# SOFT STORY SEISMIC RETROFIT 225 CATALPA STREET SAN MATEO, CA.

**PROJECT TEAM** 

SHEET INDEX:

PROJECT DATA

**REVISIONS** DATE

W. CHARLES PERRY & ASSOCIATES. 231 W. 41st AVE. SAN MATEO, CA 94403 (650)638-9546

No C−38622 EXPIRES 3/31/15

VICINITY MAP

INCLUDE INSULATION JOIST LAUNDRY

DRAWINGS ARE HALF SCALE AND NOT FOR CONSTRUCTION WHEN SHOWN ON 11x17 OR **NOT WET** SIGNED & DATED

225 CATALPA STRE SAN MATEO, CA. 9

APARTMENTS 226 CATALPA STREET SAN MATEO, CA. 94

.32 293 100 MULTI FAMILY AP'TS MIXED, LOW DENSITY Title Sheet Site Plan General Notes General Notes (E) First Floor Plan ENGINEER: W. CHARLES PERRY & ASSOCIATES 231 W. 41st AVE. SAN MATEO, CA, 94403 V-B NON SPRINKLED R-2 TYPE OF CONSTRUCTION
OCCUPANCY OF BUILDING
OCCUPANCY OF GARAGE AREA PH. 650-638-9246 (E) Second & Third Floor Plans CONTACT: CHARLES PERRY 13,239 S.F. 21,906 S.F. 5,271 S.F. (E) Elevations
(E) Elevations
(E) Foundation Plan CELL: 415-509-2956 TOTAL SITE AREA BUILDING AREA E-MAIL: charles@wcharlesperry.com (E) Foundation Plan
(N) Garage Foundation Retrofit
& (N)Shear Frame Plan
(E) Second Floor Framing Plan
(N) Rigid Floor Diaphragm Truss Plan
(E) Third Floor Framing Plan WORK AREA S1R PROPERTY OWNER: MARK BARCHAS 27142 ELENA ROAD LOS ALTOS HILLS, CA. 94022 E) Sections E) & (N) Braced Sections PHONE: 650-823-3585 (K) Rigid Floor Diaphragm Truss details
(N) QB Frame & Floor Truss Details
(N) Ceiling Frame Details
(E) Details EMAIL: BARCHAS@SBCGLOBAL.NET CONTRACTOR: TO BE DETERMINED SEISMIC RETROFIT FOR: SITE PLAN **CODES USED ABBREVIATIONS** LT. LIGHT

MAX. MAXIMUM

MFR. MANUFACTURER

MIN. MINIMUM

MTD. MOUNTED

MTL. METAL

(N) NEW

N.I.C. NOT IN CONTRACT

N.T.S. NOT TO SCALE

O/C O.C. ON CENTER

O/ OVER HEAD, OVER HANG

OP. OPERATED

OPPOSITE

OPPOSITE

OPPOSITE

OPPOSITE

OPPOSITE

OP COPPOSITE

OP COPP 1. COMPLY WITH ALL CODES INCLUDING; ADD'N.
AVE.
BLDG.
BD'S.
BLK'G.
BB.K'G.
BM.
CONC.
CAB.
CJ.
CCONT.
DN.
DB.L.
DI.J.
(E)
ELEC.
ELEV.
EXT.
EAN.
F.H.T.
F.J.
F.J.
FLR.
FLUOR. ADDITION 2013 CALIFORNIA STATE BUILDING CODE
2013 CALIFORNIA STATE PLUMBING CODE
2013 CALIFORNIA STATE MECHANICAL CODE
2013 CALIFORNIA STATE ELECTRICAL CODE
CALIFORNIA FIRE CODE, TITLE 24, PG&E REQUIREMENTS
AND 2013 CURRENT CITY CODES INCLUDING: AVENUE BUILDING PROPERTY LINE 138.75 BOARDS BLOCKING BEAM CONCRETE CABINET LINE OF — CANT. DECK CEILING JOIST CEILING CLOSET LINE OF PARAPET ROOF CONCRETE DOWN DOUBLE PROJECT SCOPE LINE OF CANT. DECK DOWN SPOUT DIAMETER SHEET DECK JOIST EXISTING ELECTRIC ELEVATION EXTERIOR 15'-0" A. SEISMIC UPGRADE PROJECT FOR RETROFIT OF SOFT STORY BUILDING. EXCH FACH FOUNDATION FULL HEIGHT FIXTURE FLOOR JOIST FLOOR FLUORESCENT FEET INDICATES AREA OF WORK REQUIRED
REQUIRED
ROOM
ROUGH OPENING
SEISMICALLY-TUNED
ARTICULATED BRAACED FRAME
SIMOKE DETECTOR
SECTION
SIMILAR
SINGLE
SLAB ON GRADE
STANDARD
TONGUE & GROOVE
TRUE DIVIDED LITE
TOP OF CONCRETE
THICK
TREAD
TYPICAL
UNDER
VERIEY IN FIELD
VAPOR BARRIER
WITHOUT
WITHOUT
WOOD
ROOSE
VERSE
WOOD
ROOSE
VERSE
WITHOUT
WOOD
ROOSE
VERSE
WOOD
ROOSE
VERSE
WITHOUT
WOOD
ROOSE
VERSE
VERSE
WOOD
ROOSE
VERSE
WOOD
ROOSE
VERSE
WOOD
ROOSE
VERSE
WOOD
ROO TITLE B. GENERAL PROCEDURE 1. INSTALL NEW FOOTINGS WHERE SPECIFIED ON PLANS; INSTALL ANCHOR BOLTS WHERE INDICATED ON PLANS.
2. OPEN GARAGE CEILING & INSTALL BLOCKING TO EXISTING FRAMING WHERE INDICATED ON PLANS.
3. RELOCATE UTILITIES AS NEEDED TO INSTALL RIGID CEILING TRUSS.
4. INSTALL BASE CONNECTIONS TO ANCHOR BOLTS.
5. INSTALL SHEAR FRAMES TO BASE CONNECTIONS.
6. INSTALL RIGID CEILING TRUSS TO SHEAR FRAMES & CONNECT RIGID CEILING TRUSS TO NEW BLOCKING.
7. CLOSE GARAGE CEILING & FIREPROOF. 15'-0" FEET
FOOTING
FURNACE
GAUGE
GAUGE
GAUGE
GAUGE
GAUGE
GAUGH
GROUND FAULT INTERRUPT
GLUE LAMINATED BEAM
GALVANIZED SHEET METAL
GYPSUM BOARD
HEADBER
HANGER
HIGHWAY
INCH
INCANDESCENT
INCLUDE FTG. FURN. GA. GALV. GFI GLB G.S.M. GYP. E HDR. HNGR. HWY. LINE OF CANT. DECK PROPERTY LINE 138.75 C. DETAILED INSTRUCTIONS ARE PROVIDED ON SHEET G1.

#### SEISMIC RETROFIT DESIGN CRITERIA:

- 1. ONLY THE SOFT —STORY RETROFIT SYSTEM AND ITS CONNECTIONS TO THE EXISTING STRUCTURE ARE CONSIDERED.
- 2. THE DESIGN LOAD IS THE LESSER OF 75% OF THE DESIGN SEISMIC LOAD SPECIFIED BY THE 2013 CA. BUILDING CODE, 65% OF THE STRENGTH OF THE STORY ABOVE THE RETROFIT WHEN ONLY ONE SUCH STORY IS SUPPORTED, OR 80% OF THE STRENGTH OF THE STORY ABOVE THE RETROFIT WHEN MULTIPLE STORIES ARE SUPPORTED.
- 3. THE DESIGN DISPLACEMENT IS THE LIMIT SET BY THE 2010 CA BUILDING CODE: 2.5% OF THE STORY HEIGHT FOR WOOD FRAMED STRUCTURES & 1.25% OF THE STORY HEIGHT FOR MASONRY STRUCTURES.

#### SEISMIC LOADS:

- 1. LONGITUDE-122.507797; LATITUDE 37.756334
- . Ss = 2.02 g
- . S1 = 1.083 g
- $4 \quad \text{Fa} = 1.06$
- $5. \quad \text{Fv} = 1.5$
- 6. SOIL SITE CLASS D
- 7. SEISMIC DESIGN CATEGORY E
- 8. SDS = 1.347 g
- 9. SD1 = 1.083 of
- 10. RESPONSE MODIFICATION COEFFICIENT, R = 3.25
- 11. DESIGN BASE SHEAR V = 0.414 W

#### **MAINTENANCE:**

- OWNER SHALL SCHEDULE INSPECTIONS OF THE COMPLETED INSTALLATION 6 MONTHS, 1 YEAR, 5 YEARS, AND EVERY 10 YEARS AFTER THE DATE OF SUBSTANTIAL COMPLETION WITH ENGINEER OF RECORD AND CERTIFIED INSTALLATION CONTRACTOR AND/OR SUBCONTRACTOR.
- OWNER SHALL SCHEDULE INSPECTIONS OF THE COMPLETED INSTALLATION AFTER ANY EARTHQUAKE THAT HAS A LOCAL INTENSITY DESCRIBED AS MODERATE OR GREATER AS DEFINED ON THE MODIFIED MERCALLI SCALE.
- 3. OWNER SHALL SCHEDULE INSPECTION OF THE COMPLETED INSTALLATION AFTER ANY IMPACT BY A VEHICLE, EXPOSEURE TO FIRE, OBVIOUS CORROSION, OR ANY OTHER FORM OF UNEXPECTED OR SUDDEN DAMAGE.
- 4. THE FEE FOR THESE INSPECTIONS IS SEPARATE FROM FEES PAID FOR THE INITIAL INSTALLATION. THESE MAY BE NEGOTIATED IN ADVANCE OR AT THE TIME OF SERVICE.
- 5. FAILURE TO SCHEDULE THESE INSPECTIONS SHALL REMOVE LIABILITY FOR FUTURE SYSTEM FAILURES FROM ENGINEER OF RECORD, CERTIFIED INSTALLATION CONTRACTOR AND/OR SUBCONTRACTOR, AND LICENSED FABRICATOR.

#### STUCCO REPAIR:

- 1. INSTALL NEW WEEP SCREED & COUNTER-FLASHING REGLET WHERE SHOWN AND AS SHOWN.
- INSTALL NEW BUILDING PAPER AND LATH; TIE OLD LATH TO NEW; LAP OLD LATH WITH NEW.
- 3. INSTALL NEW 3-COAT STUCCO SYSTEM. MATCH EXISTING TEXTURE. BLEND NEW STUCCO TO OLD ACROSS JOINTS.
- 4. INSTALL NEW COUNTER FLASHING.
- 5. PAINT NEW STUCCO AND COUNTER FLASHING TO MATCH EXISTING. BLEND NEW PAINT TO OLD.
- 6. INSTALL NEW COUNTER-FLASHING.

#### **GENERAL NOTES & REQUIREMENTS:**

- 1. COMPLY WITH ALL CODES INCLUDING 2013 CALIFORNIA STATE BUILDING CODE, 2013 CALIF STATE PLUMBING CODE, CALIF STATE MECHANICAL MECHANICAL CODE, CURRENT CITY CODES, TITLE 24, UMC,NEC, UPC, PG&E REQUIREMENTS, AND 2013 CALIF. STATE ELECTRICAL CODE. CALIF. STATE ELECTRICAL CODE.
- 2. DO NOT SCALE DRAWINGS.
- 3. PROTECT ADJACENT PROPERTY AND IMPROVEMENTS. REPLACE DAMAGED ADJACENT PROPERTIES/IMPROVEMENTS AS REQUIRED.
- PROVIDE ALLOWANCES FOR FINISHES, PER OWNER'S SPECIFICATIONS AND APPROVAL (AS REQUIRED). —OSHA
- 5. NO WORK TO BE CONCEALED UNLESS APPROVED AND SIGNED OFF BY INSPECTOR
- CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE OSHA, CAL AND LOCAL SAFETY REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR ALL JOB SITE SAFETY & SECURITY FOR ALL PERSONS. THIS INCLUDES SUBCONTRACTORS, INDEPENDENT CONTRACTORS, PROFESSIONALS, AND LAY PERSONS.
- 7. ALL MATERIALS TO COMPLY WITH THE APPLICABLE ICBO/2013 CSBC STANDARDS.
- 8. ALL EXTERIOR FASTENERS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH 2013 CSBC STANDARDS AND PROJECT SPECIFICATIONS.
- CONTRACTOR TO PROVIDE TO OWNER OR THEIR AGENT A CONSTRUCTION PLAN SHOWING TRAILER, DEBRIS BOX, TOILETS, PARKING, AND MATERIAL STORAGE LOCATION ON SITE, FOR APPROVAL PRIOR TO START OF CONSTRUCTION
- 10. CONTRACTOR SHALL CONFORM TO THE CITY GUIDELINES FOR HOURS
  OF CONSTRUCTION IN A RESIDENTIAL AREA: MIN-FRI 7:00 AM TO 6:00 PM,
  SAT 9:00 AM TO 5:00 PM, NO WORK ON SUNDAYS/HOLIDAYS.
- 11. CONTRACTOR TO PRESENT ALL WARRANTIES TO PROPERTY OWNERS AT END OF PROJECT
- 12. CONTRACTOR TO PROVIDE UNCONDITIONAL LIEN RELEASES FROM ALL SUBCONTRACTORS AND SUPPLIERS PRIOR TO ALL PAYMENTS.
- 13. CONTRACTOR TO PROVIDE CERTIFICATE OF INSURANCE WITH OWNER AND ENGINEER OF RECORD AS NAMED ADDITIONAL INSURED FOR SELF AND ALL SUBCONTRACTORS.
- 14. PROVIDE TEMPORARY 6' HIGH SECURITY & PRIVACY FENCE AROUND SITE DURING CONSTRUCTION.
- 15. JOB SITE SHALL BE BROOM SWEPT, ORGANIZED, AND SECURED AT THE END OF EACH DAY. TOOLS & MATERIALS SHALL BE STORED & SECURED IN THEIR DESIGNATED LOCATIONS WITHIN SECURITY & PRIVACY FENCING. DEBRIS SHALL BE PLACED IN DEBRIS BOX OR RECYCLED AS REQUIRED BY CITY, COUNTY, STATE, & FEDERAL REGULATIONS.
- 16. CONTRACTOR IS RESPONSIBLE FOR JOB SITE SAFETY FOR ALL EMPLOYEES, SUBCONTRACTORS, SUPPLIERS, INDEPENDENT CONTRACTORS, PROFESSIONALS, & PEDESTRIANS ON JOB SITE AT ALL TIMES.
- 17. CONTRACTOR SHALL MAINTAIN EGRESS AT ALL TIMES IN THE WORK AREA.
- 18. CONTRACTOR SHALL REPAIR OR REPLACE ALL FIRE RATED CONSTRUCTION IN THE WORK AREA.
- 19. CONTRACTOR SHALL REPAIR OR REPLACE ALL FIRE RATED PENETRATIONS IN THE WORK AREA.

#### ES REPORTS:

- 1. SIMPSON SET XP EPOXY-ICC ESR-2508
- 2. HILTI WOOD-METAL SCREWS PFH-ICC ESR-2196
- 3. SIMPSON A35/A36-ICC ESR-2236, ICC ESR 2614 & 14PMO ER-112

#### GYPSUM WALLBOARD:

- 1. INSTALL SHEET WITH LONG SEAMS PARALLEL TO STUDS.
- 2. ATTACH TO STUDS/JOISTS WITH 1 1/4" DRYWALL SCREWS @ 6"o.c. MAX. COUNTER SINK HEADS. DO NOT TEAR PAPER.
- 3. TAPE AND FLOAT ALL JOISTS. TEXTURE TO MATCH (E) FINISH.
- 4. ALL WORK SHALL COMPLY WITH USG GYPSUM CONSTRUCTION HANDBOOK.

#### PRIORITY OF DOCUMENTS:

- 1. PRIORITY OF DOCUMENTS:
  - A. SIGNED CHANGE ORDERS AND ADDENDUM PREVAIL OVER...
  - B. CONTRACTS PREVAIL OVER.
  - C. WRITTEN SPECIFICATIONS, INCLUDING STANDARDS PRODUCT INSTALLATION & USE GUIDES, CODES, AND REGULATIONS, WHICH PREVAIL OVER...
  - D. INDUSTRY STANDARDS, CODES, AND GOVERNMENT REGULATIONS.
  - E DDAWN DIANG
- WHEN A CONFLICT OR MULTIPLE REQUIREMENTS OCCUR, THE MOST RESTRICTIVE INTERPRETATION THAT PRODUCES THE HIGHEST QUALITY WORKMANSHIP, CONSIDERING ALL REQUIREMENTS, SHALL PREVAIL.
- 3. CODES, STANDARDS, AND REGULATIONS SHALL BE THE MOST RECENT VERSION IN FORCE AT THE TIME OF CONSTRUCTION.
- 4. ENGINEER OF RECORD SHALL BE THE FINAL ARBITEUR IN THE INTERPRETATION OF CONTRACT & CONSTRUCTION DOCUMENTS.

#### **WARNINGS:**

- SITE CONDITIONS MIGHT VARY FROM PLANS, CONTRACTOR SHALL VERIFY ALL DIMENSIONS OF WINDOW SIZES, PIPE LOCATIONS, PIPE SIZES, ETC. IN FIELD. CONTRACTOR SHALL CONFIRM DIMENSIONS PRIOR TO START OF CONSTRUCTION, AND AFTER DEMOLITION & INFORM THE ENGINEER OF RECORD OF ALL VARIANCES.
- PLANS ARE REPRESENTATIONAL AND ARE NOT EXACT REPRESENTATIONS
  OF EXISTING CONDITIONS. CONTRACTOR SHALL VERIFY ALL ASSUMED
  CONDITIONS AND DETAILS.
- 3. LOCATE (E) UTILITIES PRIOR TO ALL EXCAVATIONS.
- EXCAVATE TO REQ'D DEPTH & NO FURTHER. DO NOT DISTURB SOIL BENEATH NEW FOOTINGS.
- DO NOT ALLOW EXCAVATED SOIL TO DRY OR GET WET. ANY CHANGE IN MOISTURE CONTENT OF SUPPORTING SOIL SHALL BE REMEDIED BY SCARIFACATION TO A DEPTH OF 12" & COMPACTION OF 95% OF OPTIMUM PER ASTM STANDARDS.
- 6. OWNER SHOULD SEAL ALL JOINTS, CRACKS, & PENETRATIONS IN WALL ANNUALLY PRIOR TO RAINY SEASON.
- 7. ASBESTOS, LEAD, & OTHER ENVIRONMENTALLY HAZARDOUS MATEREIALS MIGHT BE PRESENT. CONTRACTOR SHALL TEST FOR AND REMEDIATE ANY SUCH MATERIALS IN COMPLIENCE WITH CALIFORNIA LAW.

#### PROJECT SUBMITTALS & REQUESTS FOR INFORMATION;

- INFORMATION CONTAINED IN THESE GENERAL NOTES & CONSTRUCTION NOTES MIGHT BE AMENDED BY INFORMATION IN CONTRACTOR'S SUBMITTALS & BY ENGINEER OF RECORD'S RESPONSES TO REQUESTS FOR INFORMATION.
- 2. CONTRACTOR SHALL DIRECT ALL REQUESTS FOR INFORMATION TO ENGINEER OF RECORD.
- 3. CONTRACTOR SHALL SUBMIT PRODUCT DATA SHEETS AND SPECIFICATIONS TO ENGINEER OF RECORD FOR APPROVAL PRIOR TO CONSTRUCTION FOR ALL PRODUCTS USED ON THE PROJECT.
- 4. CONTRACTOR SHALL PROVIDE BOUND COPIES OF ALL WARRANTIES, MANUALS, & INSTRUCTIONS, ETC. TO E.O.R AT END OF PROJECT.

#### CONCRETE & REINFORCING STEEL:

- 1. ALL CONCRETE SHALL BE F'C=2500 PSI MIN. USE 6 SACK MIX OF TYPE IIA CEMENT. MAX W/C RATIO OF 0.5, MAX AGGREGATE SIZE 3/4"
- 2. SANDBLAST OR ROUGHEN & CLEAN EXISTING CONCRETE SURFACES WHEN CASTING NEW CONCRETE AGAINST EXISTING CONCRETE.
- 3. APPLY WELD-CRETE BONDING AGENT (OR EQUIVALENT) TO EXISTING CONCRETE SURFACES.
- 4. ALL REINFORCING STEEL SHALL HAVE FY=60 KSI MIN.
- LEVELING/TOPPING COMPOUNDS SHALL BE QUICKCRETE SAND TOPPING MAX.
- 6. FLATWORK REPAIRS SHALL BE PERFORMED WITH SHRINKAGE COMPENSATING TYPE 1 CEMENT.
- 7. ALL CONCRETE WORK SHALL COMPLY WITH THE CURRENT ACI MANUAL OF STANDARD PRACTICE & ACI 301.
- 8. ALL REINFORCING STEEL WORK SHALL COMPLY WITH THE CURRENT CRSI MANUAL OF STANDARD PRACTICE.
- 9. ALL REINFORCING DETAILS SHALL COMPLY WITH ACI 318-10 CHAPTER 7.

REVISIONS
NO. DATE

W. CHARLES PERRY & ASSOCIATES. 231 W. 41st AVE. SAN MATEO, CA 94403 (650)638-9546



This drawing, as an instrument of service is and shall remain the property of the Architect's and shall not be reproduced, published or used in any way without the permission of the Architect. Drawings are originals only if stamp and signature are red.

DRAWINGS ARE
HALF SCALE
AND NOT FOR
CONSTRUCTION
WHEN SHOWN
ON 11x17 OR
NOT WET
SIGNED & DATED

SEISMIC RETROFIT FOR:
APARTMENTS
225 CATALPA STREET
SAN MATEO, CA. 94

NOTES

GENERAL

WN BY: WM

OB#: CATALI

#### SOFT-STORY SEISMIC RETROFIT SYSTEMS INSTALLATION PROCEDURE;

- 1. REMOVE GYPSUM WALLBOARD FROM CEILING IN 16 -INCH-WIDE STRIPS ALONG LONGITUDINAL & TRANSVERSE CHORDS OF THE RIGID TRUSS DIAPHRAGM (RTD). INSTALL BLOCKING AND/OR SISTER FLOOR JOISTS AS INDICATED ON THE RETROFIT PLAN FOR EACH BUILDING.
- 2. LOCATE THE BASE PLATES FOR THE LONGITUDINAL AND TRANSVERSE SEISMICALLY-TUNED, ARTICULATED BRACED (S-TAB) FRAMES.
- 3. INSTALL THE ANCHOR BOLTS FOR THE BASE PLATES FOR THE S-TAB FRAMES, SPECIAL INSPECTION BY E.O.R. IS REQUIRED DURING INSTALLATION.
- 4. ATTACH THE BASE PLATES AND ACCOMPANYING SEISMICALLY-TUNED, FRICTION (S-TBF) CONNECTIONS FOR THE S-TAB FRAMES TO THE
- 5. INSTALL THE VERTICAL POSTS AND DIAGONAL BRACE OF THE S-TAB FRAMES LEAVE THE SLIP-FIT (S-F) CONNECTIONS LOOSE.
- 6. INSTALL THE TOP S -TBF CONNECTIONS TO THE VERTICAL UPRIGHTS AND DIAGONAL BRACE. LEAVE THE S-F CONNECTIONS LOOSE.
- 7. INSTALL THE TOP CONTINUOUS SHEAR TRANSFER (CST) CHORD OF THE S-TAB FRAME. NOTCH EXISTING BEAMS WHERE REQUIRED FOR CST CHORD TO PASS THROUGH BEAMS. GET WRITTEN APPROVAL FROM E.O.R. PRIOR TO MAKING SUCH NOTCHES IF THEY ARE NOT SHOWN IN THE RETROFIT PLANS FOR EACH BUILDING. RE-ROUTE GAS, WATER, AND SEWER LINES AS SHOWN IN PLANS. TEMPORARILY SHORE THE CST CHORD INTO FINAL POSITION. LEAVE THE S-F CONNECTIONS LOOSE.
- 8. ATTACH THE CST CHORD TO THE JOISTS AND/OR BLOCKING AS SHOWN ON THE RETROFIT PLANS FOR EACH BUILDING.
- 9. TACK WELD THE SF CONNECTIONS TO THE CST CHORD, THE VERTICAL CHORDS, AND DIAGONAL BRACE.
- 10. INSTALL THE LONGITUDINAL AND TRANSVERSE CST CHORDS OF THE RIGID TRUSS DIAPHRAGM (RTD) AS SHOWN ON THE RETROFIT PLANS FOR EACH BUILDING. START AT EACH END OF THE TOP CST CHORD OR EACH S—TAB FRAME. POSITION AND INSTALL EACH RTD CHORD COMPONANT. TEMPORARILY SHORE THE RTD CST CHORD INTO ITS FINAL POSITION. INSTALL THE CHORD INTERSECTION SLIP FIT (CISF) JOINTS AND LEAVE THEM LOOSE. ATTACH THE CST CHORDS TO THE JOISTS AND/OR BLOCKING AS SHOWN ON THE RETROFIT PLANS. REPEAT THIS PROCESS UNTIL ALL LONGITUDINAL AND TRANSVERSE CST CHORDS AND CISF JOINTS ARE INSTALLED. NOTCH EXISTING BEAMS WHERE REQUIRED FOR CST CHORDS TO PASS THROUGH BEAMS; GET WRITTEN APPROVAL FROM E.O.R. PRIOR TO MAKING SUCH NOTCHES IF THEY ARE NOT SHOWN IN THE RETROFIT PLANS.
- 11. TACK WELD FACH CISE JOINT INTO FINAL POSITION
- 12. CHECK THE ENTIRE ASSEMBLY FOR COMPLETENESS AND ACCURACY OF
- 13. FIELD WELD ALL SF JOINTS AND CISF JOINTS WITH CONTINUOUS SINGLE-PASS FILLET WELDS AS SHOWN ON THE RETROFIT PLANS.
- 14. CLEAN, PRIME, AND PAINT ASSEMBLY.
- 15. INSTALL CLEVIS PINS, TIE-RODS, AND TRURN BUCKLES OF DIAGONAL BRACES BETWEEN OPPOSING CISF JOINTS. DRILL 1 1/2 INCH DIAMETER HOLES IN BEAMS WHERE SHOWN ON PLANS TO PASS TIE RODS THROUGH BEAMS. TIGHTEN TURN BUCKLES TO REMOVE ALL SLACK FROM THE COMPLETED RTD.
- 16. TIGHTEN THE BOLTS IN EACH S-TBF CONNECTION IN EACH S-TAB FRAME TO THE TORQUE SPECIFIED ON THE RETROFIT PLANS. TORQUE WRENCHES AND IMPACT WRENCHES MUST BE CALIBRATED PRIOR TO FINAL TIGHTENING. SPECIAL INSPECTION BY E.O.R. IS REQUIRED FOR FINAL TIGHTENING.
- 17. INSTALL 5/8" TYPE-X GYPSUM WALLBOARD OVER THE CUT OPENINGS IN THE CEILING UP TO & AROUND THE WOOD BLOCKING ON THE CST CHORDS OF THE RTD. TAPE AND FINISH TO A CLASS 3 FINISH WITH FIRE-RATED TAPE AND COMPOUND. MATCH EXISTING TEXTURE. FOR NARROW GAPS WHERE GWB WILL NOT FIT, FILL GAP WITH 3M FIRE BARRIER BACKING MATERIAL THEN SEAL WITH 3M FIRE BARRIER WATER TIGHT SILICONE SEALANT 1003SL
- 18. REPAINT REPAIRED CEILING TO MATCH THE EXISTING CEILING.
- 19. ASIC SPECIFICATION SECTION J3, EQUATION J3-4.

Bolts Pre—Load Table Per 5 bolts Per Brace Connections (Class A Faying Surfaces, µ=.35						
	Longitudinal	Transverse				
Brace Force Per 5 Bolts (kips)	26	26				
Required Pre-Ten Per Bolt (K)	14.86	14.86				
Torque, F-LB	148.94	148.94	All Bolt Torques Are < 190 F-lb			
Pre-Ten Per Bolt Per Table J3.1	19.00	19.00	P = 19 Kps Per Table J3.1			
Torque Per Table J3.1	190.00	190.00				
$Rn/\Omega$ ( $\Omega$ = 1.5) Per Eq J3-4	5.48	5.48	Braces are tuned to slip @ service load			
$Rn/\Omega$ ( $\Omega$ = 1.76) Per Eq J3-4	4.67	4.67				

- NOTE: 

  1. The Brace Slip Critical Bolted Connection Forces Shall Be Based on the Torque Levels Resulting in the Serviceability. 
  2. Conventional Preload/Tor  $T = c \times cb \times Ftx \ c=0.2$ , (friction constant for steel). 
  3. The above torque table and bolt torque values will be modified based on the actual constructed frames in the field to account for the constucted frames dimensions.

#### STEEL SPECIFICATIONS:

- 1 1 HSS USE ASTM A500 GRADE B
- 2. PLATE USE ASTM A36
- 3. BOLTS USE ASTM A325 TYPE I
- 4. WASHERS USE ASTM F436 OVERSIZE
- 5. WELDING FILLER MATERIAL -E70 ELECTRODES, SELECT SPECIFIC ELECTRODE FOR WELD TYPE, CONDITIONS, AND POSITION; E.O.R. SHALL APPROVE PRIOR
- 6. FAYING SURFACES (CONTACT SURFACES FOR FRICTION BOLTED CONNECTIONS)
- 7. PAINTING; PRIME & PAINT ALL COMPLETED COMPONENTS IN SHOP PRIOR TO ASSEMBLY AND/OR DELIVERY. FOLLOW AISC CLASS A REQUIREMENTS FOR FAYING SURFACES.

#### **BOLT TORQUE SPECIFICATIONS:**

- 1. BOLTS SHALL BE INSTALLED IN A CLEANED AND LUBRICATED CONDITION.
- 2. DO NOT CONTAMINATE FAYING SURFACE OR ALLOW FOR FUTURE CONTAMINATION.
- 3. ASSEMBLE S-TBF CONNECTIONS. ARTICUTATION PLATES ON BOTTOM CONNECTIONS AND TOP CST CHORDS SHALL BE POSITIONED TOWARD THE WALL BRACE ARTICULATION PLATES AND SPACER PLATES SHALL BE POSTIONED IN THE MIDDLE. ARTICULATION PLATES ON VERTICAL UPRIGHTS OF S-TAB FRAME SHALL POSITIONED TO THE OUTSIDE.
- 4. INSERT A325 BOLT THROUGH OVER —SIZED F436 WASHER AND THEN THROUGH ALIGNED HOLES IN ASSEMBLED S-TBF CONNECTION. BOLT HEAD SHALL BE POSITIONED TOWARD THE WALL. INSTALL F436 OVERSIZED WASHER AND A325 NUT OVER PROTRUDING BOLT THREADS AND TIGHTEN FINGER TIGHT. INSTALL THE NUMBER OF BOLTS SPECIFIED FOR EACH JOINT.
- 5. TIGHTEN NUTS WITH A SPUD WRENCH TO REMOVE PLAY IN THE ASSEMBLED JOINT. DO NOT FULLY TIGHTEN. DO NOT USE A TORQUE WRENCH OR
- 6. ONCE S-TBF CONNECTIONS ARE DELIVERED TO PROJECT LOCATION AND FULLY ASSEMBLED INTO S-TABS FRAMES AND RTDS ARE FULLY CONNECTED TO S-TAB FRAMES, THEN TIGHTEN BOLTS TO TORQUE SPECIFIED ON INDIVIDUAL PROJECT PLANS. USE CALIBRATED TORQUE WRENCH OR IMPACT WRENCH. CALIBRATION SHALL BE IN COMPLIANCE WITH AISC SPECIFICATION FOR HIGH STRENGTH BOLTS. FINAL TORQUE SHALL BE PERFORMED WHILE E.O.R. PERFORMS A SPECIAL INSPECTION
- 7. IF TORQUE IS NOT SPECIFIED ON ENGINEERING DRAWINGS. THEN THE INSTALLER SHOULD CONTACT W. CHARLES PERRY, PARVIZ ZAVAREH, OR AN AUTHORIZED QUAKE-BRAKE DEALER FOR PROPER OPERATION, OTHERWISE THE SYSTEM WILL NOT BE WARRANTED AS A VALID CERTIFIED INSTALLATION.

#### **DEFERRED SUBMITTALS:**

- CERTIFIED MILL REPORTS FOR ALL STEEL PLATE, ROLLED SHAPES, HHS AND BOLTS.
- SHOP DRAWINGS FOR ALL STEEL FABRICATION
- WELD FILLER MATERIAL SPECIFICATION SHEETS

#### SPECIAL INSPECTIONS:

CONTRACTOR IS RESPONSIBLE FOR HIRING SPECIAL INSPECTORS. COLLECTING REPORTS, AND DISTRIBUTING COPIES OF REPORTS TO E.O.R., OWNER, & CITY OF SAN MATEO.

- 1. FINAL BOLT TORQUE APPLICATION.
- 2. ANCHOR BOLT INSTALLATION
- 3. SHOP WELDS (UNLESS SHOP IS CERTIFIED BY STATE OF CA)
- 4. FIELD WELDS
- 5. CONCRETE FORMWORK & REBAR PLACEMENT
- 6 FPOXY SETTING OF REBAR DOWELS

WELDING INSPECTION SHALL BE IN COMPLIANCE WITH AWS D1.1

#### **INSPECTIONS BY ENGINEER OF RECORD:**

ENGINEER OF RECORD SHALL BE HIRED BY CONTRACTOR TO PROVIDE THE REQUIRED STRUCTURAL OBSERVATIONS AND PERIODIC & FINAL REPORTS TO THE CITY OF SAN MATEO.

AFTER DEMOLITION & BASE PLATE LOCATION. LOCATE ALL BEAM NOTCH & HOLE LOCATIONS

- ANCHOR BOLT INSTALLATION
  AFTER S -TAB FRAMES ARE ASSEMBLED AND TACK WELDED INTO FINAL POSITION
- AFTER RTD'S ARE ASSEMBLED AND TACK WELDED INTO FINAL POSITION
- AFTER FINAL WELDING OF SF & CISF JOINTS
- AFTER FINAL ASSEMBLY OF COMPLETE RETROFIT
- AFTER WALLBOARD INSTALLATION AND TAPING
- 8. AFTER WATERPROOFING, FLASHING, & LATH INSTALLATION
- AFTER SCRATCH & EPOXY COAT
- 10. PUNCH-LIST INSPECTION
- 11 FINAL INSPECTION
- A. WHERE NEW FOUNDATION ELEMENTS ARE REQUIRED
- 1. AFTER EXCAVATION, FORMWORK & REBAR PLACEMENT
- 2. FPOXY SETTING OF REBAR DOWELS
- B. WHERE FLATWORK IS INSTALLED TO IMPROVE DRAINAGE
- AFTER SURFACE PREPARATION & INSTALLATION OF SCREEDS
- 2. AFTER PLACEMENT & FINISHING OF (N) FLATWORK
- C. WHERE COLUMNS & POST BASES ARE REPAIRED
- 1. AFTER DEMOLITION OF CONCRETE & DAMAGED PORTIONS OF POST BASES
- AFTER WELDING ON (N) POST BASES TO REMNANTS OF (E) POST BASES
- 3. AFTER INSTALLATION OF (N) COLUMNS

ENGINEER OF RECORD SHALL BE NOTIFIED 2 BUSINESS DAYS PRIOR TO EACH INSPECTION. IF E.O.R. IS NOT NOTIFIED OR HIRED, THEN THE CONTRACTOR ASSUMES LIABILITY TO THE GREATEST EXTENT ALLOWED BY LAW

#### **CERTIFICATIONS:**

- 1. FABRICATION SHOP SHALL BE CERTIFIED BY W. CHARLES PERRY & ASSOCIATES BEING QUALIFIED TO FABRICATE QUAKE-BREAK COMPONANTS.
- 2 INSTALLATION CONTRACTOR AND/OR SUBCONTRACTOR SHALL BE CERTIFIED BY W. CHARLES PERRY & ASSOCIATES OR QUAKEBRAKE CORP. AS BEING QUALIFIED TO INSTALL
- 3. WELDERS SHALL BE CERTIFIED BY AWS FOR ALL WELDING EQUIPMENT. WELDING METHODS, MATERIALS, AND WELDING POSITIONS.

#### LICENSING:

FABRICATION SHOP SHALL BE LICENSED BY W. CHARLES PERRY & ASSOCIATES OR QUAKE—BREAK TO FABRICATE AND SELL QUAKE—BREAK COMPONANTS.

#### PATENTS & COPYRIGHTS:

- 1. THE SEISMIC RETROFIT SYSTEM AND ALL OF ITS COMPONENTS ARE PROTECTED BY A PENDING PATENT.
- 2. ALL CONSTRUCTION DOCUMENTS, PLANS, DRAWINGS, DESCRIPTIONS, SKETCHES, PHOTOGRAPHS, AND OTHER REPRESENTATIONS OF THE SEISMIC RETROFIT SYSTEM AND ITS COMPONENTS ARE PROTECTED BY COPYRIGHTS HELD BY W. CHARLES PERRY AND PARVIZ B. ZAVAREH. THE USE OF THESE REPRESENTATIONS IS LIMITED TO THE FABRICATION AND INSTALLATION OF THE SEISMIC RETROFIT SYSTEM FOR THIS ONE PROJECT. ALL OTHER USE
- 3. SHOP DRAWINGS OF SEISMIC RETROFIT COMPONENTS MAY BE PREPARED BY A LICENSED FABRICATOR. ALL SUCH DRAWINGS MUST BE REVIEWED, APPROVED, STAMPED, AND SIGNED BY W. CHARLES PERRY, P.E. OR PARVIZ B. ZAVAREH, P.E. ALL SUCH DRAWINGS REMAIN THE PROPERTY OF W. CHARLES PERRY AND PARVIZ B. ZAVAREH AND/OR THEIR ASSIGNEE.

REVISIONS DATE

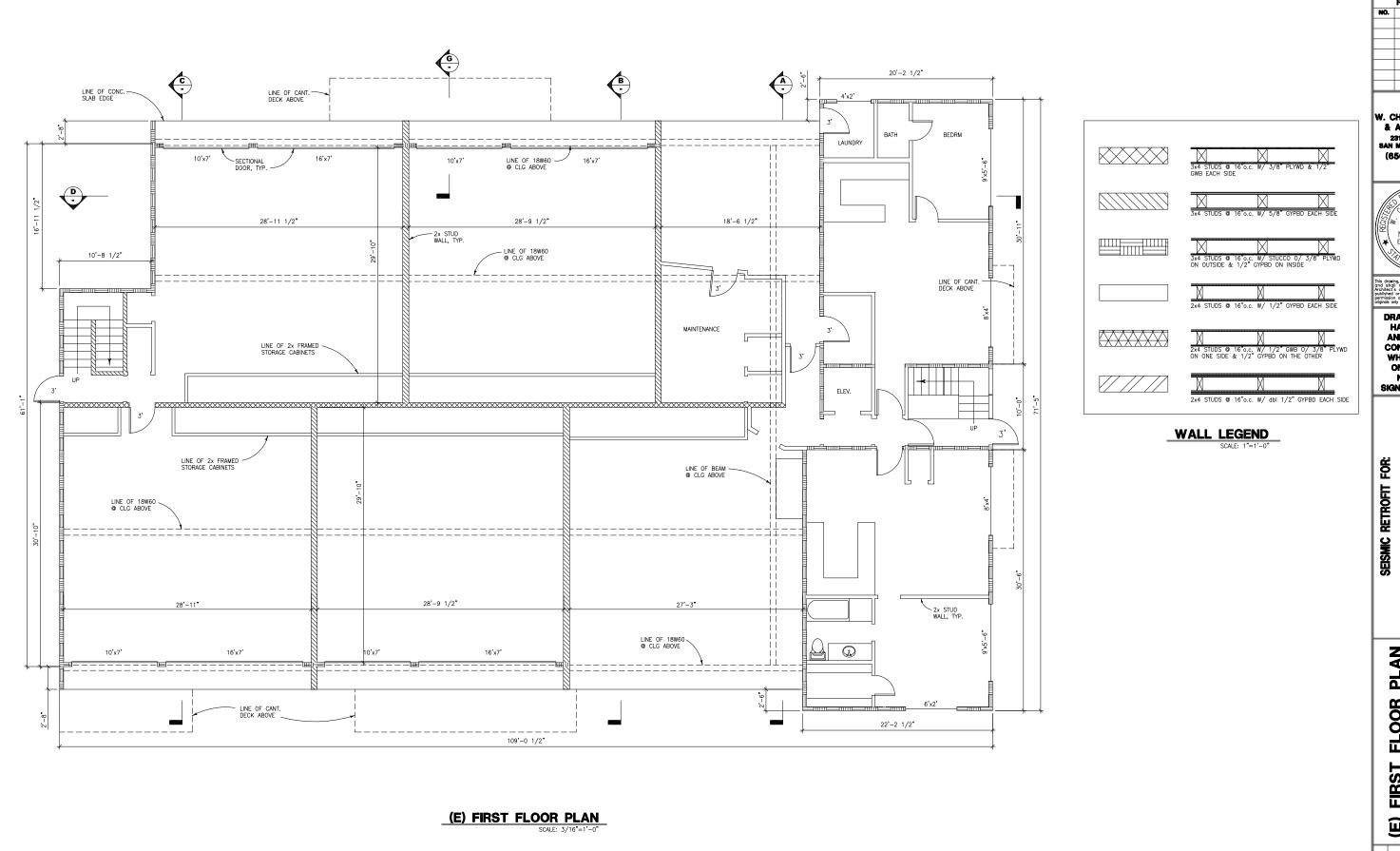
> W. CHARLES PERRY & ASSOCIATES. 231 W. 41st AVE. BAN MATEO, CA 94403 (650)638-9546



DRAWINGS ARE HALF SCALE AND NOT FOR CONSTRUCTION WHEN SHOWN ON 11x17 OR **NOT WET** SIGNED & DATED

**APARTMENTS** RETROFIT E S

2



REVISIONS DATE W. CHARLES PERRY & ASSOCIATES.

231 W. 41st AVE. SAN MATEO, CA 94403 (650)638-9546



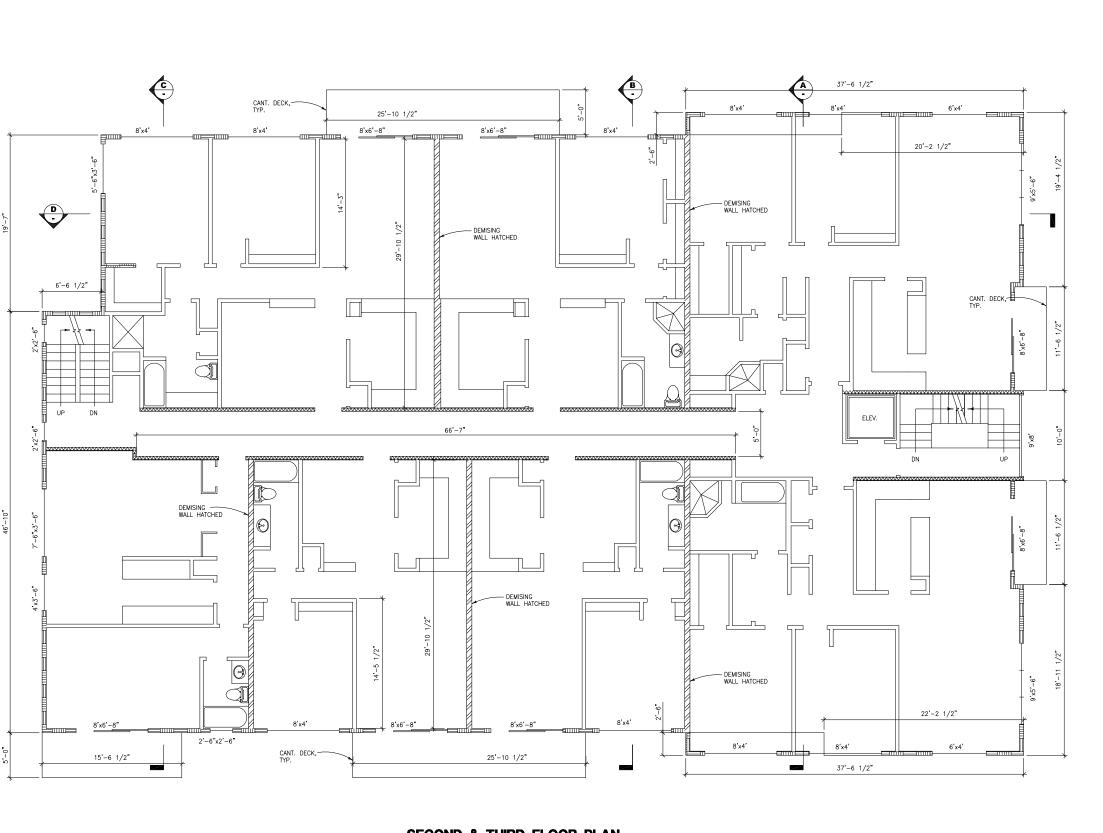
DRAWINGS ARE HALF SCALE AND NOT FOR CONSTRUCTION WHEN SHOWN ON 11x17 OR NOT WET SIGNED & DATED

SEISMIC RETROFIT FOR:
APARTMENTS
226 CATALPA STREET
SAN MATEO, CA. 94

PLAN FLOOR **FIRST** 

Œ

A<sub>1</sub>



2x4 STUDS @ 16"o.c. W/ 1/2" GYPBD EACH SIDE 2x4 STUDS @ 16"o.c. W/ dbl 1/2" GYPBD EACH SIDE

**WALL LEGEND** 

REVISIONS DATE

W. CHARLES PERRY & ASSOCIATES. 231 W. 41st AVE. SAN MATEO, CA 94403 (650)638-9546



DRAWINGS ARE HALF SCALE AND NOT FOR CONSTRUCTION WHEN SHOWN ON 11x17 OR NOT WET SIGNED & DATED

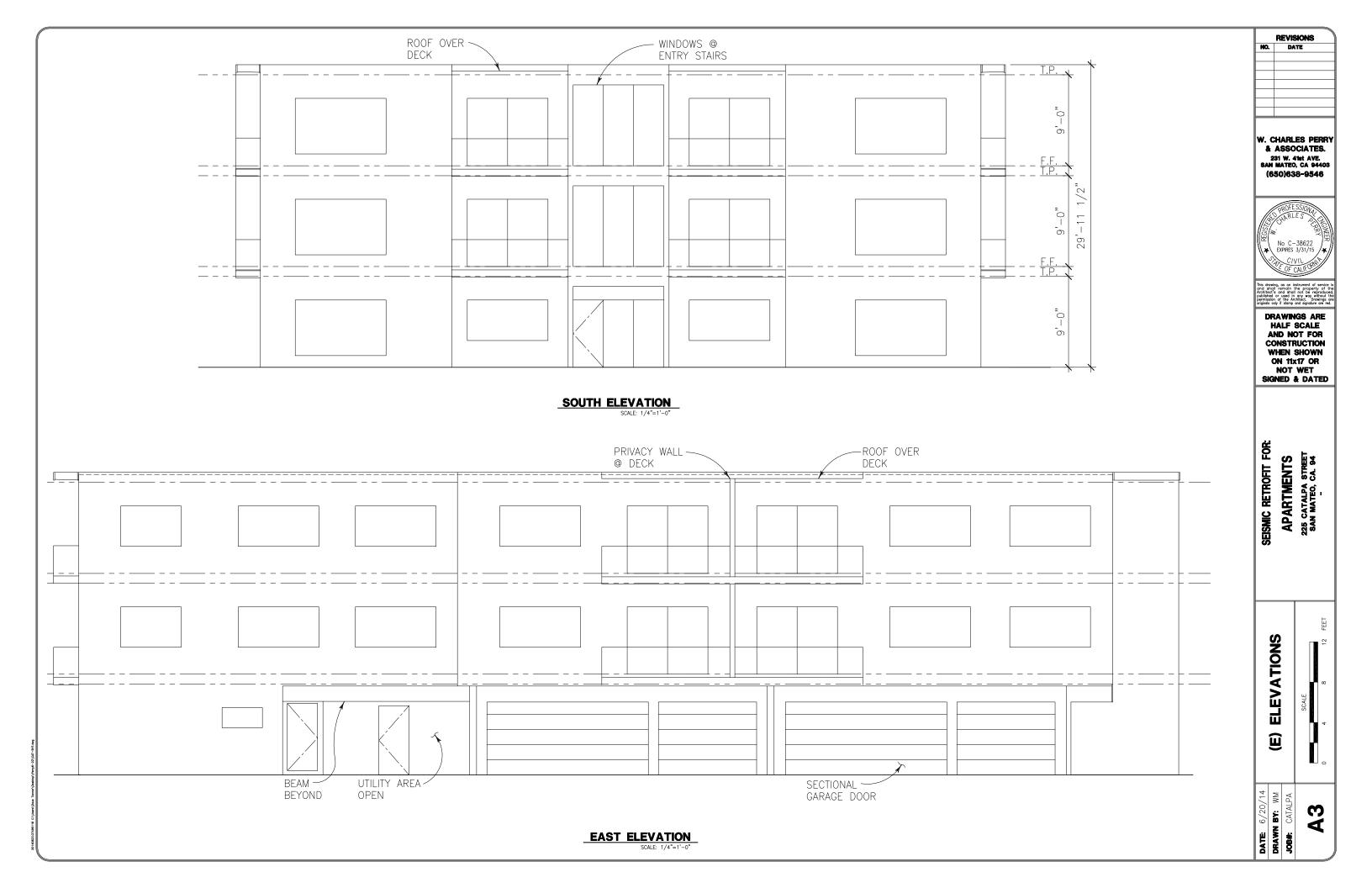
SEISMIC RETROFIT FOR:
APARTMENTS
226 CATALPA STREET
SAN MATEO, CA. 94

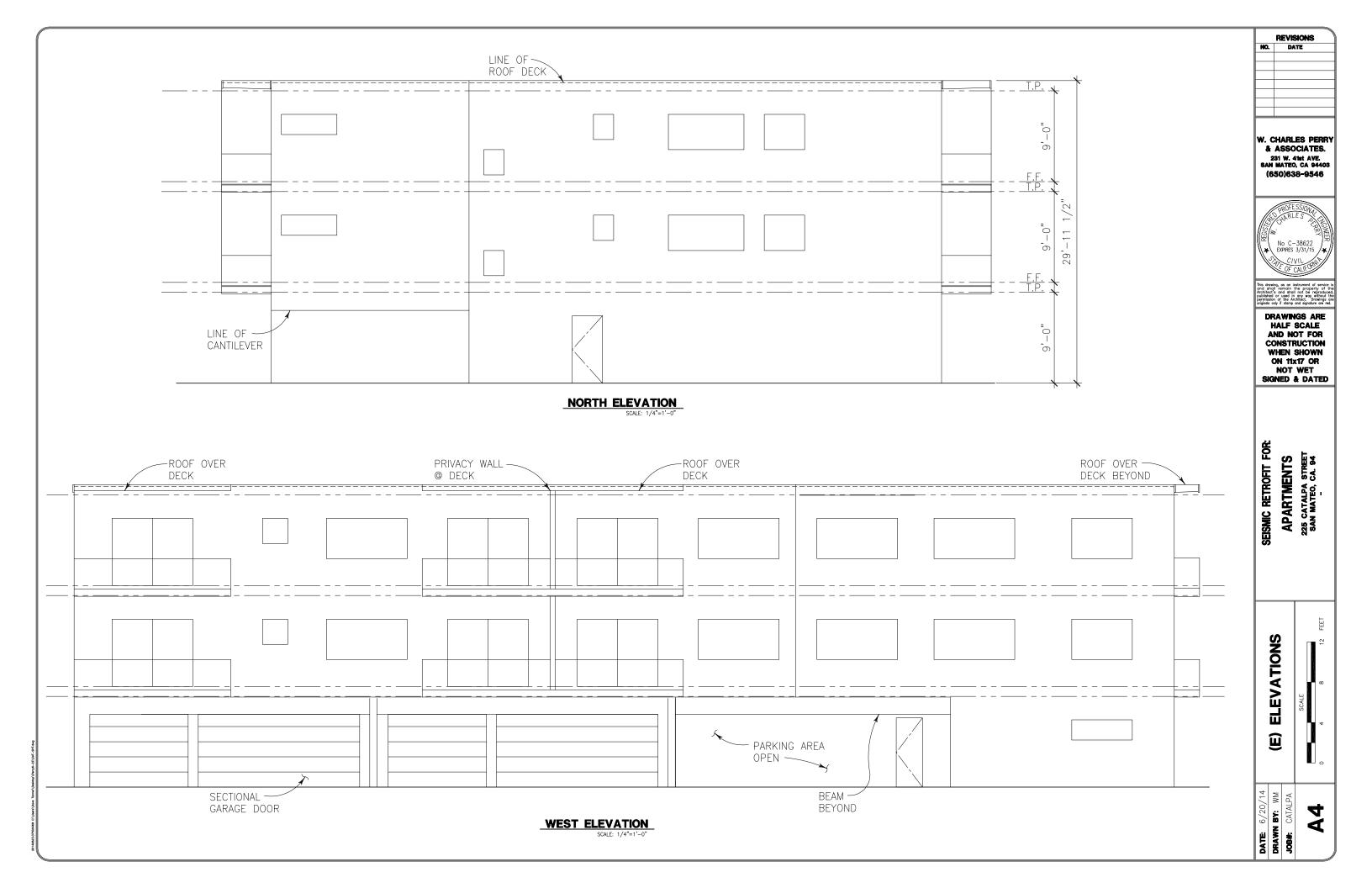
SECOND & THIRD FLOOR PLANS

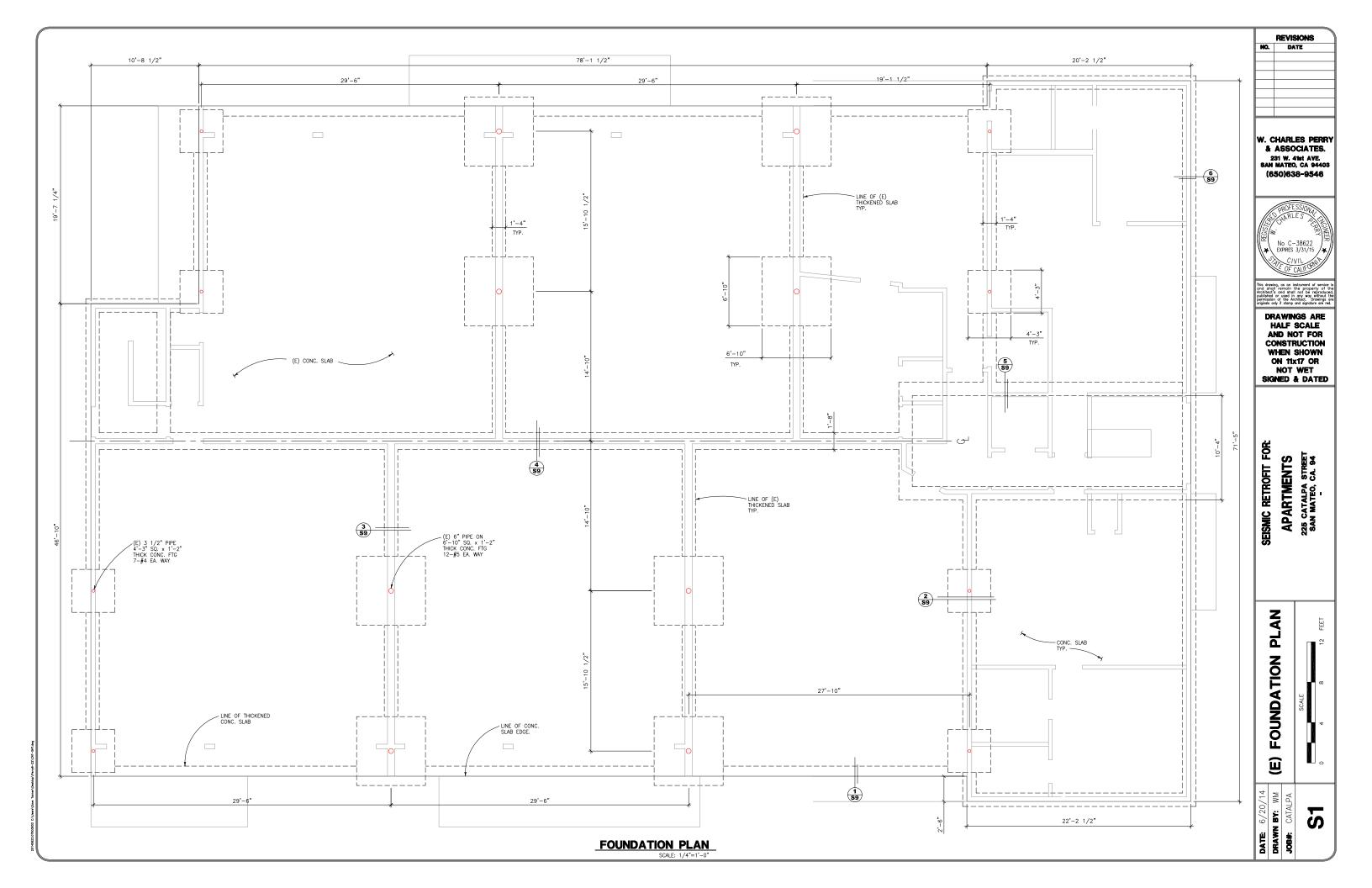
Œ

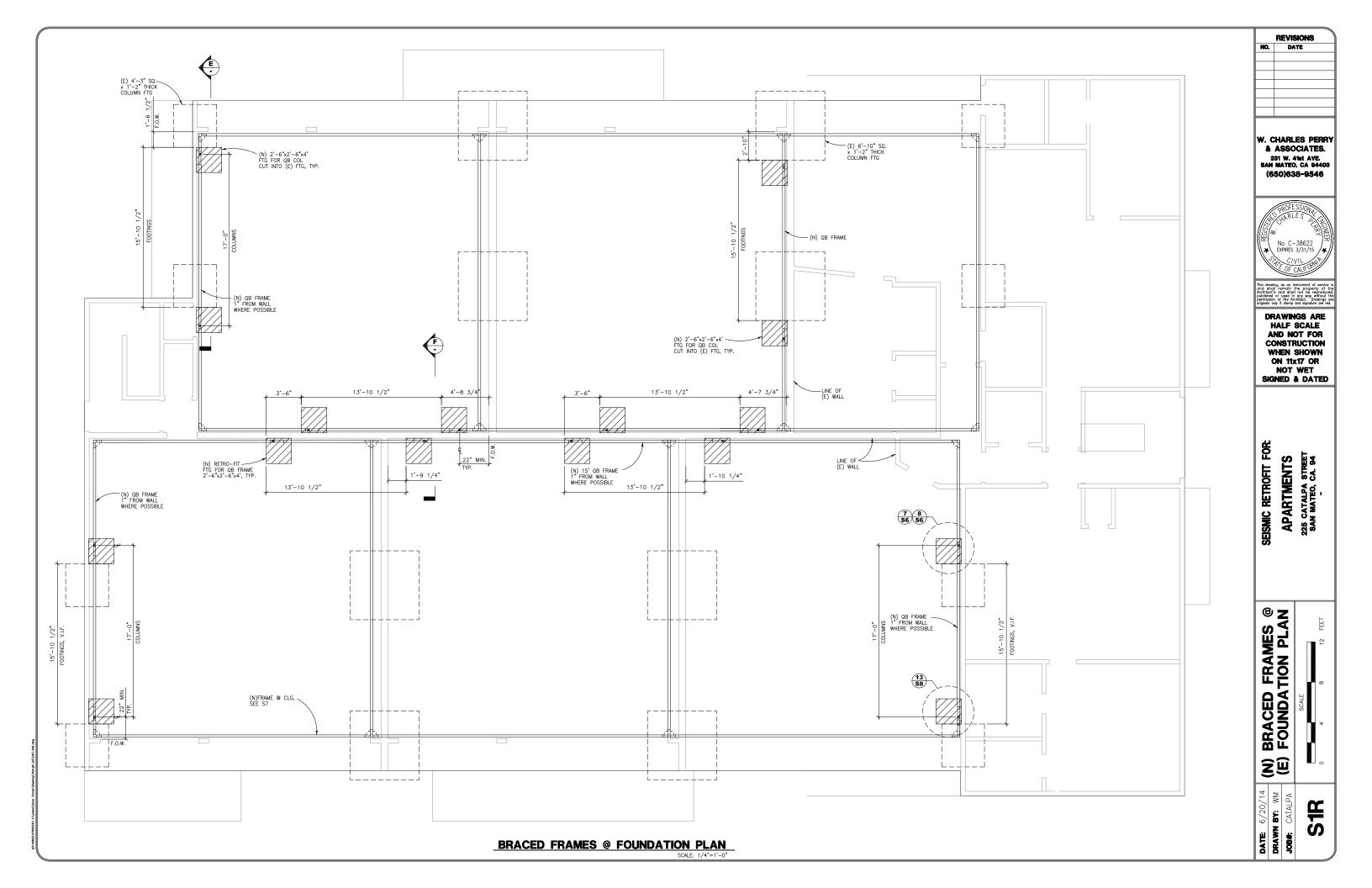
2 4

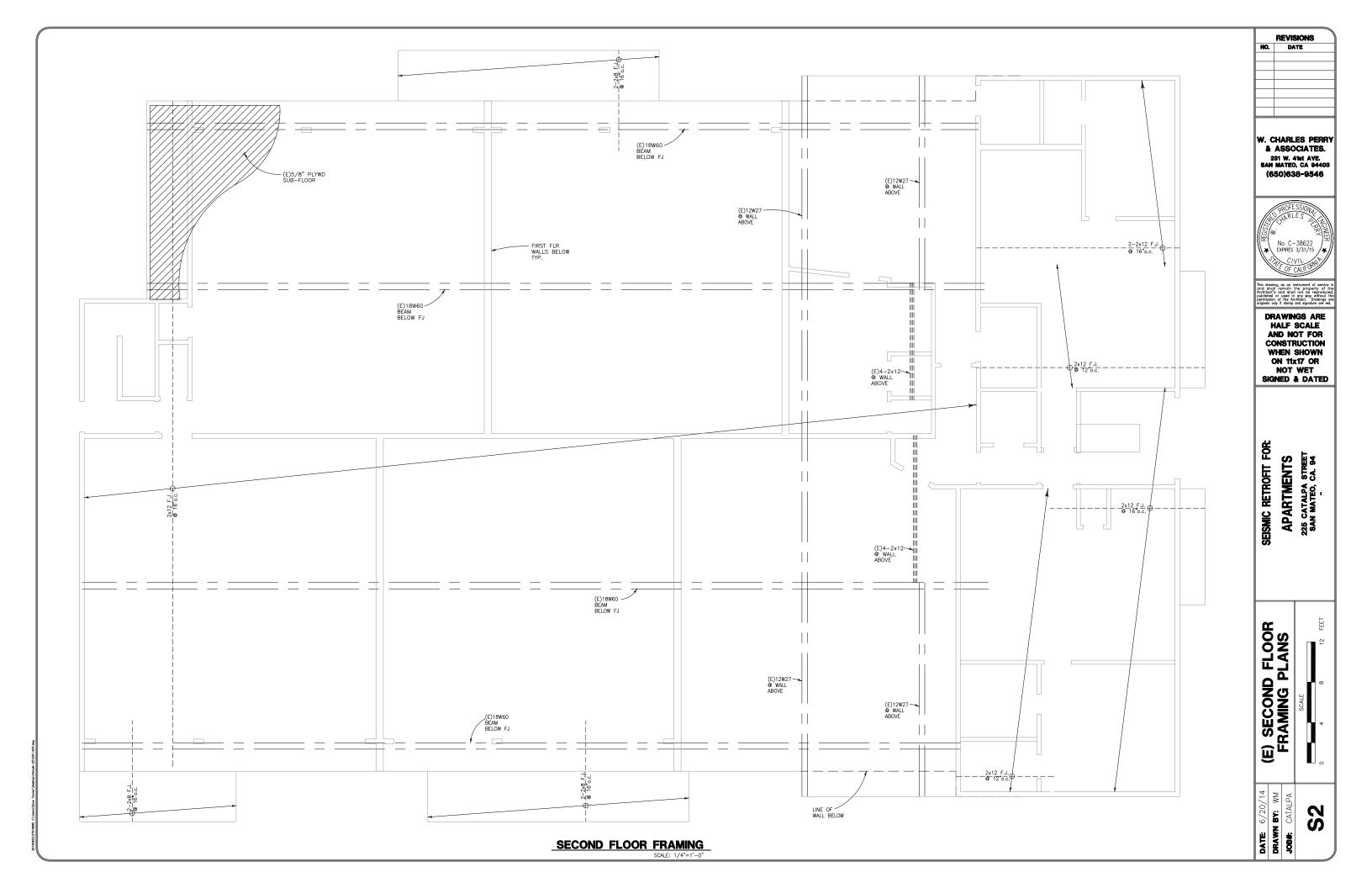
SECOND & THIRD FLOOR PLAN

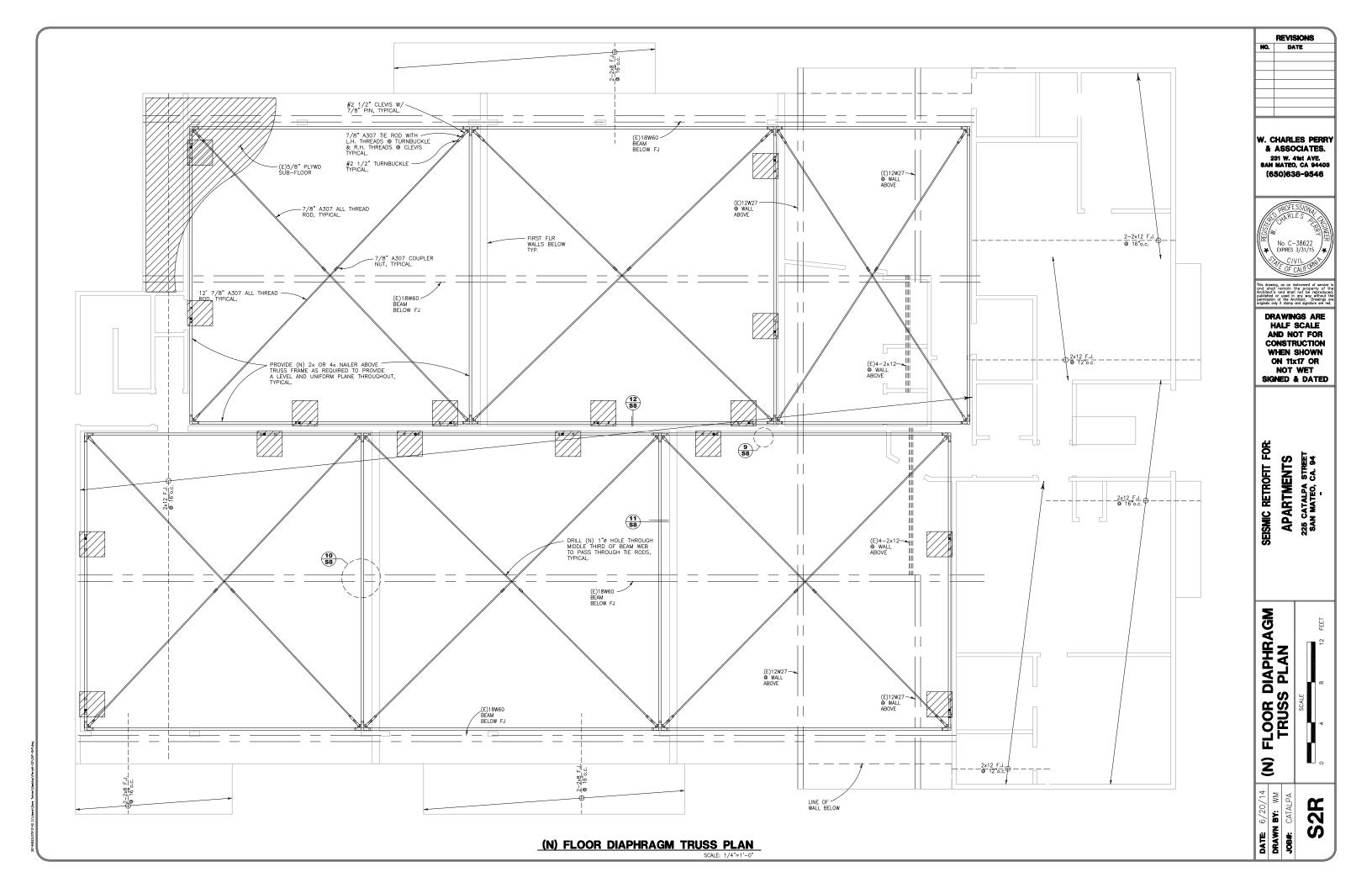


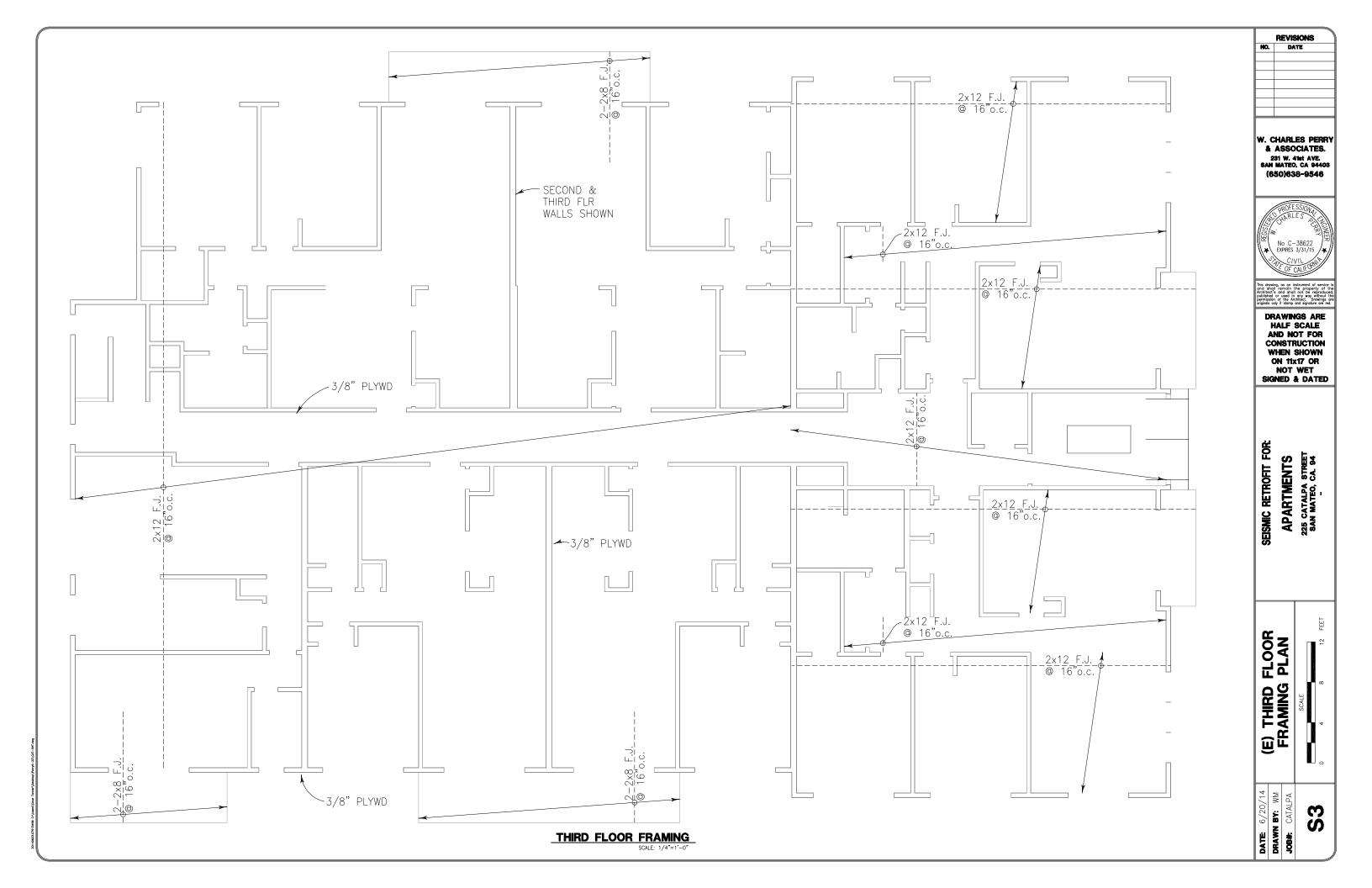


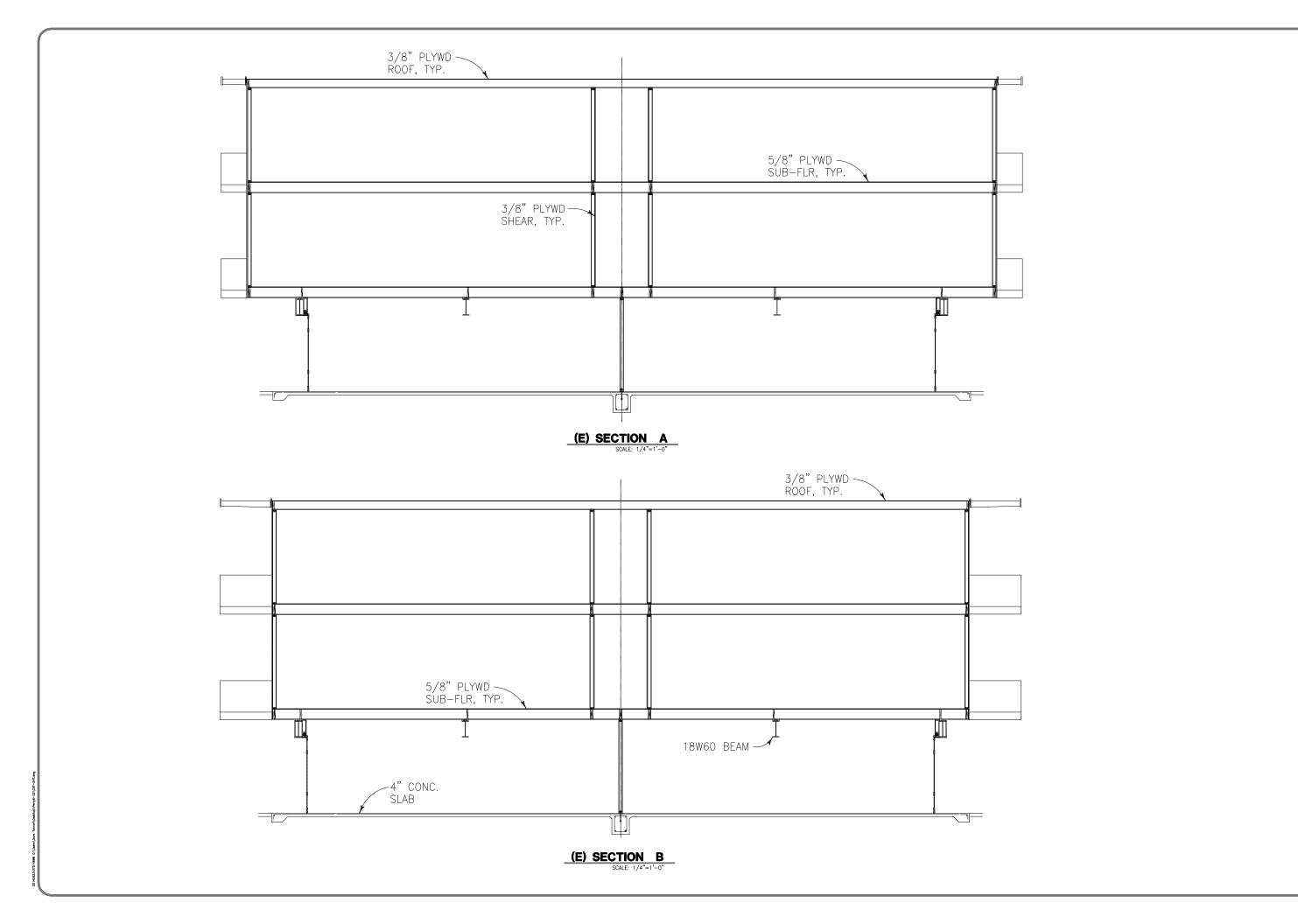












	REVISIONS				
	NO.	DATE			
- 1					

W. CHARLES PERRY & ASSOCIATES. 231 W. 41et AVE. SAN MATEO, CA 94403 (650)638-9546

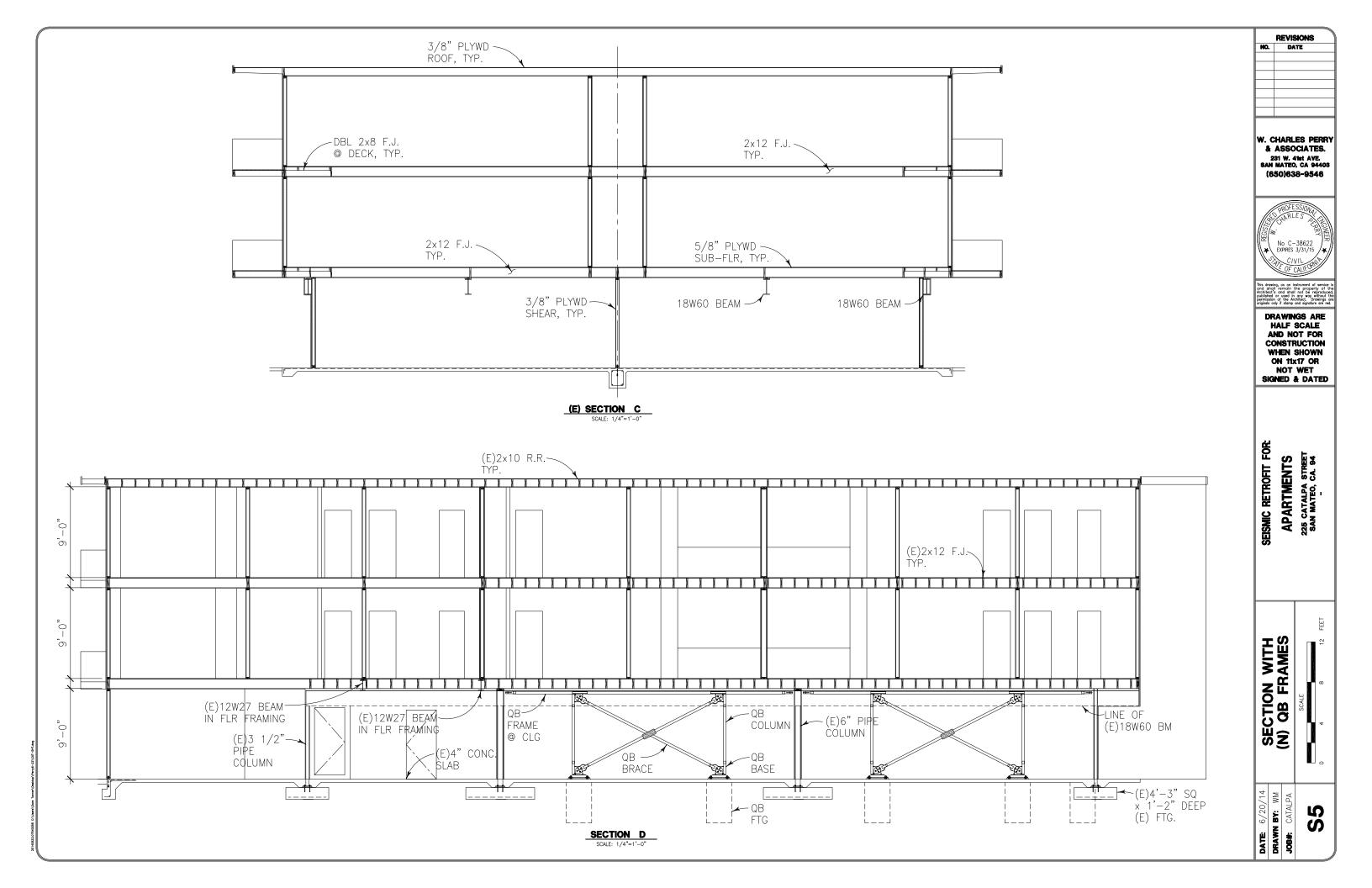


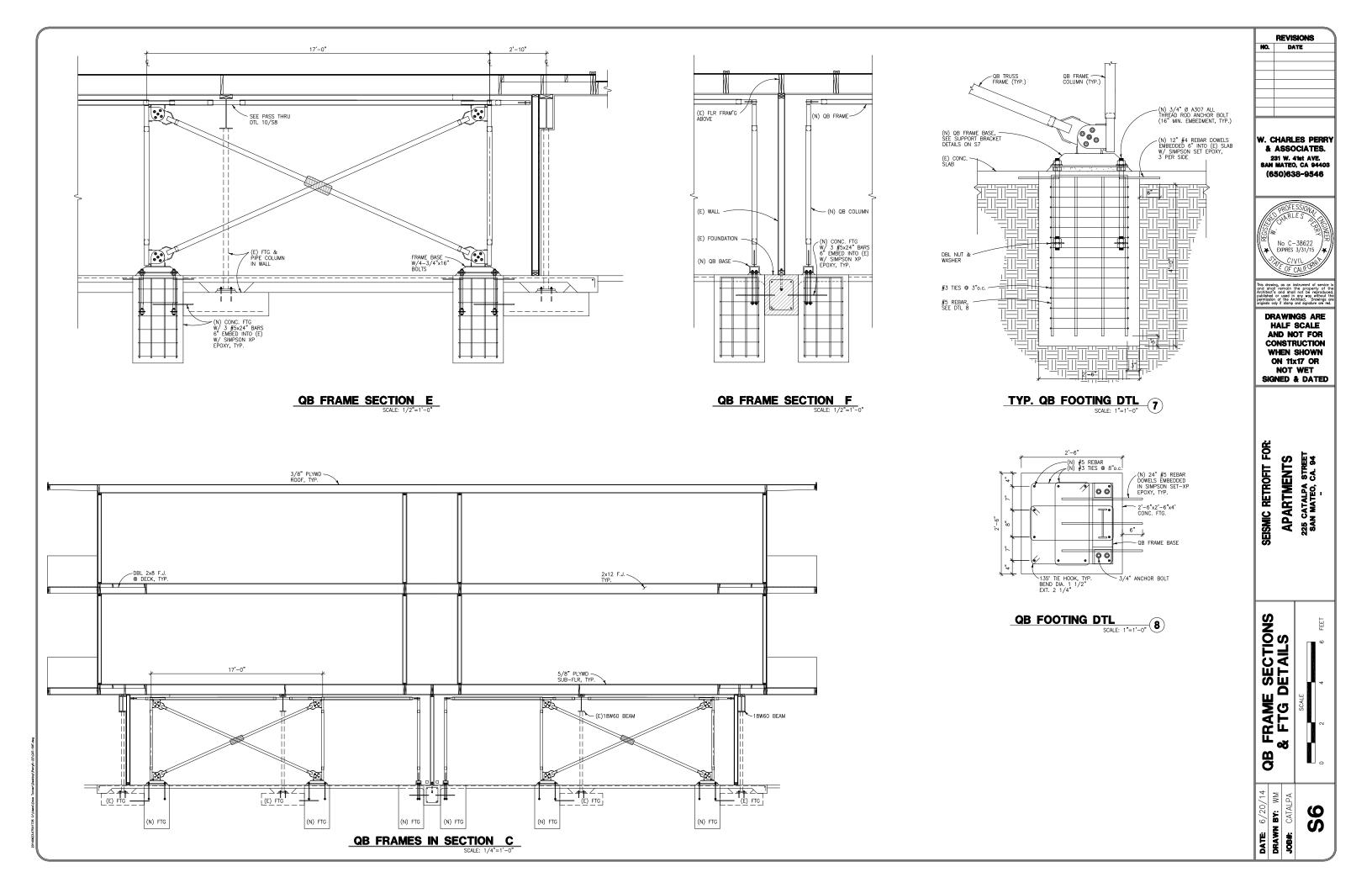
DRAWINGS ARE
HALF SCALE
AND NOT FOR
CONSTRUCTION
WHEN SHOWN
ON 11x17 OR NOT WET SIGNED & DATED

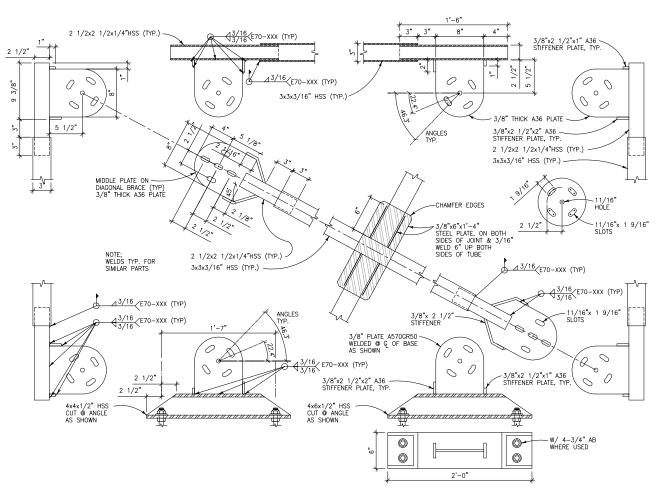
SEISMIC RETROFIT FOR:
APARTMENTS
225 CATALPA STREET
SAN MATEO, CA. 84

SECTIONS Œ

**\$4** 







### SUPPORT BRACKET DETAILS

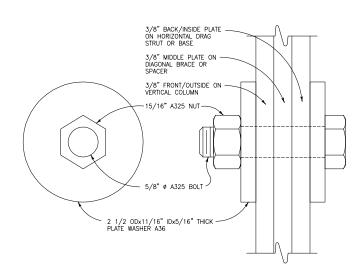
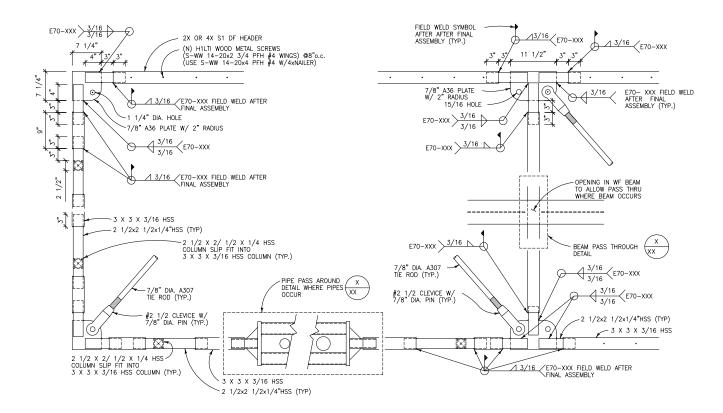
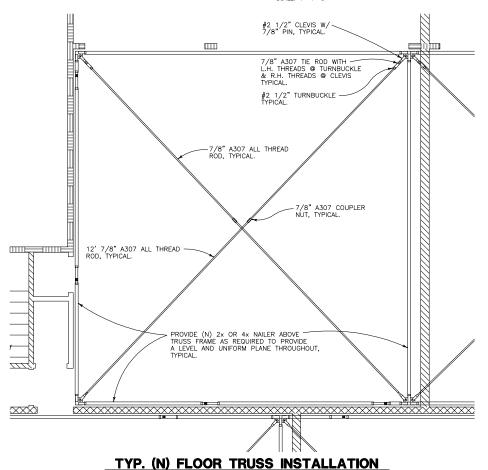


PLATE BOLTING DETAIL



### FLOOR TRUSS DETAILS

SCALE: 1"=1'-0"



REVISIONS
NO. DATE

W. CHARLES PERRY & ASSOCIATES. 231 W. 41st AVE. 8AN MATEO, CA 94403 (650)638-9546



his drawing as an instrument of service is and shall remain the property of the vichitect's and shall not be reproduced, ublished or used in any way without the bermission of the Architect. Drawings are

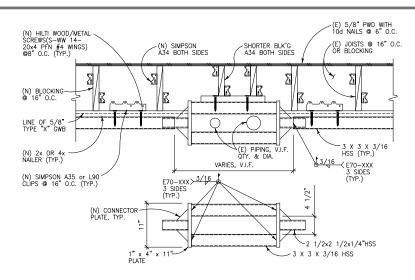
DRAWINGS ARE
HALF SCALE
AND NOT FOR
CONSTRUCTION
WHEN SHOWN
ON 11x17 OR
NOT WET
SIGNED & DATED

SEISMIC RETROFIT FOR:
APARTMENTS
225 CATALPA STREET
SAN MATEO, CA. 94

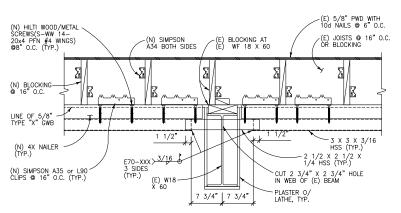
SUPPORT BRACKET & FLOOR TRUSS DETAILS

SERE CATALPA

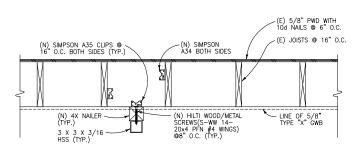
1



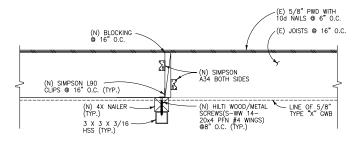
## FRAME PASS-AROUND DTL



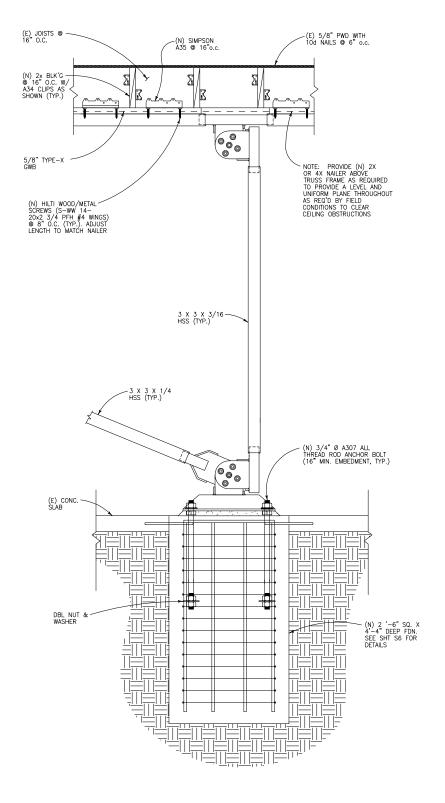
# FRAME PASS-THRU DTL



### NAILER PARALLEL TO JT.



NAILER PERPENDICULAR TO JT.



**QB FRAME DTL** 

SCALE: 1"=1'-0"

REVISIONS DATE

W. CHARLES PERRY & ASSOCIATES. 231 W. 41st AVE. SAN MATEO, CA 94403 (650)638-9546



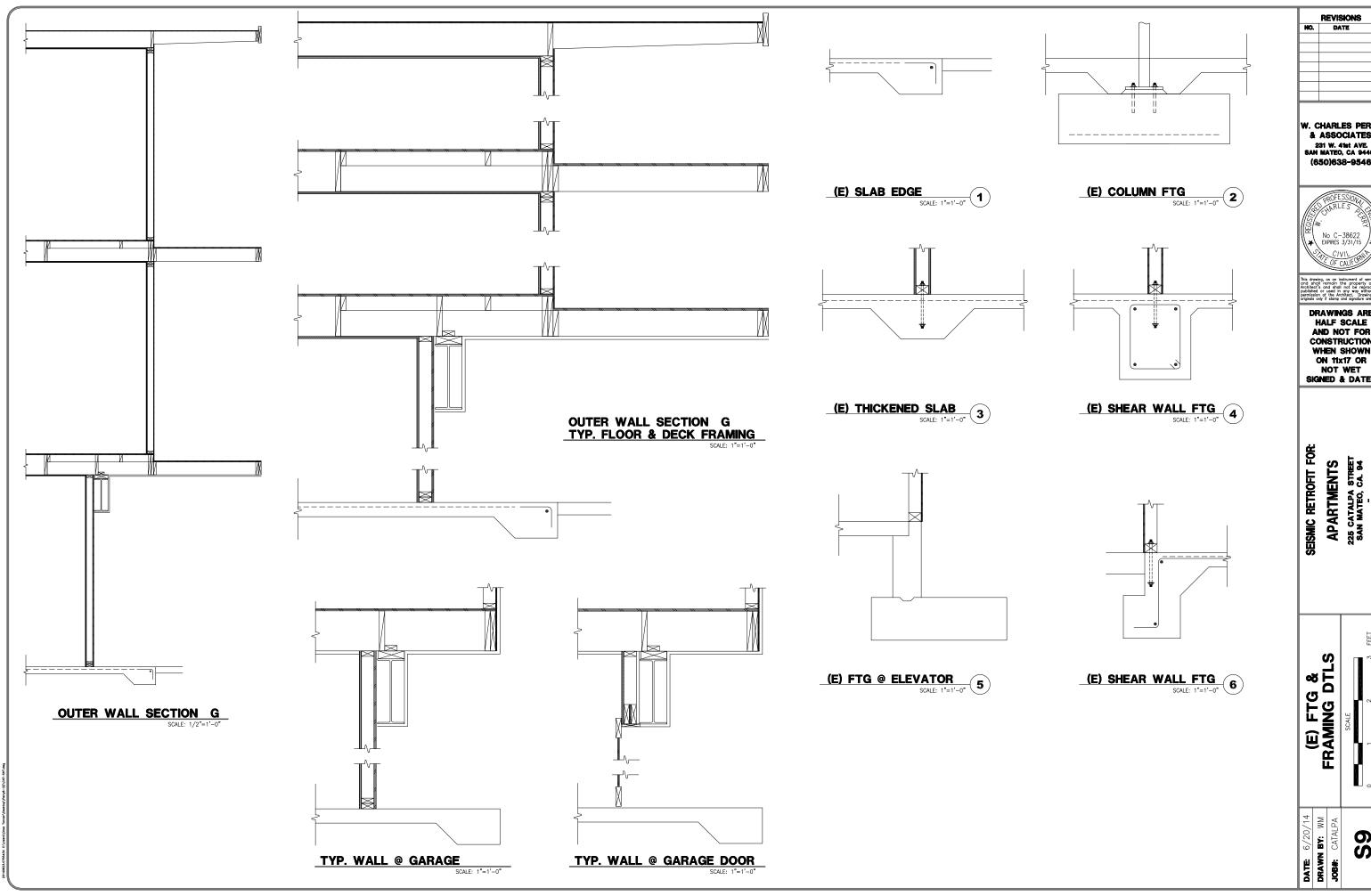
**DRAWINGS ARE** HALF SCALE AND NOT FOR CONSTRUCTION WHEN SHOWN ON 11x17 OR NOT WET SIGNED & DATED

SEISMIC RETROFIT FOR: 225 CATALPA STREET SAN MATEO, CA. 94 **APARTMENTS** 

**DETAIL** 

**FRAME** G 5

 $\infty$ Ö



W. CHARLES PERRY & ASSOCIATES. 231 W. 41st AVE. 8AN MATEO, CA 94403 (650)638-9546



DRAWINGS ARE HALF SCALE AND NOT FOR CONSTRUCTION WHEN SHOWN ON 11x17 OR NOT WET SIGNED & DATED

89