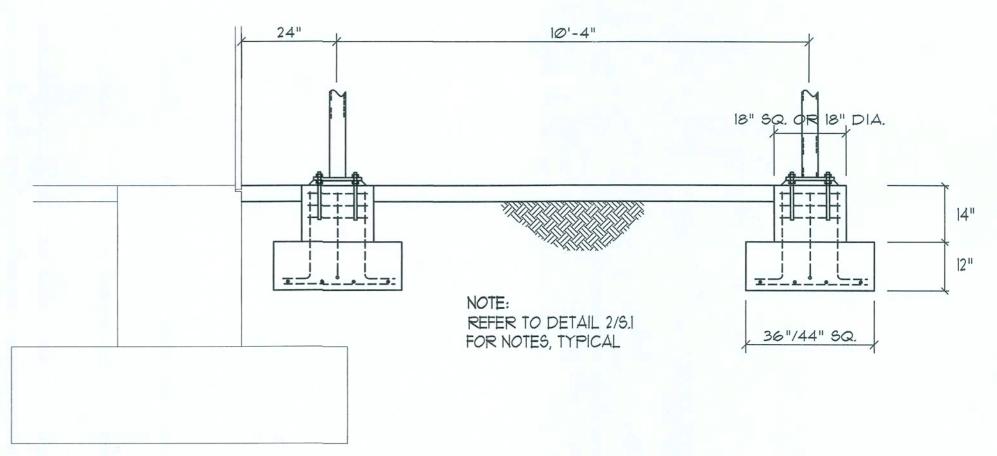


SCALE: 1/2" = 1'-0"



TYP. FOOTING DETAIL AT EXISTING SPREAD FOOTING SCALE: 1/2" = 1'-0"



S.1 of 5 AR0007005

30 APR 2021

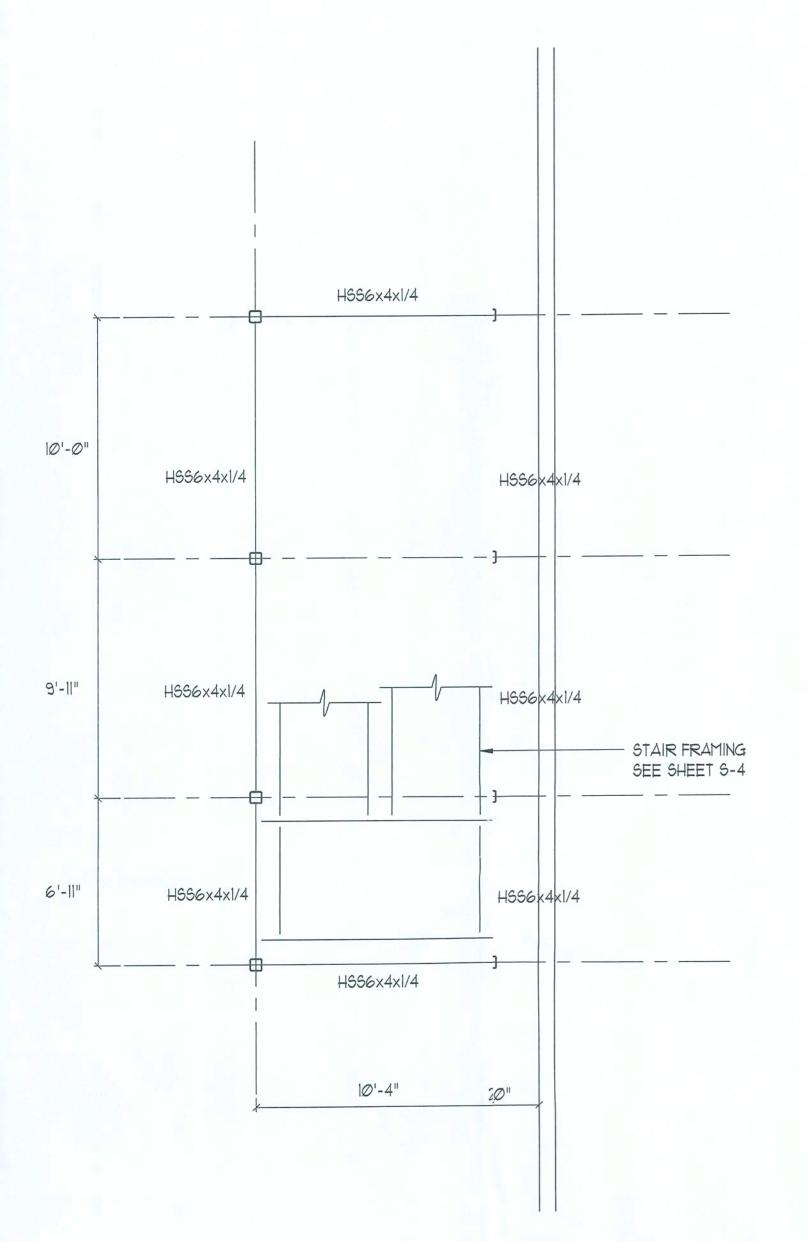
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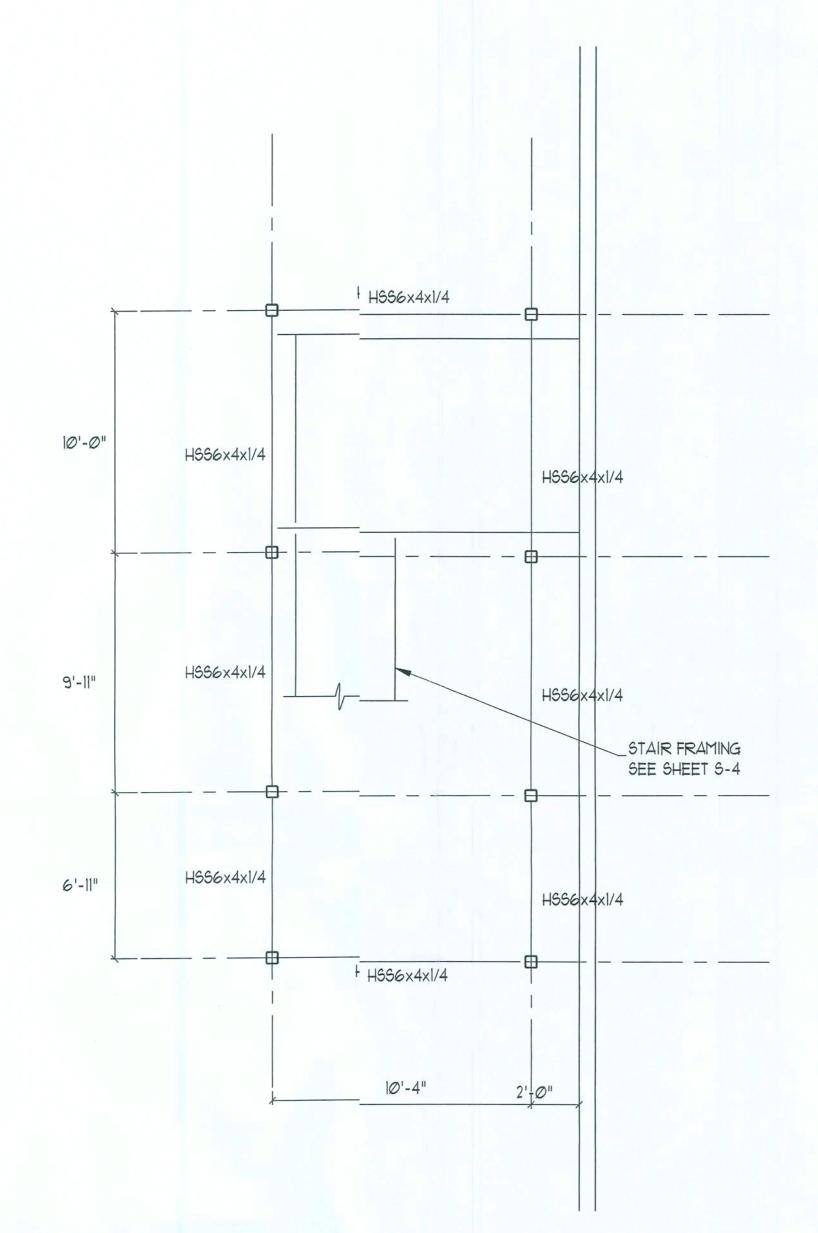
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Digitally signed by: N. P. GEISLER DN: CN = N. P. GEISLER C = US O = AR0007005 OU = ARCHITECT Date: 2021.04.30 15:51:48 -05'00'

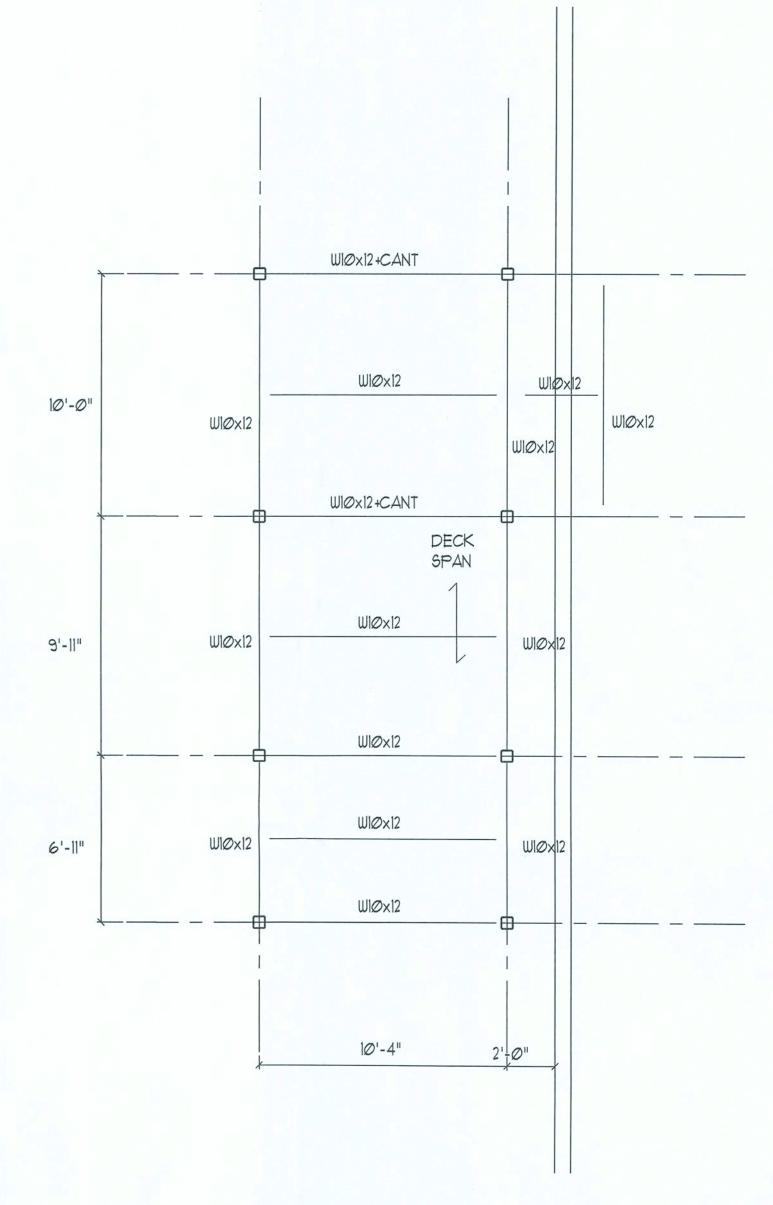


MID-LANDING FRAMING 'LAN 1/4" = 1'-0" 5-2

1) SEE FRAMING ELEVATIONS ON SHET S-3 FOR TOP OF STEEL



2ND FLOOR LANDING FRAMING PLAN 5-2 1/4" = 1'-0" 1) SEE FRAMING ELEVAILTIONS ON SHEET 5-3 FOR TOP OF STEEL



ROOF FRAMING PLAN

5-2

NOTES:

1) SEE FRAMING ELEVATIONS ON SHEET 5-3 FOR TOP OF STEEL 2) ROOF DECK: 1.5B - 20 GAGE, G90 GALVANIZED FINISH. SEE GENERAL NOTES FOR ATTACHMENT TO STEEL SUPPORTS.

DRAWN

REVSION:

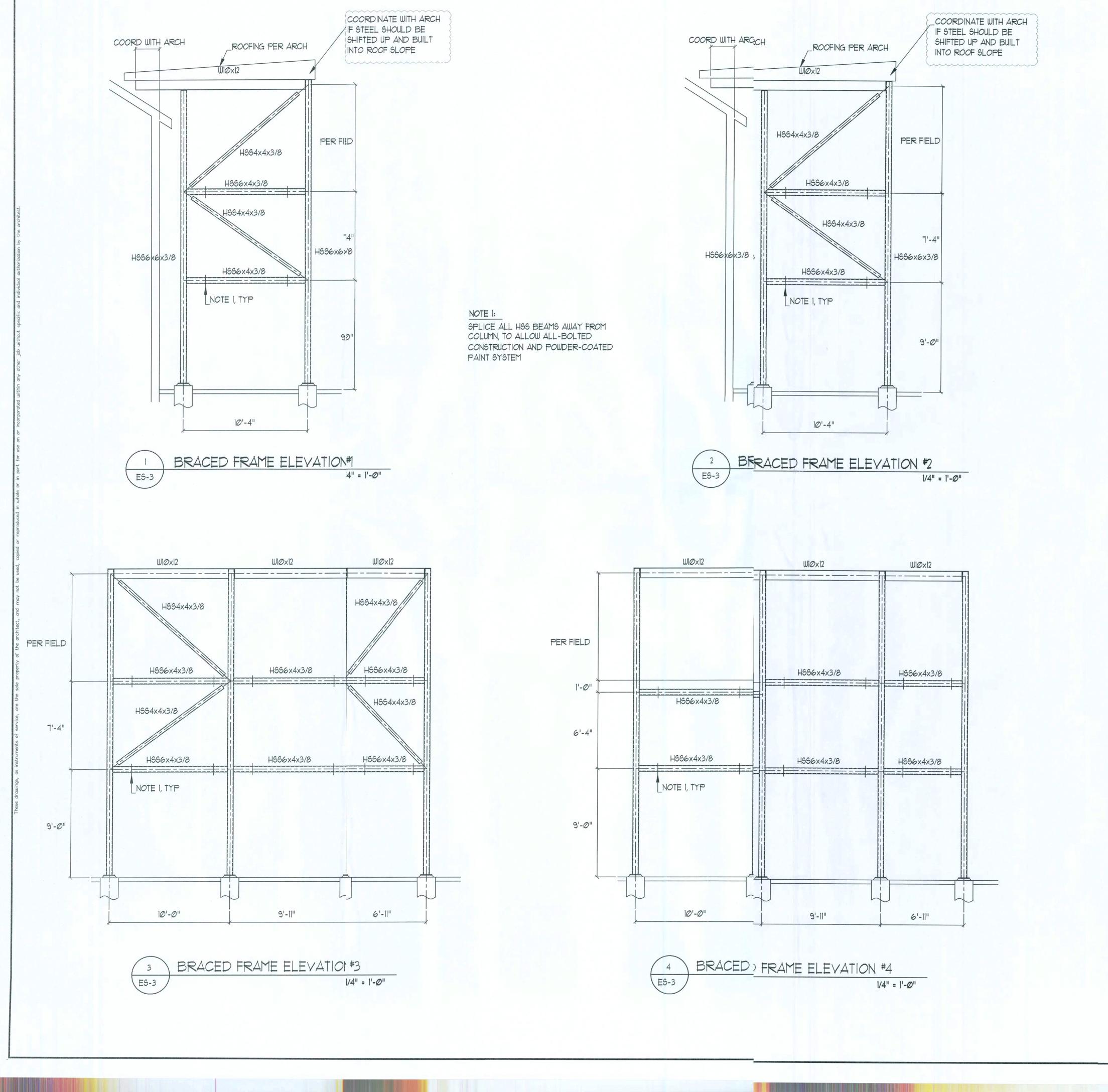
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1/4" = 1'-0"

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2 of 5

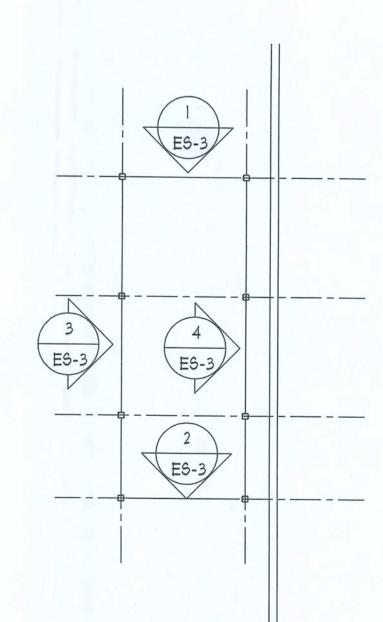
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3D ISOMETRIC VIEW ES-3

N.T.S.



BRACED FRAME ELEVATION KEY PLAN

Digitally signed by: N. P.
DN: CN = N. P. GEISLEF
O = AR0007005 OU =
ARCHITECT
Date: 2021.04

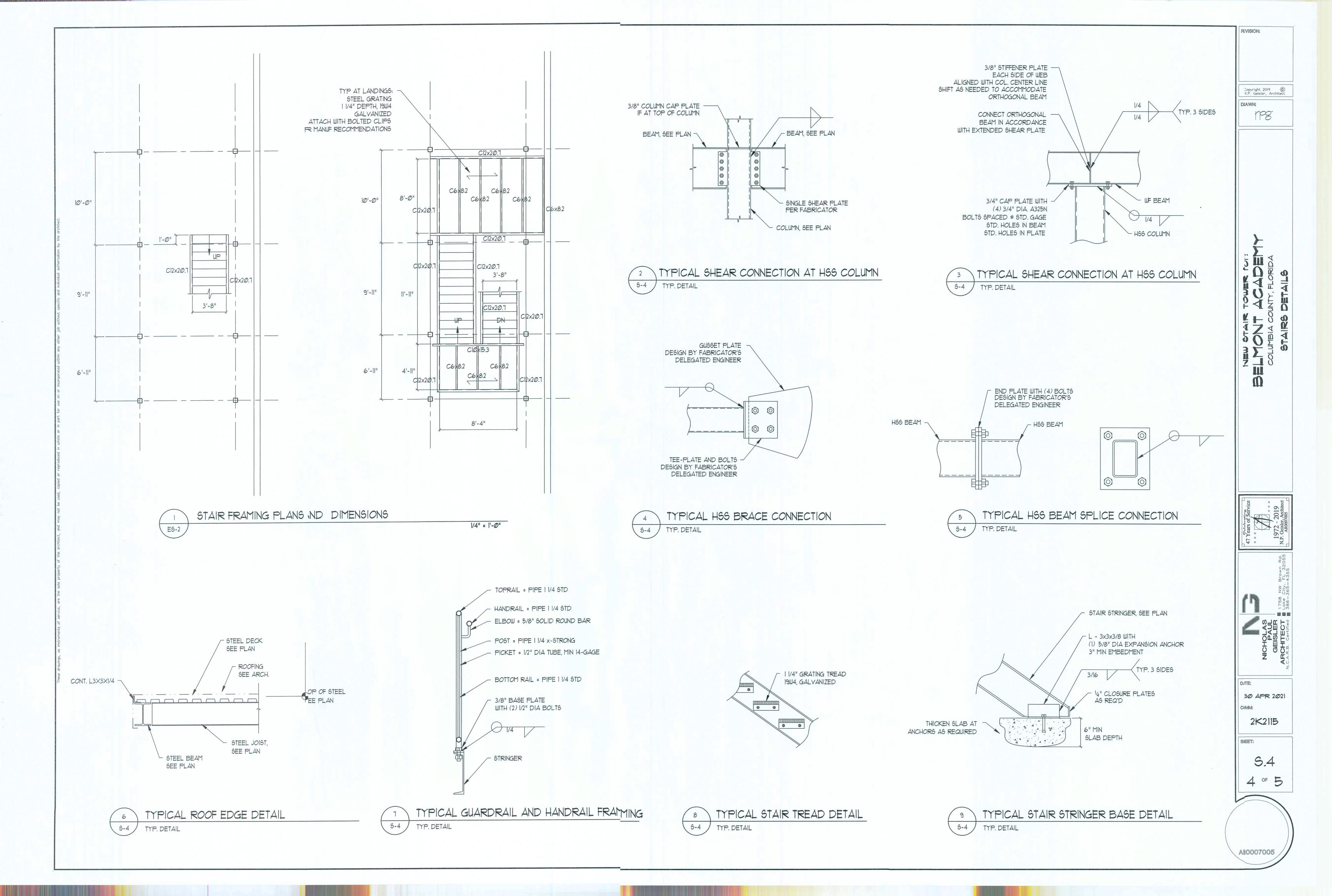
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DATE: 30 APR 2021

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GENERAL

- 1. THIS PROJECT HAS BEEN DESIGNED IN ACCORDANCE WITH THE 2020 FLORA BUILDING CODE.
- 2. CONSTRUCTION AND MATERIALS SHALL FURTHER CONFORM TO THE APPLICILE PROVISIONS OF THE FOLLOWING STANDARDS:
 - A. AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM)
 - B. AMERICAN CONCRETE INSTITUTE (ACI)
 C. NATIONAL CONCRETE MASONRY ASSOCIATION (NCMA)
 - D. AMERICAN WELDING SOCIETY (AWS)
 E. CONCRETE PLANT STANDARDS AND TRUCK MIXER AND AGITATORIANDARDS
 - F. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)
 - G. AMERICAN IRON AND STEEL INSTITUTE (AISI)

 AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)
 - H. AMERICAN NATIONAL STANDARDS INSTITUTE (ANS I. STEEL DECK INSTITUTE (SDI)
- 3. METHODS, PROCEDURES AND SEQUENCES OF CONSTRUCTION ARE THE RESNSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIS TO MAINTAIN AND INSURE THE INTEGRITY OF THE STRUCTURE AT ALL STAGES OF CONSTRUCTI. ANY DRAWINGS AND/OR CALCULATIONS RELATED TO THE MEANS AND METHODS OF CONSTICTION SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND SALL BE SIGNED AND SEALED BY THE CONTRACTOR'S ENGINEER REGISTERED IN THE STATOF FLORIDA.
- 4. REFER TO THE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBINGRAWINGS FOR SLEEVES, CURBS, INSERTS, ETC. NOT SHOWN ON STRUCTURAL DRAWINGS. THLOCATION OF SLEEVES OR OPENINGS IN STRUCTURAL MEMBERS SHALL BE REVIEWED BYHE STRUCTURAL ENGINEER.
- 5. THE GENERAL CONTRACTOR AND SUBCONTRACTORS SHALL DETERMINE THE SCOPE OR THE STRUCTURAL WORK FROM THE CONTRACT DOCUMENTS TAKEN AS A WHOLE HE STRUCTURAL DRAWINGS SHALL NOT BE CONSIDERED SEPARATELY FOR PURPOSES OF DDING THE STRUCTURAL WORK, DUE CONSIDERATION SHALL BE GIVEN TO OTHER STRURAL WORK OR WORK RELATED TO THE STRUCTURE, INCLUDING NECESSARY COORDINATIODESCRIBED OR IMPLIED BY THE ARCHITECTURAL AND MEP DRAWINGS.
- 6. PRIOR TO STARTING, THE CONTRACTOR MUST VERIFY FEASIBILITY OF WORKHOWN ON THESE DRAWINGS. THE DRAWINGS HAVE BEEN PREPARED BASED ON THE NOTED (ISTING DRAWINGS. EXISTING DIMENSIONS AND LOCATIONS OF EXISTING STRUCTURES SHOWN OTHE DRAWINGS SHALL BE VERIFIED BY FIELD MEASUREMENTS. IF, DURING DEMOLITION, EXVYATION OR CONSTRUCTION, ACTUAL CONDITIONS ARE DISCOVERED TO DIFFER FROM DSE INDICATED ON THE DRAWINGS, ARCHITECT AND OR ENGINEER SHALL BE NOTIFIED PRIOR) PROCEEDING.
- DETAILS LABELED "TYPICAL" APPLY WHERE CONDITIONS ARE EXACT OR MILAR AND NOT SPECIFICALLY DETAILED ELSEWHERE. WHERE NO SPECIFIC DETAILS ARE SWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ELSEWHERE ON THE PRIECT.
- 8. DO NOT SCALE THE DRAWINGS, USE DIMENSIONS. STRUCTURAL ELEMENTS A: CENTERED ON GRID LINES AND GRID LINE INTERSECTIONS UNLESS DIMENSIONED OTHERWS.
- 9. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. NHING SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE CONSTRUED AS ELIMINATING THE NID FOR THE CONTRACTOR TO COMPLY WITH ALL OSHA REQUIREMENTS. THE CONTRACT? AND ERECTOR ARE RESPONSIBLE FOR THE DESIGN OF TEMPORARY BRACING AND ERECTOR PROCEDURES.
- 10. THE CONTRACTOR SHALL ADD ALL NECESARY BOLTS, ANCHOR BOLTS, PITES, STIFFENER PLATES, STABILIZER PLATES, BRIDGING BRACING, BEARING SEATS, COLUMSPLICES, CLOSURES FOR OPENINGS AND ALL ERECTION FRAMING NECSSARY TO COMPLY WITH HA. IN ADDITION, FIELD PROTECT ANYTHING THAT MAY BE CONSIDERED A TRIP HAZARD, SH AS SHEAR STUDS,
- II. WASHERS OR RINGS MAY BE WELDED TO NON-AESS COLUMNS TO PROVIDEOR SAFETY CABLES. DO NOT PLACE HOLES IN COLUMNS WITHOUT APPROVAL OF THE STRUCTUR ENGINEER.
- 12. THE CONTRACTOR SHALL PAY ALL COSTS, INCLUDING INVESTIGATION ANDR REDESIGN DUE TO CONTRACTOR MISLOCATION OF STRUCTURAL ELEMENTS OR OTHER LACK CONFORMANCE WITH THE CONTRACT DOCUMENTS TO BRING WORK IN COMPLIANCE WITH THEONTRACTOR DOCUMENTS.
- 13. MISCELLANEOUS ITEMS HUNG FROM THE STRUCTURAL FRAMING, SUCH AS BUYOT LIMITED TO LIGHT-WEIGHT MECHANICAL ITEMS, SHALL BE ATTACHED CONCENTRICALLYO AS NOT TO IMPOSE UNFORESEEN ECCENTRIC LOADS TO THE STRUCTURAL FRAMING WITH
- 14. STRUCTURAL DESIGN LOADS ARE AS FOLLOWS AND ARE INDEXED TO THEEFERENCED BUILDING CODE.
- 1603.1.1 FLOOR LIVE LOADS A. SLAB ON GRADE: 100 PSF
- B. STAIRS: 100 PSF
 1603.1.2 ROOF LIVE LOAD
- A. 20 PSF
- 1603.1.4 WIND DESIGN DATA A. ULTIMATE DESIGN WIND SPEED, Yult: 120 MPH AND NOMINAL DESIGN WD SPEED Y49d: 95 MPH
- B. RISK CATEGORY: II C. WIND LOAD EXPOSURE: C
- E. COMPONENTS AND CLADDING WIND PRESSURES SHALL BE DETERMIN PER ASCE 1-10 CHAPTER 30, WIND LOADS COMPONENTS AND CLADDING (C&C) BY-IE MANUFACTURER'S SPECIALTY STRUCTURAL ENGINEER FOR EACH BUILDING ELEMENT REIVING EXTERIOR WALL AND ROOF WIND LOADS.
- 1603.1.6 GEOTECHNICAL INFORMATION SEE FOUNDATION SECTION
- 16/03.1.1 FLOOD DESIGN DATA: BUILDING IS NOT LOCATED IN A FLOODAZARD AREA

SPECIALTY ENGINEERING / DEFERRED SUBMITTALS

- I. THE FOLLOWING PORTIONS OF THE STRUCTURAL DESIGN WILL NOBE SUBMITTED AT TIME OF PERMIT APPLICATION. WHEN RECEIVED AN REVIEWED, THESE :FERRED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE BUILDING OFFICIAL BY THE CONTRACTO
- 2. THE FOLLOWING ITEMS ARE REQUIRED TO BE DESIGNED SPECIALTY STRUCTURAL ENGINEERS:
- A. STRUCTURAL STEEL CONNECTIONS
 B. PERFORATED METAL PANELS
- 3. CALCULATIONS AND SHOP DRAWINGS FOR ALL SPECIALTY TRUCTURAL ENGINEERING SUBMITTALS SHALL BE SIGNED AND SEALED BY A PROFESSION. STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA. ADDITIONAL SUPPLEMENT MISCELLANEOUS STEEL MAY BE BE REQUIRED TO SUPPORT THE LOADS IMPOSED FROM LESE ITEMS AND SHALL BE DESIGNED AND DETAILED BY THE SPECIALTY ENGINEER.
- 4. STRUCTURAL ENGINEER OF RECORD IS NOT RESPONSIBLE FOR T. DESIGN OF SYSTEMS NOT SHOWN ON THE STRUCTURAL DRAWINGS AND NOTED ABOVE. REVU OF SHOP DRAWINGS FOR THESE SYSTEMS SHALL BEFOR THE GENERAL CONFORMANCE WITHTHE PROJECT PARAMETERS AS INDICATED ON THE DRAWINGS AND IN THE STRUCTURAL NOTES.

SUBMITTALS

- 1. THE STRUCTURAL DRAWINGS MAY NOT BE REPRODUCED FOUSE IN SHOP DRAWING PREPARATION. CONTRACTOR SHALL REVIEW ARCHITECTURAL/MEP RAWINGS, SURVEY EXISTING CONDITIONS TO OBTAIN ALL REQUIRED DIMENSIONS AND ELEVATIO. ANY QUESTIONS RELATED TO DIMENSIONS, ELEVATIONS, OR EXISTING CONDITIONS SHALL E SUBMITTED TO A/E IN RFI FORMAT IN ADVANCE, AND ANSWERS INCORPORATED INTO THE SHOP RAWINGS.
- 2. THE CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO IBMISSION TO A/E, CLEARLY NOTE ANY PROPOSED CHANGES AND STAMP SUBMISSION. ANY SMISSION NOT STAMPED BY THE GENERAL CONTRACTOR WILL BE RETURNED WITHOUT REVIEW AND ARKED "DISAPPROVED".
- 3. THE CONTRACTOR SHALL ALLOW TWO WEEKS MAXIMUM FROM THIME THE SHOP DRAWINGS ARE RECEIVED BY THE STRUCTURAL ENGINEER UNTIL THEY ARE RURNED TO ARCHITECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUBMIT THE SHOP DRAWIS IN A TIMELY MANNER TO ENSURE THAT SHOP DRAWING REVIEW DOES NOT IMPACT THE CONSTRITION SCHEDULE.

- 4. THE CONTRACTOR SHALL SUBMIT DIMENSIONED SHOP DRAWINGS AT ALL LEVELS LOCATATING FLOOR AND ROOF EDGES, SLEEVES AND OPENINGS REQUIRED BY ALL TRADES FOR REVIEW W BY A/E PRIOR TO EXECUTION OF WORK.
- 5. SHOP DRAWINGS FOR THE FOLLOWING ITEMS ARE REQUIRED. PLEASE NOTE THAT SHISHOP DRAWINGS NOT MEETING, AS A MINIMUM, THE FOLLOWING REQUIREMENTS WILL BE RETURNINED WITHOUT REVIEW
 - A. CONCRETE MIX DESIGNS INCLUDE 28-DAY COMPRESSIVE STRENGTHINS, SPECIFICATIONS/PROPERTIES FOR ALL MATERIALS USED IN THE VARIOUS MIXES / AND THE LOCATION OF EACH DIFFERENT CONCRETE MIX.
 - B. REINFORCED CONCRETE: GRADE OF REINFORCING STEEL* LOCATION AND DET_{ETAIL} CONSTRUCTION JOINTS* LOCATION, SPACING, SIZE, LENGTH, AND BENDING SHAPE E OF REINFORCING* AND LOCATION AND DETAILS OF KEYS AND SETTING PLANS.
 - C. STRUCTURAL STEEL: MILL TEST REPORTS, LAYOUT PLANS, GRADE OF STEEL, MEMBUBER SIZES, DETAILS (INCLUDING LINTELS) AND CONNECTIONS CLEARLY INDICATIVING COMPLETE SHOP AND FIELD WELD DESIGNATIONS WHICH INCLUDES WELD SYMBGOLS
 - D. STEEL DECK: PLANS, PROFILES, DETAILS WITH GRADE OF STEEL, CONNECTION TO SUPPORTING STEEL, DECK LAYOUT AND CONFIGURATION.

PSF = POUNDS PER SQUARE FOOT

UNO = UNLESS NOTED OTHERWISE

UON = UNLESS OTHERWISE NOTED

FT. = FOOT

TYP. = TYPICAL

TOF = TOP OF FOOTING

TEB = TOP AND BOTTOM

6. THE OMISSION FROM THE SHOP DRAWINGS OF ANY MATERIALS REQUIRED BY THE CONTRACTOR DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY OF FURNISHING AND INSTALLING SUCH MATERIALS, EVEN THOUGH THE SHOP DRAWINGS MAY HAVE BIBEEN REVIEWED AND APPROVED.

ABBREVIATIONS AND LEGENDS

- EL = RELATIVE ELEVATION

 W/ RESPECT TO GROUND FLOOR

 SLAB EL. = 00'-0"
- CMU = CONCRETE MASONRY UNIT
- C/C = CENTER TO CENTER

 O.C. = ON CENTER
- CONT. = CONTINUOUS

 HK. = HOOKED

 BRG. = BEARING
- BRG. = BEARING C.J. = CONTROL JOINT

 JT. = JOINT ALT. = ALTERNATE
- TOC =TOP OF CONCRETE

FOUNDATION

- 1. THE FOUNDATION HAS BEEN DESIGNED FOR THE FOLLOWING MINIMUM DESIGN VALUES BASIJSED UPON THE STRUCTURAL DESIGN DRAWINGS FOR THE EXISTING CLASSROOM BUILDING. A ALL DESIGN VALUES SHALL BE FIELD VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER PRIOR & TO PLACING FOUNDATIONS.
- A. SHALLOW FOUNDATIONS: MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF B. BELOW GRADE FOUNDATION WALLS DRAINED AND LEVEL BACKFILL:
 - 1.) MINIMUM MOIST SOIL DENSITY: 125 PCF
 2.) EQUIVALENT FLUID PRESSURE:
 EFP = 15 PCF (RESTRAINED AT REST):
 - = 50 PCF (UNRESTRAINED ACTIVE)

 3.) PASSIVE RESISTANCE: 250 PSF / FT OF DEPTH
- 4.) FRICTION BETWEEN CONCRETE FOOTING AND SUBGRADE = 0.35
 5.) ASSUMED FRICTION ANGLE OF SOIL = 28 DEGREES
 C. GROUND SLABS: MODULES OF SUBGRADE REACTION, k = 150 POUNDS PER CUBIC INCH.
- 2. ALL FOOTINGS SHALL BEAR UPON SUITABLE BEARING, NATIVE SOILS OR CONTROLLEIED, STRUCTURAL FILL PLACED AND COMPACTED IN ACCORDANCE WITH THE RECOMMENDATIONS OF A QUALIFIED GEOTECHNICAL ENGINEER.
- 3. SUBGRADE SOILS TO SUPPORT GROUND SLABS SHALL CONSIST OF SUITABLE-BEARINING, NATURAL SOILS AND/OR CONTROLLED, STRUCTURAL FILL AND BE FIRM AND UNYIELDING.
- 4. SITE PREPARATION SHALL BE AS RECOMMENDED BY A QUALIFIED GEOTECHNICAL ENGINEER.
- 5. FOOTING ELEVATIONS SHOWN ON PLAN OR PER DETAILS/SECTIONS ARE TO BE CONSIDERED MINIMUM DEPTHS. FURTHER EXCAVATION MAY BE REQUIRED TO REACH THE SPECIFICIED BEARING CAPACITY.
- 6. EXCAVATIONS FOR SPREAD FOOTINGS AND CONTINUOUS FOOTINGS SHALL BE CLEANED AT AND HAND TAMPED TO A UNIFORM SURFACE. FOOTING EXCAVATIONS SHALL HAVE THE SIDES AT AND BOTTOMS TEMPORARILY LINED WITH 6 MIL POLYETHYLENE BARRIER IF PLACEMENT (OF CONCRETE DOES NOT OCCUR WITHIN 24 HOURS OF THE EXCAVATION OF THE FOOTING.
- 7. STRUCTURAL FILL PLACEMENT SHALL BE COMPACTED PER THE RECOMMENDATIONS OF A QUALIFIED GEOTECHNICAL ENGINEER.
- 8. UTILITY WORK SUCH AS PIPES, DRAINS, EJECTOR, ETC. SHALL BE INSTALLED AND PROPERI_{RLY} BACKFILLED PRIOR TO BEGINNING THE FOUNDATION WORK.
- 9. SLABS ON GRADE SHALL BE UNDERLAIN WITH A MINIMUM OF 6" (UNLESS NOTED OTHERWISE (ON PLAN) OF CLEAN, GRANULAR, DENSE-GRADED AGGREGATE MATERIAL.
- 10. DO NOT USE EARTH CUTS ARE FORMS FOR VERTICAL SURFACES.
- II. ALL BELOW GRADE WALLS SHALL BE ADEQUATELY WATERPROOFED AND APPROPIATE DRAINED UTILIZING DRAINAGE BOARD, GRAVEL BACKFILL AND/OR PERMANENT DRAINAGE SYSTEM SEE GEOTECHNICAL INVESTIGATION FOR ADDITIONAL INFORMATION.
- 12. DO NOT BACKFILL AGAINST BELOW GRADE WALLS UNTIL THE UPPER BRACING SLABON GRAIADE HAS BEEN IN PLACE FOR AT LEAST 1 DAYS AND THE CONCRETE HAS ATTAINED 15% OF DESIGNAL STRENGTH UNLESS ADEQUATE TEMPORARY BRACING IS INSTALLED.

CONCRETE

- I. CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318. CONCRETE SHALL HAVE NATURAL: SAND, FINE AGGREGATE AND TYPE I PORTLAND CEMENT CONFORMING TO ASTM C 150, CCOARSE AGGREGATES CONFORMING TO ASTM C 33 FOR NORMAL WEIGHT CONCRETE, AIR-ENTRACAINING ADMIX CONFORMING TO ASTM C 260, PREFORMED JOINT FILLER CONFORMING TO ASTM D 99394 AND JOINT SEALANT CONFORMING TO ASTM D 1190. MIXING, TRANSPORTING AND PLACINING OF CONCRETE SHALL CONFORM TO ACI 301.

 CONCRETE SHALL = 4" +/- 1".
- 2. FORM ALL CONCRETE PER ACI 34TR-14, "GUIDE TO FORMWORK FOR CONCRETE".
- 3. THE MINIMUM CONCRETE COMPRESSIVE STRENGTH (fc') AT 28 DAYS SHALL BE AS FOLLOWS:
 - A. FORMED FOOTINGS, GRADE BEAMS AND BELOW GRADE WALLS: 3000 PSI (NORMAL WEIGHT CONCRETE)±
 - B. SLAB-ON-GRADE: 3000 PSI (NORMAL WEIGHT CONCRETE)±
 - NOTE: CONCRETE SHALL CONFORM TO THE DURABILITY REQUIREMENTS OF ACI 318, CHA_{HAPTER}
 19 AND CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED 6 %,%, 4/- 1 %
- 4. GROUT SHALL BE NON-SHRINKABLE, NON-METALLIC CONFORMING TO C 1107, AND SHALL HALAVE A SPECIFIED COMPRESSIVE STRENGTH AT 28 DAYS OF 6000PSI. PREGROUTING OF BASE PLPLATES SHALL NOT BE PERMITTED.
- 5. DETAILING OF CONCRETE REINFORCEMENT BARS AND ACCESSORIES SHALL CONFORM TOTO THE RECOMMENDATIONS OF ACI 315 "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" AND ACI SP-66 "DETAILING MANUAL". PLACING OF REINFORCING BARS SHALL CONFORM TOTO THE RECOMMENDATIONS OF ACI 315R "MANUAL OF ENGINEERING AND PLACING DRAWINGS & FOR REINFORCED CONCRETE STRUCTURES" AND CRSI "MANUAL OF STANDARD PRACTICE".
- 6. SLAB ON GRADE SHALL HAVE CONTROL/CONSTRUCTION JOINTS JOINTS AS REQUIRED, SUCH H THAT NO AREA BOUNDED BY CONSTRUCTION JOINTS CONTAIN MORE THAN 300 SQUARE FEET OF SLAB AND THE JOINTS DO NOT EXCEED 15'-0" O.C. IN ANY ONE DIRECTION. THE RATIO OF LENGTISTH TO WIDTH OF THE AREA BOUND BY THE JOINTS SHALL NOT EXCEED 2 TO 1.

- 1. CONCRETE SHALL BE THOROUGHLY COMPACTED DURING PLACEMENT AND WORKED AROUND EMBEDDED ITEMS AND INTO CORNER OF FORMS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ITEMS EMBEDDED IN CONCRETE AND SHALL ENSURE THAT ALL ARE ACCURATELY LOCATED AND SECURE.
- 8. PROVIDE STANDARD CORROSION RESISTANT HIGH-CHAIRS AND SPACERS AS REQUIRED TO MAINTAIN CONCRETE PROTECTION SPECIFIED. MINIMUM CONCRETE COVER PROTECTION FOR REINFORCEMENT BARS SHALL BE AS FOLLOWS: (SEE ACI 318 SECTION 20.6 FOR CONDITIONS NOT NOTED).
 - A.) CAST AGAINST AND PERMANENTLY IN CONTACT WITH GROUND: 3" B.) EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
 - #6 THROUGH #18 : 2"
 #5 BAR AND SMALLER: 1 1/2"
 C.) SLABS AND WALLS NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
 - #14 AND #18 BARS: 1 1/2"

 #18 BARS AND SMALLER: 3/4"

 D.) BEAMS, COLUMNS, PEDESTAL AND TENSION TIES NOT EXPOSED TO WEATHER OR IN

CONTACT WITH GROUND: PRIMARY REINFORCEMENT, STIRRUPS TIES, SPIRALS, AND

- HOOPS: 1 1/2"

 E.) SLAB-ON-GRADE: 2" FROM TOP OF SLAB, UNLESS NOTED OTHERWISE

 F.) FLOOR DECK REINFORCING BARS: 1" FROM TOP OF SLAB, UNLESS NOTED OTHERWISE

 G.) FLOOR DECK WELDED WIRE REINFORCEMENT: 3/4" FROM TOP OF SLAB, UNLESS NOTED
- 9. CONCRETE REINFORCEMENT BARS SHALL CONFORM TO ASTM A 615, GRADE 60. WHERE INDICATED, EPOXY COATED BARS SHALL CONFORM TO ASTM A 175, REINFORCEMENT BARS SHALL NOT BE TACK WELDED, WELDED, HEATED OR CUT UNLESS NOTED ON THE CONTRACT DOCUMENTS OR REVIEWED AND APPROVED BY THE STRUCTURAL ENGINEER.
- 10. HORIZONTAL REINFORCEMENT SHALL BE CONTINUOUS AROUND CORNERS AND INTERSECTIONS WITH BARS OF EQUIVALENT SIZE AND LAPPED A MINIMUM OF 40 BAR DIAMETERS UNLESS NOTED OTHERWISE.
- 11. HORIZONTAL JOINTS WILL NOT BE PERMITTED IN CONCRETE CONSTRUCTION EXCEPT AS SHOWN ON THE CONTRACT DOCUMENTS. ONLY VERTICAL JOINTS INDICATED ON PLAN SHALL BE PERMITTED.
- RECTANGULAR SLAB OPENINGS UNLESS NOTED OTHERWISE. PLACE BAR DIAGONAL TO CORNER WITH I" CLEARANCE AT THE CORNER.

 13. WELDED STEEL WIRE REINFORCEMENT (W.W.R.) SHALL CONFORM TO ASTM A 185. SUPPLY W.W.R.

12. PROVIDE TWO NO. 3 REINFORCEMENT BARS X 5' - O" AT REENTRANT CORNERS AND AROUND

- IN SHEETS. LAPTWO FULL MESH LENGTHS AT SPLICES AND WIRE TOGETHER. SEE PLAN FOR SIZES REQUIRED.
- OTHERWISE. MAKE ALL REINFORCING BAR BENDS IN THE FABRICATOR'S SHOP.

 15. FURNISH ALL ACCESSORIES, CHAIRS, SPACE BARS, SUPPORTS, ETC. NECESSARY TO SECURE ALL

REINFORCING, DOWELS, BOLTS AND EMBEDDED PLATES BEFORE THE CONCRETE IS POURED.

14. BENDING OF REINFORCING PARTIALLY EMBEDDED IN CONCRETE IS NOT ALLOWED UNLESS NOTED

- "STABBING" INTO PREVIOUSLY PLACED CONCRETE IS NOT PERMITTED.

 16. PLACING SLEEVES THROUGH CONCRETE ELEMENTS IS NOT PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER IN WRITING.
- 17. DO NOT BACKFILL AGAINST WALLS UNTIL CONCRETE HAS ACHIEVED 15 % OF 28 DAY STRENGTH WHETHER OR NOT THE WALLS ARE BRACED. KEEP HEAVY CONSTRUCTION EQUIPMENT AWAY FROM WALLS, DISTANCE OF WALL HEIGHT.
- 18. PROVIDE KEYED JOINTS BETWEEN ALL NON-MONOLITHIC INTERSECTION CONCRETE WALLS AND ALL CONCRETE JOINTS. PROVIDE VINYL DUMBBELL TYPE OR BENTONITIE/BUTYL RUBBER EXPANDING CONCRETE WATERSTOPS AT KEYED JOINTS.

STRUCTURAL STEEL

- I. STRUCTURAL STEEL SHALL BE DESIGNED, FABRICATED AND ERECTED IN ACCORDNACE WITH "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS AND THE 14TH EDITION OF THE MANUAL OF STEEL CONSTRUCTION.
- 2. MATERIALS:
- A. STRUCTURAL WF SHAPES: ASTM A 992 (Fy = 50 KSI)
 B. STEEL CHANNELS, ANGLES AND PLATES: ASTM A36 (Fy = 36 KSI) OR ASTM A512 (Fy = 50 KSI),
- C. HOLLOW STRUCTURAL SECTIONS: ASTM A500, Gr. B (Fy = 46 KSI FOR SQUARE, RECT)
 D. STRUCTURAL PIPE: ASTM A53 Gr. B (Fy = 35 KSI)
- 3. CONNECTION BOLTS SHALL CONFORM TO ASTM A325 OR A490, INCLUDING CODE REQUIRED NUTS AND WASHERS CLEARLY MARKED AS REQUIRED BY AISC SPECIFICATIONS. CONNECTIONS MADE WITH UNMARKED BOLTS WILL RE REJECTED & ANCHOR RODS SHALL CONFORM TO ASTM FI554, Gr. 36.
- 4. WELDING SHALL CONFORM TO THE AMERICAN WELDING SOCIETY STANDARD D.I. ELECTRODE FOR SHOP AND FIELD WELDS SHALL CONFORM TO AWS A 5.1 OR AWS A 5.5, CLASS ETØXX LOW HYDROGEN. ALL WELDS SHALL BE PERFORMED BY CERTIFIED WELDERS AND WHO SHALL MAINTAIN CURRENT EVIDENCE OF WELDERS PASSING THE APPROPRIATE AWS QUALIFICATION TESTS WHICH MAY BE REQUESTED AT ANY TIME DURING THE PROJECT.
- 5. NO HOLES SHALL BE CUT IN ANY STEEL ELEMENT UNLESS THEY ARE DETAILED ON THE DRAWINGS.
- 6. INSTALL ALL STEEL BEAMS WITH NATURAL CAMBER UP.
- 1. POST INSTALLED ANCHORS INDICATED ON PLAN SHALL BE INSTALLED PER THE MANUFACTURES RECOMMENDATIONS MEETING OR EXCEEDING THE MINIMUM SPACING RECUIREMENTS.
- 8. DESIGN CONNECTIONS FOR REACTIONS SHOWN ON PLANS AND AS DETAILED AND SCHEDULED. BEAM CONNECTIONS TO OTHER BEAMS OR GIRDERS CAN BE MADE WITH BEARING CONNECTIONS UNLESS OTHERWISE NOTED. PROVIDE AT LEAST 2 BOLTS PER CONNECTION.
- 9. IF NO REACTION IS SHOWN, DETAIL SIMPLE SHEAR CONNECTIONS FOR 1/2 OF THE ALLOWABLE UNIFORM LOAD TABULATED IN THE AISC "STEEL CONSTRUCTION MANUAL: ASD". NO CONNECTIONS SHALL CONSIST OF LESS THAN (2) 3/4" DIA. HIGH STRENGTH BOLTS AND/OR MINIMUM WELD FOR CONNECTIONS SHALL BE 1/4" FILLET.
- 10. PROVIDE BRACING CONNECTIONS AS DETAILED ON THE DRAWINGS. CONNECTIONS THAT REQUIRE DESIGN SHALL BE DESIGNED UNDER THE DIRECT SUPERVISION OF AN ENGINEER REGISTERED IN THE STATE OF FLORIDA. IF NO BRACE FORCE IS SHOWN, DESIGN THE CONNECTIONS TO FULLY DEVELOP THE BRACING MEMBERS IN TENSION. SUBMIT SHOP DRAWINGS AND CALCULATIONS BEARING FABRICATOR'S ENGINEER'S SEAL AND SIGNATURE.
- II. TIGHTEN ALL HIGH STRENGTH BOLTS TO THE "SNUG TIGHT" CONDITION, DEFINED AS THE TIGHTNESS ATTAINED BY A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF A MAN USING AN ORDINARY SPUD WRENCH, UNLESS NOTED OTHERWISE. THE SNUG TIGHT CONDITION MUST ENSURE THAT THE PILES OF THE CONNECTED MATERIAL HAVE BEEN BROUGHT INTO SNUG CONTACT. TIGHTEN BOLTS TO THE "PRETENSIONED" CONDITION AS REQUIRED BY AISC/RCSC TABLE 4.1.
- 12. WELDS DEPICTED AS FIELD WELDS ON THE CONTRACT DRAWINGS MAY BE MADE IN THE FIELD OR SHOP AT THE FABRICATOR'S DISCRETION. WELDS DEPICTED AS SHOP WELDS SHALL BE MADE IN THE SHOP UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE STRUCTURAL ENGINEER
- 13. COORDINATE STRUCTURAL STEEL PAINTING REQUIREMENTS WITH THE ARCHITECT.
- 14. NOTIFY THE STRUCTURAL ENGINEER OF ANY FABRICATION OR ERECTION ERRORS, DEVIATIONS OR DAMAGED STEEL. WRITTEN APPROVAL IS REQUIRED BEFORE ANY FIELD CORRECTIONS ARE MADE.
- 15. FIELD CUTTING WITH A GAS TORCH IS NOT PERMITTED.
- 16. STEEL BOLTS, NUTS, AND WASHERS FOR STEEL PERMANENTLY EXPOSED TO THE WEATHER (ELEVATED ROOF PLATFORMS AND RAILS) AND WHERE NOTED SHALL BE HOT DIPPED GALVANIZED TO ASTM A125 GRADE Z35Ø. TOUCH UP ALL DAMAGED AREAS, INCLUDING FIELD WELDS.
- 17. NO FABRICATION SHALL PROCEED PRIOR TO SHOP DRAWING APPROVAL.

METAL DECKING

- I. METAL DECK MATERIAL, DESIGN AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE STEEL DECK INSTITUTE'S "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS AND ROOF DECKS".
- 2. PROVIDE ROOF DECK WITH THE FOLLOWING MINIMUM SECTION PROPERTIES:

MINIMUM DECK BEARING: 2" EXTERIOR AND 3" INTERIOR

- A.) 1-1/2" DEEP 20 Ga. GALV. (COATING CLASS G90) TYPE B ROOF DECK CONFORMING TO ASTM A 653:
 Fy = 33 KSI MIN± I = 0213 in/FT± Sp = 0235 in/FT± Sn = 0247 in/FT
- 3. METAL DECK SHALL BE INSTALLED CONTINUOUS MORE THAN 3 SPANS MINIMUM, UNLESS NOTED OTHERWISE. DO NOT INSTALL DECK AS SINGLE SPAN UNLESS SPECIFICALLY SHOUN ON DRAWINGS.
- 4. PROVIDE ADDITIONAL FRAMING TO SUPPORT DECK AT OPENINGS THROUGH DECK IN ACCORDANCE WITH THE TYPICAL DECK OPENING DETAILS. FURNISH AND INSTALL CONTINUOUS CLOSURES AND POUR STOPS AT DECK ENDS, EDGES AND OPENINGS WHERE NO STEEL ANGLE IS SPECIFIED. SEE ARCHITECTURAL AND MEP DRAWINGS FOR EXACT OPENING. LOCATIONS AND SIZES. THE OPENINGS IN THE DECK ARE NOT TO BE CUT UNTIL OPENING IS NEEDED (PER OSHA).
- 5. SCREW ROOF DECKS TO STEEL SUPPORTS, INCLUDING THE EDGE SUPPORT PARALLEL TO THE DECK SPAN WITH \$12 SELF-TAPPING SCREWS OR EQUIVALENT POWDER ACTUATED FASTENERS, USING 36/4 PATTERNS, AND 6" OC AT ALL PERIMETERS. FASTEN SIDE LAPS WITH \$10 SELF-TAPPING SCREWS \$12" OC MAXIMUM.

POST-INSTALLED ANCHORS

- 1. POST-INSTALLED ANCHORS SHALL ONLY BE USED WHERE SPECIFIED ON THE DRAWINGS. CONTRACTOR SHALL OBTAIN APPROVAL FROM A/E PRIOR TO USING POST-INSTALLED ANCHORS FOR MISSING OR MISPLACED ANCHORS.
- 2. CARE SHALL BE GIVEN TO AVOID CONFLICTS WITH EXISTING REINFORCING WHEN DRILLING HOLES. HOLES SHALL BE DRILLED AND CLEANED PER THE MANUFACTURER'S INSTRUCTIONS. ANCHORS SHALL BE INSTALLED PER THE MANUFACTURE'S INSTALLATION INSTRUCTIONS AT NOT LESS THAN THE MINIMUM EDGE DISTANCES AND/OR SPACING INDICATED IN THE MANUFACTURE'S LITERATURE.

SPECIAL INSPECTION REQUIREMENTS

- SPECIAL INSPECTIONS SHALL BE PROVIDED IN ACCORDANCE WITH THE STATEMENT OF SPECIAL INSPECTIONS SCHEDULE SUBMITTED WITH THE CONTRACT DOCUMENTS AND AS COMPLETED BY THE STRUCTURAL ENGINEER OF RECORD.
- 2. THE SPECIAL INSPECTIONS ENGINEER OF RECORD SHALL DOCUMENT ALL RESULTS OF ALL TESTS AND SUBMIT THEM TO THE OWNERS REPRESENTATIVE. IF HE FINDS RESULTS WHICH ARE NOT IN ACCORDANCE WITH THE DOCUMENTS, HE SHALL NOTIFY THE OWNERS REPRESENTATIVE IMMEDIATELY BY TELEPHONE.
- 3. THE STRUCTURAL ENGINEER MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS AND SUCH VISITS ARE NOT TO BE CONSTRUED AS MEETING THE PROJECT'S INSPECTION REQUIREMENTS. THE STRUCTURAL ENGINEER WILL NOT PERFORM ANY OF THE REQUIRED INSPECTION SERVICES FOR THIS PROJECT.

RETSION:

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NEW STAIR TOWER FOR COLUMBIA COUNTY, FLORIDA

Celebrating

4. Tears of Service

1972 - 2019

N.P. Geisler, Architect

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