STRUCTURAL NOTES

GENERAL NOTES:

1. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH JOB SPECIFICATIONS AND ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND SITE DRAWINGS. CONSULT THESE DRAWINGS FOR SLEEVES, DEPRESSIONS AND OTHER DETAILS NOT SHOWN ON STRUCTURAL DRAWINGS

2. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD AND WITH ALL OTHER DRAWINGS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK

3. THE STRUCTURE IS DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER THE BUILDING IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE BUILDING AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING. SHEETING. TEMPORARY BRACING (AND ACCOMPANYING FOOTINGS), GUYS OR TIEDOWNS.

4. ADDITIONAL OBSERVATIONS AS A RESULT OF REJECTION OF WORK COMPLETED AND/OR ADDITIONAL OBSERVATIONS DUE TO THE DEFICIENCIES IN WORK OBSERVED WILL BE AT THE EXPENSE OF THE CONTRACTOR

5. ALL STRUCTURAL SHOP DRAWINGS TO BE REVIEWED BY JOB SUPERINTENDENT IN ADDITION TO ALL PERSONNEL DEEMED NECESSARY BY CONTRACTOR PRIOR TO SUBMITTAL TO ENGINEER FOR APPROVAL

6. ALL SHOP DRAWING RESUBMITTALS SHALL INCLUDE A WRITTEN DETAILED LIST OF LOCATIONS AND DESCRIPTIONS OF ALL CHANGES MADE FROM PREVIOUS SUBMITTAL. LIST SHALL BE SPECIFIC AND GENERAL NOTES SUCH AS 'DIMENSIONS CORRECTED' ARE NOT ACCEPTABLE

DESIGN CODES:

2018 NORTH CAROLINA STATE BUILDING CODE.

ACI 318-14 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND COMMENTARY. AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, ALLOWABLE STRESS DESIGN. 2015 NATIONAL DESIGN SPECIFICATIONS (NDS) FOR WOOD CONSTRUCTION

DESIGN LOADS:

THE STRUCTURAL SYSTEM FOR THIS BUILDING HAS BEEN DESIGNED WITH THE FOLLOWING SUPERIMPOSED LOADINGS:

DESIGN RO SNOW EXP		Pg = Pf = Ce = Is = Ct = 10 psf	10 psf 10 psf 0.9 1.0 1
DESIGN LIV FLOOR ROOF	E LOADS:	100 psf 20 psf	
		143 mph C II Vx = Vy =	55.3 k 113.4 k
ALL BUILDI ARE TO BE THE NORTH	NT & CLADDING: NG COMPONENTS AND CLADDING ENGINEERED BY TH DESIGNED BY THE MANUFACTURER'S ENGINEER FOR I CAROLINA STATE BUILDING CODE FOR THE BASIC DI ID EXPOSURE LISTED ABOVE.	IE COMPC	NENT MANUFACTURER ADS DETERMINED PER
RISK CATE	CE FACTOR GORY PECTRAL RESPONSE ACCELERATIONS,	= Ss =	1.0 II 0.136 g

MAPPED SPECTRAL RESPONSE ACCELERATIONS,	Ss = S1 =	0.136 g 0.066 g
SPECTRAL RESPONSE COEFF.,	Sds = Sd1 =	0.145 g 0.106 g
SEISMIC RESISTING SYSTEM: ORDINARY REINFORCED MASONRY SHEAR WALLS	3u1 -	0.100 g
DESIGN BASE SHEARS,	Vx = Vy =	23.1k 23.1k
SEISMIC RESPONSE COEFFICIENT	Cs =	.021
RESPONSE MODIFICATION FACTOR	R =	7
ANALYSIS PROCEDURE USED:		AT. FORCE
	B D	
SITE CLASSIFICATION	D	

FOUNDATIONS

1 SEE THE FOLLOWING REPORT FOR COMPLETE GEOTECHNICAL RECOMMENDATIONS AND INSTALLATION PROCEDURES. SITE PREPARATION AND FOUNDATION SHALL COMPLY WITH THE FOLLOWING:

PREPARED BY: ECS SOUTHEST, LLP

TITLE: GEOTECHNICAL REPORT SWANSBORO ICEHOUSE SWANSBORO. ONSLOW COUNTY, NORTH CAROLINA

ECS PROJECT NUMBER # 22:28186 DATE: AUGUST 2, 2019

2. GEOTECHNICAL RECOMMENDATIONS WERE PREPARED WITH SPECIFIC KNOWLEDGE OF THE SPECIFIC BUILDING TYPE, CONSTRUCTION TYPE, AND LIKELY LOADS SHOWN ON THE CONSTRUCTION DOCUMENTS. DETERMINING THE AMOUNT OF SETTLEMENT ACCEPTABLE FOR THE BUILDING TYPE IS THE RESPONSIBILITY OF THE GEOTECHNICAL ENGINEER. ALL STRUCTURAL DESIGNS WERE BASED UPON STAYING WITHIN THE LIMITS GIVEN WITHIN THE GEOTECHNICAL REPORT FOR THE LOADS PRESCRIBED BY THE BUILDING CODE REFERENCED IN THE DESIGN CODES SECTION OF THESE STRUCTURAL NOTES.

3. DESIGNS BASED UPON GEOTECHNICAL REPORT RECOMMENDATION FOR DEEP FOUNDATIONS. SEE GEOTECHNICAL REPORT FOR ALL REQUIREMENTS RELATED TO THE INSTALLATION OF PILES.

PLUMBING SLEEVES:

MINIMUM SLEEVE SPACING SHALL BE TWO DIAMETERS CENTER TO CENTER TO THE LARGER SLEEVE DR 6" CLEAR BETWEEN SLEEVES, WHICHEVER IS GREATER. PRIOR TO CONSTRUCTION SLEEVE LOCATIONS AND SIZES SHALL BE APPROVED BY THE STRUCTURAL ENGINEER OF RECORD.

CHEMICAL ANCHORS:

SHALL BE A POLYMER INJECTION SYSTEM SUCH AS RAMSET "EPCON", MOLLY "PARAMOUNT HVC". SIKA "SIKADUR INJECTION SEL", "HILTI-HIGH STRENGTH EPOXY", OR APPROVED EQUAL, INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. INSTALLERS SHALL BE TRAINED BY THE MANUFACTURER'S REPRESENTATIVE

ANCHOR BOLTS:

SHALL BE A36 THREADED ROD. PROVIDE HOT DIP GALVANIZE FINISH ON ALL ANCHOR BOLTS PERMANENTLY EXPOSED TO EXTERIOR

1 AT 7 DAYS

2 AT 28 DAYS

THE ADDITIONAL CYLINDER(S) MAY BE DISCARDED.

CONCRETE '

AGE AS FOLLOWS:

PENETRATIONS:

WORKABLE MIX:

CONCRETE MIX DESIGN:

ENGINEER.

CONCRETE TESTING:

1. CONCRETE TESTING SHALL BE PAID FOR BY THE OWNER. TESTING LABORATORY SHALL PERFORM THE FOLLOWING TESTS ON CAST-IN-PLACE CONCRETE:

A) ASTM C143 - "STANDARD TEST METHOD FOR SLUMP OF PORTLAND CEMENT

B) ASTM C39 - "STANDARD TEST METHOD FOR COMPRESSIVE STRENGTH OF

CONDUCTED FOR EACH CLASS, FOR EVERY 50 CUBIC YARDS (OR FRACTION

PROVIDE ONE ADDITIONAL RESERVE CYLINDER TO BE TESTED UNDER THE

1 SHALL BE MIX DESIGNED BY A RECOGNIZED TESTING LABORATORY TO

ACHIEVE A STRENGTH AT 28 DAYS AS LISTED BELOW WITH A PLASTIC AND

THEREOF), PLACED PER DAY. REQUIRED CYLINDER(S) QUANTITIES AND TEST

CYLINDRICAL CONCRETE SPECIMENS." A SEPARATE TEST SHALL BE

IRECTION OF THE ENGINEER, IF REQUIRED. IF 28 DAY STRENGTH IS ACHIEVED, NO PENETRATIONS SHALL BE MADE IN ANY STRUCTURAL MEMBERS OTHER THAN THOSE LOCATED ON THESE DRAWINGS WITHOUT PREVIOUS APPROVAL OF THE

3.000 psi FOUNDATION WALLS AND FOOTINGS INTERIOR SLABS-ON-GRADE 3,000 psi -ALL OTHER CONCRETE 4,000 psi -2. SUBMIT PROPOSED MIX DESIGN WITH RECENT FIELD CYLINDER OR LAB TESTS FOR REVIEW PRIOR TO USE. MIX SHALL BE UNIQUELY IDENTIFIED BY MIX NUMBER OR OTHER POSITIVE IDENTIFICATION. CONCRETE SHALL COMPLY WITH ALL THE REQUIREMENTS OF ASTM STANDARD C94 FOR MEASURING MIXING RANSPORTING, ETC. CONCRETE TICKETS SHALL BE TIME STAMPED WHEN CONCRETE IS BATCHED. THE MAXIMUM TIME ALLOWED FROM THE TIME THE /IXING WATER IS ADDED UNTIL IT IS DEPOSITED IN ITS FINAL POSITION SHAL NOT EXCEED ONE AND ONE HALF (1-1/2) HOURS. IF FOR ANY REASON THERE IS A

LONGER DELAY THAN STATED ABOVE, THE CONCRETE SHALL BE DISCARDED. IT SHALL BE THE RESPONSIBILITY OF THE TESTING LAB TO NOTIFY THE OWNER'S REPRESENTATIVE AND THE CONTRACTOR OF ANY NONCOMPLIANCE WITH THE ABOVE. ALL SLABS SHALL BE CURED USING CURING COMPOUND MEETING ASTM STANDARD C309 TYPE 1 AND SHALL HAVE A FUGITIVE DYE. THE COMPOUND SHALL BE PLACED AS SOON AS THE FINISHING IS COMPLETED OR AS SOON AS THE WATER HAS LEFT THE UNFINISHED CONCRETE. ALL SCUFFED OR BROKEN AREAS IN THE CURING MEMBRANE SHALL BE RECOATED DAILY. CALCIUM

CHLORIDES SHALL NOT BE UTILIZED; OTHER ADMIXTURES MAY BE USED ONLY WITH THE APPROVAL OF THE ENGINEER. 3. CONCRETE SHALL UTILIZE TYPE I/II CEMENT UNLESS OTHERWISE DIRECTED

BY THE GEOTECHNICAL ENGINEER OR GEOTECHNICAL REPORT 4. THE CONCRETE STRENGTHS SHOWN IN THE SECTION ABOVE AND IN THE SPECIFICATIONS ARE MINIMUM COMPRESSIVE STRENGTHS. THE ENGINEER

SHALL DETERMINE IF THE CONCRETE IS ACCEPTABLE, OR TO BE REMOVED, OR TO RECEIVE SPECIAL CURING IF THE COMPRESSIVE STRENGTHS ARE LESS THAN SPECIFIED. 5. ALL CONCRETE EXPOSED TO WEATHER OR EARTH SHALL BE AIR ENTRAINED

TO 5% TO 7%. 6. WATER REDUCING AGENTS MAY BE USED IN THE CONCRETE MIX. PLASTICIZERS AND SUPER-PLASTICIZERS MAY BE USED ONLY WHEN WRITTEN PERMISSION OF THE ENGINEER IS GIVEN.

7. NO SALTS OF ANY KIND MAY BE USED IN CONCRETE BEFORE OBTAINING THE ENGINEER'S WRITTEN PERMISSION FOR THEIR USE

8. CONCRETE FOR TROWEL-FINISHED INTERIOR CONCRETE FLOORS SHALL NOT INCLUDE AN AIR-ENTRAINING ADMIXTURE; THE MAXIMUM AIR CONTENT IN THESE SLABS SHALL NOT EXCEED 3%.

CONCRETE AND REINFORCING PLACEMENT:

1. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 301 AND ACI 117 EXCEPT AS MODIFIED BELOW: ACI 117 ITEM 4.3.1.1

ELEVATIONS OF SLABS-ON-GRADE TOP OF SLAB ELEVATION SHALL BE WITHIN A 3/8" ENVELOPE EITHER SIDE OF THE THEORETICAL DESIGN SURFACE. ACI 117 ITEM 4.5.7

FLOOR FINISH TOLERANCES AS MEASURED BY PLACING A FREESTANDING (UNLEVELED) 10 FT_STRAIGHTEDGE ANYWHERE ON THE SLAB AND ALLOWING IT TO REST UPON TWO HIGH SPOTS WITHIN 28 DAYS AFTER SLAB CONCRETE PLACEMENT. THE GAP AT ANY POINT BETWEEN THE STRAIGHTEDGE AND THE FLOOR SHALL NOT EXCEED 1/4".

2. ALL REINFORCING STEEL TO BE ASTM A615, GRADE 60 (#4 AND LARGER), EXCEPT WHERE NOTED OTHERWISE. REINFORCING SHALL NOT BE WELDED. 3 WELDED WIRE FABRIC TO CONFORM TO ASTM A185 AND SHALL BE FREE FROM OIL, SCALE AND RUST. PLACE WWF IN ACCORDANCE WITH THE TYPICAL PLACING DETAILS OF ACI STANDARDS AND THE SPECIFICATIONS. MINIMUM

LAPS SHALL BE ONE SPACE PLUS 2". 4. ALL REINFORCING STEEL BARS TO BE DETAILED AND PLACED IN ACCORDANCE WITH THE LATEST ACI MANUALS.

5. LAP ALL REINFORCING SPLICES IN CONCRETE A MINIMUM OF 48 BAR DIAMETERS OR 24 INCHES, WHICHEVER IS GREATER, UNLESS NOTE OTHERWISE ON DRAWINGS (CLASS B SPLICE).

6. PROVIDE CORNER BARS OF SAME BAR DIAMETER AS SPECIFIED FOR THE WALL, BEAM OR FOOTING. PROVIDE MINIMUM OF 40 BAR DIAMETER LAP FOR ALL CORNER BARS, UNLESS NOTED OTHERWISE. 7. PROVIDE FOUNDATION DOWELS AS SHOWN. MINIMUM SIZE DOWELS TO BF #

4 UNLESS OTHERWISE NOTED ALL VERTICAL REINFORCING STEEL IN COLUMNS AND PIERS OR VERTICAL REINFORCING IN WALLS SHALL BE DOWELED INTO THE FOOTINGS WITH SAME SIZE AND QUANTITY DOWEL AS THE VERTICAL REINFORCING.

8. WHERE SHOWN ON THE DRAWINGS, PROVIDE WELD PLATES, WELDMENTS, OR CONCRETE INSERTS FOR FASTENING AND SECURING OTHER COMPONENTS. CONCRETE INSERTS SHALL BE FURNISHED BY THE CONTRACTOR REQUIRING THEM AND INSTALLED BY THE CONTRACTOR CASTING THE CONCRETE AROUND THEM. CLIP ANGLES SHALL BE FURNISHED BY THE CONTRACTOR REQUIRING THEM.

9. REINFORCING STEEL SHALL RECEIVE CONCRETE COVER AS FOLLOWS: DESCRIPTION MINIMUM COVER

CAST AGAINST AND PEI EXPOSED TO EARTH	RMANENTLY	3"
EXPOSED TO EARTH OF #6 THROUGH #18 BARS #5 BARS OR SMALLER	= =	2" 1 1/2"
NOT EXPOSED TO EART OR IN CONTACT WITH T AND WALLS		
#11 BARS OR SMALLER #14 AND #18		3/4" 1 1/2"
BEAMS AND COLUMNS		1 1/2"

10. PROVIDE TWO (2) #5'S, ONE AT EACH FACE, UNLESS NOTED OTHERWISE, AROUND ALL OPENINGS GREATER THAN 12"x12" IN CAST-IN-PLACE CONCRETE. EXTEND REINFORCING 2'-0" BEYOND OPENING IN BOTH DIRECTIONS. CONTACT ENGINEER FOR ALL OPENINGS GREATER THAN 12"x12" FOR DESIGN.

11. COLD WEATHER AND HOT WEATHER PROVISIONS OF ACI 306 AND 305

ADDITIONAL #4 & #5 REINFORCING STEEL TO BE USED AT ENGINEER'S

(CURRENT EDITIONS), RESPECTIVELY, SHALL BE MAINTAINED 12. CONTRACTOR TO FURNISH AND INSTALL 500 LINEAR FT. EACH OF

FORMWORK AND SHORING:

NO STRUCTURAL CONCRETE SHALL BE STRIPPED UNTIL IT HAS REACHED AT LEAST TWO-THIRDS OF THE 28 DAY DESIGN STRENGTH. DESIGN, ERECTION AND REMOVAL OF ALL FORMWORK, SHORES AND RESHORES SHALL MEET THE REQUIREMENTS SET FORTH IN ACI STANDARDS 301 AND 347.

OF THE PRISMS

DESCRIBED ABOVE.

MASONRY MATERIALS: = 1,500 psi).

SNOW AND ICE.

CONDITION

COURSES OR BY EQUIVALENT MECHNICAL ANCHORAGE. LESS THAN 2"x3".

MASONRY PRISM TESTING:

1. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL CONSTRUCT THREE (3) TEST PRISMS FOR TESTING. THEY SHALL BE CONSTRUCTED OF TWO (2) 8"x8"x16" PRISMS FOR TESTING ONE (1) ON TOP OF THE OTHER JOINED WITH TYPE "S" MORTAR, AND FILLED WITH 3.000 psi CONCRETE GROUT. PRISMS SHALL BE CURED FOR 28 DAYS. NO REINFORCING SHALL BE USED IN THE CONSTRUCTION OF THE

2. PRISMS SHALL BE MADE OF THE SAME MATERIALS, UNDER THE SAME CONDITIONS AND INSOFAR AS POSSIBLE. WITH THE SAME BONDING ARRANGEMENTS AS FOR THE STRUCTURE. THE MOISTURE CONTENT OF THE UNITS AT THE TIME OF LAYING, CONSISTENCY OF MORTAR, AND WORKMANSHIP SHALL BE THE SAME AS WILL BE USED IN THE STRUCTURE. THE VALUE OF I'M SHALL BE THE AVERAGE OF ALL SPECIMENS TESTED BUT SHALL BE NOT MORE THAN 125 PERCENT OF THE MINIMUM VALUE DETERMINED BY THE TEST, WHICHEVER IS LESS.

3. TESTING SHALL INCLUDE TESTS IN ADVANCE OF BEGINNING OPERATIONS AS DESCRIBED ABOVE, AND AT LEAST ONE (1) FIELD TEST DURING CONSTRUCTION FOR EACH 5,000 SQUARE FEET OF WALL, BUT NOT LESS THAN ONE (1) FIELD TEST MINIMUM IF TOTAL SQUARE FEET OF WALL FOR ENTIRE PROJECT IS LESS THAN 5,000

SF. ONLY WALLS INDICATED ON STRUCTURAL PLANS NEED BE TESTED. 4 THE COMPRESSIVE STRENGTH fm SHALL BE COMPUTED BY DIVIDING THE ULTIMATE LOAD BY THE NET AREA OF THE MASONRY USED IN THE CONSTRUCTION

5. TEST PRISMS SHALL BE STORED FOR SEVEN DAYS IN AIR, AT A TEMPERATURE OF 70 DEGREES, PLUS OR MINUS 5 DEGREES, IN A RELATIVE HUMIDITY EXCEEDING 90%, AND THEN IN AIR AT A TEMPERATURE OF 70 DEGREES, PLUS OR MINUM 5 DEGREES, UNTIL TESTED. THOSE CONSTRUCTED IN THE FIELD SHALL BE STORED UNDISTURBED FOR FROM 48 TO 96 HOURS UNDER WET MATERIAL TO SIMULATE 90% HUMIDITY, THEN TRANSPORTED TO LABORATORY FOR CONTINUED CURING AS

6. NOT LESS THAN THREE (3) PRISM SPECIMENS SHALL BE MADE FOR EACH FIELD TEST TO CONFIRM THAT THE MATERIALS ARE AS ASSUMED IN THE DESIGN. THE STANDARD AGE OF TEST SPECIMENS SHALL BE 28-DAYS, BUT 7-DAY TESTS MAY BE USED PROVIDED THE RELATION BETWEEN THE 7-DAY AND 28-DAY STRENGTHS OF THE MASONRY IS ESTABLISHED BY ADEQUATE TEST DATA FOR THE MATERIALS

1. MASONRY UNITS SHALL MEET ASTM C90 TYPE I, GRADE N, FOR HOLLOW LOAD BEARING TYPE MASONRY WITH A UNIT STRENGTH OF 1,900 psi ON THE NET AREA (fm

2. MORTAR SHALL BE TYPE "M" (BELOW GRADE) OR "S" (ABOVE GRADE) AND SHALL MEET ASTM C270. GROUT SHALL BE 3,000 psi PEA-GRAVEL CONCRETE AND SHALL MEET ASTM C476 MORTAR MIX DESIGN SHALL BE TESTED PRIOR TO CONSTRUCTION USING MORTAR TEST CUBES, WITH 7-DAY STRENGTH OF LABORATORY MIX EXCEEDING THE 28-DAY SPECIFIED DESIGN STRENGTH. GROUT SHALL BE TESTED PRIOR TO CONSTRUCTED USING PRISMS AS DESCRIBED ABOVE.

MASONRY AND REINFORCED MASONRY PLACEMENT:

1. ALL MASONRY SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE. MATERIALS TO BE LAID AND MATERIALS TO BE BUILT UPON SHALL BE FREE FROM

2. PROVIDE HOOKED DOWELS INTO FOOTINGS FOR ALL VERTICAL REINFORCING ABOVE AS SHOWN IN THE DRAWINGS. LAP SPLICES A MINIMUM OF 48 BAR DIAMETERS. AT THE OPTION OF THE CONTRACTOR, DOWELS MAY BE DRILLED AND EPOXIED INTO FOOTING IN LIEU OF HOOKS. EPOXY SHALL BE AS NOTED ON THIS SHEET UNDER 'CHEMICAL ANCHORS.' 6" MIN. EMBEDMENT FOR #5 OR SMALLER DOWELS. 8" MIN. EMBEDMENT FOR #6 DOWELS.

3. PROVIDE DUR-O-WALL (OR EQUAL PER SPECIFICATIONS) LADDER OR TRUSS HORIZONTAL JOINT REINFORCEMENT AT EACH SECOND COURSE IN RUNNING BOND AND EACH COURSE IN STACKED BOND, UNLESS NOTED OTHERWISE. DISCONTINUE HORIZONTAL JOINT REINFORCEMENT AT CONTROL JOINTS.

4. PROVIDE BOND BEAMS REINFORCED WITH (2) #5 BARS EVERY 6'-0" OF VERTICAL WALL, AT TOPS OF ALL MASONRY WALLS, AND WHERE SHOWN ON DRAWINGS. AT BOND BEAM CORNERS AND TEE JOINTS. PROVIDE BENT BARS TO MATCH QUANTITY AND BAR SIZE IN THE BOND BEAM. LAPS IN BOND BEAMS SHALL BE 48 BAR DIAMETERS OR A MINIMUM OF 2'-0", WHICHEVER IS GREATER.

5 WHERE SHOWN ON THE DRAWINGS CORES IN CONCRETE BLOCK UNITS SHALL BE FILLED WITH 3 000 psi CONCRETE GROUT FROM TOP OF FOOTING TO BOTTOM OF BEARING, OR TO THE TOP OF WALL, DEPENDING ON THE CONDITION. INSPECTION OF OPENING AT BOTTOM IS REQURIED.

6. WHERE REINFORCING STEEL IS CALLED FOR IN FILLED CORES, IT SHALL EXTEND FROM TOP OF FOOTING TO BOTTOM OF BEARING, OR TOP OF WALL, DEPENDING ON

7 WHERE REINFORCING STEEL IS INTERRUPTED BY AN OPENING IN THE WALL. THE QUANTITY OF BARS INTERRUPTED ARE TO BE MOVED TO EACH SIDE OF THE OPENING HALE OF REINFORCING TO ONE SIDE AND REMAINING HALE TO THE OTHER SIDE. REINFORCING SHALL BE FROM TOP OF FOOTING TO TOP OF WALL. PROVIDE A MINIMUM OF (2) #5 VERTICAL REINFORCING BARS AT EACH JAMB. SEE PLAN NOTES AND/OR DETAILS FOR VERTICAL REINFORCING SPACING

8. WHERE VERTICAL REINFORCING STEEL IS SPLICED IN MASONRY, PROVIDE A MINIMUM OF 48 BAR DIAMETERS, LAP SPLICE, UNLESS NOTED OTHERWISE.

9 THE MINIMUM DISTANCE BETWEEN PARALLEL BARS EXCEPT IN COLUMNS SHALL BE NOT LESS THAN THE DIAMETER OF THE BAR EXCEPT THAT LAPPED SPLICES MAY BE WIRED TOGETHER. THE CENTER TO CENTER SPACING OF BARS WITHIN A COLUMN SHALL BE NOT LESS THAN 2 AND ONE-HALF TIMES THE BAR DIAMETER.

10. ALL BARS SHALL BE COMPLETELY EMBEDDED IN MORTAR OR CONCRETE. REINFORCEMENT EMBEDDED IN HORIZONTAL MORTAR JOINTS SHALL HAVE NOT LESS THAN 5/8" MORTAR COVERAGE FROM THE EXPOSED FACE. ALL OTHER REINFORCING SHALL HAVE A MINIMUM COVERAGE OF ONE BAR DIAMETER OVER ALL BARS. BUT NOT LESS THAN 3/4", EXCEPT WHERE EXPOSED TO WEATHER OR SOIL IN WHICH CASE THE MINIMUM COVERAGE SHALL BE 2".

11. WHERE REINFORCING IS SHOWN TO BE LOCATED ALONG TWO FACES OF A CONCRETE BLOCK WALL, THE CONTRACTOR SHALL BREAK OUT THE SHELL OF THE LOWEST CONCRETE BLOCK TO GAIN ACCESS TO THE REINFORCING STEEL. THE REINFORCED STEEL SHALL THEN BE WIRED INTO ITS CORRECT POSITION, AND THE ACCESS HOLE COVERED. THE CONCRETE GROUT FILL SHALL BE PUDDLED OR VIBRATED TO ASSURE COMPLETE FILLING OF THE COR

12. REINFORCED MASONRY PIERS AND COLUMNS SHALL HAVE THE REINFORCING STEEL ACCURATELY LOCATED BY WIRING THE TOP AND BOTTOM OF ALL VERTICAL STEEL INTO ITS CORRECT POSITION. PROVIDE AN ACCESS HOLE AT THE BOTTOM OF ALL COLUMNS OR PIERS.

13. ALL REINFORCED HOLLOW UNIT MASONRY SHALL BE BUILT TO PRESERVE THE UNOBSTRUCTED VERTICAL CONTINUITY OF THE CELLS TO BE FILLED. WALLS AND CROSS WEBS FORMING SUCH CELLS TO BE FILLED SHALL BE FULLBEDDED IN MORTAR TO PREVENT LEAKAGE OF CONCRETE GROUT. ALL HEAD (OR END) JOINTS SHALL BE SOLIDLY FILLED WITH MORTAR FOR A DISTANCE IN FROM THE FACE OF THE WALL OR UNIT NOT LESS THAN THE THICKNESS OF THE LONGITUDINAL FACE SHELLS. BOND SHALL BE PROVIDED BY LAPPING UNITS IN SUCCESSIVE VERTICAL

A) VERTICAL CELLS TO BE FILLED SHALL HAVE VERTICAL ALIGNMENT SUFFICIENT TO MAINTAIN A CLEAR, UNOBSTRUCTED CONTINUOUS VERTICAL CELL MEASURING NOT

B) CLEANOUT OPENINGS SHALL BE PROVIDED AT THE BOTTOM OF ALL CELLS TO BE ILLED AT EACH POUR OF CONCRETE WHERE SUCH CONCRETE POUR IS IN EXCESS OF 6' IN HEIGHT. ANY OVERHANGING MORTAR, OTHER OBSTRUCTION OR DEBRIS SHALL BE REMOVED AND/OR CLEANED AT TIME OF INSPECTION AND PRIOR TO CORE FILLING. INSPECT AND SEAL ALL OPENINGS BEFORE CONCRETING.

C) VERTICAL REINFORCEMENT SHALL BE HELD IN POSITION AT TOP AND BOTTOM AND AT INTERVALS NOT EXCEEDING 192 DIAMETERS OF THE REINFORCEMENT. D) ALL CELLS CONTAINING REINFORCEMENT SHALL BE FILLED SOLIDLY WITH CONCRETE. CONCRETE SHALL BE POURED IN LIFTS OF 8' MAXIMUM HEIGHT. ALL CONCRETE SHALL BE CONSOLIDATED AT THE TIME OF POURING BY PUDDLING FOR LIFTS OF 4' OR LESS, OR BY VIBRATING FOR LIFTS GREATER THAN 4'. CONCRETE SHOULD LATER BE CONSOLIDATED AGAIN BY PUDDLING, BEFORE PLASTICITY IS

E) WHEN TOTAL CONCRETE POUR EXCEEDS 8' IN HEIGHT, THE CONCRETE SHALL BE PLACED IN 4' MAXIMUM LIFTS. MINIMUM CELL DIMENSION SHALL BE 3".

F) WHEN CONCRETING IS STOPPED FOR ONE HOUR OR LONGER, HORIZONTAL CONSTRUCTION JOINTS SHALL BE FORMED BY STOPPING THE POUR OF CONCRETE 1 1/2" BELOW THE TOP OF THE UPPERMOST UNIT. 14. PROVIDE A MINIMUM OF 8" BEARING FOR ALL MASONRY LINTELS.

15. WHERE LINTEL BLOCKS ARE USED IN LIEU OF HOLLOW CONCRETE BLOCKS, THE REINFORCING STEEL SHALL BE ANCHORED TO THE LOWER STEEL OR DOWELS AND THE LINTEL BLOCKS LAID AROUND THE STEEL. THE CONCRETE FILL SHALL BE INSTALLED IN LIFTS NOT TO EXCEED 2' IN HEIGHT. THE REINFORCING STEEL SHALL BE MAINTAINED IN THE SAME POSITION AS THE DOWELS. STOP THE POUR OF THE CONCRETE 1 1/2" BELOW THE TOP OF THE UPPERMOST UNIT.

16. SPECIFICATION REQUIREMENTS FOR COLD WEATHER AND HOT WEATHER MASONRY CONSTRUCTION SHALL BE MAINTAINED.

STRUCTURAL STEEL:

GALVANIZED.

APPLICABLE.

WOOD:

AS A TEMPLATE

WOOD MEMBERS.

WOOD SHEATHING:

THE 2018 NCSBC

A) TOP CHORD:

23, UNLESS NOTED OTHERWISE.

PRE-ENGINEERED WOOD ROOF TRUSSES:

BOTTOM CHORD:

L/360 LIVE LOAD AND L/240 TOTAL LOAD.

REVIEW PRIOR TO FABRICATION.

THE PROJECT LOCATION.

UNLESS NOTED OTHERWISE.

1. STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi) FOR ALL W-SHAPES, AND ASTM A36 (Fy=36 ksi) FOR ALL OTHER MISCELLANEOUS SHAPES AND PLATES. STRUCTURAL TUBING SHALL CONFORM TO ASTM A500. GRADE B (Fy=46 ksi). STRUCTURAL PIPE SHALL CONFORM TO ASTM A53. GRADE B. TYPE "E" OR "S' (Fv=42 ksi).

2. STEEL SHALL CONFORM TO THE LATEST EDITION OF "SPECIFICATION FOR

3. ALL STRUCTURAL STEEL EXPOSED TO EXTERIOR SHALL BE HOT-DIPPED

BUILDINGS" BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION, INC (AISC).

4. ALL SHOP CONNECTIONS TO BE WELDED (UTLIZING E70XX ELECTRODES) AND

FIELD CONNECTIONS TO BE BOLTED. UNLESS OTHERWISE NOTED. STEEL TO

5. WELDS FOR ALL EXPOSED STRUCTURAL STEEL SHALL BE GROUND SMOOTH

6. ALL BOLTED CONNECTIONS SHALL CONSIST OF 3/4" DIAMETER (MIN.) ASTM

CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR TO SUPPORT AN END

STRUCTURAL 2x WOOD COMPONENTS HAVE BEEN DESIGNED AS SOUTHERN

WOOD IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PROTECTED OR

BOLTS IN WOOD ARE MACHINE BOLTS, UNLESS OTHERWISE NOTED. MACHINE

MEMBER SIZES SHOWN ARE NOMINAL UNLESS NOTED OTHERWISE.

BOLTS SHALL HAVE A SHANK DIAMETER WITHIN 1/64" OF THAT SPECIFIED. BOLTS ARE

ASTM 307 STEEL. BOLT HOLES IN WOOD SHALL BE 1/32" OVERSIZE. WHERE STEEL IS

STANDARD CUT WASHERS UNDER HEAD AND NUT WHERE BEARING IS AGAINST WOOD

WHERE STEEL SIDE PLATES ARE USED FOR CONNECTION, THE PLATE SHALL BE USED

ALL WOOD ELEMENTS SHALL BE ATTACHED PER THE FASTENING

6. SEE ARCHITECTURAL DRAWINGS FOR WEATHER PROTECTION OF ALL EXPOSED

PLYWOOD ROOF, FLOOR AND WALL SHEATHING ARE DESIGNED AS

IAPHRAGMS AND SHALL COMPLY WITH APPLICABLE PROVISIONS OF CHAPTER 23 OF

SHEATHING SHALL BE FASTENED IN ACCORDANCE WITH PLANS SHOWN

IN GENERAL, SHEETS SHALL BE 4'-0"x8'-0" AND SHALL BE LAID WITH FACE

PLIES ACROSS FRAMING MEMBERS AND WITH END JOINTS STAGGERED 4'-0". NO PANEL

1. ENGINEERED WOOD TRUSS SYSTEMS SHALL BE DESIGNED BY SUPPLIER TO THE

CONFIGURATION AND LOAD-CARRYING CAPACITY SHOWN ON THE DRAWINGS AND

TRUSSES AND UNIFORM LOADS AS INDICATED ON THIS SHEET AND AS FOLLOWS:

PECIFICATIONS. TRUSSES SHALL BE DESIGNED TO SUSTAIN SELF WEIGHT OF THE

DEAD LOAD = 10 psf

SNOW LOAD = 10 psf

DEAD LOAD = 10 psf

LIVE LOAD = 10 psf

2. WIND LOAD: WHEN CALCULATING NET UPLIFT REACTIONS, USE MAXIMUM RESISTING

DEAD LOAD EQUAL TO 6 PSF ON THE TOP CHORD AND 0 PSF ON THE BOTTOM CHORD.

4. ALTERNATE TRUSS LAYOUTS ARE ACCEPTABLE ONLY AS A CHANGE ORDER WHICH

WILL INCLUDE ENGINEERING CHARGES TO THE CONTRACTOR FOR REDESIGN FOR

5. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.

TRUSSES. AS WELL AS CONNECTORS UTILIZED IN ALL OTHER CONNECTIONS AND

ATTACHMENTS BETWEEN TRUSSES OR COMPONENTS SUPPLIED AS PART OF THE

ENGINEERED TRUSS SYSTEM. AN ERECTION DRAWING SHALL BE INCLUDED,

BRACING REQUIRED FOR TRUSS DESIGN. SHOP DRAWINGS SHALL BEAR THE

IDENTIFYING ALL TRUSS SYSTEM COMPONENTS, AS WELL AS ALL PERMANENT

SHOP DRAWINGS SHALL SHOW AND SPECIFY ALL CONNECTOR TYPES UTILIZED WITHIN

SIGNATURE AND SEAL OF A PROFESSIONAL ENGINEERED REGISTERED IN THE STATE OF

3. ROOF TRUSSES SHALL BE DESIGNED FOR A MAXIMUM VERTICAL DEFLECTION OF

SNOW DRIFT = SEE DRIFT PLAN

WIND LOAD = SEE DESIGN LOADS

LIVE LOAD = 20 psf

SHALL BE USED WHICH IS LESS THAN 24" IN WIDTH ON FLOORS AND ROOFS.

SHEATHING SHALL BE CONTINUOUS ACROSS 2 SPANS, MINIMUM.

SPECIAL NAILING REQUIREMENTS AND WITH THE APPROPRIATE SCHEDULE IN CHAPTER

CONNECTED TO WOOD, HOLES IN STEEL SHALL BE 1/16" OVERSIZE, PROVIDE

SCHEDULE OF THE 2018 NCSBC (TABLE 2304.9.1) UNLESS OTHERWISE NOTED.

1.300.000 PSI

850 PSI

75 PSI

REACTION OF Wc/2L KIPS IN ACCORDANCE WITH PART 2 - "BEAM AND GIRDER

CONNECTIONS SHALL NOT HAVE LESS THAN 2 ROWS OF BOLTS. SEE ALSO

YELLOW PINE (SYP) OR HEM-FIR (HF) NO. 2 OR BETTER AND SHALL HAVE THE

FOLLOWING MINIMUM ALLOWABLE FIBER STRESSES AND PROPERTIES:

MODULAS OF ELASTICITY (E)

PRESSURE TREATED IN ACCORDANCE WITH AITC-109.

BENDING (Fb)

SHEAR (Fv)

RECEIVE ONE SHOP COAT AND ONE FIELD TOUCH UP COAT OF APPROVED

PAINT, EXCEPT WHERE GALVANIZED IS INDICATED ON THE DRAWINGS.

A325 HIGH STRENGTH BOTLTS, UNLESS NOTED OTHERWISE, BEAM

DESIGN" OF THE MANUAL OF STEEL CONSTRUCTION (9th EDITION). BU

DOUBLE ANGLE AND SHEAR TAB CONNECTION SCHEDULE(S) WHERE

7. CONTRACTOR TO FURNISH AND INSTALL 500 lbs. OF ADDITIONAL

MISCELANEOUS STEEL TO BE USED AT ENGINEER'S DISCRETION.

THE DESIGN. FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR

CONNECTOR MODEL NUMBERS SHOWN ARE "Strong-Tie" CONNECTORS AS APPROVAL OF THE STRUCTURAL ENGINEER. MATERIALS SHALL HAVE STANDARD G-60 COATING

TYPE 316L STAINLESS STEEL, INCLUDING FASTENERS.

WOOD FRAMING CONNECTORS:

MANUFACTURED WOOD STRUCTURAL COMPONENTS:

PRODUCTS (GANG-LAM LVL). OR APPROVED EQUAL, AND SHALL HAVE THE FOLLOWING MINIMUM ALLOWABLE FIBER STRESSES AND PROPERTIES: MODULAS OF ELASTICITY (E) BENDING (Fb) SHEAR (Fv)

ALLOWABLE FIBER STRESSES AND PROPERTIES: MODULAS OF ELASTICITY (E

BENDING (Fb) SHEAR (Fv) TENSION (Ft COMP. PERP. (Fc1)

COLD FORMED LIGHT GAGE STRUCTURAL STEEL:

WIND, & SEISMIC DESIGN LOADS LISTED ON THE STRUCTURAL DRAWINGS. OF THE WALL

INTERIOR WALL FRAMING EXTERIOR WALL FRAMING

MEMBERS

COATING CONFORMING TO ASTM A525, CLASS G60.

STRUCTURAL MEMBERS'

8. SUBMITTALS PRODUCT AND ACCESSORY INDICATED.

WHERE THE PROJECT IS LOCATED ATIONS SIGNED AND SEALED BY THE OLIA

PREPARATION.

LOCATED.

SPECIAL INSPECTION AND TESTING: 1. SPECIAL INSPECTION AND MINIMUM TESTING SHALL BE PERFORMED IN 1704.5.1 (MASONRY).

BE PAID FOR BY THE GENERAL CONTRACTOR

ENGINEER.

PRE-ENGINEERED WOOD FLOOR TRUSSES:

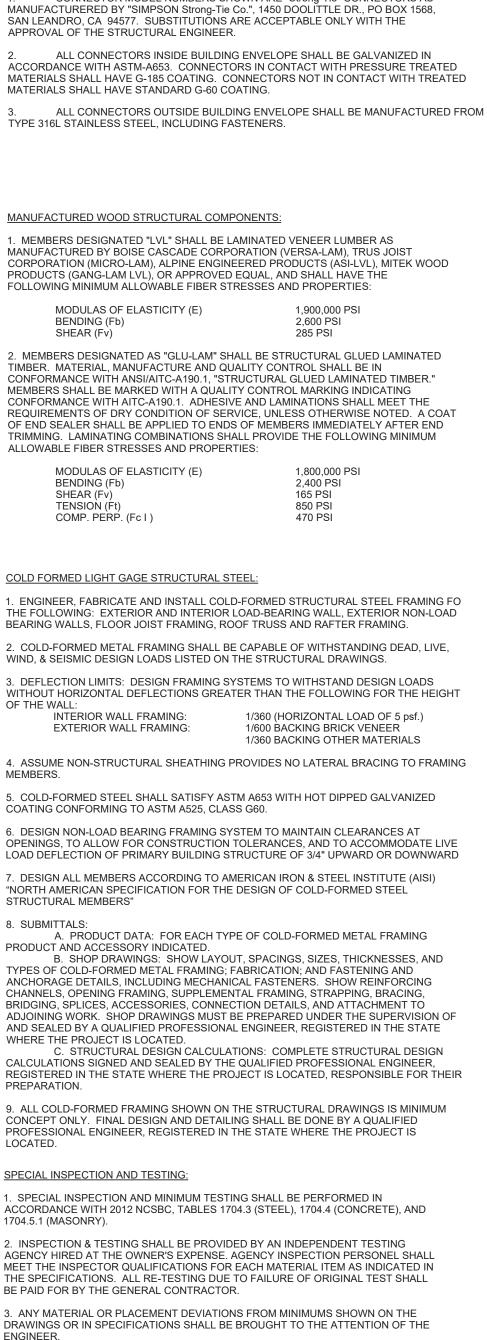
1. ENGINEERED WOOD TRUSS SYSTEMS SHALL BE DESIGNED BY SUPPLIER TO THE CONFIGURATION AND LOAD-CARRYING CAPACITY SHOWN ON THE DRAWINGS AND SPECIFICATIONS. TRUSSES SHALL BE DESIGNED TO SUSTAIN SELF WEIGHT OF THE

TRUSSES AND UNIFORM LOADS AS INDICATED ON THIS SHEET AND AS FOLLOWS: TOP CHORD: DEAD LOAD = 10 psf LIVE LOAD = 100 psf

DEAD LOAD = 10 psf BOTTOM CHORD: B) LIVE LOAD = 0 psf 2. FLOOR TRUSSES SHALL BE DESIGNED FOR A MAXIMUM VERTICAL DEFLECTION OF

L/480 LIVE LOAD AND L/360 TOTAL LOAD. 3. ALTERNATE TRUSS LAYOUTS ARE ACCEPTABLE ONLY AS A CHANGE ORDER WHICH WILL INCLUDE ENGINEERING CHARGES TO THE CONTRACTOR FOR REDESIGN FOR REVIEW PRIOR TO FABRICATION.

4. SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. SHOP DRAWINGS SHALL SHOW AND SPECIFY ALL CONNECTOR TYPES UTILIZED WITHIN RUSSES, AS WELL AS CONNECTORS UTILIZED IN ALL OTHER CONNECTIONS AND ATTACHMENTS BETWEEN TRUSSES OR COMPONENTS SUPPLIED AS PART OF THE ENGINEERED TRUSS SYSTEM. AN ERECTION DRAWING SHALL BE INCLUDED, IDENTIFYING ALL TRUSS SYSTEM COMPONENTS, AS WELL AS ALL PERMANENT BRACING REQUIRED FOR TRUSS DESIGN. SHOP DRAWINGS SHALL BEAR THE SIGNATURE AND SEAL OF A PROFESSIONAL ENGINEERED REGISTERED IN THE STATE OF THE PROJECT LOCATION.



STRUCTURAL ABBREVIATIONS: BBREV. DEFINITION ANCHOR BOLTS ADJACENT ABOVE FINISHED FLOOR ALTERNATE ARCHITECT BOTTOM CHORD EXTENSION BELOW FINISHED FLOOR BOTTOM BOTTOM OF x BOTTOM OF STEEL BUILDING BEAM BEARING CANTILEVER CENTERLINE CONTROL JOINT CI FAR CONCRETE MASONRY UNIT COLUMN CONCRETE CONSTRUCTION CONTINUOUS COMPLETE PENETRATION NAIL PENNY WEIGHT DEFORMED BAR ANCHOR DOUBLE DEGREE DFTAIL DIAMETER DIAGONAL DIMENSION DECK DOWN DRAWINGS DOWEL FACH FACH FACE EXPANSION JOINT ELEVATION EMBEDDED / EMBEDMENT ENGINEER EDGE OF DECK EDGE OF STEEL FOUAL FOUIPMENT EACH WAY EXISTING EXPANSION EXTERIOR FINISH FLOOR FLOOR DRAIN FOUNDATION FACE OF MASONRY FACE OF WALL FOOTING STEP FOOTING FIELD VERIFY GAUGE GALVANIZED GRADE BEAM HORIZONTAL HIGH STRENGTH EPOXY HOLLOW STRUCTURAL SECTION INSIDE FACE INTERIOR JOINT KIPS = 1000 LBS KNEE BRACE KIPS PER SQUARE INCH **KIPS PER LINEAR FOOT** POUNDS LONG LEG HORIZONTAL LONG LEG VERTICAL LOCATIONS LAMINATED STRAND LUMBER LAMINATED VENEER LUMBER I ONG WAY LIGHT WEIGHT CONCRETE MASONRY MAXIMUM MOMENT CONNECTION MECHANICA MANUFACTURER MIDDLE MINIMUM MISCELLANEOUS MASONRY PILASTER METAL NUMBER NOMINAL NOT TO SCALE NORMAL WEIGHT CONCRETE ON CENTER OUTSIDE FACE **OPPOSITE HAND** OPENING POWDER ACTUATED FASTENER PRECAST PRE-ENGINEERED PLATE POUNDS PER LINEAR FOOT POUNDS PER SQUARE FOOT POUNDS PER SQUARE INCH PARRALEL STRAND LUMBER PRESSURE TREATED RADIUS REFERENCE REINFORCEMENT REQUIRED REVISION SLIP CRITICAL SCHEDULE SELF DRILLING SCREW SECTION SHEET SIMILAR SLAB SLAB ON GRADE SPECIAL JOIST SPECIFICATION SQUARE STANDARD STEEL SHORT WAY SYMMETRICAL TOP CHORD EXTENSION TOP AND BOTTOM TOP OF CONCRETE TOP OF STEEL TOP OF WALL TOP OF xx THICKNESS TIE JOIST TYPICAL UNLESS NOTED OTHERWISE VERTICAL VERIEY IN FIELD WELDED WIRE FABRIC WELDED WIRE MESH

ADJ AFF

ARCH

BCX

BOT

B.O.xx

BLDG

CANT

CLR

CMU

COL CONC

CONST

CONT

DBA

DEG DET,DTL

DIAG

DWGS

EL, ELEV

ENGR

EQ EQUIP

EXIST

EW

EXF EXT

FOM

FOW

HORZ

LLV

LWC

MAS

MAX

MFR

MID

MIN

MISC

MTL

No / #

OPNG

PSF

PSI

PSL

REINF

REQD

SCHD SDS SECT

SIM

SOG

SQ STD

STL

SW

SYM

TCX

T&B TOC TOS TOW

T.O.xx

THK

TYP

UNO

VERT

VIF

WWF

WWM

SPEC

REV

NOM

EOD EOS

AI T



PROJECT IN	FORMATION	DESIGN PROFE	SSIONAL INFORMATION	CONSTRUCTION AND SITE		
PROJECT NAME	Icehouse Restaurant, Swansboro	ARCHITECT/ENGINEER/CONSULTANT	Dereck Rabun, PE	INSPECTION CATEGORIES	Concrete, Structural Steel, Deep Foundations	
PROJECT DESCRIPTION	Commercial	FIRM	FDR Engineers	SEISMIC DESIGN CATEGORY	В	
LOCATION	Swanboro, Onslow County, NC	ADDRESS	13200 Strickland Rd., Suite 114 Box 332, Raleigh, NC 27613	WIND SPEED	140 MPH	
OWNER		PHONE	(919) 957-5100	EXPOSURE CATEGORY	С	

VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS & WASHERS:			
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.		х	Al A M
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED (SHOP DRAWINGS)		Х	
2. INSPECTION OF HIGH-STRENGTH BOLTING:			
a. SNUG-TIGHT JOINTS		X	
b. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITH MATCHMARKING, TWIST-OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION.		х	
c. PRETENSIONED AND SLIP-CRITICAL JOINTS USING TURN-OF-NUT WITHOUT MATCHMARKING OR CALIBRATED METHODS OF INSTALLATION.			
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:		l	
a. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360.		Х	
b. FOR OTHER STEEL, IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.		х	М
c. MANUFACTURER'S CERTIFIED MILL TEST REPORTS.		Х	
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:			
a. IDENTIFICATION MARKINGS TO COFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.		Х	Al A
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED (SHOP DRAWINGS)		Х	
5. INSPECTION WELDING:	· · · ·		
a. STRUCTURAL STEEL AND COLD-FORMED STEEL DECK:			
1) COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS.			
2) MULTIPASS FILLET WELDS.			
3) SINGLE-PASS FILLET WELDS > 5/16"			
4) PLUG AND SLOT WELDS.			
5) SINGLE-PASS FILLET WELDS \leq 5/16"		Х	
6) FLOOR AND ROOF DECK WELDS.			
b) REINFORCING STEEL:			
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.			
2) REINFORCING STEEL RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.			
3) SHEAR REINFORCEMENT.			
4) OTHER REINFORCING STEEL.		x	
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:	I	I	
a. DETAILS SUCH AS BRACING AND STIFFENEING.		X	
b. MEMBER LOCATIONS.		X	
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.		X	

REFERENCED STANDARD	IBC REFERENCE	VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC	REFERENCED STANDARD	IBC REFERENCE
		1. INSPECTION OF REINFORCING STEEL, INCLUDING PRESTRESSING TENDONS, AND PLACEMENT.		х	ACI 318: 3.5, 7.1-7.7	1913.4
AISC 360, SECTION A3.3 AND APPLICABLE ASTM MATERIAL STANDARDS		2. INSPECTION OF REINFORCING STEEL WELDING IN ACCORDANCE WITH TABLE 1704.3, ITEM 5b.			AWS D1.4 ACI 318: 3.5.2	
		3. INSPECTION BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED OR WHERE STRENGTH DESIGN IS USED.	x		ACI 318: 8.1.3, 21.2.8	1911.5, 1912.1
		4. INSPECTION OF ANCHORS INSTALLED IN HARDENED CONCRETE.		Х	ACI 318: 3.8.6, 8.1.3, 21.2.8	1912.1
		5. VERIFYING USE OF REQUIRED DESIGN MIX.		Х	ACI 318: Ch 4, 5.2-5.4	1904.3, 1913.2, 1913.3
AISC 360, SECTION M2.5	1704.3.3	6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X		ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1913.10
		7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X		ACI 318: 5.9, 5.10	1913.6, 1913.7, 1913.8
		8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.		Х	ACI 318: 5.11-5.13	1913.9
AISC 360, SECTION M5.5		9. INSPECTION OF PRESTRESSED CONCRETE:				
	_	a. APPLICATION OF PRESTRESSING FORCES.			ACI 318: 18:20	
APPLICABLE ASTM /ATERIAL STANDARDS		b. GROUTING OF BONDED PRESTRESSING TENDONS IN THE SEISMIC-FORCE-RESISTING SYSTEM.			ACI 318: 18.18.4	
		10. ERECTION OF PRECAST CONCRETE MEMBERS.			ACI 318: Ch 16	
AISC 360, SECTION A3.5 AND APPLICABLE AWS A5 DOCUMENTS		11. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POSTTENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.			ACI 318: 6.2	
		12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.		Х	ACI 318: 6.1.1	
		REQUIRED VERIFICATION AND INSPECTION OF DR		IDATION		1
		ELEMENTS - 2012 NCSBC (TABLE 1704.8)				
			FREQUENCY O	F INSPECTION		

	THE GOLINOT C	
VERIFICATION AND INSPECTION	CONTINUOUS	PERIODIC
1. VERIFY ELEMENT MATERIALS, SIZES AND LENGTHS COMPLY WITH THE REQUIREMENTS.	х	
2. DETERMINE CAPACITIES OF TEST ELEMENTS AND CONDUCT ADDITIONAL LOAD TESTS, AS REQUIRED.	Х	
3. OBSERVE DRIVING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT.	х	
4. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM TYPE AND SIZE OF HAMMER, RECORD NUMBER OF BLOWS PER FOOT OF PENETRATION, DETERMINE REQUIRED PENETRATIONS TO ACHIEVE DESIGN CAPACITY, RECORD TIP AND BUTT ELEVATIONS AND DOCUMENT ANY CHANGE TO FOUNDATION ELEMENT.	Х	
5. FOR STEEL ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE SECTION 1704.3.		Х
6. FOR CONCRETE FILLED ELEMENTS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1704.4.		
7. FOR SPECIALTY ELEMENTS, PERFORM ADDITIONAL INSPECTIONS AS DETERMINED BY THE REGISTERED DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE.		Х

1704.3.2

1704.3.1

AWS D1.1

AWS D1.3

AWS D1.4 ACI 318: SECTION 3.5.2

ions	

SPECIAL INSPECTION AND TESTING:

1. SPECIAL INSPECTION AND MINIMUM TESTING SHALL BE PERFORMED IN ACCORDANCE WITH 2012 NCSBC, TABLES 1704.3 (STEEL), 1704.4 (CONCRETE), AND 1704.5.1 (MASONRY). 2. INSPECTION & TESTING SHALL BE PROVIDED BY AN INDEPENDENT TESTING AGENCY HIRED AT THE OWNER'S EXPENSE. AGENCY INSPECTION PERSONEL SHALL MEET THE INSPECTOR QUALIFICATIONS FOR EACH MATERIAL ITEM AS INDICATED IN THE SPECIFICATIONS. ALL RE-TESTING DUE TO FAILURE OF ORIGINAL TEST SHALL BE PAID FOR BY THE GENERAL CONTRACTOR.

3. ANY MATERIAL OR PLACEMENT DEVIATIONS FROM MINIMUMS SHOWN ON THE DRAWINGS OR IN SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

-13200 STRICKLAND ROAD SUITE 114, BOX 332 RALEIGH, NC 27613 p. 919.957.5100 - f. 919.957.5101 www.fdr-eng.com jfejfar@fdr-eng.com ICE HOUSE RESTAURANT FRONT ST. & MOORE ST. 4 (O, NC 28584 SWANSBOR SPECIAL INSPECTIONS DESIGNED BY: DLR DRAWN BY: CBA APPROVED BY: DLR PROJECT #: 19-018 11/15/2019 DATE:

Revision

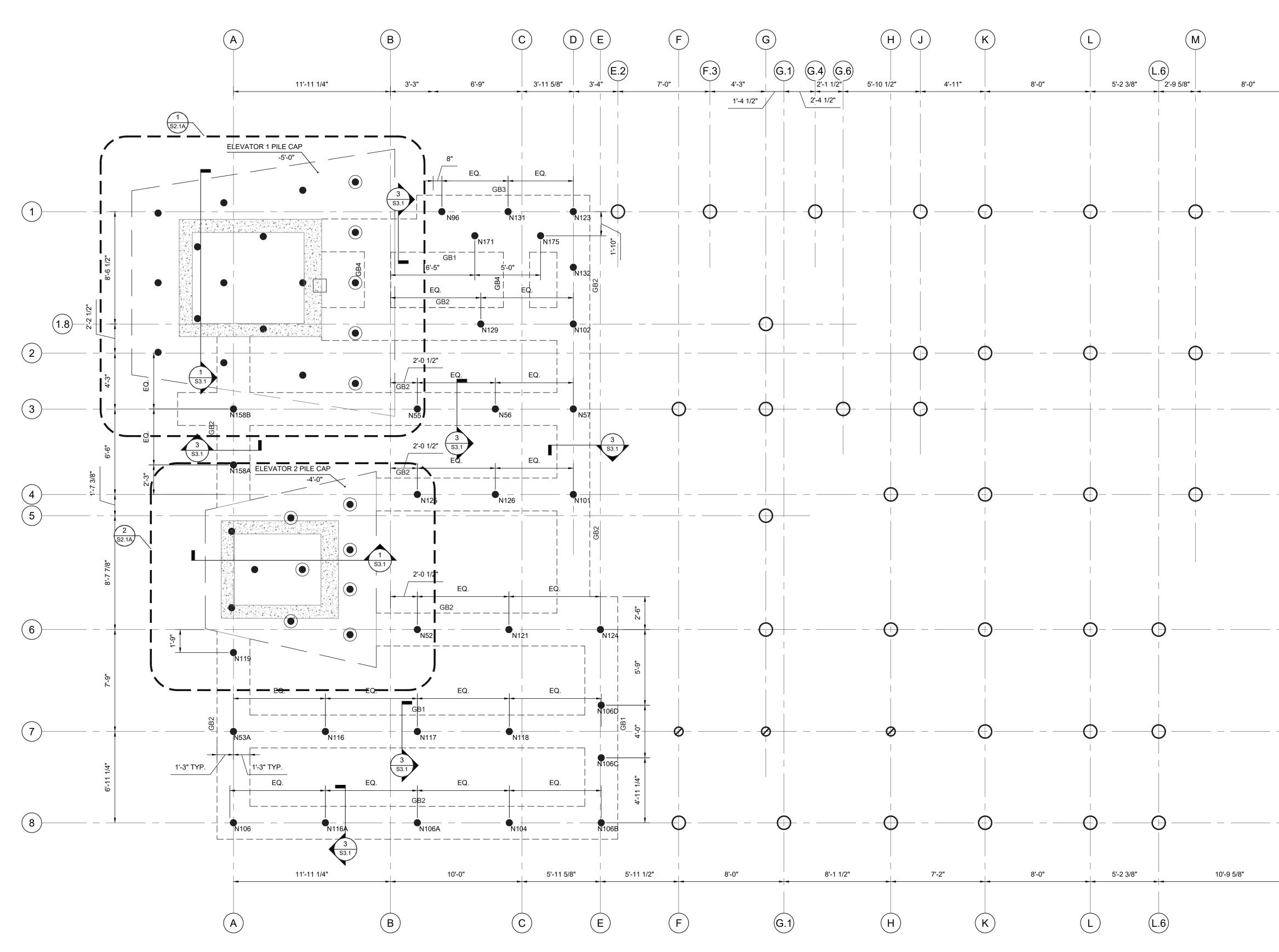
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		GRADE BEA	M SCHEDULE					PILE CAP S	CHEDULE		
	SIZE REINFORCEMENT					MARK		SIZE			DRCING
MARK	012						WIDTH (X)	LENGTH (Y)	DEPTH	BOTTOM BARS	TOP BARS
	WIDTH	HEIGHT	BOTTOM BARS	TOP BARS	STIRRUPS	ELEVATOR 1			32"	#8 @ 13" EA. WAY	#8 @ 13" EA. WAY
GB1	30"	32"	(4) #6	(4) #6	#4 @ 16"	ELEVATOR 2	SEE	S2.1A	32"	#8 @ 14" EA. WAY	#8 @ 14" EA. WAY
GB2	30"	32"	(3) #6	(3) #6	#4 @ 16"			I			
GB3	28"	32"	(3) #6	(3) #6	#4 @ 16"						
GB4	24"	24"	(3) #5	-	#4 @ 16"						

			M PILE FORCES (SER) (-Shear [k] Y-Axial [-0.008 11.9 0.003 4.0 0.01 3.1 -0.47 5.1 0.007 4.3 -0.141 9.1 -0.012 4.9 -0.141 9.1 -0.011 8.9 0.007 15.1 0.005 13.6 0.013 14.9 -0.141 9.1 -0.015 10.0 -0.017 13.6 0.013 14.9 -0.014 9.9 -0.015 10.0 -0.057 11.0 -0.057 11.0 -0.057 11.0 -0.057 13.7 -0.008 11.9 0.017 9.4 0.378 18.0 -0.017 13.7 -0.008 11.9 0.04 20.3 -0.14 13.3 0.75 0.37	k] Z-Shear [k] 98 -0.5198 28 -0.5908 04 -0.5728 58 -0.4678 66 -0.5968 61 -0.6298 62 -0.6378 63 -0.5778 65 -0.667 72 -0.669 69 -0.648 86 -0.7354 52 -0.649 69 -0.649 69 -0.649 72 -0.669 69 -0.7354 52 -0.7574 54 -0.8024 07 -0.8704 02 -0.912 98 -0.915 63 -0.624 01 -1.735 89 -0.614 07 -0.645 34 -0.645 34 -0.645 34 -0.645 34 -0.645 34 -0.645 34 -0.645 34 -0.645			13200 STRICKLAN SUITE 114, BO RALEIGH, NC2 p. 919.957.5100 - f. 9 www.fdr-eng.0 jfejfar@fdr-eng Jfejfar@fdr-eng	X 332 27613 19.957.5101 com .com
_	-3		+X	<u>32</u> -0.702			<i></i>	
	PC #	PILE CAP MARK OP OF PILE CAF BELOW FINISHED ST PASS UNDEF E CANNOT BE R	FLOOR	SCALE HSS5X5X5/10 BP2 -4'-0" BASEPLAT MARK EE TYPICAL FOR RADE BEAM.	E: 1/4" = 1'-0"	D FLOOR	Project Name ICE HOUSE RESTAURANT FRONT ST. & MOORE ST.	SWANSBORO, NC 28584
	TYPICAL G 5. ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●	RADE BEAM ELE NOTES STEEL P ENOTES STEEL I ENOTES 12" MIN. ENOTES 8" MIN. I ENOTES 8" MIN.	PILE [LOADS PER SC PILE WITH UPLIFT [L DIAMETER WOOD F DIAMETER WOOD PI ALL CONSTRUCTION ELEVATIONS WITH CES EAM SHALL COINCIE ADE BEAMS UNLESS APS TO BE MONOLI	HEDULE, S2.1 (OADS PER SCI PILE (SEE S5.3) LE (SEE S5.3) N DETAILS SEE ARCHITECTUR DE WITH COLUR S NOTED OTHE THIC WHERE T	OR S2.1A] (SEE S3.1) HEDULE, S2.1A] E S5.4 RAL DRAWINGS BEFOR MN CENTERLINE UNLE RWISE.	SS PER	DESIGNED BY: DRAWN BY: APPROVED BY:	DLR CBA DLR

SHEET REVISED 1/10/2020

PROJECT #:

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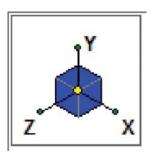
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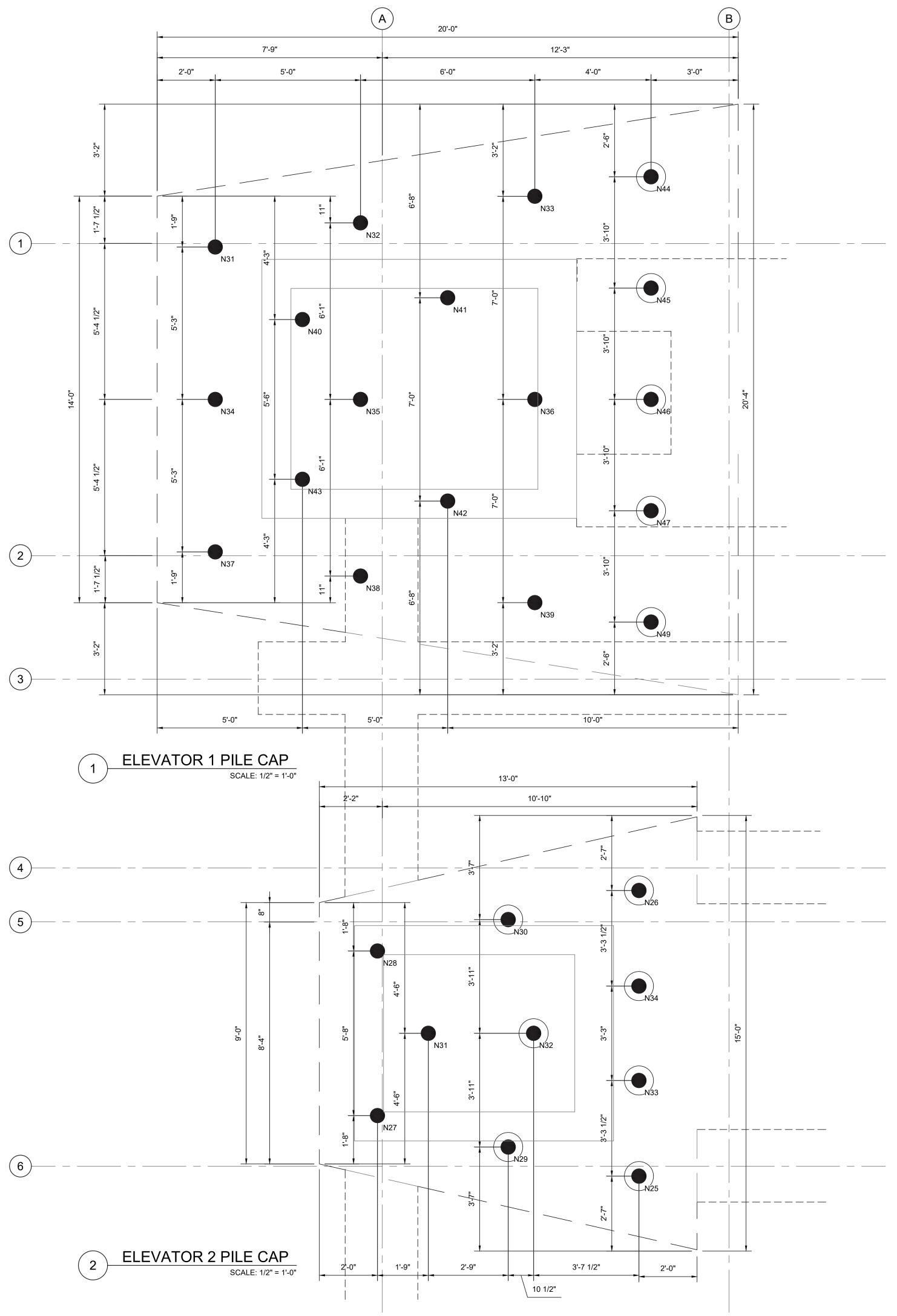
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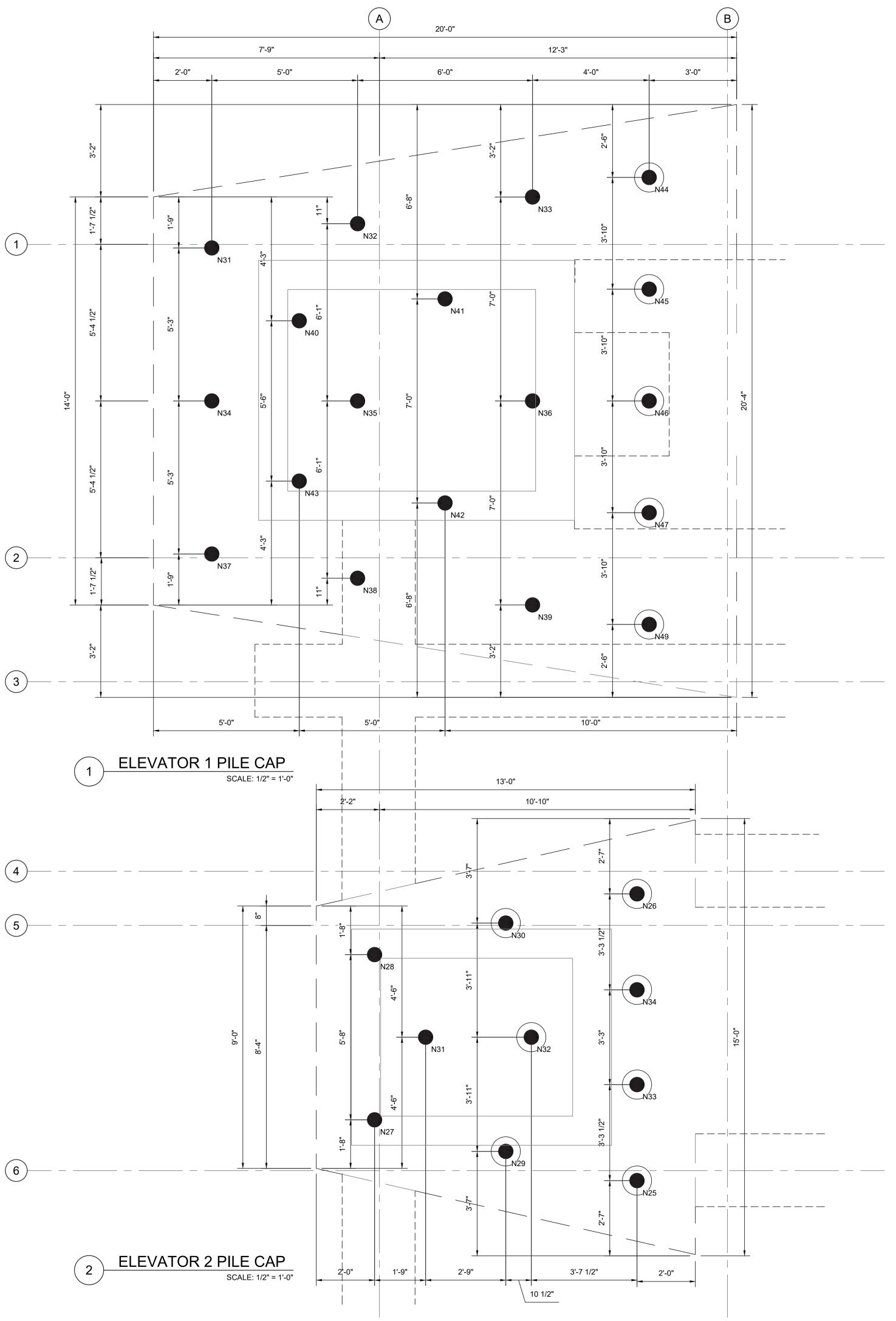
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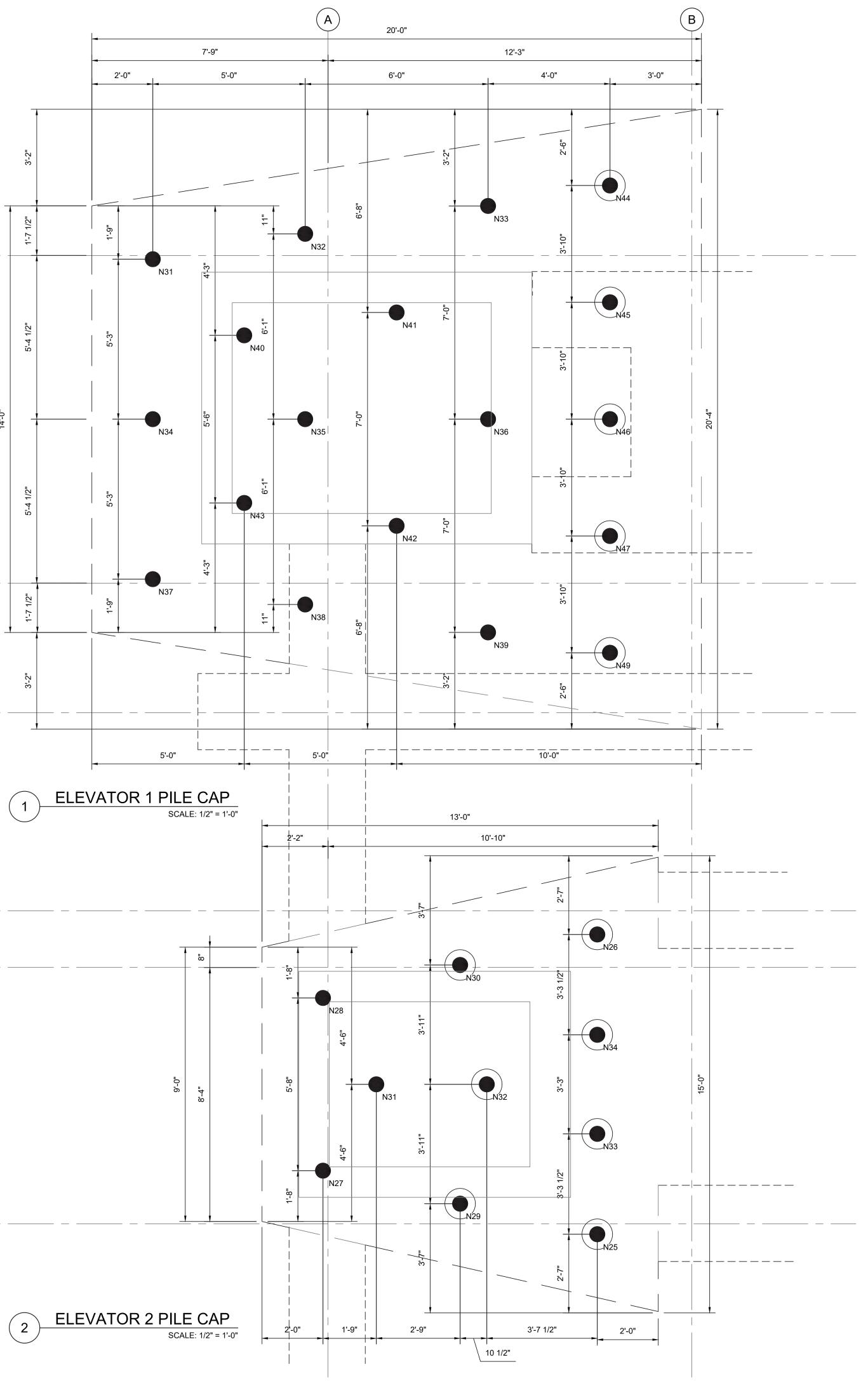
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С	Point Labe	X[k]	Y[k]	Z[k]	MX[k-ft]	MY]k=ft]	MZ[k-ft]
24	N31	0.049	-6.992	-9.828	0	0	0
24	N32	-0.968	-4.237	-19.66	0	0	0
24	N33	-3.359	-1.741	-10.275	0	0	0
24	N40	-6.352	-5.492	-18.503	0	0	0
24	N41	-1.329	-2.989	-24.143	0	0	0
24	N34	-2.716	-6.997	-8.417	0	0	0
24	N35	-2.342	-4.241	-9.371	0	0	0
24	N36	-3.792	-1.742	-6.068	0	0	0
24	N43	-2.167	-5.495	-15.076	0	0	0
24	N42	-4.478	-2.991	-26.374	0	0	0
24	N37	-2.876	-6.999	-10.52	0	0	0
24	N38	-3.462	-4.243	-16.646	0	0	0
24	N39	-1.805	-1.744	-10.711	0	0	0
24	N44	-1.655	37.771	-3.696	0	0	0
24	N45	-1.368	57.285	-7.346	0	0	0
24	N46	-3.198	69.008	-5.537	0	0	0
24	N47	-1.754	51.101	-8.225	0	0	0
24	N49	0.171	19.811	-2.911	0	0	0
			+X+ FORCE	Z>			

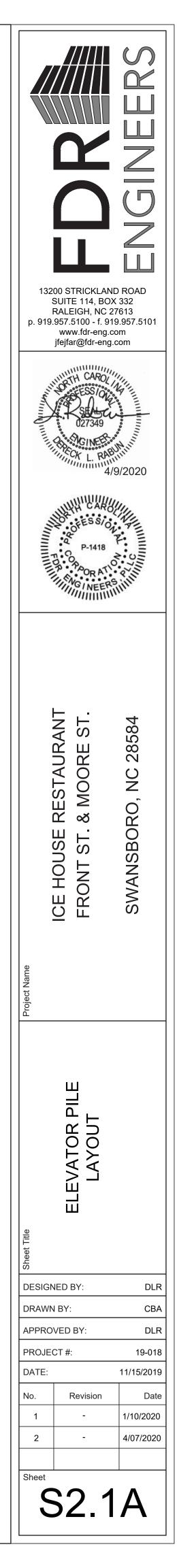


		ELEVAT	OR 2 PILE F	ORCE SCHI	EDULE		
LC	Point Label	X[k]	Y[k]	Z[k]	MX[k-ft]	MY]k=ft]	MZ[k-ft]
	1 N25	9.284	61.57	1.338	0	0	0
	1 N26	9.62	62.009	-1.566	0	0	C
	1 N33	13.024	64.985	-0.793	0	0	C
	1 N34	13.024	65.127	0.197	0	0	C
	1 N32	10.949	23.923	-0.43	0	0	C
	1 N29	20.086	6.077	-2.168	0	0	C
	1 N30	21.819	6.174	1.772	0	0	C
	1 N31	12.845	-26.337	0.504	0	0	C
	1 N27	22.901	-52.182	2.224	0	0	C
	1 N28	23.117	-52.363	-1.077	0	0	C
			←+X FORCE A (+Y IS UP				

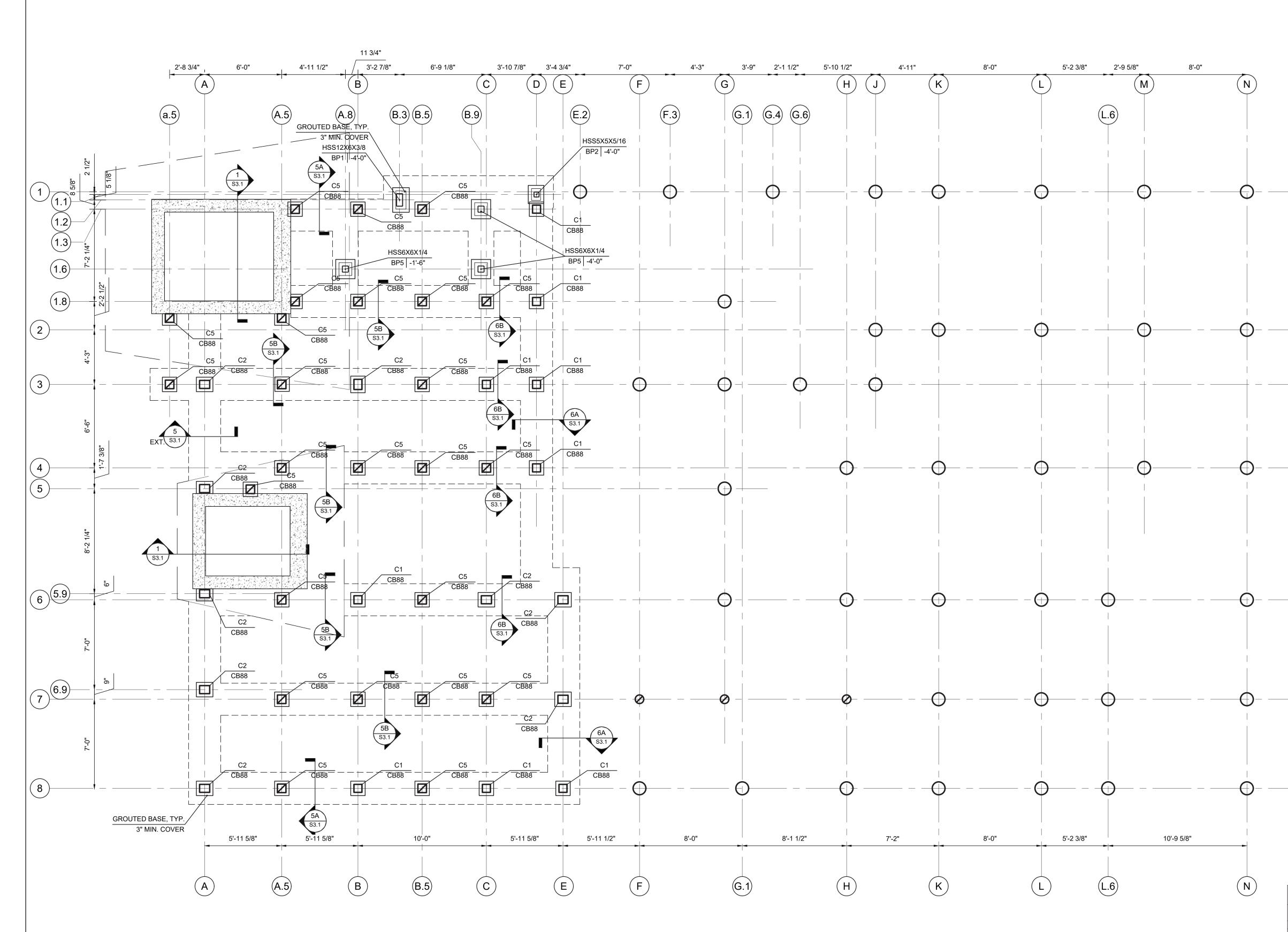








ADDENDUM 4/07/2020



2					13200 STRICKLAN SUITE 114, BO RALEIGH, NC p. 919.957.5100 - f. 9 www.fdr-eng jfejfar@fdr-eng jfejfar@fdr-eng	DX 332 27613 019.957.5101 .com g.com
4	1 NOTES: 1. CE			: 1/4" = 1'-0"	ICE HOUSE RESTAURANT FRONT ST. & MOORE ST.	SWANSBORO, NC 28584
7	 C C	ENOTES 12" DIAMETER WOO ENOTES 8" DIAMETER WOOD ENOTES WOOD COLUMN TO ENOTES WOOD COLUMN TO ENOTES 8" CMU WALL TO BE ENOTES CAST IN PLACE COM CAL MASONRY WALL CONST	D PILE (SEE S5.3) MAIN LEVEL DECK LEVEL E REINFORCED (SEE S4.2, S NCRETE WALL (SEE S4.2 & S RUCTION DETAILS SEE S S	S4.3) 5.4	Project Name	
MARK C1 C2	CONSTRU 5. PROVIDE SLAB ON 6. C.J. DENC AND 2 ON COL SIZE 8X8 SP #2 8X10 SP #2	L DIMENSIONS & ELEVATION CTION COMMENCES #4 AT ALL INTERIOR SLAB EE GRADE REINFORCING TES CONTROL JOINT OR CO SHEET S5.4 UMN SCHEDULE BASE ELEVATION GRADE BEAM (-4'-0") GRADE BEAM (-4'-0")	DGES AND CORNERS. SEE DNSTRUCTION JOINT LOCAT TOP ELEVATION MAIN FLOOR (11'-9") MAIN FLOOR (11'-9")	3/S5.4 FOR TYPICAL	Sheet Title Sheet Title DESIGNED BY:	DLR
C3 C4 C5	HSS10X5X ³ / ₈ HSS5X5X ¹ / ₄ 8X8 SP#2	GRADE BEAM (-4'-0") GRADE BEAM (-4'-0")	ROOF (33'-4 ¹ / ₂ ") ROOF (33'-4 ¹ / ₂ ") WATER LEVEL DECK (0'-0")		DRAWN BY: APPROVED BY: PROJECT #: DATE:	CBA DLR 19-018 11/15/2019

SHEET REVISED 1/10/2020

2 SHEET REVISED 4/07/2020

Date

1/10/2020

4/07/2020

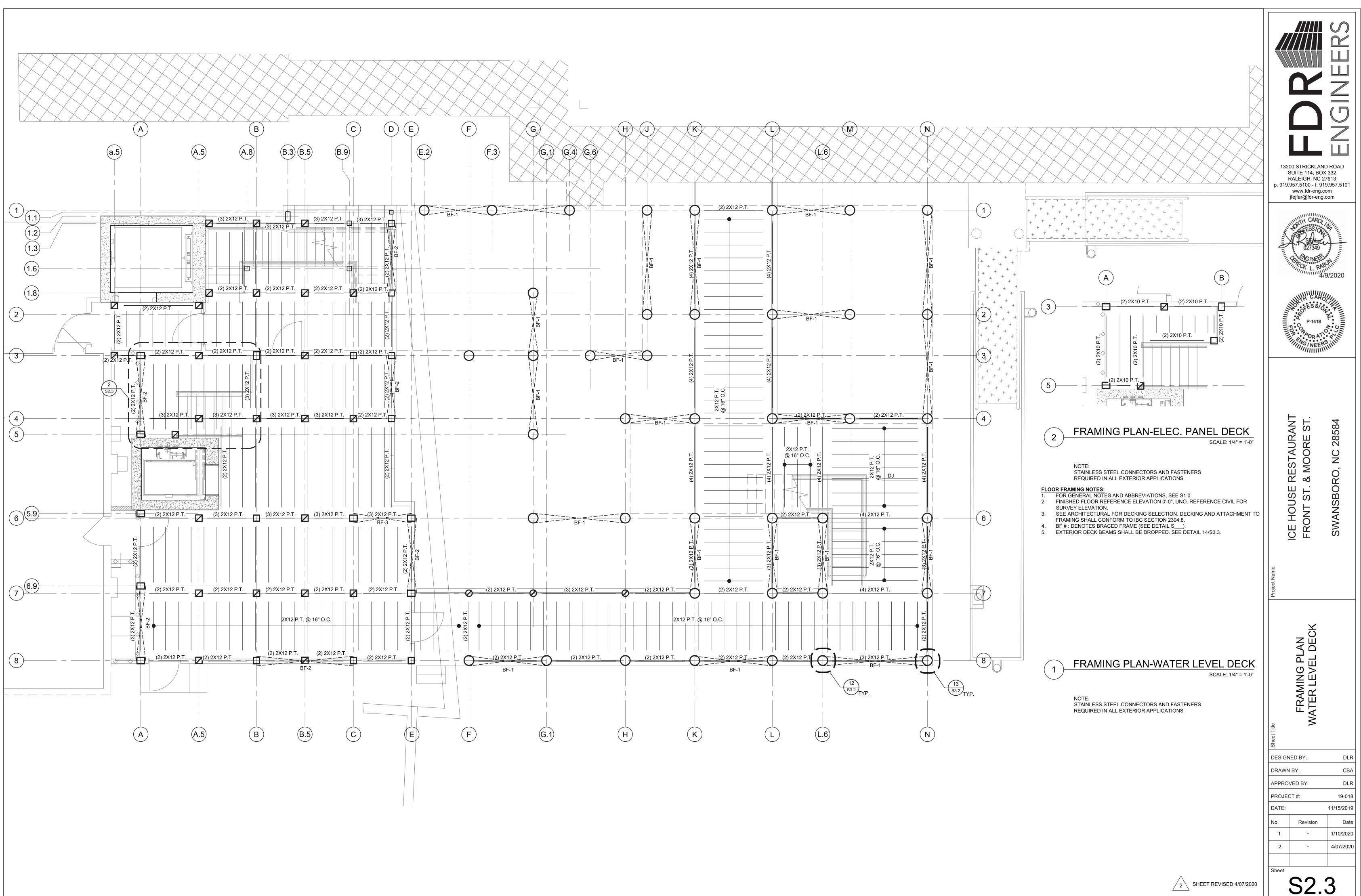
Revision

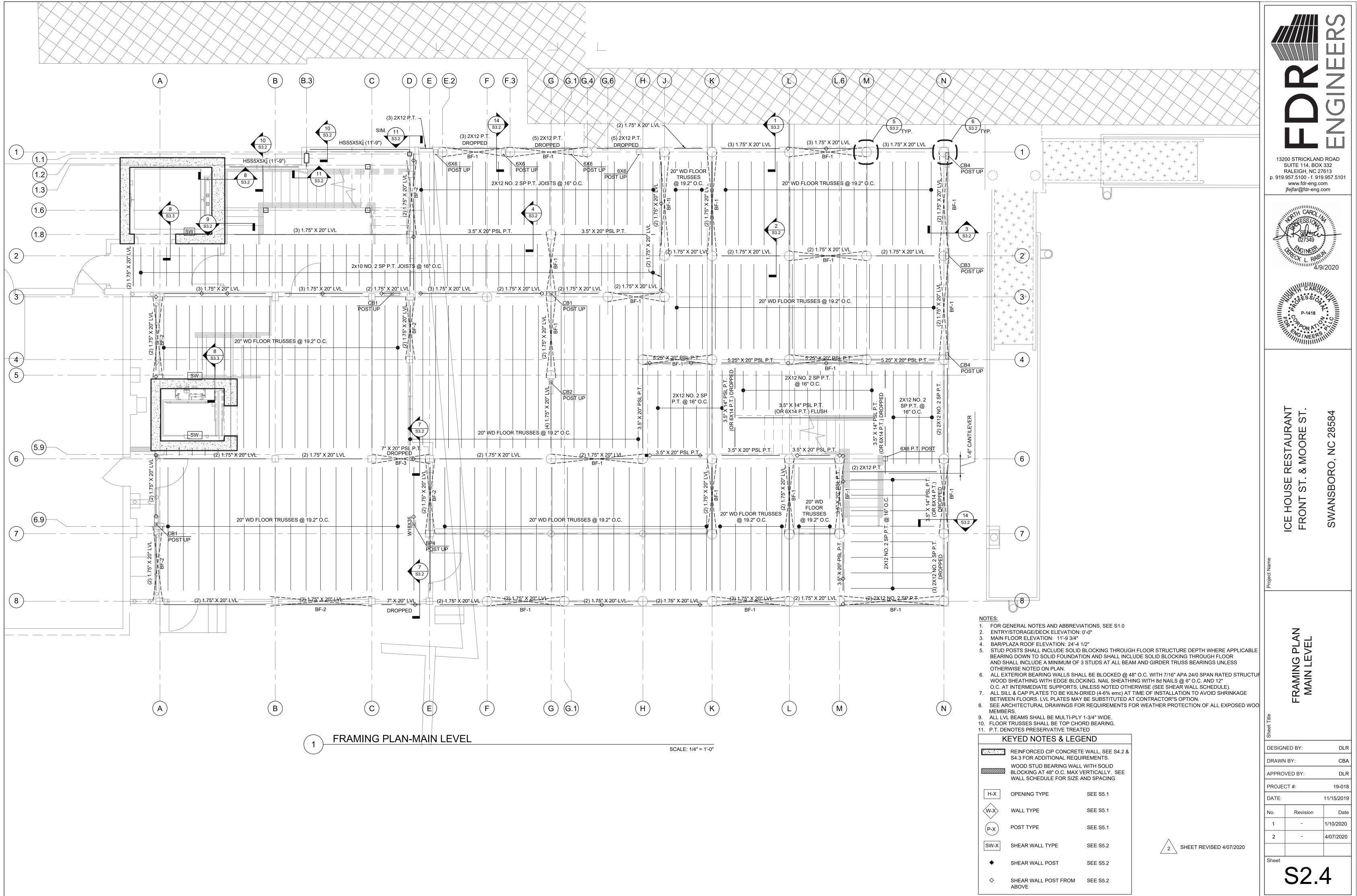
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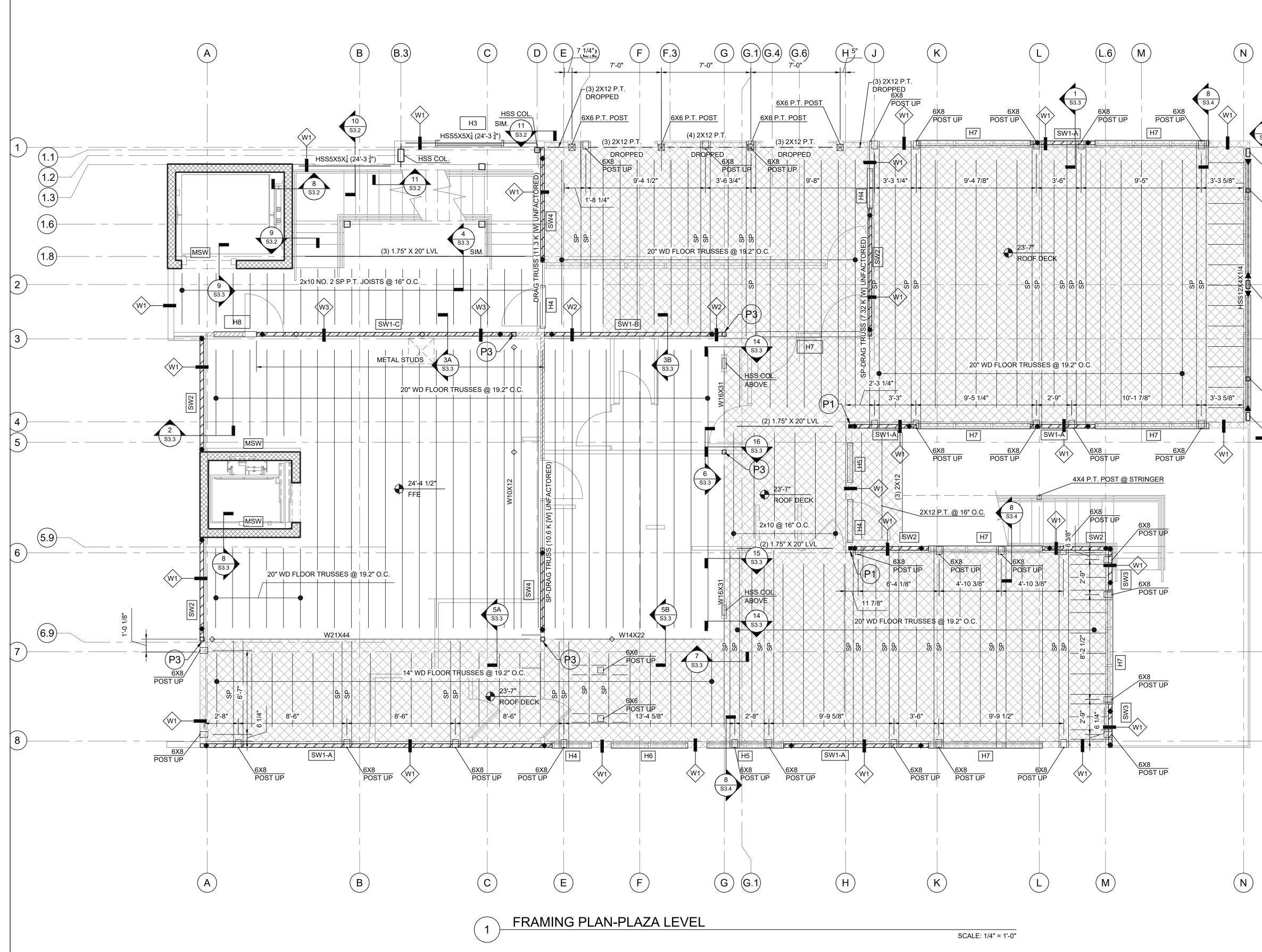
S2.2

2

Sheet



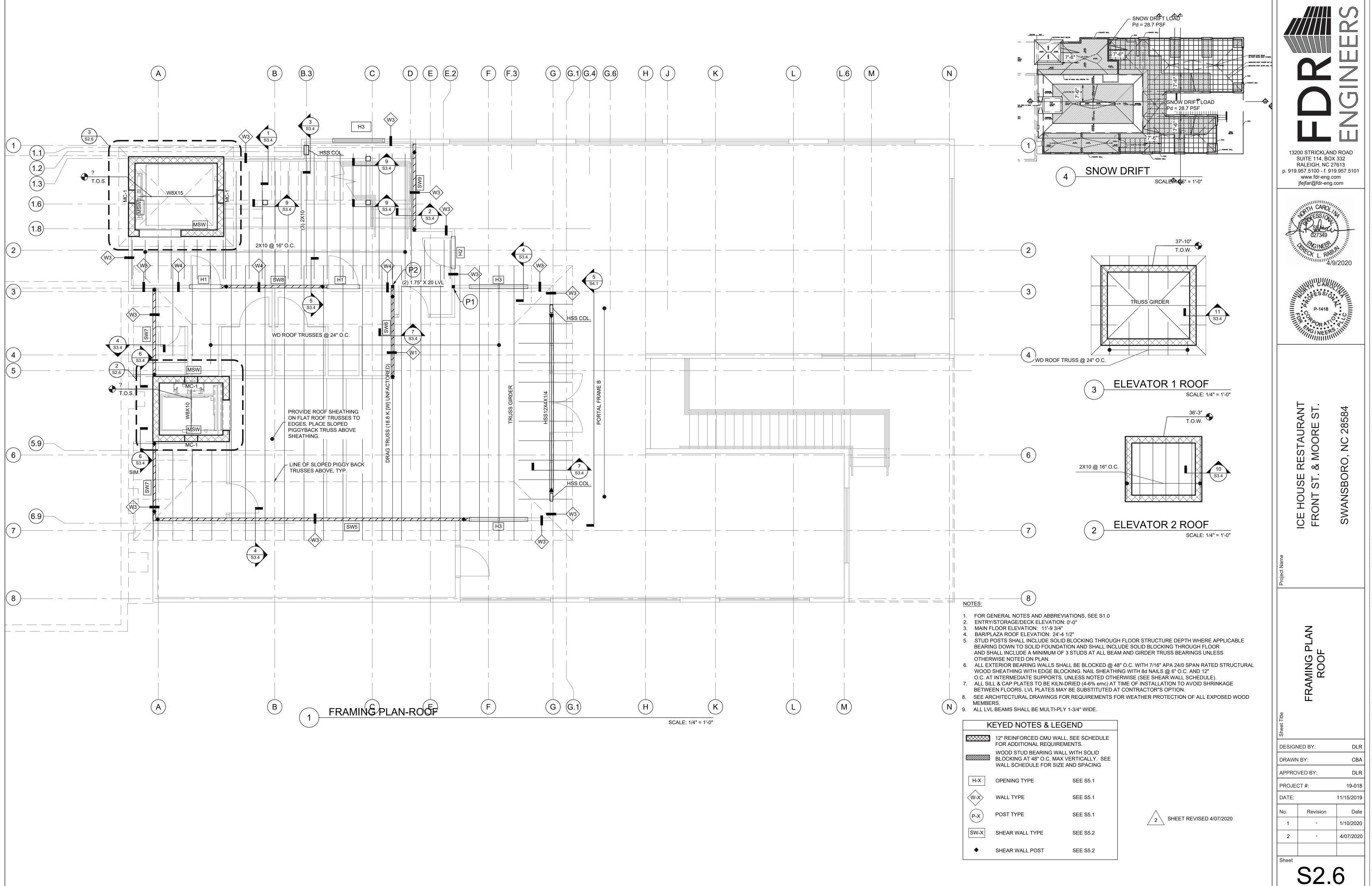




NOTES:

- 1. FOR GENERAL NOTES AND ABBREVIATIONS, SEE S1.0
- 2. ENTRY/STORAGE/DECK ELEVATION: 0'-0"
- 3. MAIN FLOOR ELEVATION: 11'-9 3/4" 4. BAR/PLAZA ROOF ELEVATION: 24'-4 1/2"
- 5. STUD POSTS SHALL INCLUDE SOLID BLOCKING THROUGH BEARING DOWN TO SOLID FOUNDATION AND SHALL INCLUD AND SHALL INCLUDE A MINIMUM OF 3 STUDS AT ALL BEAM OTHERWISE NOTED ON PLAN.
- 6. ALL EXTERIOR BEARING WALLS SHALL BE BLOCKED @ 48" WOOD SHEATHING WITH EDGE BLOCKING. NAIL SHEATHING
- O.C. AT INTERMEDIATE SUPPORTS, UNLESS NOTED OTHERV 7. ALL SILL & CAP PLATES TO BE KILN-DRIED (4-6% emc) AT TIM BETWEEN FLOORS. LVL PLATES MAY BE SUBSTITUTED AT C
- 8. SEE ARCHITECTURAL DRAWINGS FOR REQUIREMENTS FOR MEMBERS.
- 9. ALL LVL BEAMS SHALL BE MULTI-PLY 1-3/4" WIDE.
- 10. SP DENOTES SPECIAL TRUSS LOADING (SEE DETAIL _/S_._ OR PLAN NOTE)

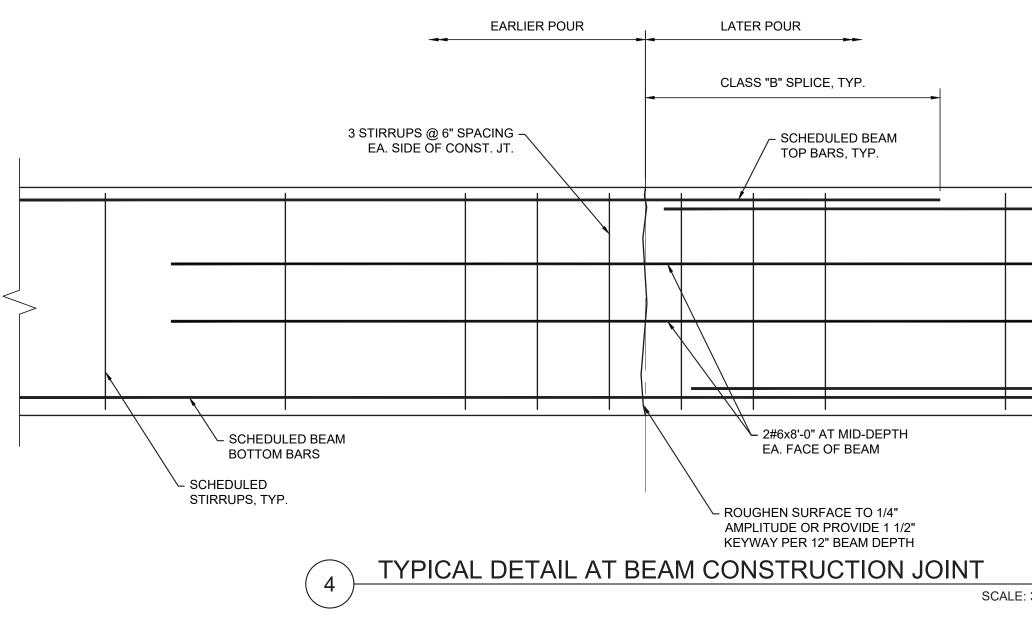
4 54.1 HSS COL. HSS COL. HSS 4X4X1/4 POST UP AND A AND		A A B A A B A A B A A B A A B A A B A A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B A B
(4)		ICE HOUSE RESTAURANT FRONT ST. & MOORE ST. SWANSBORO, NC 28584
8		FRAMING PLAN ROOF PLAZA
A FLOOR STRUCTURE DEPTH WHERE APPLICABLE JDE SOLID BLOCKING THROUGH FLOOR A AND GIRDER TRUSS BEARINGS UNLESS " O.C. WITH 7/16" APA 24/0 SPAN RATED STRUCTURAL NG WITH 8d NAILS @ 6" O.C. AND 12" RWISE (SEE SHEAR WALL SCHEDULE). IME OF INSTALLATION TO AVOID SHRINKAGE CONTRACTOR"S OPTION. DR WEATHER PROTECTION OF ALL EXPOSED WOOD OR PLAN NOTE)	2 SHEET REVISED 4/07/2020 KEYED NOTES & LEGEND I2" REINFORCED CMU WALL, SEE SCHEDULE FOR ADDITIONAL REQUIREMENTS. WOOD STUD BEARING WALL WITH SOLID BLOCKING AT 48" O.C. MAX VERTICALLY. SEE WALL SCHEDULE FOR SIZE AND SPACING ROOF DECK ELEVATION OF 23'- 7" H-X OPENING TYPE V-X WALL TYPE V-X POST TYPE SHEAR WALL TYPE SEE S5.1 SW-X SHEAR WALL TYPE SHEAR WALL POST SEE S5.2 SHEAR WALL POST FROM SEE S5.2 ABOVE SEE S5.2	L C PL C PL TO PL TO PL TO PL TO PL TO PROJECT BY: DLR PROJECT #: 19-018 DATE: 11/15/2019 No. Revision Date 1 - 1/10/2020 2 - 4/07/2020 Sheet Sheet

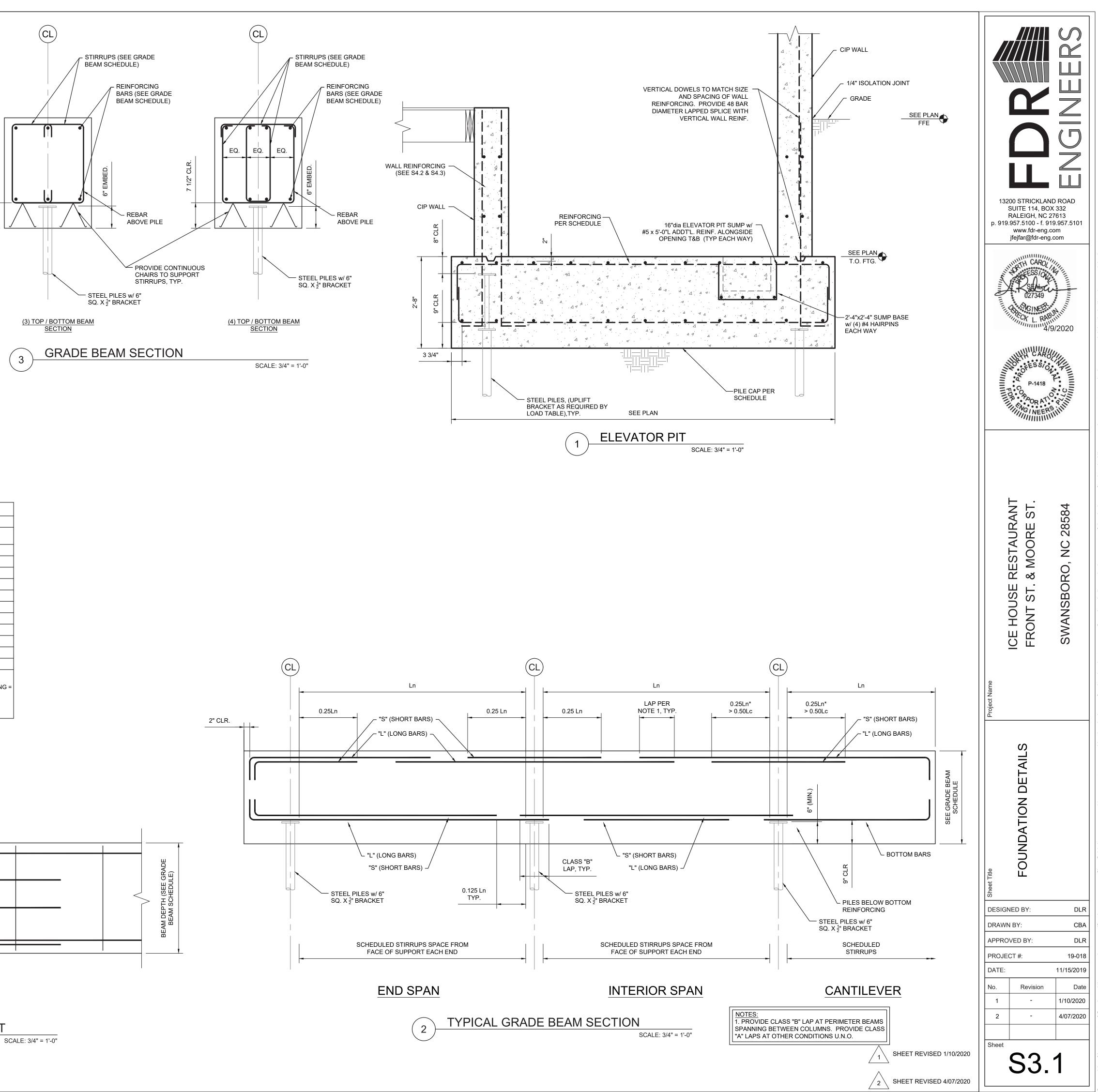


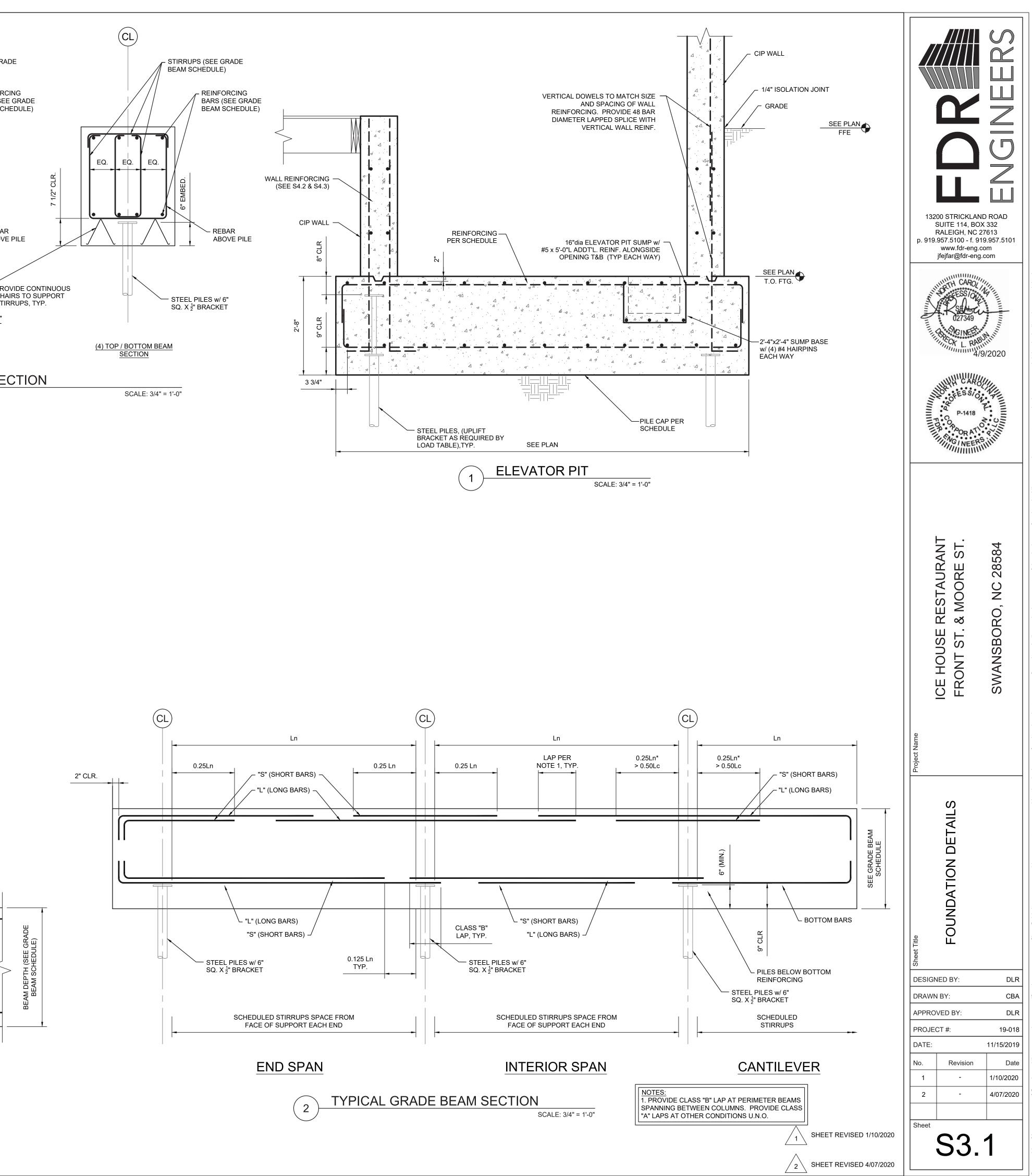
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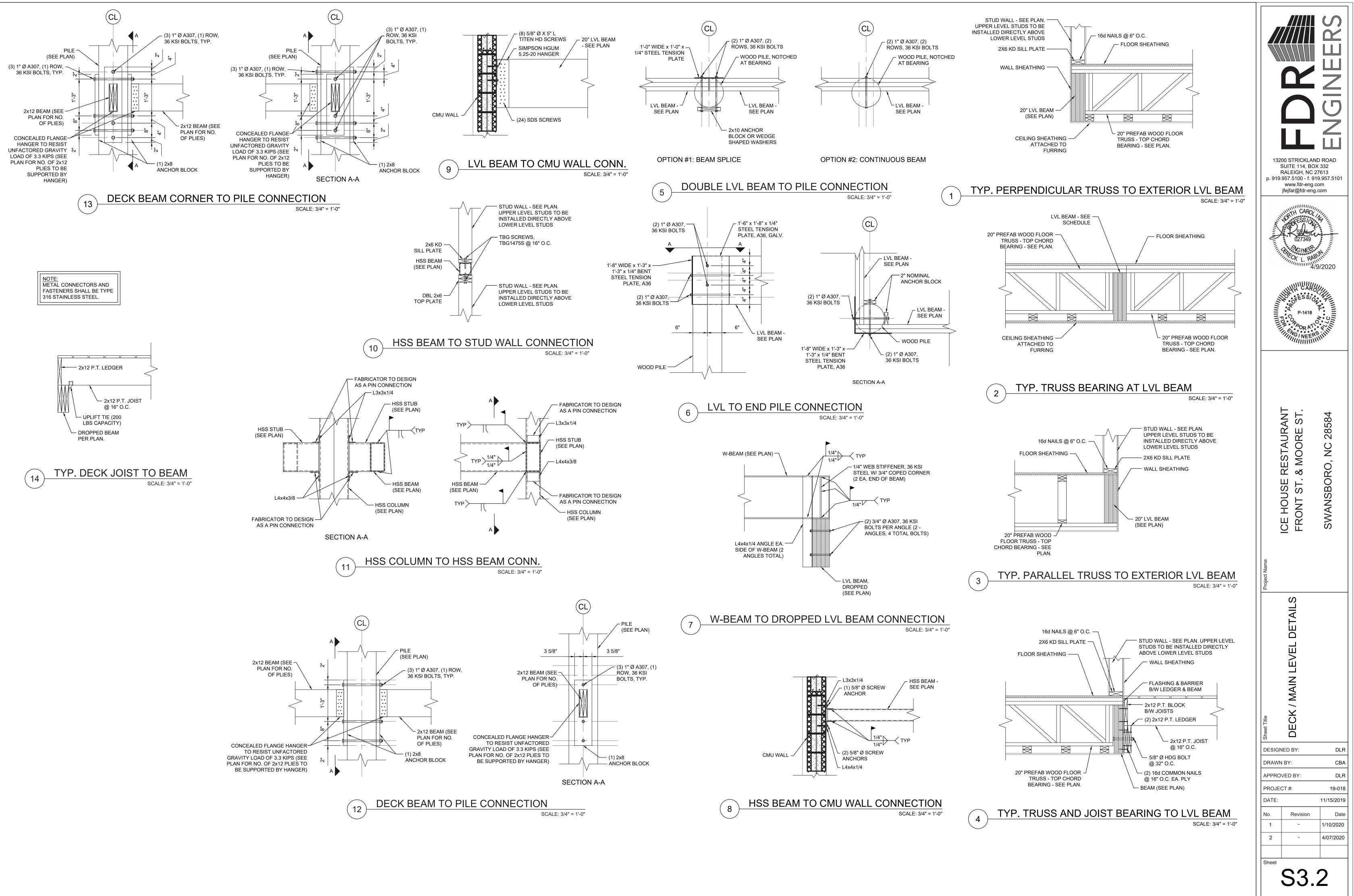
BAR SIZE	TENSION DEVELOPMENT		CLASS "B" SPLICE		STD. 90 DEG. HOOK		COMPRESSION BARS	
	TOP BAR Ldt	OTHER BAR Ldo	TOP BAR Lbt	OTHER BAR Lbo	EMBED Ldh	LEG LENGTH Lh	DEVELOPMENT Ldc	SPLICE
#3	22"	17"	28"	22"	6"	6"	9"	12"
#4	29"	22"	37"	29"	8"	8"	11"	15"
#5	36"	28"	47"	36"	10"	10"	14"	19"
#6	43"	33"	56"	43"	12"	12"	17"	23"
#7	63"	48"	81"	63"	14"	14"	20"	27"
#8	43"	33"	56"	43"	16"	16"	22"	30"
#9	53"	41"	69"	53"	18"	19"	25"	34"
#10	66"	51"	85"	66"	20"	22"	25"	38"
#11	79"	61"	102"	79"	22"	24"	31"	43"
#14	108"	83"			37"	31"	37"	
#18	174"	134"			50"	41"	50"	

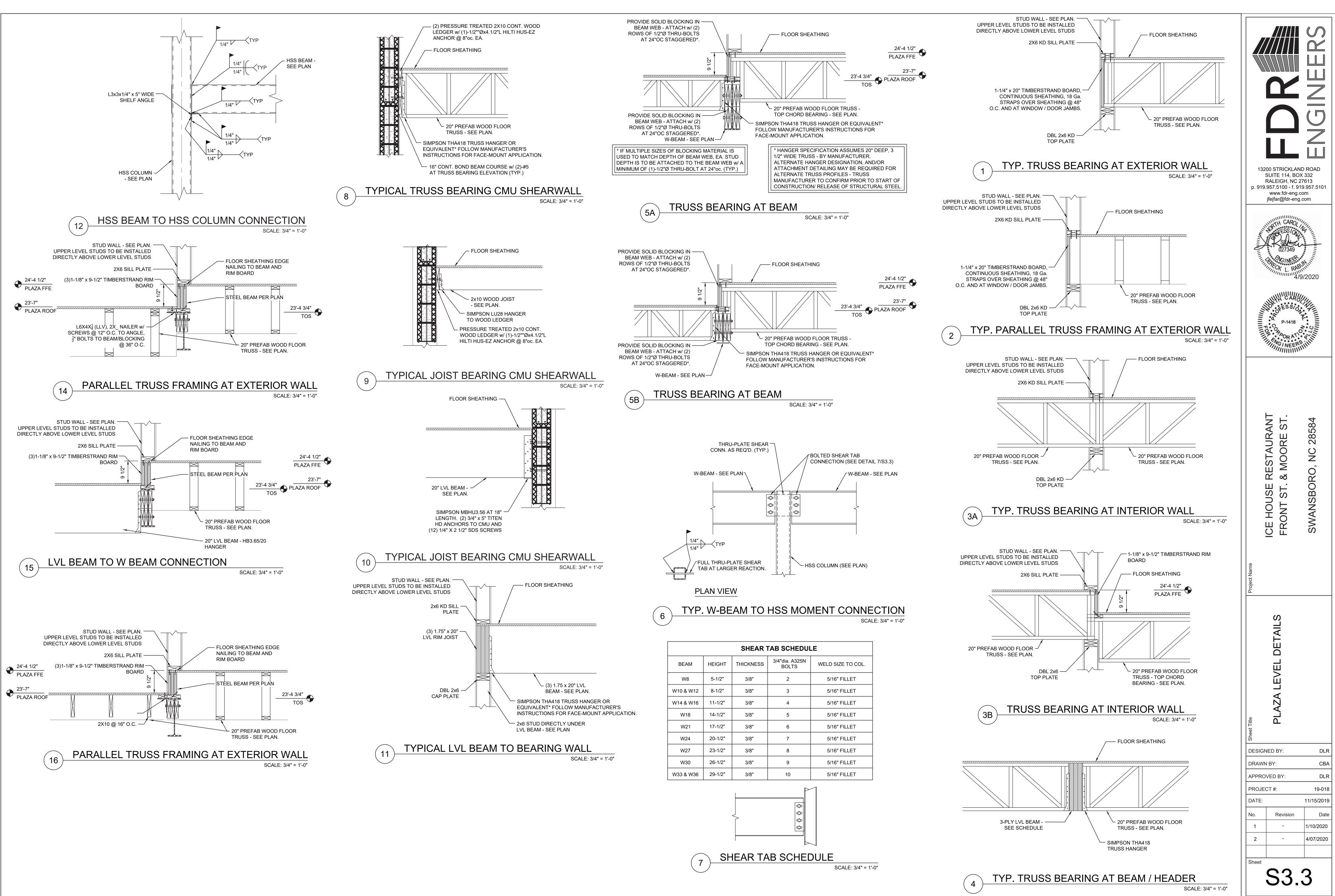
1. STRAIGHT DEVELOPMENT AND CLASS "B" SPLICE LENGTHS SHOWN IN ABOVE TABLE ARE BASED ON UNCOATED BARS ASSUMING CENTER-TO-CENTER BAR SPACING = 12" WITHOUT TIES OR STIRRUPS AND BAR CLEAR COVER = 2". NORMAL WEIGHT CONCRETE WITH NO TRANSVERSE REINFORCING IS ASSUMED. 2.STANDARD 90 DEGREE HOOK EMBEDMENT LENGTHS ARE BASED ON BAR SIZE COVER = 2.5" AND BAR END COVER = 2" WITHOUT TIES AROUND HOOK. 3. TABLE DOES NOT REFLECT SPECIAL SEISMIC CONSIDERATIONS FROM ACI 318-11 CHAPTER 21.



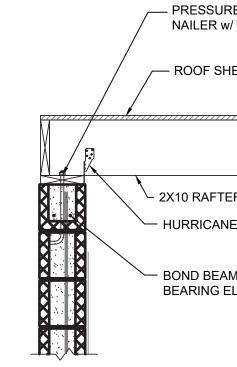


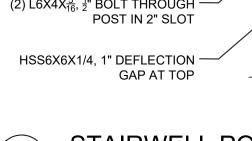










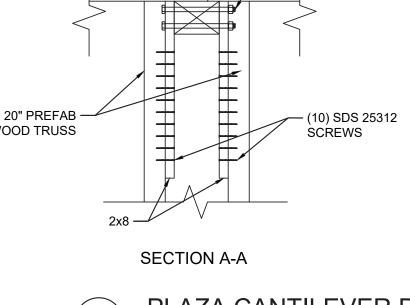


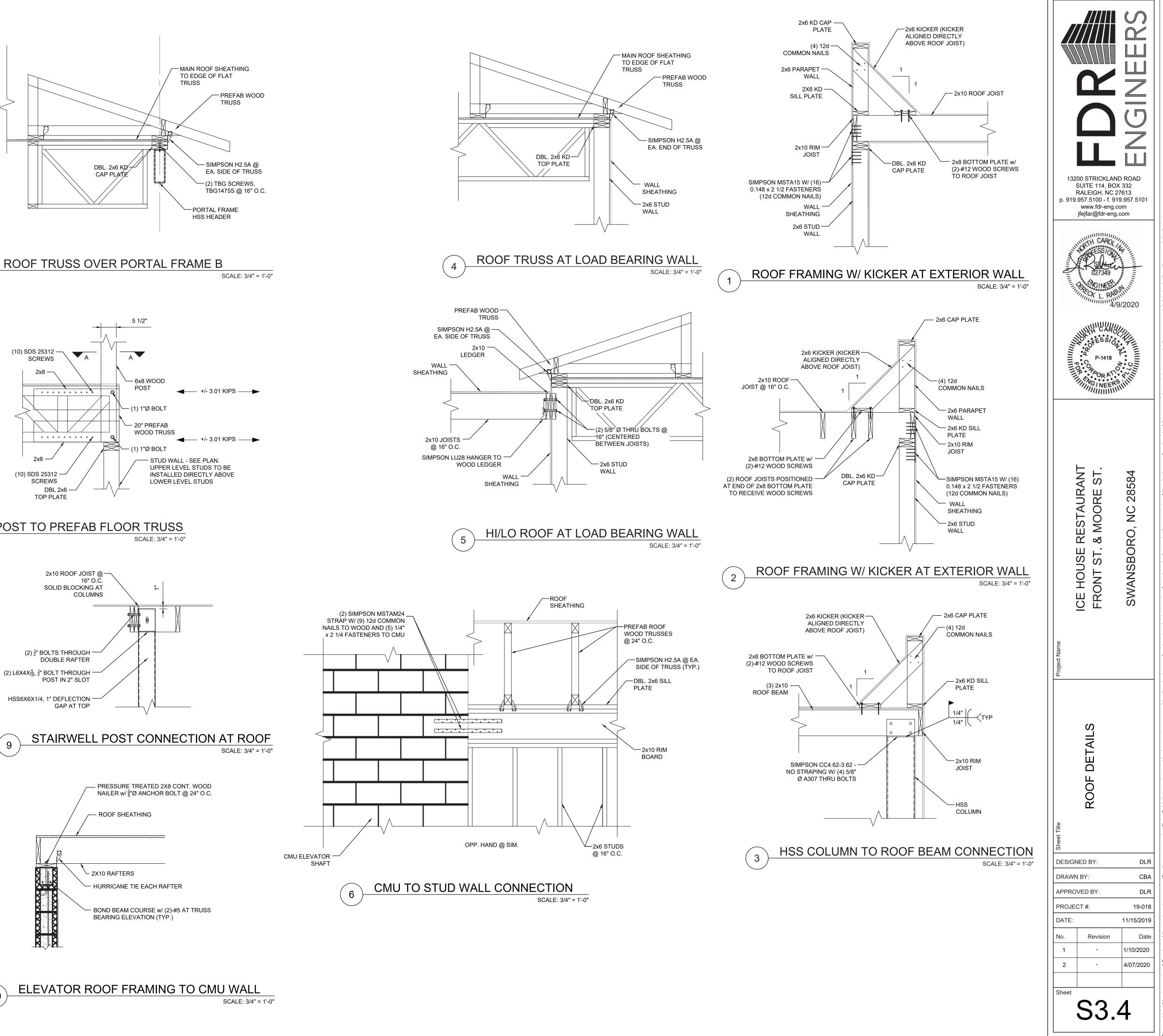
(2) L6X4X⁵₁₆, ¹/₂" BOLT THROUGH ----

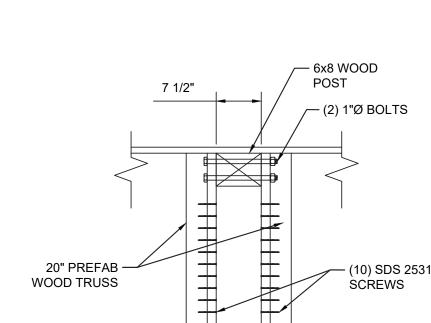
DOUBLE RAFTER

(2)¹/₂" BOLTS THROUGH —

2x10 ROOF JOIST @-16" O.C. SOLID BLOCKING AT COLUMNS



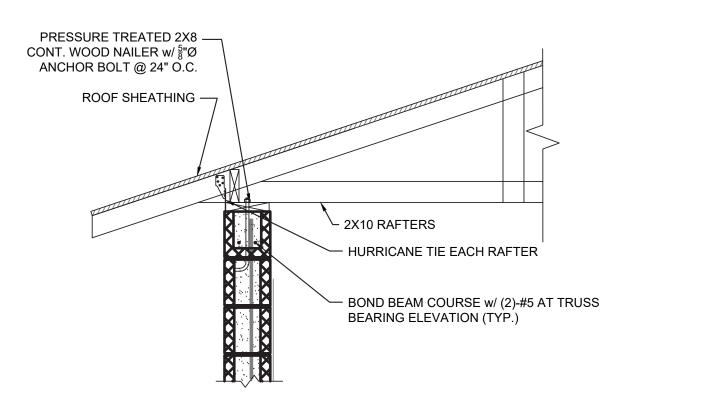




8

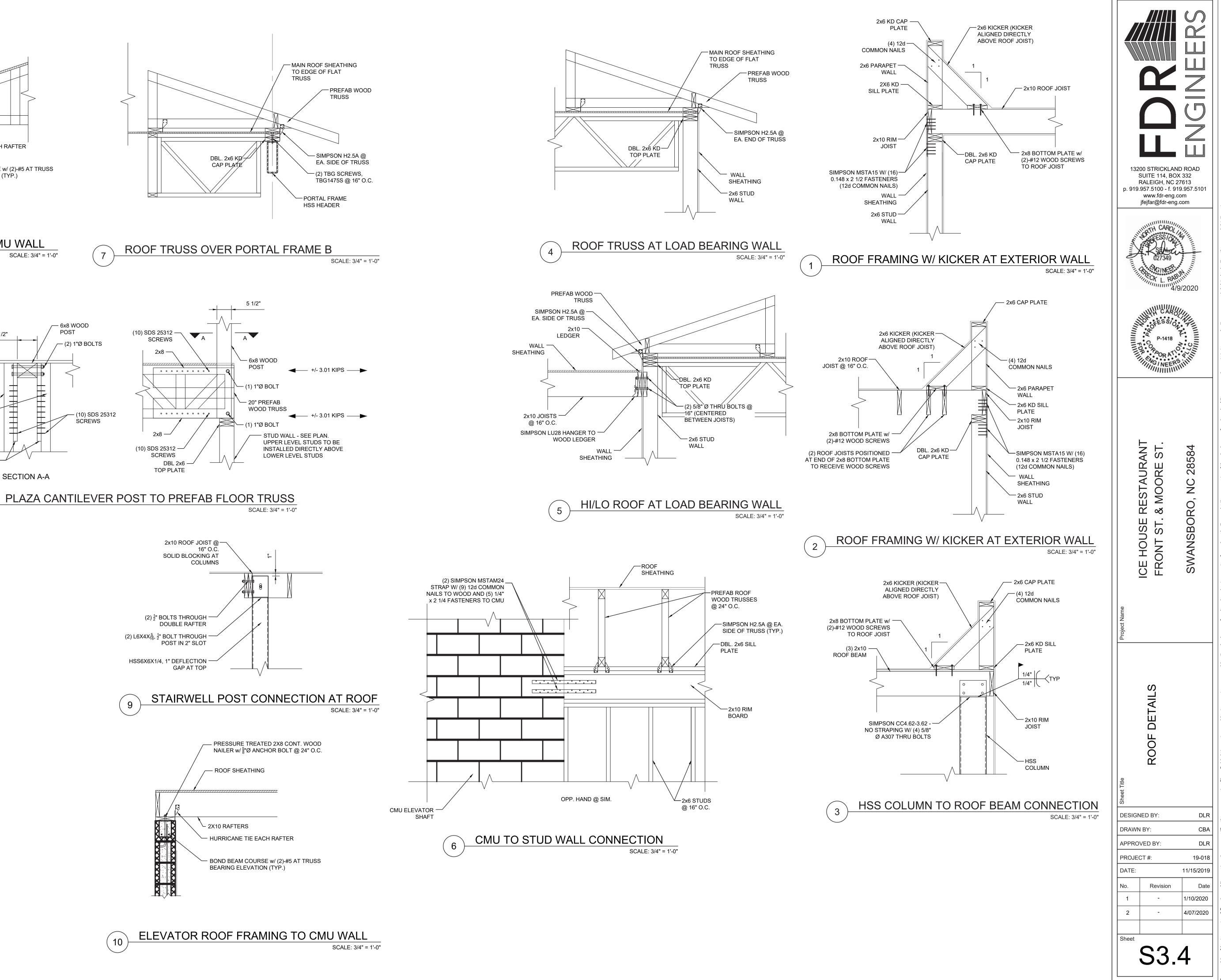
SCALE: 3/4" = 1'-0"

7

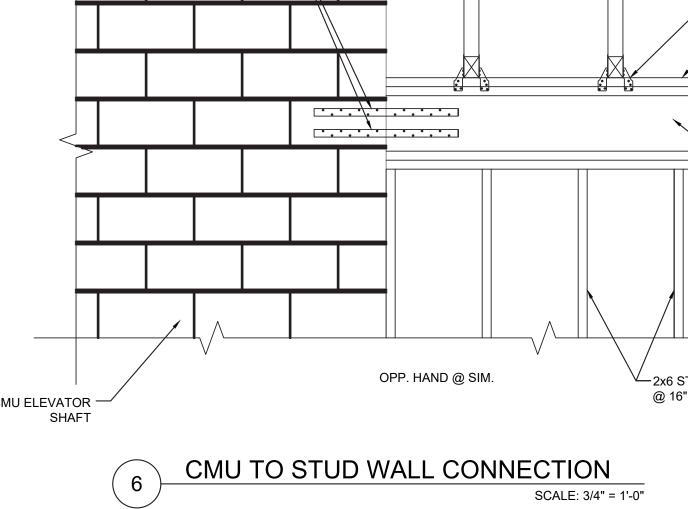


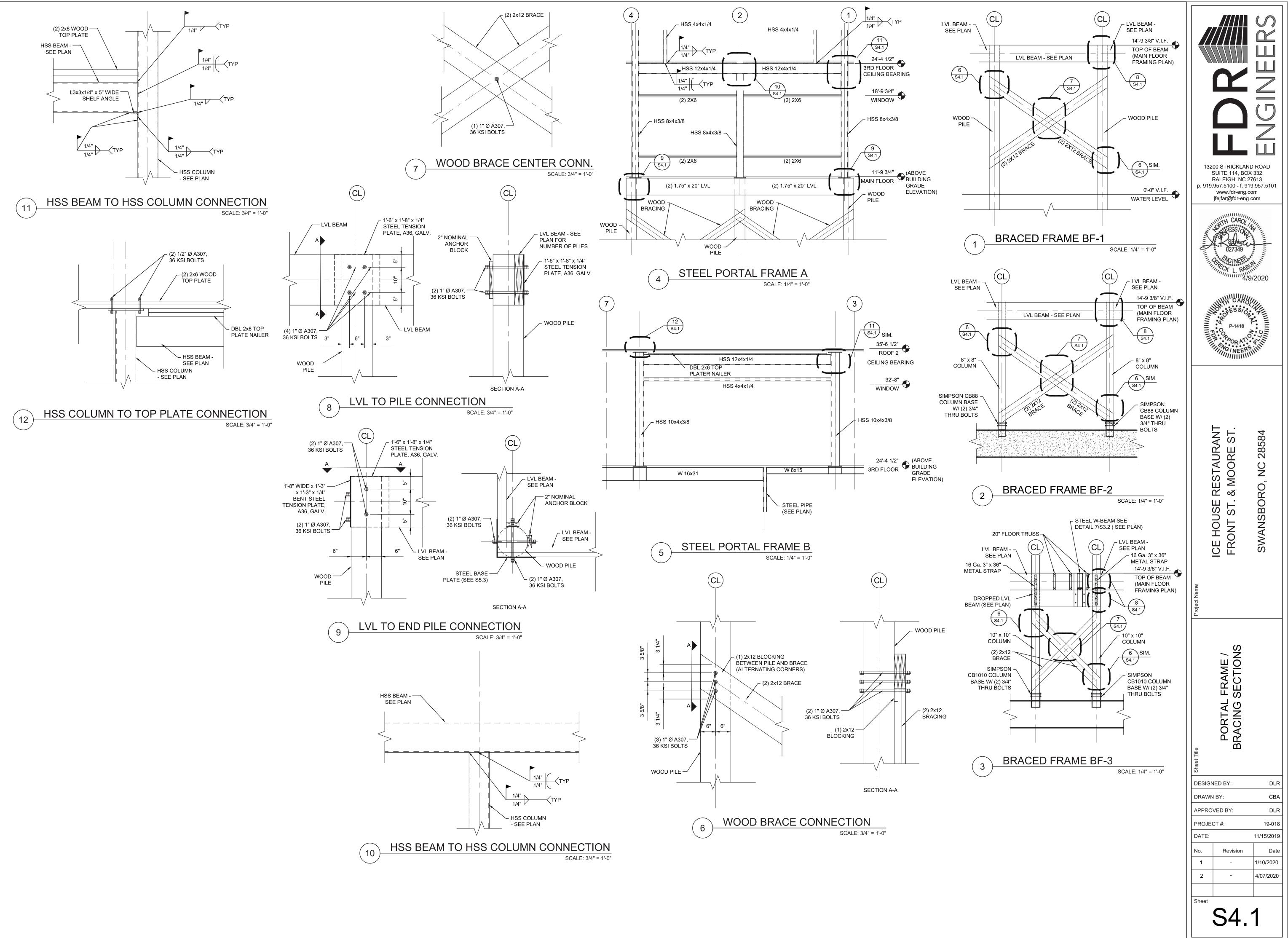
ELEVATOR ROOF FRAMING TO CMU WALL

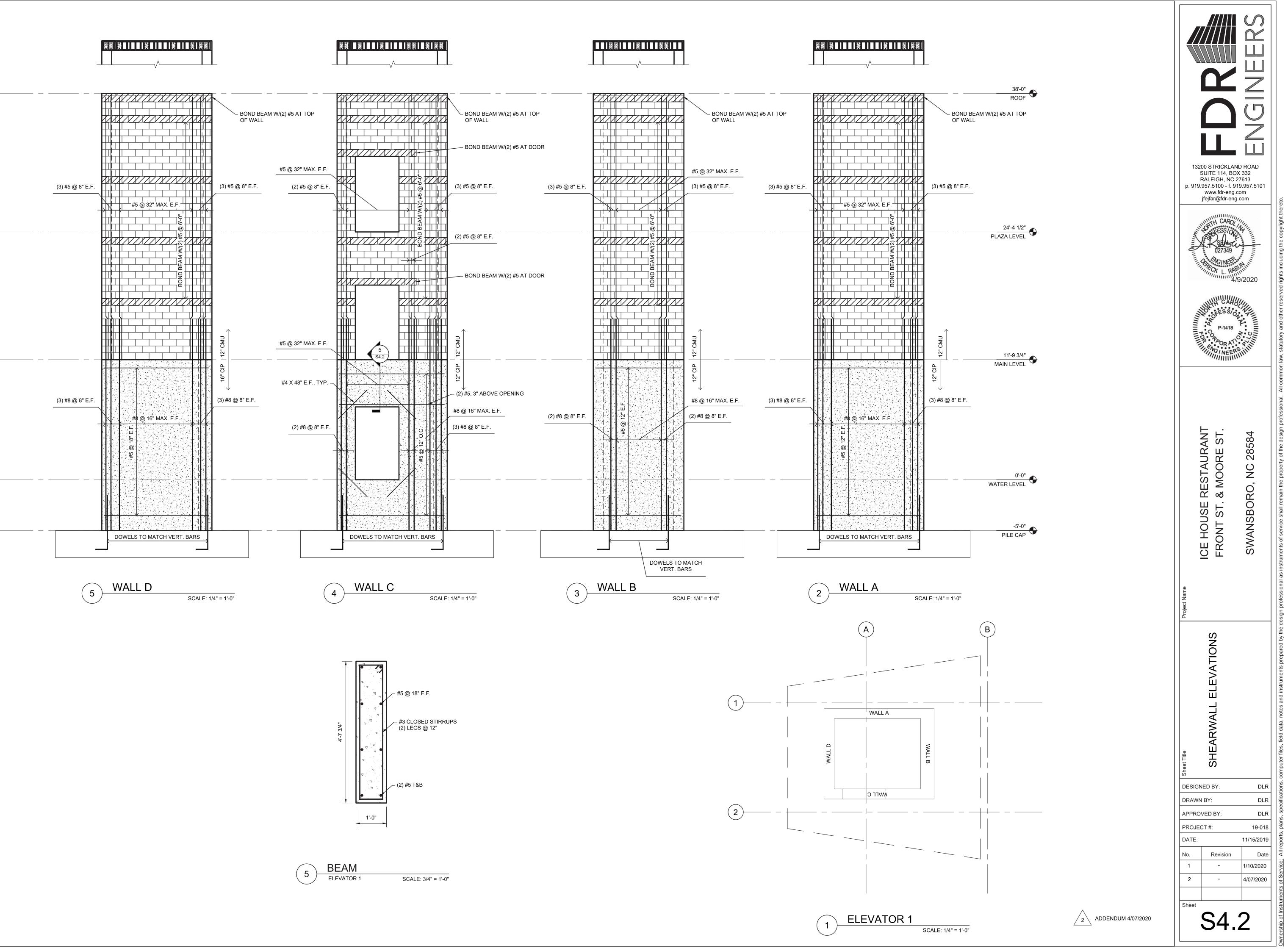
(11)

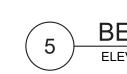


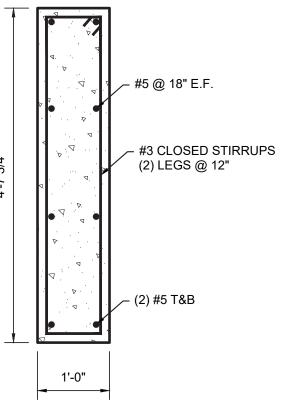


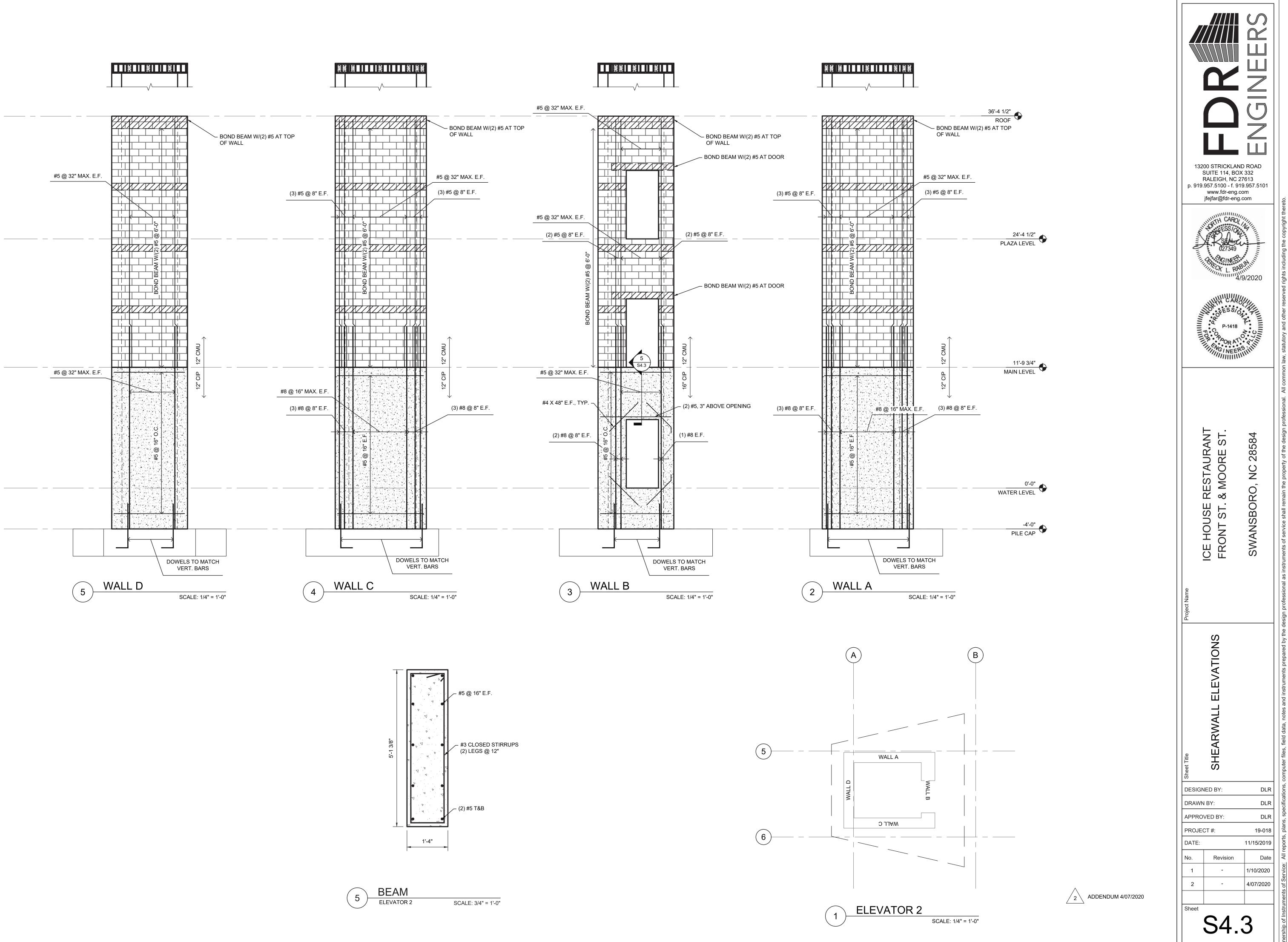


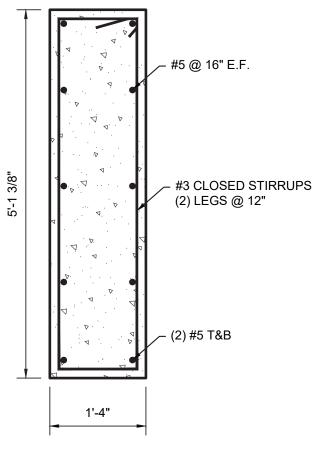


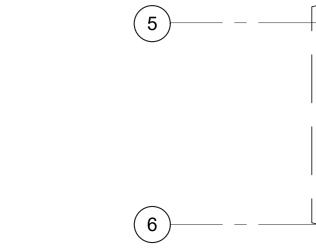












POST SCHEDULE

POST	
P1	(3)
P2	(3)
P3	HS

*** NOTE: HSS COLUMN CANNOT BEAR ON LVL

LOAD BEARING WALL SCHEDULE WALL TYPE LEVEL STUD SIZE

W1	LOWER - PLAZA	(1) 2x6 No. 2 SP @ 16" O.C. MAX.
W2	LOWER - PLAZA	(2) 2x4 No. 2 SP @ 16" O.C. MAX.
W3	LOWER - PLAZA	400S250-43 @ 16" O.C. MAX. (METAL STUD)
W4	UPPER - ROOF	(1) 2x6 No. 2 SP @ 16" O.C. MAX.
W5	UPPER - ROOF	(1) 2x4 No. 2 SP @ 16" O.C. MAX.

1. DOUBLE STUDS SHALL BE FASTENED TOGETHER WITH (2)10d COMMON NAILS @ 24" O.C.

2. SEE ARCHITECTURAL DRAWINGS FOR WALL THICKNESS.

3. ALL INTERIOR AND EXTERIOR BEARING WALLS SHALL BE BLOCKED WITH FULL WIDTH BLOCKING @ 48" O.C.

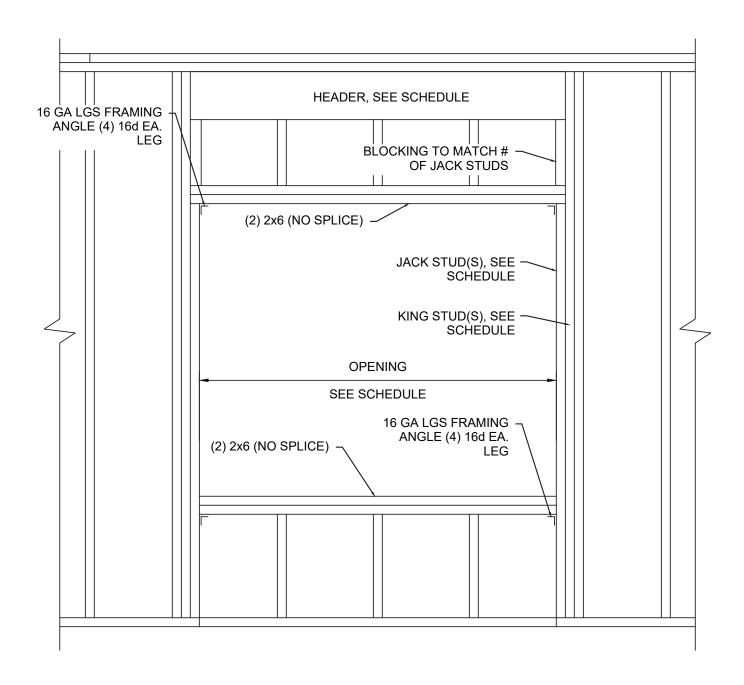
4. WALL TOP AND BOTTOM PLATES SHALL MATCH SIZE AND GRADE OF WALL STUDS.

5. SEE GENERAL NOTES SHEET S1.0 FOR MINIMUM MATERIAL PROPERTIES OF LUMBER.

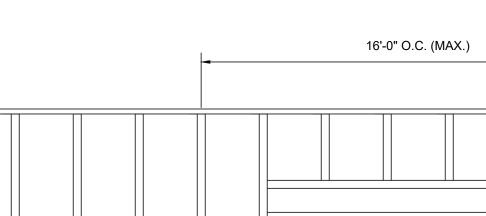
6. STUDS TO BE SPF/HF No. 2 UNLESS NOTED OTHERWISE.

- 7. SEE 2/S5.1 FOR BRIDGING ANCHORAGE. METAL STUDS REQUIRE 2"X43 MIL
- FLAT STRAP BRIDGING @ 4'-0" MAX. SPACING ANCHORED @ 16'-0" MAX. 8. SEE S1.1 FOR METAL STUD SPECIFICATIONS.

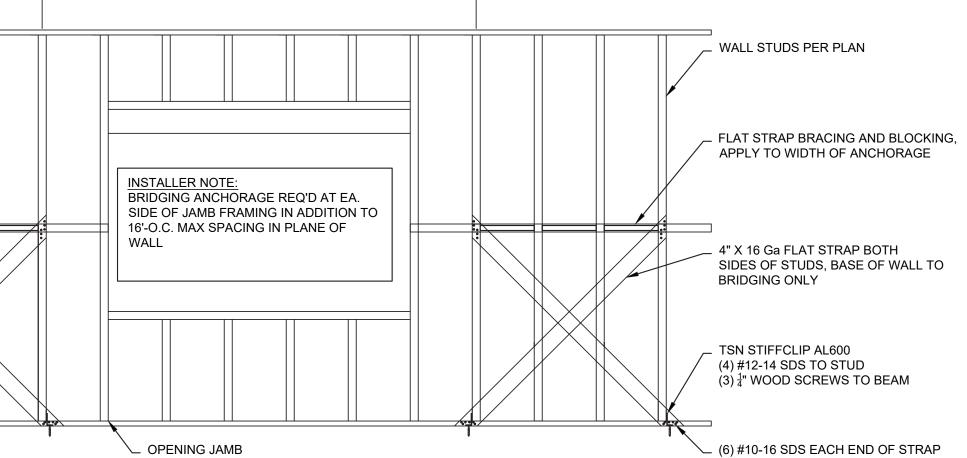
NOTE: SQUASH BLOCK ARE REQUIRED, BETWEEN FLOORS, TRIPLE, OR QUADRUPLE STUDS.



HEADER SCHEDULE



(2



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

FLAT STRAP BRIDGING ANCHORAGE

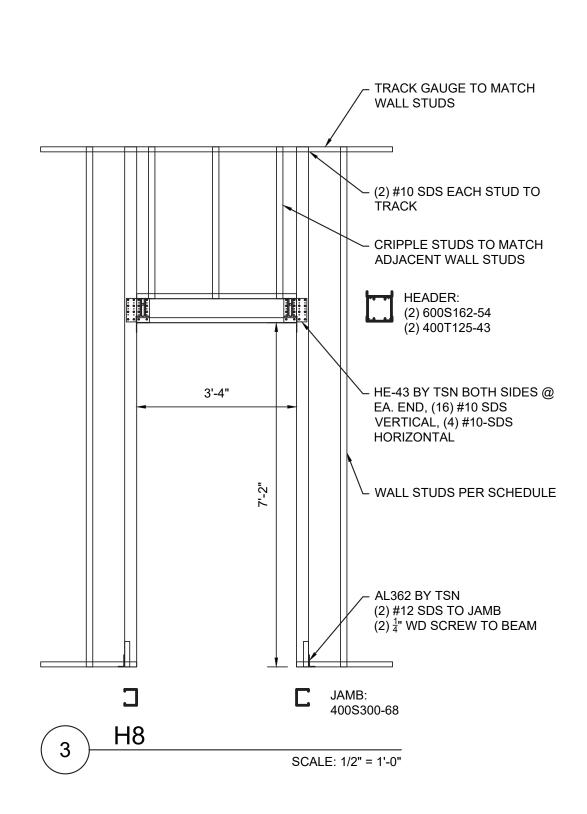
POST SIZE

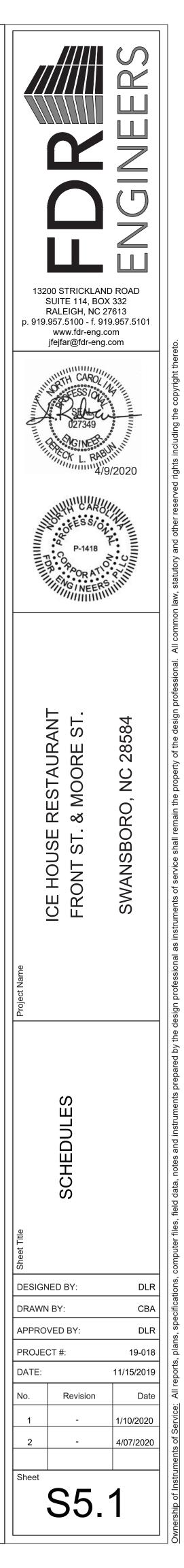
) 2x6 No. 2 SP ** 6) 2x4 No. 2 SP ** SS 4x4x5/16

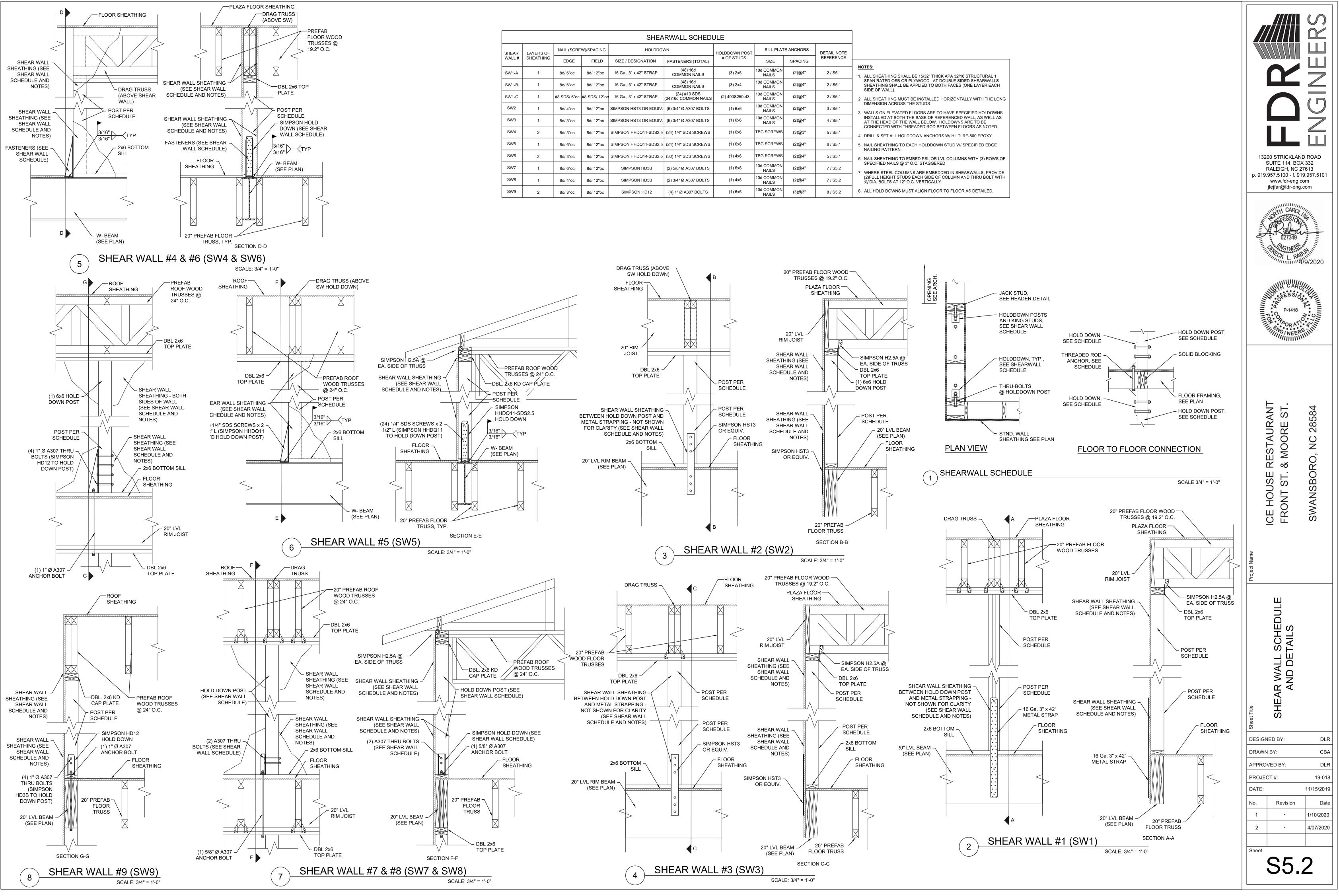
** SQUASH BLOCKS (SAME SIZE, QUANITY, AND MATERAL AS POST ABOVE) REQUIRED, BETWEEN FLOORS, DIRECTLY BELOW POST ABOVE (NOTE: SHIM SOLID TO BEARING AT ALL GAPS).

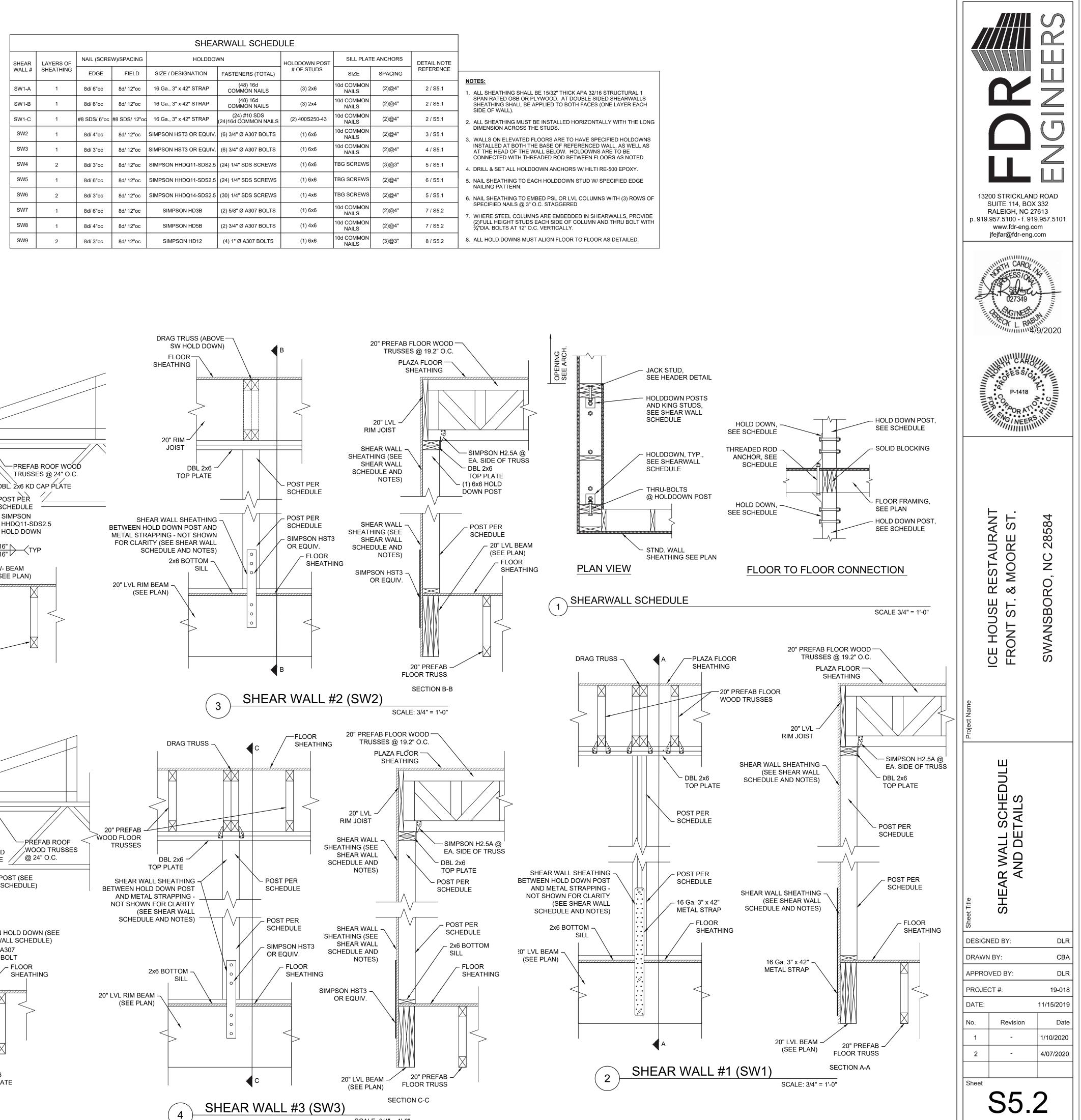
PLATES (OR ANY WOOD). HSS COLUMN MUST EXTEND DOWN THROUGH THE FLOOR SYSTEM TO BEAR ON HSS COLUMN OR STEEL PLATE.

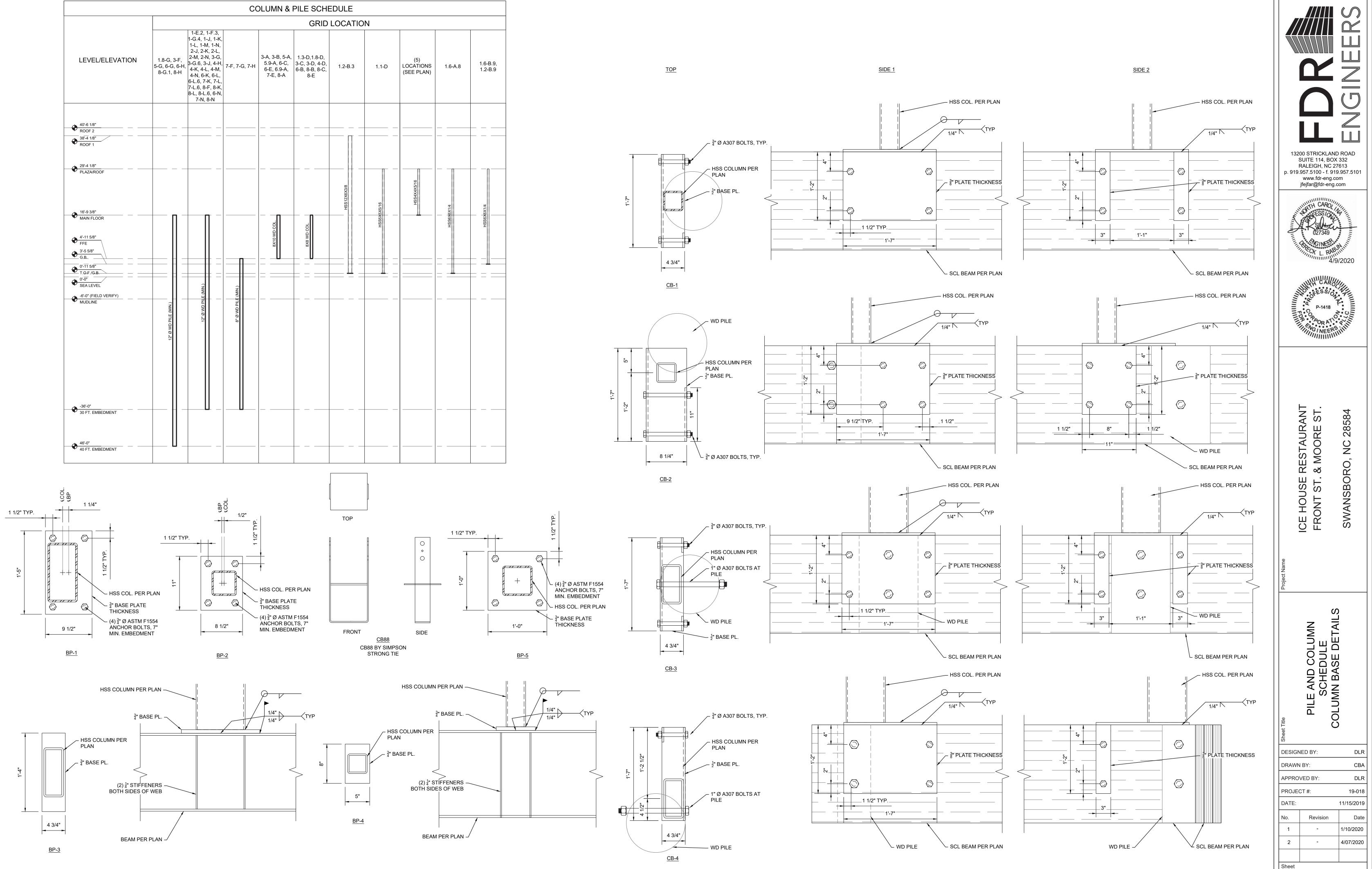
HEADER JACK STUD & KING STUD SCHEDULE						
Header Mark	Max. Opening	Header Size	# Jacks Members	# Kings Members		
H1	3'-4"	(2) 2X10	(1) 2X4	(1) 2X4		
H2	3'-4"	(3) 2X10	(1) 2X6	(1) 2X6		
H3	6'-0"	(3) 2X10	(1) 2X6	(3) 2X6		
H4	3'-4"	(3) 2X10	(1) 2X6	(2) 2X6		
H5	6'-0"	(3) 1.75" X 9.25" LVL	(2) 2X6	(3) 2X6		
H6	6'-0"	(3) 2X12	(1) 2X6	(3) 2X6		
H7	8'-11"	(3) 1.75" X 9.25" LVL	(1) 2X6	(3) 2X6		
H8	3'-4"		SEE DETAIL 3/S5.1			





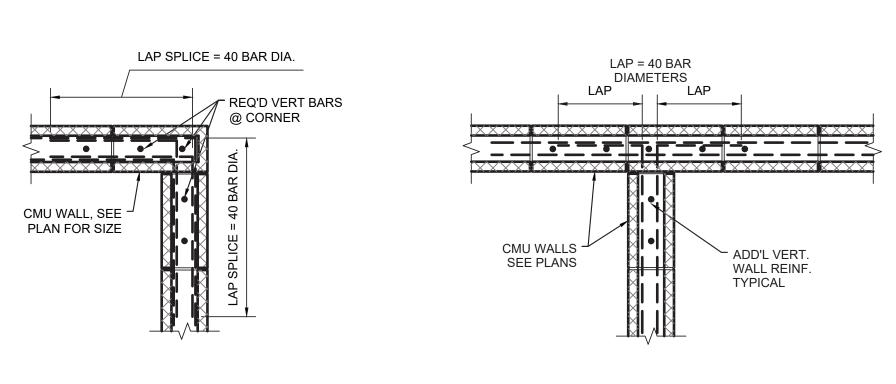






S5.3

6 TYP. BOND BEAM REINFORCING AT CORNERS AND INTERSECTIONS SCALE 3/4" = 1'-0"

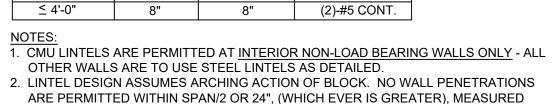


MASONRY LINTEL SCHEDULE (4)

4. SEE DETAILS FOR TYPICAL JAMB REINFORCING.

BEARING.

DETAILS.



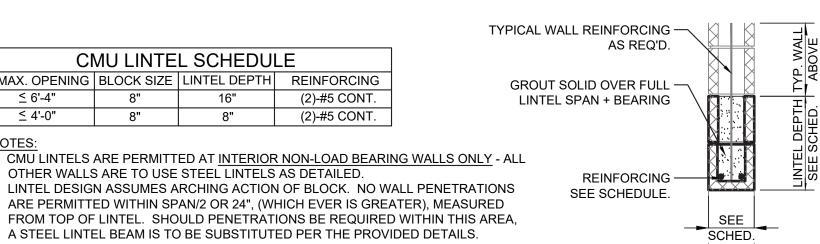
A STEEL LINTEL BEAM IS TO BE SUBSTITUTED PER THE PROVIDED DETAILS.

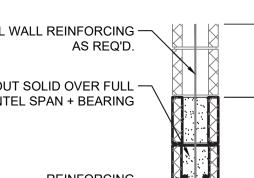
5. REFER TO GENERAL REINGFORCING NOTES FOR ADDT'L. WALL CONSTRUCTION

HORIZONTAL REINFORCING IS TO BE CONTINUOUS OVER THE FULL SPAN +

3. CMU LINTEL BEAMS ARE TO BEAR 8" (MIN.) ON EITHER SIDE OF OPENING.

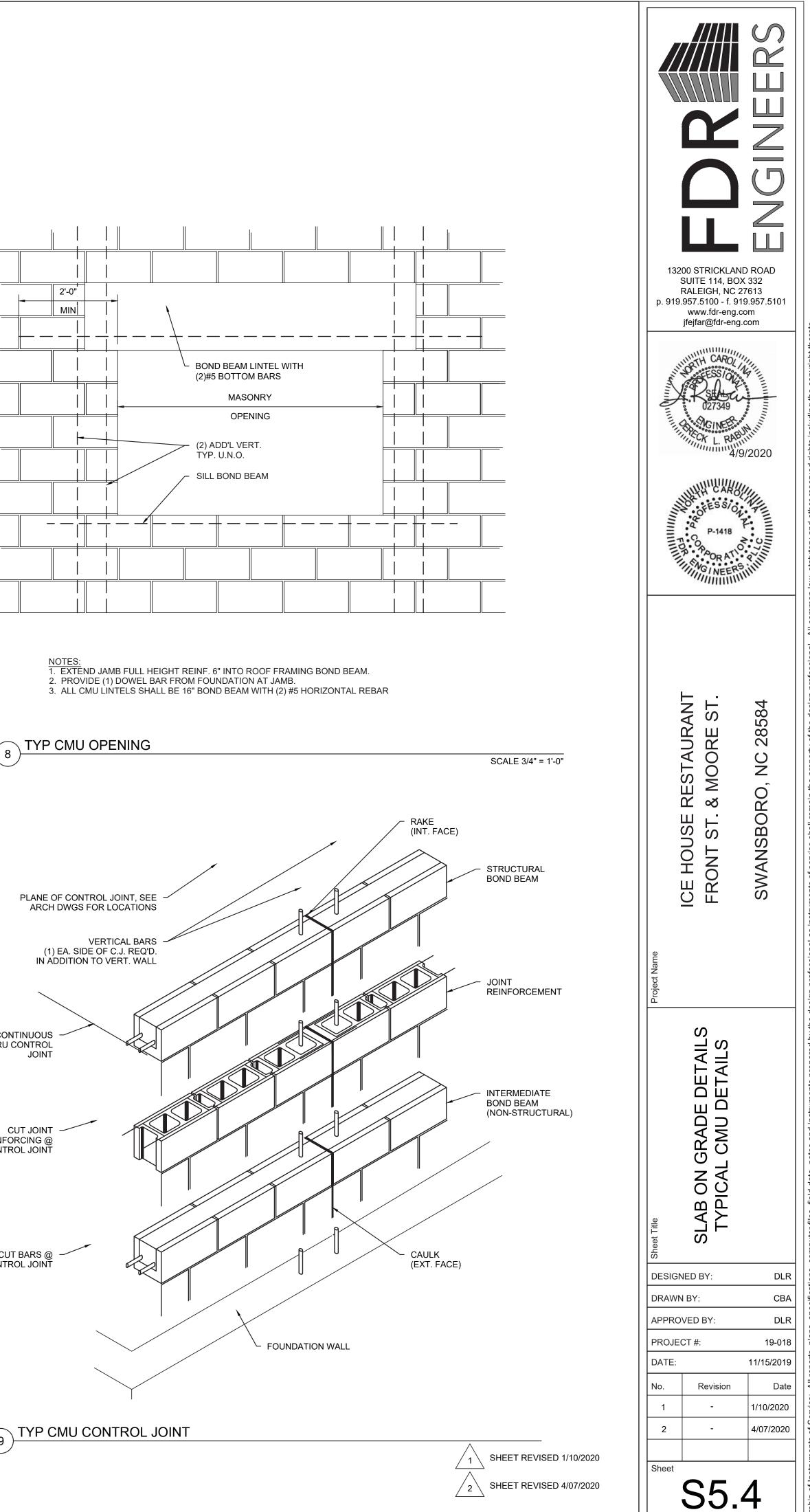
CMU LINTEL SCHEDULE MAX. OPENING BLOCK SIZE LINTEL DEPTH REINFORCING ≤ 6'-4" 16" (2)-#5 CONT. 8"

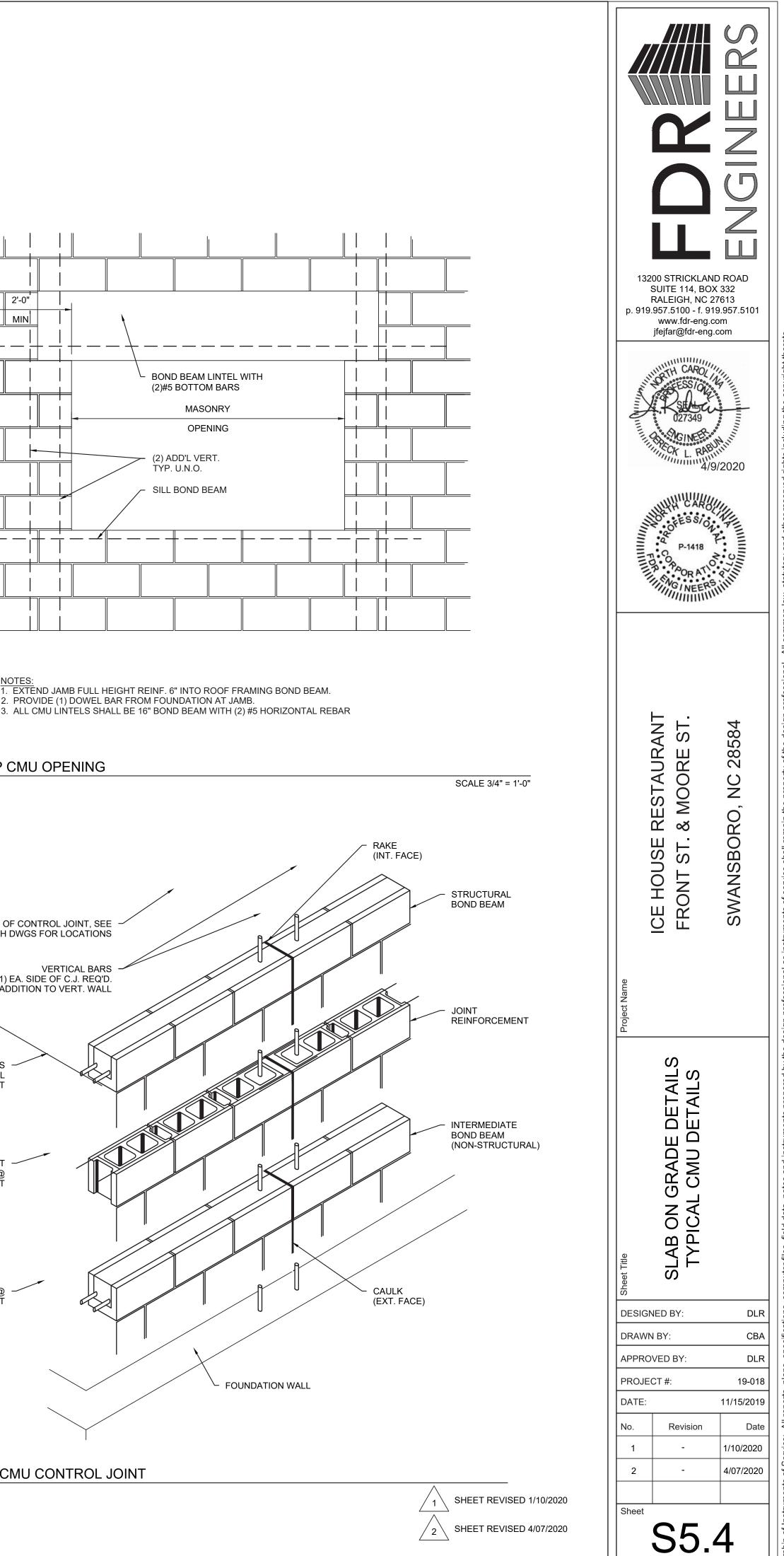


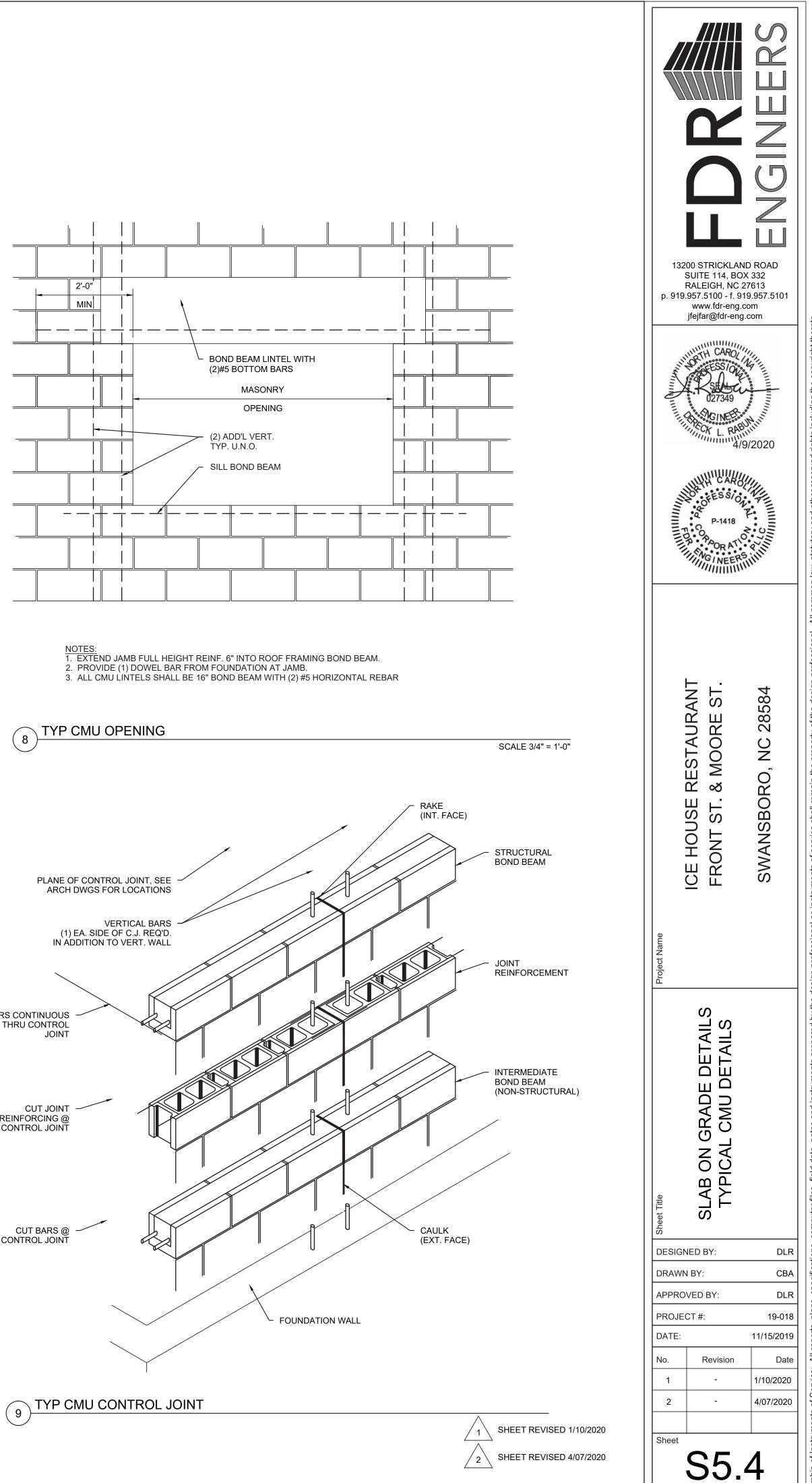


TYPICAL CMU LINTEL

SCALE 3/4" = 1'-0"





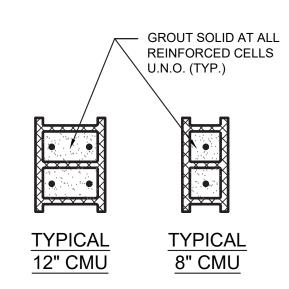


BARS CONTINUOUS THRU CONTROL

REINFORCING @ CONTROL JOINT

CUT BARS @ CONTROL JOINT

CMU WALL REINFORCING SCHEDULE						
APPLICATION	THICKNESS	VERT REINF	REMARKS			
EXTERIOR WALLS	12" CMU	(2) #5 @ 32" O.C.				

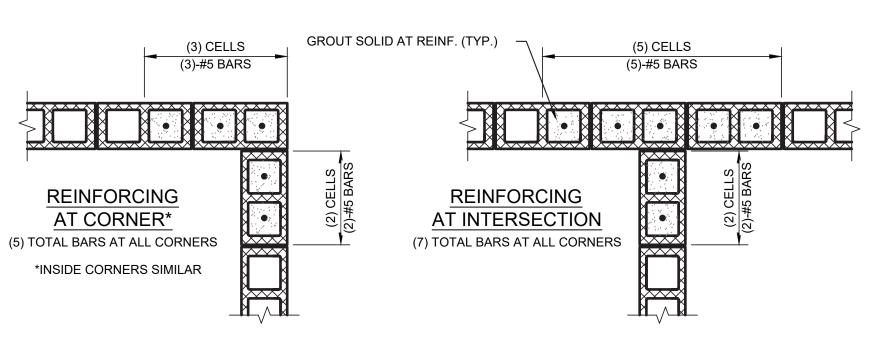


APPLICATION	THICKNESS	VERT REINF	REMARKS			
EXTERIOR WALLS	12" CMU	(2) #5 @ 32" O.C.				
NOTES: 1. ALL MASONRY SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE.						

2. LAP SPLICES A MINIMUM OF 48 BAR DIAMETERS.

- 3. PROVIDE DUR-O-WALL (OR EQUAL) LADDER OR TRUSS HORIZONTAL JOINT REINFORCEMENT AT EACH SECOND COURSE IN RUNNING BOND, AND EACH COURSE IN STACKED BOND, UNLESS NOTED OTHERWISE. DISCONTINUE HORIZONTAL JOINT REINFORCEMENT AT CONTROL JOINTS.
- 4. PROVIDE BOND BEAMS REINFORCED WITH (2) #5 BARS EVERY 6'-0" OF VERTICAL WALL, AT TOPS OF ALL MASONRY WALLS, AND WHERE SHOWN ON DRAWINGS. FIRST BOND BEAM MAY BE PLACED AT TOP OF DOOR OPENINGS, 8'-0" MAX. AT BOND BEAM CORNERS AND TEE JOINTS, PROVIDE BENT BARS TO MATCH QUANTITY AND BAR SIZE IN THE BOND BEAM. LAPS IN BOND BEAMS SHALL BE 48 BAR DIAMETERS OR A MINIMUM OF 2'-0", WHICHEVER IS GREATER.

∖ CMU WALL REINFORCING SCHEDULE 5



ADDITIONAL REINFORCING AT CORNERS AND INTERSECTIONS

SCALE 3/4" = 1'-0"

SCALE 3/4" = 1'-0"