

GENERAL REQUIREMENTS:

1. PRIOR TO STARTING ANY WORK THE CONTRACTOR SHALL REVIEW THESE PLANS AND SITE CONDITIONS AND NOTIFY THE ENGINEER IF ANY DISCREPANCIES ARE DISCOVERED.
2. THE ENGINEER IS NOT RESPONSIBLE FOR THE SUPERVISION OF THE CONTRACTOR NOR HIS EMPLOYEES DURING THE CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE MEANS AND ESTABLISH METHODS OF THE CONSTRUCTION TO MEET REQUIREMENTS OF ALL APPLICABLE CODES, INDUSTRY STANDARDS AND REQUIREMENTS OF THESE PLANS.
3. QUALITY OF THE WORK SHALL MEET OR EXCEED INDUSTRY STANDARD PRACTICES.
4. ANY DEVIATIONS FROM THESE PLANS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.

DESIGN DATA:

1. APPLICABLE BUILDING CODE: FBC EXISTING BUILDING 8TH EDITION (2023)
2. APPLICABLE DESIGN LOADS: PER ASCE/SEI 7-22
 - LIVE LOAD: 50 PSF/250 PSF (GARAGE)
 - ROOF LIVE LOAD: 20 PSF (300 LB CONC.)
 - BASIC WIND SPEED: 200 MPH
 - EXPOSURE: D
 - STRUCTURAL CATEGORY: IV
 - FLOOD ZONE: AE6

ALL PRESSURES SHOWN ARE BASED ON ASD DESIGN, WITH A LOAD FACTOR OF 0.6

3. ASCE 24-14 FLOOD RESISTANT DESIGN AND CONSTRUCTION

SOILS AND FOUNDATIONS:

PRESUMPTIVE LOAD-BEARING VALUES OF FOUNDATION MATERIALS ARE USED IN LIEU OF A COMPLETE GEOTECHNICAL EXPLORATION. FOUNDATIONS SHALL BE PLACED ON A "SEDIMENTARY AND FOLIATED ROCK" WITH AN ALLOWABLE LOAD BEARING PRESSURE OF 3,000 PSF. NOTIFY THE ENGINEER IF SOIL CONDITIONS ARE DIFFERENT.

1. ALL FOUNDATIONS, SLABS AND FOOTERS SHALL BE PLACED ON STABILIZED UNDISTURBED SUBGRADE SOIL.
2. MINIMUM FOUNDATION DEPTH SHALL BE 24" UNLESS OTHERWISE IS SPECIFIED ON THE PLANS. IF OVER-EXCAVATED - FILL SHALL NOT BE PLACED BACK INTO THE TRENCH UNLESS APPROVED BY THE ENGINEER.
3. FILL UNDER THE FOUNDATIONS SHALL BE USED ONLY IF APPROVED BY THE ENGINEER. CLEAN FILL MATERIAL SHALL BE PLACED IN 6"-8" LAYERS AND COMPACTED TO 98% DENSITY USING THE MODIFIED PROCTOR TEST.
4. FILL MATERIAL SHALL BE CLEAN GRANULAR SAND OR LIMEROCK MIX WITHOUT ANY ORGANIC MATERIALS, CLAY, MUCK AND ROCKS LARGER THAN 4". BACKFILL SHALL NOT CONTAIN ANY WOOD OR CELLULOSE DEBRIS.

AUGERCAST PILES

1. AUGERCAST PILES SHALL BE 16" DIAMETER WITH MINIMUM EMBEDMENT OF 3FT INTO THE CAP ROCK UNLESS OTHERWISE SHOWN ON THE PLANS.
2. CONCRETE FOR PILES SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 5000 PSI. WATER/CEMENT RATIO SHALL NOT EXCEED W/C=0.40.
3. REINFORCEMENT SHALL BE FOUR (4) #5 REBAR VERTICALLY WITH #3 STIRRUPS AT 12" O.C. CONTRACTOR SHALL USE PLASTIC CHAIRS OR CENTRALIZERS TO PROVIDE A 3" COVER ON ALL SIDES OF THE REINFORCEMENT.

CONCRETE:

1. APPLICABLE CODE ACI 318 LATEST EDITION AND ACI 301.
2. ALL CONCRETE ELEMENTS SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE IS SHOWN ON THE PLANS. WATER/CEMENT RATIO SHALL NOT EXCEED W/C=0.40.
3. ALL CAST-IN-PLACE CONCRETE SHALL BE CURED AND PROTECTED FROM OVERDRYING PER ACI 305R-10 "HOT WEATHER CONCRETING".
4. ALL EXPOSED EDGES SHALL HAVE 1/2" CHAMFERS.
5. NO COLD JOINTS ARE ALLOWED UNLESS OTHERWISE APPROVED BY THE ENGINEER.
6. TESTING: ALL FIELD AND LABORATORY TESTING SHALL BE PERFORMED BY AN INDEPENDENT SPECIALIZED COMPANY. THE CONTRACTOR IS RESPONSIBLE FOR ALL SCHEDULING, COORDINATION AND COST OF THE TESTING COMPANY. THREE (3) SAMPLES SHALL BE TAKEN AND TESTED EACH TIME. MINIMUM SAMPLING FREQUENCY:
 - A) EACH DAY OF CONCRETING FOR EVERY CONCRETE MIX;
 - B) EVERY 50 CUBIC YARDS;
 - C) EVERY 2000 SQ.FT. OF SLAB AREA.

ALL TESTING SHALL BE PER LATEST ACI AND ASTM REQUIREMENTS. LABORATORY SHALL SUPPLY THREE (3) ORIGINAL SIGNED&SEALED REPORT RESULTS TO THE ENGINEER.

7. CAST-IN-PLACE AND PRECAST MEMBER ERECTION TOLERANCES SHALL BE AS SPECIFIED IN THE TABLE 8.2.2 OR IN SECTION 8.3 OF "PCI DESIGN HANDBOOK/SIXTH EDITION".

REINFORCEMENT:

1. ALL REBAR SHALL BE DEFORMED CARBON-STEEL ASTM A615/A615M-13 GRADE 60 UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 - * ADD ALTERNATE REINFORCEMENT OPTION: ASTM A1035 GRADE 100 (MMFX2) AS CORROSION RESISTANT ALTERNATIVE FOR ALL REINFORCEMENT.
2. ALL REQUIREMENTS FOR PLACEMENT, COVER, TOLERANCES, ETC. SHALL BE PER ACI 318-11.
3. ALL HOOKS AND BENDS SHALL BE FACTORY MADE UNLESS FIELD BENDS ARE APPROVED BY THE ENGINEER.
4. ONLY PLASTIC CHAIRS AND CENTRALIZERS SHALL BE USED FOR REBAR SUPPORT.

ALUMINUM COMPONENTS:

1. TYPE 6061-T6 ALUMINUM.
2. MIG WELD ALL JOINTS W/ CONTINUOUS 1/8" WELD. USE 5356 FILLER WIRE ALLOY.
3. ALL ALUMINUM IN CONTACT WITH CONCRETE, PT WOOD, DISSIMILAR METALS AND OTHER CORROSIVE MATERIALS SHALL COATED WITH COAL-TAR EPOXY OR PROTECTED BY OTHER ENGINEER APPROVED METHOD.

HARDWARE:

1. HARDWARE SHALL BE 304 STAINLESS STEEL OR BETTER OR ZMAX GALVANIZED FOR NON EXPOSED SIMPSON PRODUCTS, UNLESS OTHERWISE SPECIFIED.

STRUCTURAL LUMBER:

1. ALL WOOD MEMBERS SHALL MEET OR EXCEED REQUIREMENTS SPECIFIED IN "ANSI/AF&PA NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION" AND ALL REFERENCED STANDARDS.
2. ALL WOOD MEMBERS SHALL BE PRESSURE TREATED SOUTHER PINE NO2 OR GREATER KILN DRIED AS SPECIFIED IN THE STANDARDS, UNLESS OTHERWISE SPECIFIED.
3. ALL WOOD MEMBERS EXPOSED TO EXTERIOR, IN DIRECT CONTACT WITH CONCRETE OR STEEL SHALL BE PRESSURE-TREATED (PT) UC3B GRADE PER AWPA STANDARDS.
4. ALL FIELD CUTS IN PT LUMBER SHALL BE TREATED ON SITE.
5. NAILING SHALL BE IN ACCORDANCE WITH FBC 8TH EDITION (2023). NAILS AND OTHER FASTENERS FOR PT WOOD SHALL BE STAINLESS STEEL OR ACQ APPROVED TREATED.
6. SHEATHING SHALL BE 3/4" CDX PLYWOOD SHEATHING GRADE, UNLESS OTHERWISE IS SPECIFIED ON THE PLANS. USE 10D RING-SHANK NAILS WITH SPACING OF 4" O.C. ON ALL EDGES AND 6" O.C. IN THE FIELD.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL COMPONENTS SHALL BE AS DESCRIBED IN "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS" AISC 360 OR LATER EDITION.
2. HSS SHAPES (STRUCTURAL TUBING) SHALL BE ASTM A500 (FY=46 KSI).
3. STEEL PLATES, FLANGES AND MISCELLANEOUS ELEMENTS SHALL BE ASTM A36 (FY=36 KSI) UNLESS NOTED OTHERWISE ON THE PLANS.
4. W-SHAPES, C-SHAPES AND OTHER FORMED STEEL SHALL BE ASTM A992 (FY=50 KSI).
5. ALL WELDING SHALL BE IN CONFORMANCE WITH THE LATEST SPECIFICATIONS AWS D1.1/D1.1M:2010, STRUCTURAL WELDING CODE - STEEL.

STRUCTURAL STEEL COATING:

1. ALL SURFACES SHALL BE ABRASIVE BLAST CLEANED TO NEAR-WHITE METAL (PER SSPC-SP10)
2. EXPOSED STEEL:
3. ALL SURFACES SHALL BE PRIMED WITH POLYAMIDE EPOXY - ONE COAT (8.0 MILS DFT).
4. APPLY SEALANT AT ALL LOCATIONS WHERE STEEL IS WELDED, LAPPED, ETC. SEALANT MATERIAL SHALL BE COMPATIBLE WITH THE PAINTING SYSTEM.
5. TOP PAINT SHALL BE TWO (2) COAT POLYURETHANE (3.0 MILS DFT EACH).
6. COLORS SHALL MATCH EXISTING OR TO BE SELECTED BY THE OWNER.
7. 2 COATS OF "SUMTER COATINGS" UNIVERSAL PRIMER (6.0 MILS DFT) OR APPROVED EQUAL.

REINFORCED MASONRY (CMU):

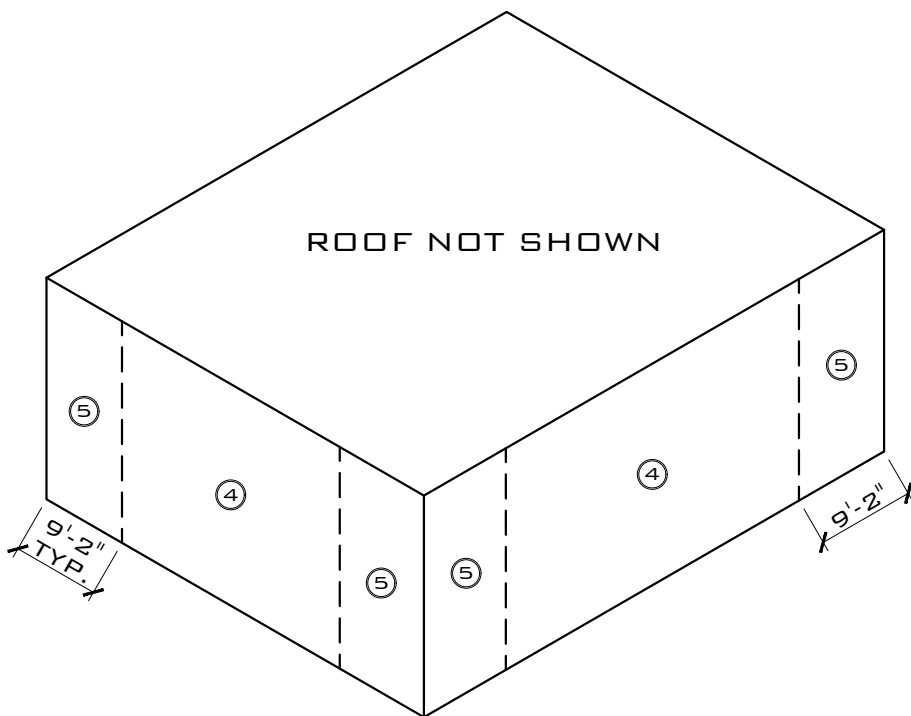
1. ALL MASONRY SHALL BE REINFORCED CONCRETE MASONRY UNIT IN ACCORDANCE WITH THE LATEST EDITION OF ACI 530/ASCE 5/TMS 402.
2. INSTALL ALL BLOCKS IN RUNNING BOND.
3. MINIMUM MASONRY BLOCK (ASTM D90) STRENGTH SHALL (F'm) BE 2000 PSI.
4. TYPE "S" MORTAR (ASTM C270) SHALL BE USED USING 3/8" FULL BEDDING REINFORCED W/ 9 GAGE GALVANIZED LADDER WIRE EVERY 2ND ROW.
5. FILLED CELLS SHALL BE REINFORCED WITH #5 REBAR @ 24" O.C. (UNLESS OTHERWISE IS SPECIFIED ON THE PLANS).
6. GROUT SHALL BE PEA ROCK PUMP MIX (ASTM C476) WITH A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI (28 DAY) (ASTM C1019). TARGETED SLUMP SHALL BE 8"-11".
6. EACH GROUTED CELL SHALL HAVE CLEAN-OUT OPENINGS AT THE BOTTOM. THERE SHALL BE NO LOOSE MORTAR OR OTHER DEBRIS IN THE BOTTOM OF THE CELL. USE BLAST PRESSURE WASHING FOR SURFACE PREPARATION.

CONCRETE REPAIRS:

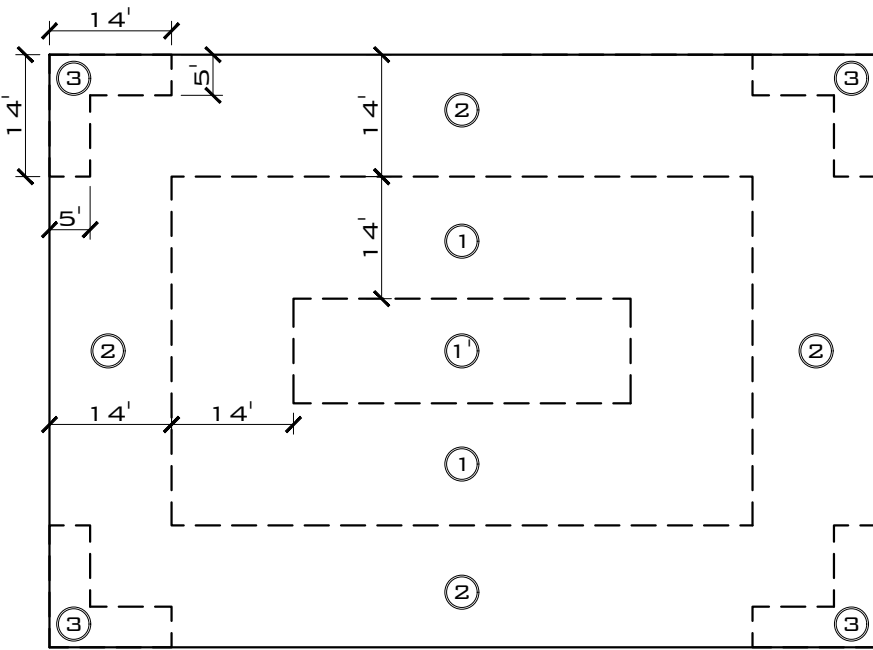
1. REMOVE ALL LOOSE AND UNSOUND CONCRETE.
2. EXPOSE ALL CORRODED REBAR FROM ALL SIDES (1.5" AROUND).
3. CLEAN ALL EXPOSED REBAR BY MECHANICAL MEANS TO NEAR-WHITE CONDITION.
4. PRESSURE WASH ALL CONCRETE AND REINFORCEMENT WITH POTABLE WATER.
5. PRIME EXISTING REINFORCEMENT W/ "SIKA ARMATED 110 EPODEM" OR APPROVED EQUAL. FOLLOW MANUFACTURER INSTRUCTIONS FOR SURFACE PREPARATION, APPLICATION AND CURING.
6. ALL REBAR WITH LOSS OF SECTION OVER 20% SHALL BE DUPLICATED WITH NEW REBAR OF EQUAL SIZE.
7. MINIMUM CONCRETE COVER SHALL BE 1.5" UNLESS OTHERWISE IS APPROVED BY THE ENGINEER.
8. INSTALL SACRIFICIAL ANODES "VECTOR GALVASHIELD XPT" (OR APPROVED EQUAL) AS SHOWN ON THE DIAGRAMS.
9. FOR SMALL PATCH REPAIRS (DEPTH UP TO 4", AREA UP TO 10 FT2) USE "SIKACRETE 211 SCC PLUS" REPAIR MORTAR. STRICTLY FOLLOW MANUFACTURER INSTRUCTIONS FOR SURFACE PREPARATION, APPLICATION AND CURING.
- 9A. FOR LARGE REPAIRS (FULL DEPTH SLAB, BEAM OR COLUMN REPAIR/REPLACEMENT) USE 4000 PSI CONCRETE MIX WITH W/C RATIO 0.4 MAX. WITH HIGH RANGE PLASTESIZER AND RUST INHIBITING ADMIXTURES.
10. FOR OVERHEAD REPAIR APPLICATION WITHOUT FORMING (SMALL DEPTH SLAB AND BEAM REPAIRS) USE "SIKAQUICK® VQH" TROWEL GRADE REPAIR MORTARS. STRICTLY FOLLOW MANUFACTURER INSTRUCTIONS FOR SURFACE PREPARATION, APPLICATION AND CURING.
11. THE CONTRACTOR IS RESPONSIBLE FOR ANY SHORING/RESHORING AND TEMPORARY SUPPORTS OF ALL STRUCTURAL ELEMENTS DURING THE REPAIR AND THROUGH THE CONCRETE CURING PERIOD.

1. MOIST CURING FOR MINIMUM OF 4 DAYS IS REQUIRED. FOLLOW HOT WEATHER CONCRETING GUIDELINES.

1. USE SIKA SET-XP ADHESIVE FOR ALL DOWELS AND REBAR EMBEDDED INTO EXISTING CONCRETE

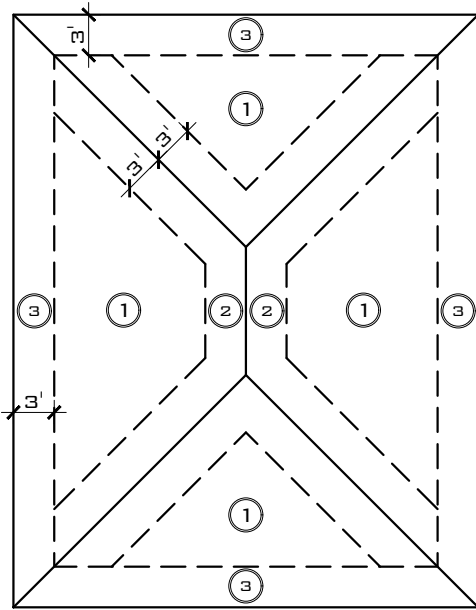


WALLS WIND PRESSURES DIAGRAM
SCALE: NTS



FLAT ROOF WIND PRESSURES DIAGRAM
SCALE: NTS

ENCLOSED - BUILDING (FLAT ROOFS)					
WIND PRESSURE ON COMPONENTS AND CLADDING (CH 30 PART 1)					
DESCRIPTION	WIDTH, FT	SPAN, FT	AREA, FT2	MAX P, PSF	MIN P, PSF
ZONE 1	1	1	1	+27.95	-109.46
ZONE 1'	1	1	1	+27.95	-62.88
ZONE 2	1	1	1	+27.95	-144.40
ZONE 3	1	1	1	+27.95	-196.80
ZONE 4	1	1	1	+62.88	-68.12
ZONE 5	1	1	1	+62.88	-83.84



HIP ROOF WIND PRESSURES DIAGRAM
SCALE: NTS

ENCLOSED - BUILDING (HIP ROOFS)					
WIND PRESSURE ON COMPONENTS AND CLADDING (CH 30 PART 1)					
DESCRIPTION	WIDTH, FT	SPAN, FT	AREA, FT2	MAX P, PSF	MIN P, PSF
ZONE 1	1	1	1	+50.70	-95.12
ZONE 2	1	1	1	+50.70	-117.40
ZONE 3	1	1	1	+50.70	-141.99
ZONE 4	1	1	1	N/A	N/A
ZONE 5	1	1	1	N/A	N/A

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STATE OF FLORIDA
LICENSE NO 71480

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STATUS: FINAL

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CA # 30835

CLIENT: CITY OF KEY WEST

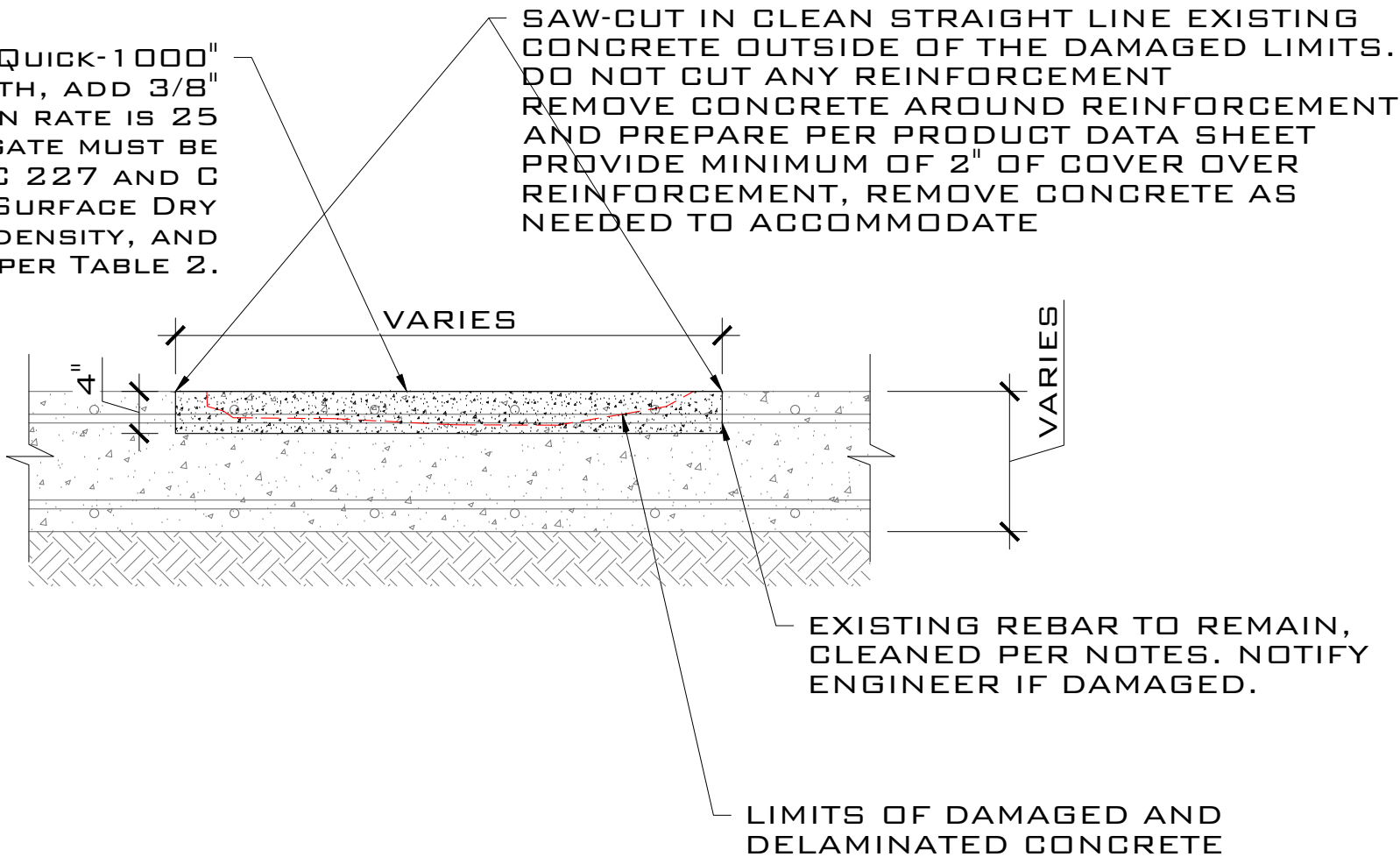
PROJECT: STORM
HARDENING
PROJECTS

SITE: FIRE STATION 1
KEY WEST, FL 33040

TITLE: NOTES

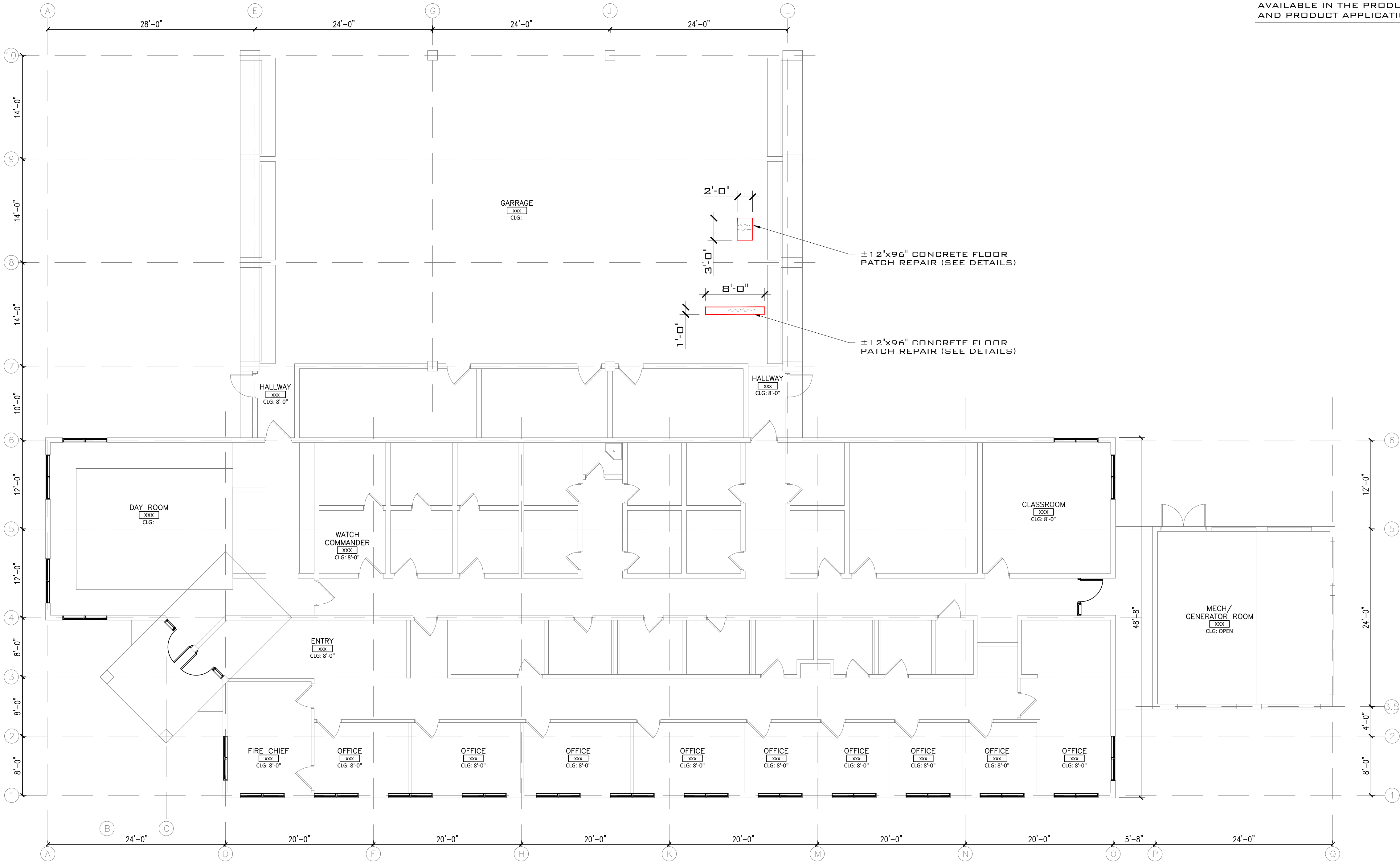
SCALE AT 24X36:	DATE:	DRAWN:	CHECKED:
AS SHOWN	04/30/25	SAM	SAM
PROJECT NO:	DRAWING NO:	REVISION:	
2302-06	S-100	1	

USE REPAIR MORTAR "SIKAQUICK-1000"
FOR APPLICATIONS GREATER THAN 1" IN DEPTH, ADD 3/8"
COARSE AGGREGATE. • THE TYPICAL ADDITION RATE IS 25
LBS OF AGGREGATE PER BAG. • THE AGGREGATE MUST BE
NON-REACTIVE (REFERENCE ASTM C 1260, C 227 AND C
289), CLEAN, WELL GRADED, SATURATED SURFACE DRY
(SSD), HAVE LOW ABSORPTION AND HIGH DENSITY, AND
COMPLY WITH ASTM C 33 SIZE NUMBER 8 PER TABLE 2.



NOTES: 1. STRICTLY FOLLOW MANUFACTURER RECOMMENDATIONS
AVAILABLE IN THE PRODUCT DATA SHEET FOR SURFACE PREPARATION,
AND PRODUCT APPLICATION AND CURING REQUIREMENTS.

CONCRETE FLOOR PATCH
REPAIR DETAIL
SCALE:NTS



GROUND FLOOR PLAN
STRUCTURAL IMPROVEMENTS
SCALE: 1/8" = 1'-0"

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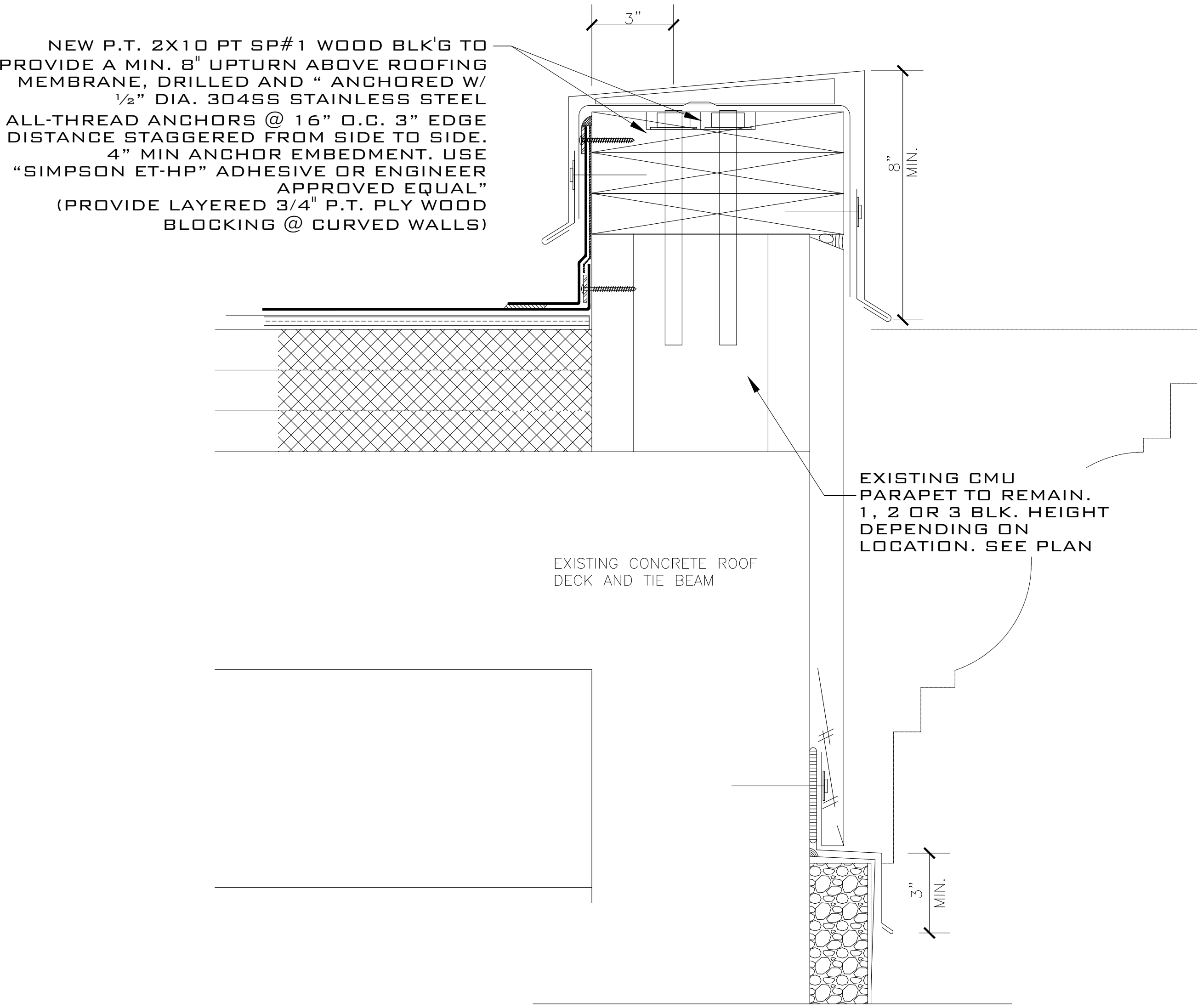
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CLIENT: CITY OF KEY WEST

PROJECT: STORM
HARDENING
PROJECTS

SITE: FIRE STATION 1
KEY WEST, FL 33040
TITLE: DETAILS

SCALE AT 24X36: AS SHOWN	DATE: 04/30/25	DRAWN: SAM	CHECKED: SAM
PROJECT NO: 2302-06	DRAWING NO: S-101	REVISION: 1	



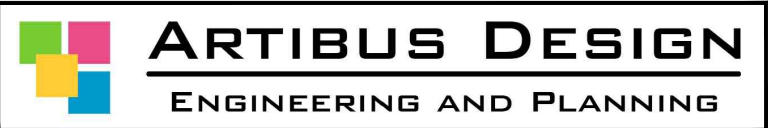
NEW PARAPET DETAIL
(STRUCTURAL ANCHORING)
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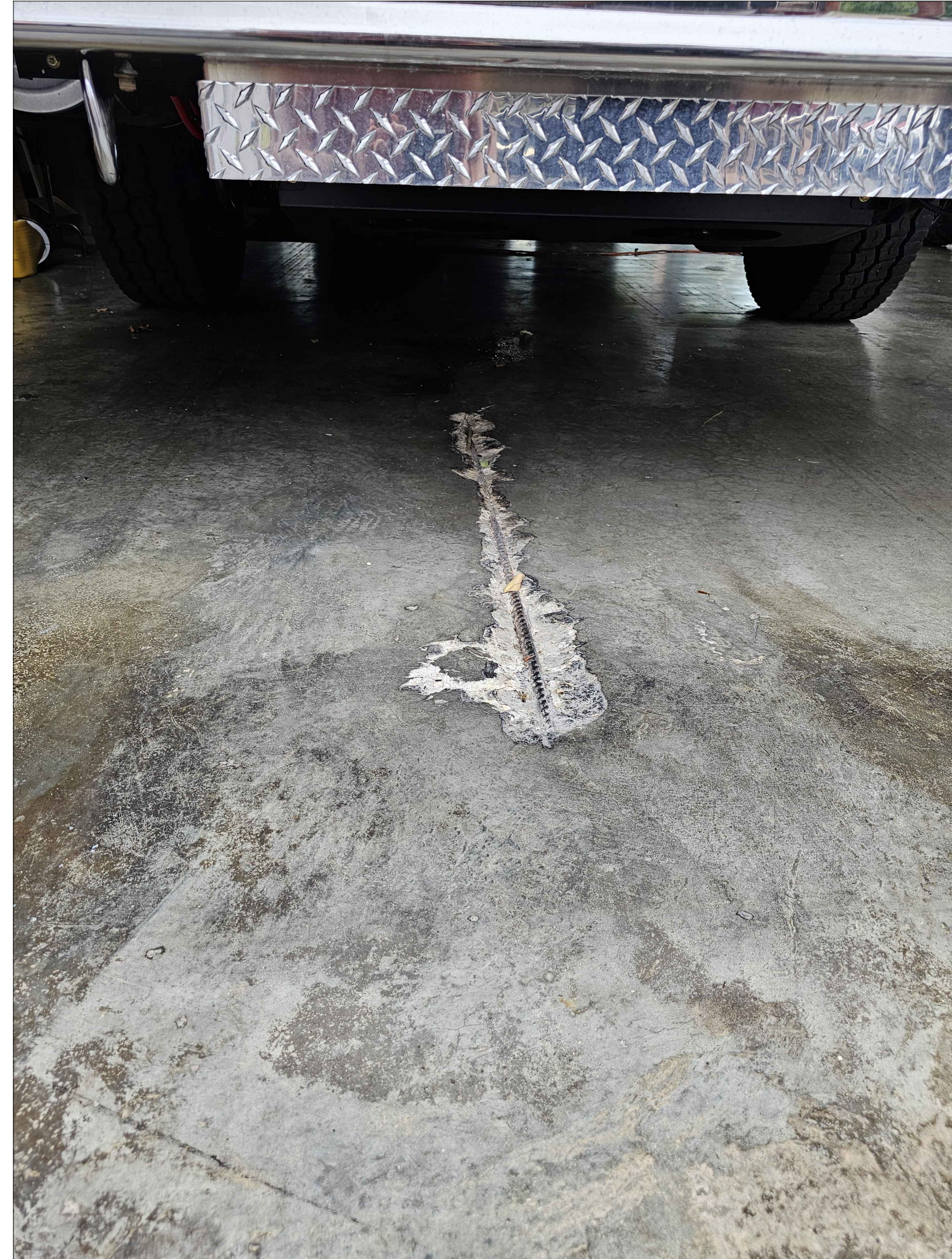
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CLIENT: CITY OF KEY WEST

PROJECT: STORM HARDENING PROJECTS

SITE: FIRE STATION 1
KEY WEST, FL 33040
TITLE: DETAILS

SCALE AT 24X36:	DATE:	DRAWN:	CHECKED:
AS SHOWN	04/30/25	SAM	SAM
PROJECT NO:	DRAWING NO:	REVISION:	
2302-06	S-102	1	



DAMAGED CONCRETE FLOOR



DAMAGED CONCRETE FLOOR

EXISTING SITE
CONDITIONS
PHOTOGRAPHS