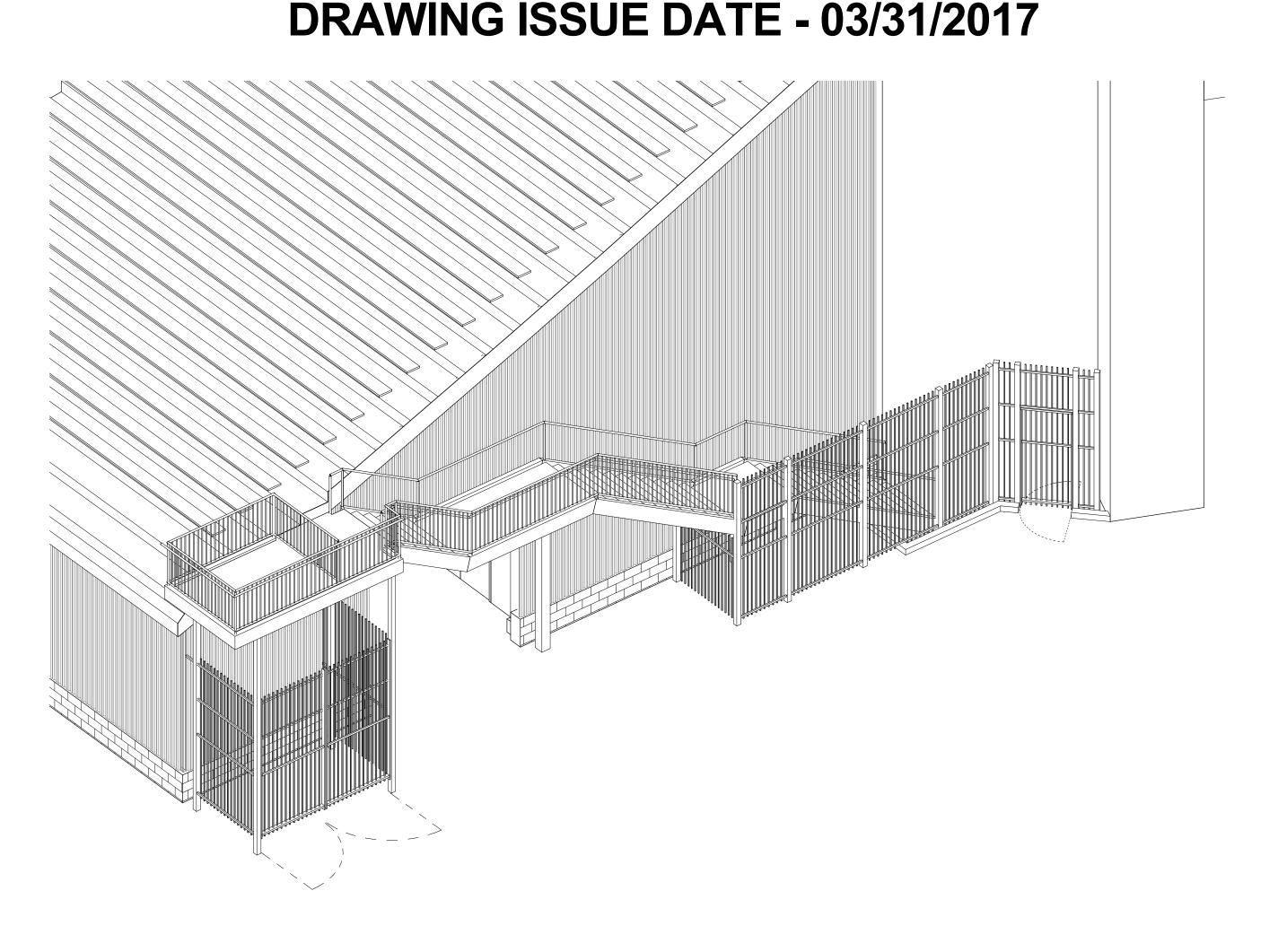
UNIVERSITY OF SOUTH CAROLINA WILLIAMS BRICE STADIUM - NEW STAIR AT SECTION 10

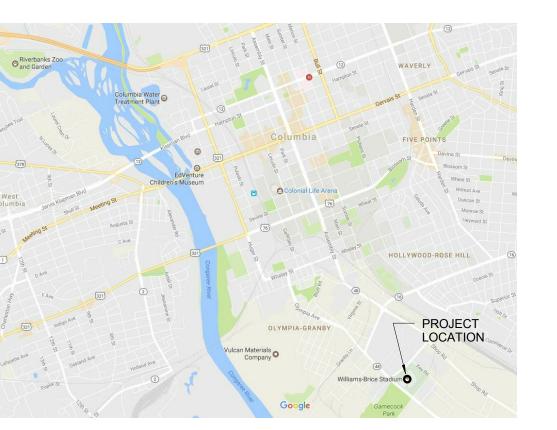
1127 GEORGE ROGERS BLVD, COLUMBIA SC 29208

STATE PROJECT NUMBER: H27-Z341 ARCHITECT'S PROJECT NUMBER: ACOL170001

CONSTRUCTION DOCUMENT - BID SET



VICINITY MAP



LOCATION MAP



PROJECT TEAM

OWNER: UNI FAC

UNIVERSITY OF SOUTH CAROLINA FACILITIES PLANNING & CONSTRUCTION 743 GREENE STREET, COLUMBIA, SC 29208 (803) 777-3126 ANN DERRICK, PROJECT MANAGER

ARCHITECT OF RECORD:
GOODWYN MILLS CAWOOD
1320 MAIN STREET
COLUMBIA, SC 29201
(803) 724-1282
MARC W. WARREN, AIA, LEED AP BD

STRUCTURAL ENGINEER:
TIMMERMAN STRUCTURAL ENGINEERING GROU
580 CHRIS DRIVE
WEST COLUMBIA, SC 29169
(803) 791-4511
KEN TIMMERMAN, P.E.

ELECTRICAL ENGINEER:
BELKA ENGINEERING ASSOCIATES, INC.
7 CLUSTERS COURT
COLUMBIA, SC 29210
(803) 731-0650
CLIFF STRINGFIELD

DRAWING INDEX

A0.00 COVER SHEET
A1.10 EXISTING / DEMOLITION PLAN
A1.11 ENLARGED STAIR PLANS
A1.12 ELEVATIONS, SECTIONS AND DETAILS
S1.0 FOUNDATION & FRAMING PLANS
S2.0 FOUNDATION SECTIONS & DETAILS
S2.1 FRAMING SECTIONS & DETAILS
S2.2 FRAMING SECTIONS & DETAILS
S3.0 GENERAL NOTES & SPECIAL INSPECTIONS
E1.10 ELECTRICAL PLANS

PROJECT SCOPE

THE PROJECT SCOPE OF WORK CONSISTS OF THE CONSTRUCTION OF A NEW EXTERIOR STAIR AT THE SOUTHWEST CORNER OF THE MAIN CONCOURSE LEVEL OF WILLIAMS BRICE STADIUM ALONG WITH ALL ASSOCIATED ENGINEERING COMPONENTS DESCRIBED HEREIN INCLUDING ALL ASSOCIATED STRUCTURAL STEEL WORK NECESSARY TO COMPLETE THE WORK.

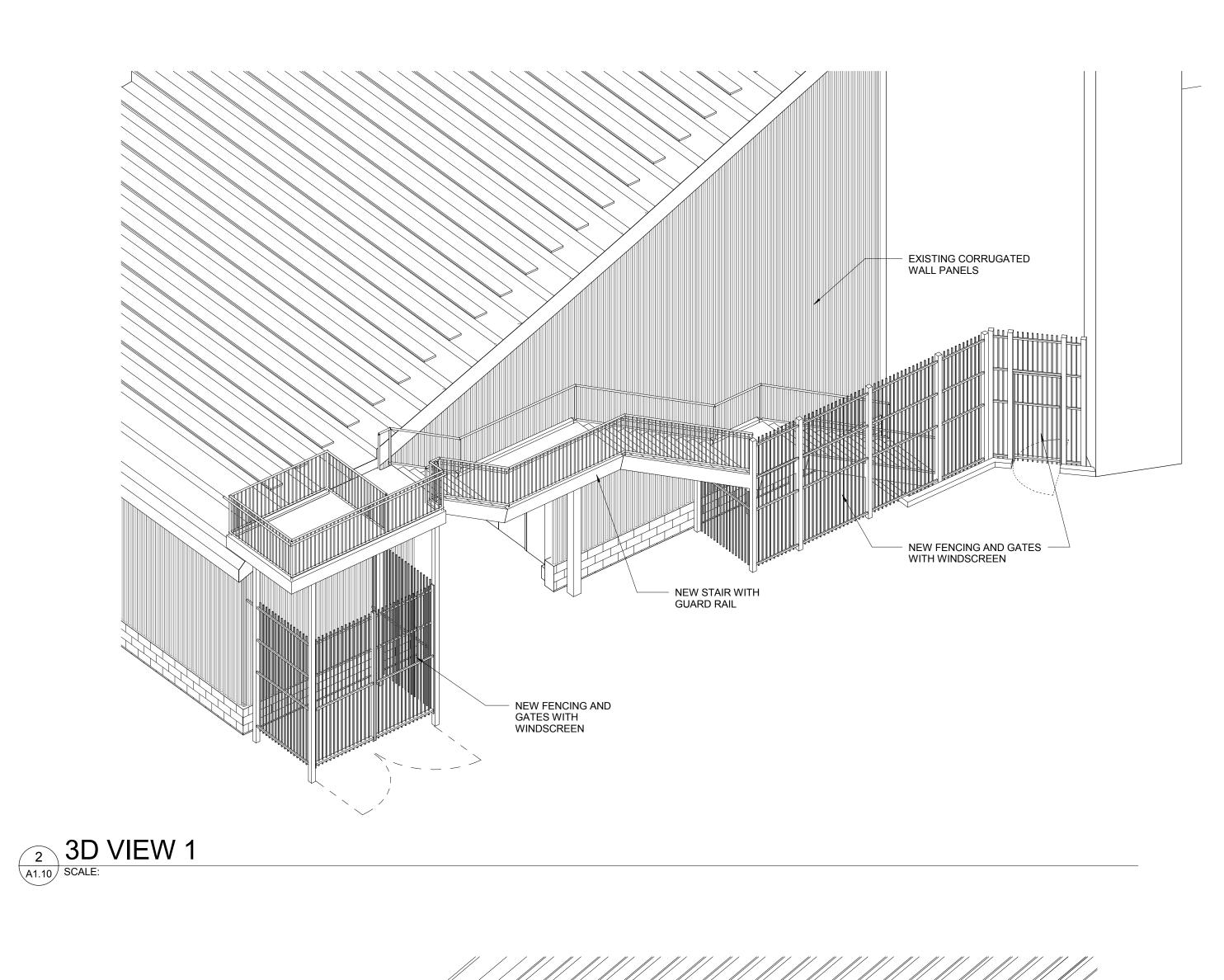
WORK BY THE OWNER:
THE OWNER WILL CONDUCT ALL ELECTRICAL WORK DESCRIBED IN
THE DOCUMENTS. THE CONTRACTOR WILL COORDINATE WITH USC
PERSONNEL.

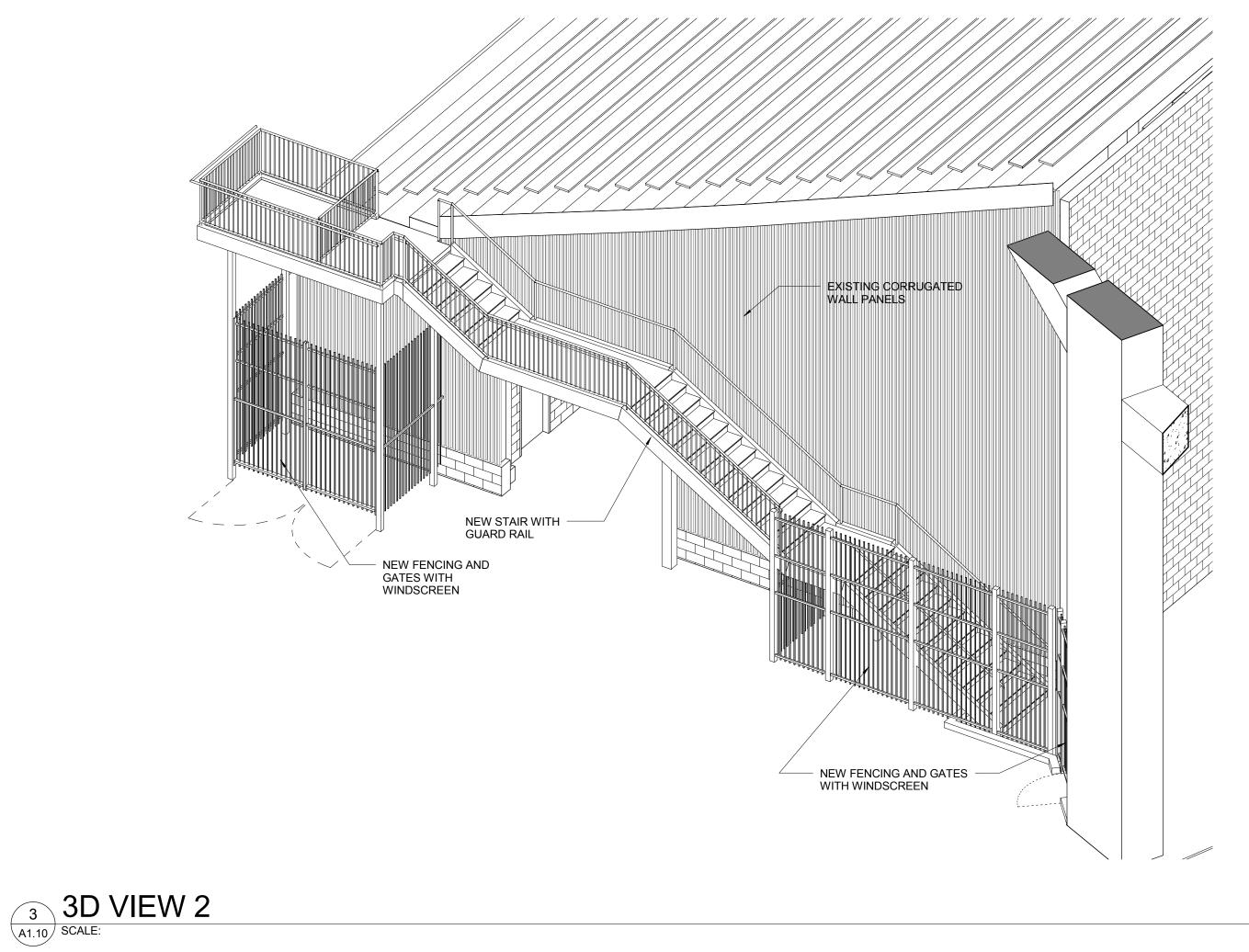
ALTERNATES:

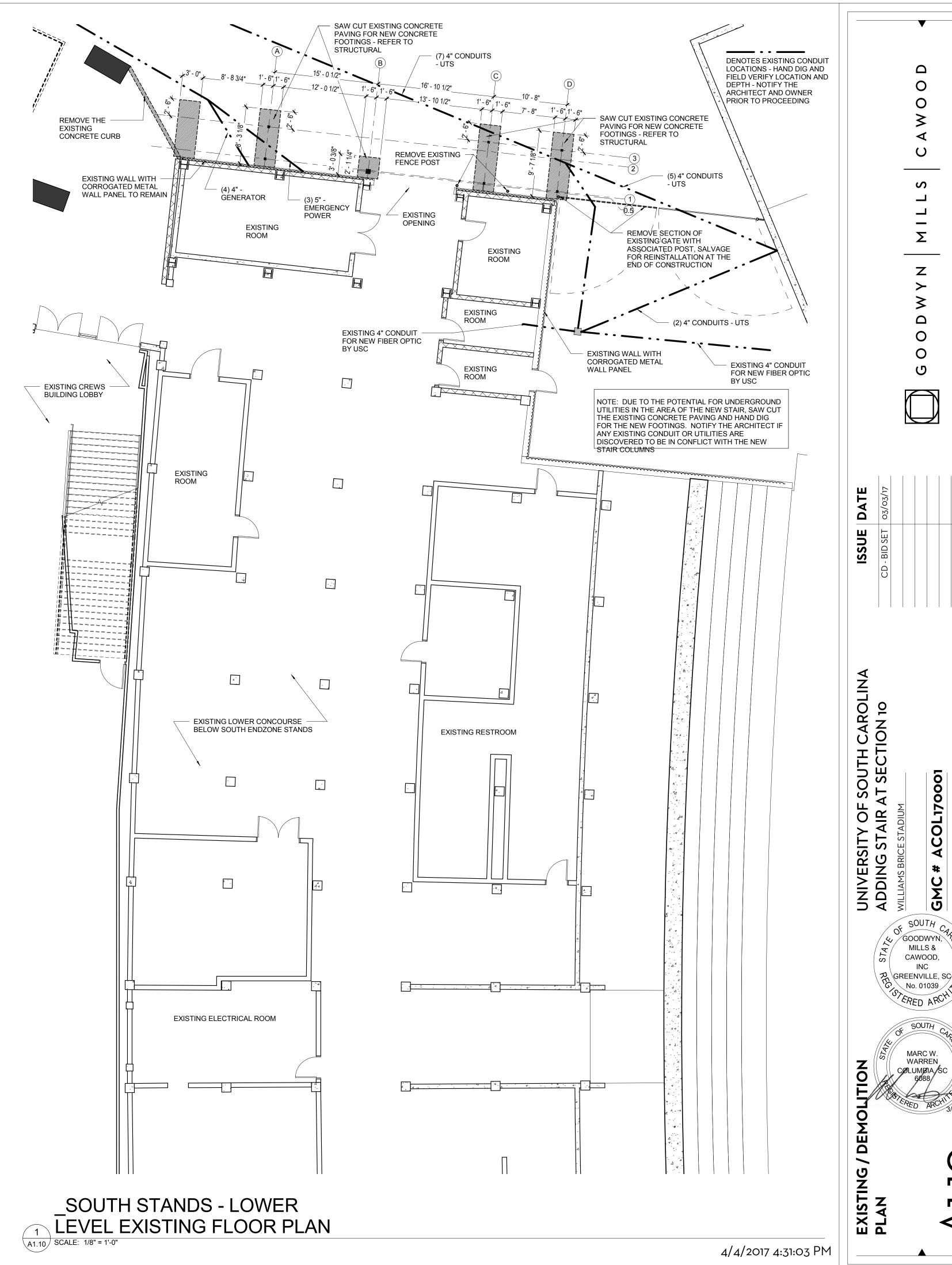
ALTERNATE #1: PROVIDE AN ADD ALTERNATE PRICE TO INCLUDE THE PURCHASE AND INSTALLATION OF THE CUSTOM CANOPY AWNING AS DESCRIBED HEREIN.

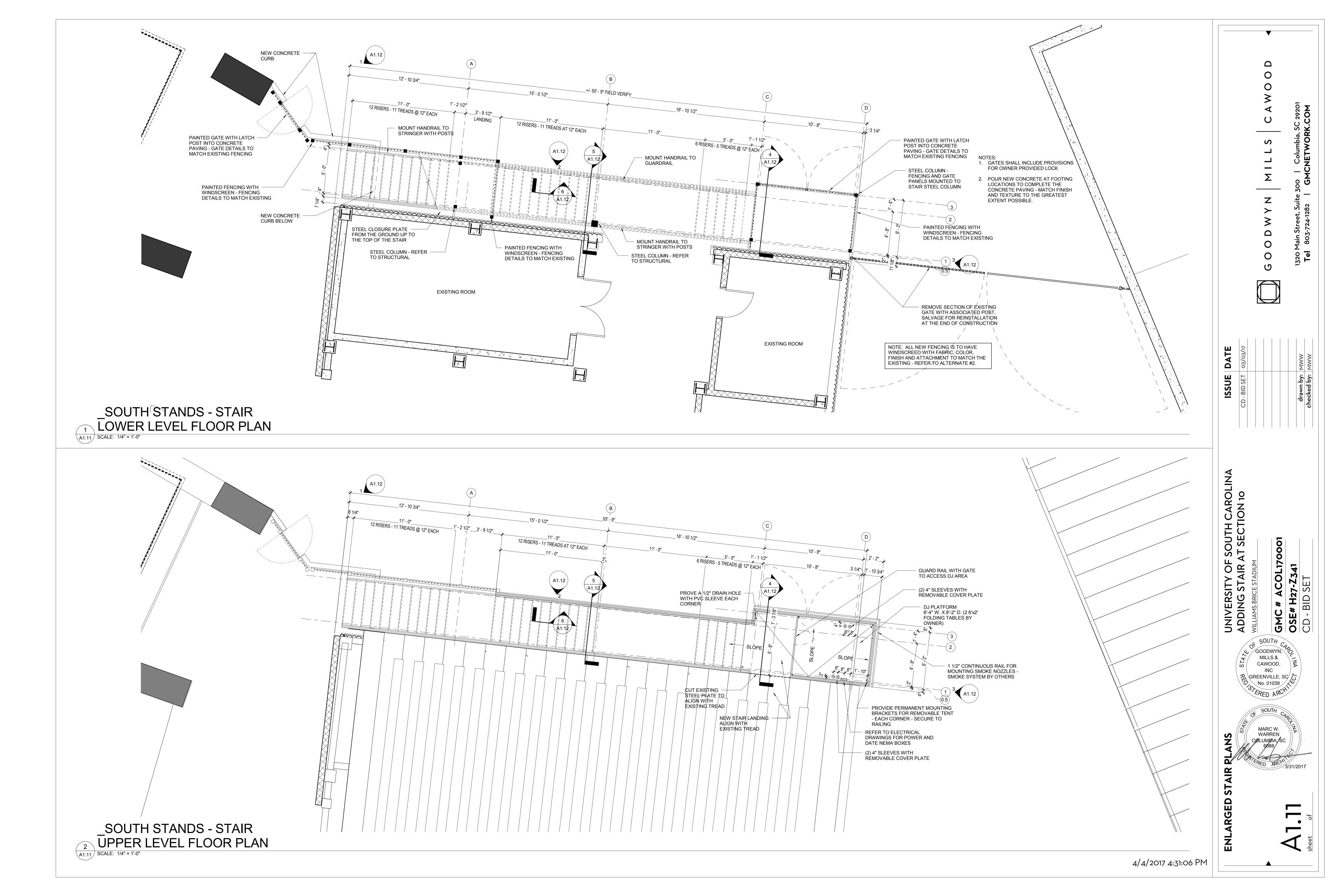
ALTERNATE #2: PROVIDE AN ADD ALTERNATE PRICE TO INCLUDE THE PURCHASE AND INSTALLATION OF THE WINDSCREEN TO BE INSTALLED ON THE FENCING AT ALL LOCATIONS INDICATED HEREIN. THE WINDSCREEN IS TO BE FABRICATED WITH STYLE, COLOR, EDGE TREATMENT, AND ATTACHMENT TO MATCH EXISTING.

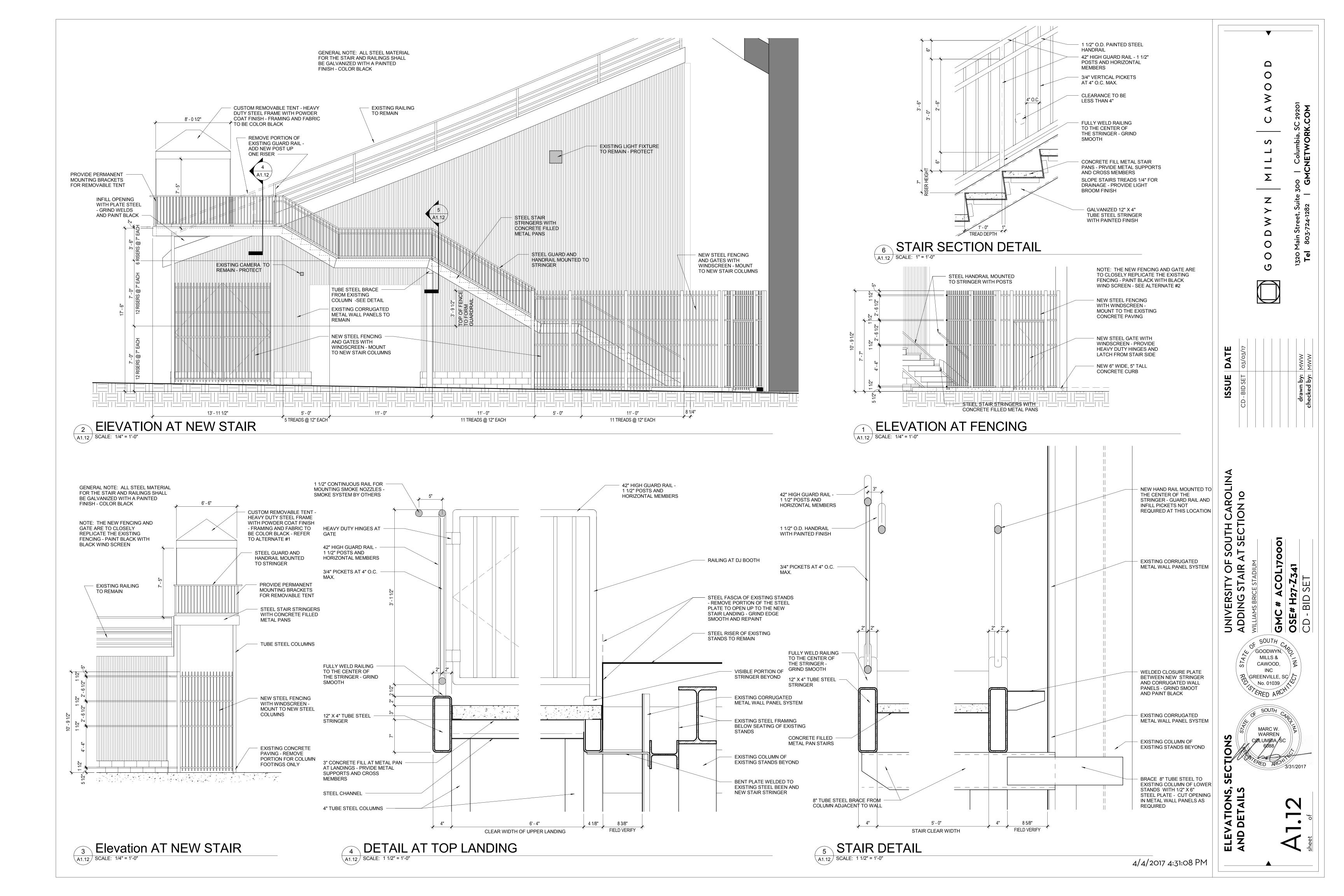


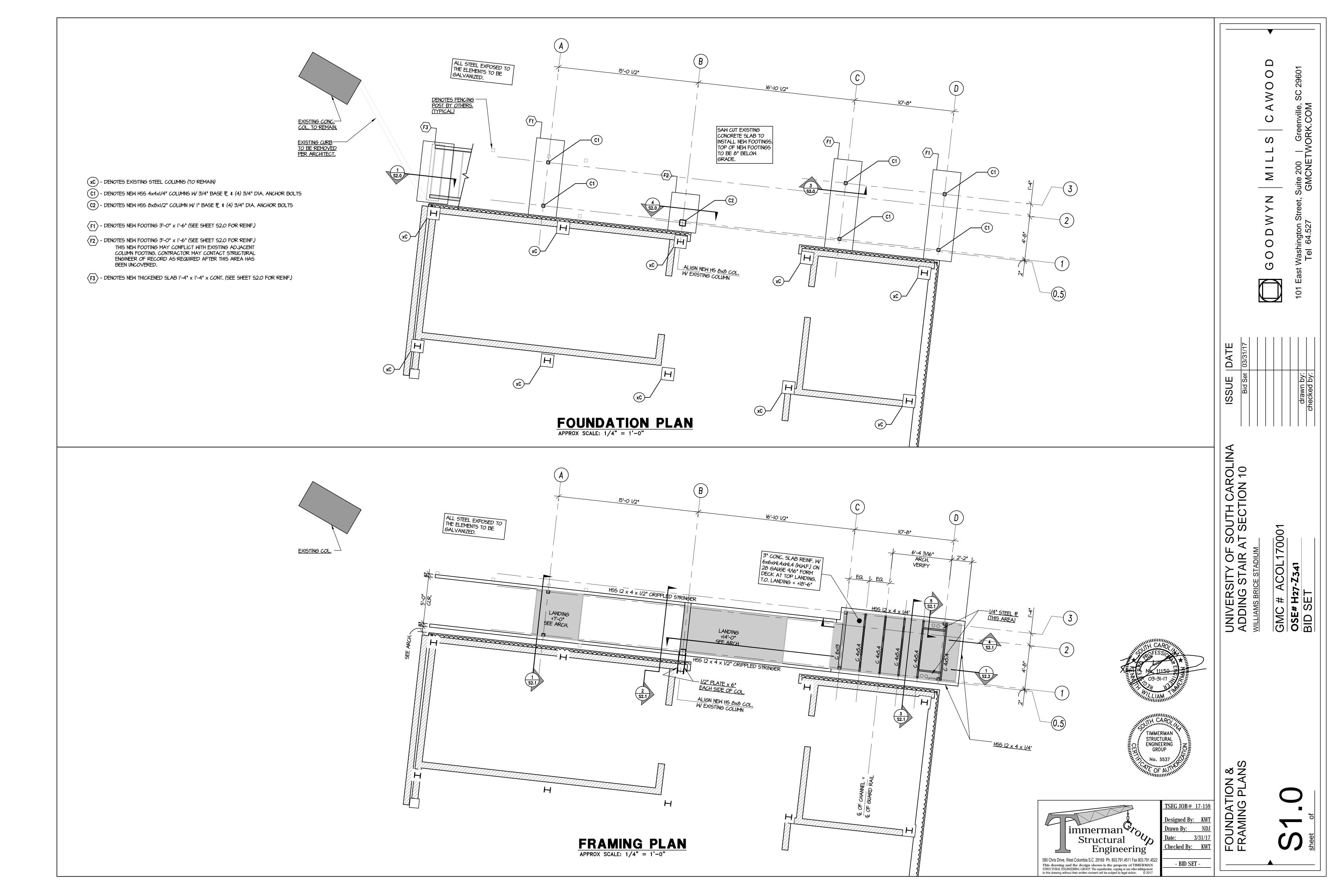


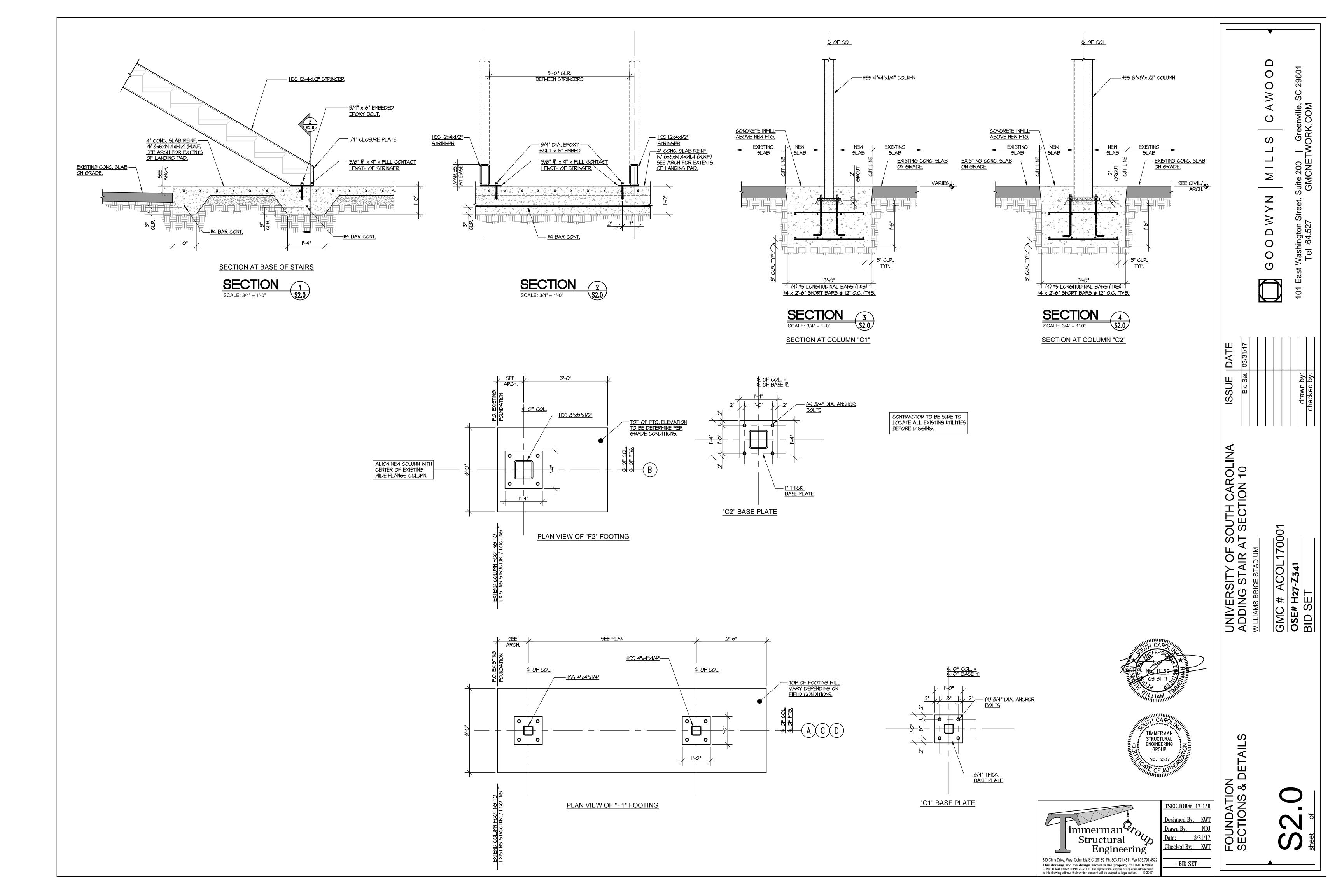


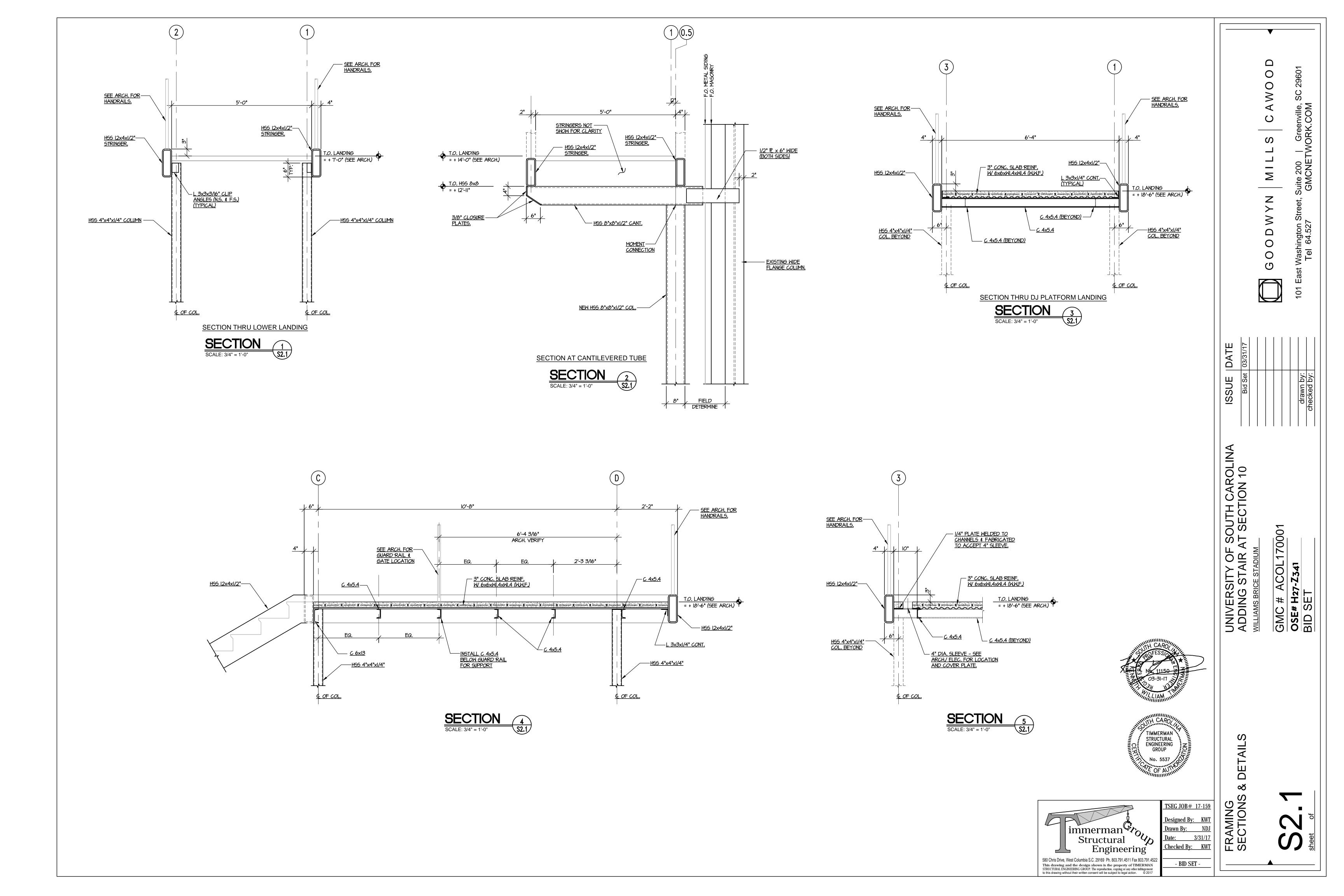


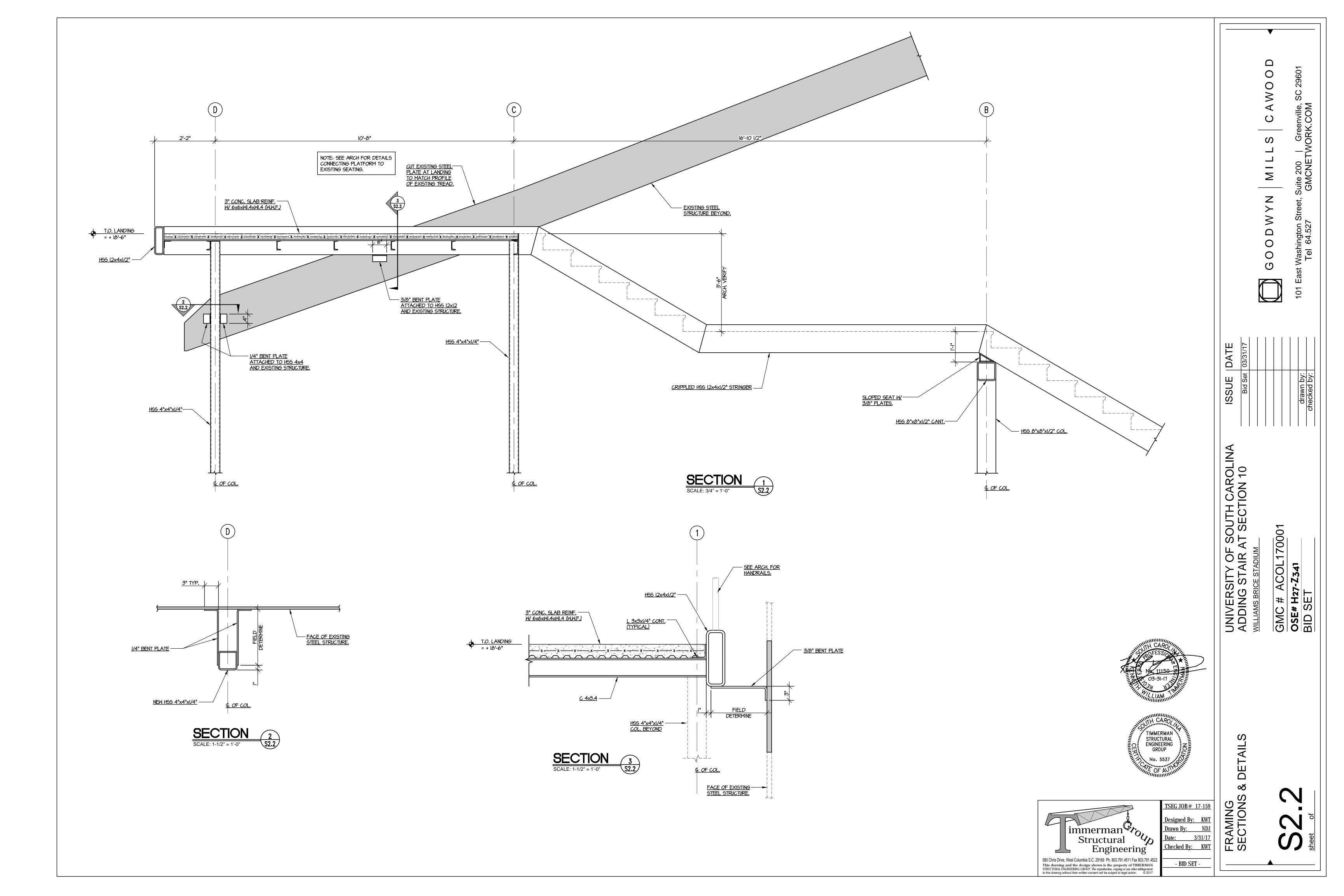












STRUCTURAL NOTES

- THE CONTRACTOR SHALL BE AWARE OF ANY EXISTING AND NEIGHBORING SITE CONDITIONS WHICH MAY HAVE A BEARING ON THE CONSTRUCTION COST, WORKING CONDITIONS FOR THIS
- 2. THE ENGINEER'S APPROVAL OF SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY FOR DEVIATIONS FROM REQUIREMENTS IN THE CONTRACT DOCUMENTS.
- 3. ALL HANDRAILS, STAIRS, STAIR LANDINGS AND OTHER ARCHITECTURAL/ STRUCTURAL ITEMS & THEIR CONNECTIONS (SHOWN OR NOT) ON THE STRUCTURAL AND/OR CONSTRUCTION DOCUMENTS SHALL BE DESIGNED BY A REGISTERED ENGINEER, REGISTERED IN THE PROJECT STATE, TO RESIST ALL APPLIED LOADS PER THE LATEST EDITION OF THE APPLICABLE BUILDING CODES. ANY ENGINEERING, DETAILING FEES, MATERIAL AND LABOR COSTS FOR THESE ITEMS ARE CONSIDERED PART OF THE CONTRACT.
- 4. THE STRUCTURAL DRAWINGS AND RELATED INFORMATION SHALL BE USED IN CONJUNCTION WITH ALL ARCHITECTURAL DRAWINGS AS WELL AS OTHER INFORMATION AND DOCUMENTS RELATING TO ALL TRADES. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HIS OWN VERIFICATION AND COORDINATION OF DIMENSIONS, FIELD CONDITIONS, CLEARANCES, ETC. WITH THE WORK ALL TRADES.
- 5. THE CONTRACTOR SHALL YERIFY SIZES AND LOCATIONS OF ALL SLOTS, PIPE SLEEVES, ANCHOR BOLTS, ETC. AS REQUIRED FOR ALL TRADES PRIOR TO CONSTRUCTING THAT PORTION OF THE PROJECT.
- 6. THE DESIGN PROFESSIONALS DO NOT CONTROL, OR HAVE TRAINING FOR, THE CONTRACTOR'S MEANS, METHODS, SEQUENCE, TECHNIQUES, PROCEDURES AND/OR QUALITY CONTROL IN PERFORMING THE WORK, SITE SAFETY OR SAFETY PROGRAMS IN CONNECTION WITH THIS PROJECT. THESE DUTIES ARE SOLELY THE RESPONSIBILITY OF THE CONTRACTOR AND HIS STAFF. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL REGULATORY AGENCIES.
- 7. EXISTING BUILDINGS/STRUCTURES: DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS WILL REQUIRE FIELD VERIFICATION. DEPENDING ON FIELD CONDITIONS BEYOND THE DESIGNER(S CONTROL, SOME STRUCTURAL/ARCHITECTURAL SECTIONS AND/OR DETAILS MAY REQUIRE MODIFICATION.
- 8. THIS FOUNDATION DESIGN IS BASED ON AN ASSUMED ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. A GEOTECHNICAL ENGINEER AND/OR TESTING LABORATORY SHALL BE RETAINED FOR THE PURPOSES OF ASSURING ADEQUATE SOIL SUPPORT FOR FOUNDATIONS AND SLABS.
- 9. ANY ELEVATIONS INDICATED ON THE FOUNDATION PLANS TYPICALLY REFER TO TOP OF FOOTING. ALL FOOTINGS SHALL EXTEND BELOW FROST DEPTH AND DOWN TO SOLID BEARING MATERIAL REGARDLESS OF ELEVATIONS SHOWN. SEE GEOTECHNICAL REQUIREMENTS BY GEOTECHNICAL ENGINEER AS NEEDED FOR PROPER COMPACTION AND PREPARATION OF SOILS.
- IO. CONTRACTOR IS RESPONSIBLE FOR PROTECTING ALL EXCAVATIONS AND SLOPES.
- II. REINFORCEMENT SHALL BE HELD IN PLACE DURING CONCRETE PLACEMENT. IF REQUIRED, ADDITIONAL BARS MAY BE PROVIDED BY THE CONTRACTOR TO FURNISH SUPPORT FOR ALL
- 12. 28 DAY MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 3000 PSI.
- 13. WELDED WIRE FABRIC SHALL BE LAPPED A MINIMUM OF I'O".
- 14. A QUALIFIED TESTING LABORATORY SHALL BE RETAINED TO COLLECT CYLINDERS AND PERFORM THE NECESSARY CONCRETE TESTS. A MINIMUM OF FOUR CYLINDERS SHALL BE TAKEN FOR EVERY 50 CUBIC YARDS (OR FRACTION THEREOF)OF EACH CONCRETE TYPE/STRENGTH SUPPLIED.
- 15. 4" SLAB ON GRADE SHALL BE REINFORCED WITH W6X6-WI.4 x WI.4 WWF ON PROPERLY PREPARED BASE MATERIAL WITH VAPOR BARRIER. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL ENGINEER(5 RECOMMENDATIONS FOR SPECIFICS RELATING TO SLAB SUPPORT, LOCATION OF VAPOR BARRIER AND ANY OTHER (UNDER SLAB) REQUIREMENTS. A 4" SLAB IS TYPICALLY FOR (DOMESTIC OR LIGHT COMMERCIAL) APPLICATIONS WITH FLOOR LOADINGS UP TO 100 PSF. SLAB THICKNESS SHOULD BE INCREASED IN THE EVENT THERE IS A NEED FOR HEAVIER FLOOR LOADINGS- CONTRACTOR SHALL VERIFY FLOOR LOADS WITH OWNER AND EQUIPMENT SUPPLIERS, ETC. PRIOR TO BASE AND SLAB PLACEMENT. IN THESE AREAS THE SLAB SHALL BE THICKENED TO ACCOMMODATE THE LOADS. SEE CONSTRUCTION DOCUMENTS FOR LOCATIONS OF SLABS AND (BASIC) OR MINIMUM SLAB THICKNESS.
- 16. UNLESS SPECIFIED OTHERWISE, THE CONTRACTOR SHALL SPACE SLAB JOINTS NOT EXCEED 36 TIMES THE SLAB THICKNESS PER ACI (AMERICAN CONCRETE INSTITUTE). THE WIDTH TO LENGTH OF JOINTED SECTIONS SHALL NOT EXCEED THE RATIO OF 1 TO 1-1/2.
- 17. THE CONTRACTOR SHALL SUBMIT DETAILED STRUCTURAL STEEL SHOP DRAWINGS TO INCLUDE (BUT NOT LIMITED TO) COLUMNS, BEAMS, DECKING, STAIRS, STAIR LANDINGS AND ALL CONNECTIONS.
- 18. A SUITABLE NON-SHRINK GROUT (7000 PSI) SHALL BE USED UNDER BASE PLATES REQUIRING GROUT. GROUT SHALL BE PLACED UNDER THE BASEPLATE ONCE THE STEEL COLUMN IS IN PLACE & PLUMB. THOUGH THE DETAILS AND DRAWINGS MAY (OR MAY NOT) INDICATE, THE CONTRACTOR MAY OPT TO USE LEVELING PLATES AND LEVELING NUTS BELOW THE BASE PLATES TO PLUMB THE STEEL COLUMNS. THE CONTRACTOR SHALL ADJUST THE FOOTING ELEVATION(S) AND CONSIDER THE FLOOR ELEVATION FOR COLUMNS SUBJECT TO GROUT, LEVELING NUTS, ETC.
- 19. ALL WELDS IN EXPOSED STEEL SHALL BE FIELD COATED W/ ZING-RICH PAINT.
- 20. METAL FLOOR DECKING SHALL BE 9/16" TYPE "S" 28 GAUGE (G90 GALVANIZED). METAL DECK SHALL BE MECHANICALLY FASTENED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS, FASTENERS SHALL NOT EXCEED 12" O.C. UNLESS NOTED OTHERWISE.
- 21. CONCRETE (INCLUDING TOPPINGS) IS NOT WATERTIGHT OR A WATERPROOF MATERIAL. WATER PERMEABILITY MAY POSSIBLY BE REDUCED DEPENDING ON A NUMBER OF FACTORS INCLUDING SURFACE SLOPE. STANDING WATER ON THE SURFACE OF CONCRETE WILL EVENTUALLY SEEP INTO THE CONCRETE MATERIAL THROUGH VIRTUALLY INVISIBLE CRACKS WHICH EXISTS IN ALL CURED CONCRETE. FOR THIS REASON CONCRETE MUST BE PROPERLY SEALED AND PROTECTED FROM WATER INTRUSION. AN ADEQUATE LONG TERM CONCRETE MAINTENANCE PLAN SHOULD BE USED FOR ALL CONCRETE SYSTEMS.

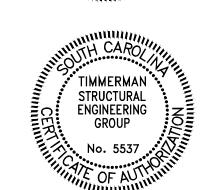
SPECIAL INSPECTION COMPANY / COORDINATOR - TO BE RETAINED BY OWNER									
BUILDING SYSTEM OR COMPONENT	MATERIAL SUBMITTAL	TESTING			INSPECTION (PER IBC)			QUALITY ASSURANCE (PER IBC)	
		REQUIREMENTS	FREQUENCY	AGENCY	MONITORING	FREQUENCY	AGENCY	PART OF WIND	PART OF SEISMIC
CONCRETE FOUNDATIONS	1. SUBMIT CONCRETE MIX DESIGN. 2. SUBMIT FOUNDATION REINFORCEMENT SHOP DRAWINGS. 3. VERIFY PROPER CONCRETE STRENGTH.	1. TEST CONCRETE STRENGTH.	(1) SET OF CYLINDERS FOR EACH VERTICAL LIFT OR EACH 50 YARDS OF CONCRETE.	TESTING LAB TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL	AS CONCRETE AND REINFORCING STEEL CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE INSPECTED TO ENSURE COMPLIANCE: 1. VERIFY REINFORCING SIZE, QUANTITY & PLACEMENT 2. ANCHORS CAST IN CONCRETE 3. ANCHORS POST INSTALLED IN HARDENED CONCRETE 4. VERIFYING USE OF REQUIRED DESIGN MIX 5. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TEST, AND DETERMINE THE TEMPERATURE OF CONCRETE 6. CONCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES 7. INSPECT FORMWORK FOR; SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED	1. PERIODIC 2. PERIODIC 3. PERIODIC 4. PERIODIC 5. CONTINUOUS 6. CONTINUOUS 7. PERIODIC	INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL	SPREAD FOOTINGS AT BEARING WALLS AND SHEARWALL.	SPREAD FOOTINGS AT BEARING WALLS AND SHEARWALL.
STRUCTURAL STEEL	SUBMIT MANUFACTURER'S CERTIFIED MILL TEST REPORTS FOR STRUCTURAL STEEL.	N/A	N/A	N/A	INSPECT STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH CONSTRUCTION DOCUMENTS.	1. PERIODIC	INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL PER IBC	1. FLOOR SYSTEM FRAMING	1. FLOOR SYSTEM FRAMING
STRUCTURAL STEEL WELDING	SUBMIT MANUFACTURER'S CERTIFICATE OF COMPLIANCE FOR WELD FILLER MATERIAL.	N/A	N/A	N/A	VERIFY WELDING IS IN COMPLIANCE WITH AWS D1.1 1. COMPLETE AND PARTIAL PENETRATION GROOVE WELDS. 2. MULTIPASS FILLET WELDS 3. SINGLE-PASS FILLET WELDS > 5/16" 4. SINGLE-PASS FILLET WELDS < OR = 5/16" 5. FLOOR AND DECK WELDS	1. CONTINUOUS 2. CONTINUOUS 3. CONTINUOUS 4. PERIODIC 5. PERIODIC	INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL PER IBC	1. FLOOR SYSTEM WELDING	1. FLOOR SYSTEM WELDING

NOTE: ALL TESTING, INSPECTION & RELATED REPORTS SHALL BE SENT TO THE SPECIAL INSPECTION COORDINATOR & THE OWNER. ANY DEFICIENCIES SHALL BE CLEARLY NOTED & BROUGHT TO THE ATTENTION OF THE SPECIAL INSPECTION COORDINATOR BEFORE THE END OF THE INSPECTOR'S SHIFT.

- SPECIAL INSPECTOR: PER IBC "A QUALIFIED PERSON EMPLOYED OR RETAINED BY AN APPROVED BY THE BUILDING OFFICIAL AS HAVING THE COMPETENCE NECESSARY TO INSPECT A PARTICULAR TYPE OF CONSTRUCTION REQUIRING SPECIAL INSPECTION" - PERIODIC SPECIAL INSPECTION: PER IBC "SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS INTERMITTENTLY PRESENT WHERE THE WORK TO BE INSPECTED HAS BEEN OR IS BEING PERFORMED".

- CONTINUOUS SPECIAL INSPECTION: PER IBC "SPECIAL INSPECTION BY THE SPECIAL INSPECTOR WHO IS PRESENT WHEN AND WHERE THE WORK TO BE INSPECTED IS BEING PERFORMED". THIS IS INTENDED TO BE A CONTINUOUS INSPECTION.





immerman Co Drawn By: Engineering

This drawing and the design shown is the property of TIMERMAN STRUCTURAL ENGINEERING GROUP. The reproduction, copying or any other infringement to this drawing without their written consent will be subject to legal action.

TSEG JOB# 17-159 Designed By: KW1 Checked By: KWT

- BID SET -

∣ШД (J) (V)

01

0

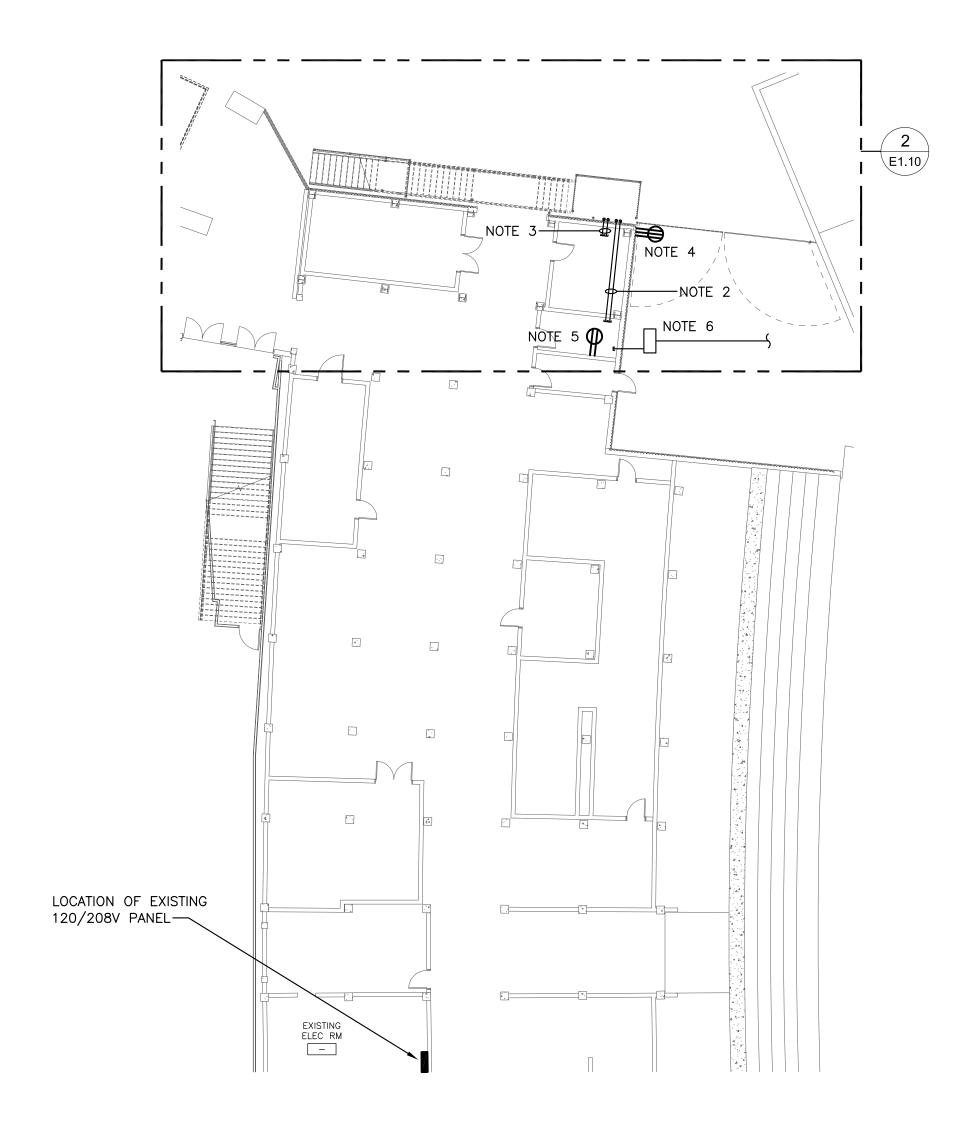
 \circ

S

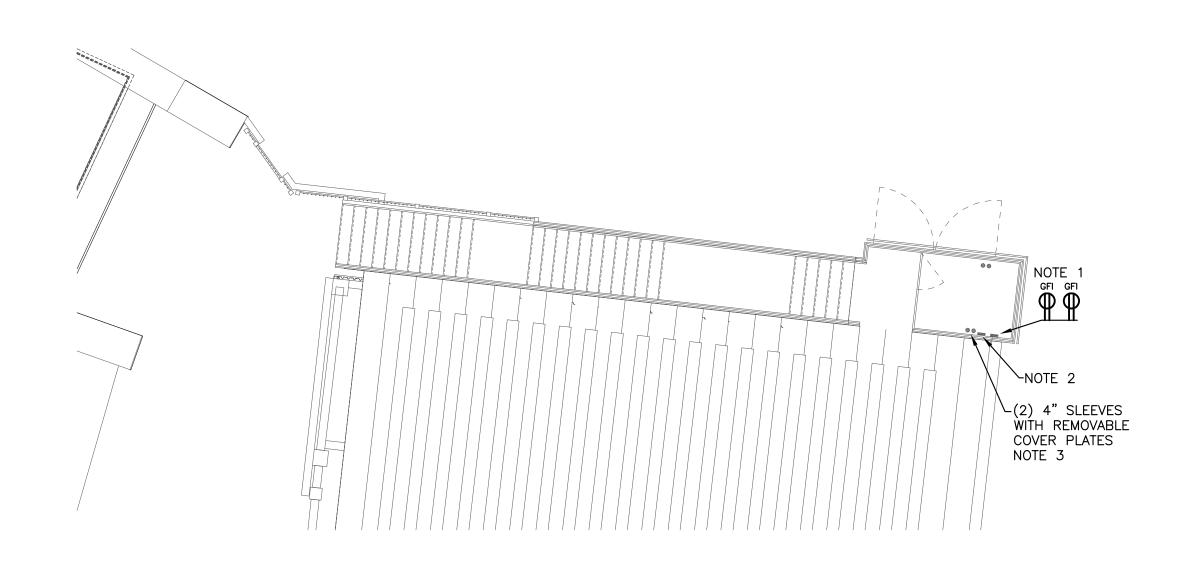
Z

Ŋ

SOUTH CAROL F SECTION 10



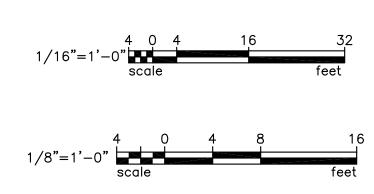
SOUTH STANDS - LOWER 1 LEVEL EXISTING ELECTRICAL PLAN (
E1.10 SCALE: 1/16" = 1'-0"

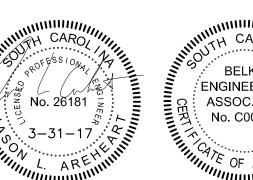


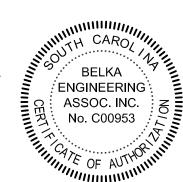
SOUTH STANDS - STAIR UPPER 2 LEVEL RENOVATION ELECTRICAL PLAN E1.10 SCALE: 1/8" = 1'-0"

ELECTRICAL NOTES

- METALLIC "WHILE-IN-USE" WEATHERPROOF ENCLOSURES. PROVIDE 20 AMP CIRCUIT (2#10, 1#10G. IN 3/4"C.) FROM EXISTING 120/208V PANEL LOCATED IN SOUTH STADIUM ELECTRICAL ROOM (SEE OVERALL PLAN ON THIS DRAWING FOR PANEL LOCATION). PROVIDE ONE (1) 20 AMP, 1 POLE BREAKER. COORDINATE EXACT LOCATION OF RECEPTACLÉ ENCLOSURES WITH ARCHITECT AND OWNER BEFORE ROUGH-IN. COORDINATE ALL POWER WORK WITH DENNIS GALLAGHER, USC ELECTRICAL - (803)777-4217.
- 2. PROVIDE ONE (1) 12"x12"x4" NEMA 4X STAINLESS STEEL ENCLOSURE FOR DATA AND A/V INPUT JACKS. PROVIDE TWO (2) 2" CONDUITS FROM ENCLOSURE TO LOCATION BELOW THE SOUTH STADIUM STANDS. COORDINATE THAT TERMINATION LOCATION WITH OWNER'S I.T. REPRESENTATIVE. COORDINATE ENCLOSURE LOCATION WITH ARCHITECT AND OWNER BEFORE ROUGH-IN.
- 3. PROVIDE TWO (2) 4" CONDUIT SLEEVES WITH REMOVABLE CAPS IN FLOOR OF PLATFORM. SLEEVES SHALL TERMINATE 2' INTO METAL BUILDING. COORDINATE EXACT LOCATIONS WITH ARCHITECT.
- 4. PROVIDE ONE (1) 50 AMP TWIST-LOCK 208V TYPE RECEPTACLE (L6-50R) IN METALLIC "WHILE-IN-USE" WEATHERPROOF ENCLOSURE. PROVIDE 50 AMP CIRCUIT (2#8, 1#10G. IN 1"C.) FROM EXISTING 120/208V PANEL LOCATED IN SOUTH STADIUM ELECTRICAL ROOM (SEE OVERALL PLAN ON THIS DRAWING FOR PANEL LOCATION). PROVIDE ONE (1) 50 AMP, 2 POLE BREAKER. COORDINATE EXACT LOCATION OF RECEPTACLE ENCLOSURE WITH ARCHITECT AND OWNER BEFORE ROUGH-IN.
- 5. PROVIDE ONE (1) 20 AMP GFI TYPE DUPLEX RECEPTACLE WITH SEPARATE METALLIC "WHILE-IN-USE" WEATHERPROOF ENCLOSURE. PROVIDE 20 AMP CIRCUIT (2#10, 1#10G. IN 3/4"C.) FROM EXISTING 120/208V PANEL LOCATED IN SOUTH STADIUM ELECTRICAL ROOM (SEE OVERALL PLAN ON THIS DRAWING FOR PANEL LOCATION). PROVIDE ONE (1) 20 AMP, 1 POLE BREAKER. COORDINATE EXACT LOCATION OF RECEPTACLE ENCLOSURE WITH ARCHITECT AND OWNER BEFORE ROUGH-IN.
- 6. EXISTING CONDUIT AND HANDHOLE SHALL BE USED TO ROUTE FIBER FROM DJ BOOTH. COORDINATE TERMINATION POINT AND ROUTING WITH OWNER.
- 7. CONDUCTORS SHALL BE THHN/THWN-2 COPPER. RACEWAYS SHALL BE RIGID GALVANIZED STEEL WITH LONG SWEEP ELBOWS FOR DATA/AV CABLES. RECEPTACLES SHALL BE COMMERCIAL SPEC GRADE.









(803) 731-0650 p | (803) 731-2880 f CSTRINGFIELD@BEA-Consulting.com

SOUTH CAROLI F SECTION 10 ; # ACOL170001 # **H27-Z341** SET UNIVERSITY OF (ADDING STAIR AWILLIAMS BRICE STADIUM GMC #
OSE# |
BID SE

