# CONSTRUCTION PLANS FOR SMATHERS BEACH PAVILIONS



SITE LOCATION

# LOCATION MAP:

CITY OF KEY WEST

ARTIBUS DESIGN TASK ORDER #2212-01

PROJECT LOCATION:
SMATHERS BEACH,
2018 S ROOSEVELT BLVD,
KEY WEST, FL 33040

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SERGE MASHTAKOV PROFESSIONAL ENGINEER STATE OF FLORIDA LICENSE NO 71480

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# ARTIBUS DESIGN

3710 N. ROOSEVELT BLVD KEY WEST, FL 33040 (305) 304-3512 www.ARTIBUSDESIGN.COM CA # 30835

CLIENT:
CITY OF KEY WEST
ENGINEERING DEPARTMENT
1300 WHITE ST,
KEY WEST, FL 33040

SMATHERS BEACH
PAVILIONS

	2018 S ROOSEVELT BLVD,				
	KEY WEST, FL 33040				
	SCALE AT 11x17:	DATE:	DRAWN:	CHECKED:	
	AS SHOWN	11/29/23	SAM	SAM	
	PROJECT NO:	DRAWING NO:		REVISION:	
	1907-20	G-100		1	



NOTES:

1. No impacts are to occur to any vegetation surrounding the work areas, especially the sea dats. Tree protection barriers shall be installed to protect the vegetative areas from impacts of demolition, staging, and reconstruction.

2. Any work that occurs between April 15 and October 31 must incorporate sea turtles protection measures.

3. THE CONTRACTOR SHALL USE THE BRIDAL PATH AS A STAGING AREA FOR ALL CONSTRUCTION MATERIALS.

4. THE CONTRACTOR SHALL MEET ALL CITY OF KEY WEST CODE OF ORDINANCES INCLUDING BUT NOT LIMITED TO ARTICLE IV. - COASTAL RESOURCES, SECTIONS 110-181 - COASTAL IMPACTS; 110-182 - SHORELINE VEGETATION AND STABILITY; AND 110-189 - SHORELINE ACCESS AND PROTECTION OF NATURAL SHORELINE AND LIMITED BEACH/DUNE SYSTEM.

PROJECT DESCRIPTION: THIS PROJECT CONSISTS OF THE RENOVATIONS AND RE-ROOFING OF SEVEN (7) BEACH PAVILION STRUCTURES LOCATED ALONG SMATHERS BEACH.

IMPROVEMENTS INCLUDE BUT ARE NOT LIMITED TO:

 REMOVAL AND DISPOSAL OF ALL ROOFING, FRAMING HARDWARE AS NEEDED FOR NEW INSTALLATION

- REMOVAL STORAGE AND
  REINSTALLATION OF ANY EXISTING
  FURNITURE LOCATED UNDER THE
  PAVILION ROOFS AS NEEDED FOR NEW
  INSTALLATION.
- MANUAL EXCAVATION OF ACCRETED SEND AROUND PAVILION SUPPORTS.
- NO VEHICLES SHALL DRIVE OR PARK OVER THE SAND.
- ALL STORAGE AND STAGING SHALL BE OFF-SITE.
- INSTALLATION OF ALL NEW FRAMING, HARDWARE AND ROOFING AS SHOWN ON THE PLANS.

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ENGINEERING DEPARTMENT
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KEY WEST, FL 33040

SMATHERS BEACH
PAVILIONS

2018 S ROOSEVELT BLVD,
KEY WEST, FL 33040

TITLE: SITE MAP

SCALE AT 11x17: DATE: DRAWN: CHECKED:
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PROJECT NO: DRAWING NO: REVISION:
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GENERAL REQUIREMENTS: 1. PRIOR TO STARTING ANY WORK THE CONTRACTOR SHALL REVIEW THESE PLANS AND SITE CONDITIONS AND NOTIFY THE ENGINEER IF ANY 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.

- 1. THE CONTRACTOR SHALL PROVIDE 5 ORIGINAL SUBMITTALS FOR ALL MATERIALS, PRODUCTS, AND ACCESSORIES USED FOR THIS PROJECT (NO
- 2. ALL SUBMITTALS SHALL BE REVIEWED. APPROVED. DATED AND SIGNED BY THE GENERAL CONTRACTOR REPRESENTATIVE PRIOR SUBMITTING FOR
- 3. THE CONTRACTOR SHALL PREPARE AND MAINTAIN SUBMITTAL LOG FOR ALL PRODUCT WITH LIST OF ALL SUBMITTALS, THEIR STATUS AND DATES OF
- 4. The Contractor shall plan in advance for timely preparation of all submittals and allow 2-3 weeks for review and correction
- 5. THE ENGINEER AND THE CITY SHALL REVIEW ALL SUBMITTALS AND PROVIDE TIMELY TURNAROUND OF REVIEWS.
- 6. THE CONTRACTOR SHALL FURNISH PROJECT SCHEDULE PRIOR TO BEGINNING WORK

- 1. APPLICABLE BUILDING CODE: FBC 7TH EDITION (2020) 2. APPLICABLE DESIGN LOADS: PER ASCI/SEI 7-16
- ROOF LIVE LOAD: 20 PSF (300 LB CONC.) BASIC WIND SPEED: 180 MPH
- EXPOSURE: D
  STRUCTURAL CATEGORY: II
- FLOOD ZONE: VE11/VE13
- FLOOD RESISTANT DESIGN AND CONSTRUCTION PER ASCI 24-14
- FLOOD DESIGN CLASS 2, WET FLOOD PROOFING

ALL PRESSURES SHOWN ARE BASED ON ASD DESIGN WITH A LOAD FACTOR OF O.6.

#### REINFORGEMENT (GFRP. ONLY WHERE SPECIFIED)

- WHERE SPECIFIED, REINFORCING SHALL BE GLASS FIBER REINFORCED POLYMER REBAR MANUFACTURED BY MST-BAR AND CONFORM TO ASTM DESIGNATION D7957. REINFORCEMENT SHALL USE VINYL ESTER RESIN AND BORON FREE ECR GLASS FIBERS WITH 145 KSI MIN TENSILE STRENGTH (FU) AND 8700 KSI MIN (6600 KSI ALLOWED FOR #3 BAR ONLY) MODULUS
- 2. ALL REINFORGEMENT SHALL BE CONTINUOUS. STAGGER SPLICES IN ADJACENT LAP SPLICES SHALL BE PER CURRENT ACI 440 MINIMUM LAP LENGTH REQUIREMENTS AND MANUFACTURER'S REQUIREMENTS.
  3. HOLD REINFORGEMENT IN ITS INTENDED POSITION WITH DEVICES SUFFICIENTLY NUMEROUS TO PREVENT DISPLACEMENT.
  4. GFRP REINFORGEMENT SHALL BE PROTECTED FROM SUNLIGHT.

- 5. MINIMUM BAR COVERAGE SHALL BE AS FOLLOWS: 3" FOR CONCRETE CAST AGAINST EARTH.
- 2" FOR ALL OTHER REBAR.

  6. MINIMUM CLEARANCE BETWEEN BARS SHALL BE 2".
- MINIMUM REINFORCING LAP SPLICES/DEVELOPMENT LENGTHS (MIN. F'C=3 KSI):
- BAR SIZE HOOK LENGTH (IN) SPLICE LENGTH (IN)
- #3 (3MAX) 4.5 13
- #4 (4EQ) 5.5 18
- #5 (#5 MST) 7.5 35
- #6 (#6 MST) 9.0 50
- 8. STAGGER NON-CONTACT SPLICES IN WALLS SO THAT NO TWO ADJACENT BARS ARE SPLICED IN THE SAME LOCATION.
- 9. REINFORCING SHALL BE CONTINUOUS THROUGH ALL COLD JOINTS WITH FULL LAP LENGTHS ON EACH SIDE, MINIMUM . 10. PROVIDE CORNER BARS PER DETAILX/SXX AT CORNERS AND INTERSECTING
- WALLS AND FOOTINGS, SIZE AND PLACEMENT TO MATCH HORIZONTAL REINFORCEMENT, U.N.O.
- 11. ALL REINFORCEMENT SHALL BE BENT BY MANUFACTURER. NO FIELD BENDING OF MST-BAR. 12. WET SETTING OF REINFORCING BARS IN FOOTINGS AND WALLS IS NOT ALLOWED

# AUGER PILES:

- 1. AUGER PILES SHALL BE 16" DIAMETER WITH MINIMUM EMBEDMENT OF 4FT MIN. BELOW EXISTING (PRE-CONSTRUCTION) GRADE,
- 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 GFRP REBAR VERTICAL WITH #3 GFRP HOOPS AT 10" O.C. CONTRACTOR SHALL USE PLASTIC CHARS OR CENTRALIZERS TO PROVIDE A 3" COVER
- ON ALL SIDES OF THE REINFORCEMENT.

#### CONCRETE:

- 4. APPLICABLE CODE ACI 318 LATEST EDITION AND ACI 301.
  5. ALL CONCRETE ELEMENTS SHALL HAVE A MIN. COMPRESSIVE STRENGTH OF 5000 PSI UNLESS OTHERWISE NOTED ON THE PLANS. WATER/CEMENT RATIO SHALL NOT EXCEED W/C=0.40.
  6. ALL CAST-IN-PLACE CONCRETE SHALL BE CURED AND PROTECTED FROM OVERDRYING PER ACI
- 305R-10 "HOT WEATHER CONCRETING".
- 7. ALL EXPOSED EDGES SHALL HAVE 1/2" CHAMFERS.
- NO COLD JOINTS ARE ALLOWED UNLESS OTHERWISE APPROVED BY THE ENGINEER.

#### OPEN STRUCTURE - BUILDING

### WIND PRESSURE ON COMPONENTS AND CLADDING (CH 3D PART 1)

(811 88 1 ART 17					)	
DESCRIPTION	WIDTH, FT	SPAN, FT	AREA, FT2	MAX P, PSF	MIN P, PSF	}
ZONE 1	1	1	1	+48.03	-33.28	{
ZONE 2	1	1	1	+73.90	-51.73	}
ZONE 3	1	1	1	+96.06	-66.55	}

#### STRUCTURAL LUMBER

- . 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 SOUTHER PINE NO1 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) <u>UC4B</u> GRADE PER AWPA STANDARDS. ALL FIELD CUTS IN PT LUMBER SHALL TREATED ON SITE.
- 5. NAILING SHALL BE IN ACCORDANCE WITH FBC 2020. NAILS AND OTHER FASTENERS FOR PT WOOD SHALL BE STAINLESS STEEL.
- 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.

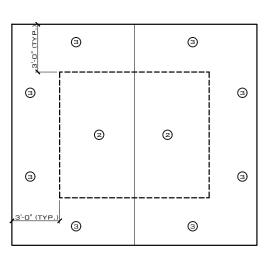
- HARDWARE SHALL BE 316 STAINLESS STEEL OR BETTER UNLESS OTHERWISE SPECIFIED.
- 2. ALL CONNECTORS SHALL HAVE STAINLESS STEEL SCREWS AND FASTENERS

- 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 A240 316/316L. (FY=30 KSI)
  3. STEEL PLATES, FLANGES AND MISSELLANGUA STRUCTURE TO THE STRUCTUR
- 316/316L (FY=30 KSI) UNLESS NOTED OTHERWISE ON THE PLANS.
- W-SHAPES, C-SHAPES AND OTHER FORMED STEEL SHALL BE ASTM A240 316/316L (FY=30 KSI).
- 5. ALL WELDING SHALL BE IN CONFORMANCE WITH THE LATEST SPECIFICATIONS AWS D1.6/D1.6M:2017, STRUCTURAL WELDING CODE STEEL.
- BOLTS: 316 STAINLESS STEEL. ASTM F593, ASTM F594-09(2020) HEX NUTS, ASTM A240 WASHERS.

ANCHOR BOLTS: 316 STAINLESS STEEL. ASTM A240 316/316L (FY=30 KSI).

#### STRUCTURAL STEEL COATING

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



# ROOF WIND PRESSURES DIAGRAM

SCALE: NTS

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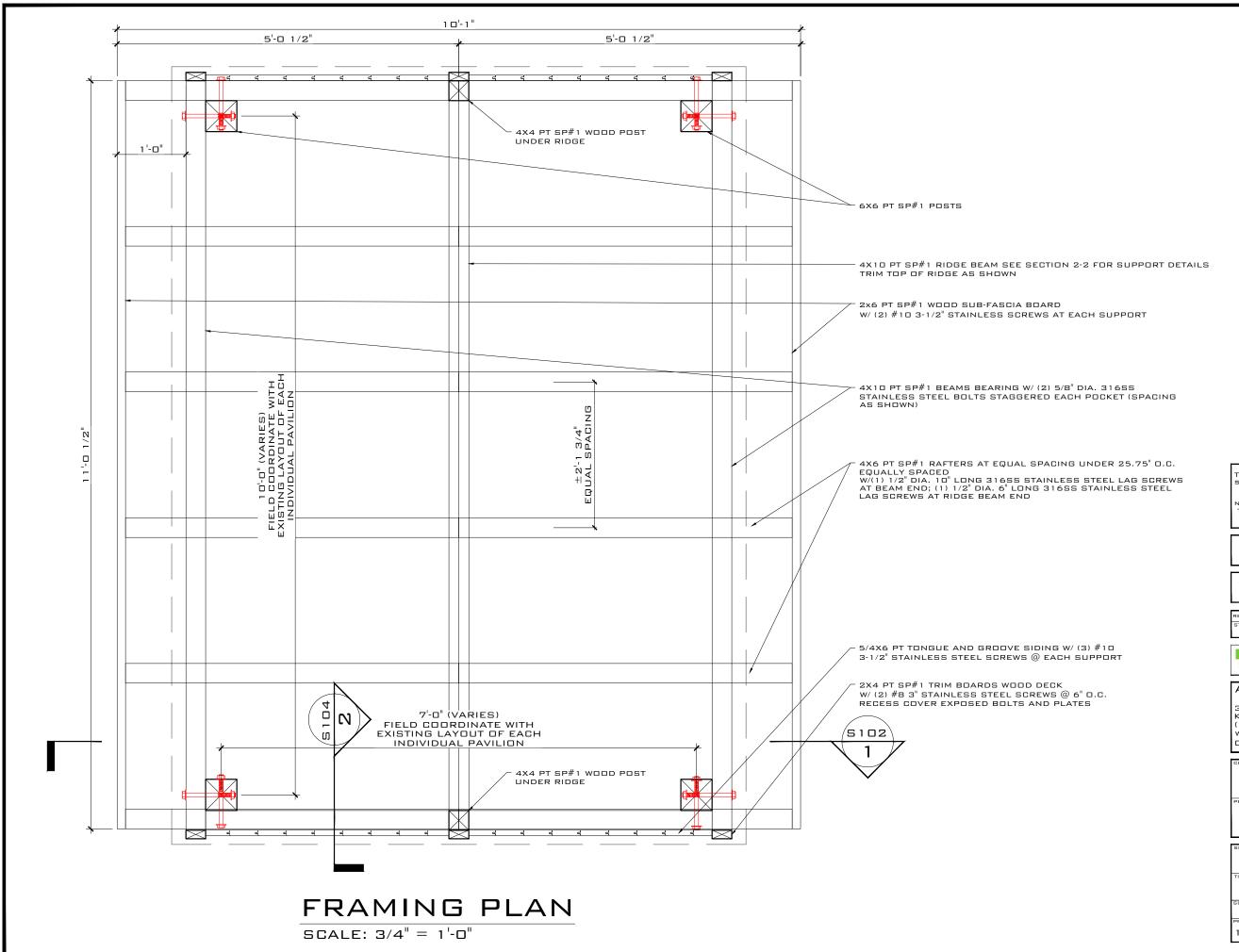
CITY OF KEY WEST ENGINEERING DEPARTMENT 1300 WHITE ST KEY WEST, FL 33040

> SMATHERS BEACH PAVILIONS

2018 S ROOSEVELT BLVD, KEY WEST, FL 33040 Notes SCALE AT 11x17 FCKF AS SHOWN 05/31/24 SAM SAM

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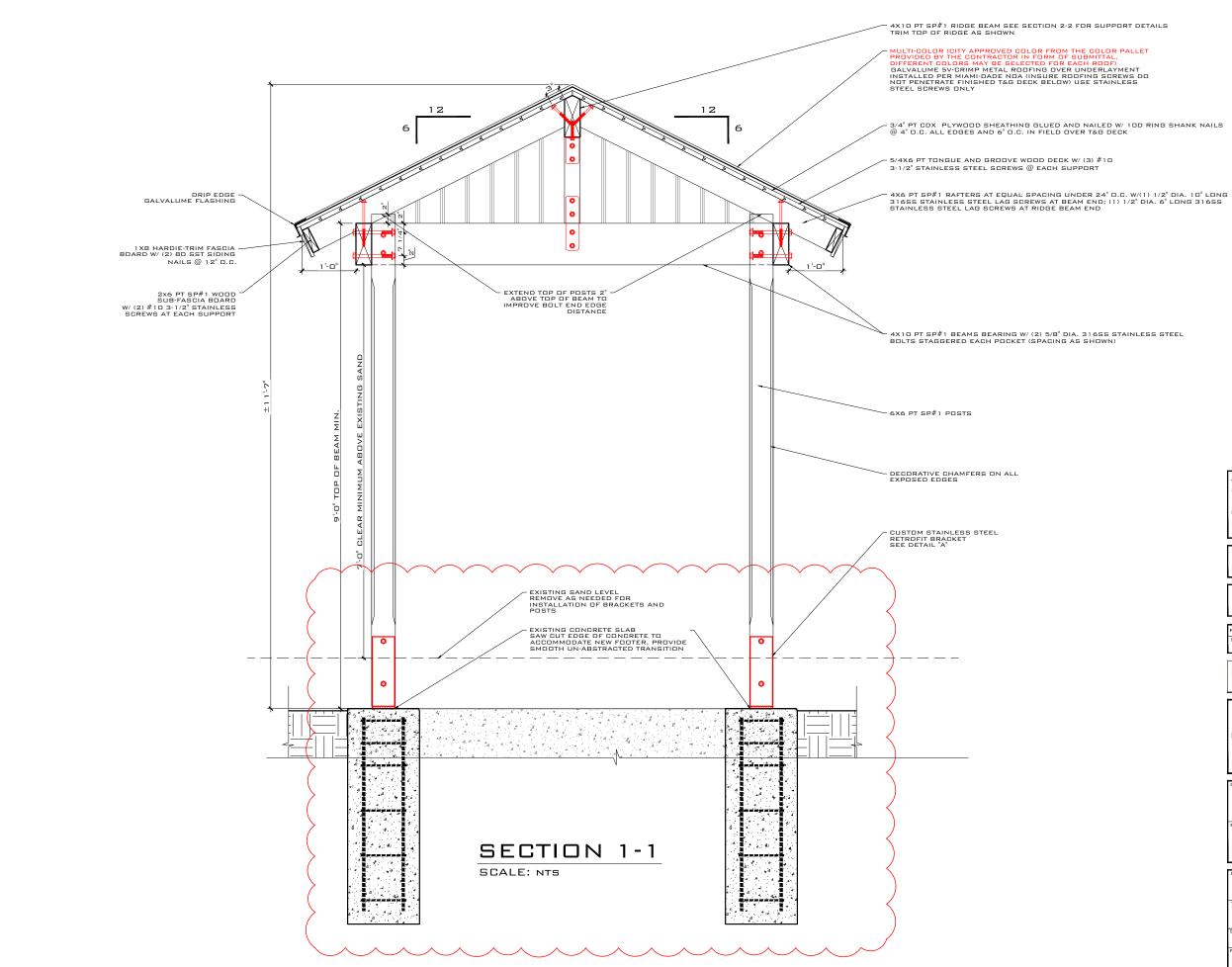
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2018 S ROOSEVELT BLVD, KEY WEST, FL 33040

FRAMING PLAN

AS SHOWN 11/29/23 SAM SAM S-101 1907-20



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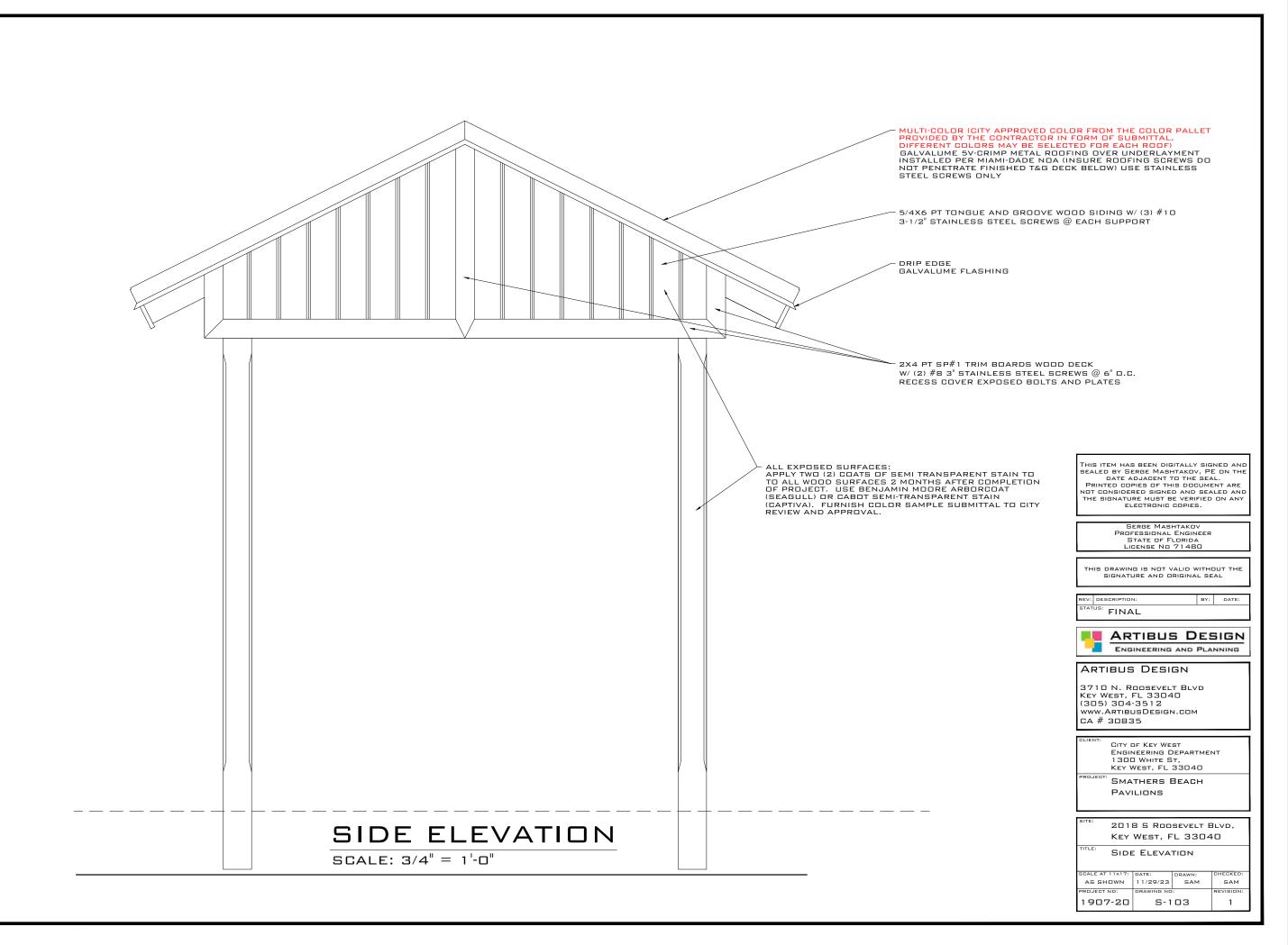
KEY WEST, FL 33040

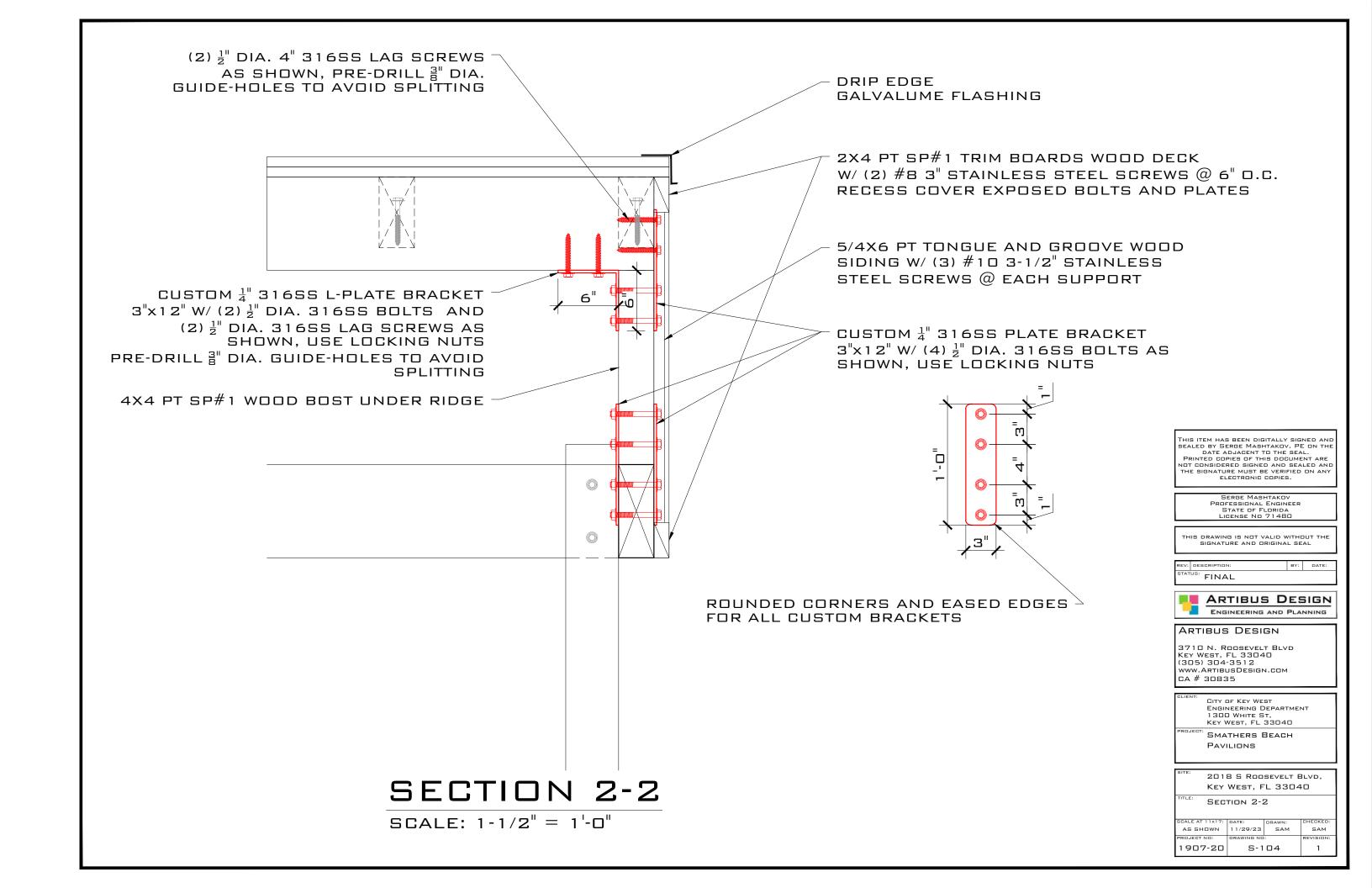
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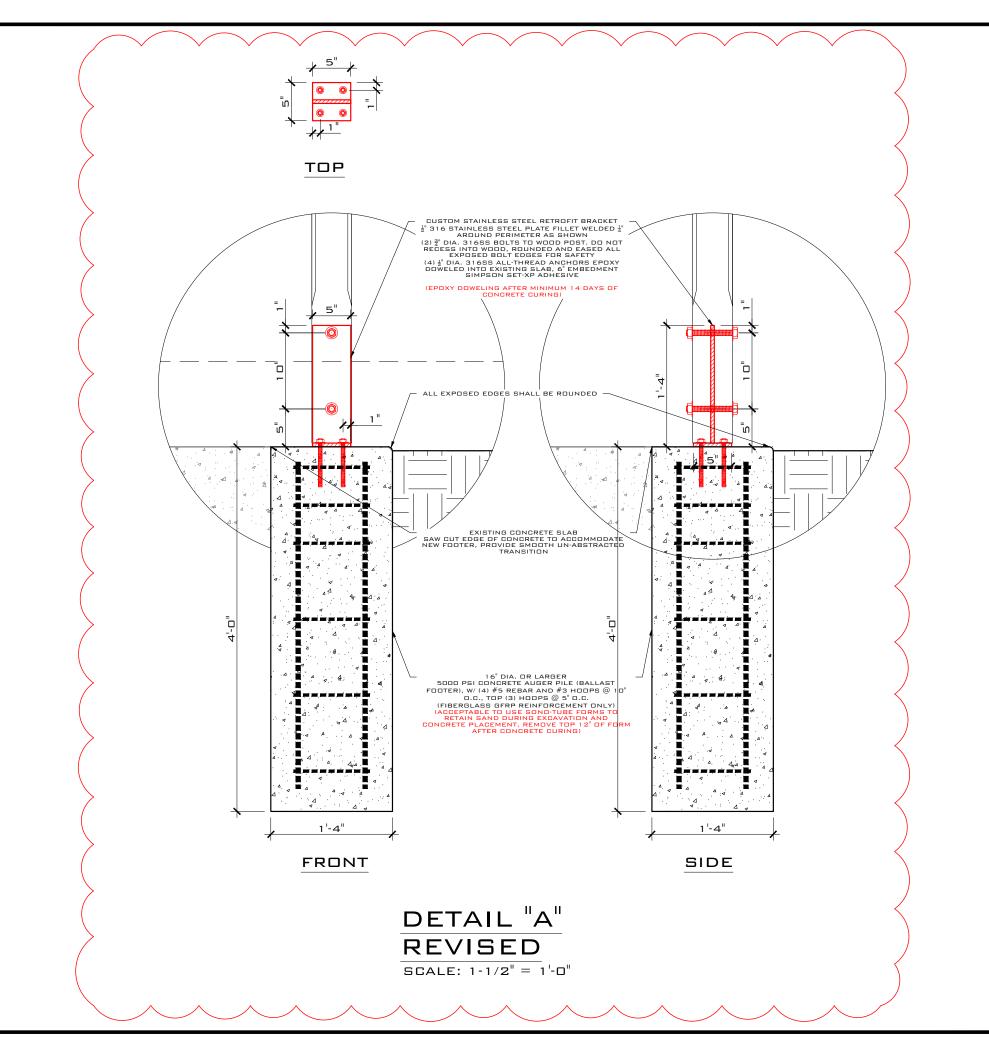
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SECTION 1-1

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DETAIL "A" - REVISED

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