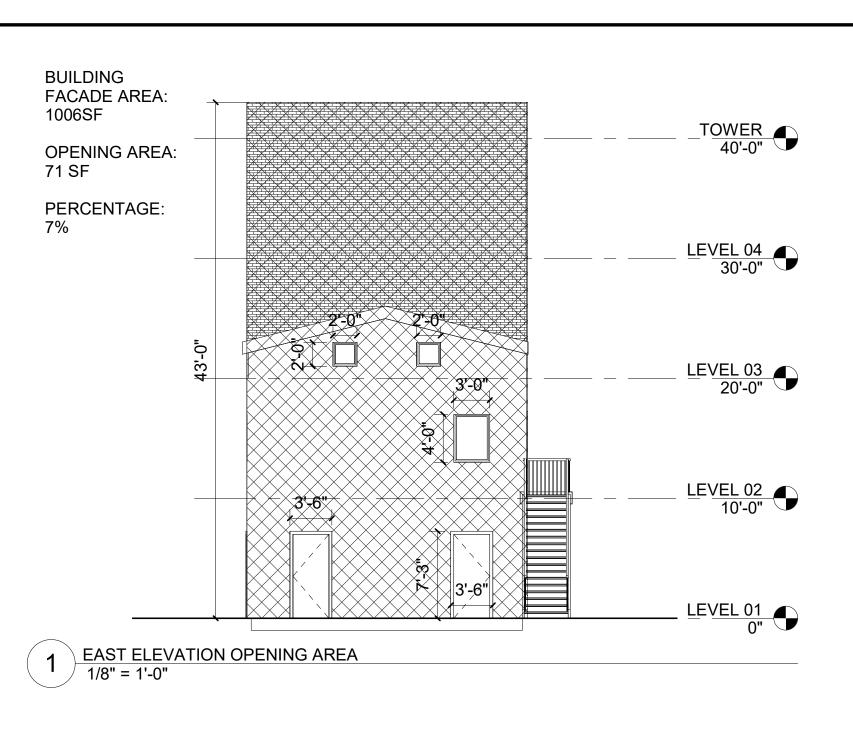
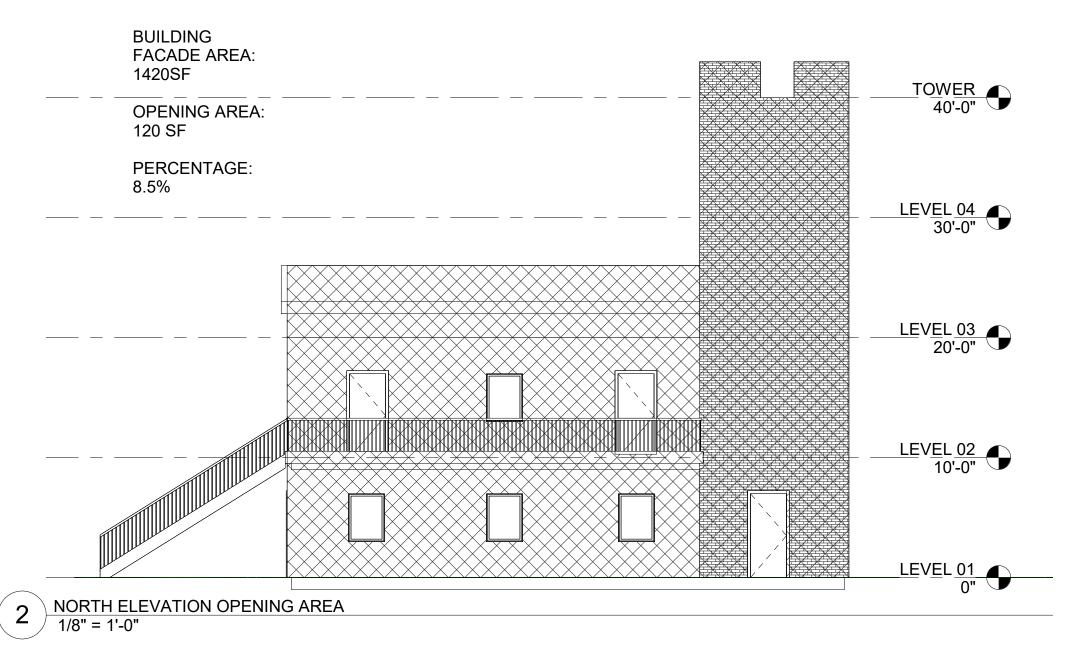
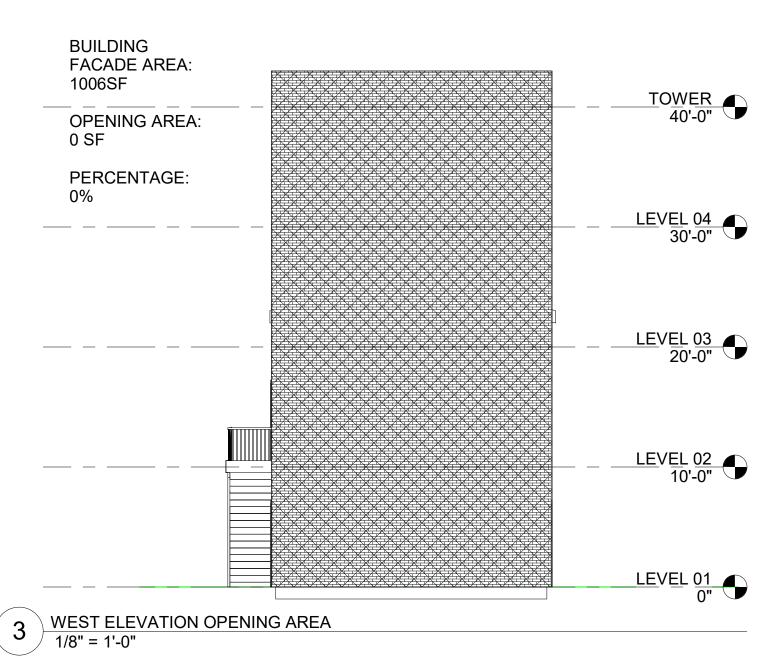
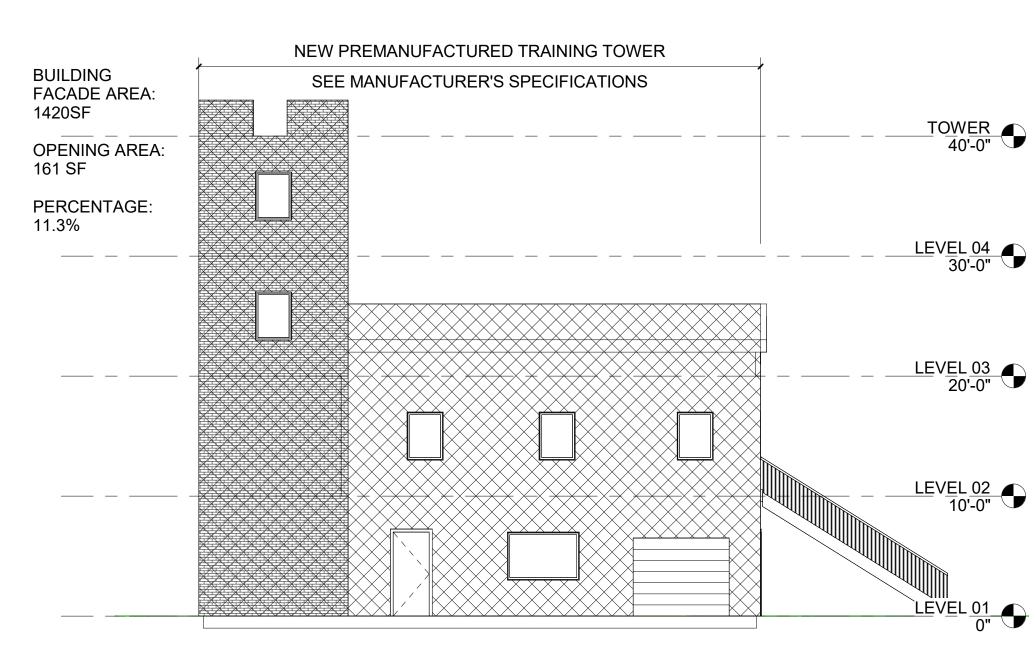
ABBREVIATIONS		SHEET INDEX	AE3 PARTNERS
& AND GA GAUGE S SOUTH  ∠ ANGLE GALV GALVANIZED S&P SHELF AND CLOTHES POLE  @ AT GB GRAB BAR SAD SEE ARCHITECTURAL DRAWINGS	PERMIT - NOVEMBER 10, 2021	G-000 COVER G-002 GENERAL NOTES & SYMBOLS A-001 SITE PLAN	Architects + Project Managers  275 Battery Street, Suite 1050 San Francisco, California 94104
CENTERLINE  GEN  GEN  GEN  GENERAL  SC  SOLID CORE  SOLID CORE  DEGREES (45 DEGREES)  GFRC  GLASS FIBER REINFORCED CONCRETE SCD  SEE CIVIL DRAWINGS  Ø  DIAMETER OR ROUND  GFRG  GLASS FIBER REINFORCED  SCHED  SCHEDULE		A-201 SITE ELEVATIONS  A-031 GREEN BUILDING CHECKLIST  A-032 GREEN BUILDING CHECKLIST	Ph: 415-233-9991 Fax: 415-651-8911 www.ae3partners.com
# POUND OR NUMBER (GYPSUM) PLASTER SCP SECURITY COMMUNICATION SYSTEM PROPERTY LINE GFI GROUND FAULT INTERRUPTED PANEL LESS THAN GI GALVANIZED IRON SCWD SOLID CORE WOOD DOOR		00 TITLE PAGE 01 FLOOR PLANS 02 FLOOR PLANS CONT	www.aespartners.com
> GREATER THAN GLAZ GLAZING SD SOAP DISH OR DISPENSER GND GROUND SEC SECTION A/C AIR CONDITIONING GR GRADE SED SEE ELECTRICAL DRAWINGS	ACSO	03 ELEVATIONS 04 ELEVATIONS CONT	
AB ANCHOR BOLT GRAN GRANITE SF SQUARE FEET  AC ASPHALTIC CONCRETE GSM GALVANIZED SHEET METAL SFPD SEE FIRE PROTECTION DRAWINGS  ACOUS ACOUSTICAL GYP GYPSUM SGD SLIDING GLASS DOOR		05 ANCHOR BOLT PLAN 06 STRUCTURAL FRAMING PLAN 07 STRUCTURAL ELEVATIONS	
ACCOUNTIC CEILING TILE GWB GYPSUM WALL BOARD SH SINGLE HUNG (WINDOW)  AD AREA DRAIN  ADA AMERICANS WITH DISABILITIES ACT H HIGH	TRAINING TOWER	08 STRUCTURAL ELEVATIONS CONT 09 STRUCTURAL SECTIONS 10 STRUCTURAL SECTIONS CONT	
ADJ ADJUSTABLE HB HOSE BIB SHT SHEET  AFF ABOVE FINISH FLOOR HC HOLLOW CORE SHTG SHEATHING  AGGR AGGREGATE HCP HANDICAPPED SIM SIMILAR		11 JOIST PLAN 12 JOIST PLAN CONT 13 STUD WALL ELEVATIONS AND DETAILS	TOTAL COLOR
ALUM ALUMINUM HD HEAD SLAD SEE LANDSCAPE DRAWINGS APPROX APPROXIMATE HDWD HARDWOOD SLTD SEE LIGHTING DRAWINGS ARCH ARCHITECTURAL HDWE HARDWARE SMD SEE MECHANICAL DRAWINGS	5301 MADIGAN ROAD	14 STUD WALL ELEVATIONS AND DETAILS 15 PARAPET DETAILS WITHOUT NOVABRIK 16 NOVABRIK PARAPET DETAILS	STILL STREET SOUTH PROPERTY OF THE PROPERTY OF
ASPH ASPHALTIC HM HOLLOW METAL SMW SHEET METAL WATERPROOFING AUTO AUTOMATIC HO HOPPER (WINDOW) SND SANITARY NAPKIN DISPENSER AVG AVERAGE HORZ HORIZONTAL SNR SANITARY NAPKIN RECEPTACLE	DUBLIN, CA 94568	17 NOVABRIK DETAILS 18 MISC DETAILS	SWERTER
AV ACOUSTICAL VENT HP HIGH POINT SOG SLAB ON GRADE HR HOUR SP STANDPIPE BD BOARD HT HEIGHT SPEC SPECIFICATION		19 MISC DETAILS CONT 20 STAIR DETAILS 21 MOVABLE PARTITION SYSTEM DETAILS	GRECORY J. AIRERE
BITUM BITUMINUOS HVAC HEATING VENTING & AIR CONDITIONING SPD SEE PLUMBING DRAWINGS BLDG BUILDING HWH HOT WATER HEATER SPO STANDPIPE OUTLET BLK BLOCK SPRM SINGLE PLY ROOF MEMBRANE		22 RAPPELING RAIL SYSTEM DETAILS 23 SMOKE DISTRIBUTION DETAILS S-001 TITLE PAGE	
BLKG BLOCKING ID INSIDE DIAMETER SQ SQUARE BM BEAM INCAN INCANDESCENT SS STAINLESS STEEL BO BOTTOM OF INSUL INSULATION SSD SEE STRUCTURAL DRAWINGS		S-101 GENERAL NOTES S-201 FOUNDATION PLAN S-301 FOUNDATION DETAILS	
BSMT BASEMENT INT INTERIOR STD STANDARD B/T BETWEEN BUR BUILT-UP ROOF JAN JANITOR STN STAINLESS		E-000 ELECTRICAL COVER SHEET  E-100 ELECTRICAL SITE PLANS  E-200 ELECTRICAL FLOOR PLAN	AN SERVICES
BUWP BUILT-UP WATERPROOFING JCT JUNCTION STOR STORAGE  JST JOIST STRL STRUCTURAL  CAB CABINET JT JOINT SUPS SUSPENDED		E-300 ELECTRICAL SPECIFICATIONS TTS-108 APPENDIX B - STRUCTURAL PART DRAWINGS	
CB CATCH BASIN CC CENTER TO CENTER OKIT KITCHEN SYM SYMMETRICAL CEM CEMENT KHB KEYED HOSE BIB			Control of the second s
CER CERAMIC CG CORNER GUARD LAM LAMINATE T&B TOP AND BOTTOM CI CAST IRON LAND LANDING T&G TONGUE AND GROOVE			OF ALAS
CIP CAST IN PLACE LAV LAVATORY TB TOWEL BAR CJ CONTROL JOINT LCC LEAD COATED COPPER TC TRASH COMPACTOR CLG CEILING LH LEFT HAND TDIS TOWEL DISPENSER			General Services Agency Capital Programs 1401 Lakeside Drive
CLKG CAULKING LP LOW POINT TEL TELEPHONE CLO CLOSET LT LIGHT TEMP TEMPERED CLR CLEAR LWT LIGHTWEIGHT TEMPOR TEMPORARY CNTR COUNTER			Oakland CA, 94612
COTTA COUNTER  CO CLEAN OUT MAT MATERIAL THK THICK  COL COLUMN MAX MAXIMUM THRSD THRESHOLD  COMB COMBUSTION MB MACHINE BOLT TO TOP OF			
COMB COMBOSTION MB MACHINE BOLT TO TOP OF COMPOSITION MBL MARBLE TOW TOP OF WALL CMU CONCRETE MASONRY UNIT MBX MAILBOX TPH TOILET PAPER HOLDER CONC CONCRETE MC MEDICINE CABINET TRASH TRASH RECEPTACLE			
CONN CONNECTION MD MEDIUM DENSITY TS TUBE STEEL CONSTR CONSTRUCTION MECH MECHANICAL TYP TYPICAL			NO.         ISSUE/REVISION         YYYY-MM-DD           1         PERMIT         AUG-27-2021           2         PERMIT COMMENT RESPONSE         NOV-10-2021
CONT CONTINUOUS MED MEDIUM CORR CORRIDOR MEMB MEMBRANE UL UNDERWRITERS LABORATORIES, INC. CPT CARPET MET METAL OR METALLIC UNF UNFINISHED CS CASEMENT (WINDOW) MFR MANUFACTURER UON UNLESS OTHERWISE NOTED			
CT CERAMIC TILE MH MANHOLE CTR CENTER MIN MINIMUM W/ WITH CTSK COUNTERSUNK MIR MIRROR W/D WASHER AND DRYER			
CYL CYLINDER MISC MISCELLANEOUS W WEST OR WIDE  MO MASONRY OPENING W/O WITHOUT  (D) DEMOLISH MTD MOUNTED WC WATER CLOSET			
D DEEP MUL MULLION WD WOOD DBL DOUBLE MW MICROWAVE WH WATER HEATER DEPT DEPARTMENT WO WHERE OCCURS	VICINITY MAP	PROJECT DIRECTORY	
DF DRINKING FOUNTAIN (N) NEW WATERPROOF DFPT DOUGLAS FIR PRESSURE TREATED N NORTH WPM WATERPROOFING MEMBRANE DH DOUBLE HUNG (WINDOW) NA NOT APPLICABLE WR WATER RESISTANT		CLIENT DSA	
DIA DIAMETER NIC NOT IN CONTRACT WS WEATHERSTRIPPING DIF DIFFUSER NO NUMBER WSCT WAINSCOT DIM DIMENSION NOM NOMINAL WSP WET STANDPIPE DIMP DIMENSION POINT NR NON RATED WT WEIGHT	SITE	1401 LAKESIDE DRIVE OAKLAND CA, 94612 CONTACT: DAVID BARBA	
DISP DISPOSAL NTS NOT TO SCALE  DN DOWN  DO DOOR OPENING  NTS NOT TO SCALE  VCT VINYL COMPOSITE TILE  VERT VERTICAL		E:DAVID.BARBA@ACGOV.ORG  ARCHITECTURE	
DR DOOR OC ON CENTER VEST VESTIBULE DS DOWNSPOUT OD OUTSIDE DIAMETER VIF VERIFY IN FIELD DSP DRY STANDPIPE OFD OVERFLOW DRAIN	Alameda County Fire Department Fire	AE3 PARTNERS 315 MONTGOMERY ST., SUITE 1000 SAN FRANCISCO, CA 94111	
DET DETAIL OPER OPERABLE DW DISHWASHER OPENING DWG DRAWING OPP OPPOSITE	FCI Dublin Alameda County	CONTACT: DOUGLAS DAVIS T: 415.651.4592 E: DOUGD@AE3PARTNERS.COM	
DWR DRAWER PC PIECE OR PRECAST (E) EXISTING PERP PERPENDICULAR	FCI Dublin Alameda County Santa Rita Jail	STRUCTURAL KPFF	KEY PLAN
E EAST PKT POCKET (DOOR)  EA EACH PL PLATE  EFOS EXTERIOR FACE OF STUD PLAM PLASTIC LAMINATE	CityHealth COVID-19 Testing - Dublin Regional Training Center	45 FREMONT ST., 28 <sup>th</sup> FLOOR SAN FRANCISCO, CA 94105 CONTACT: BRIAN BIEHL	
EJ EXPANSION JOINT PLAS PLASTER EL ELEVATION PLYWD PLYWOOD ELEC ELECTRICAL PNL PANEL ELEV ELEVATOR POL POLISH(ED)	East County Hall of Justice	E: BRIAN.BIEHL@KPFF.COM	N
ELEV ELEVATOR POL POLISH(ED) EMER EMERGENCY POLY POLYETHYLENE ENCL ENCLOSURE POS PER OWNER'S SELECTION EO EDGE OF PR PAIR	Gleason Dr	ELECTRICAL RANDALL LAMB ASSOCIATES, INC 500 WASHINGTON ST, SUITE 200 SAN FRANCISCO, CA 94111	
EP ELECTRICAL PANEL PRCST PRECAST EQ EQUAL PREFAB PREFABRICATED EQT EQUIPMENT PT POINT	E CONTRACTOR OF STATE	SAN FRANCISCO, CA 94111 CONTACT: AARON STRAUCH E: ASTRAUCH@RANDALLLAMB.COM	PROFESSIONAL SEALS  CENSED ARCAI  CARAS A. O. T.
EWC ELECTRICAL WATER COOLER PTCL PARTICLE EXH EXHAUST PTDIS PAPER TOWEL DISPENSER EXP EXPANSION PTD PAINTED	BUILDING INFORMATION SCOPE OF WORK	APPLICABLE CODES	<b>★</b> NO. C 28047. ★
EXPO EXPOSED PTN PARTITION EXT EXTERIOR PTREC PAPER TOWEL RECEPTACLE PVC POLY VINYL CHLORIDE	LOCATION: 5301 MADIGAN ROAD		PAP. US-31-21 ST
F FIXED POSITION (WINDOW) FA FIRE ALARM QT QUARRY TILE FAU FORCED AIR UNIT QTY QUANTITY	DUBLIN, CA 94568  CONSTRUCTION TYPE:  NA  2  ERECTING A TACTICAL TRAINING SYSTEM 4000 SERIES PER MANUFACTURER'S SHOP DRAWINGS	ALL WORK SHALL FULLY COMPLY BUT NOT BE LIMITED TO:  A. 2019 CALIFORNIA BUILDING CODE (CBC)	FACILITY 5301 Madigan Road
FD FLOOR DRAIN QUAL QUALITY FDN FOUNDATION FE FIRE EXTINGUISHER (R) RELOCATED	NUMBER OF STORIES: FOUR	B. 2019 CALIFORNIA ELECTRICAL CODE (CEC) C. 2019 CALIFORNIA MECHANICAL CODE (CMC) D. 2019 CALIFORNIA PLUMBING CODE (CPC)	Dublin, CA 94568
FEC FIRE EXTINGUISHER CABINET R RISER OR RADIUS FF FINISH FLOOR RAD RADIUS FHC FIRE HOSE CABINET RD ROOF DRAIN	OCCUPANCY:  U  All of the training towers, that are supplied by FFI, have been designate nonbuilding structure because of the unusual nature and use of this type structure. The National Fire Protection Association (NFPA) has published.	e of G. 2019 CALIFORNIA FIRE CODE  G. 2019 GREEN BUILDING STANDARDS CODE  H. 2010 CREEN BUILDING STANDARDS CODE (CAL CREEN)	PROJECT
FHMS FLAT HEAD MACHINE SCREW REBAR REINFORCING BAR  FIN FINISH REF REFERENCE  FIXT FIXTURE REFL REFLECTED OR REFLECTIVE	CLASSIFICATION ALLOWABLE BUILDING HEIGHT IS 40'-0"  Specifically for the design and construction of both tactical and fire training facilities. NFPA 1402 (2019) section A.1.2.2 reads "Fire training structure occupied buildings. Building code requirements for many occupied buildings."	ng les are not ding  H. 2019 GREEN BUILDING STANDARDS CODE (CALGREEN)  I. NFPA 13 SPRINKLER SYSTEM (NFPA 13-2019 EDITION)  J. NFPA 72 NATIONAL FIRE ALARM CODE (NFPA 72-2019 EDITION)	ACSO TACTICAL TRAINING TOWER
FL FLOOR REFR REFRIGERATOR FLASH FLASHING REINF REINFORCED FLUOR FLUORESCENT REQ REQUIRED FO FACE OF RET RETAINING	CLASSIFICATION ALLOWABLE BUILDING AREA IS 5500 SF  items, such as fire protection, HVAC, finishes, and accessibility per the not apply to fire training structures."	ADA, do  K. 2019 TITLE 24 FROM THE CALIFORNIA CODES OF REGULATIONS (CCR)  J. ALAMEDA COUNTY MUNICIPAL CODE	
FO FACE OF RET RETAINING FOF FACE OF FINISH REV REVISION OR REVISED FOS FACE OF STUD REVER REVERSED FOT FACE OF TREAD RF RESILIENT FLOORING			SHEET TITLE COVER
FOT FACE OF TREAD RF RESILIENT FLOORING FPL FIREPLACE RH RIGHT HAND FPRF FIREPROOF RM ROOM FR FIRE RESISTIVE RND ROUND			
FR FIRE RESISTIVE ROUND FRMG FRAMING RO ROUGH OPENING FRP FIBERGLASS REINFORCED ROW RIGHT OF WAY POLYESTER PANEL RWD REDWOOD			Author Approver
FS FULL SIZE RWL RAIN WATER LEADER FSK FLOOR SINK FT FEET OR FOOT			PROJECT NUMBER 2021007
FTG FOOTING FURR FURRING			8/25/21 <b>G-000</b>
	·	·	-







SOUTH ELEVATION OPENING AREA



**GENERAL NOTES** 

A. THE CONTRACT DOCUMENTS INCLUDE THESE DRAWINGS, SPECIFICATIONS AND/OR PROJECT MANUAL, AND ANY OTHER DOCUMENTS PER AGREEMENT BETWEEN THE OWNER THE CONTRACTOR FOR CONSTRUCTION. THE CONTRACT DOCUMENTS CONTAIN INFORMATION THAT DESCRIBES THE DESIGN INTENT FOR THE SCOPE OF WORK. SUCH INFORMATION SHALL NOT BE CONSTRUED TO BE COMPREHENSIVE, EXHAUSTIVE, OR DESCRIBE ALL LABOR, MATERIALS AND ITEMS NECESSARY TO COMPLETE THE SCOPE OF WORK. INTERNAL REFERENCING WITHIN THE CONTRACT DOCUMENTS IS FOR CONVENIENCE ONLY AND IS NOT INTENDED TO LIMIT THE APPLICATION OF ANY DRAWINGS OR DETAIL. DETAILS NOT SHOWN ARE SIMILAR TO THOSE DETAILED ELSEWHERE.

B. THE DRAWINGS ARE ORGANIZED INTO DISCIPLINES AND SECTIONS FOR CONVENIENCE; HOWEVER THIS IS NOT INTENDED TO CONTROL THE DIVISION OF WORK OR THE CONTRACTOR'S ORGANIZATION OF TRADES. THE CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEWING THE WHOLE OF THE CONTRACT DOCUMENTS (DRAWINGS, SPECIFICATION AND OTHER DELIVERABLES) AND ENSURING THAT ALL TRADES ARE FULLY COORDINATED. ALL WORK SHALL CONFORM WITH ALL GOVERNING CODES AND ORDINANCES.

C. THE CONTRACTOR IS SOLELY AND COMPLETELY RESPONSIBLE FOR MEANS AND METHODS IN COMPLETING THE WORK, CONDITION OF THE JOBSITE, THE SAFETY OF ALL PERSONS / PROPERTY LOCATED WITHIN THE JOB SITE AND SCOPE OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL PERSONNEL WITHIN THE WORK AREA ARE PROTECTED FROM HAZARDOUS MATERIALS AND OTHER OCCUPATIONAL HAZARDS. SHOULD THE CONTRACTOR IDENTIFY OR DISCOVER ANY SUCH MATERIALS OR HAZARDS DURING ITS COURSE OF WORK, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER.

D. THE CONTRACTOR, DURING ITS ENTIRE DURATION ON THE JOBSITE, IS RESPONSIBLE FOR PROTECTING ALL (N) WORK, MATERIAL. EQUIPMENT AND ALL PROPERTY FROM DIRT AND DAMAGE DURING THE COURSE OF CONSTRUCTION. THE CONTRACTOR SHALL PROTECT ALL (N) BUILDING SYSTEMS INCLUDING BUT NOT LIMITED TO HVAC, FIRE, SPRINKLER, TELEPHONE AND DATA SYSTEMS FROM DAMAGE, DUST AND DEBRIS DURING THE COURSE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ANY DAMAGE TO SURFACES AND EXISTING BUILDING SYSTEMS / COMPONENTS DUE TO CONSTRUCTION ACTIVITY TO THEIR ORIGINAL CONDITION.

E. THE CONTRACTOR SHALL ERECT SUITABLE BARRIERS TO SEPARATE THE JOBS SITE / WORK AREA FROM NON-WORK AREAS AND PROVIDE APPROPRIATE TRAFFIC AND PEDESTRIAN CONTROLS TO ROUTE PERSONS AND TRAFFIC AROUND THE SITE. EXCEPT AS OTHERWISE PERMITTED BY THE OWNER IN WRITING, THE CONTRACTOR SHALL KEEP THE GENERAL PUBLIC AND ALL NON-CONSTRUCTION PERSONNEL FROM THE WORK AREA. THE CONTRACTOR SHALL ENSURE THAT THE APPROPRIATE CODE REQUIRED EGRESS PATHS AND SIGNAGE ARE MAINTAINED FROM AND AROUND THE WORK AREA DURING THE DURATION OF CONSTRUCTION.

F. PRIOR TO COMMENCING WORK, THE CONTRACTOR, IN CONFERENCE WITH THE OWNER AND FACILITIES MANAGEMENT. SHALL PREPARE A LIST OF ITS ACTIVITIES THAT WILL IN ANYWAY EFFECT THE NORMAL OPERATIONS OF THE BUILDING, SITE AND ADJACENT PROPERTIES. PROTECTIVE MEASURES AND SCHEDULING SHALL BE ESTABLISHED TO MINIMIZE DISRUPTION AND PROTECT PROPERTY NOT RELATED TO THIS PROJECT. PROVIDE THE OWNER AND ARCHITECT WITH A COPY OF THE SCHEDULE AND DESCRIPTION OF PROTECTION FOR OWNER APPROVAL

G. THE CONTRACTOR IS RESPONSIBLE FOR CHECKING CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS FOR ACCURACY AND CONFIRMING THAT THE WORK IS BUILDABLE PRIOR TO PROCEEDING WITH ANY CONSTRUCTION. IF THE CONTRACTOR HAS ANY QUESTION OR ISSUES, THEY SHALL BE SUBMITTED IN WRITING AS A REQUEST FOR INFORMATION (RFI) TO OBTAIN CLARIFICATION FROM THE ARCHITECT BEFORE PROCEEDING WITH THE WORK FOR QUESTION.

H. THE ARCHITECT AND OWNER SHALL NOT CONSIDER CHANGE ORDERS OR ADDITIONAL CHARGES FOR THE CONTRACTORS FAILURE TO PROPERLY VERIFY FIELD DIMENSION AND EXISTING CONDITIONS PRIOR TO START OF WORK.

I. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS SHALL GOVERN.

J. THE CONTRACTOR SHALL PROMPTLY REPORT TO THE ARCHITECT ANY DISCREPANCIES FOUND BETWEEN EXISTING CONDITIONS AND THOSE SHOWN ON THE DRAWINGS SO THAT A CLARIFICATION CAN BE ISSUED. ALL MATERIALS, FIXTURES AND EQUIPMENT CALLED OUT IN THE DRAWING ARE NEW UNLESS OTHERWISE NOTED (UON) AS EXISTING. ALL WALL DIMENSIONS ARE FACE-OF-FINISH TO FACE-OF-FINISH UNLESS OTHERWISE NOTED.

J. THE CONTRACTOR SHALL ALWAYS PROVIDE FIRE STOP IN ALL WALLS. FURRED SPACES AND CEILING, ETC. AS REQUIRED BY CODE AND SHALL PROVIDE APPROPRIATE SMOKE/FIRE DAMPERS AT DUCTWORK THAT CROSSES THROUGH RATED ASSEMBLIES. ALL CLEAR DIMENSIONS ARE REQUIRED TO BE EXACT WITH 1/8" TOLERANCE ALONG FULL HEIGHT AND FULL WIDTH OF WALLS.

K. THE CONTRACTOR SHALL SAFE OFF ANY FIRE ALARM OR SPRINKLER SYSTEM DURING THE COURSE OF WORK. SPRINKLER HEADS SHALL BE PROTECTED DURING CONSTRUCTION.

L. CONTRACTOR SHALL HAVE ON HAND AT ALL TIMES DURING CONSTRUCTION A MEANS OF CONTAINING AN ACCIDENTAL DISCHARGE. FIRE ALARM COMPONENT SHALL BE PROTECTED AND OR REMOVED AS NEEDED TO PROTECT THEM IN THE COURSE OF CONSTRUCTION.

M. CONTRACTOR SHALL PROVIDE ALL STIFFENERS, BRACING, BLOCKING, BACK-UP PLATES AND SUPPORTING BRACKETS REQUIRED FOR THE INSTALLATION OF ALL CASEWORK, TOILET ROOM ACCESSORIES, FIXTURE, PARTITIONS AND ALL MECHANICAL, ELECTRICAL AND PLUMBING EQUIPMENT NOTED IN THE DRAWINGS. CONTRACTOR SHALL VERIFY WITH THE MANUFACTURER THE PHYSICAL DIMENSIONS AND MOUNTING REQUIREMENT OF EQUIPMENT AND FIXTURES.

N. IF THE SPACE, MOUNTING OR OTHER INSTALLATION PROVISIONS PROVIDED IN CONTRACT DOCUMENTS IS INADEQUATE THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IN WRITING PRIOR TO THE START OF WORK.

O. ALL DOORS SHALL USE LEVER HARDWARE. ALL REQUIRED EXIT DOORS SHALL NOT REQUIRE THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE TO OPERATE AND SHALL BE OPERABLE WITH A SINGLE EFFORT. ALL FIRE RATED EXIT DOORS SHALL BE FITTED WITH A CLOSER. THE MAXIMUM EFFORT TO OPEN DOORS SHALL NOT EXCEED 15 POUNDS FOR FIRE RATED EXIT DOORS AND 5 LBS FOR ALL OTHER DOORS.

P. UNLESS OTHERWISE NOTED, FINISHES INDICATED SHALL BE APPLIED TO THE ENTIRE EXTENT OF THE WALL, FLOOR, CEILING OR OTHER SURFACE SHOWN. PAINT FINISH SHALL BE LEVEL 5 UON.

Q. THE DRAWINGS ARE NOT SUITABLE FOR USE AS BASIS OF CALCULATING AREA FOR A LEASE, PURCHASE AGREEMENT OR OTHER REAL ESTATE PURPOSES. IT IS STRONGLY RECOMMENDED THAT PARTIES REQUIRING THIS INFORMATION RETAIN THE SEPARATE SERVICES OF A SURVEYOR OR APPROPRIATE PROFESSIONAL TO OBTAIN THIS INFORMATION.

SYMBOLS

**ELEVATION** COLUMN GRID TAG / GRID LINE \_\_\_\_ + \_\_\_\_

WORK/DATUM/CONTROL POINT

BUILDING / WALL SECTION TAG

-DRAWING NUMBER

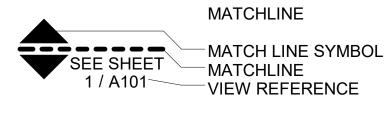
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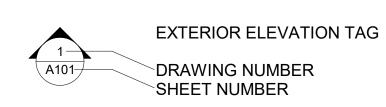
INTERIOR ELEVATION TAG

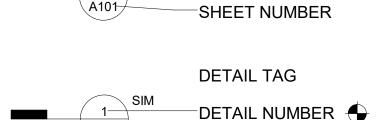
ELEVATION NUMBER

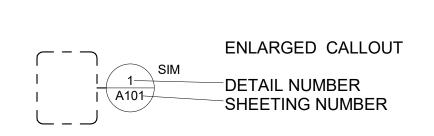
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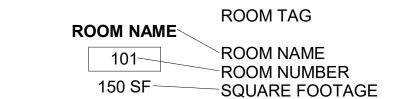
REVISION











ROOM OCCUPANCY TAG
ROOM NAME
OCCUPANT LOAD FACTOR
SQUARE FOOTAGE
EXITS OCCUPANTS

101	DOOR TAG	

<u>1t</u>	WINDOW / LOUVER TA

STOREFRONT TAG

1EWA4.1	PARTITION TYPE TAG









**SLOPE ARROW** 



**AE3** PARTNERS

Architects + Project Managers

275 Battery Street, Suite 1050

www.ae3partners.com

San Francisco, California 94104

415-233-9991

415-651-8911



General Services Agency Capital Programs 1401 Lakeside Drive Oakland CA, 94612

NO.	ISSUE/REVISION	YYYY-MM-E
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5301 Madigan Road Dublin, CA 94568

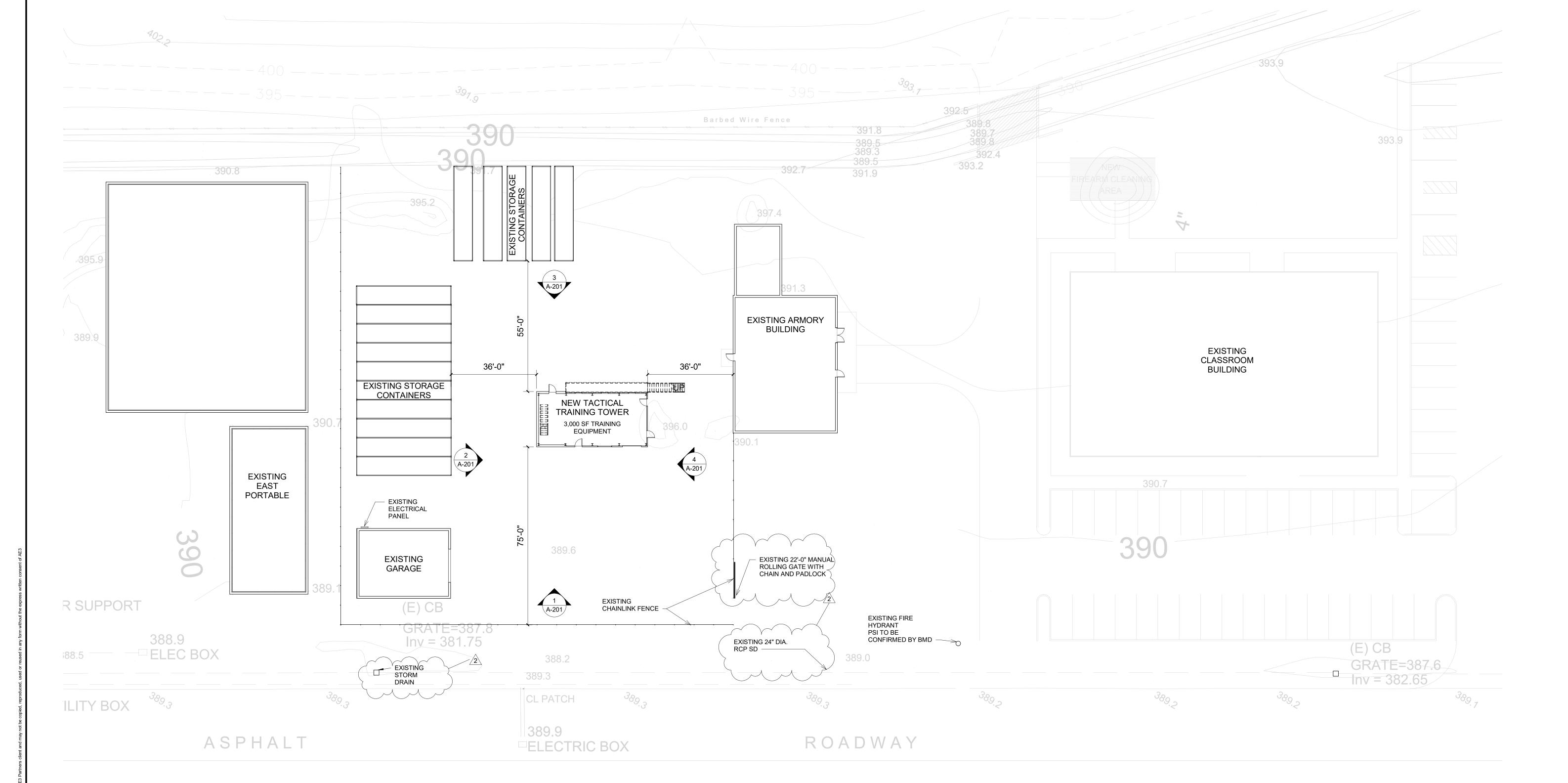
PROJECT ACSO TACTICAL TRAINING TOWER

GENERAL NOTES & SYMBOLS DRAWN BY REV'D BY SHEET NUMBER Author Approver

SHEET TITLE

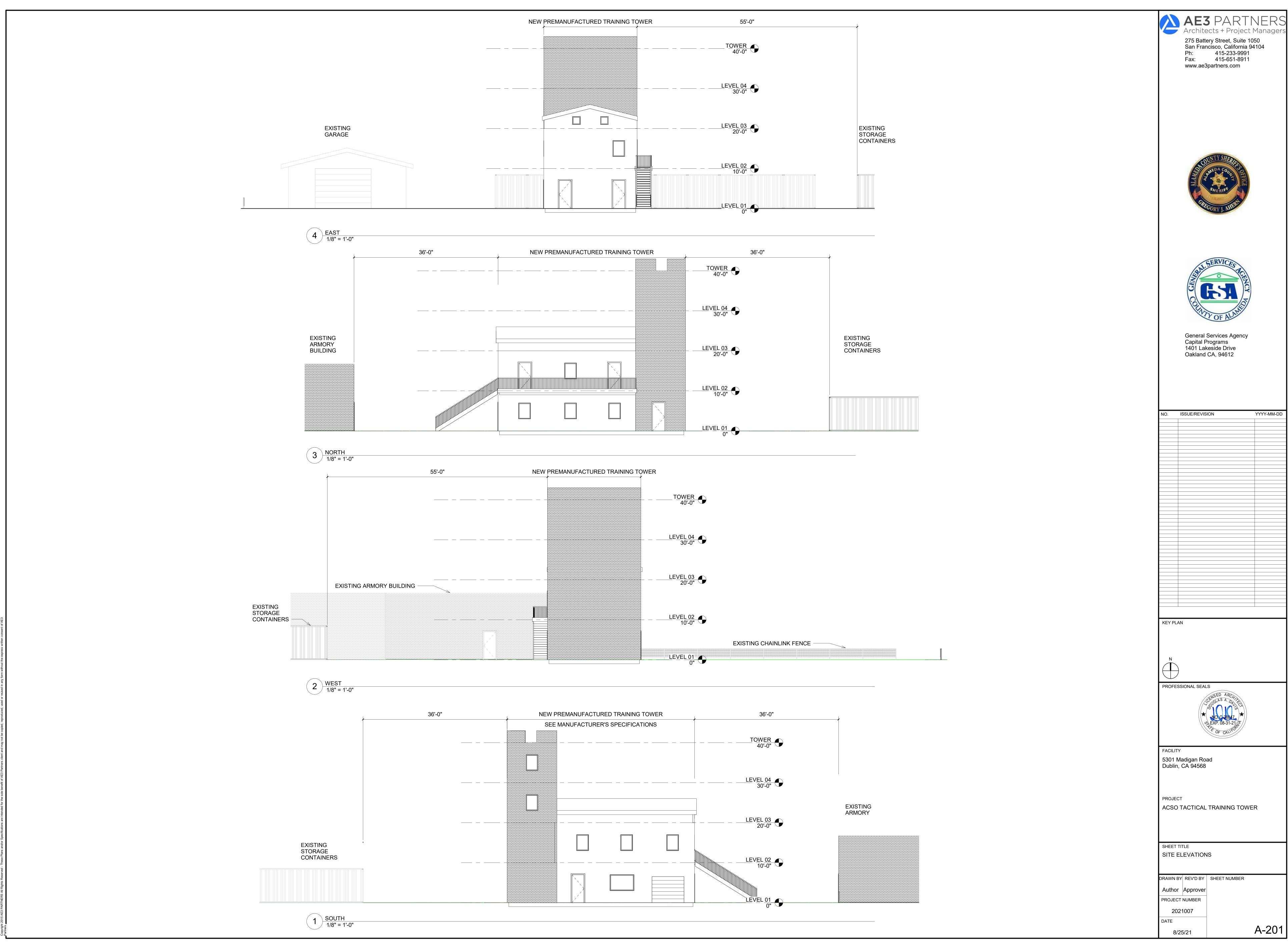
PROJECT NUMBER 2021007 G-002 8/25/21

A-001



EXISTING GENERAL SERVICES BUILDING

1 SITE PLAN 1" = 20'-0"



AE3 PARTNERS
Architects + Project Managers

	A	
EY PL/	NIF.	

**GENERAL DATA** 

Stories: 4

Allowable Area: N/A

Fire Sprinkler: N/A

Occupancy Group: Unoccupied fire training

simulator/nonbuilding structure Construction Type: Type II—B Area: 3300 sq. ft. Height: 40 ft

**DRAWING INDEX** 

PAGE 01 - FLOOR PLANS PAGE 02 - FLOOR PLANS CONT. PAGE 03 - ELEVATIONS

PAGE 04 - ELEVATIONS CONT. PAGE 05 - ANCHOR BOLT PLAN PAGE 06 - STRUCTURAL FRAMING PLAN

PAGE 07 - STRUCTURAL ELEVATIONS PAGE 08 - STRUCTURAL ELEVATIONS CONT.

PAGE 09 - STRUCTURAL SECTIONS

PAGE 10 - STRUCTURAL SECTIONS CONT.

PAGE 11 - JOIST PLAN

PAGE 12 - JOIST PLAN CONT.

PAGE 13 - STUD WALL ELEVATIONS AND DETAILS

**COLORS SELECTED: BUILDING COLOR:** SLATE GRAY

**NOVABRIK COLOR**: DESERT SAND

WINDOW AND DOOR TRIM COLOR: ROYAL BLUE

NOTE: Burn room doors and all shutters are Galvanized Steel

EXTERIOR DOOR OTHER THAN BURN DOORS. BRONZE

PAGE 14 - STUD WALL ELEVATIONS AND DETAILS CONT. PAGE 15 - PARAPET DETAILS WITHOUT NOVABRIK

PAGE 16 - NOVABRIK PARAPET DETAILS

PAGE 17 - NOVABRIK DETAILS

PAGE 18 - MISC. DETAILS PAGE 19 - MISC. DETAILS CONT.

PAGE 20 - STAIR DETAILS

PAGE 21 - MOVABLE PARTITION SYSTEM DETAILS

PAGE 22 - RAPPELLING RAIL SYSTEM DETAILS PAGE 23 - SMOKE DISTRIBUTION SYSTEM DETAILS

WIND LOAD: 92 MPH; RISK CAT II; EXP C

building items, such as fire protection, HVAC, finishes, and structures."

# DESIGN LOADS:

FLOOR LIVE LOAD: 100 PSF ROOF LIVE LOAD: 100 PSF

SEISMIC DESIGN CAT: D

SITE CLASS: D

DESIGN CODE: CBC 2019 AND NFPA 1402

NFPA 1402 is the Standard on Facilities for Fire Training and Associated Props. Chapters 1.2.2 and A.1.2.2 state the following 'Fire training structures are not occupied buildings. Building code requirements for many occupied accessibility per the ADA, do not apply to fire training

**MATERIAL SPECIFICATIONS: W SHAPES**: ASTM A992 (Fy = 50 ksi). HSS: ASTM A500 (GRADE B). PLATES: ASTM A36 OR ASTM A572 (GRADE 50). **ANGLES**: ASTM A36. C SHAPES: ASTM A36. **BOLTS**: ASTM A325N. LIGHT GAUGE STEEL: ASTM A653 OR ASTM A924. **WELDS** Field Welding Not Required; Shop Electrodes E71T-1

SPECIAL INSPECTIONS (cont. reports required for submittal to city inspector):

1. HIGH STRENGTH BOLTS 2. REINF. CONC W/ F'c > 2.5ksi

3. WELDING — NO FIELD WELDING REQUIRED

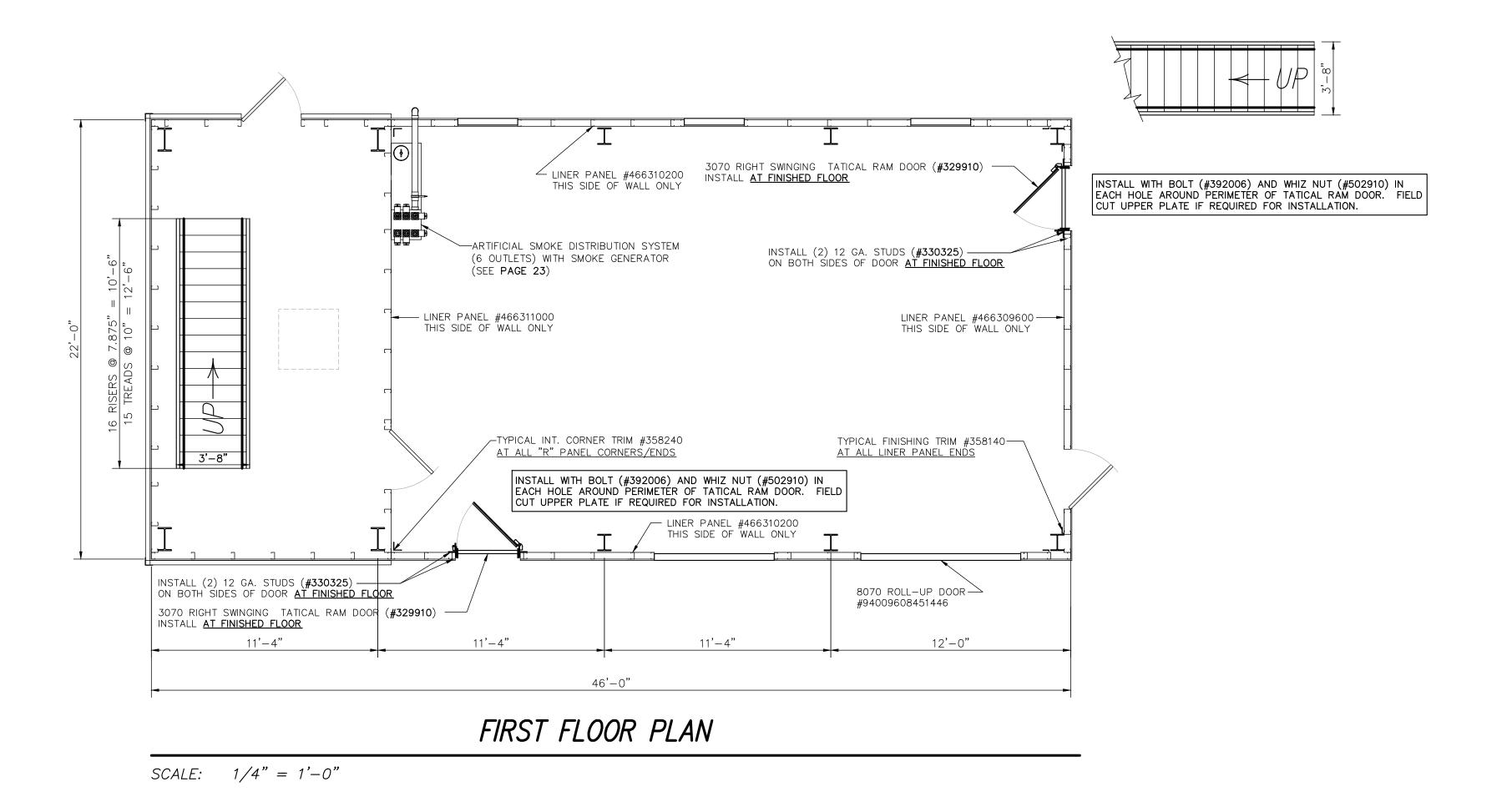
INSPECTIONS FOR REINF. CONCRETE SHALL TAKE PLACE PRIOR/DURING FOUNDATION CONSTRUCTION AND INSPECTIONS FOR HIGH STRENGTH BOLTS DURING SUPERSTRUCTURE PLACEMENT.

SERIES 4 CUSTOM DUBLIN, CA

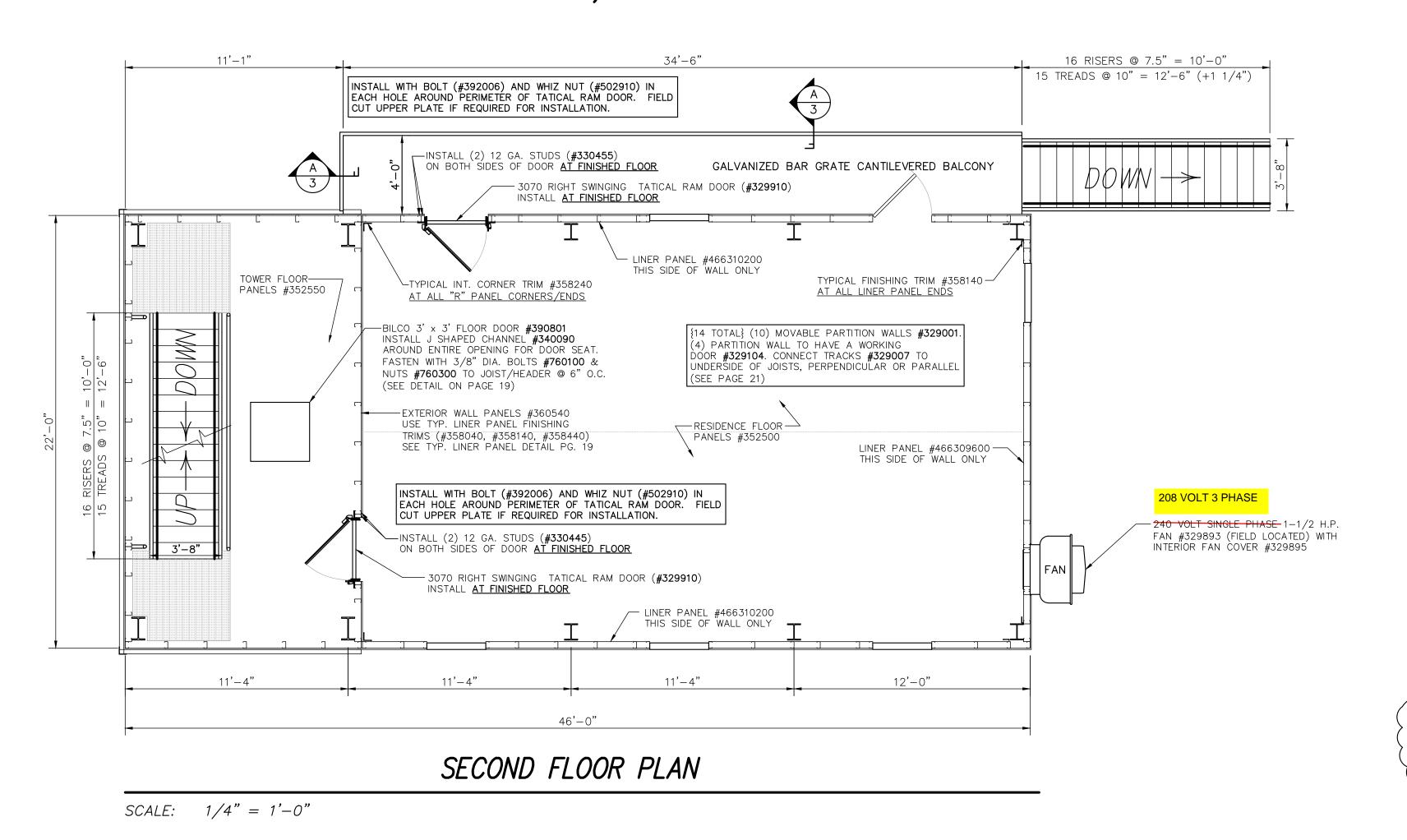
AUGUST 13, 2021

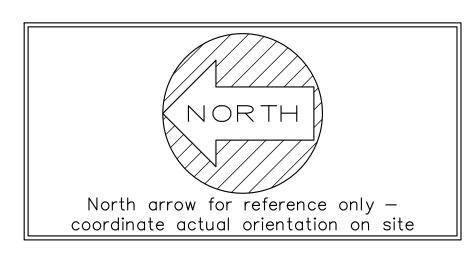
Drawn by: Checked by: SPW Scale: SHOWN

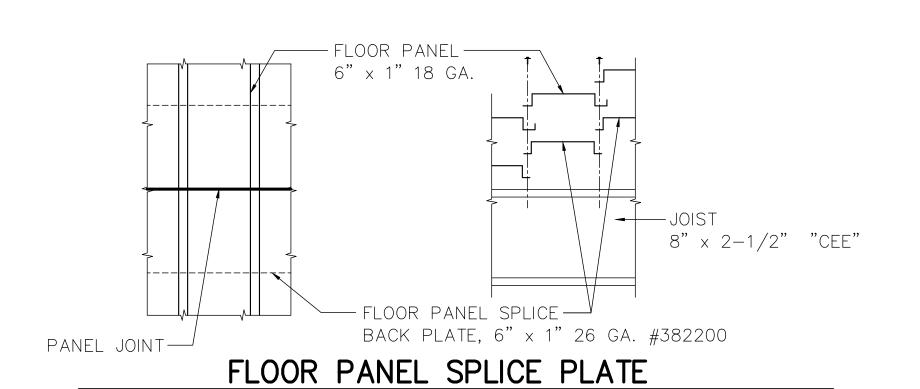
TTS-108/#238355 Sheet No.

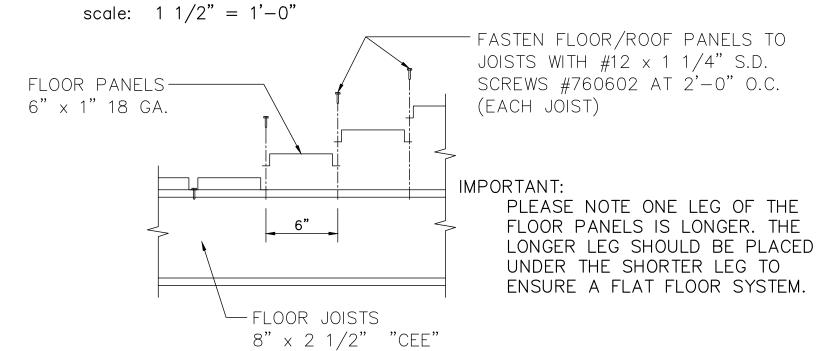


# NOTE: ALL SHUTTERS IN TOWER SWING IN, UNLESS OTHERWISE SHOWN ALL SHUTTERS IN ATTIC SWING OUT, UNLESS OTHERWISE SHOWN

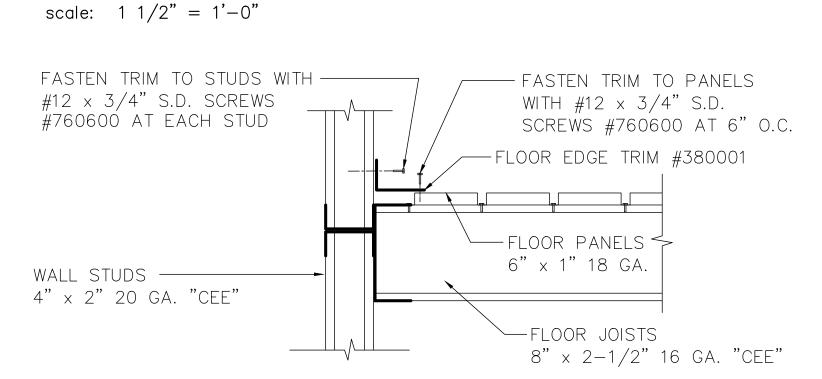




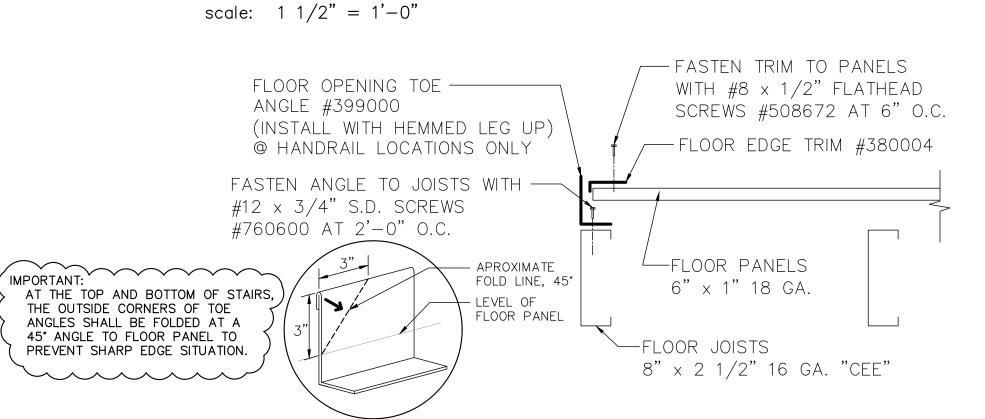




# TYPICAL FLOOR PANEL FASTENING DETAIL



# TYPICAL FLOOR EDGE TRIM DETAIL



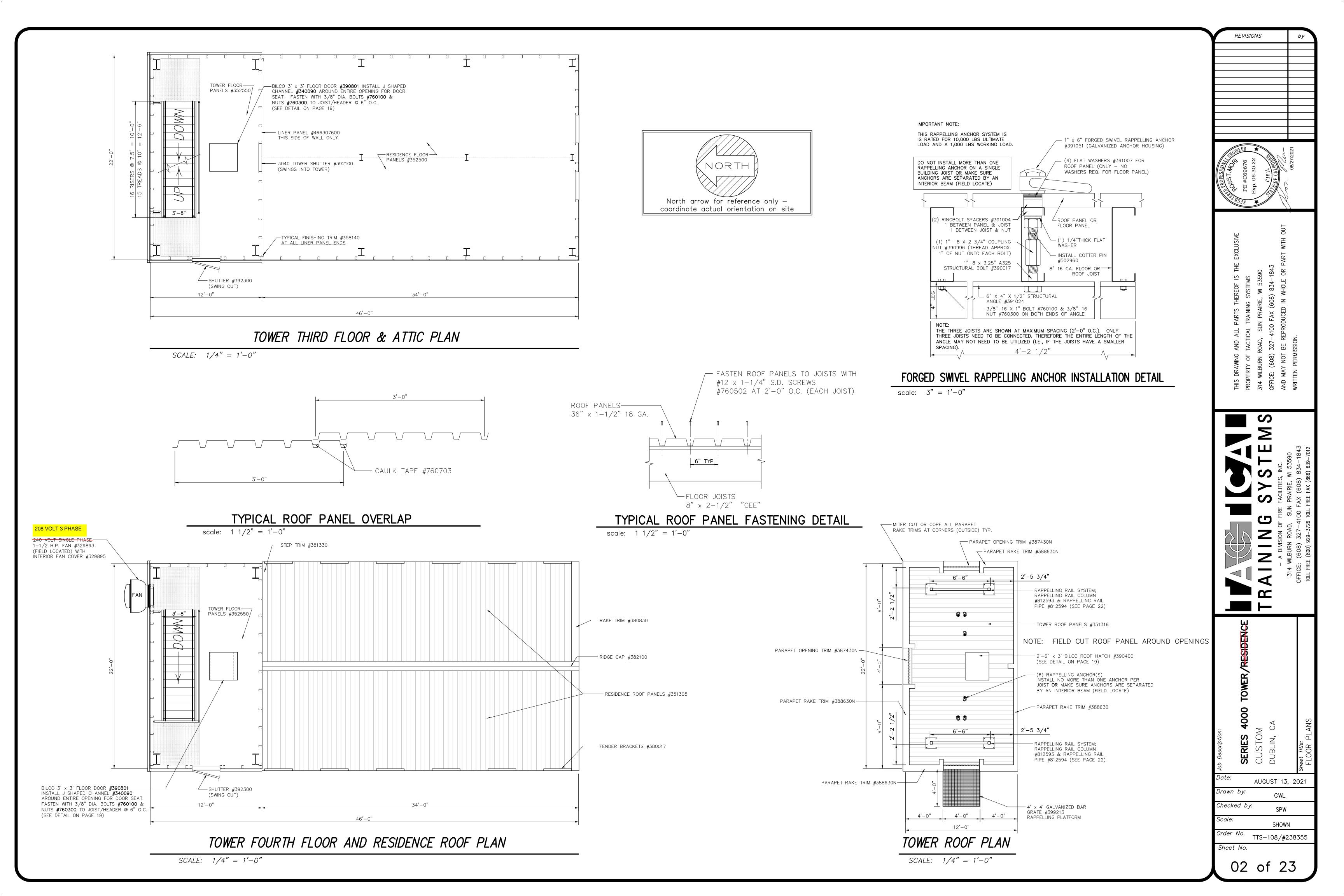
TYPICAL FLOOR OPENING TRIM DETAIL

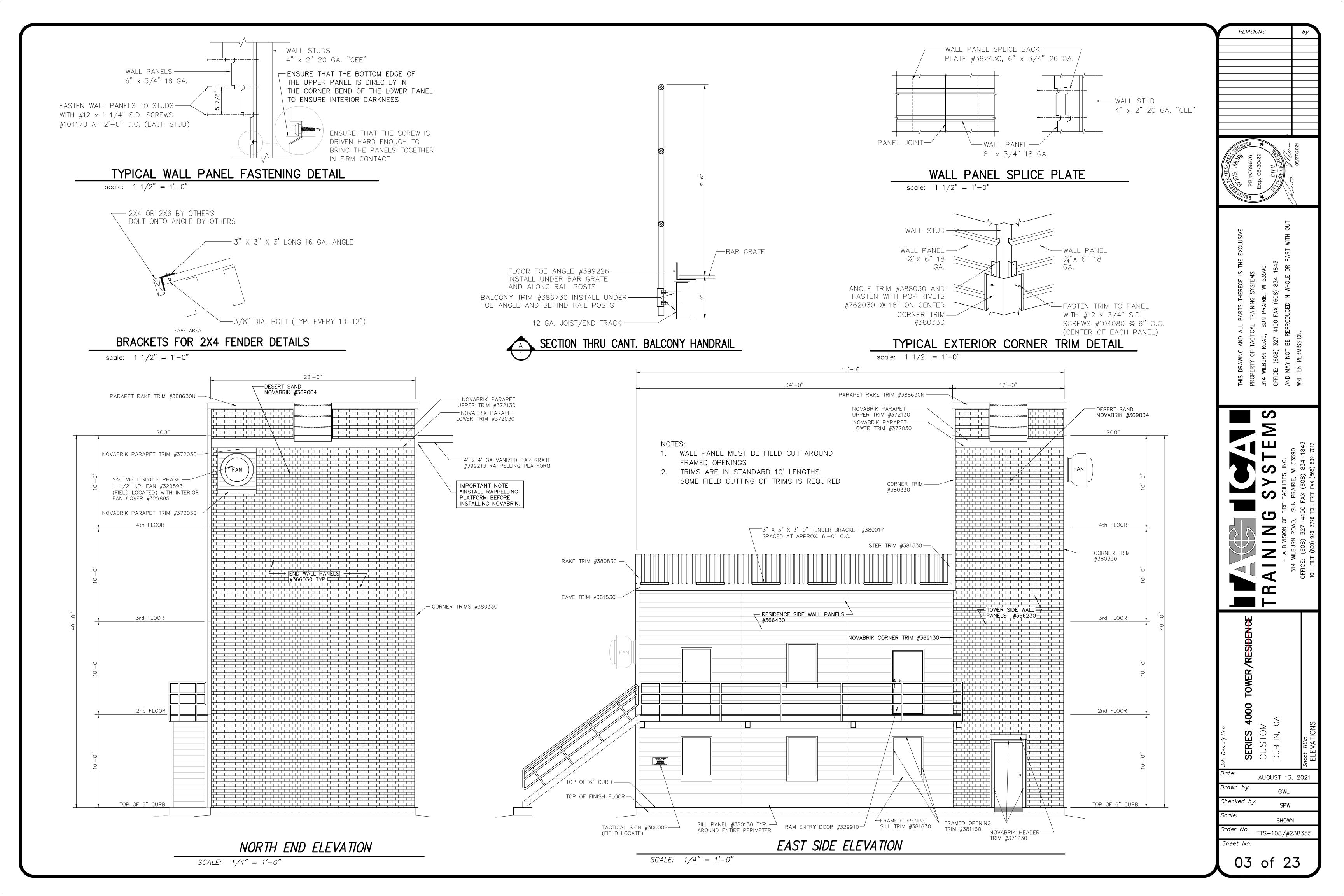
scale:  $1 \frac{1}{2} = 1' - 0''$ 

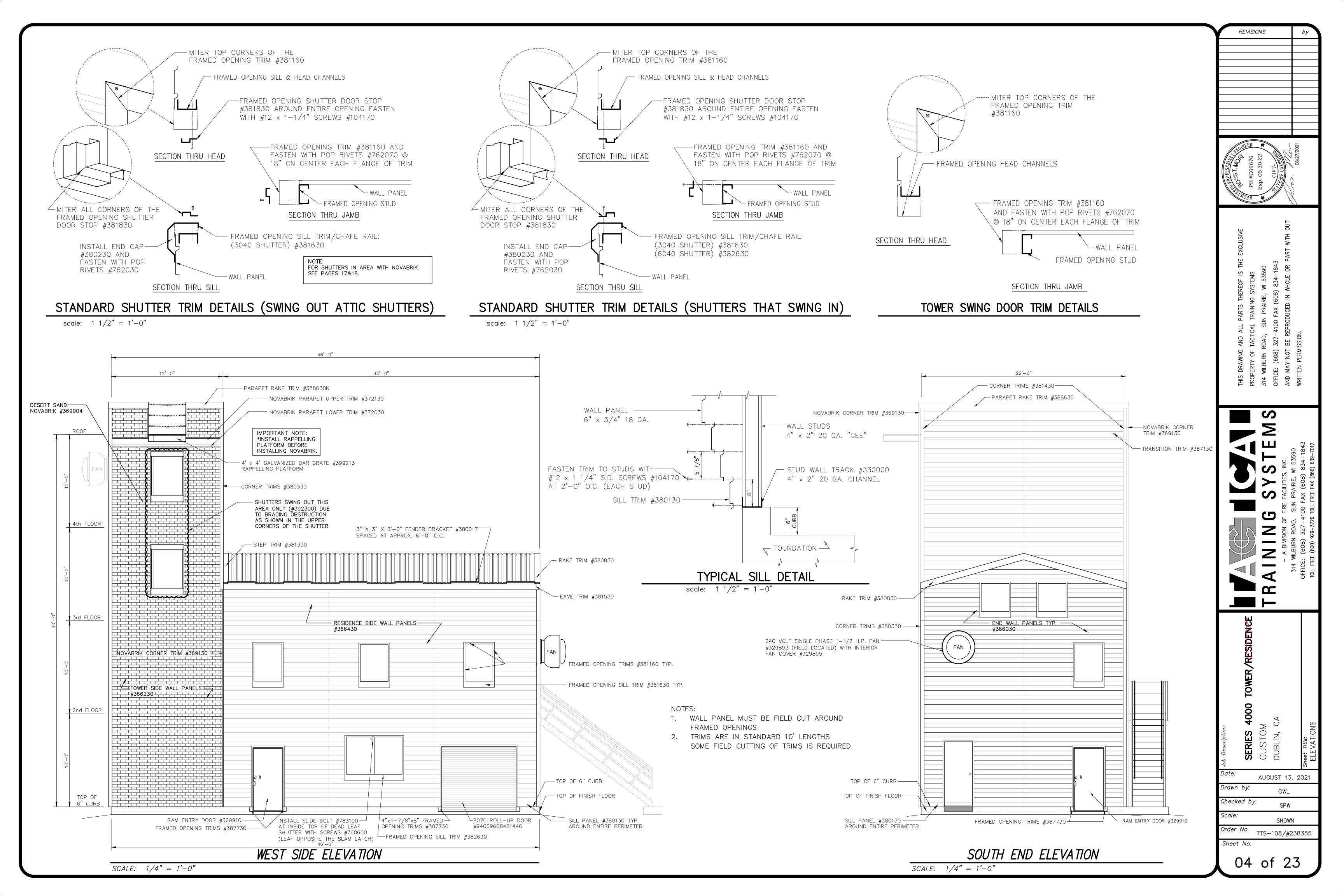
SERIES 46 CUSTOM DUBLIN, CA

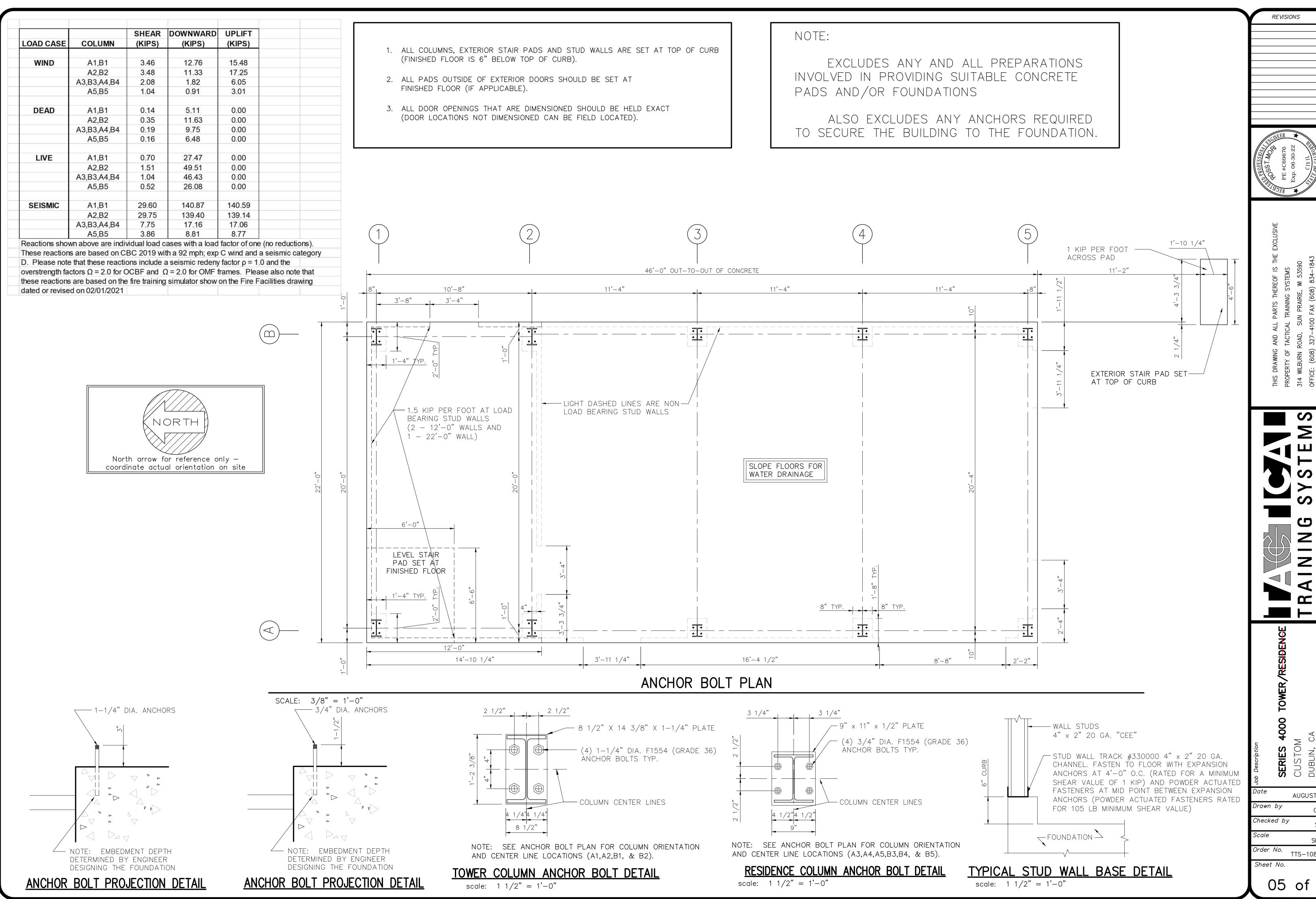
AUGUST 13, 2021 Drawn by: Checked by: SPW SHOWN

Scale: TTS-108/#238355 Sheet No.



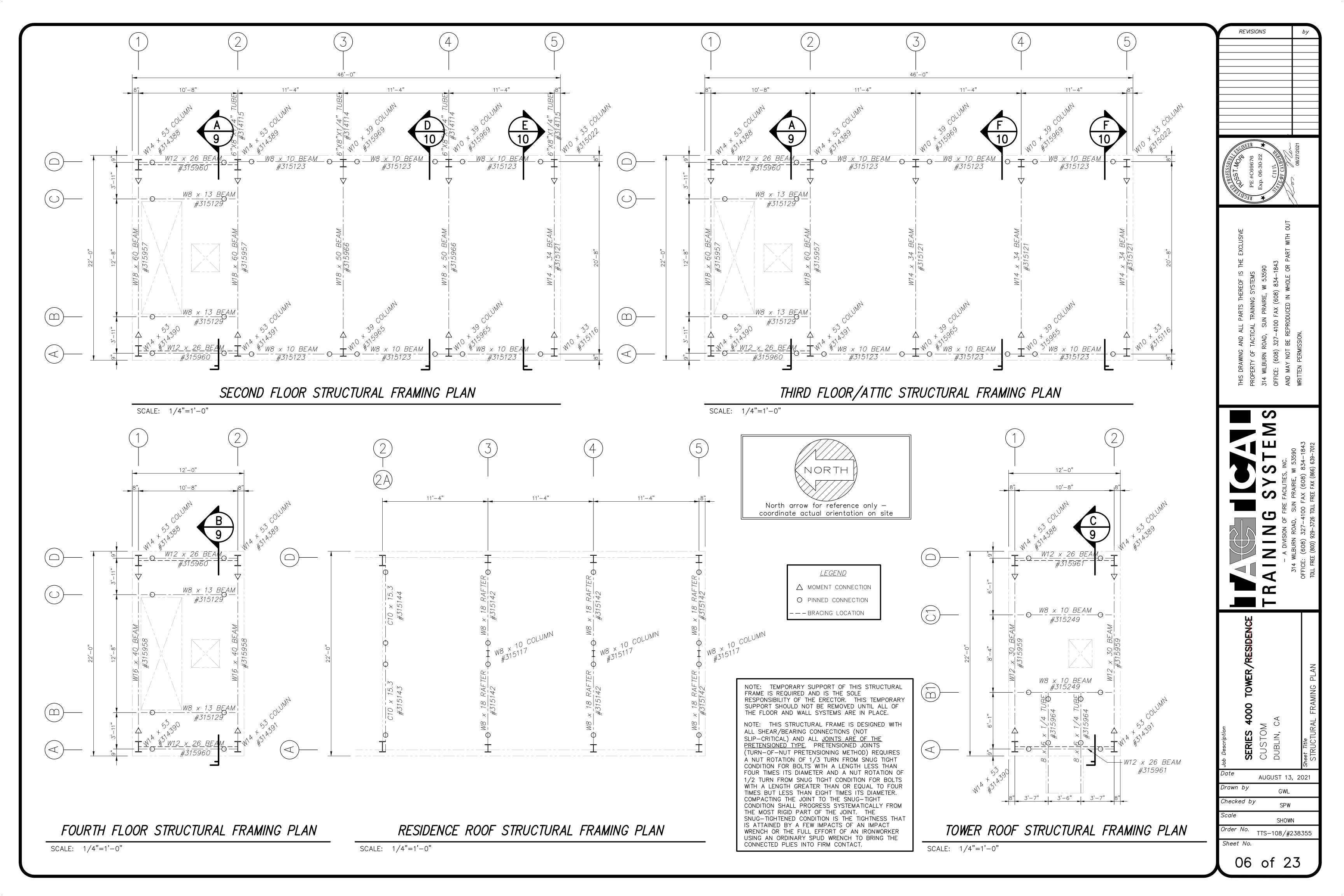


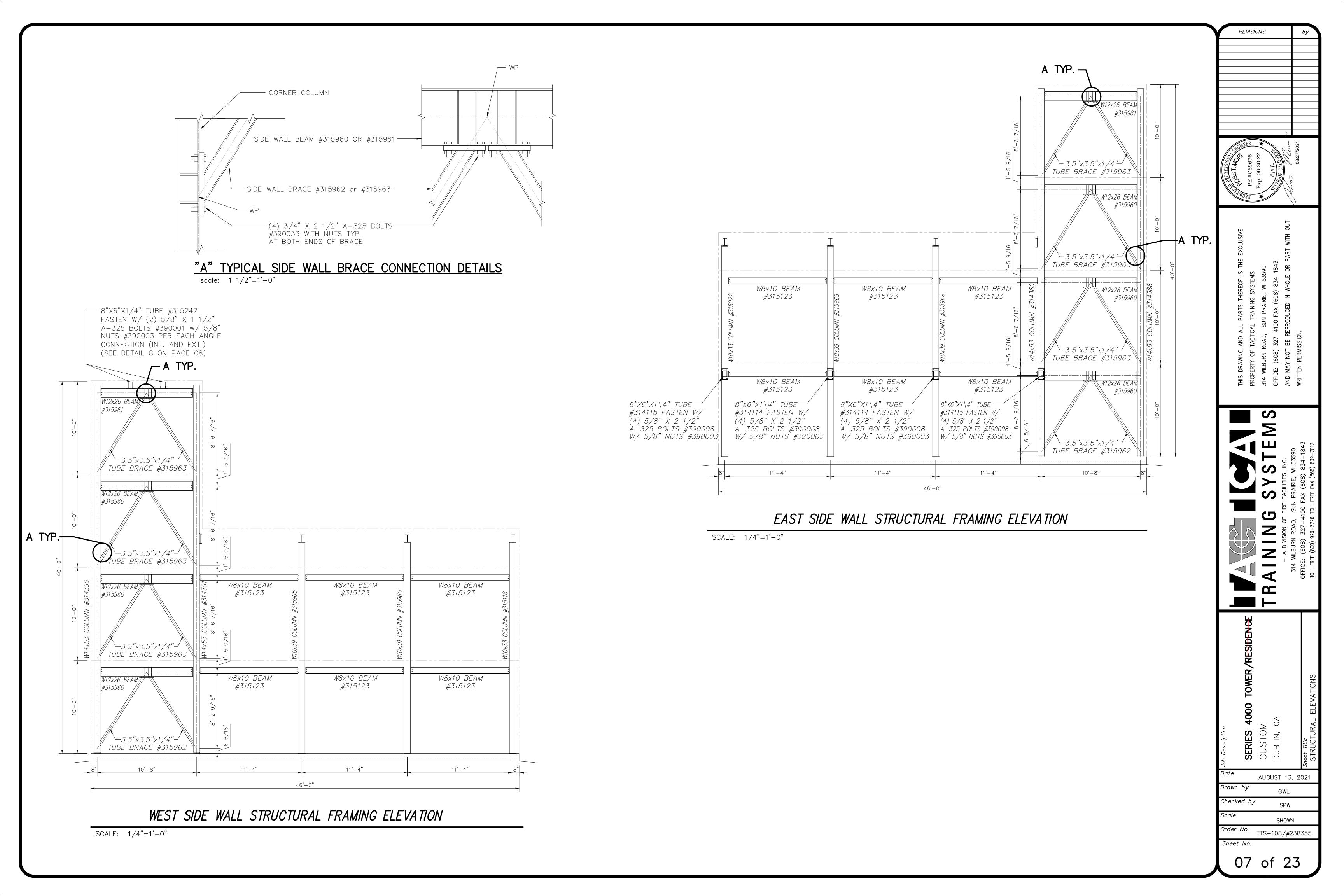


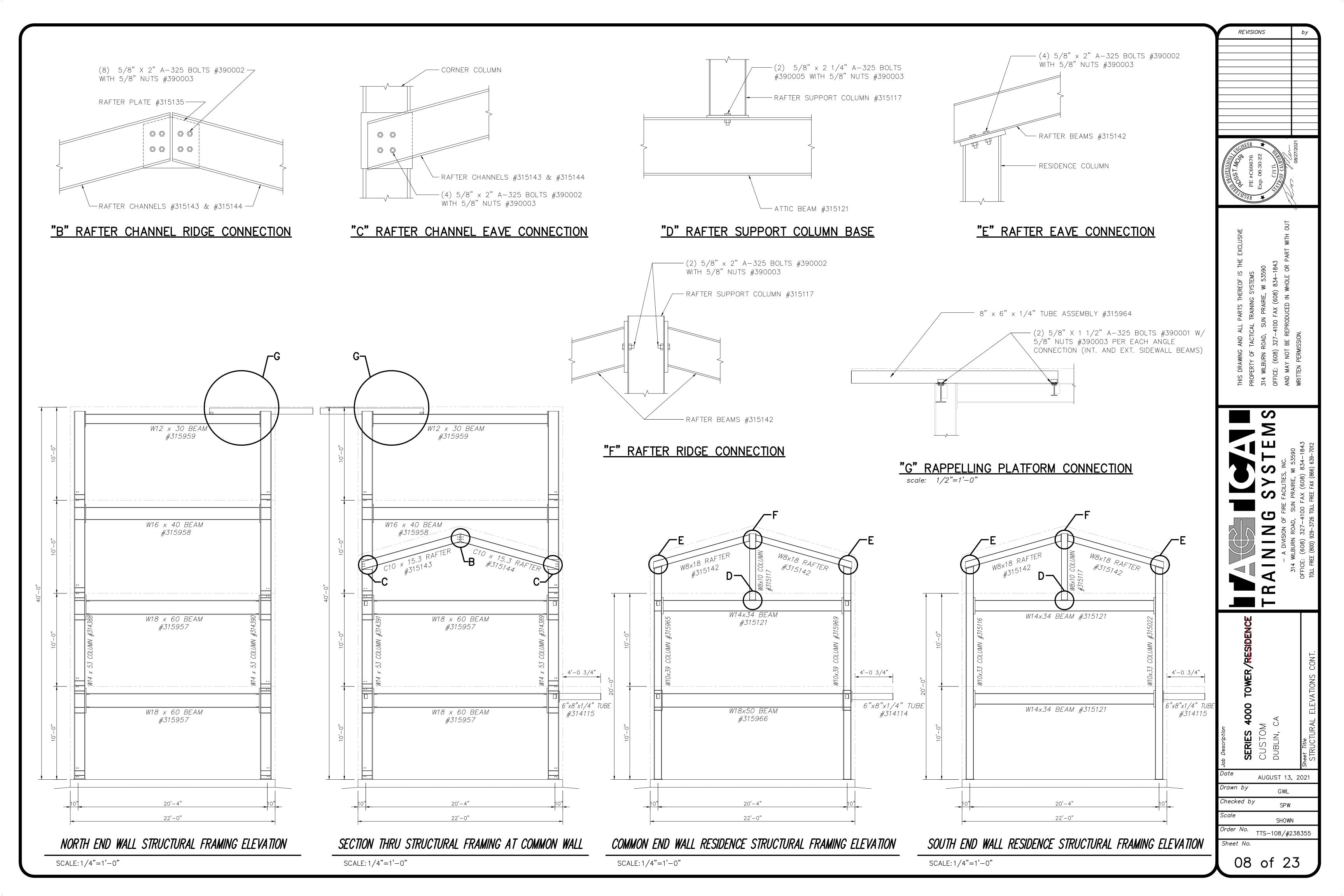


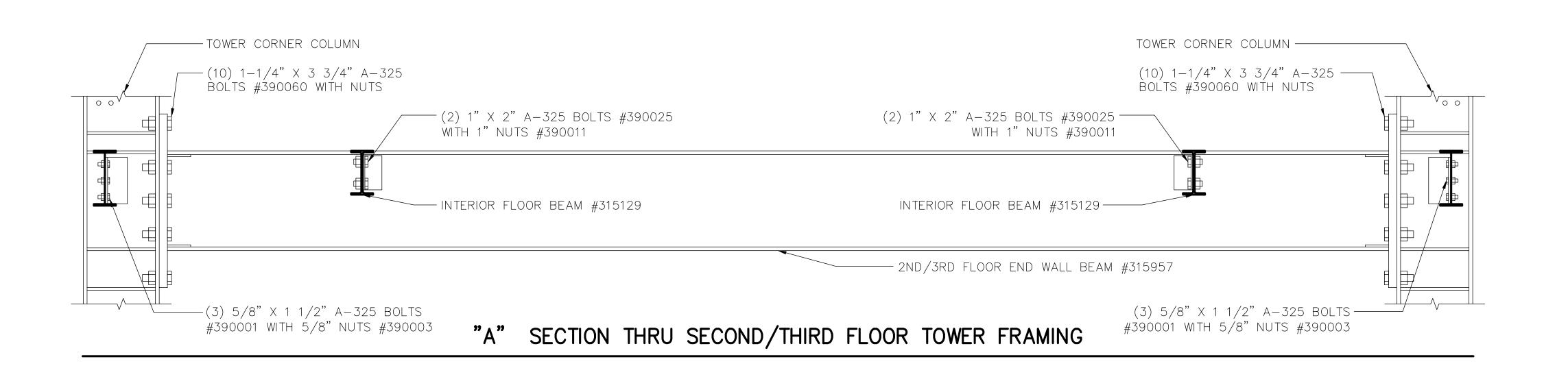
AUGUST 13, 2021 GWL SPW

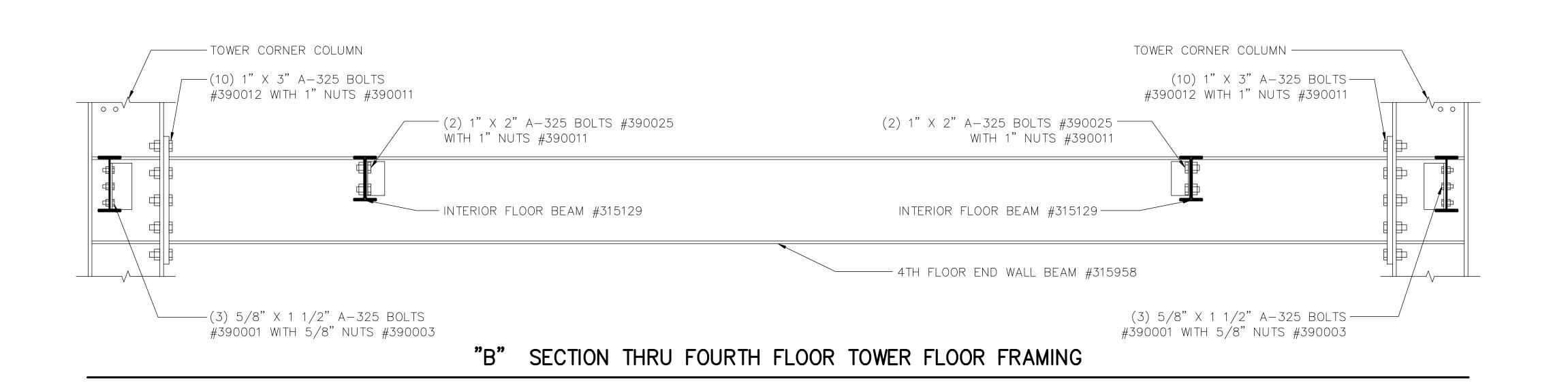
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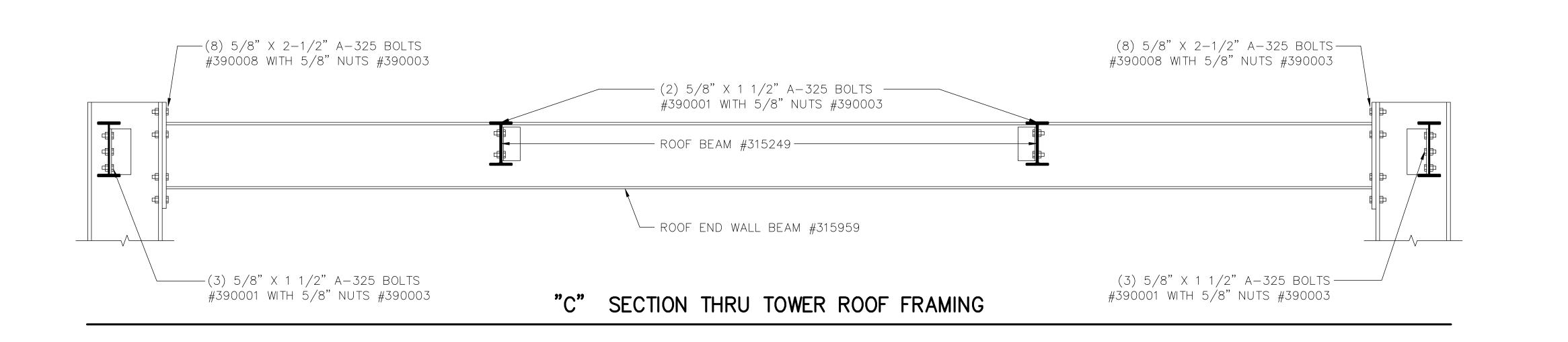


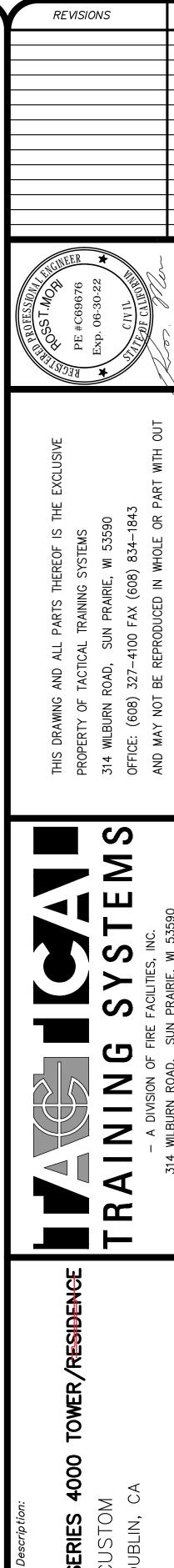










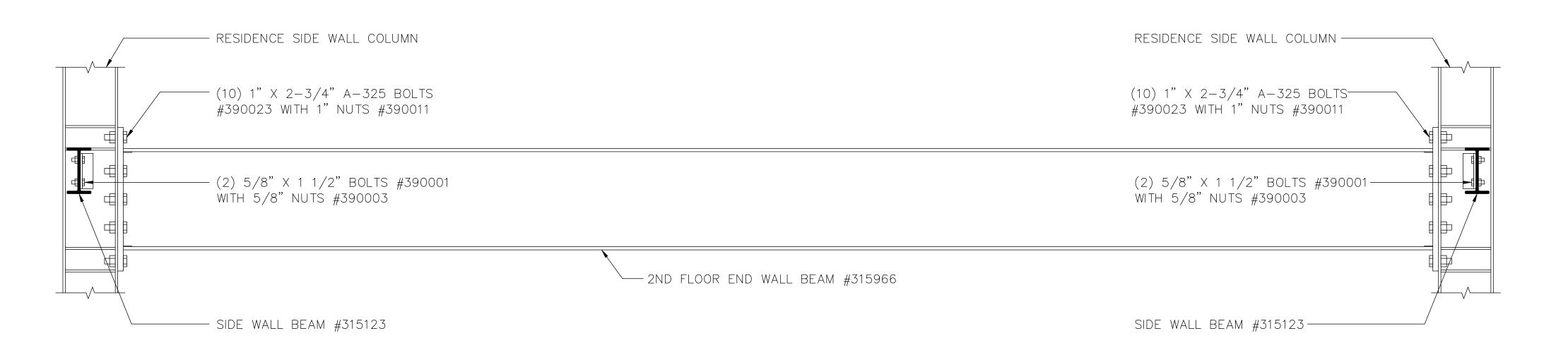


AUGUST 13, 2021

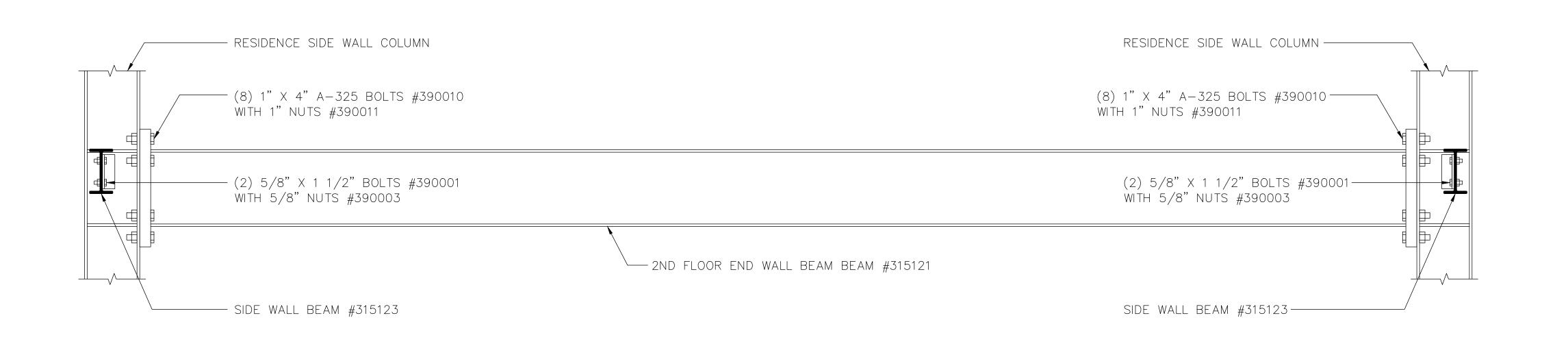
GWL SPW

SHOWN Order No. TTS-108/#238355

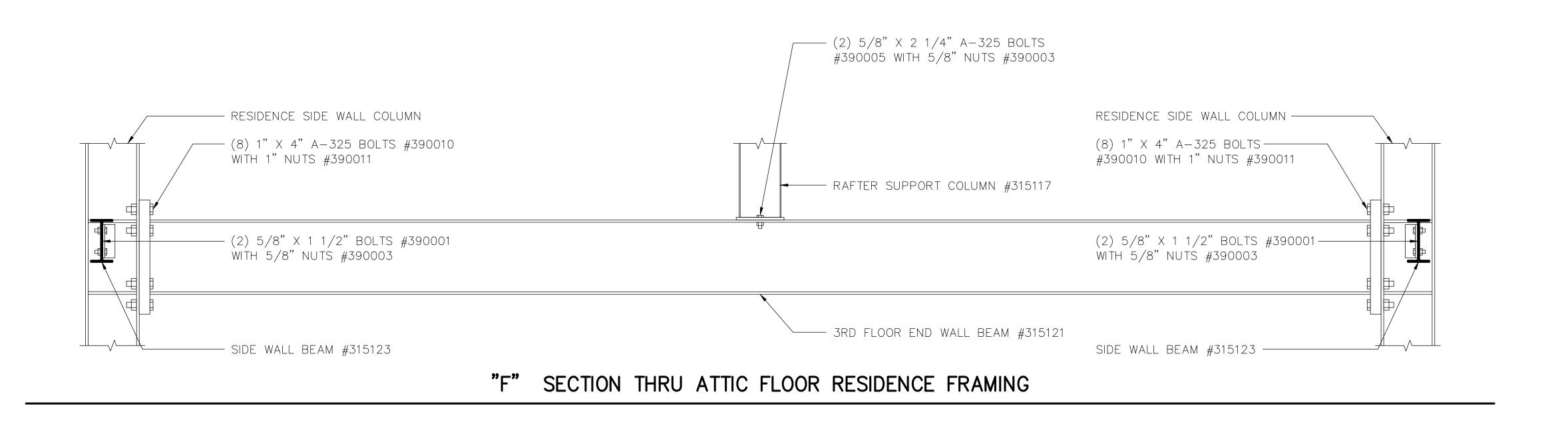
Sheet No.



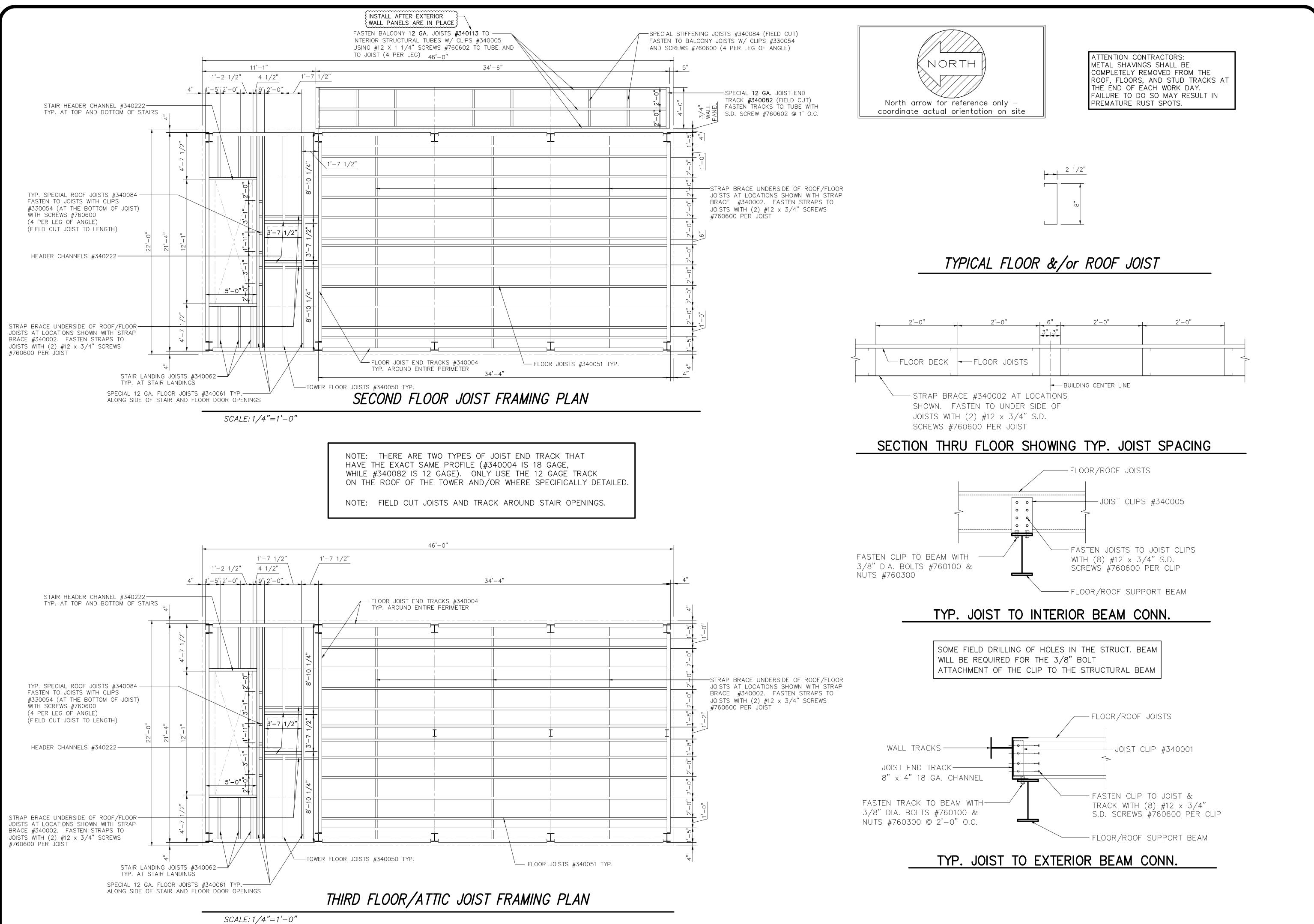
# "D" SECTION THRU INTERIOR SECOND FLOOR RESIDENCE FRAMING



### "E" SECTION THRU SECOND FLOOR END RESIDENCE FRAMING





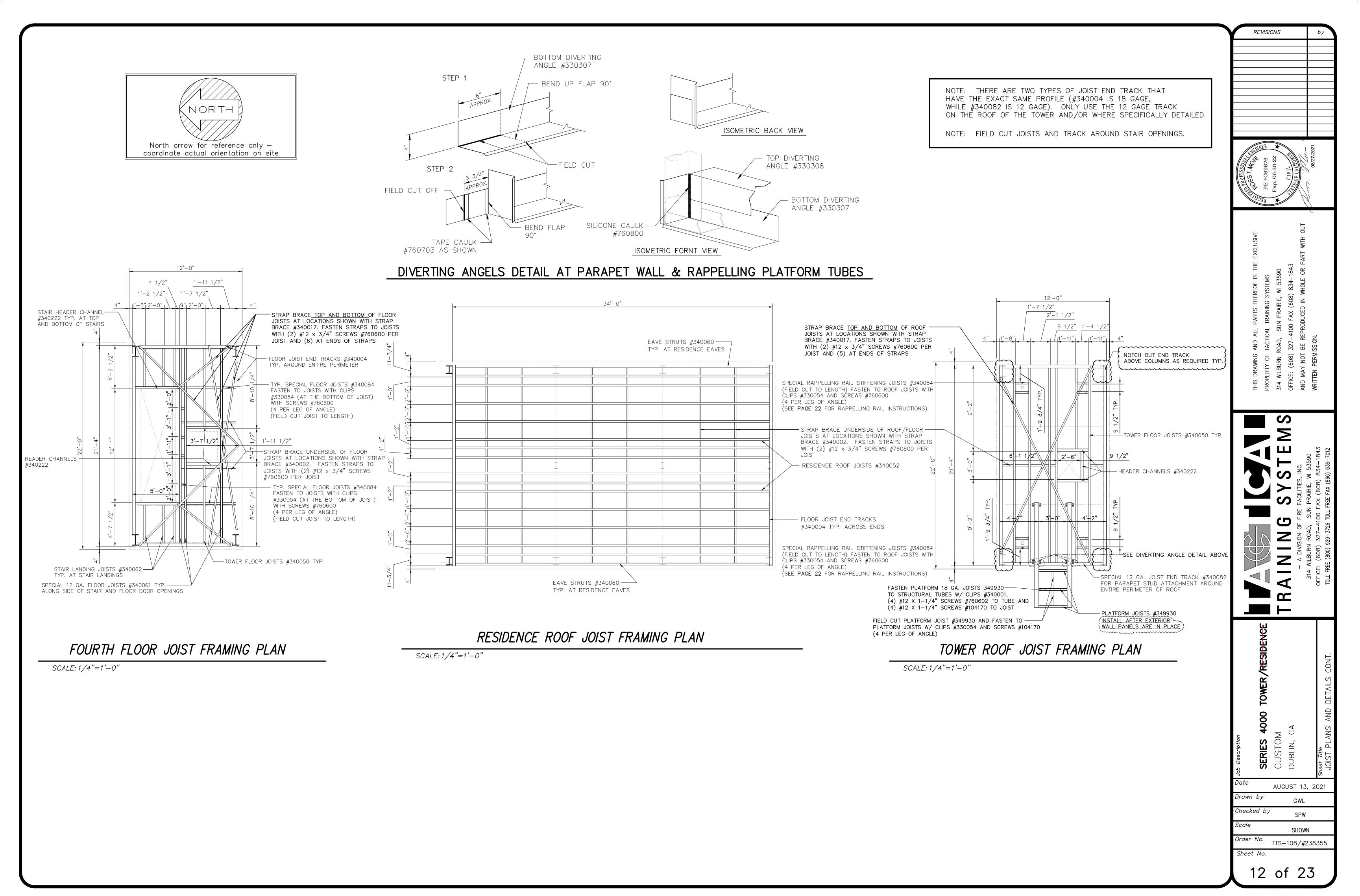


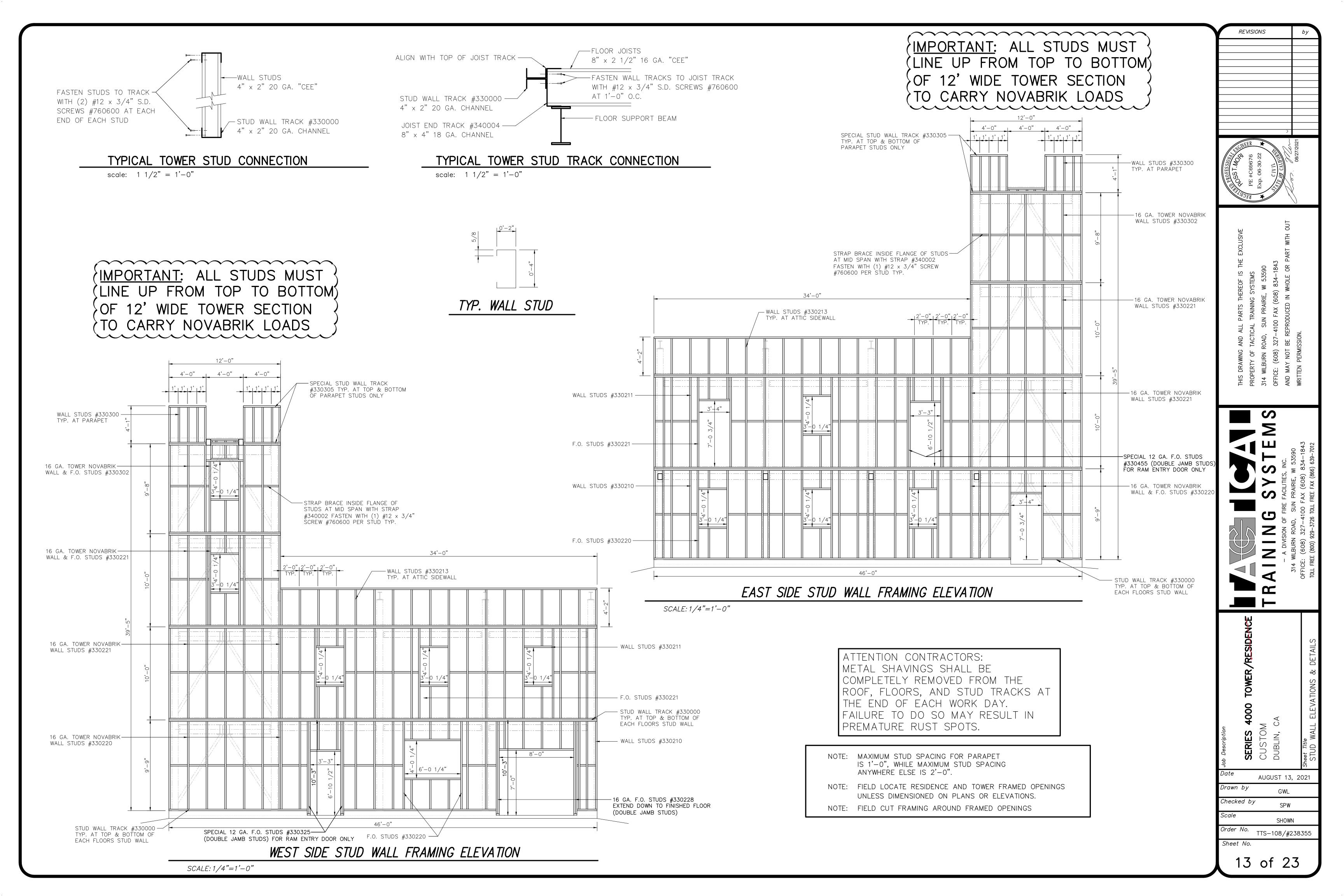
REVISIONS

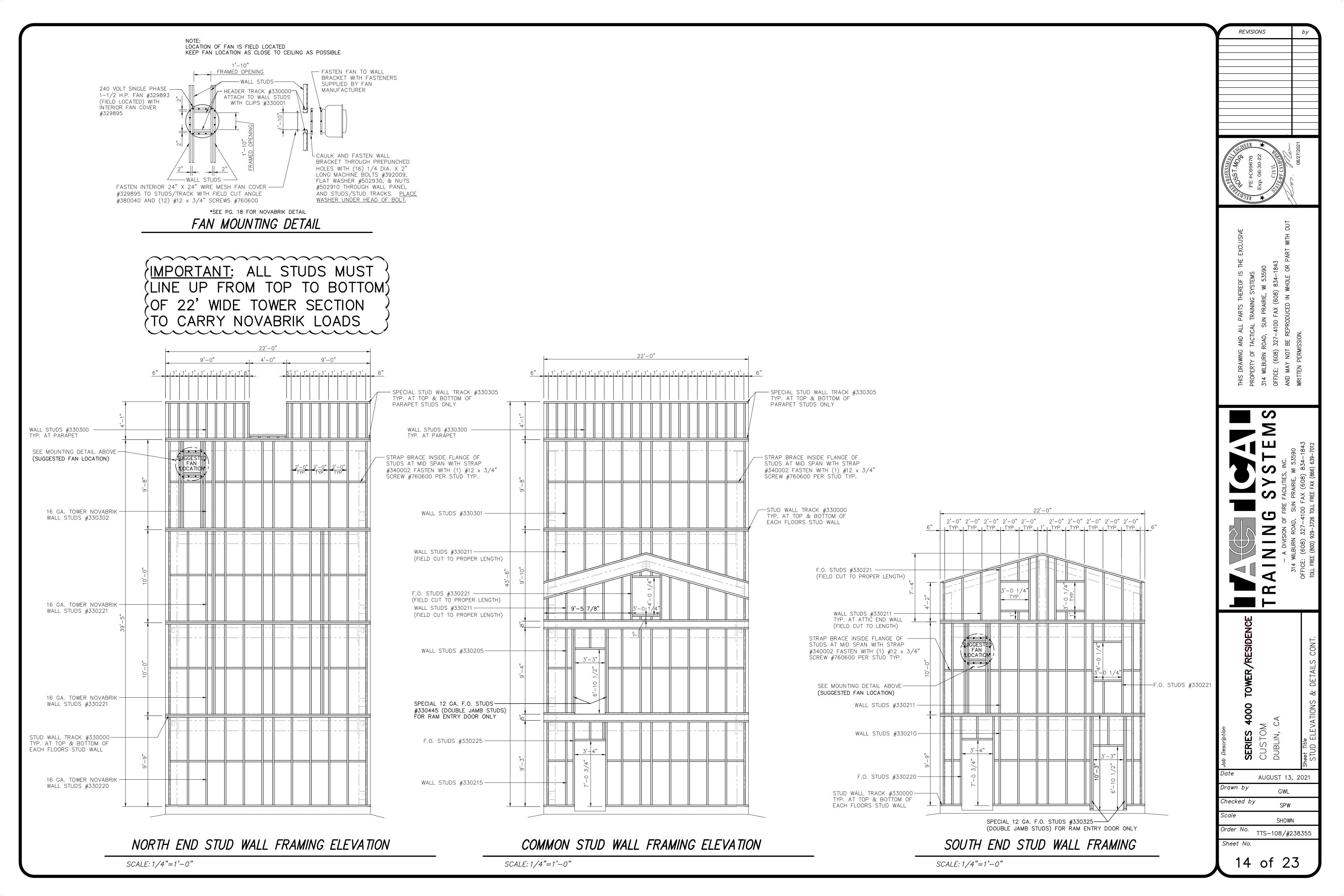
AUGUST 13, 2021 Drawn by GWL

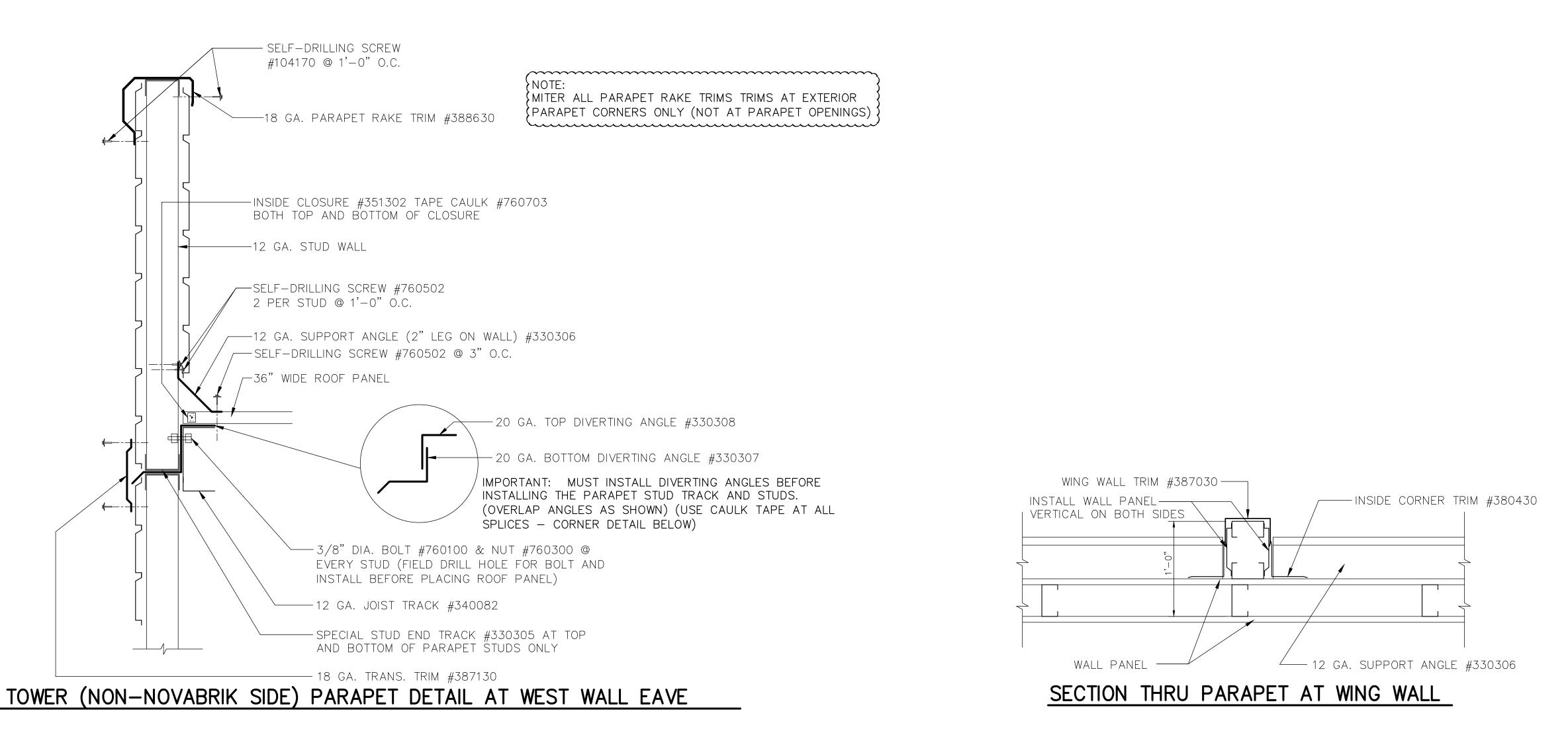
Checked by SPW SHOWN

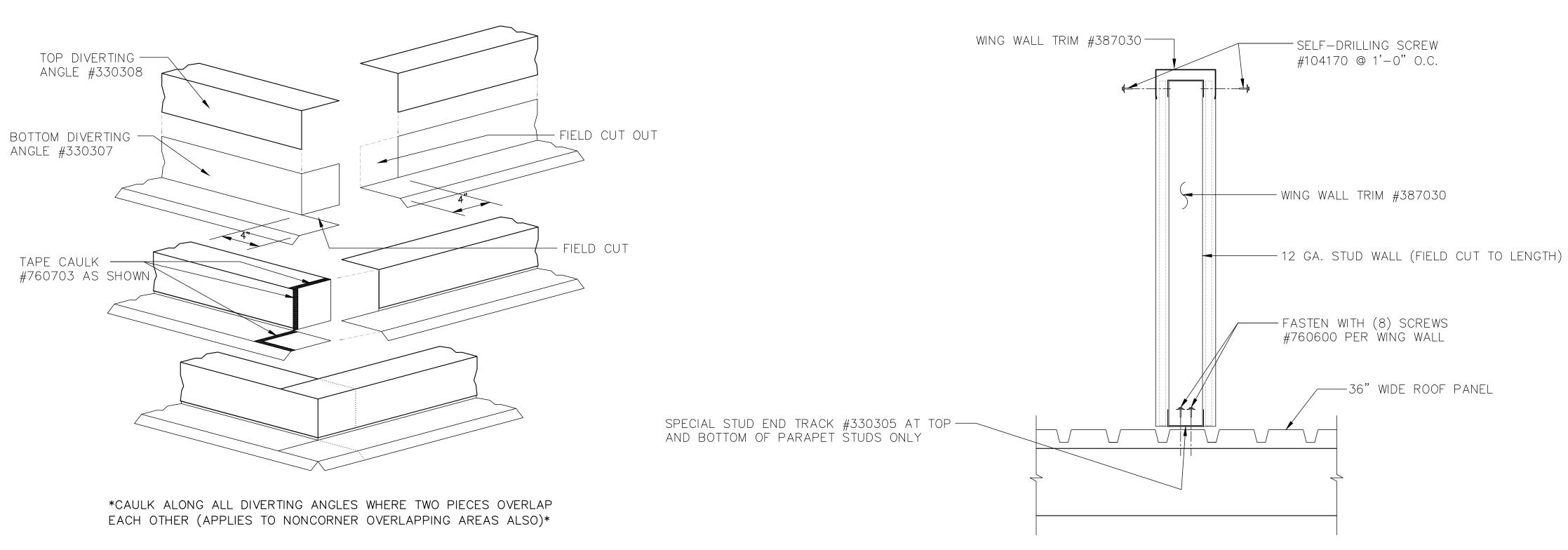
TTS-108/#238355 Sheet No.











DIVERTING ANGELS/CAULK TAPE DETAIL AT CORNER OF BUILDING

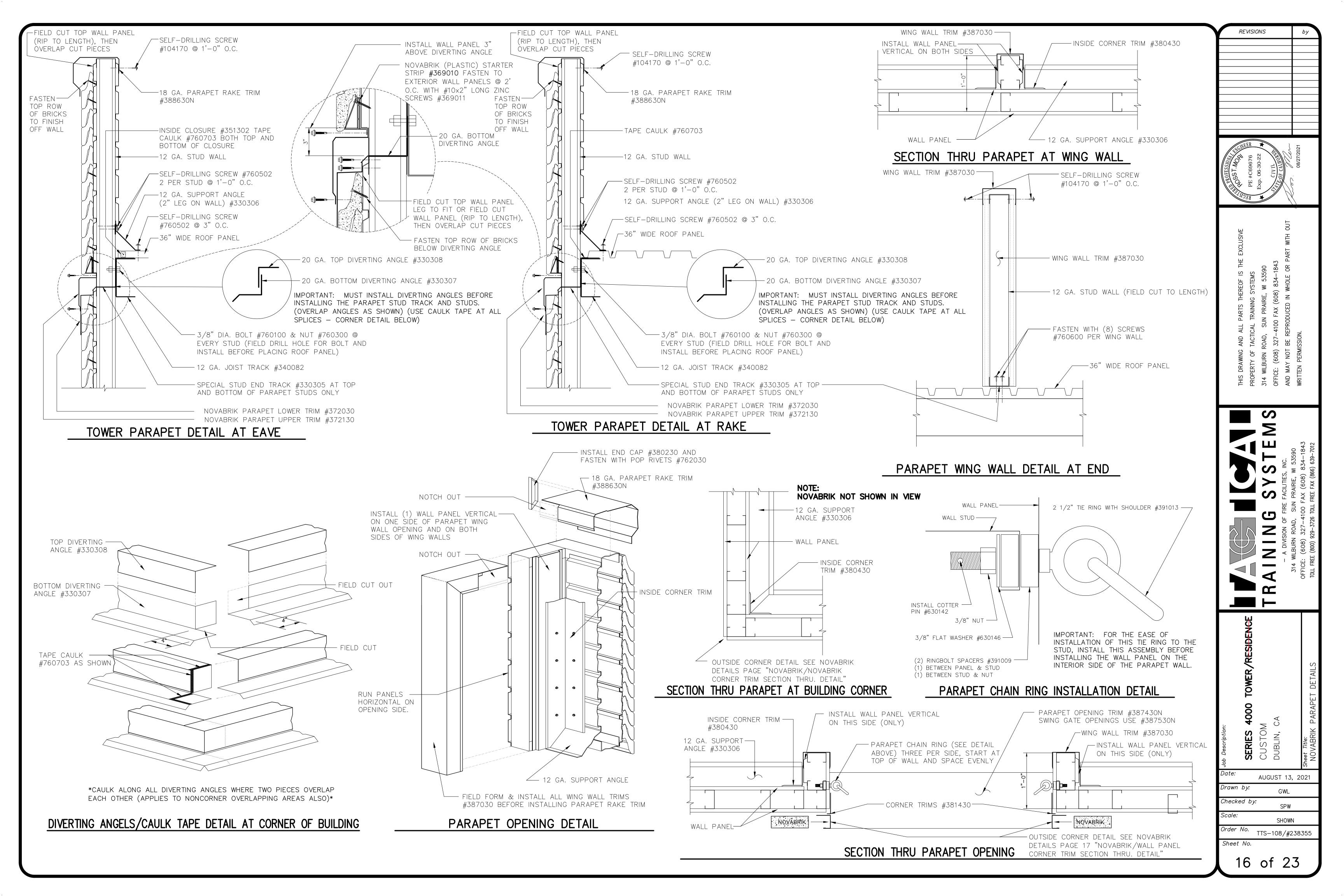
PARAPET WING WALL DETAIL AT END

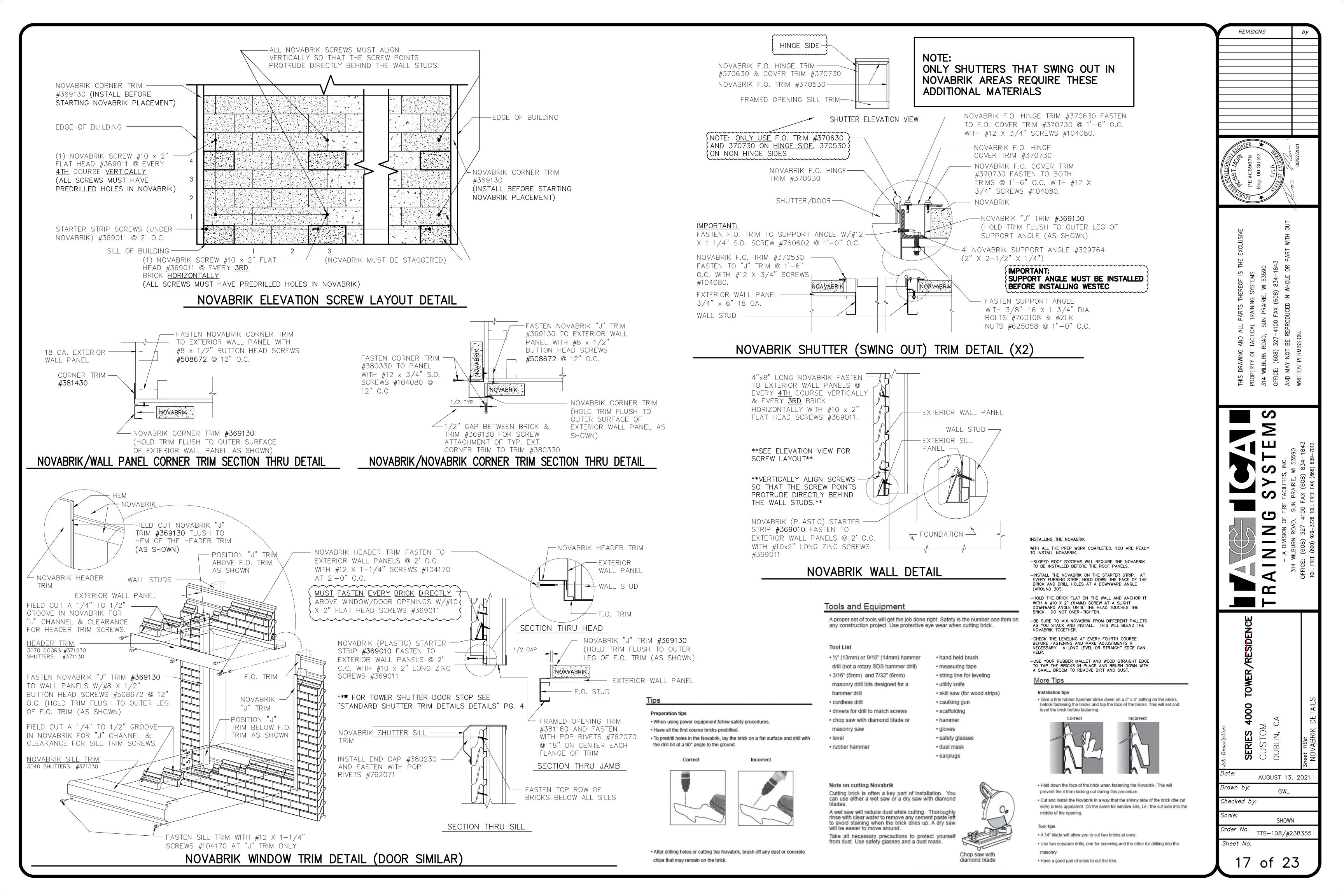
REVISIONS

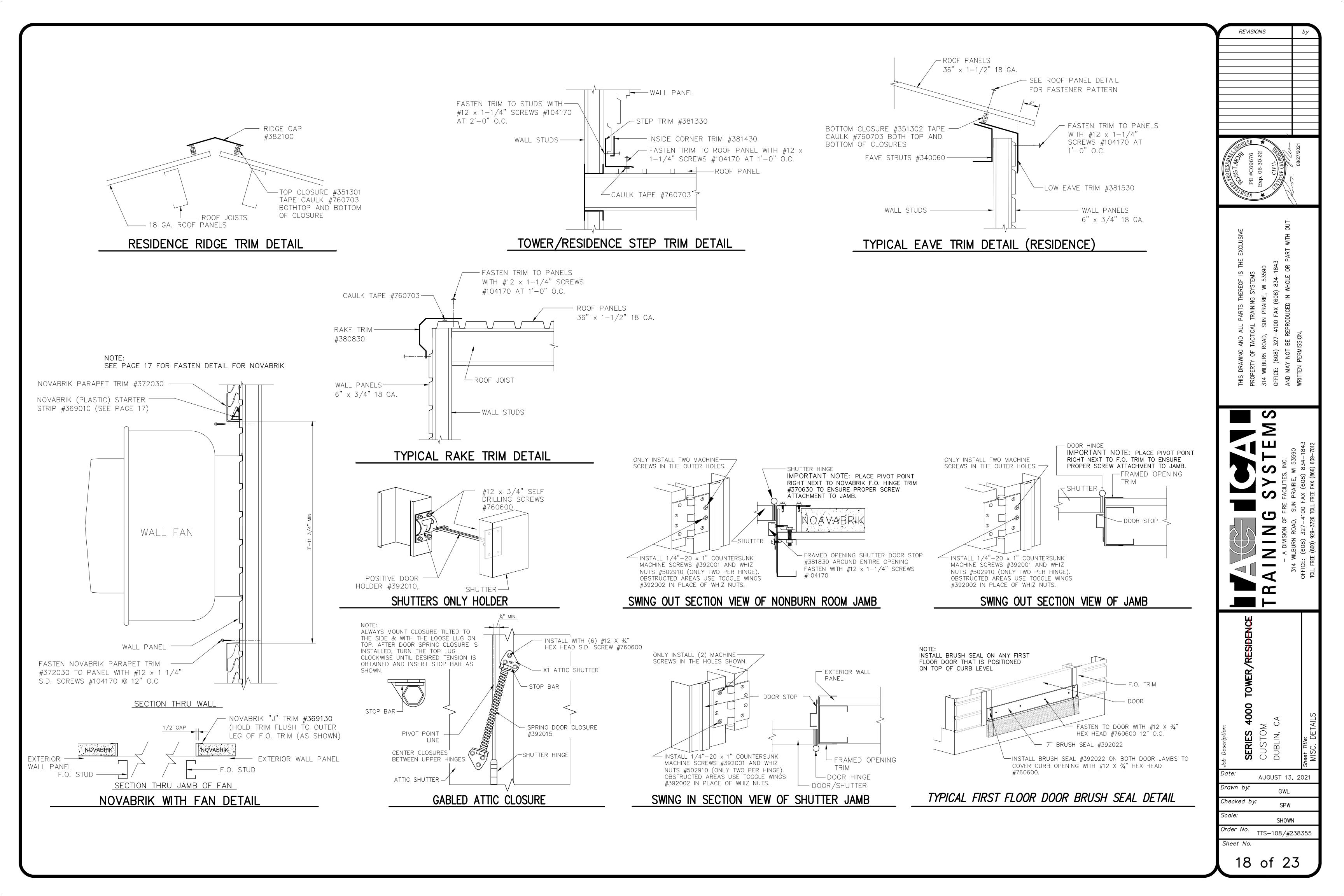
AUGUST 13, 2021 Drawn by: GWL Checked by: SPW

SHOWN Order No. TTS-108/#238355

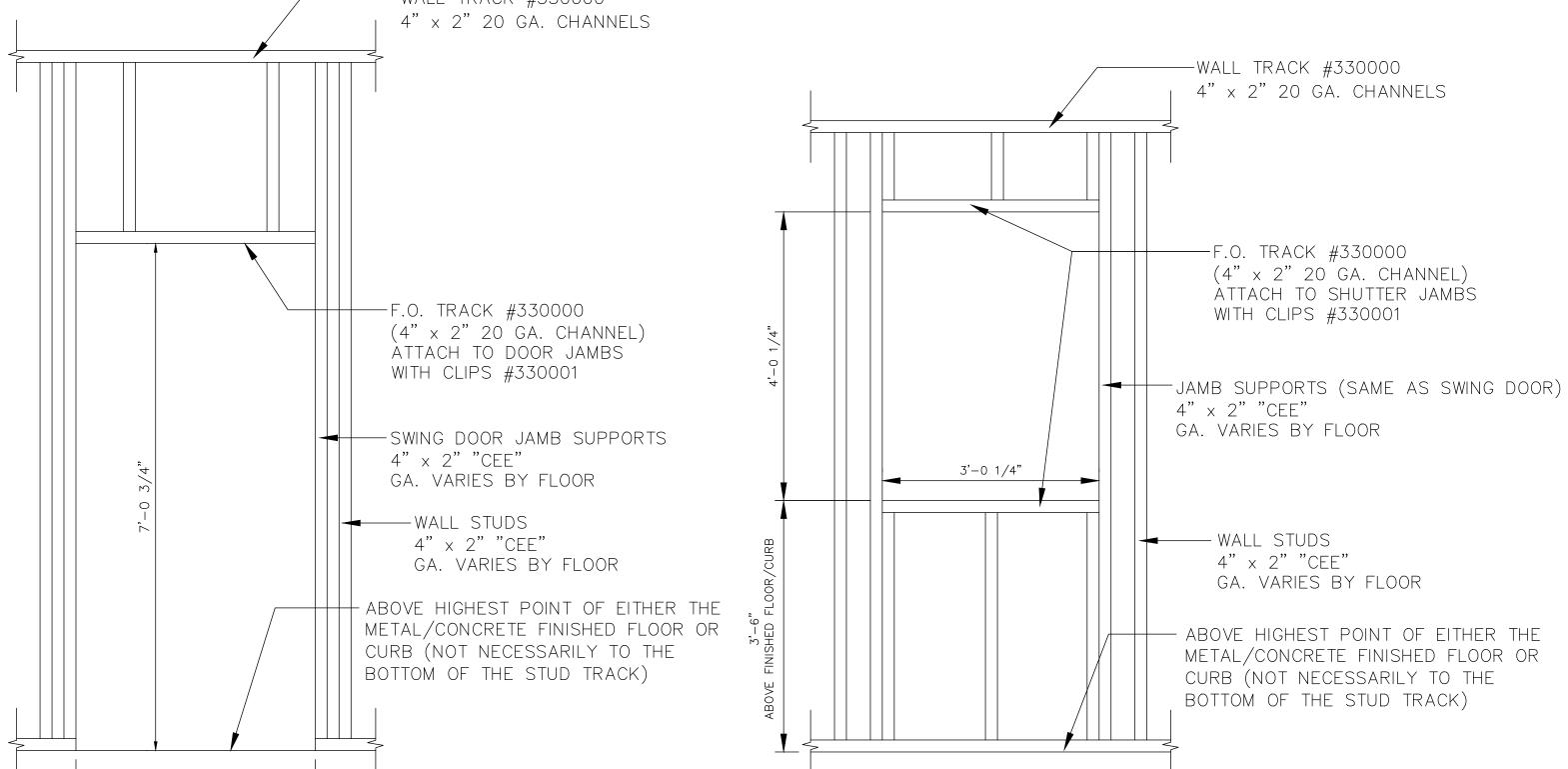
Sheet No. 15 of 23







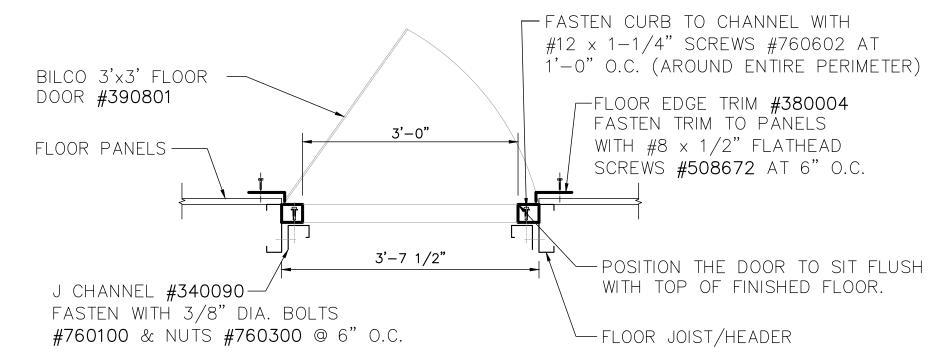
# NOTE: FRAMED OPENING FRAMING WILL REQUIRE SOME FIELD CUTTING WALL TRACK #330000 4" x 2" 20 GA. CHANNELS WALL TRACK #330000 4" x 2" 20 GA. CHANNELS



TYPICAL TOWER SWING DOOR

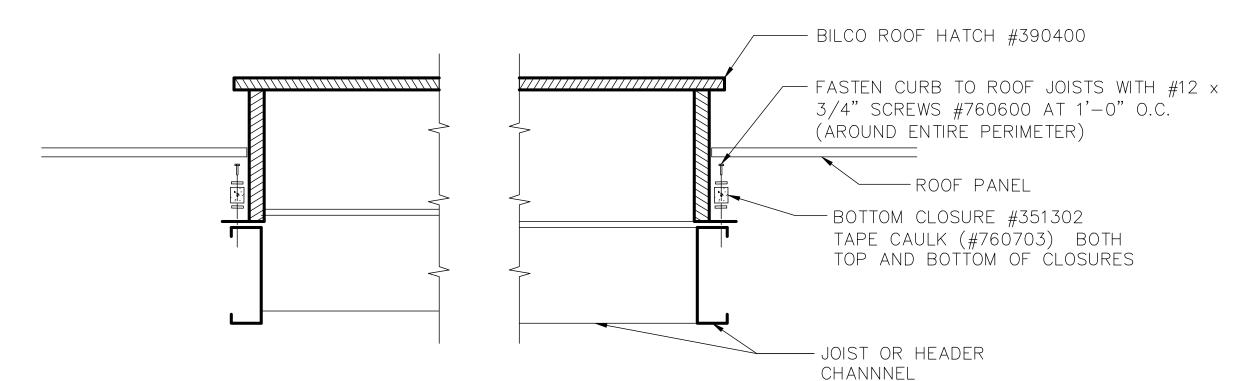
FRAMED OPENING ELEVATION

TYPICAL TOWER WINDOW/SHUTTER FRAMED OPENING ELEVATION

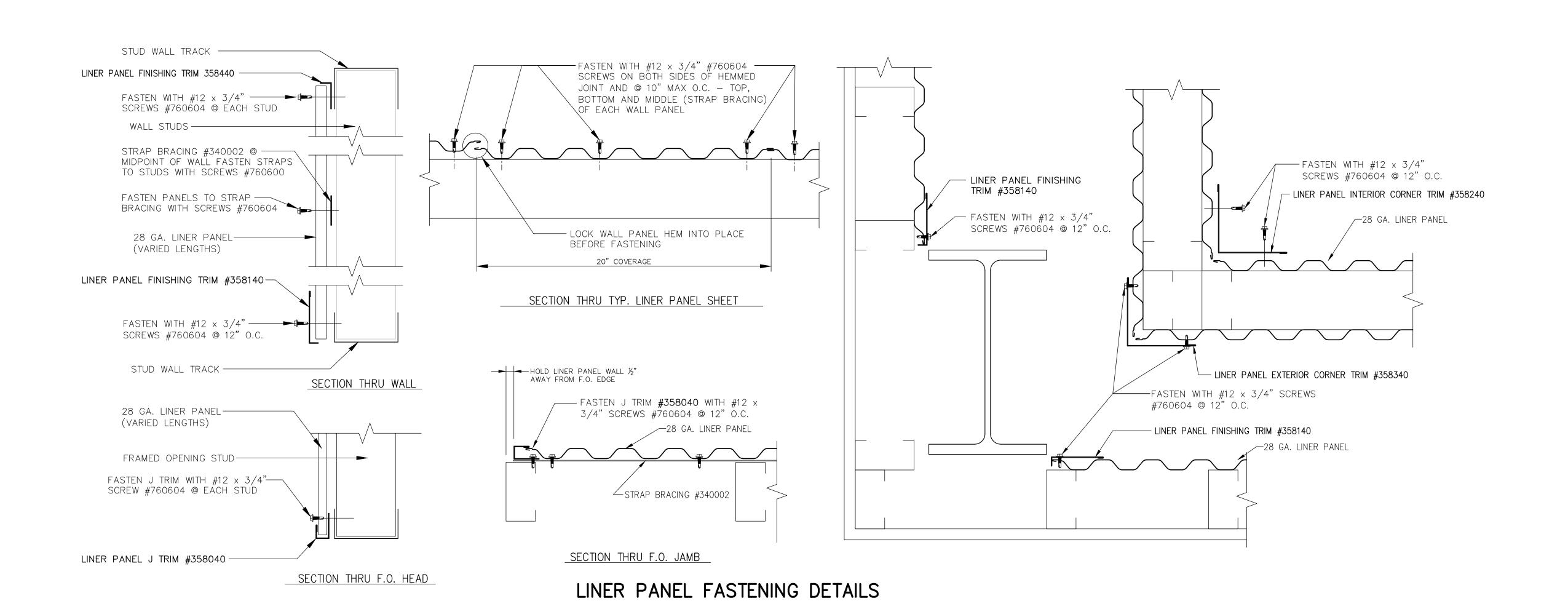


3'x3' BILCO FLOOR DOOR DETAIL (X3)

scale: 3/4" = 1'-0"



BILCO ROOF HATCH INSTALLATION DETAIL



SIVE

EXP. 06-30-22

H OUT

O8/27/2021

REVISIONS

PROPERTY OF TACTICAL TRAINING SYSTEMS
314 WILBURN ROAD, SUN PRAIRIE, WI 53590
OFFICE: (608) 327-4100 FAX (608) 834-1843
AND MAY NOT BE REPRODUCED IN WHOLE OR PART WITH OU

TRAINING SYSTEMS

- A DIVISION OF FIRE FACILITIES, INC.

SERIES 4000 TOWER/RESIDENCE
CUSTOM
DUBLIN, CA

Date.

AUGUST 13, 2021

Drawn by:

GWL

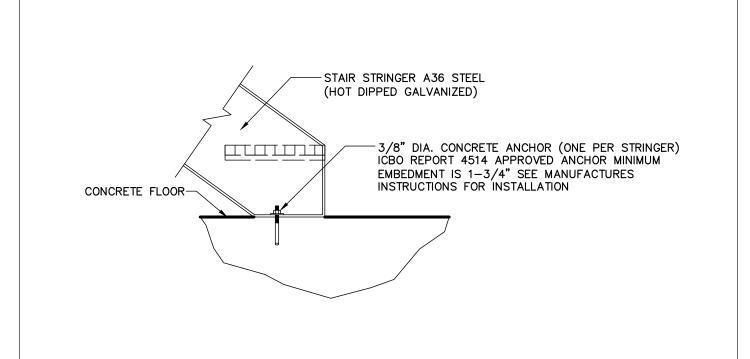
Checked by:

Spw

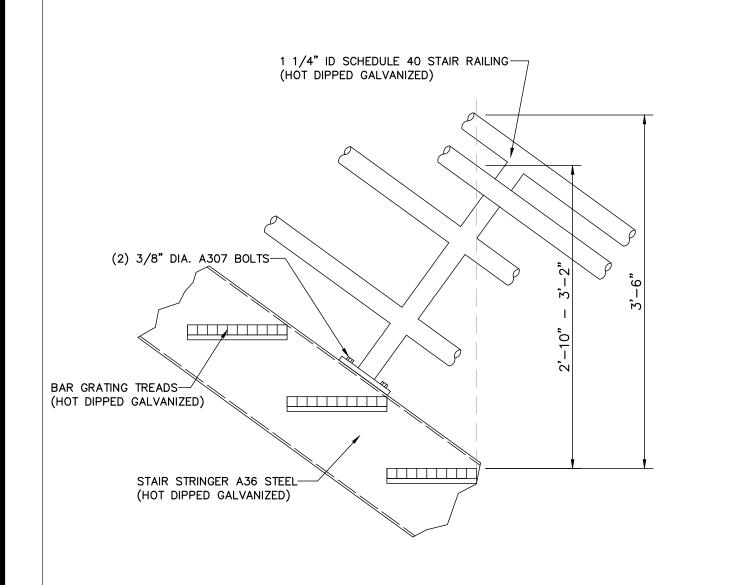
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Order No. TTS-108/#238355

Sheet No. 19 of 23

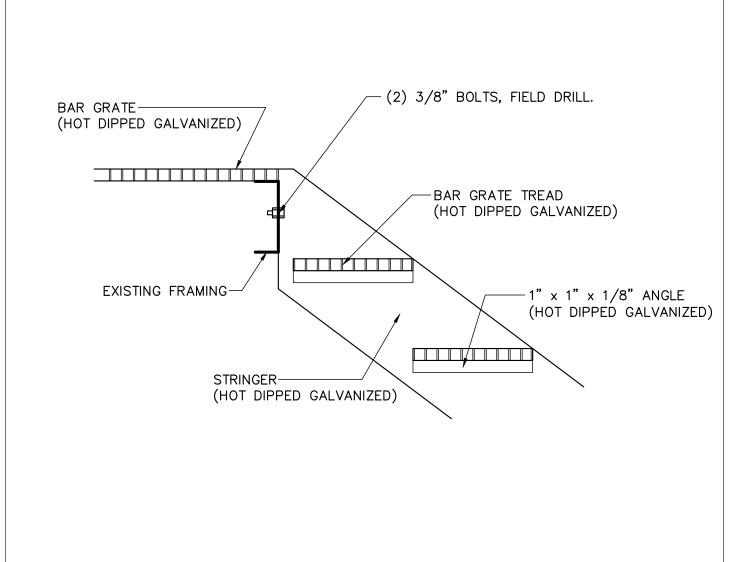


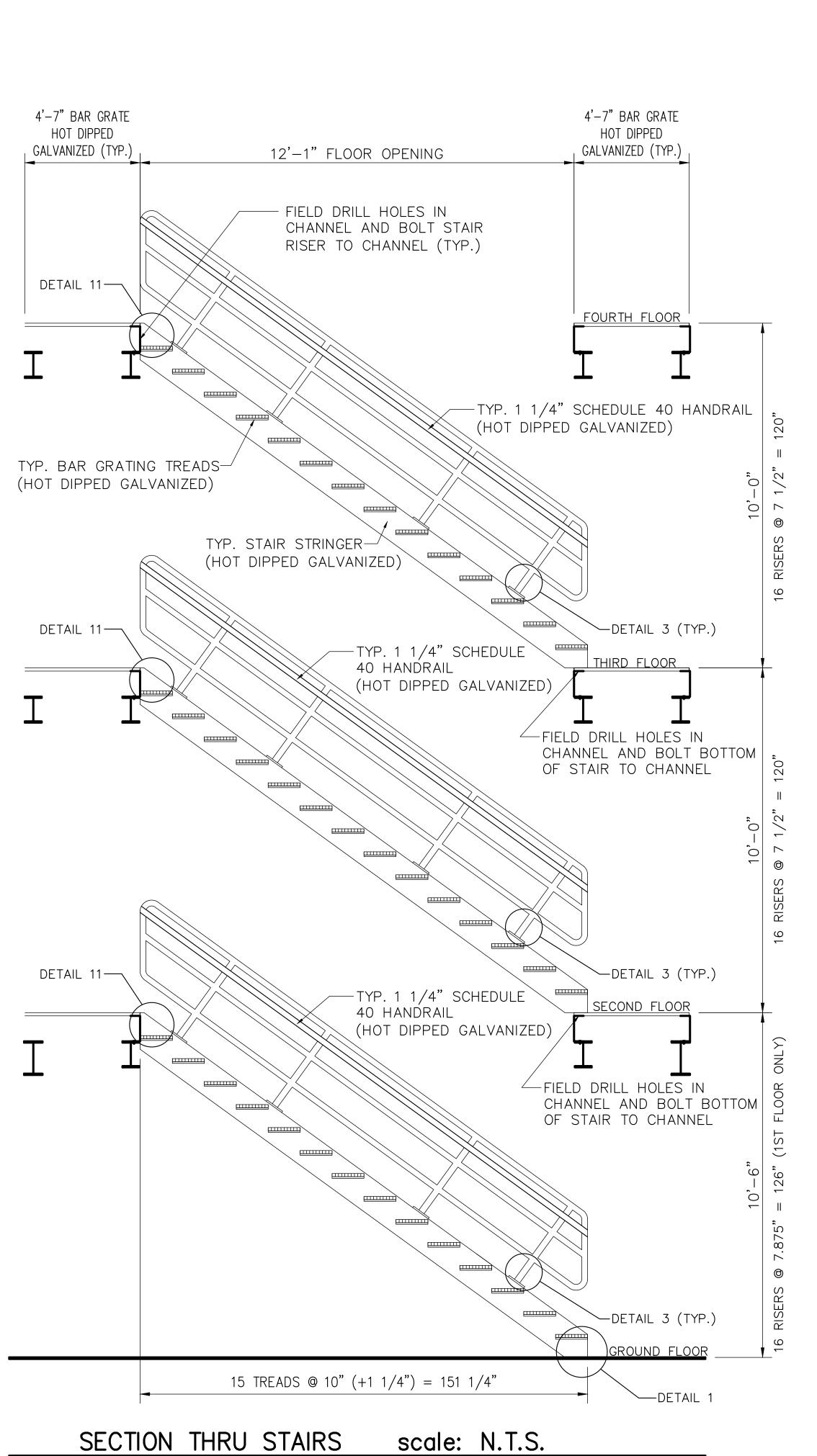
# DETAIL

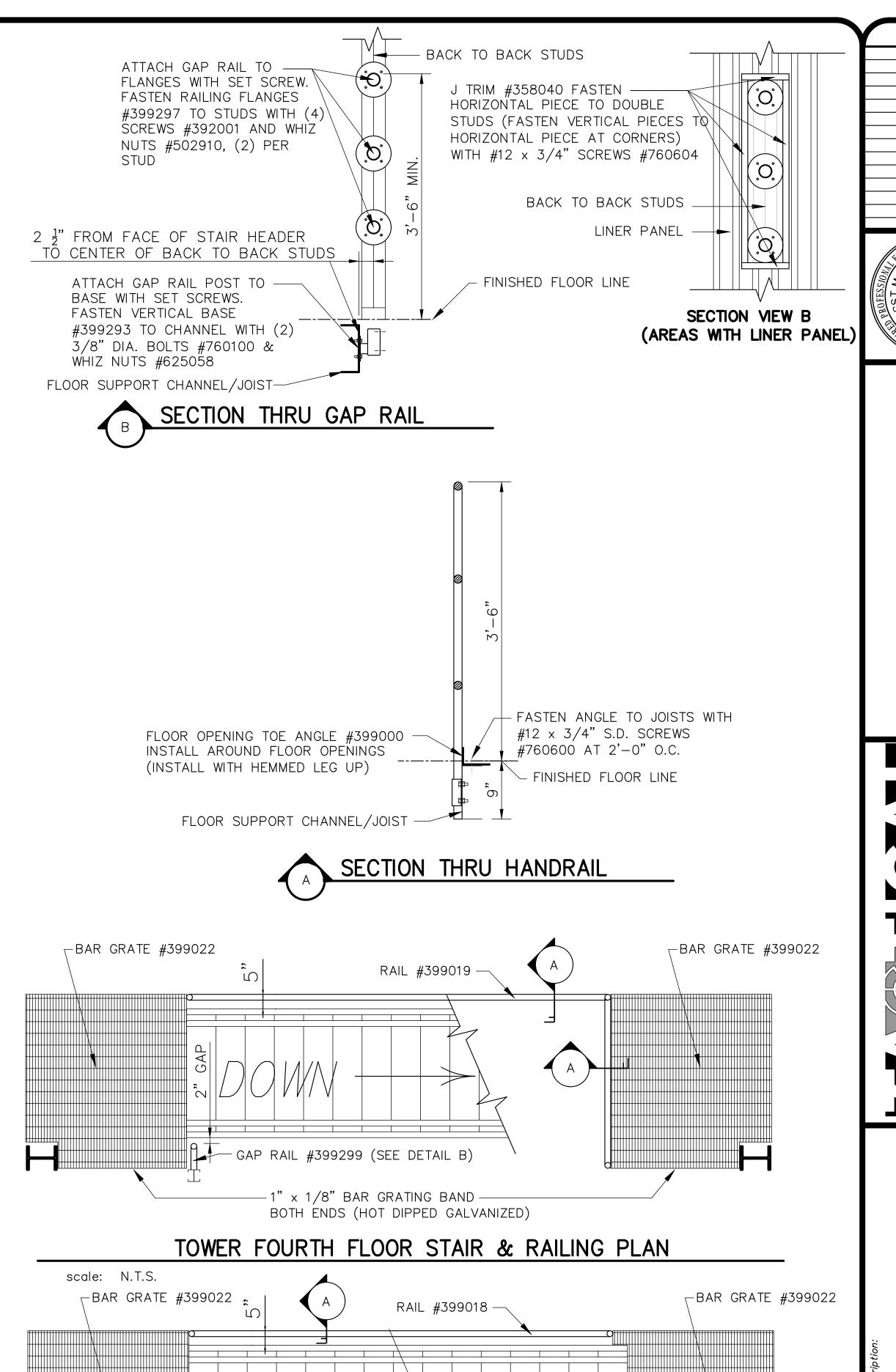


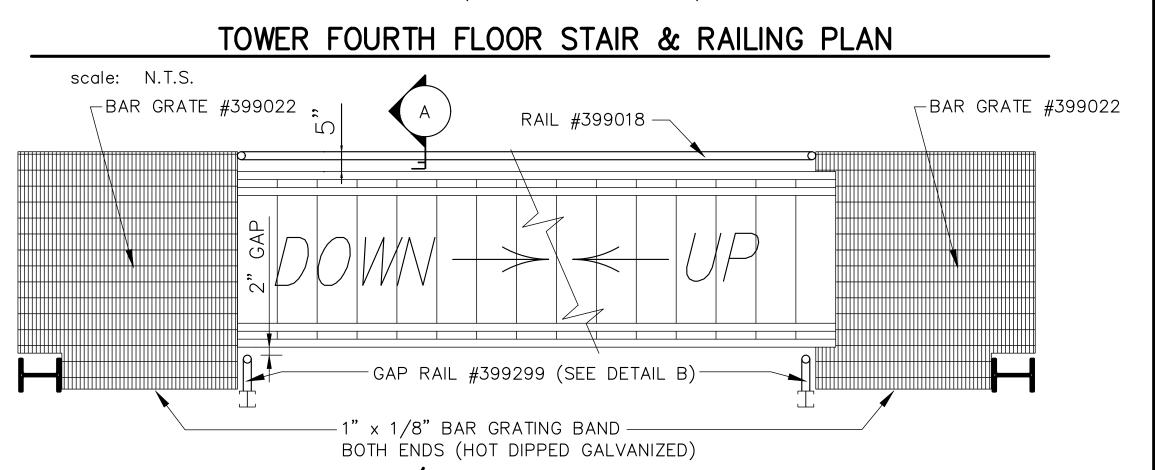
# DETAIL 3

DETAIL 11









TOWER SECOND/THIRD FLOOR STAIR & RAILING PLAN

KRESIDENCE
TRAININ

- A DIVISION C
314 WILBURN ROAD

REVISIONS

SERIES 4000 TOWER, CUSTOM DUBLIN, CA Sheet Title:

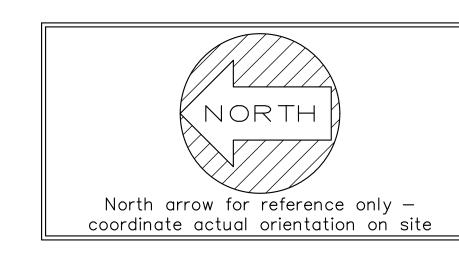
Date. AUGUST 13, 2021

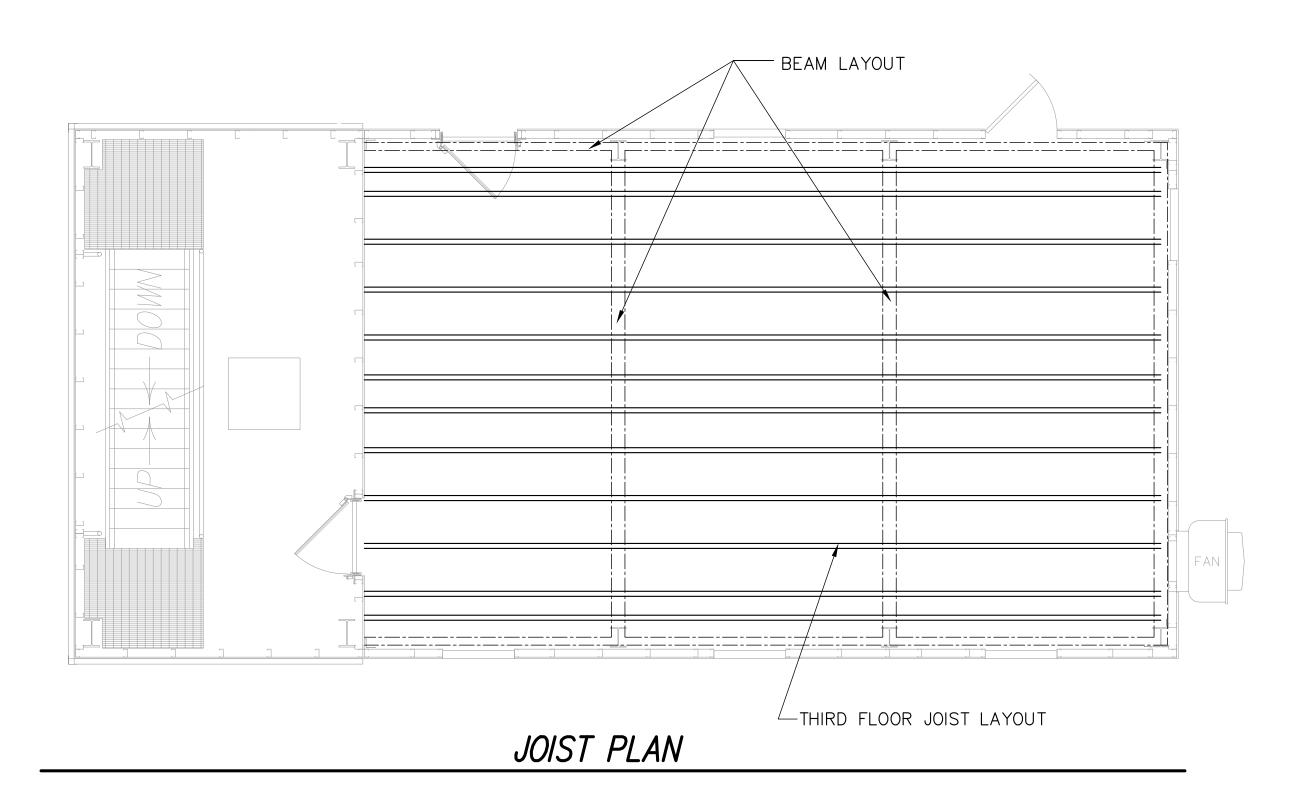
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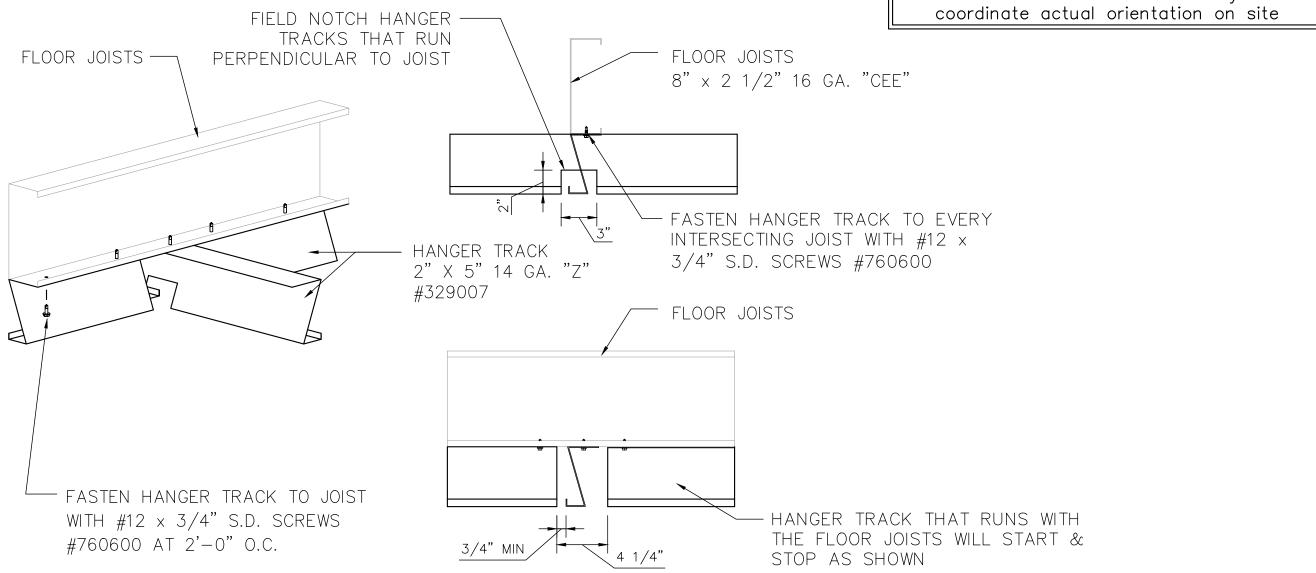
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Scale: SHOWN

TTS-108/#238355 Sheet No.



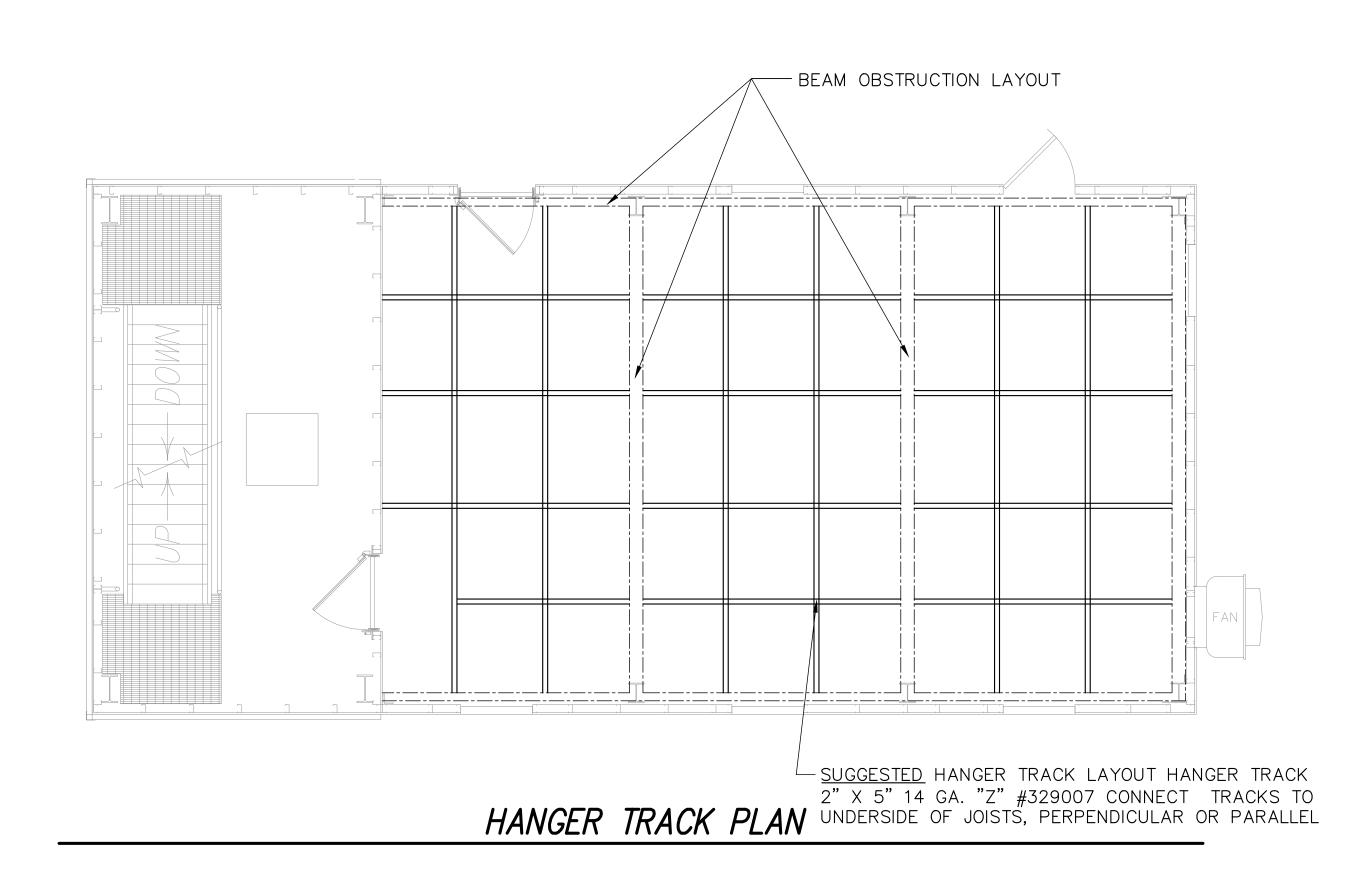


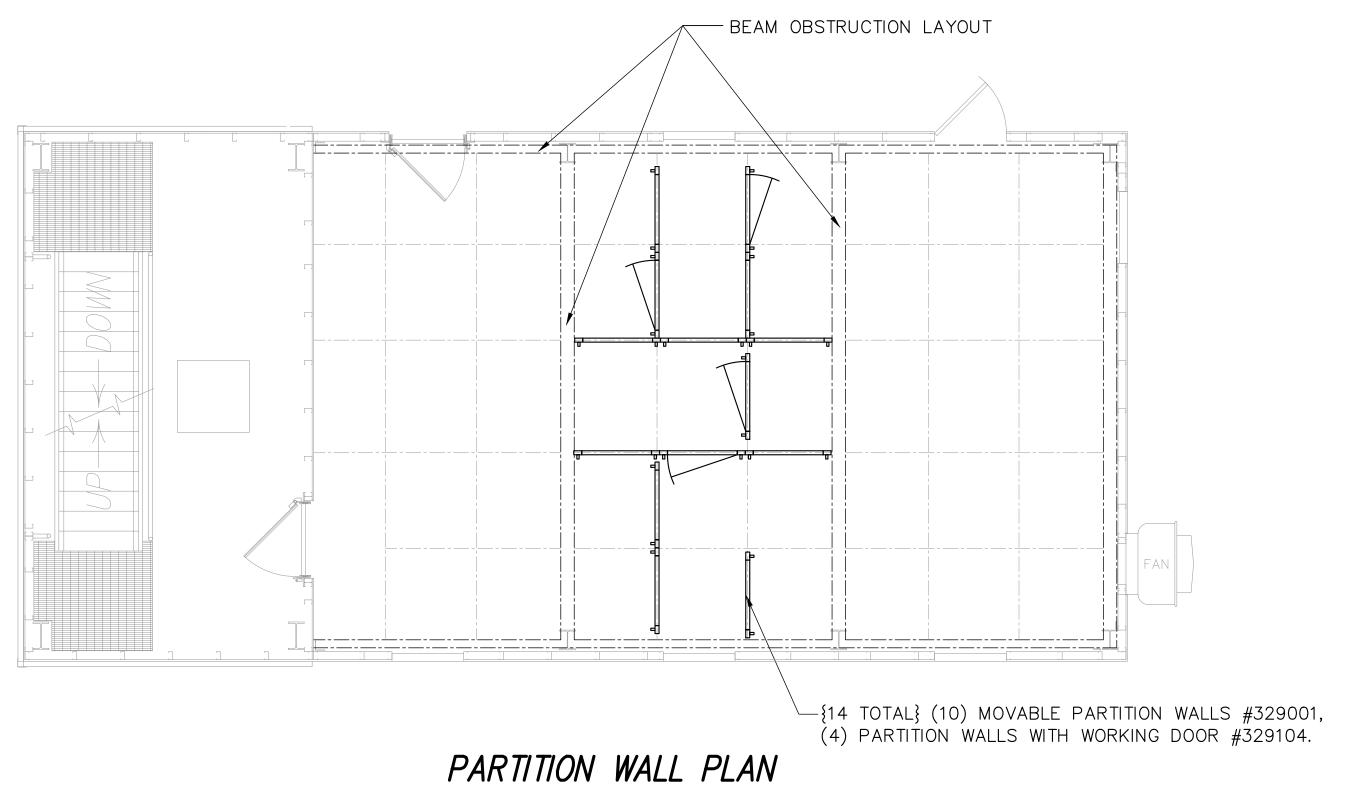


NOTE: LOCATIONS OF HANGER TRACKS AND PARTITION WALLS IS A SUGGESTION ONLY ERECTOR SHOULD COORDINATE FINAL PATTERNS WITH CUSTOMER.

TYPICAL HANGER TRACK INTERSECTION DETAIL

# NOTE: LOCATIONS OF HANGER TRACKS AND PARTITION WALLS IS A SUGGESTION ONLY





SECOND FLOOR HANGER TRACK/PARTITION WALL LAYOUT

REVISIONS

RIES 4000 TOWER/RESIDENCE
ISTOM
BLIN, CA
Title:

Date:
AUGUST 13, 2021
Drawn by:

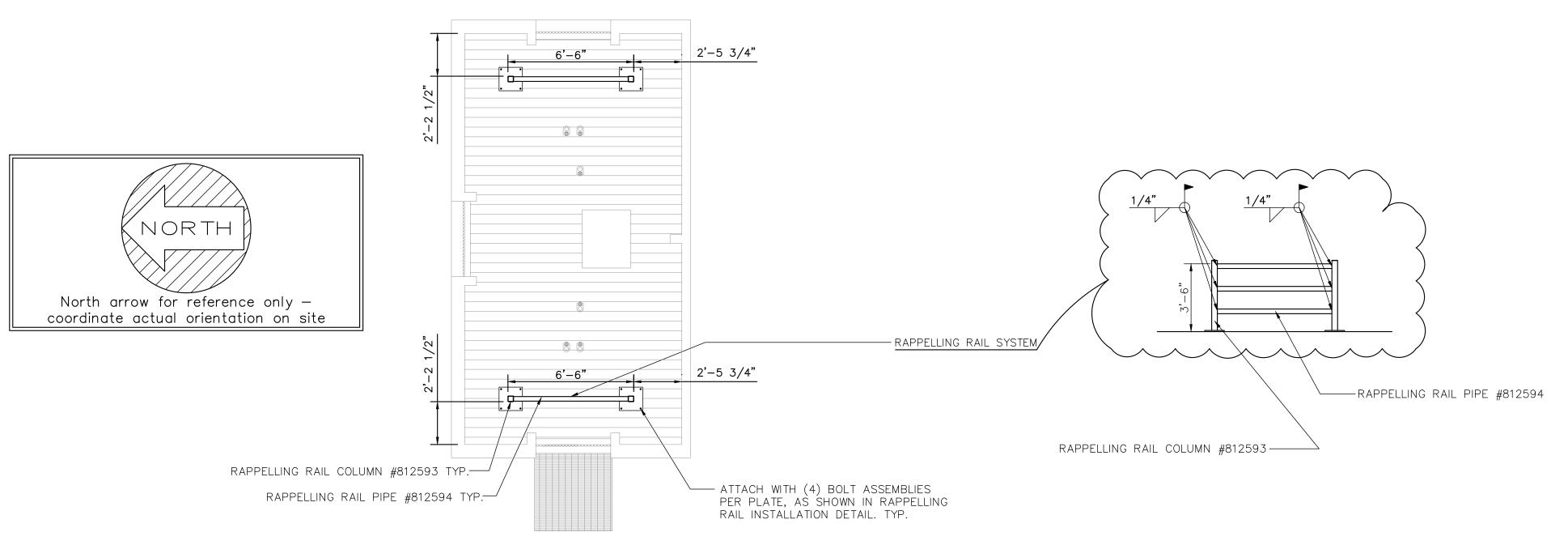
GWL

Checked by:

Scale:

TTS-108/#238355

Sheet No.



TOWER ROOF PLAN (RAPPELLING RAIL)

SCALE: 1/4" = 1'-0"

TOP OF RAPPELLING RAIL COLUMN BASE PLATE TYP. SPECIAL ROOF JOISTS #340084 FASTEN TO LONGITUDINAL JOISTS WITH CLIPS #330054 AND 3/4"-10 x 5 3/4" A325 STRUCTURAL ----BOLT & 3/4" NUT #391027 SCREWS #760600 (4 PER LEG OF ANGLE) (FIELD CUT MAY BE (5) 3/4" FLAT WASHER #391003 — REQUIRED) (3) RINGBOLT SPACERS #391008 — 2 BETWEEN JOIST & NUT 0 0 (3) 3/4" FLAT WASHER #391003 — 0 0 ONTO EACH BOLT) EXISTING JOISTS — 3/8"-16 x 1" BOLT #760100 -& 3/8"-16 NUT #760300 ON BOTH ENDS OF ANGLE  $-6" \times 4" \times 1/2"$  STRUCTURAL  $\frac{3}{4}"-10 \times 4-1/2"$  A325 STRUCTURAL BÓLT #391025 ANGLE #391024 THE THREE JOISTS ARE SHOWN AT MAXIMUM SPACING (2'-0" O.C.). ONLY THREE JOIST NEED TO BE CONNECTED, THEREFORE THE ENTIRE LENGTH OF THE ANGLE MAY NOT NEED TO BE UTILIZED (I.E., IF THE JOISTS HAVE A SMALLER TOP OF RAPPELLING RAIL COLUMN BASE PLATE SPACING). TYP. SPECIAL ROOF JOISTS
#340084 FASTEN TO LONGITUDINAL
JOISTS WITH CLIPS #330054 AND 3/4"-10 x 5 3/4" A325 STRUCTURAL ----BOLT & 3/4" NUT #391027 SCREWS #760600 (4 PER LEG OF ANGLE) (FIELD CUT MAY BE (5) 3/4" FLAT WASHER #391003 — REQUIRED) (3) RINGBOLT SPACERS #391008 1 BETWEEN ROOF PANEL & JOIST 2 BETWEEN JOIST & NUT 0 0 (3) 3/4" FLAT WASHER #391003— 0 0 EXISTING JOISTS — 3/8"-16 x 1" BOLT #760100 -& 3/8"-16 NUT #760300 ON BOTH ENDS OF ANGLE TYP. SPECIAL ROOF JOISTS #340084 -----FASTEN TO LONGITUDINAL JOISTS 6" x 4" x 1/2" STRUCTURAL ANGLE #391024 WITH CLIPS #330054 AND SCREWS #760600 (4 PER LEG OF ANGLE) (FIELD CUT MAY BE REQUIRED) RAPPELLING RAIL INSTALLATION DETAIL

THIS DRAWING AND ALL PARTS THEREO PROPERTY OF TACTICAL TRAINING SYST 314 WILBURN ROAD, SUN PRAIRIE, WI

AIN NG SYSTE

- A DIVISION OF FIRE FACILITIES, INC.
314 WILBURN ROAD, SUN PRAIRIE, WI 53590
OFFICE: (608) 327-4100 FAX (608) 834-1843

DO TOWER/RESIDENCE T R

SERIES 4000

CUSTOM

DUBLIN, CA

Sheet Title:
BADDELLING BAIL

Date:
AUGUST 13, 20

Drawn by:
GWL

Drawn by:

Checked by:

Scale:

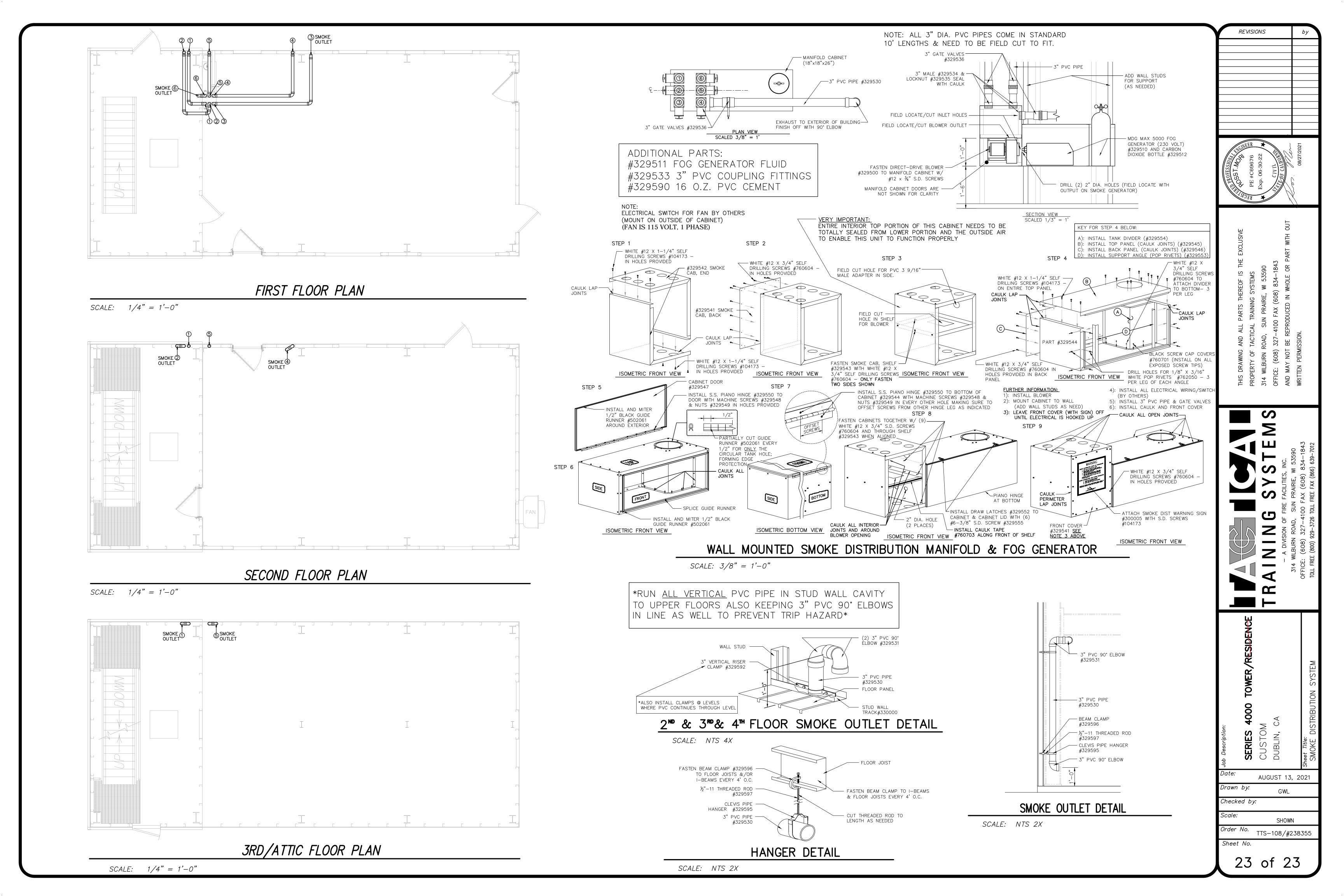
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Order No. TTS-108/#238355

Sheet No.

22 of 23

scale: 3" = 1'-0"



# ALAMEDA COUNTY TACTICAL TRAINING TOWER FOUNDATION

DUBLIN, CA

SYMBOLS

IN PLAN

IN SECTION

SECTION

w/

PLYWOOD

SHEATHING

WOOD STUD STUD WALL

TUBE

SECTION

CONTIN

WOOD

IN ELEVATION

SECTION

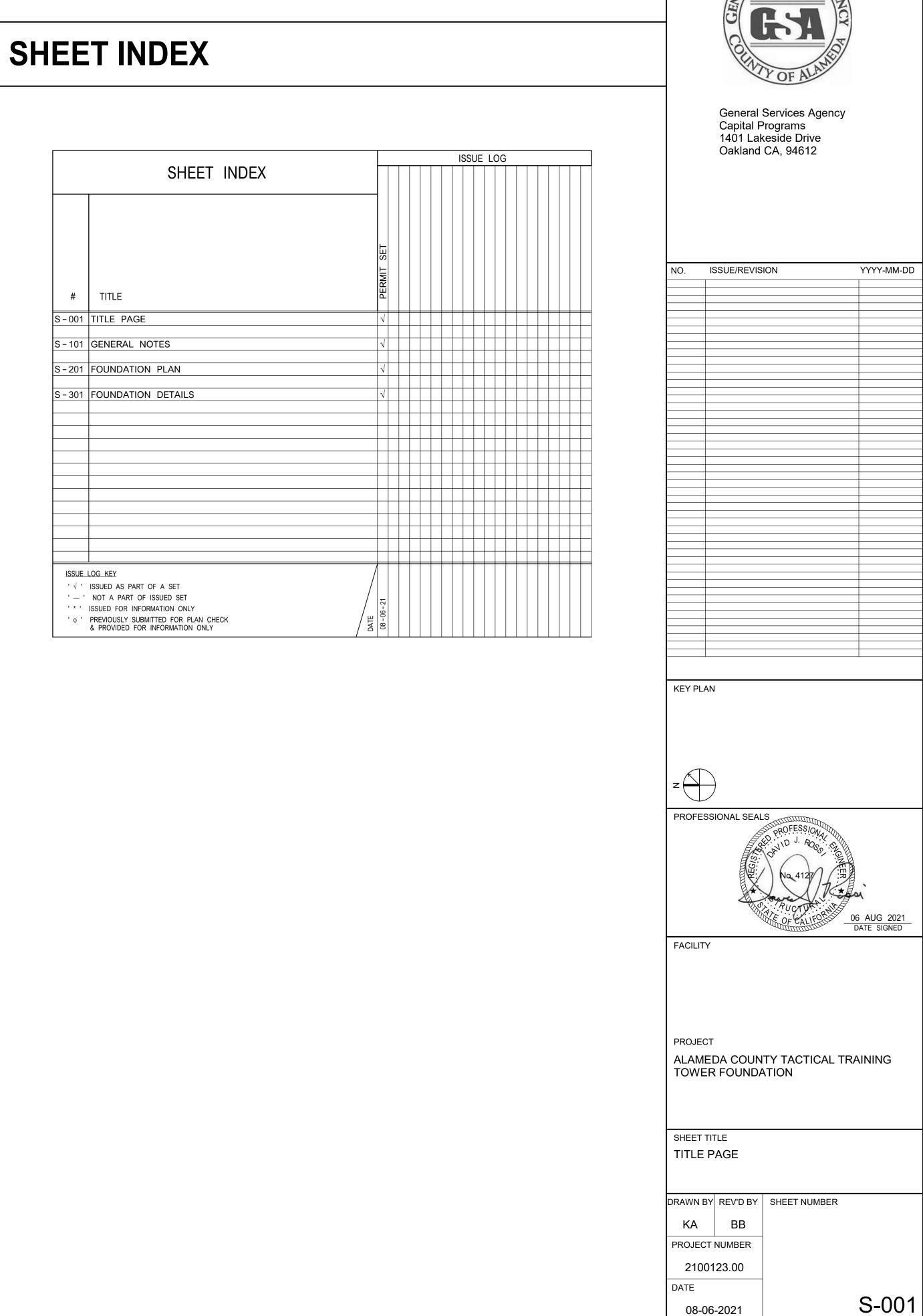
WOOD

BLOCKING

SAND ROCK EARTH

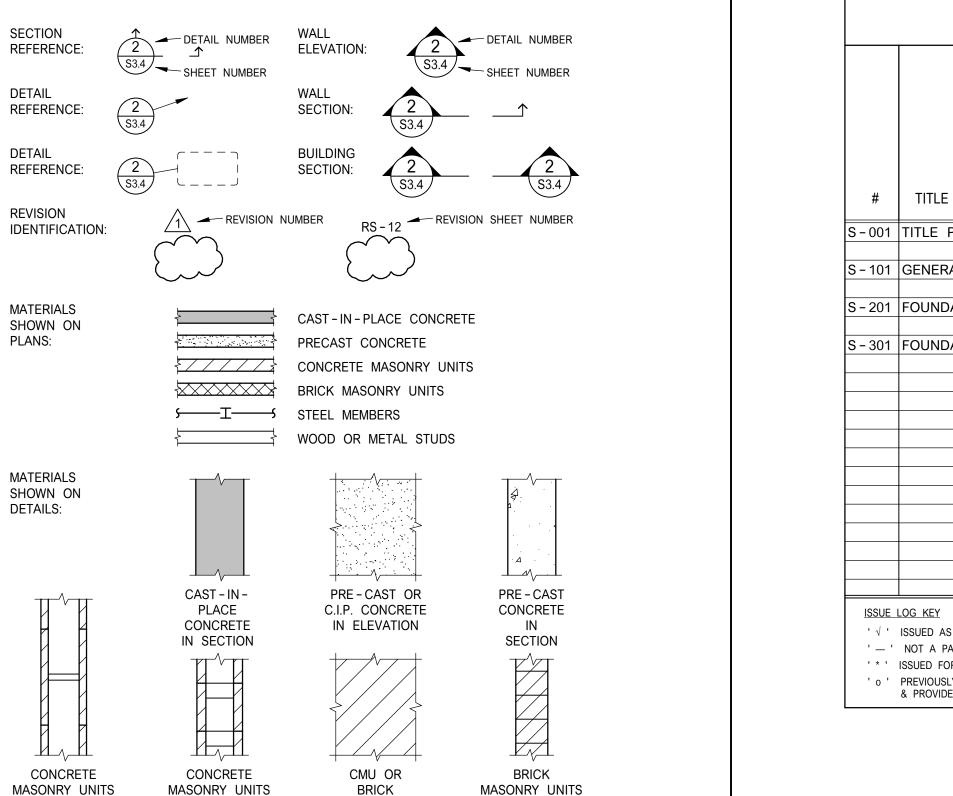
SECTION

GLU - LAM



San Francisco, CA 94105

Day-to-Day Contact:



IN SECTION

ASPH Glued Laminated Column American Society for Testing and Materials Radius Asphaltic Concrete, Air Condition Roof Drain **RDWD** Redwood Hanger REINF Reinforcing REQD BLDG Hook Required Horizontal Revision BLKG Hard Rock Room Hollow Structural Section Rough Opening BOT Section Modulus Moment of Inertia BRG S.C.D. See Civil Drawings BRKT Bracket SCHED Schedule Information See Electrical Drawings Channel Sheathing CBC California Building Code C.I.P. Cast In Place C.J. Construction or Control Joint See Landscape Drawings CLG 1000 Pounds See Mechanical Drawings KIPS Per Square Foot Center Line Special Moment Frames CLR Sheet Metal Screw Concrete Masonry Unit Slab On Grade COL Space or Spacing CONC Concrete See Plumbing Drawings CONN Connection Long Leg Horizontal Specification CONSTR Long Leg Vertical CONTIN S.S.D. See Structural Drawings Continuous Longitudinal C.J.P. STAGG Complete Joint Penetration Low Point Staggered CTR Low Shrinkage CTRD STIFF Stiffener Laminated Strand Lumber CTRSNK Countersink STRUCT Laminated Veneer Lumber Structural LTWT SYM Symmetric DBL D.F. Douglas Fir Tongue and Groove DIA or Diameter Diagonal Maximum DIM Through Dimension DL Miscellaneous Channel Mid - depth DN Ditto Mechanical D.W.F. Deformed Wire Fabric T.O. CONC Top of Concrete Moment Frame DWG Drawing Manufacturer

Not Applicable

No Profile

Near Side

On Center

Opposite

Parapet

Precast

Not To Scale

Outside Face

Opposite Hand

Oriented Strand Board

Open Web Steel Girder

Open Web Steel Joist

Pound per Cubic Foot

Powder Driven Fastener

Powder Driven Pin

Property Line or Plate

N.S.

O.W.S.J.

P/C

Not In Contract

Grade Beam

Glued Laminated Beam

**ABBREVIATIONS** 

Adjacent

Each

Each Face

**Embedment** Edge Nail

Enclosure

Edge of

E.O. SLAB Edge of Slab

Edge of Masonry

Edge of Plate

Each Way

Expansion

Foundation

Face of

F.O. CONC Face of Concrete

F.O. MAS Face of Masonry

Finish Floor

Exterior

Elevation

**EMBED** 

E.N.

**ENGR** 

E.O. PL

EQPT

E.W.

EXT

FDN

FLR

E.O.

Approximately

AISC

ALT

APPROX

Above Finish Floor

Architect or Architectural

American Institute of Steel Construction

See Architectural Drawings Shrinkage Joint, Seismic Joint or Slip Joint T.O. SLAB T.O. STL Tube Steel Top Upper Uniform Building Code Unless Noted Otherwise Vapor Barrier VENT VERT Verify In Field With Without Wide Flange

Work Point

Weakened Plane Joint

Weight or Structural T

Welded Wire Fabric

Pounds per Square Foot

Pounds per Square Inch

Pressure Treated Douglas Fir

Parallel Strand Lumber

Post - Tensioned

Pressure Treated

#### **GENERAL**

Dimensions refer to rough concrete surfaces, face of studs, face of concrete block, top of sheathing, or top of slab, unless otherwise indicated. The Contractor shall verify all dimensions prior to the start of construction. The Architect shall be notified of any discrepancies or inconsistencies.

All drawings are considered to be a part of the contract documents. The Contractor shall be responsible for the review and coordination of all drawings and specifications prior to the start of construction. Any discrepancies that occur shall be brought to the attention of the Architect prior to the start of construction so that a clarification can be issued. Any work performed in conflict with the contract documents or any code requirements shall be corrected by the Contractor at his own expense and at no expense to the owner or Architect.

Notes and details on the structural drawings shall take precedence over general notes and typical details. Where no details are given, construction shall be as shown for similar

All work shall conform to the minimum standards of the following codes:

2019 California Building Code, which comprises Title 24, Part 2 of the California Code of Regulations, as adopted by the California Building Standards Commission referred to here as "The California Building Code, 2019 Edition" or "the code", and any other regulating agencies which have authority over any portion of the work, including the State of California Division of Industrial Safety, and those additional codes and standards including, but not limited to, the following incorporated codes listed below, and in these structural notes and specifications.

American Society of Civil Engineers: ASCE 7–16 Minimum Design Loads for Buildings and Other Structures including Supplement No. 1 and 2.

American Concrete Institute (ACI): ACI 318-14 Bldg. Code Requirements for Structural Concrete and Requirements for Structural Concrete and Commentary

American Institute of Steel Construction (AISC): Steel Construction Manual 15th Edition

American Institute of Steel Construction (AISC): AISC 341–16 Seismic Provisions for Structural Steel Buildings

American Institute of Steel Construction (AISC): AISC 360–16 Specification for Structural Steel Buildings

American Welding Society: AWS D1.1:2015 Structural Welding Code - Steel American Welding Society: AWS D1.3:2008 Structural Welding Code - Sheet Steel

American Welding Society: AWS D1.4:2017 Structural Welding Code - Reinforcing

American Welding Society: AWS D1.8:2016 Structural Welding Code - Seismic Supplement ASTM specifications on the structural drawings shall be of the latest version, unless

Refer to the architectural drawings for the following:

otherwise noted.

Dimensions not shown on the structural drawings.

Size and location of all floor and roof openings, except as noted. Size and location of all interior and exterior non-bearing partitions. Size and location of all door and window openings, except as noted. Size and location of inserts for cladding or ornamentation.

Size and location of all concrete curbs, equipment pads, pits, floor drains, slopes, depressed areas, change in level, chamfers, grooves, inserts, etc. Floor and roof finishes.

Refer to the mechanical, plumbing, and electrical drawings for the following:

Pipe runs, sleeves, hangers, trenches, wall and slab openings, etc., except as noted. Electrical conduit runs, boxes, and outlets in walls and slabs.

Concrete inserts for electrical, mechanical, or plumbing fixtures. Size and location of machine or equipment bases or anchor bolts for motor mounts.

The contract structural drawings and specifications represent the finished structure. They do not indicate the method of construction. The Contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to, bracing and shoring for loads due to construction equipment, etc. Observation visits to the site by the Engineer shall not include inspection of the aforementioned items.

Contractor shall investigate the site, during clearing and earthwork operations, for filled excavations or buried structures, such as cesspools, cisterns, foundations, etc. If any such structures are found, the Engineer shall be notified immediately.

Openings, pockets, etc., larger than 6" shall not be placed in concrete slabs, decks, or walls, unless specifically detailed on the structural drawings. Notify the Engineer when drawings by others show openings, pockets, etc., larger than 6" not shown on the structural drawings, but which are located in structural members. For any further restrictions on openings in structural elements, see applicable sections below.

Construction material shall be spread out if placed on framed roof or floor. Load shall not exceed the design live load per square foot. Provide adequate shoring and/or bracing where the structure has not attained the design strength.

Specifications and detailing of all waterproofing and drainage items, although sometimes indicated on the structural drawings for general information purposes only, are solely the design responsibility of others.

Shop drawings, special inspections, and material sampling and testing, when required, are specified in their respective tables in the general notes and in the specifications.

# <u>DESIGN</u>

Design conforms to the California Building Code, 2019 Edition

Roof (flat) ..... 100 psf Floor Live Load ...... 100 psf

Wind Analysis:

Basic wind speed, V3S ..... (CBC Figure 1609) Exposure ...... (CBC Section 1609.4.3) = C Internal Pressure Coefficient, GCPI ... (ASCE Table 26.13-1) GCPI =  $\pm 0.18$ Seismic Analysis: Seismic Importance Factor, I ......... (ASCE Table 1.5-2) I = 1.0Risk Category ...... (CBC Table 1604.5) = II

Site Location, Longitude ..... -122.8368° Spectra Accel., Short Period, SS ..... (CBC Figure 1613.2.1(1)) SS = 1.614 g Spectra Accel., Long Period, S1 ...... (CBC Figure 1613.2.1(2)) S1 = 0.60 gSite Classification  $\dots$  (CBC Section 1613.2.2) = D Design Response, Short Period, SDS..... (CBC Section 1613.2) SDS = 1.076 g Design Response, Long Period, SD1 ..... (CBC Section 1613.2) SD1 = NULL Seismic Design Category ...... (CBC Table 1613.2.5(1)&(2)) = D

Lateral System (ASCE Table 12.2-1)..... Moment Frame System, Steel Ordinary Moment Frame Response Modification Factor, ...... R = 3.5System Overstrength Factor,.....  $\Omega$ 0 = 3 Deflection Amplification Factor..... Cd = 3

Lateral System (ASCE Table 12.2-1)..... Building Frame System Steel Ordinary Concentric Braced Frame Response Modification Factor, ...... R = 3.25System Overstrength Factor,.....  $\Omega$ 0 = 2

Deflection Amplification Factor..... Cd = 3.25

#### **FOUNDATIONS**

Foundations conform to the recommendations of the Geotechnical Report entitled: "ASCO RTC Tower Project 5301 Madigan Road Dublin, California" prepared by Cal Engineering & Geology, dated December 2nd, 2019.

Maximum soil pressure = 4500 psf DL + LL

= 6000 psf DL + LL + Lateral = 0.32Coefficient of friction

Passive earth pressure = 350 pcf Refer to the Geotechnical Report for additional recommendations not listed below. All site

grading, excavations, fills, and soil preparation shall conform to the Geotechnical Report and all work shall be done under the observation of the Geotechnical Engineer. The Contractor shall provide for the design and installation of all cribbing, sheathing,

#### and shoring required and shall be solely responsible for all excavation procedures including lagging, shoring, and the protection of adjacent property, structures, streets, and utilities in accordance with all national, state, and local safety ordinances.

Footings shall extend to such depth as to bear upon firm, undisturbed native soil or engineered fill. All abandoned footings, utilities, etc. shall be removed. All footings shall be founded at a depth at least 24 inches below the lowest adjacent grade. Footing depths shown on the structural drawings are minimum depths. Footings may be poured in neat excavated trenches.

Excavations for footings shall be observed by the Geotechnical Engineer prior to placing reinforcing and concrete. The Contractor shall notify the Geotechnical Engineer when the excavations are ready for observation.

#### <u>Engineered Fill</u>

Engineered fill below footings shall be compacted to 90% relative compaction as determined by the ASTM D1557 compaction test method and under the observation of the Geotechnical Engineer.

#### <u>Slabs On Grade</u>

For the sub capillary break materials under concrete slabs on grade, refer to the Geotechnical Report. Provide a 15 mil vapor barrier complying with ASTM E1745 Class A with a WVTR less than or equal to 0.008 per ASTM E96, placed in accordance with ASTM E1643 over 4" rock course under slabs on grade. Rock course shall be rolled to a smooth surface.

#### <u>Backfill</u>

All excavations shall be properly backfilled. Do not place backfill behind retaining walls before the concrete or grout has attained full design strength. The Contractor shall brace or protect all building and pit walls below grade from lateral loads until the attaching floors are completely in place and have attained full strength. The Contractor shall provide for the design, permits, and installation of such bracing.

Footing backfill and utility trench backfill within the building area shall be mechanically compacted in layers in accordance with the Geotechnical Report and observed by the Geotechnical Engineer or Inspector. Flooding will not be permitted.

#### Geotechnical Engineer Observation Letter

The Geotechnical Engineer shall prepare a letter for the Building Department giving an opinion regarding conformance of the footing excavations, engineered fill compaction, subgrade preparation, and backfilling with the requirements contained in the Geotechnical

#### REINFORCING STEEL

Reinforcing Steel detailing, fabrication, and placement shall conform to the "California Building Code", Chapter 19; the "Manual of Standard Practice of the Concrete Reinforcing Steel Institute", latest edition; and the "Building Code Requirements for Structural Concrete and Commentary", ACI 318-14; unless otherwise noted.

#### <u>Standards:</u> Reinforcing steel shall conform to the following standards:

Deformed Bars, #4 and larger ...............................ASTM A615, Grade 60

Placing: All steel reinforcement shall be securely tied in place so as to maintain their exact position before and during the placement of concrete. Reinforcing steel shall be securely tied in place with #16 annealed iron wire. Bars in beams and slabs shall be supported on well-cured concrete blocks or approved plastic tipped metal chairs, as specified by CRSI Manual of Standard Practice, MSP-1. Accessories for epoxy-coated reinforcing, where shown on plans, shall be as noted in the Specifications. Wire fabric in slabs shall be securely fastened to supporting devices to maintain their position during concrete placement.

Lap bars 58 diameters, laps shall be staggered, for #3 to #6 bars unless otherwise noted

Lap bars 72 diameters, laps shall be staggered, for #7 to #11 bars unless otherwise noted

Mechanical splices: Where noted on plans, provide threaded couplers capable of developing at least 125% of the specified yield strength of the reinforcing steel. Couplers shall be Type 2, as per ACI 318–14 Section 18.2.7. Threaded Couplers shall be as manufactured by Erico Company, or approved equal with a current evaluation report from an approved source.

Headed Reinforcement: Where noted on plans, provide rebar terminators capable of developing the tensile strength of the reinforcing steel. Rebar terminators shall be as manufactured by Erico Inc (IAPMO ES ER-0188) or approved equal with a current evaluation report from an approved source.

Form Saver: Form savers are to be used where noted on the drawings. In addition, form savers may be substituted in lieu of dowels at construction joints. Where substituted, contractor to submit for review prior to construction. Form savers shall be capable of developing at least 125% of the specified yield strength of the reinforcing steel. Form savers shall be Type 2, as per ACI 318–14 Section 18.2.7. Form Savers shall be as manufactured by Erico Inc (IAPMO ES ER-0129) or approved equal with a current evaluation report from an approved source.

Welding: Where welding of reinforcing bars is approved by the Engineer, it shall be done by AWS certified welders using E80XX or approved electrodes. Welding procedures shall conform to the requirements of the "Structural Welding Code - Reinforcing Steel", AWS-D1.4

Clear distances, steel to forms, unless noted otherwise:

Slabs not exposed to weather, joists, interior wall surfaces .....3/4" Exterior wall surfaces, slabs exposed to weather, #5 and smaller .1-1/2" Exterior wall surfaces, slabs exposed to weather, #6 and larger ..2" Clear distance between bars .....2" Slabs on rolled grade ......1-1/2" Formed surfaces in contact with earth .....2"

Shop drawings shall be submitted to the Architect for review prior to fabrication. Shop drawings shall include elevations of all beams and columns showing bar and lap locations. See Shop Drawing Submittal Requirements elsewhere in General Notes. Submit mill certificates for reinforcing steel prior to rebar placement.

#### CONCRETE WORK

Forms shall be properly constructed conforming to concrete surfaces as shown on the drawings, sufficiently tight to prevent leakage, sufficiently strong, and braced to maintain their shape and alignment until no longer needed to support the concrete. Forms for exposed concrete shall be plywood, using sheets as large as possible, with all joints tightly fitted and blocked, and shall produce a finished concrete surface which is smooth, true, and free from blemishes according to accepted standards for architectural concrete.

Refer to architectural, electrical, and mechanical drawings for details at door and window openings, floor type hinges, etc., and for location of sleeves, pipes, and other embedded items. Openings through slabs or walls not shown on the structural drawings which would interrupt reinforcing bars shall not be made without approval of the Architect.

Debris should be entirely removed from forms prior to concrete placement.

Horizontal construction joints shall be located as shown on the structural drawings, and the hardened concrete surfaces shall be cleaned by sand-blasting or other approved means to expose firmly embedded aggregates prior to pouring additional concrete in contact with these surfaces. Vertical construction joints through beams or slabs shall be located only as shown on structural drawings.

Forms and shoring shall not be removed until the concrete has attained sufficient strength to withstand all loads to be imposed without excessive stress, creep, or deflection. See specifications for shoring requirements.

Concrete shall be ready mixed conforming to ASTM C94. Cement shall be Portland Cement Type II, conforming to ASTM C150. All hardrock (H.R.) concrete used in suspended slabs and slabs on grade shall be designed for low shrinkage (L.S.). Acceptable coarse aggregates for low shrinkage concrete include Kaiser Clayton, Granite Rock, Limestone, Sechelt, or Orcas aggregates. Fine aggregates acceptable for low shrinkage concrete include Sechelt, Orcas, or Granite Rock sands. Alternative aggregates may be submitted provided they provide a concrete mix with a shrinkage limitation of 0.040% after 28 days of drying. Submit test data to Architect for review.

#### Use maximum size aggregate as noted below.

Use 3/8" maximum aggregate where necessary for proper placing, such as in thin or congested sections, etc. Superplasticizers may be used to improve workability in thin or congested sections. Incorporate superplasticizers into concrete mix designs.

Flyash shall consist of pozzolanic admixtures conforming to ASTM C618, Class F, and shall be used in quantities noted below. See specifications for additional requirements.

Ground Granulated Blast Furnace Slag (GGBFS) shall conform to ASTM C989 for slag cement and be used in quantities noted below. See specifications for additional requirements. Carbon Sequestration shall consist of post-industrial, recycled CO2, sourced from an emitter and chemically mineralized into the mix. See specifications for additional requirements.

Admixtures used in concrete shall conform to the following ASTM standards, shall be used in dosages recommended by the manufacturer, and shall not contain more chloride than is found in the municipal drinking water supply. Liquid volume in ASTM C494, Type C admixtures shall be added to water content and water cement ratio calculations.

ASTM C494, Type A Mid-range water reducers ASTM C494, Type A/F High-range water reducers ASTM C494, Type F Hydration Stabilizers (Retarders) ASTM C494, Type B and D Accelerators ASTM C494, Type C Air Entraining Agents ASTM C260 Corrosion Inhibitors ASTM C494, Type C Shrinkage Reducing Admixtures ASTM C494, Type F Viscosity Modifying Admixtures ASTM C494, Type S Silica Fume ASTM C1240 Crystalline Waterproofing No ASTM standard Post-Industrial, recycled CO<sub>2</sub> ASTM C494, Type S

Cementitious Material (CM) content includes all cement and Supplemental Cementitious Materials (SCM)

Contractor shall submit for review of the Architect the concrete mixes proposed for use, designed by the concrete supplier and reviewed by an approved testing laboratory.

#### Concrete shall have the following characteristics: (Mix with GGBFS and 56 day strengths, 50% SCM)

Concrete Location	Max Aggregate	Strength @ 56 days (psi)	Min Slump¹ (in)	Min CM Content (Sacks)	GGBFS Content <sup>5</sup> Min, Max (%)	Flyash Content <sup>5</sup> Min, Max (%)	Total SCM Content (%)	Max Water Content (Gals)	Max Water/ Cement Ratio
Foundations*	1"x#4 HR	3000	4	5.0	40,50	20,30	70	34	0.50

1"x#4 HR-LS 3000 3.5 5.0 40,50 20,30 70 33 0.45

- <sup>1</sup> Slump shall be the minimum consistent with proper placing. Achieve slump with water reducing admixtures(ASTM C-494 Type A, F, or A/F) for desired workability.
- <sup>2</sup> Use high range water reducing admixture (superplasticizer) as needed. 3 Use water reducing admixtures or mid-range water reducing admixtures for desired
- 4 Use recycled carbon dioxide (CO2) sourced from an emitter, chemically mineralized into concrete mix. Use 2.0% - 4.0% CO2 by weight of cement (not cementitious).
- <sup>5</sup> Percentages of GGBFS and Flyash may be individually adjusted within the limits provided in order to maintain total SCM content

Pipes other than electrical conduits shall not be embedded in structural concrete except where specifically approved by the Engineer. Electrical conduits embedded in concrete shall not exceed 1-1/4" O.D., without approval of the Engineer.

Conduit, when embedded in concrete slabs, shall be spaced with one conduit diameter clear (larger conduit) or 1 inch clear, whichever is greater, between adjacent conduits or rebar. Conduit shall not be located directly over and parallel to rebar. Embedded conduit can be tied to rebar when oriented perpendicular to them, provided the location of rebar is not affected by the conduit. Conduit without clearance noted above shall be submitted to the architect for review prior to installation. Added trim reinforcement will be required where clearances cannot be met, such as electric panel rooms.

Sleeves, when installed in concrete, shall be spaced with one sleeve diameter (larger sleeve) clear between adjacent sleeves, rebar, or 1 inch, whichever is greater. Sleeves may not touch rebar or other support hardware. Provide clearance between sleeves and reinforcing for typical slab edge conditions. Added trim reinforcement is required per the typical slab opening detail when sleeves exceed 12" diameter or are placed in groups where the out-to-out dimension exceeds 12" in any direction. Sleeve placement shall not interfere with the rebar placement without the approval of the Engineer.

A Sleeve/Penetration Slab Shop drawing shall be submitted for review prior to fabrication. Shop drawings shall include all concrete sleeves, penetrations, and openings, from all disciplines, coordinated, dimensioned and located on plan. See Shop Drawing Submittal Requirements elsewhere in General Notes.

The Contractor shall inform the Architect at least 3 days prior to pouring any structural concrete so that the Architect may have the opportunity of reviewing the work prior to concrete placement.

All concrete except slabs on grade 6" thick or less shall be mechanically vibrated so as to completely fill the forms without causing undue segregation.

For 56 day strengths and 4" diameter x 8" long cylinders:

For mild reinforced concrete, 6 test cylinders from each 150 yards, or fraction thereof, poured in any one day, shall be secured and tested by an independent testing agency: one to be tested at 7 days for information, one at 28 days for information, and three at 56 days for acceptance, and one held in reserve.

#### For 56 day strengths and 6" diameter x 12" long cylinders:

For mild reinforced concrete, 5 test cylinders from each 150 yards, or fraction thereof, poured in any one day, shall be secured and tested by an independent testing agency; one to be tested at 7 days for information, one at 28 days for information, and two at 56 days for acceptance, and one held in reserve.

The Contractor shall remove and replace any concrete which fails to attain specified strength in 56 days if so directed by the Architect. Any defects in the hardened concrete shall be satisfactorily repaired or the hardened concrete shall be replaced.

#### STRUCTURAL STEEL AND MISCELLANEOUS IRON

#### <u> Anchor Bolts</u>

Unless otherwise noted, all steel to steel bolted connections shall be bolted with high strength bolts per the "Specification for Structural Joints Using ASTM A325 or A490 Bolts", by the Research Council on Structural Connections (RCSC).

1. Unless noted otherwise, anchor bolts and/or anchor rods shall conform to ASTM F1554 Grade

#### PREFABRICATED STRUCTURE

The prefabricated structural design shall be prepared in conformance with CBC requirements and signed by a Civil or Structural Engineer licensed in the State of California.

#### LOW VELOCITY PINS (L.V.P.)

Provide Powder Actuated Fasteners with low velocity charges of size and spacing shown, where L.V.P. is noted on the drawings. The fasteners shall be Hilti X-U as manufactured by Hilti, Inc. (ICC Evaluation Report ESR-2269) or approved equal with a current evaluation report from an approved source.

#### EPOXY FOR CONCRETE

Epoxy shall be HIT-HY 200 as manufactured by Hilti, Inc. (ICC Evaluation Report ESR-3187). All drilled holes shall be sized according to the manufacturer's recommendations.

#### **EXPANSION ANCHORS**

Expansion Anchors shall be KB–TZ2 as manufactured by Hilti, Inc. (ICC Evaluation Report ESR-4266) or approved equal with a current ICC report. All drilled holes shall be sized according to the manufacturer's recommendations.

#### HIGH STRENGTH SCREW ANCHORS

High-Strength Screw Anchors shall be Titen HD as manufactured by Simpson Strong Tie, Inc. (ICC Evaluation Report ESR-2713) or approved equal with a current ICC report. All drilled holes shall be sized according to the manufacturer's recommendations.

#### SHOP DRAWING SUBMITTALS

When indicated with a "X", the following items shall have either a) shop drawings or b) certificates of conformance or c) shop drawings, calculations, and details submitted to the architect for review and approval prior to fabrication. When shop drawings, calculations, and details are required, submittals (drawings and calculations) must be signed and stamped by a Civil or Structural Engineer registered in the State of California. For additional information on the contents of the submittals, refer to the project specifications and the specific general notes sections. Submit two prints or an electronic (PDF copy) of calculations (where indicated) and shop drawings to the Architect for review.

	Shop	Certificate¹	calcs, and	
Item	Drawings		Details	Remarks
Concrete reinforcing	Х			
Concrete, mixes	Х			
Concrete, cement		Х		
Concrete, fine aggregates		Х		
Concrete, coarse aggregates		Х		
Concrete, admixtures		Х		
Weaken Plane Joint Layout	Х			
Shrinkage Joint Layout	Х			
Construction Joint Layout	Х			
Concrete Penetration Plan	X			Plan with sleeves /blockouts coordinated, dimensioned,
Expansion Anchors	Х			located
Epoxy for Bolts or Rebar	Х			
Screw Anchors	Х			
Low Velocity Pins, L.V.P.	χ			

(1) Certificates shall be dated within 3 months of the submittal.

#### MATERIAL SAMPLING AND TESTING

When indicated with a "X", the following materials shall be sampled and/or tested by a certified inspector from an established testing agency in accordance with the project specifications, general notes, or prevailing building code, whichever is more stringent. All material sampling and testing shall be performed in accordance with ASTM requirements. For additional information on material sampling and testing, refer to the project specifications and the specific general notes sections. The testing agency shall send copies of all structural testing reports directly to the Architect, Engineer, and Building Department. Any materials which fail to meet the project specifications shall immediately be brought to the attention of the Architect.

Item	Required	Remarks
Concrete, reinforcing	Х	Mill certificate in lie of samples
Concrete, cylinders	Х	

#### SPECIAL INSPECTION

When indicated with a "X", the following items shall be inspected in accordance with CBC Section 1705 by a certified special inspector from an established testing agency. All inspection shall be continuous, unless otherwise noted. For material sampling and testing requirements, refer to the material sampling and testing section, the project specifications, and the specific general notes sections. The testing agency shall send copies of all structural testing and inspection reports directly to the Architect, Engineer, and Building Department. Any materials which fail to meet the project specifications shall immediately be brought to the attention of the Architect.

Item	Required	Remarks
Rebar Placement	Х	Periodic
Concrete Placement	Х	Continuous

Architects + Project Manage

275 Battery Street, Suite 1050 San Francisco, California 94104 415-233-9991 Fax: 415-651-8911 www.ae3partners.com



415.989.1004 | kpff.com SEOR Contact: david.rossi@kpff.com Day-to-Day Contact: brian.biehl@kpff.com

San Francisco, CA 94105





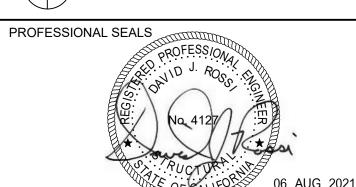
General Services Agency Capital Programs 1401 Lakeside Drive Oakland CA, 94612

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FACILITY

PROJECT

ALAMEDA COUNTY TACTICAL TRAINING

SHEET TITLE

08-06-2021

**GENERAL NOTES** 

TOWER FOUNDATION

DRAWN BY REV'D BY SHEET NUMBER KA BB PROJECT NUMBER 2100123.00

S-101

-				
LOAD CASE	COLUMN	SHEAR (KIPS)	DOWNWARD (KIPS)	UPLIFT (KIPS)
	A1,B1	3.46	12.76	15.48
14/14/15	A2,B2	3.48	11.33	17.25
WIND	A3,B3,A4,B4	2.08	1.82	6.05
	A5,B5	1.04	0.91	3.01
	A1,B1	0.14	5.11	0.00
DEAD	A2,B2	0.35	11.63	0.00
DEAD	A3,B3,A4,B4	0.19	9.75	0.00
	A5,B5	0.16	6.48	0.00
	A1,B1	0.70	27.47	0.00
LIVE	A2,B2	1.51	49.51	0.00
LIVE	A3,B3,A4,B4	1.04	46.43	0.00
	A5,B5	0.52	26.08	0.00
	A1,B1	29.60	140.87	140.59
SEISMIC	A2,B2	29.75	139.40	139.14
OLIOWIIO .	A3,B3,A4,B4	7.75	17.16	17.06
	A5,B5	3.86	8.81	8.77

REACTIONS SHOWN ABOVE ARE INDIVIDUAL LOAD CASES WITH A LOAD FACTOR OF ONE (NO REDUCTIONS). THESE REACTIONS ARE BASED ON CBC 2019 WITH A BASIC WIND SPEED OF 92 MPH, EXPOSURE CLASS C, AND SEISMIC DESIGN CATEGORY D. PLEASE NOTE THAT THESE REACTIONS INCLUDE A SEISMIC REDUNDANCY FACTOR  $\rho$ =1.0 AND OVERSTRENGTH FACTORS  $\Omega$ =2.0 FOR OCBF AND  $\Omega$ =2.0 FOR OMF. PLEASE ALSO NOTE THAT THESE REACTIONS ARE BASED ON THE FIRE TRAINING SIMULATOR SHOWN ON THE FIRE FACILITIES DRAWING DATED OR REVISED ON 02/01/2021.

- 1. FOR SYMBOLS AND ABBREVIATIONS, REFER TO SHEET S-001 FOR GENERAL NOTES, REFER TO SHEET S-101 FOR FOUNDATION DETAILS, REFER TO SHEET S-301
- 2. VERIFY ALL DIMENSIONS, ELEVATIONS, FINISH SURFACES, SLOPES, DRAINS, SLAB DEPRESSIONS, ETC., WITH ARCHITECTURAL DRAWINGS, PRIOR TO
- START OF CONSTRUCTION. 3. SPECIFICATIONS AND DETAILING OF ALL WATERPROOFING AND DRAINAGE

ITEMS, ALTHOUGH INDICATED ON THE STRUCTURAL DRAWINGS FOR GENERAL

- INFORMATION PURPOSES ONLY, ARE THE DESIGN RESPONSIBILITY OF OTHERS.
- 4. FOR LOCATION, SIZE, AND EXTENT OF CURBS, S.A.D. 5. SHORING AND UNDERPINNING OF ADJACENT PROPERTY, WHEN REQUIRED,
- SHALL BE DESIGNED BY OTHERS. 6. TOP OF CONCRETE S.O.G. EL. = 0'-0", U.N.O.
- 7. F-1  $\leftarrow$  INDICATES FOOTING TYPE, SEE 5/S-301  $\leftarrow$  INDICATES TOP OF FOOTING ELEVATION, RELATIVE TO FINISHED FLOOR = 0'-0"
- 8. 'S.J.' INDICATES SHRINKAGE JOINT IN S.O.G., SEE 9/S-301 'W.P.J.' INDICATES WEAKENED PLANE JOINT IN S.O.G., SEE 9/S-301
- 9. 'GB-1' INDICATES GRADE BEAM, SEE SCHEDULE 8/S-301 10. 'BP-1' INDICATES BASE PLATE, SEE 14/S-301 & 15/S-301



AE3 PARTNERS
Architects + Project Managers

275 Battery Street, Suite 1050 San Francisco, California 94104

Ph: 415-233-9991

Fax: 415-651-8911

45 Fremont Street, 28th floor

San Francisco, CA 94105 415.989.1004 | kpff.com

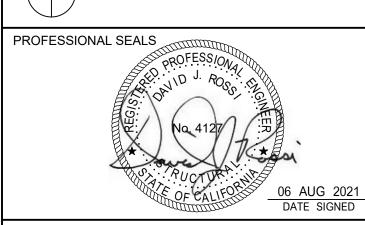
david.rossi@kpff.com Day-to-Day Contact: brian.biehl@kpff.com

SEOR Contact:

www.ae3partners.com

General Services Agency Capital Programs 1401 Lakeside Drive Oakland CA, 94612

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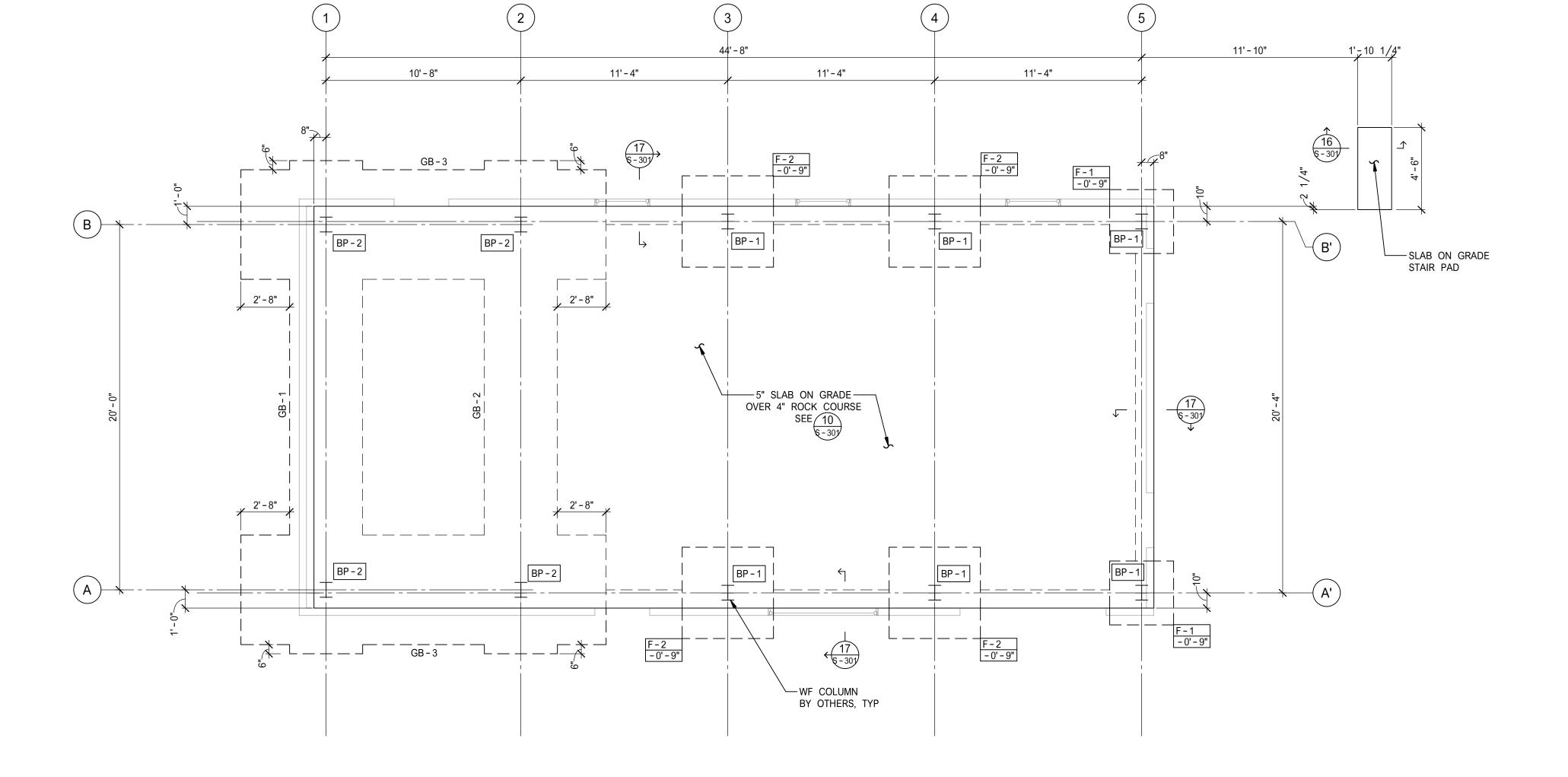
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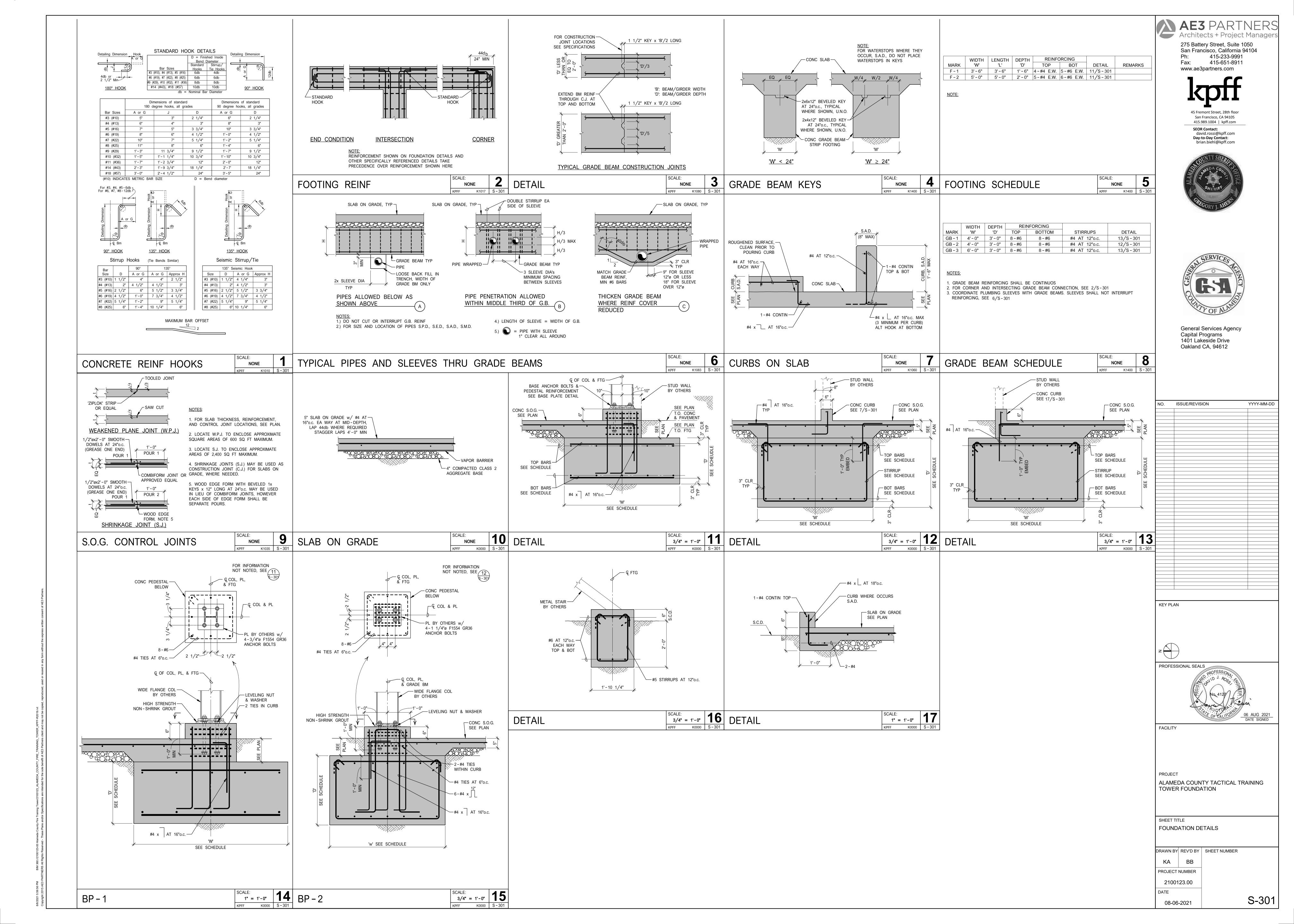
ALAMEDA COUNTY TACTICAL TRAINING TOWER FOUNDATION

SHEET TITLE FOUNDATION PLAN

DRAWN BY REV'D BY SHEET NUMBER

PROJECT NUMBER 2100123.00 08-06-2021





E	LECTRICAL SYMBOLS LIST
SYMBOL	DESCRIPTION
$\mapsto$	DUPLEX CONVENIENCE OUTLET MOUNTED IN SURFACE BOX AT +18" AFF UNLESS NOTED OTHERWISE.
	SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD.
⊢ <b></b>	JUNCTION BOX, SURFACE MOUNTED AT +18" AFF UNLESS NOTED OTHERWISE.
•••••	JUNCTION BOX WITH FLEXIBLE CONDUIT CONNECTION.
	BRANCH CIRCUIT CONDUIT, CONCEALED IN WALL OR CEILING.
	BRANCH CIRCUIT CONDUIT, CONCEALED IN FLOOR OR UNDERGROUND.
	BRANCH CIRCUIT CONDUIT, RUN EXPOSED.
	— • • • • • • • • • • • • • • • • • • •
E	DISCONNECT SWITCH, "F" INDICATES FUSED TYPE, MOUNTED AT +54" AFF UNLESS NOTED OTHERWISE.
$\boxtimes$	MAGNETIC MOTOR STARTER, MOUNTED AT +54" AFF UNLESS NOTED OTHERWISE.
$\square$	COMBINATION MOTOR STARTER, MOUNTED AT +54" AFF UNLESS NOTED OTHERWISE.
A-1—	BRANCH CIRCUIT HOMERUN WITH PANEL AND CIRCUIT DESIGNATED
~~•	FLEXIBLE CONDUIT W/ POINT OF CONNECTION.
•	POINT OF CONNECTION.
<u>\$</u>	SWITCH MOUNTED IN SURFACE BOX, +42" AFF UNLESS NOTED OTHERWISE.
\$ a,b,c	SPST WALL SWITCH. LETTERS INDICATE THE NUMBER OF SWITCHES AND OUTLETS THEY CONTROL. MOUNTED IN BOX AT +42" AFF U.O.N.
\$ D	WALL BOX DIMMER, +42" AFF UNLESS NOTED OTHERWISE.
•••	PUSHBUTTON STATION.
©	CONTACTOR COIL.

	ABBREVIATIONS		ABBREVIATIONS
SWIFIEIX	DESCRIPTION	SUFFIX	DESCRIPTION
MV	MERCURY VAPOR.	4S	4" SQUARE BY 2 1/8" DEEP BOX.
MH	METAL HALIDE.	ADA	AMERICAN WITH DISABILITIES ACT.
MIN.	MINIMUM.	AFF	ABOVE FINISH FLOOR.
MCA	MINIMUM CIRCUIT AMPS.	AFG	ABOVE FINISH GRADE.
MCM	THOUSAND CIRCULAR MILS.	AWG	AMERICAN WIRE GAUGE.
MFR.	MANUFACTURER.	AMP, A	AMPEREO INTERRUPTINO CARACITY (OYAMETRICAL)
MTD MCP	MOUNTED. MOTOR CIRCUIT PROTECTOR.	A.I.C. AF/AT	AMPERES INTERRUPTING CAPACITY (SYMMETRICAL).  AMP FRAME, AMP TRIP.
MW	MICROWAVE.	AS/AF	AMP SWITCH, AMP FUSE.
NEC	NATIONAL ELECTRICAL CODE.	ATS	AUTOMATIC TRANSFER SWITCH.
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION.	AUX	AUXILIARY CONTACTS.
NC	NORMALLY CLOSED.	BR	BRANCH.
NO	NORMALLY OPENED.	BLDG	BUILDING.
NF	NON-FUSED.	CIRC., CKT.	CIRCUIT.
NIC	NOT IN CONTRACT.	СВ	CIRCUIT BREAKER.
NL NL TO	NIGHT LIGHT.	SFD	COMBINATION SMOKE FIRE DAMPER.
N.T.S.	NOT TO SCALE.	C	CONDUIT.
NL NO or #	NIGHT LIGHT. NUMBER.	C.O. CONN	CONDUIT ONLY, COMPLETE WITH PULLSTRING. CONNECTED.
NO. or # OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED.	CT	CURRENT TRANSFORMER.
%Z	PERCENT IMPEDANCE.	CPT	CONTROL POWER TRANSFORMER.
PH. or ~	PHASE.	DIA	DIAMETER.
PC	PHOTOCELL	DISC	DISCONNECT.
Р	POLE.	DIST	DISTRIBUTION.
PVC	POLY VINYL CHLORIDE.	E.C.	ELECTRICAL CONTRACTOR.
PDU	POWER DISTRIBUTION UNIT.	EMS	ENERGY MANAGEMENT CONTROL SYSTEM.
PRIMARY	OVER 600 VOLTS.	EMT	ELECTRICAL METALLIC TUBING.
PROVIDE PT	FURNISH, INSTALL AND CONNECT. POTENTIAL TRANSFORMER.	EWC E.P.O.	ELECTRIC WATER COOLER. EMERGENCY POWER OFF.
PA	PUBLIC ADDRESS.	EF	EXHAUST FAN.
REC, RECEPT	RECEPTACLE.	FT or '	FEET.
REF	REFRIGERATOR.	FA	FIRE ALARM
RGS	RIGID GALVANIZED STEEL.	FLA	FULL LOAD AMPS.
RL	RUNNING LIGHT.	GRND	GROUND.
S	SINGLE LINE DIAGRAM. SHORT CIRCUIT CURRENT.	GFCI	GROUND FAULT CIRCUIT INTERRUPTER.
SCC SFD	SMOKE FIRE DAMPER.	HOA HACR	HAND-OFF-AUTO. HEATING AIR CONDITIONING REFRIGERATION.
SQ.	SQUARE.	HVAC	HEATING AIR CONDITIONING RELITIONING.
STB	SHUNT TRIP BREAKER.	H.,W.,D.,L.	HEIGHT, WIDTH, DEPTH, LENGTH.
SU	SITE UTILITIES.	HID	HIGH INTENSITY DISCHARGE.
TC	TIMECLOCK.	HP	HORSEPOWER.
TEL/DATA	TELEPHONE AND DATA.	HPS	HIGH PRESSURE SODIUM.
TV T.V.S.S.	TELEVISION. TRANSIENT VOLTAGE SURGE SUPPRESSION.	IN. or " IG	INCHES. ISOLATED GROUND.
TYP	TYPICAL.	JBOX	JUNCTION BOX.
U.G.P.S.	UNDERGROUND PULL SECTION.	K	DEGREE KELVIN.
U.O.N.	UNLESS OTHERWISE NOTED.	KAIC	KILOVOLT AMPERES AVAILABLE INRUSH CURRENT.
U.P.S.	UNINTERRUPTABLE POWER SYSTEM.	KVA	KILOVOLT AMPERES.
VAV	VARIABLE AIR VOLUME.	KW	KILOWATT.
V	VOLTS. VOLT AMPERES.	KWH L.F.	KILOWATT HOUR. LINEAR FEET.
VA VD	VOLTAMPERES. VOLTAGE DROP.	LTG, LTS	LINEAR FEET. LIGHTING.
WP	WEATHERPROOF.	LPS	LOW PRESSURE SODIUM.
W	WIRE.	MAX.	MAXIMUM.
XFMR	TRANSFORMER.	MOCP	MAXIMUM OVERCURRENT PROTECTION.
X	INDICATES EXISTING TO REMAIN.	MCB	MAIN CIRCUIT BREAKER.
XR	INDICATES EXISTING TO BE REMOVED.	MLO	MAIN LUGS ONLY.
XL XN	INDICATES EXISTING TO BE RELOCATED. INDICATES NEW LOCATION OF RELOCATED EQUIPMENT.	M/M	METER. METER MAIN.
ΛIV	INDICATES NEW LOCATION OF RELOCATED EQUIPMENT.	IVI/IVI	IVIL I EN IVIAIIN.

		L	IGHTING FIXTURE SCHEDUL	E				
SYMBOL	LABEL	DESCRIPTION	MANUFACTURER / MODEL #	FIXTURE VOLTAGE	INPUT WATTS	LUMENS	LAMP	DETAIL/ NOTES
0	А	CEILING LIGHT	QUORUM BELFOUR EXTERIOR QUO-301-69 NOIR 301-39	120V	25	-	-	-
•	В	10" TALL OUTDOOR WALL SCONCE	QUORUM BELFOUR SINGLE QUO-701-69 NOIR 301-39	120V	25	-	-	-
	С	LED STREET LAMP	COMMERICAL ELECTRIC INTEGRATED FLOOD DW8899ABZ-B	120V	46	5000	-	-

# VOLTAGE DROP NOTES

- FEEDER LENGTH SHOWN FOR VOLTAGE DROP CALCULATIONS ONLY.
- CONTRACTOR TO VERIFY FEEDER LENGTHS IN FIELD.

  2. 20A, 120V CIRCUITS LONGER THAN 100' USE #10AWG TO LIMIT VOLTAGE DROP ON BRANCH CIRCUITS TO 3%
- 3. 20A, 120V CIRCUITS LONGER THAN 150' USE #8AWG TO LIMIT VOLTAGE DROP ON BRANCH CIRCUITS TO 3%
- 4. 20A, 277V CIRCUITS LONGER THAN 150' USE #10AWG TO LIMIT VOLTAGE DROP ON BRANCH CIRCUIT TO 3%

## **GENERAL NOTES**

- 1. ALL WORK SHOWN IS NEW UNLESS NOTED EXISTING.
- 2. REMOVE ALL CONDUCTORS, DEVICES, AND CONDUIT RENDERED UNUSED BY THIS PROJECT.
- 3. VERIFY CIRCUITRY OF EXISTING DEVICES TO BE REMOVED PRIOR TO DEMOLITION AND PERFORM SPLICES AS REQUIRED TO MAINTAIN CONTINUITY OF CIRCUITS TO EXISTING DEVICES TO REMAIN.
- SEAL ALL CONDUIT PENETRATIONS OF FLOORS AND FIRE RATED ASSEMBLIES WITH U.L. APPROVED MATERIALS AND METHODS TO MAINTAIN FIRE RATING.
- 5. PROVIDE NEW TYPEWRITTEN DIRECTORIES REFLECTING WORK PERFORMED FOR ALL EXISTING PANELBOARDS MODIFIED BY THIS PROJECT.
- 6. PROTECT ALL OPENINGS FOR STEEL ELECTRICAL BOXES IN FIRE RATED WALLS WITH U.L. APPROVED MATERIALS AND METHODS TO MAINTAIN THE FIRE INTEGRITY. (CBC 712.4.1.2).

# NOTE TO PLAN CHECKER E200 ELECTRIC

TITLE 24 COMPLIANCE FORMS NOT REQUIRED FOR TRAINING STRUCTURES.

E000 ELECTRICAL COVER SHEET
E100 ELECTRICAL SITE PLAN
E200 ELECTRICAL FLOOR PLANS
E300 ELECTRICAL SPECIFICATIONS



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General Services Agency Capital Programs 1401 Lakeside Drive Oakland CA, 94612

IO. ISSUE/REVISION YYYY-MM-DD

BID SET 2021-09-13

KEY PLAN

N

PROFESSIONAL SEALS



FACILITY
5301 Madigan Road
Dublin, ca 94568

PROJECT

ASCO TACTICAL TRAINING TOWER

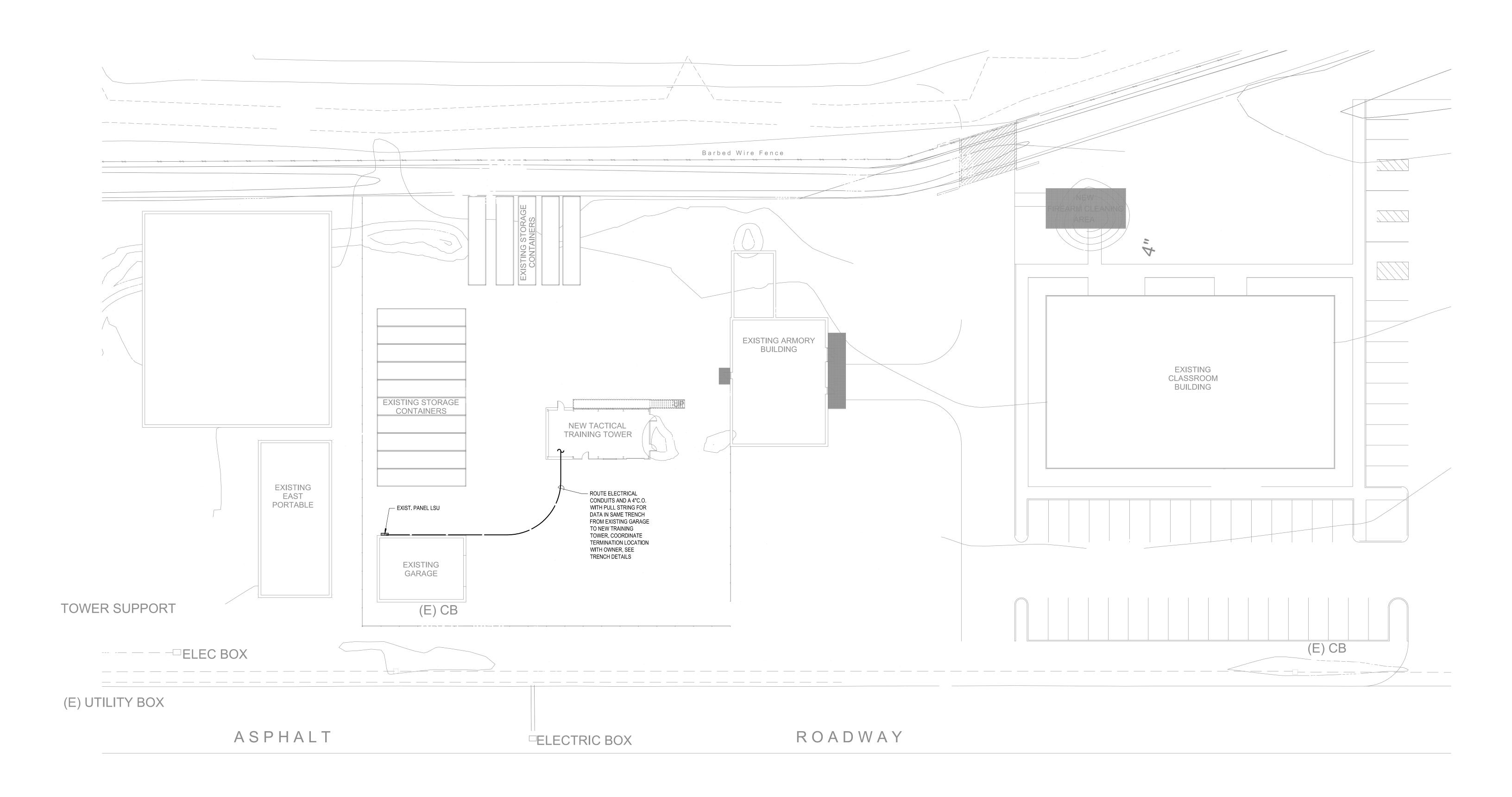
SHEET TITLE
ELECTRICAL
COVER SHEET

DRAWN BY REV'D BY SHEET NUMBER
RLA RLA

PROJECT NUMBER
SF14268.00

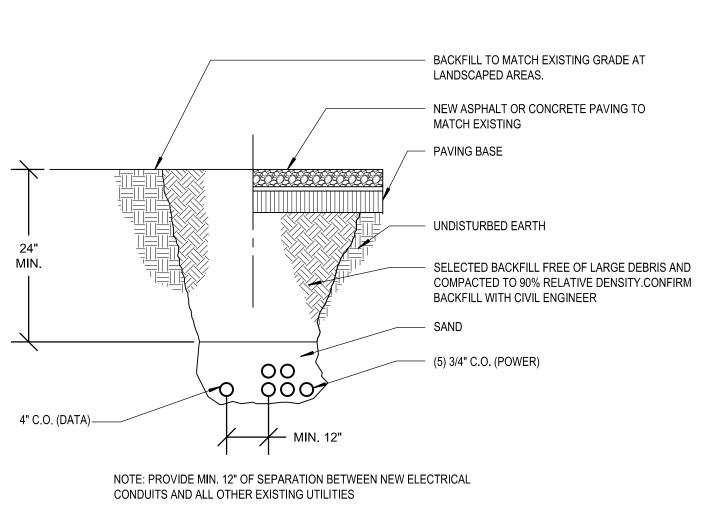
08/27/2021

E000



# EXISTING GENERAL SERVICES BUILDING





NOTE: PROVIDE MIN. 12" OF SEPARATION BETWEEN NEW ELECTRICAL CONDUITS AND ALL OTHER EXISTING UTILITIES
RENCH DETAIL T TO SCALE

208	/120	VOLTS	3 PHASE	_4	WII	RE			M	AIN		100	0 A		20		BUS	100 A
V	OLT AM	PS		R	L	O	В	С		С	В	O	L	R		VO	OLT AM	PS
ØA	ØB	ØC	DESCRIPTION	E C	T G	L E	K R	I R		I R	K R	L E	T G	E C	DESCRIPTION	ØA	ØВ	øс
			Main			3	100	1	A	2	20	1		6	Ex. Lights & Plugs	1330		
						1	-	3	В	4	30	1			Ex. Siren		500	
						-	-	5	C	6	20	1						
750			Ex. Lights			1	20	7	A	8	30	2			Ex. AC Unit	1560		
	1080		Ex. Recepts	6		1	20	9	В	10		71					1560	
		1080	Ex. Recepts	6		1	20	11	C	12	20	1			Ex. Storage Cont.			500
793			EF-4th			3	15	13	A	14	20	1			Ex. Storage Cont.	500		
8	793		1-1/2 HP			-	-	15	В	16	20	1			Ex. Storage Cont.		500	
		793	6.6 FLA			-		17	C	18	15	3			EF-2nd			793
			Ex. Spare			1	20	19	A	20	-1	-			1-1/2 HP	793		
e.	680		Tower Ded	1		1	20	21	В	22	188	-10			6.6 FLA		793	
		680	Tower Ded	1		1	20	23	C	24	20	1			Smoke Blower			500
125			Tower Interior	6	5	1	20	25	A	26	20	2			Smoke Generator	1456		
	263		Tower Exterior		8	1	20	27	В	28	1700						1456	
		1080	Tower	6		1	20	29	C	30	20	1			Ex. Spare			
1668	2816	3633							A/LIN	Œ						5639	4809	1793
ØA=	7306		ØB= 7624 ØC=						5425									
	T MTR/C			200000000000000000000000000000000000000	V 15000-E		0.000	12020					UOL	SLO	DADS			
2378	x0.25=	594	5	UP TO		kVA	46	80	X	1.00=	46	80			Secretary and the Control of the Con			
1388	x1.25=	1735	RECEPTA	CLES REM		DER			x	).50=					OTHER	14288	x1.00	14288
	7	TC	TAL DESIGN k	$V \Delta =$	2	1		7	OTA	ΙD	ESIC	W.	ΔМ	PS=	59			

AE3 PARTNERS
Architects + Project Managers

275 Battery Street, Suite 1050
San Francisco, California 94104
Ph: 415-233-9991
Fax: 415-651-8911

RANDALL LAMB
Integrated Services - MEP Engineering | Technical Services | Building Sciences |
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500 Washington Street, Suite 200
San Francisco, CA 94111

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General Services Agency Capital Programs 1401 Lakeside Drive Oakland CA, 94612

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2021-09	9-13

KEY PLAN

N

PROFESSIONAL SEALS



5301 Madigan Road Dublin, ca 94568

PROJECT
ASCO TACTICAL TRAINING TOWER

SHEET TITLE
ELECTRICAL
SITE PLAN

DRAWN BY REV'D BY SHEET NUMBER

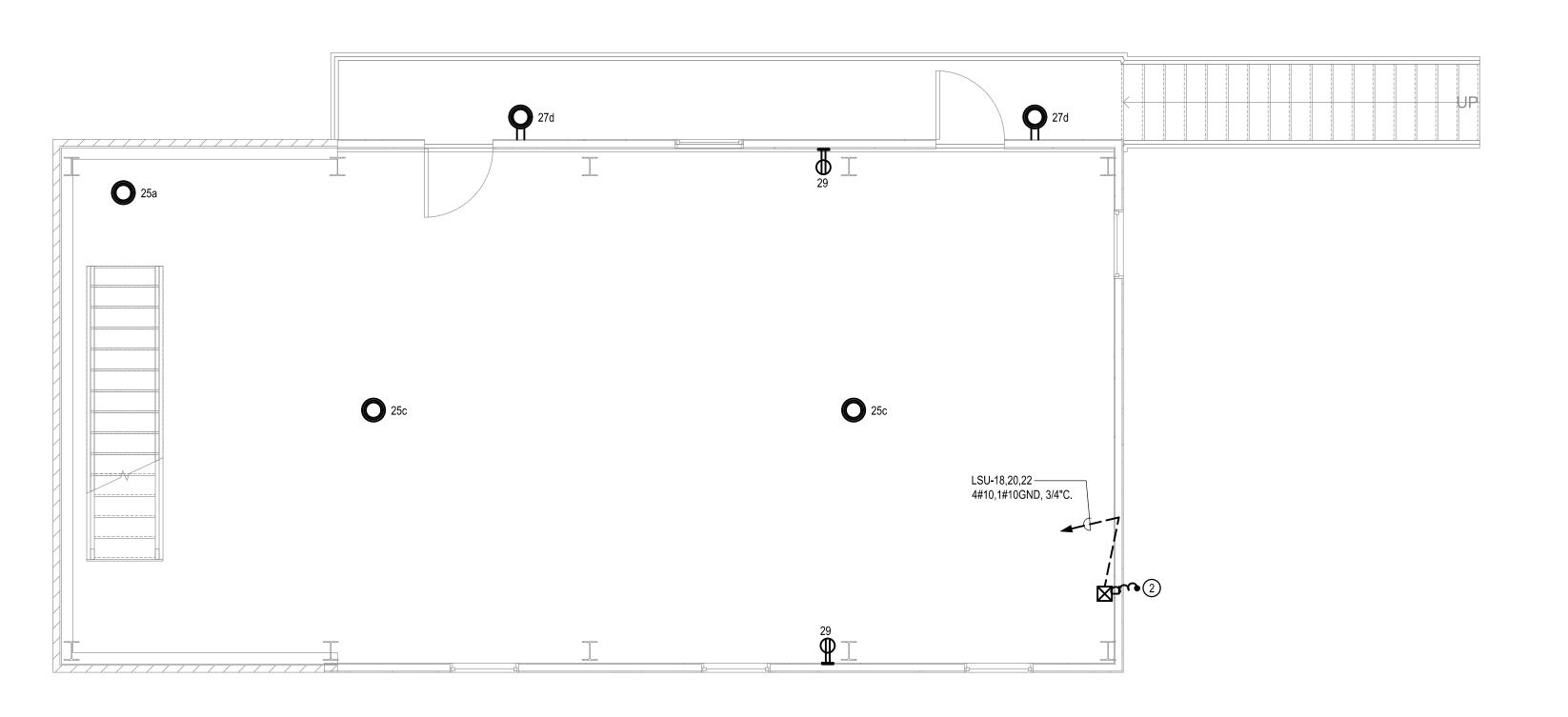
RLA RLA

PROJECT NUMBER

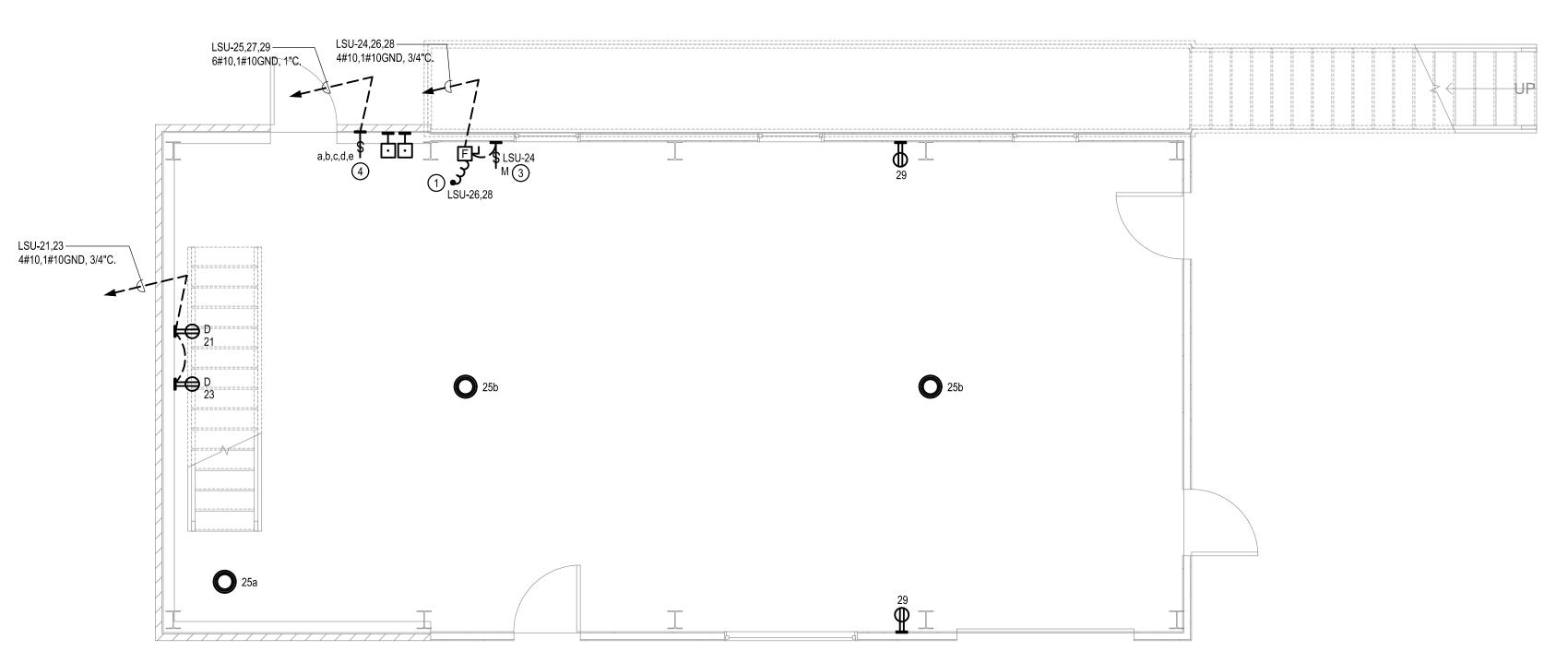
PROJECT NUMBER
SF14268.00
DATE

08/27/2021

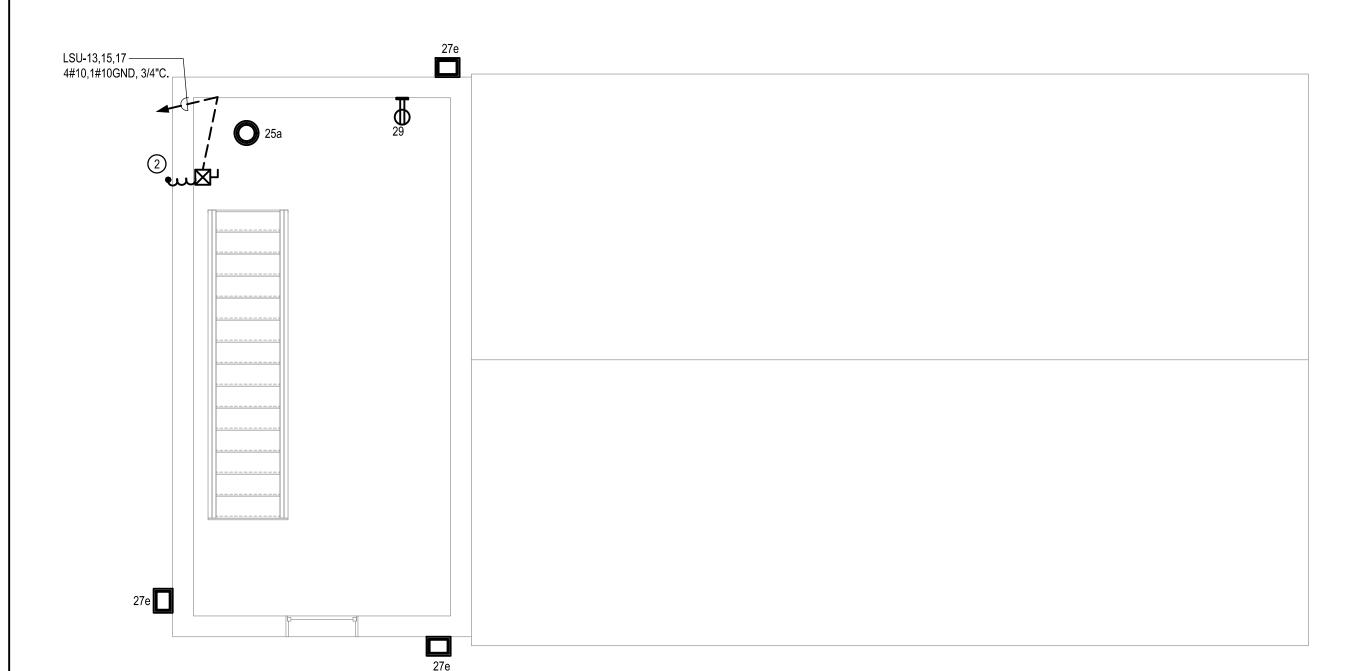
E10







1 ELECTRICAL PLAN LEVEL 01







3 ELECTRICAL PLAN LEVEL 03
SCALE: 1/4"=1'-0"

FΥ	NO.	TF:	3	

- A. ALL OUTLETS TO BE GFCI WITH WEATHER PROOF CONVER.
- B. ALL WIRING IN STRUCTURE TO BE #10 AWG IN SURFACE MOUNTED CONDUIT TO DEVICES SHOWN.
- (1) CONNECT TO SMOKE GENERATOR AS REQUIRED. CONFIRM 208 VOLT MODEL SUPPLIED.
- CONNECT TO EXHAUST FAN AS REQUIRED. PROVIDE PUSH BUTTON ON/OFF REMOTE START AT TOWER DOOR.
- (3) CONNECT TO SMOKE BLOWER FAN AS REQUIRED. MANUAL MOTOR STARTER TO BE CONTROL SWITCH.

4 LABEL SWITCHES TO IDENTIFY LIGHTS AND FAN CONTROLLED.

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PROFESSIONAL SEALS

PROJECT ASCO TACTICAL TRAINING TOWER

SHEET TITLE ELECTRICAL

FLOOR PLANS

DRAWN BY REV'D BY SHEET NUMBER RLA RLA PROJECT NUMBER

SF14268.00 08/27/2021

E200

Arrow Hart 1990 Series.

General Electric GE 5900 Series.

Pass and Seymour 20 ACI Series.

Wall Dimmers: Type, voltage and load as required on Drawings.

Bryant 4900 Series.

Hubbell 1220 Series.

Leviton 1221 Series.

each pole.

 Wattstopper Receptacles Arrow Hart #5362. Bryant #5362. General Electric #GE 4108. Hubbell #5362. Leviton #5362. Pass and Seymour #5362. GFCI Receptacle, Type 5-20R, Specification Grade: Arrow Hart #GF5342. Bryant #GFR53. General Electric #GF 5342. Hubbell #GF-5362. Leviton #6898. Pass and Seymour #2091-S. Device Body: White plastic Wall Plates Decorative Cover Plate: White smooth plastic. Manufacturer: Same as wiring device. 2.5 CABINETS Boxes: Galvanized steel. Box Size: As shown on drawings. concealed hinge and flush lock: Finish with gray baked enamel. 2.6 SUPPORTS Support Channel: Galvanized or painted steel. Hardware: Corrosion resistant. 2.7 IDENTIFICATION MATERIALS 2.8 DISCONNECT SWITCHES Acceptable Manufacturers: ITE ON position. Handle lockable in OFF position. D. Enclosures: NEMA KS 1; Type 3R outdoors. including a neutral conductor. 2.9 FUSES Acceptable Manufacturers: C. Interrupting Rating: 200,000 rms amperes. 2.10 PANELBOARDS Acceptable Manufacturers: Match existing. where scheduled on Drawings. lugs and extra gutter space for parallel feeder conductors. 2.11 MOTOR STARTERS Acceptable Manufacturers: Manual Motor Starters toggle operator. D. Controller Overcurrent Protection and Disconnecting Means

General Electric

Schneider

Eaton

Buss

Economy

Shawmut

General Electric

Schneider

Siemens

Eaton

2.12 PULL LINE

3.1 INSTALLATION

3. PART 3 EXECUTION

Conduit

temporary supports

B. Building Wire and Cable

conduit.

1/8 inch diameter braided yellow polypropylene

Install conduit in accordance with NECA "Standard of Installation."

Arrange conduit to maintain headroom and present neat appearance.

Do not attach conduit to ceiling support wires.

8. Provide insulated equipment ground conductor in flexible conduit.

Use conduit hubs to fasten conduit to cast boxes.

slabs on fill below grade watertight.

Do not combine more than two individual homeruns (6 circuits total) into common

Do not support conduit with wire or perforated pipe straps. Remove wire used for

Install conduit to preserve fire resistance rating of partitions and other elements.

9. Make conduit penetrations of exterior concrete or masonry wall below grade, and of floor

10. Seal underground conduits terminating inside building below grade after installation of

conductors; install plugs or caps in such spare (unused) conduits.

Use conductor not smaller than 12 AWG for power and lighting circuits. Neatly train and lace wiring inside boxes, equipment, and panelboards.

Duplex Convenience Receptacle, Type 5-20R, Specification Grade: C. Provide 3/4 inch thick plywood backboard mounting terminal blocks. Paint matte white. Cabinet Fronts: Steel, flush orsurface type as shown on drawings with concealed trim clamps, Nameplates: Engraved three layer laminated plastic, white letters on a black background. Wire and Cable Markers: Plastic impregnated cloth or epoxy film markers, split sleeve, or C. Box and Pull Line Markers: Cloth, vinyl or paper with vinyl overlay. Fusible Switch Assemblies: Heavy duty, quick make, quick break, load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in ON position. Handle lockable in OFF position. Fuse Clips: Designed to accommodate Class R fuses. Nonfusible Switch Assemblies: Heavy duty, quick make, quick break, load interrupter enclosed knife switch with externally operable handle interlocked to prevent opening front cover with switch in Switch Ratings: Voltage and current ratings, number of poles as shown on plan or as required by equipment or feeder controlled by switch. Provide solid neutral for switches installed on a circuit Fuses 600 Amperes and Less: UL Class RK5 with time delay for motor circuits. D. Provide fuses with voltage and current ratings suitable for equipment controlled. Where current ratings are not shown on plans, provide fuses with rating recommended by equipment manufacturer(s). Molded Case Circuit Breakers: Bolt on type ambient-compensated thermal magnetic trip circuit breakers, with factory assembled common trip handle for multiple pole units. Provide circuit breakers UL listed as Type SWD for lighting circuits. Provide UL Class A ground fault interrupter circuit breakers Provide lugs with approved connectors for size of conductors feeding panel. Provide double 1. Fractional Horsepower Manual Starter: General purpose, Class A, manually operated, full voltage controller for fractional horsepower induction motors, with thermal overload unit, and Voltage, Rating and Thermal Element: As required by motor controlled. 3. Enclosure: NEMA ICS 6; Type 1, indoor dry locations. Motor Circuit Protector: Circuit breakers with integral instantaneous magnetic trip in

AE3 PARTNERS Architects + Project Manager 275 Battery Street, Suite 1050 Make splices, taps, and terminations to carry full ampacity of conductors with no San Francisco, California 94104 perceptible temperature rise. 415-233-9991 4. Use hardened and tempered steel, tin-plated or stainless steel Belleville washer with 415-651-8911 slightly larger tin-plated mild steel flat washer for aluminum lugs. Fax: 5. Use compression connectors for copper conductor splices and taps, 6 AWG and larger. www.ae3partners.com Use compression tool designed for the size and type of connector being compressed. 6. Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, 8 AWG and smaller. RANDALL LAMB Make underground splices watertight. SAN DIEGO - SAN FRANCISCO C. Boxes 500 Washington Street, Suite 200 Install electrical boxes as shown on Drawings, and as required for splices, taps, wire San Francisco, CA 94111 pulling, equipment connections and compliance with regulatory requirements. Install electrical boxes to maintain headroom and to present neat mechanical appearance. 3. Install boxes to preserve fire resistance rating of partitions and other elements; arrange boxes to meet regulatory requirements. Align adjacent wall mounted outlet boxes for switches, thermostats, and similar devices with each other Do not use through-walls boxes or install flush mounting boxes back to back in walls; provide minimum 6 inch separation. Provide minimum 24 inches separation in acoustic rated walls. Use stamped steel bridges or bar hanger assemblies to fasten flush mounting outlet box between studs. Use adjustable steel channel fasteners for hung ceiling outlet box. Do not fasten boxes to ceiling support wires. Support sheet metal boxes independently of conduit. Use gang box where more than one device is mounted together. Do not use sectional Plaster Rings: Use for all concealed; depth of rings as required to reach finished Coordinate trimming of openings for outlet boxes in partitions to achieve neat, closelyfitting openings. Install knockout closure in unused box opening. Wiring Devices Install devices plumb, level, and rigidly in place. Install switches with OFF position down, 2 inches to 8 inches from trim on the strike Install wall dimmers to achieve power rating required for load shown on drawings. General Services Agency Do not share neutral conductor on load side of dimmers. Capital Programs Install decorative plates on switch, receptacle, and blank outlets in finished areas. Use 1401 Lakeside Drive multi-gang plates for multiple devices. Connect wiring devices by wrapping conductor around screw terminal. Oakland CA, 94612 Supporting Devices 1. Fasten hanger rods, conduit clamps, and outlet and junction boxes to building structure using expansion anchors, beam clamps, steel ramset fasteners. 2. Use toggle bolts or hollow wall fasteners in plaster or gypsum board partitions and walls; sheet metal screws or spring steel bar retainer clips in sheet metal studs. Do not fasten supports to piping, ductwork, mechanical equipment, or conduit. Do not use powder actuated anchors without specific permission. Do not drill structural steel members without specific permission. ISSUE/REVISION Fabricate supports from structural steel or steel channel, rigidly welded or bolted to present a neat appearance. Use hexagon head bolts with spring lock washers under nuts. Install surface mounted cabinets and panelboards with minimum of four anchors. Bridge studs top and bottom with channels to support flush mounted cabinets and panelboards in stud walls. Electrical Identification Secure nameplates to equipment fronts using screws or rivets. Secure nameplate to inside face of recessed panelboard doors in finished locations. Provide wire markers on each conductor in panelboard gutters, pull boxes, and at load connection. Identify with branch circuit or feeder number for power and lighting circuits If more than one neutral conductor is present, mark each with related circuit numbers. Color code all secondary branch circuit and feeder conductors as follows: Four Wire, Three Phase, Grounded Wye or Delta System: For 120/208 volt systems, use one black, one red, one blue, one white (neutral). For 277/480 volt systems, use one brown, one orange, one yellow and one gray (neutral). 4. Use wire with insulation of required color. For sizes of wire, which may not be available in specified colors use self adhesive wrap around, markers of solid colors to color code

Color code conductors at accessible locations.

Install fuses in fusible disconnect switches

Provide filler plates for unused spaces in panelboards.

Height: 6 ft. to top of panel.

Outlets: Affix label identifying panel and circuit number.

Panelboards: 1/4 inch; identify equipment designation. 1/8 inch; identify voltage rating and

Pull Rope Marking: Affix label identifying termination point at each end of pull rope.

Install disconnect switches shown mounted on walls at +4'-6" to centerline of switch.

Install panelboards plumb. Install flush mounted panelboards flush with wall finishes.

Provide typed circuit directory in plastic holder for each branch circuit panelboard.

Stub one 3/4 inch conduit to accessible location above ceiling out of each recessed

Install motor control equipment in accordance with manufacturer's instructions.

Motor Data: Provide neatly typed label inside each motor starter enclosure door

Pull Line: Provide in each empty conduit except sleeves and nipples; leave 8 inches of slack at

Select and install heater elements in motor starters to match installed motor

identifying motor served, nameplate horsepower, full load amperes, code letter, service factor, and

4. Install separately-mounted magnetic starters shown adjacent to equipment on

Install disconnect switches shown on or adjacent to equipment on field-fabricated

Nameplate Engraving

Disconnect Switches

panelboard for each 3 spares or spaces.

Motor Starters

characteristics.

voltage/phase rating.

galvanized steel frames.

**END OF SECTION** 

galvanized steel frames.

Panelboards

KEY PLAN

Main (415) 512-9771

YYYY-MM-DD

2021-09-13

PROFESSIONAL SEALS



FACILITY

5301 Madigan Road Dublin, ca 94568

PROJECT ASCO TACTICAL TRAINING TOWER

SHEET TITLE

08/27/2021

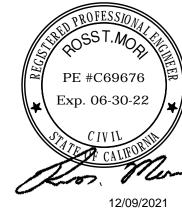
ELECTRICAL

SPECIFICATIONS

DRAWN BY REV'D BY SHEET NUMBER RLA | RLA

PROJECT NUMBER

SF14268.00



# APPENDIXB

# STRUCTURAL PART DRAWINGS

REVISIONS

RAININ

**B** DRAWINGS

APPENDIX E Structural I To follow

JULY 2, 2021

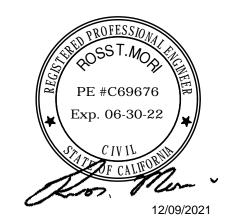
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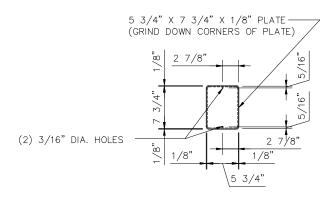
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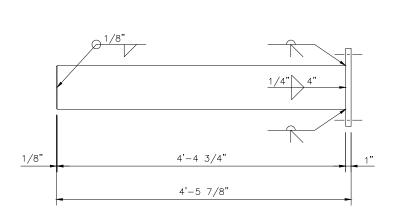
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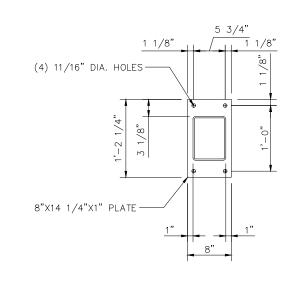
314114 PART NO:

FIRE FACILITIES INC.
ANTIOCH, ILLINOIS









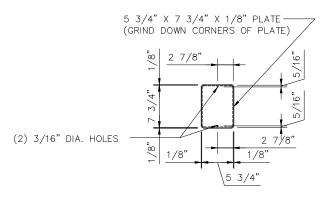
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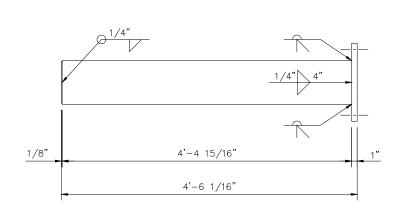
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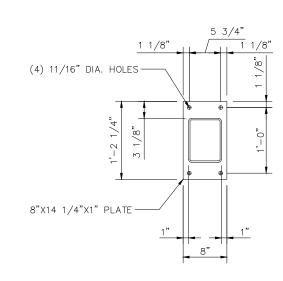
	· · · · · · · · ·		<u> </u>	
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
	8" X 6" X 1/4"	TUBE		135#
		TITLE:		
	SPEC. BALCONY	BEAM		
	NAME: S.P.W.	DATE: 6/16/98	PART N	Π.
	SCALE: 1 1/2 SCALE		7444	4 4
			3141	14
			<u> </u>	1 1

FIRE FACILITIES INC.
ANTIOCH, ILLINOIS





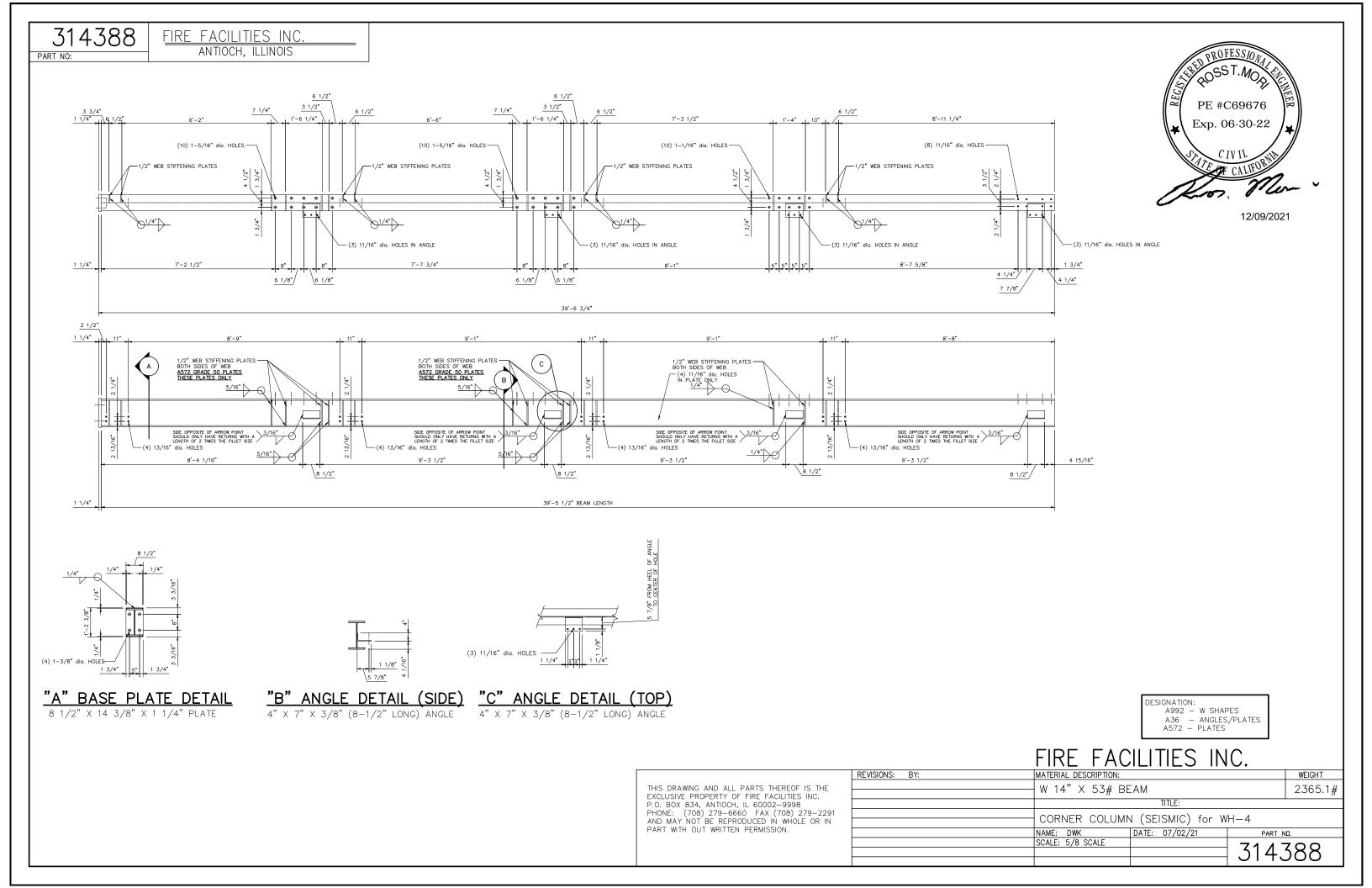


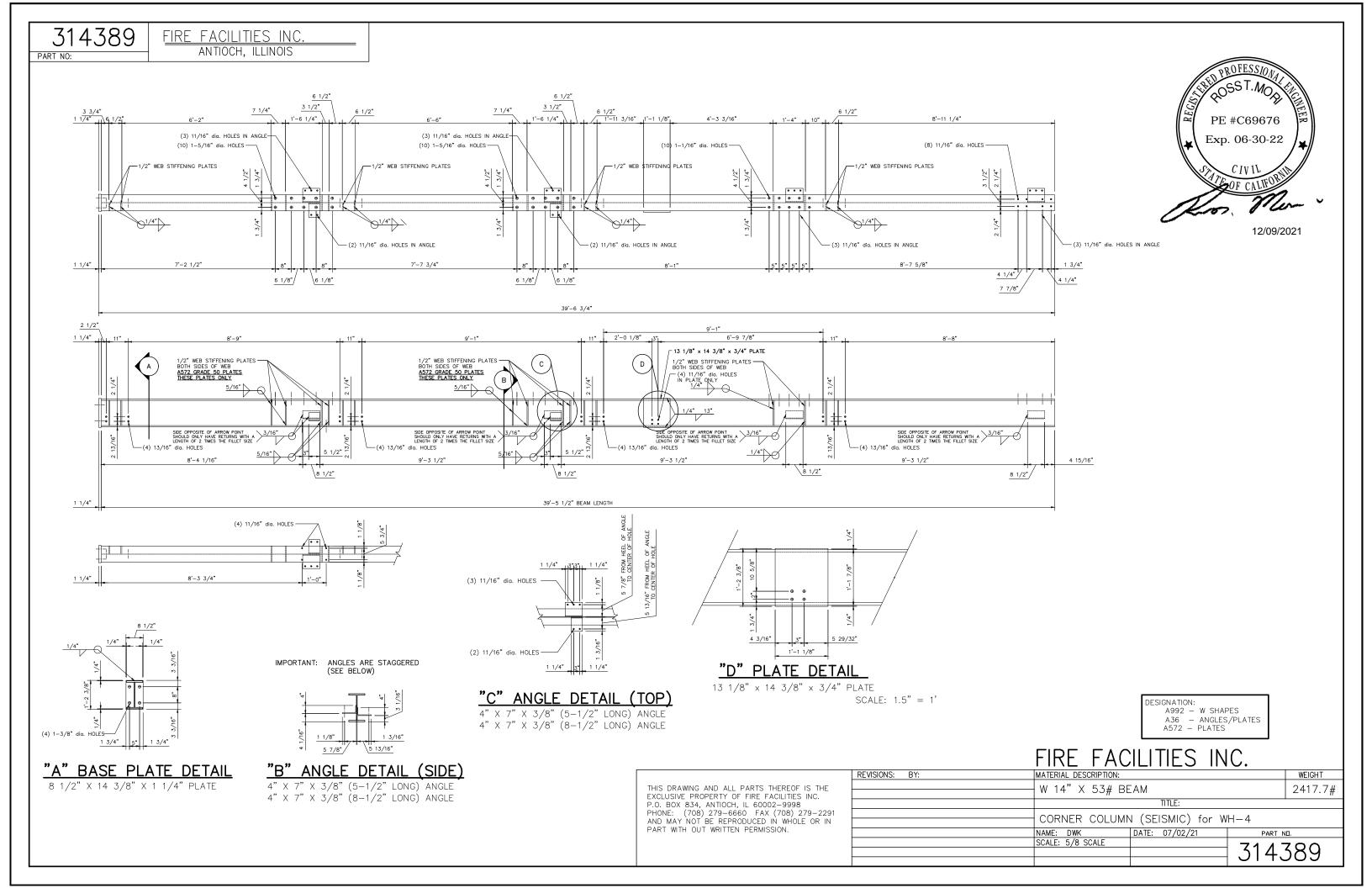


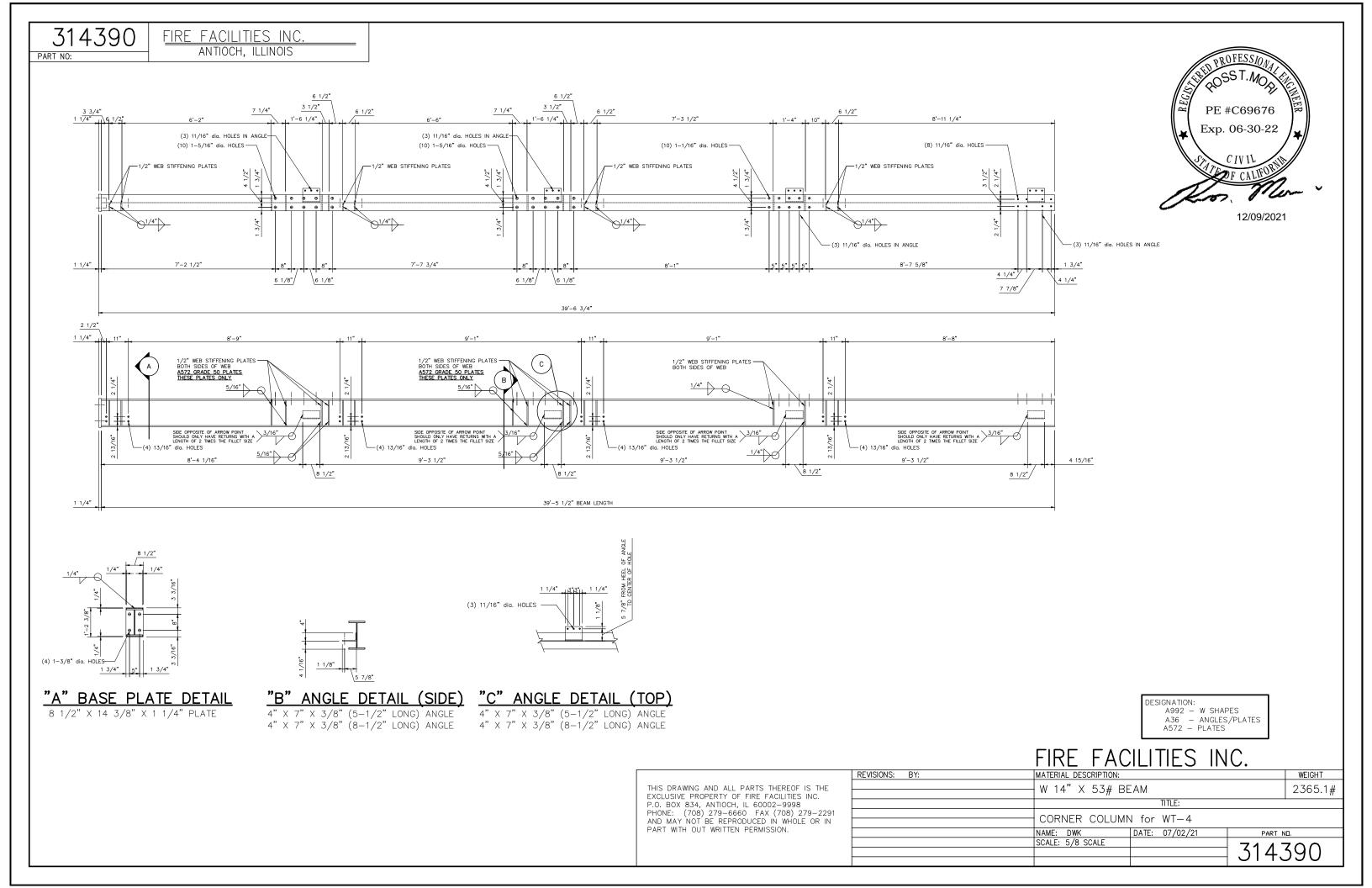
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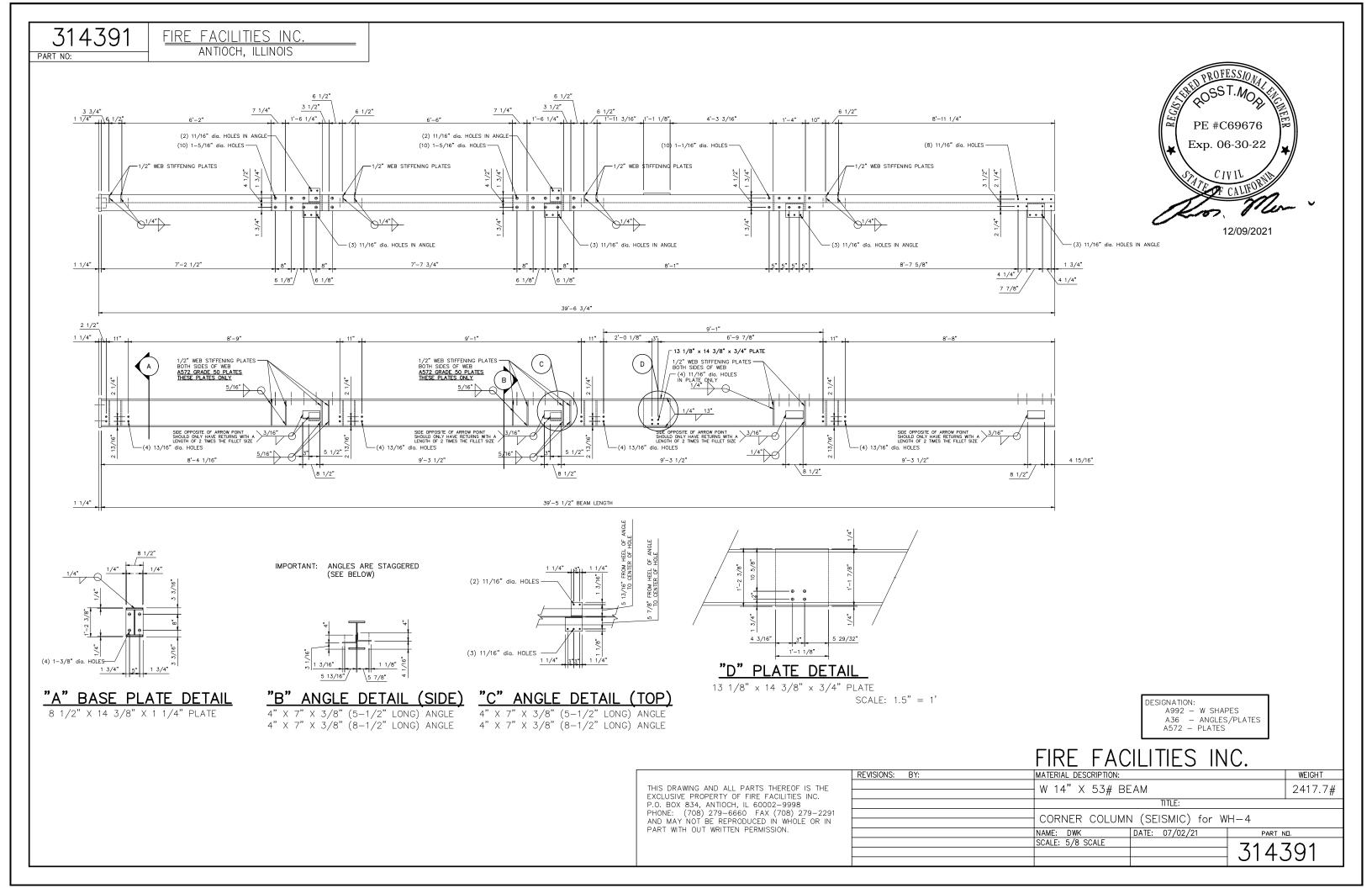
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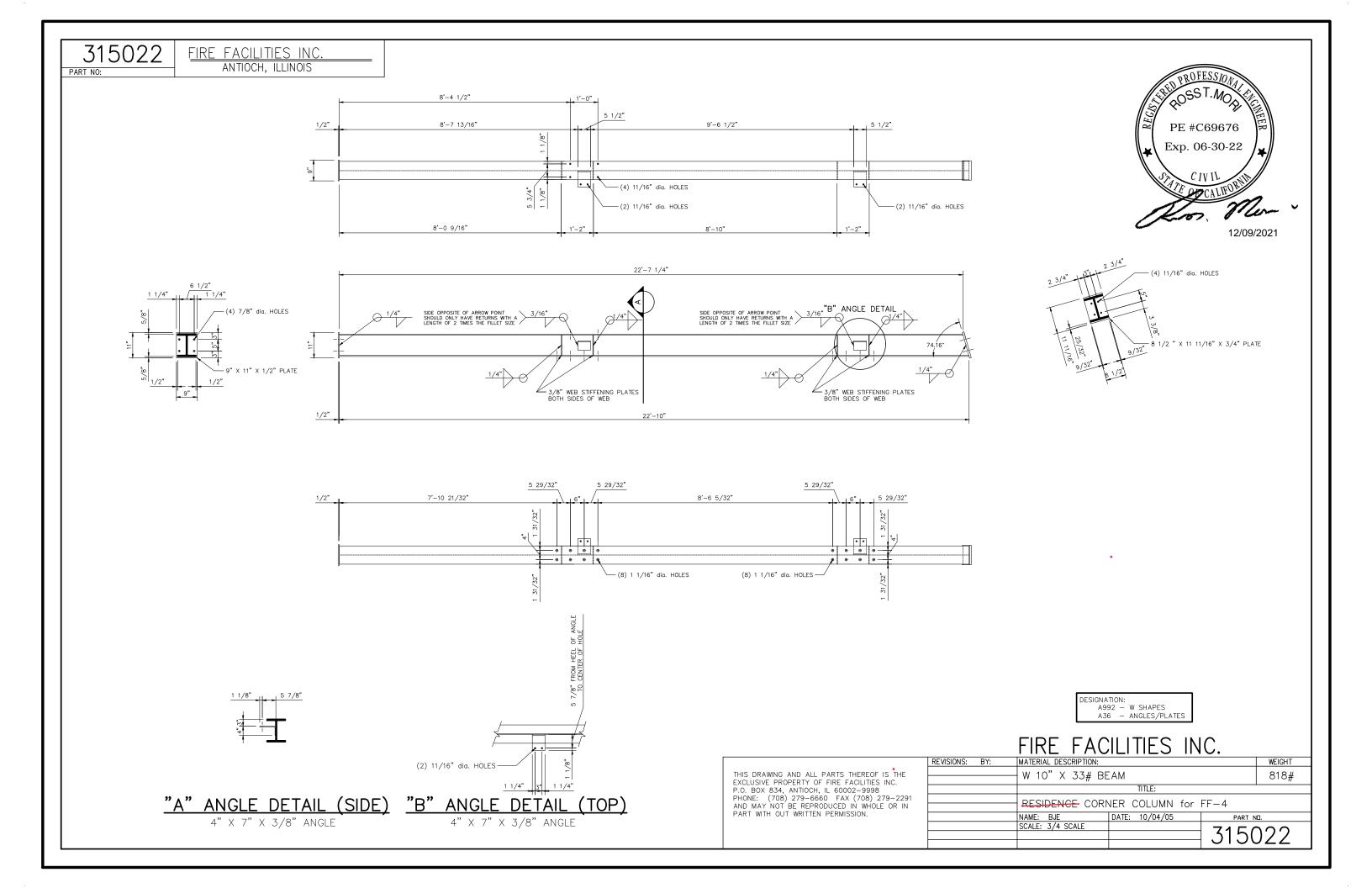
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			3141	15

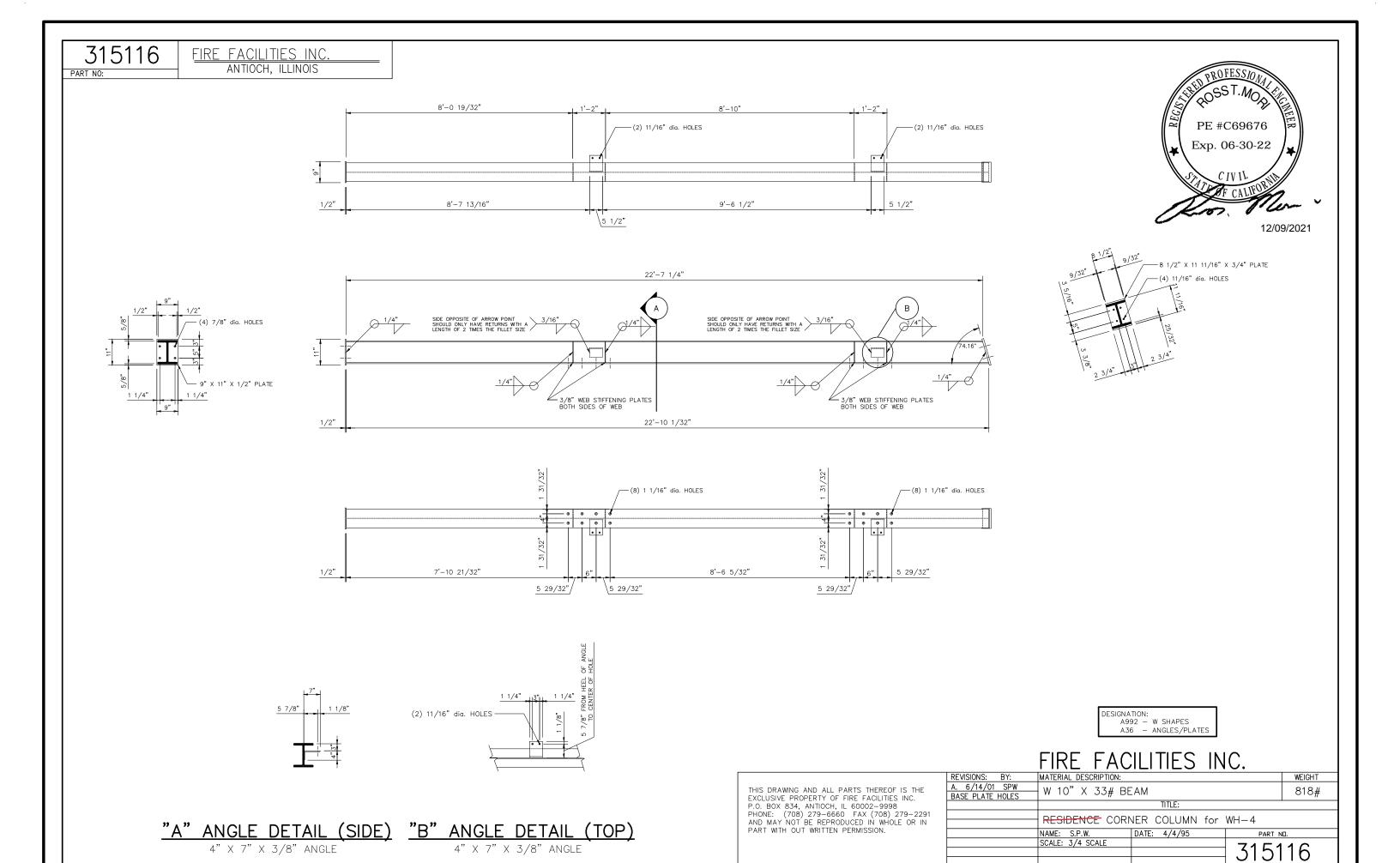








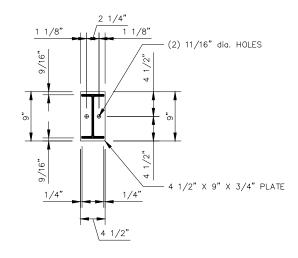


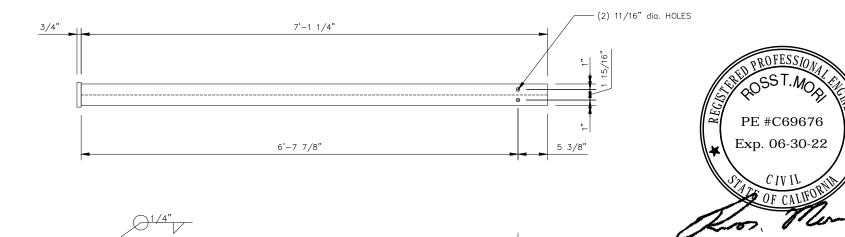


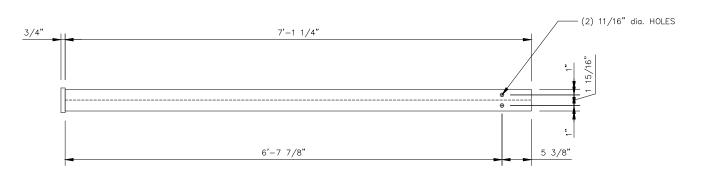


FIRE FACILITIES INC.
ANTIOCH, ILLINOIS

DART NO:





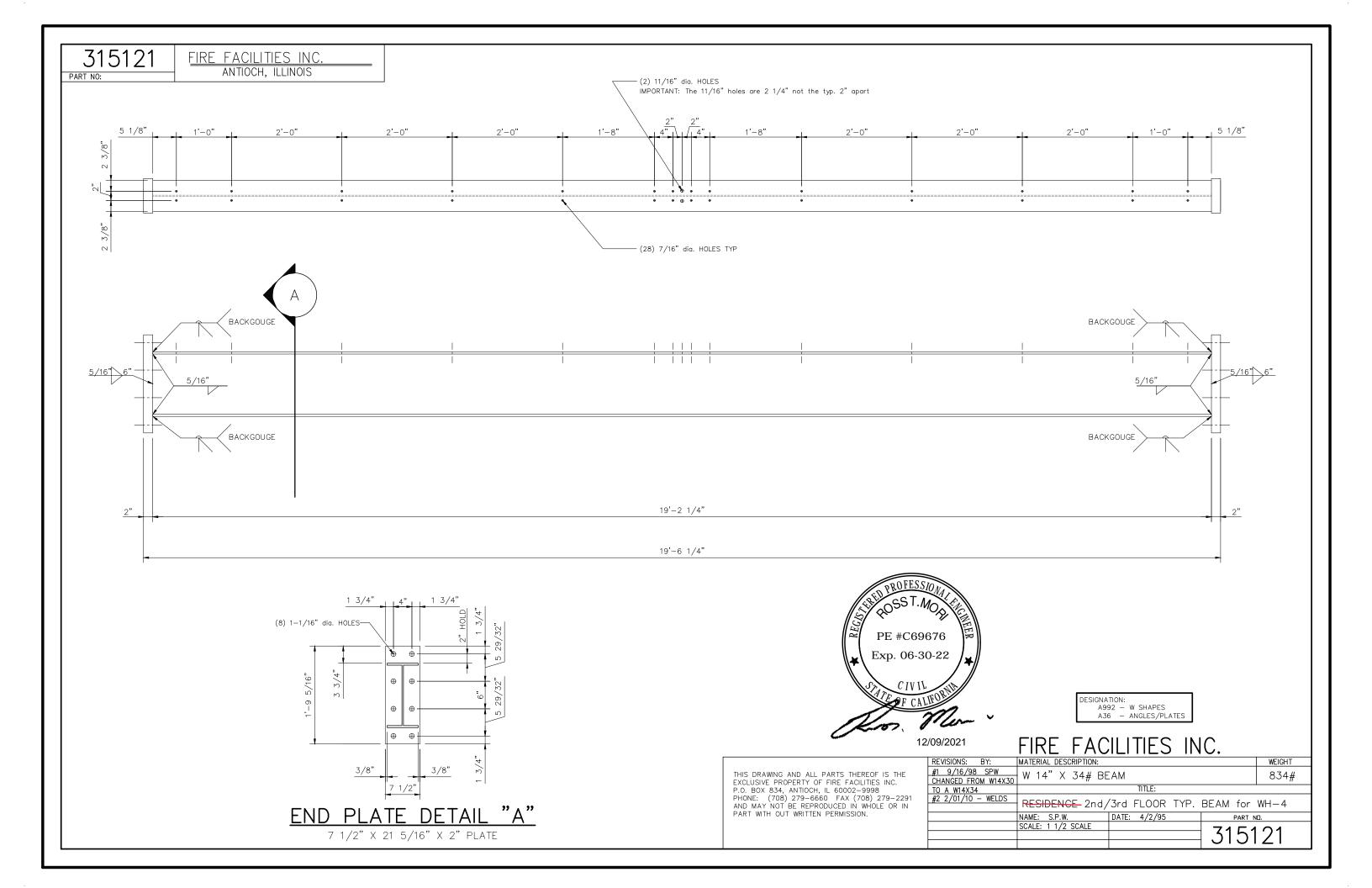


DESIGNATION: A992 - W SHAPES A36 - ANGLES/PLATES

12/09/2021

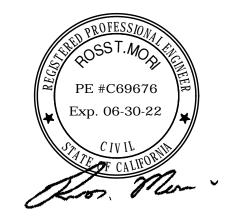
#### FIRE FACILITIES INC.

1 11 12 1 7 10 12 1 1 1 2 0 11 1 0 1					
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT	
	W 8" X 10# BEA	ΔM		75#	
		TITLE:			
	TYP. RESIDENCE	SUPPORT COLUM	N for WH-	-4	
	NAME: S.P.W.	DATE: 4/2/95	PART N	□.	
	SCALE: 1 1/2 SCALE		フィにィ	47	
			3151	1/	
			<u> </u>		

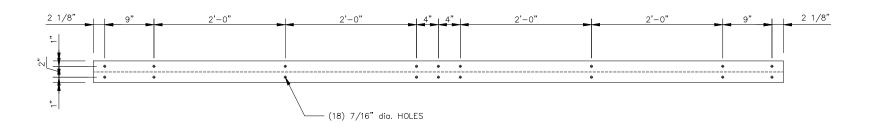


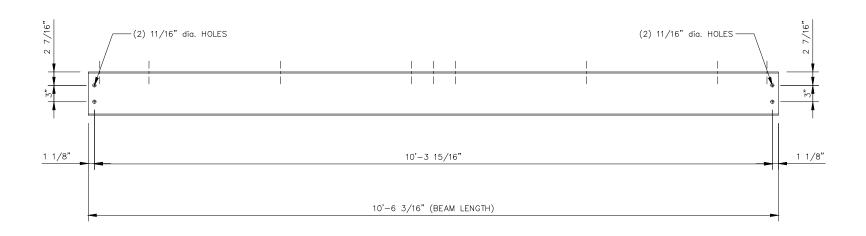
FIRE FACILITIES INC.

ANTIOCH, ILLINOIS



12/09/2021





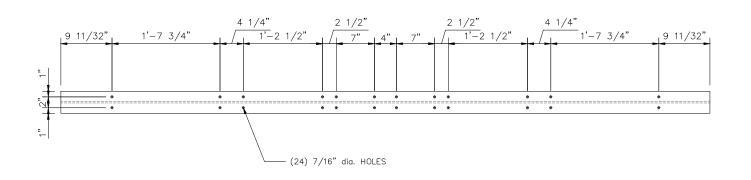
DESIGNATION:
A992 - W SHAPES
A36 - ANGLES/PLATES

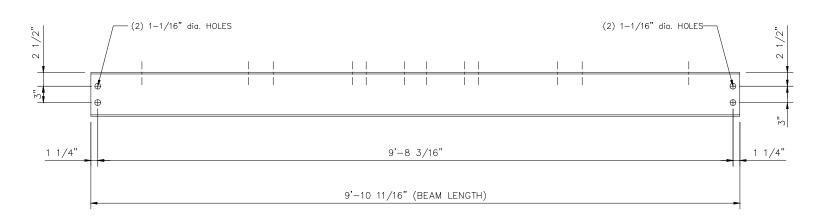
#### FIRE FACILITIES INC.

	· · · · · · · · · · · ·		<u> </u>	
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
	W 8" X 10# BEA	MA		105#
		TITLE:		
	TYP. RESIDENCE	-SIDE WALL BEAM	for WH-4	1
	NAME: S.P.W.	DATE: 4/2/95	PART N	Ο.
	SCALE: 1 1/2 SCALE		71 [1	7
			3151	23

FIRE FACILITIES INC.

ANTIOCH, ILLINOIS





DESIGNATION:
A992 - W SHAPES
A36 - ANGLES/PLATES

PE #C69676 Exp. 06-30-22

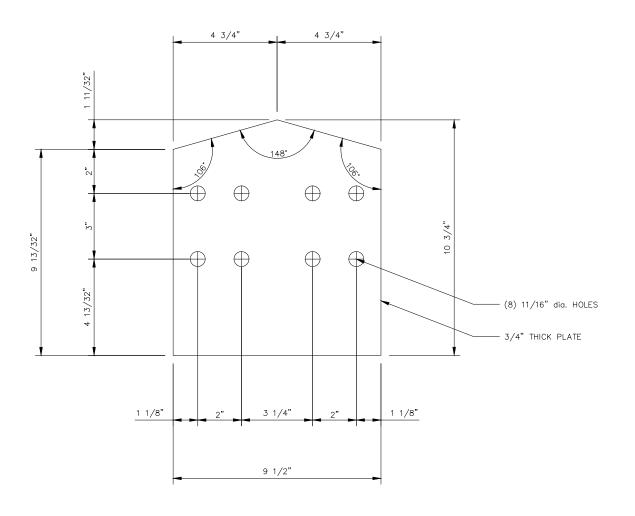
12/09/2021

#### FIRE FACILITIES INC.

	· · · · · - · · · · -			
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
#1 12/31/97 SPW	W 8" X 13# BEA	Z M		129#
#2 1/16/08 DWK	W 0 / 10# BE/	(IVI		120#
1" HOLES & EDGE DIS.		TITLE:		
#3 12/16/19 SPW	TVD TOWED INT	EDIOD DEAM for 1	A/I I - A	
ADDED 4 HOLES FOR IBC	TIP. TOWER INT	ERIOR BEAM for \	WH-4	
	NAME: S.P.W.	DATE: 4/2/95	PART N	Ο.
	SCALE: 1 1/2 SCALE		71 [1	00
			5151	79

FIRE FACILITIES INC.

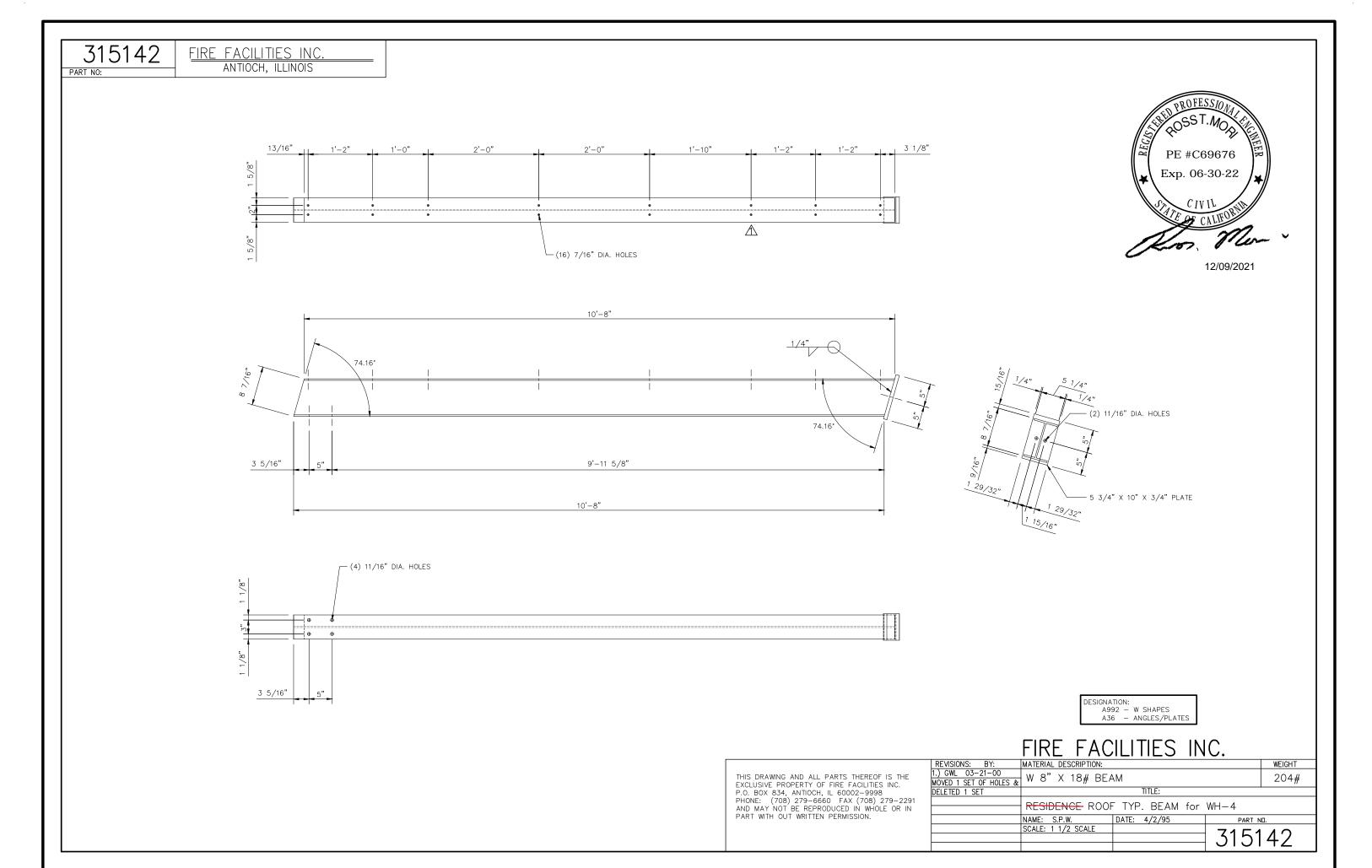
ANTIOCH, ILLINOIS

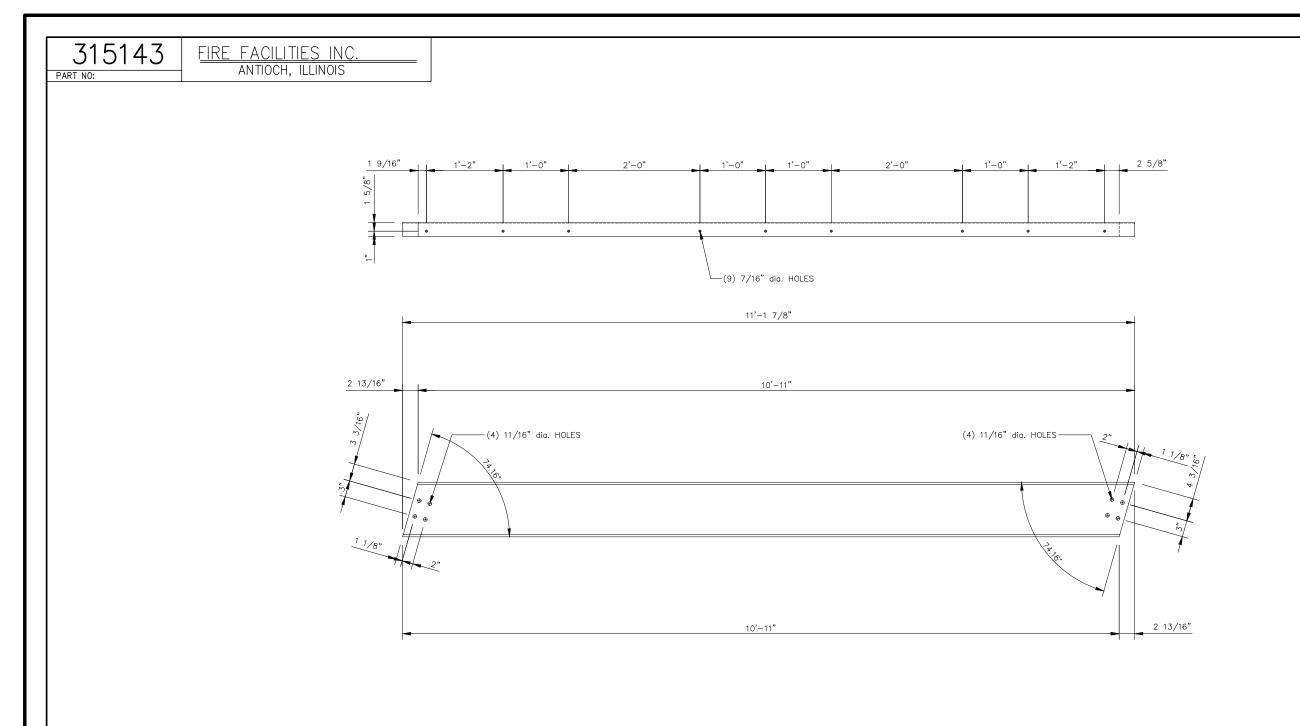


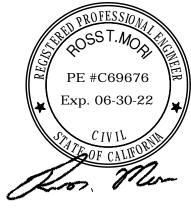


#### FIRE FACILITIES INC.

			<b>.</b>	
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
	9 1/2" X 10 3/	'4" x 3/4" plate	(A-36)	29#
		TITLE:		
	RAFTER CONNECTION PLATE for WH-4			
	NAME: S.P.W.	DATE: 4/2/95	PART N	Π.
	SCALE: 6 SCALE		74 -	7 -
			3151	.55 I
			0101	





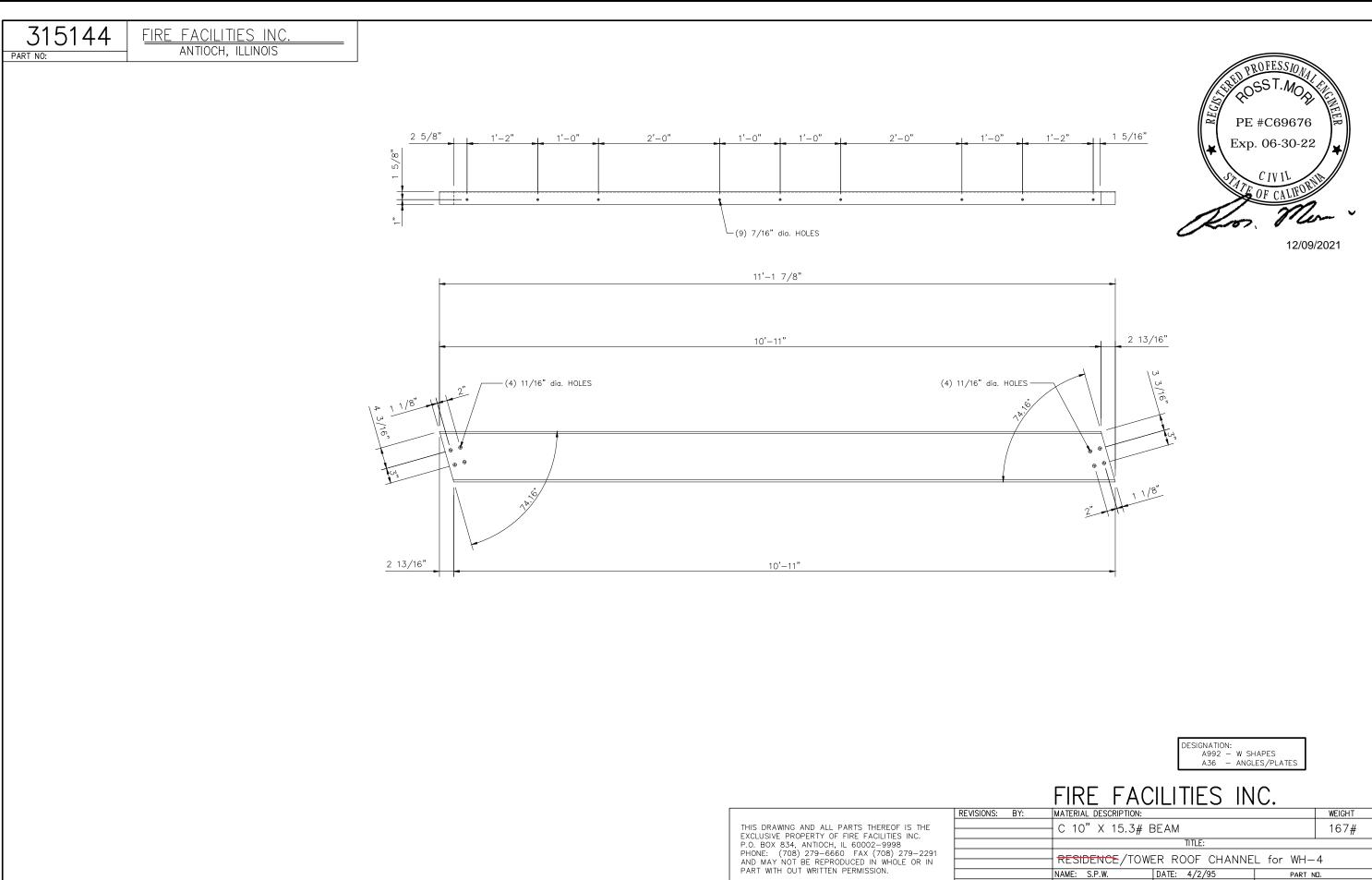


12/09/2021

DESIGNATION: A992 - W SHAPES A36 - ANGLES/PLATES

#### FIRE FACILITIES INC.

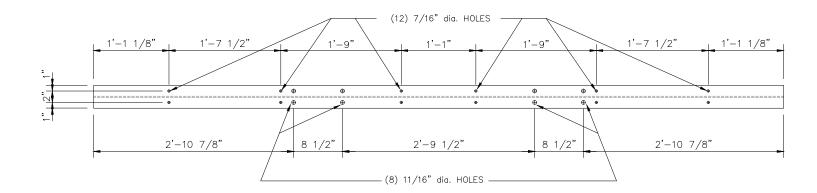
1 11 12 1 7 10 12 1 1 1 2 0 11 1 0 1					
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT	
	C 10" X 15.3# E	BEAM		167#	
		TITLE:			
	RESIDENCE/TOW	ER ROOF CHANNE	L for WH-	4	
	NAME: S.P.W.	DATE: 4/2/95	PART N	□.	
	SCALE: 1 1/2 SCALE		フィにィ	17	
			3151	43	

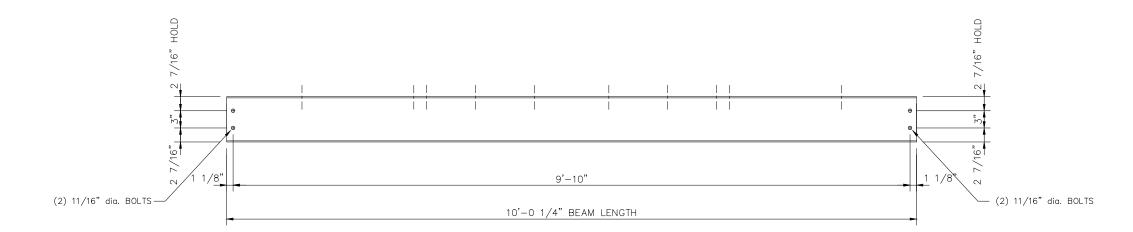


C 10"	X 15.3# BEAM			167#
		TITLE:		
RESIDE	ENCE/TOWER RO	OF CHANNEL	for WH-	4
NAME: S		4/2/95	PART N	□,
SCALE: 1	1/2 SCALE		3151	44



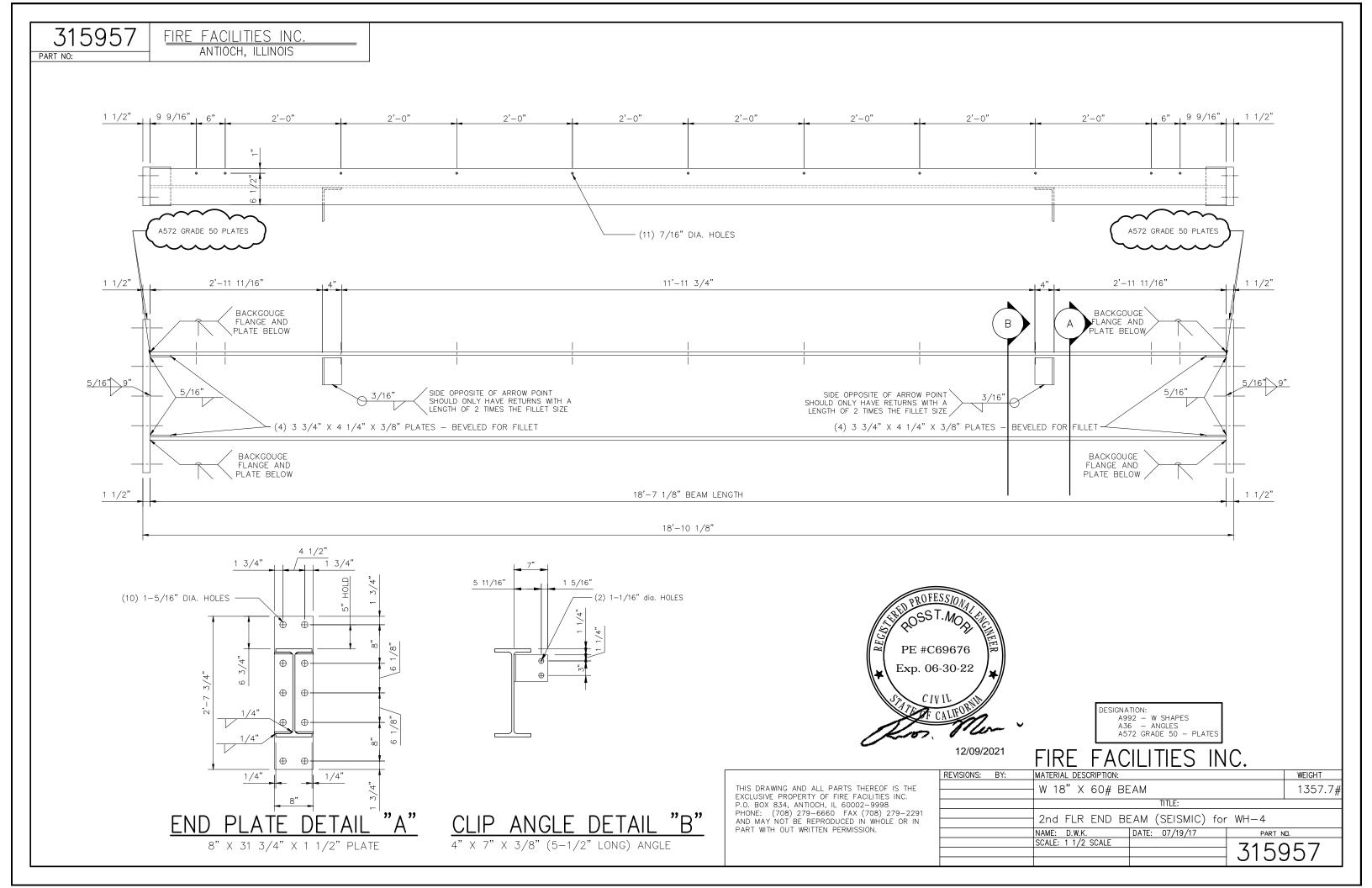


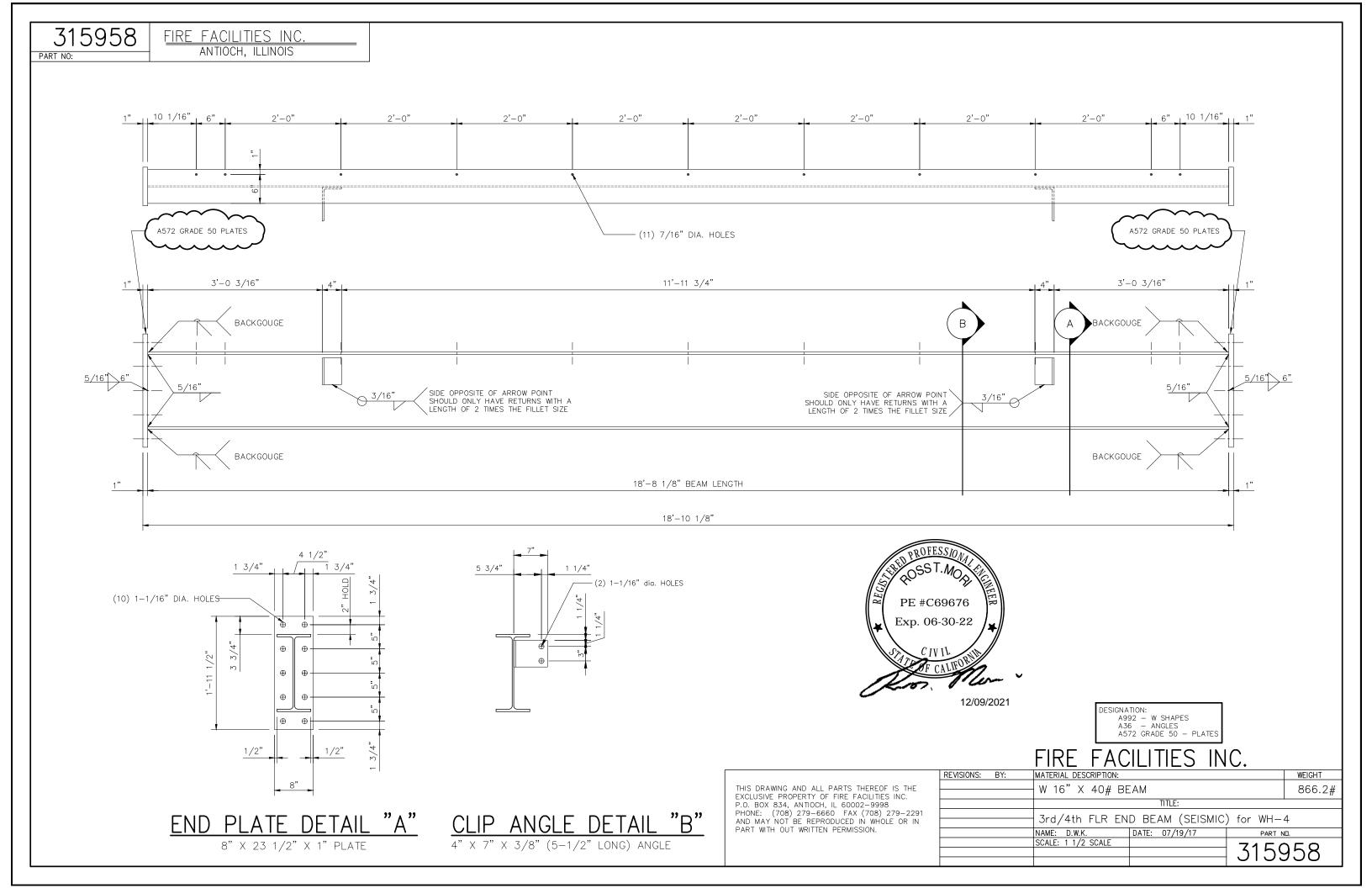


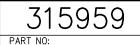


### FIRE FACILITIES INC.

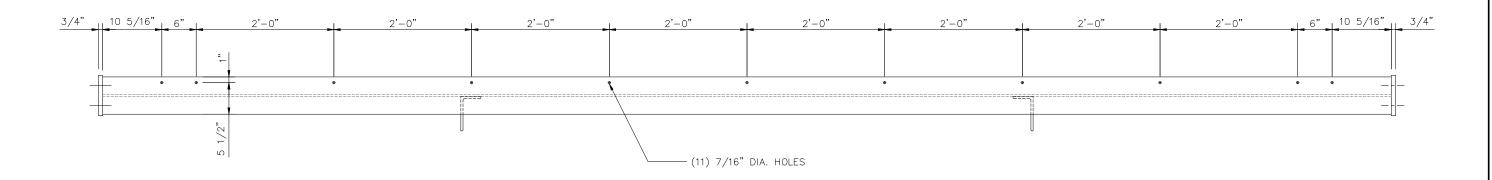
1 11 (2 1 7 (6) 2) 11 (6)				
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
	W 8" X 10# BEAM (A-36)			100.21#
		TITLE:		
	TOWER ROOF BE	AM  for  WH-4  W/	RAPP. PL	ATFORM
	NAME: S.P.W.	DATE: 4/21/99	PART N	Ο.
	SCALE: 1 1/2 SCALE		71 [	140
			3152	449

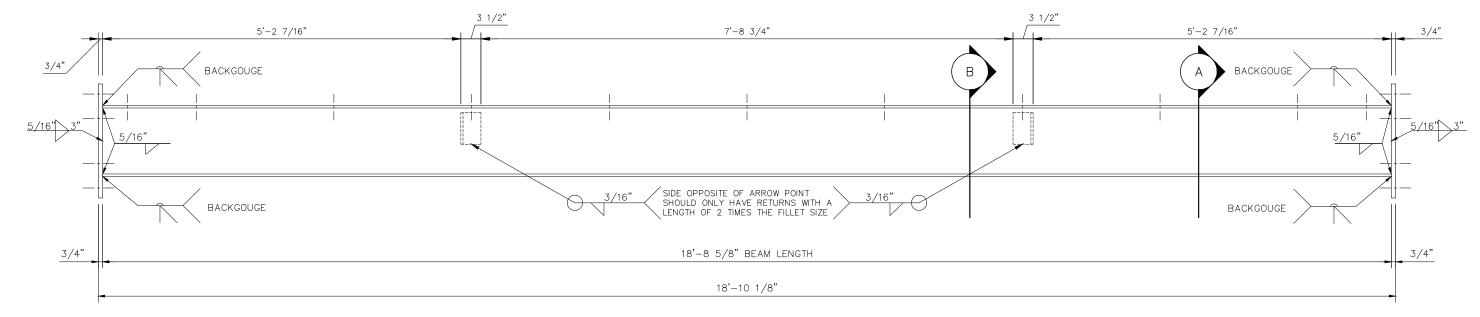


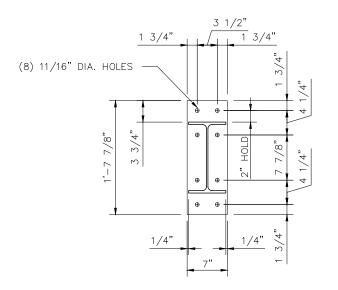


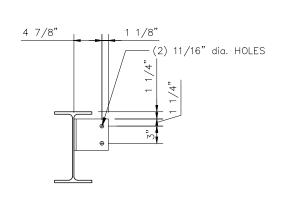


FIRE FACILITIES INC.
ANTIOCH, ILLINOIS









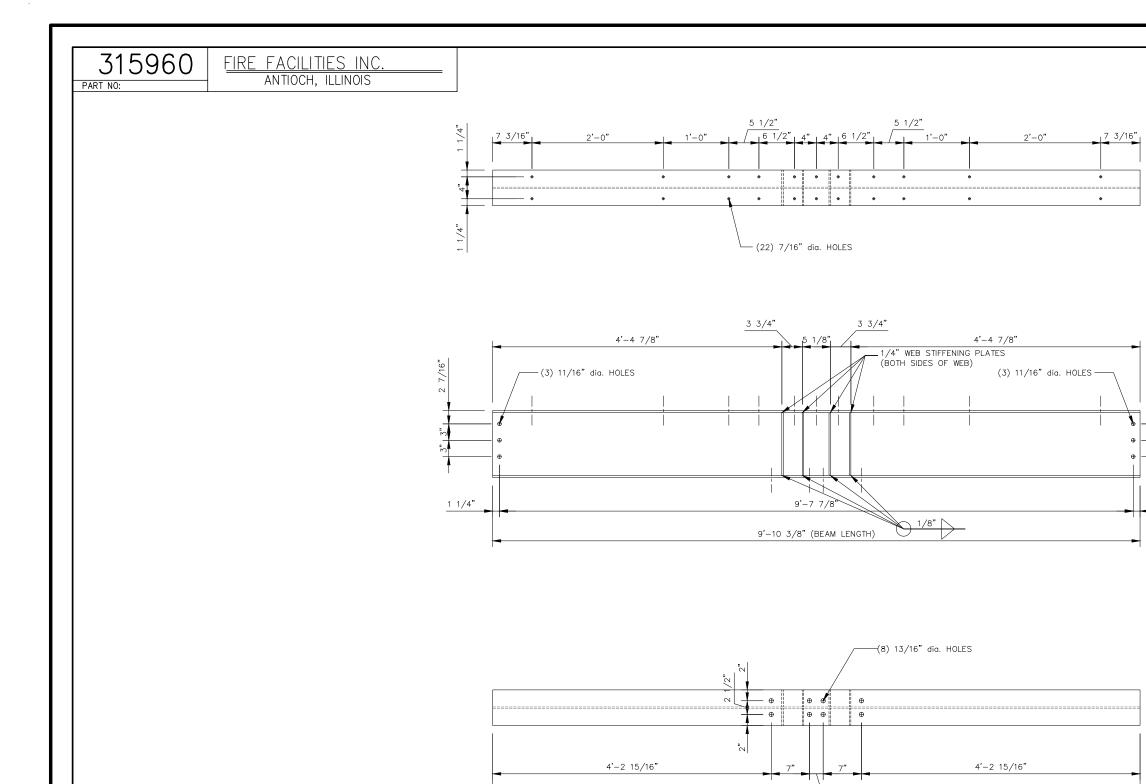


ESIGNATION: A992 - W SHAPES A36 - ANGLES/PLATES

# END PLATE DETAIL "A" 7" × 19 7/8" × 3/4" PLATE

CLIP ANGLE DETAIL "B"
3.5" × 6" × 3/8" ANGLE (5 1/2" LONG)

	FIRE FAC	ILITIES IN	C.	
/ISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
	W 12" X 30# BE	EAM		631.5#
		TITLE:		
	ROOF END BEAM	(SEISMIC) for W	H-4	
	NAME: D.W.K.	DATE: 07/19/17	PART NI	J.
	SCALE: 1 1/2 SCALE		3159	159



DESIGNATION:
A992 - W SHAPES
A36 - ANGLES/PLATES

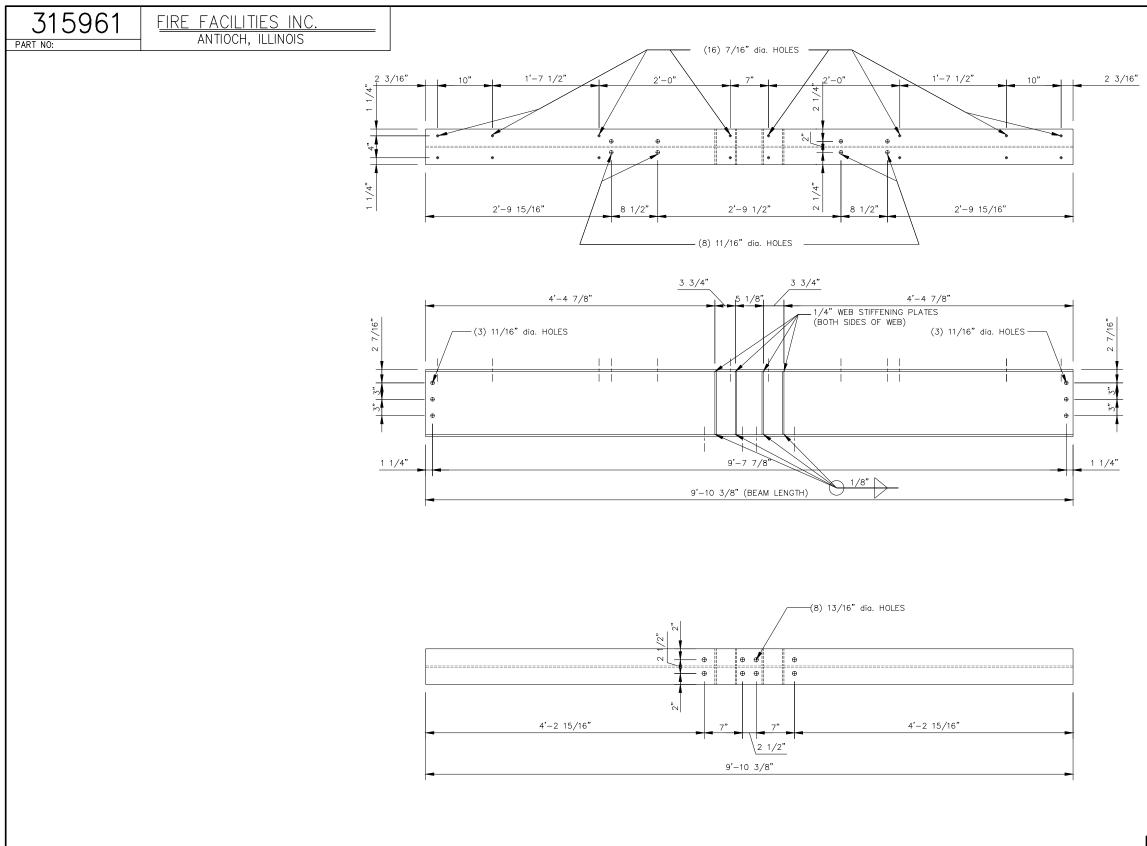
#### FIRE FACILITIES INC.

1 1/4"

THIS DRAWING AND ALL PARTS THEREOF IS THE EXCLUSIVE PROPERTY OF FIRE FACILITIES INC. P.O. BOX 834, ANTIOCH, IL 60002—9998 PHONE: (708) 279—6660 FAX (708) 279—2291 AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART WITH OUT WRITTEN PERMISSION.

9'-10 3/8"

REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
A) NODE STIFFENERS 07/02/2021 : DWK	W 12" X 26# BEA	AM		276.8#
		TITLE:		
	BRACED TOWER (	SEISMIC) SIDE	WALL BEAM	for WH-4
	NAME: D.W.K.	DATE: 07/19/17	PART N	IO.
	SCALE: 1 1/2 SCALE			$\sim$
			= 3159	<i>9</i> 60



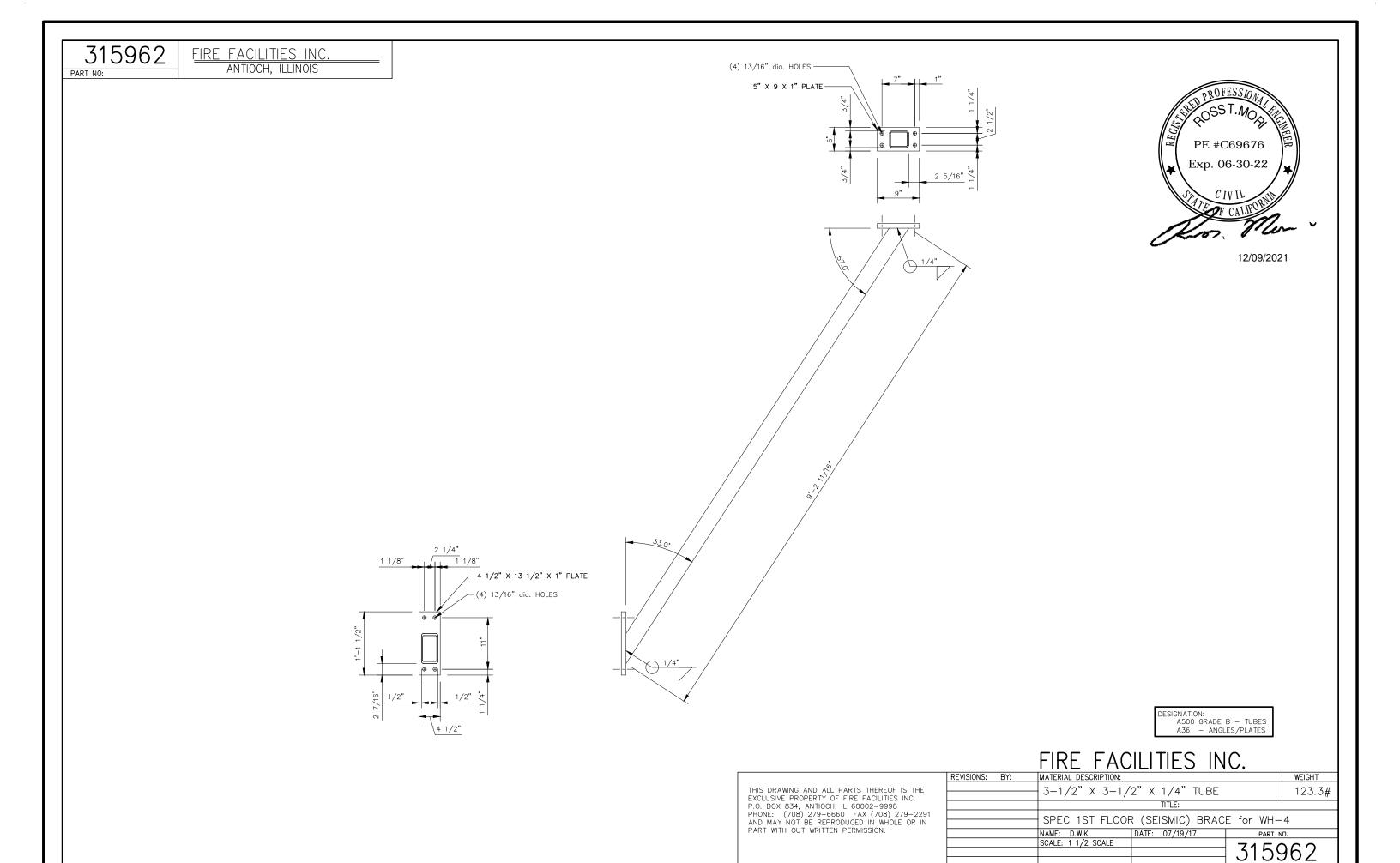
PE #C69676 Exp. 06-30-22

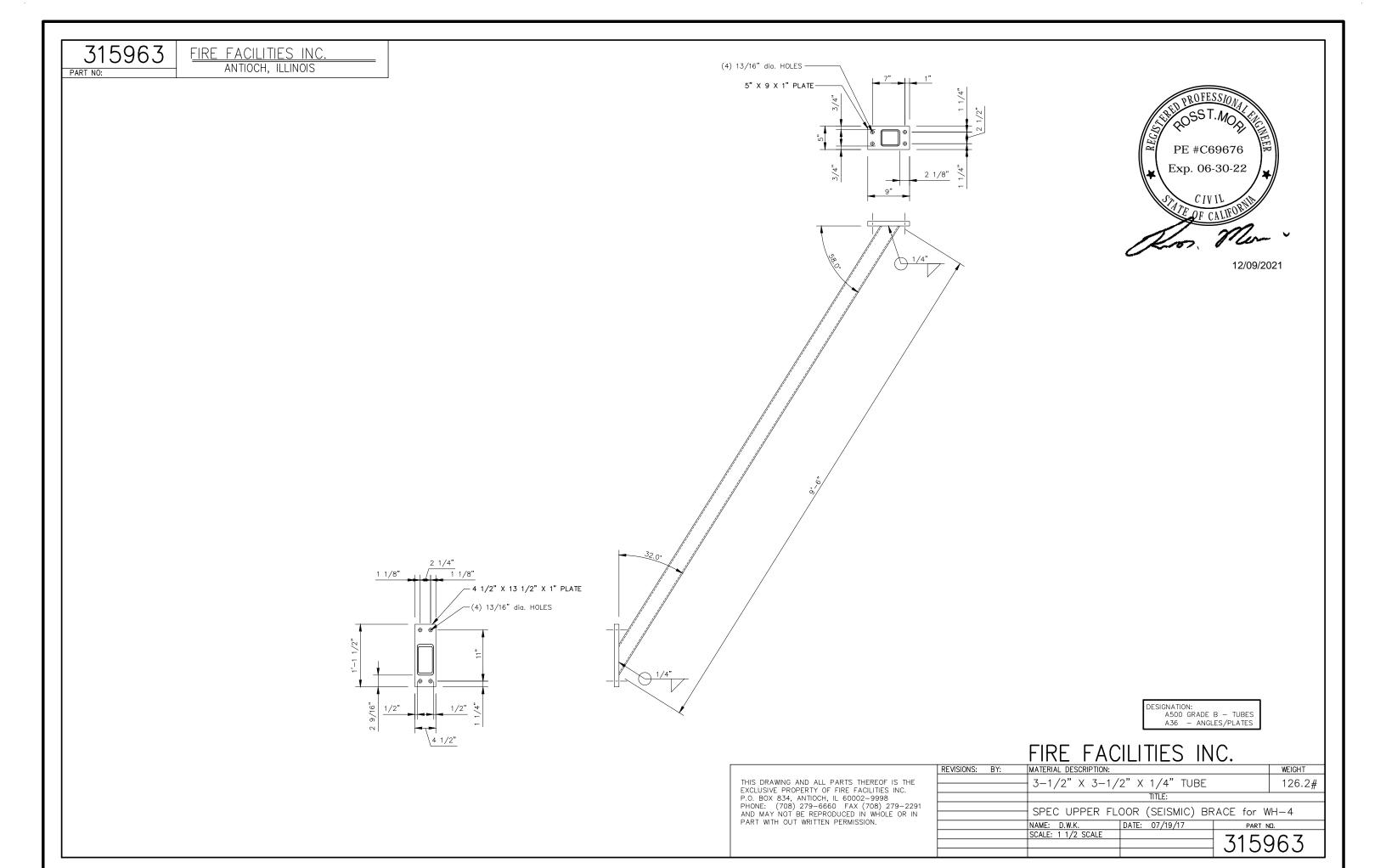
12/09/2021

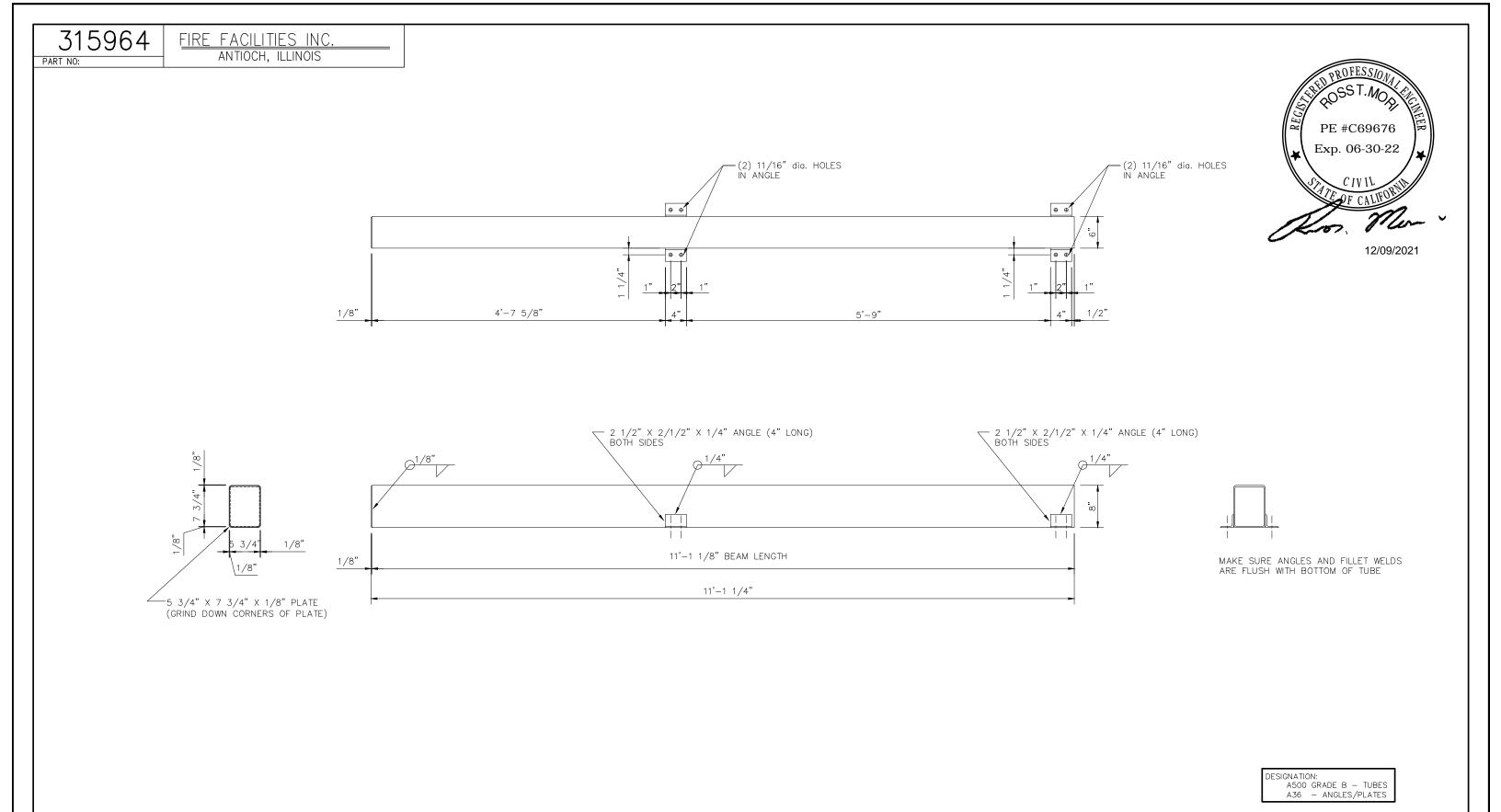
DESIGNATION: A992 - W SHAPES A36 - ANGLES/PLATES

#### FIRE FACILITIES INC.

	<u> </u>		<b>O</b> •	
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
A) NODE STIFFENERS 07/02/2021 : DWK	W 12" X 26# BE			276.8#
		TITLE:		
	SPEC BRACED T	OWER ROOF BEAM	1 for WH-	4 (SEIS)
	NAME: D.W.K.	DATE: 07/19/17	PART N	Ο.
	SCALE: 1 1/2 SCALE		74 5	\ \ \ \
			3159	10 l

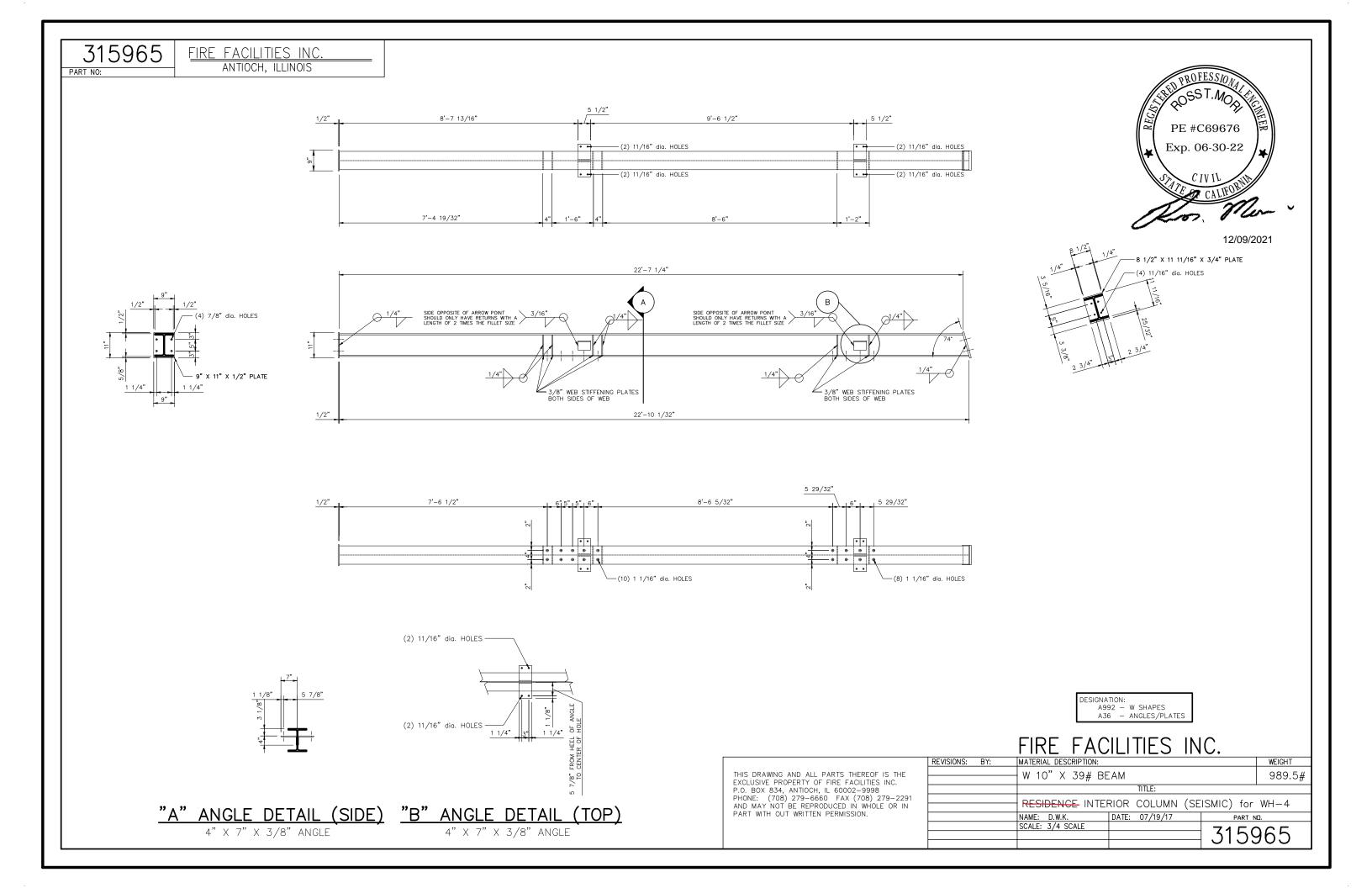


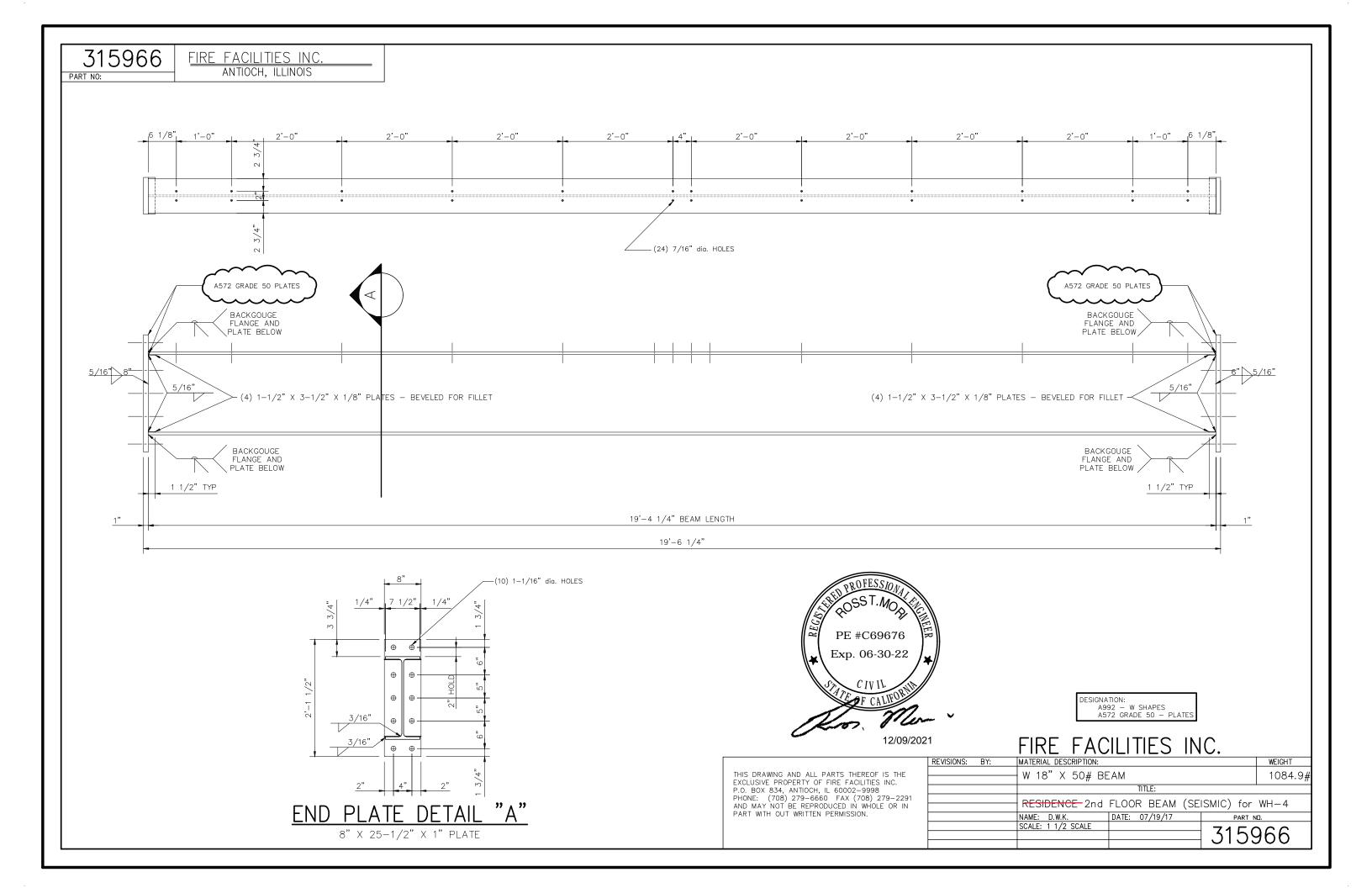


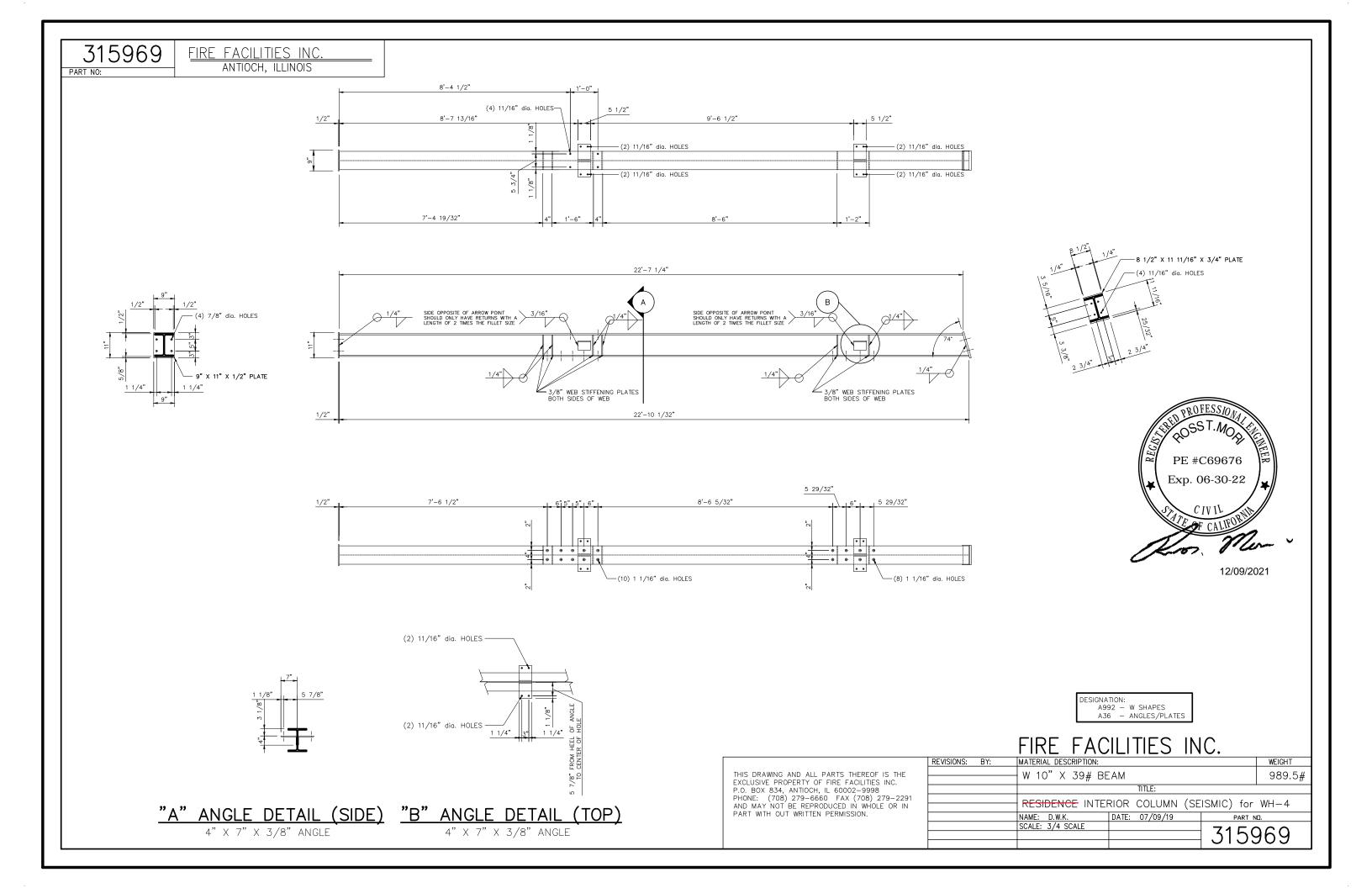


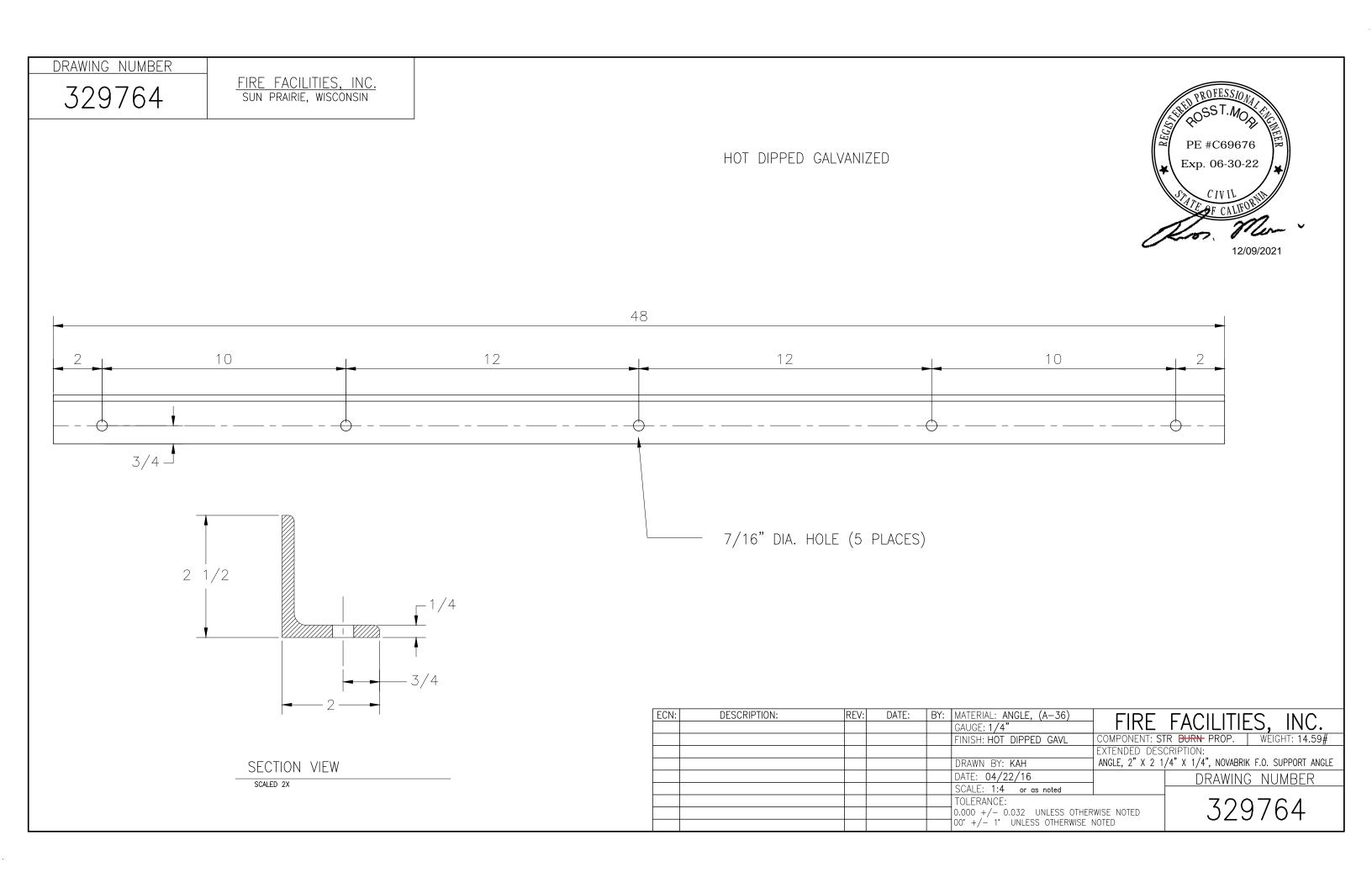
FIRE FACILITIES INC.

•	,			3150	1h4
		SCALE: 1 1/2 SCALE		710	\ \ \ \ \
		NAME: D.W.K.	DATE: 07/19/17	PART N	Ο.
		RAPPELLING PLA	TFORM BEAM		
			TITLE:		
		8" X 6" X 1/4"	TUBE		255.4#
KENIZIONZ: E	ST:	MATERIAL DESCRIPTION:			WEIGHT





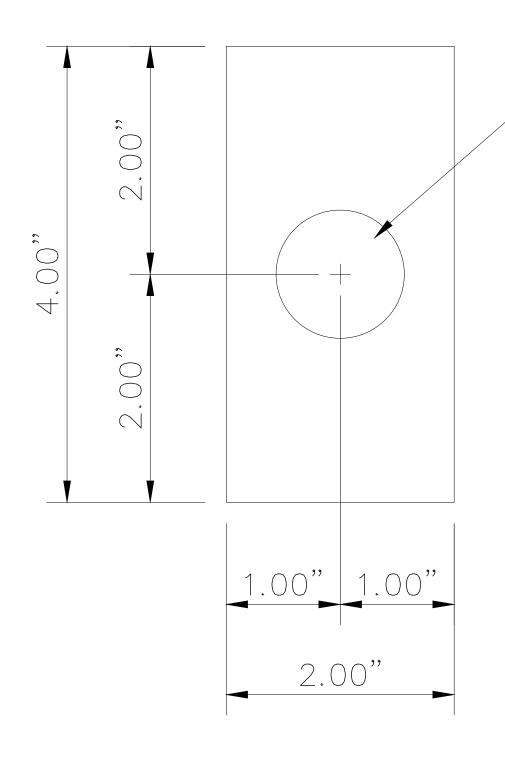


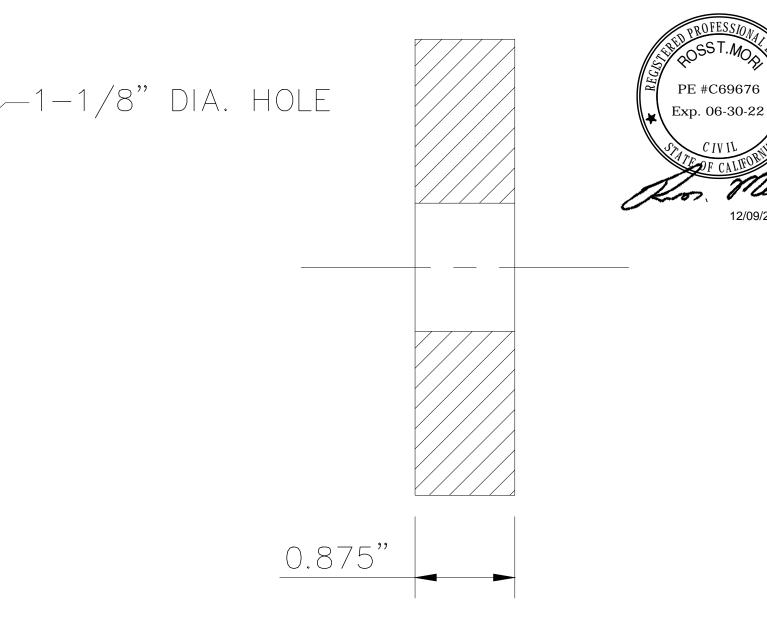




TRACHTE BUILDING SYSTEMS
SUN PRAIRIE, WISCONSIN

# SECTION THRU SPACER





# TRACHTE BLDG. SYSTEMS

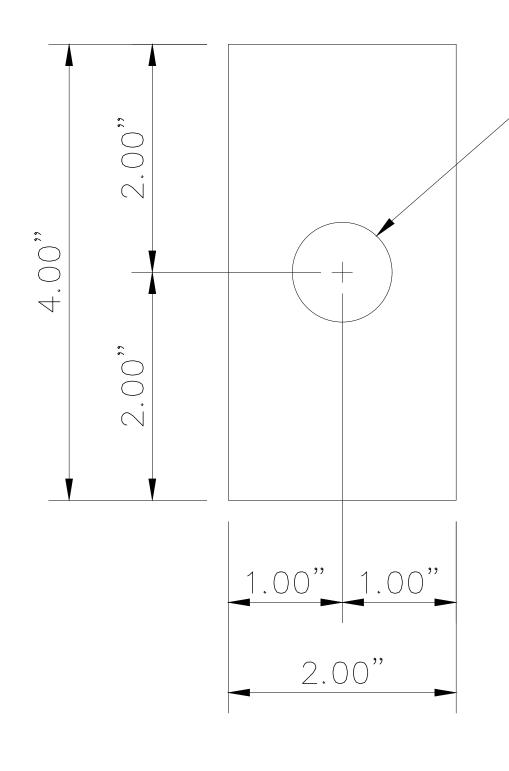
PE #C69676

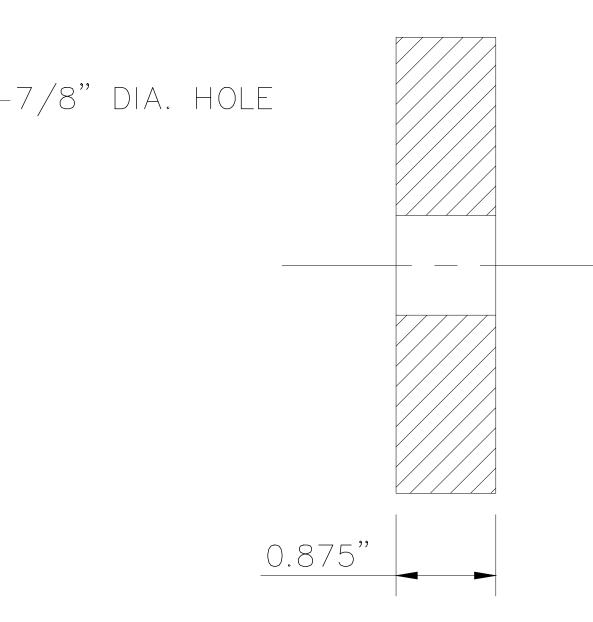
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT		
	2" X 4" X 7/8'	'PLATE (A-36)		1.98		
	TITLE:					
	RAPPELLING RIN					
	NAME: DWK	DATE: 06/09/17	PART N	٧٥.		
	SCALE: 1" = 1"		7010	$\sim$ 4		
			3910	)()4		
	TOLERANCE: +/- 1/32"		0010			



# TRACHTE BUILDING SYSTEMS SUN PRAIRIE, WISCONSIN

## SECTION THRU SPACER





# TRACHTE BLDG. SYSTEMS

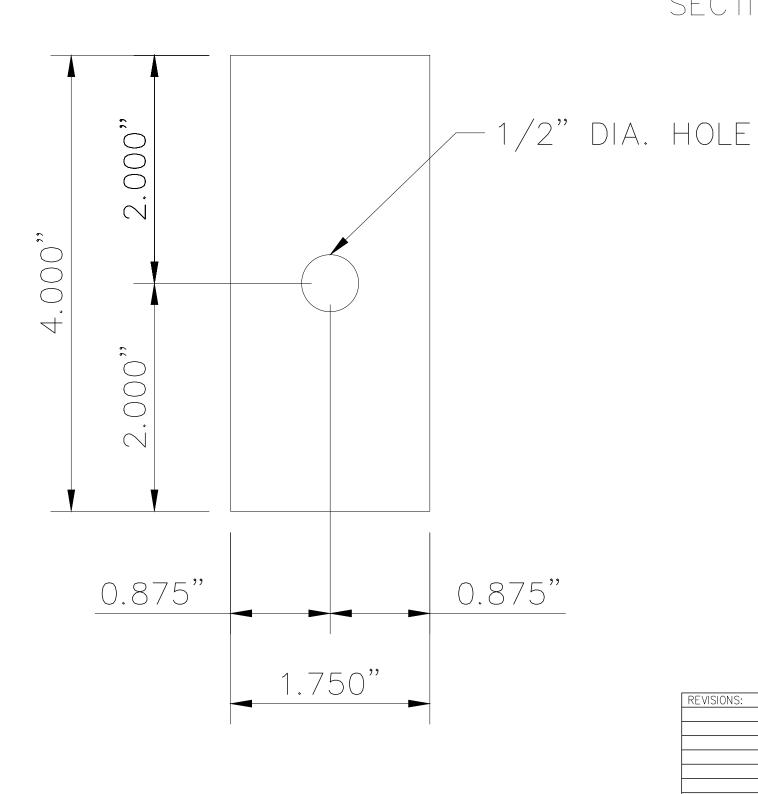
PE #C69676 Exp. 06-30-22

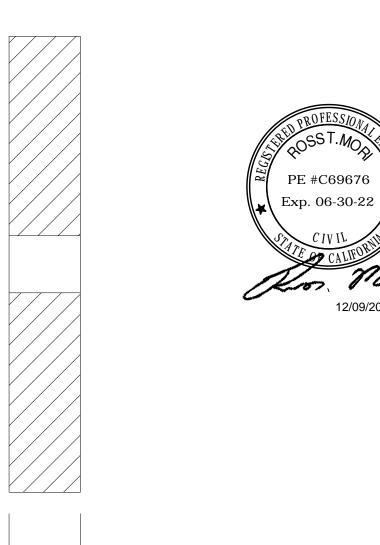
	· · · · · · · · · · —			. —
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
	2" X 4" X 7/8'	PLATE $(A-36)$		1.98
		TITLE:		
	RAPPELLING RIN			
	NAME: GWL	DATE: 04/04/00	PART N	١٥.
	SCALE: 1" = 1"		7010	
			3910	$)() \times  $
	TOLFRANCE: $+/-1/32$ "		OOIC	

PART NO:

TRACHTE BUILDING SYSTEMS
SUN PRAIRIE, WISCONSIN

## SECTION THRU SPACER





# TRACHTE BLDG. SYSTEMS

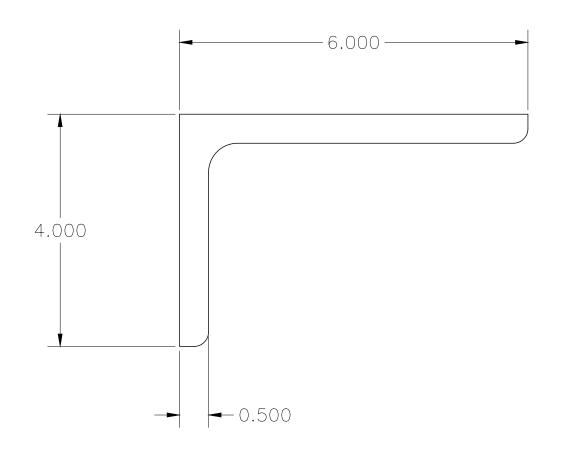
			O 1 O 1 E 11	''
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
	1 3/4" X 4" X	5/8" PLATE	(A-36)	1.24
		TITLE:		
	TIE SPACER			
	NAME: SPW	DATE: 7/29/97	PART N	١٥.
	SCALE: 1" = 1"		7010	
			<u> </u>	)()9 1
	TOLERANCE: $+/-$ 1/32"			,

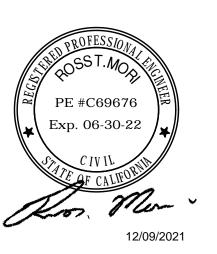
0.625"



TRACHTE BUILDING SYSTEMS
SUN PRAIRIE, WISCONSIN

LENGTH: 50 1/2"





TRACHTE BLDG. SYSTEMS

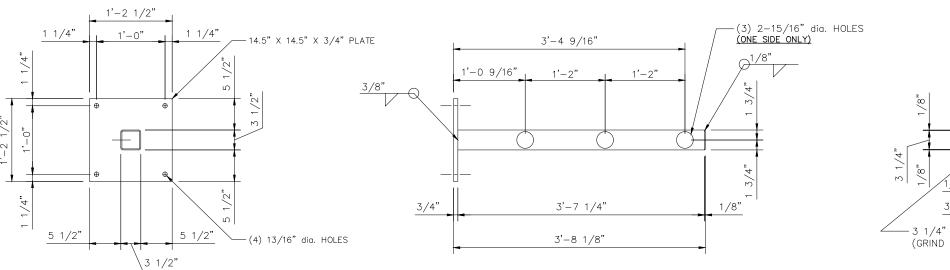
						. • . —	
DESCRIPTION:	REV:	DATE:	BY:		MATERIAL DESCRIPTION:		WEIGHT
CHANGE DESCRIPION	А	01/02/03	KH				
			ANGLE, A36				68.18
TITLE				TITLE:			
				ANCIE 6"	∨ 4" ∨ 1 /2" ⊃	ADDELLING	
				ANGLE, 6" X 4" X 1/2", RAPPELLING			
				NAME: KAH	DATE: 12/23/02	PART NO.	
				SCALE: 1:10		7010	$\bigcirc$ 1
				TOLERANCE: $+/-$ 0.033	2 UNLESS NOTED	391()	74
							_

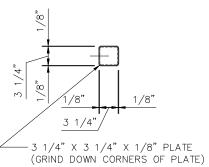
FIRE FACILITIES INC.

PE #C69676
Exp. 06-30-22

CIVIL

12/09/2021





DESIGNATION:
A500 GRADE B - STRUCT. TUBING
A36 - ANGLES/PLATES

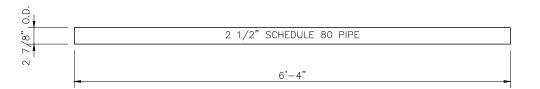
#### FIRE FACILITIES INC.

	1 11 1 1 7 1 0		<b>.</b>	
REVISIONS: BY:	MATERIAL DESCRIPTION:			WEIGHT
A. 1/5/11 SPW BASE PLATE SIZE INCR.	3 1/2" X 3 1/2	2" X 3/16" STRUC	CT. TUBING	74.5#
WAS 12" SQUARE		TITLE:		
	COLUMN FOR RA	AIL RAPPELLING S	YSTEM	
	NAME: BJE	DATE: 08/23/04	PART NO.	
	SCALE: 1 1/2 SCALE		8125	93
			0,20	

812594 FIRE FACILITIES INC.

PART NO: ANTIOCH, ILLINOIS





DESIGNATION: A53 GRADE B — STRUCT. PIPE

#### FIRE FACILITIES INC.

			<b>O</b> .			
REVISIONS: BY:	MATERIAL DESCRIPTION:	WEIGHT				
	2 1/2" SCHEDULE 80 PIPE					
		TITLE:				
	PIPE FOR RAIL RAPPELLING SYSTEM					
	NAME: BJE DATE: 08/23/04 PART NO.					
	SCALE: 1 1/2 SCALE		812594			
			8123	94		