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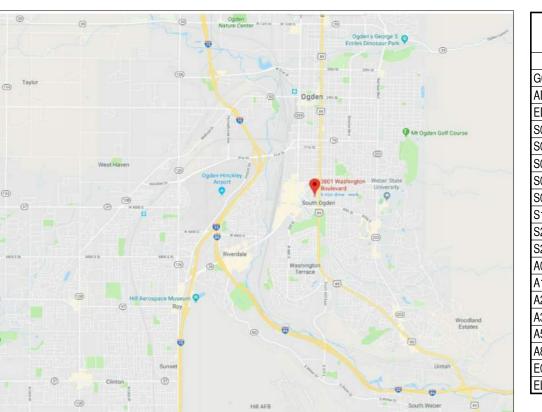
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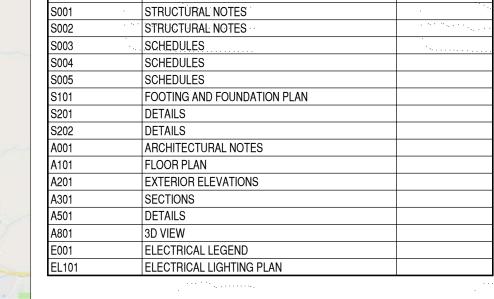
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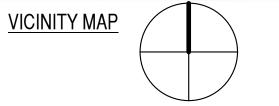


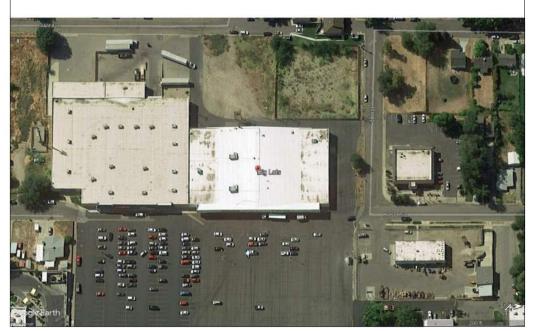




DRAWING INDEX

ARCHITECTURAL DEMO PLAN AND ELEVATION





ODE INFORMATION

DESCRIPTION- EXISTING TYPE Vb BUILDING AND M OCCUPANCY. REMOVE EXISTING WOOD CANOPY, ROOF, SOFFIT, LIGHTS. REPLACE WITH NEW STEEL STRUCTURE, METAL STUD FASCIA, LIGHTS AND ROOFING.

APPLICABLE CODESOCCUPANCYBUILDING TYPEFIRE SUPPRESSION SYSTEMALLOWABLE AREAFIRE WALLSPLUMBING REQUIRES
2015 IBC, 2015 IEBC, 2014 NE

W
EXISTING BUILDING
EXISTING
EXISTING
EXISTING

CHK'D BY:

DEFERRED SUBMITTALS

1-FIRE SUPPRESSION SYSTEM TO BE DESIGNE AND DETAILED BY GC AND SUB CONTRACTOR. PROVIDE TO CITY FOR APPROVAL.

2- PROVIDE METAL STUD DESIGN, CONNECTIONS AND ETC FOR ALL METAL STUD WALLS AND

IF SHEET IS LESS THAN 22"x 34"
IT IS A REDUCED PRINT.
REDUCE SCALE ACCORDINGLY

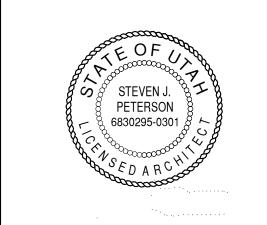


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Suite 510 • Ogden, Utah• 84401

CONSULTANTS

Δ MP

51AW





3801 Washington Blvd. South Ogden, Utah

MARK DATE DESCRIPTION

ISSUE DATE:	10/24/2019
PROJECT NO:	19060
CAD DWG FILE:	1
DRAWN BY:	KDL
CHIMD DA	CID

REVIEW SET

24 OCT 2019

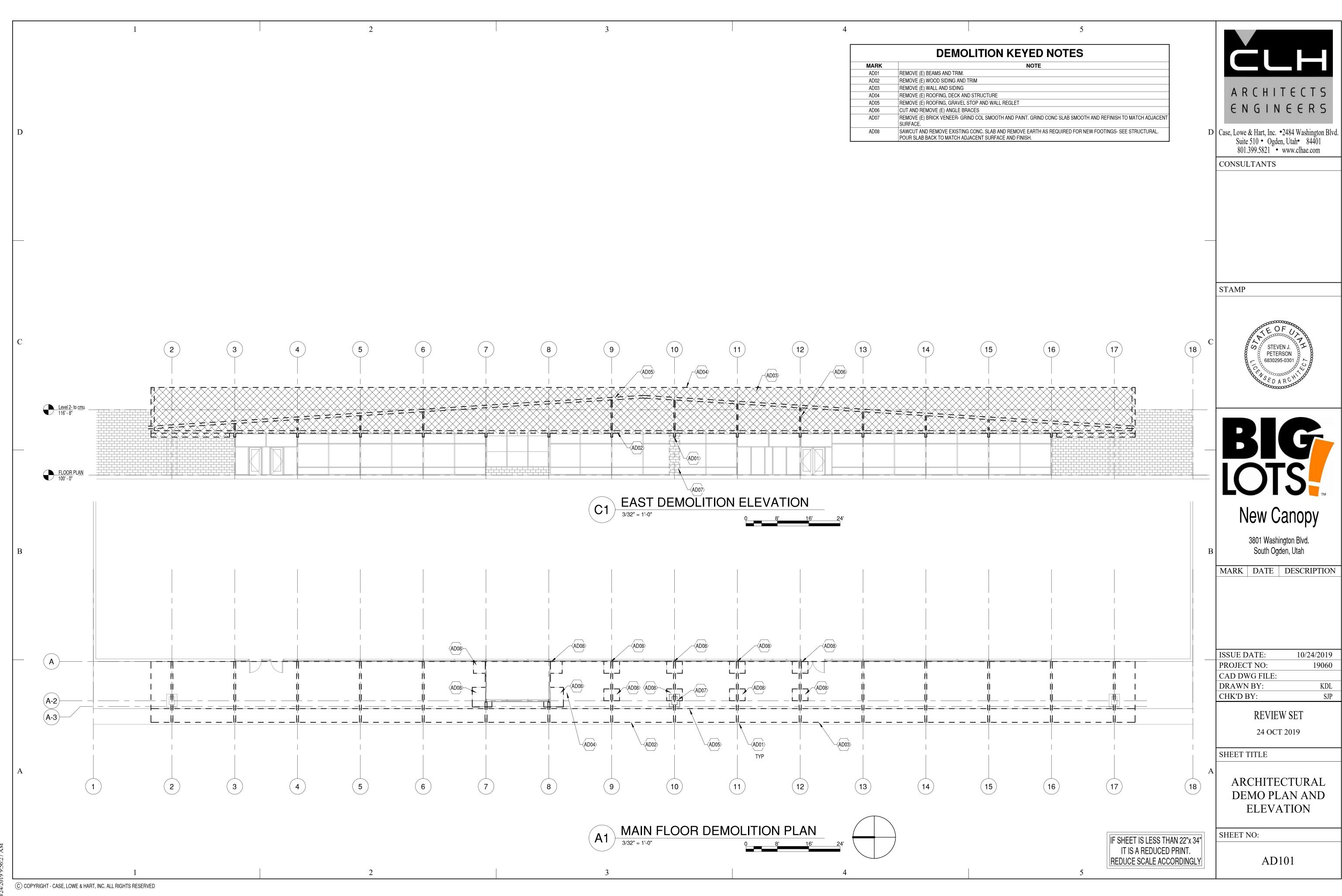
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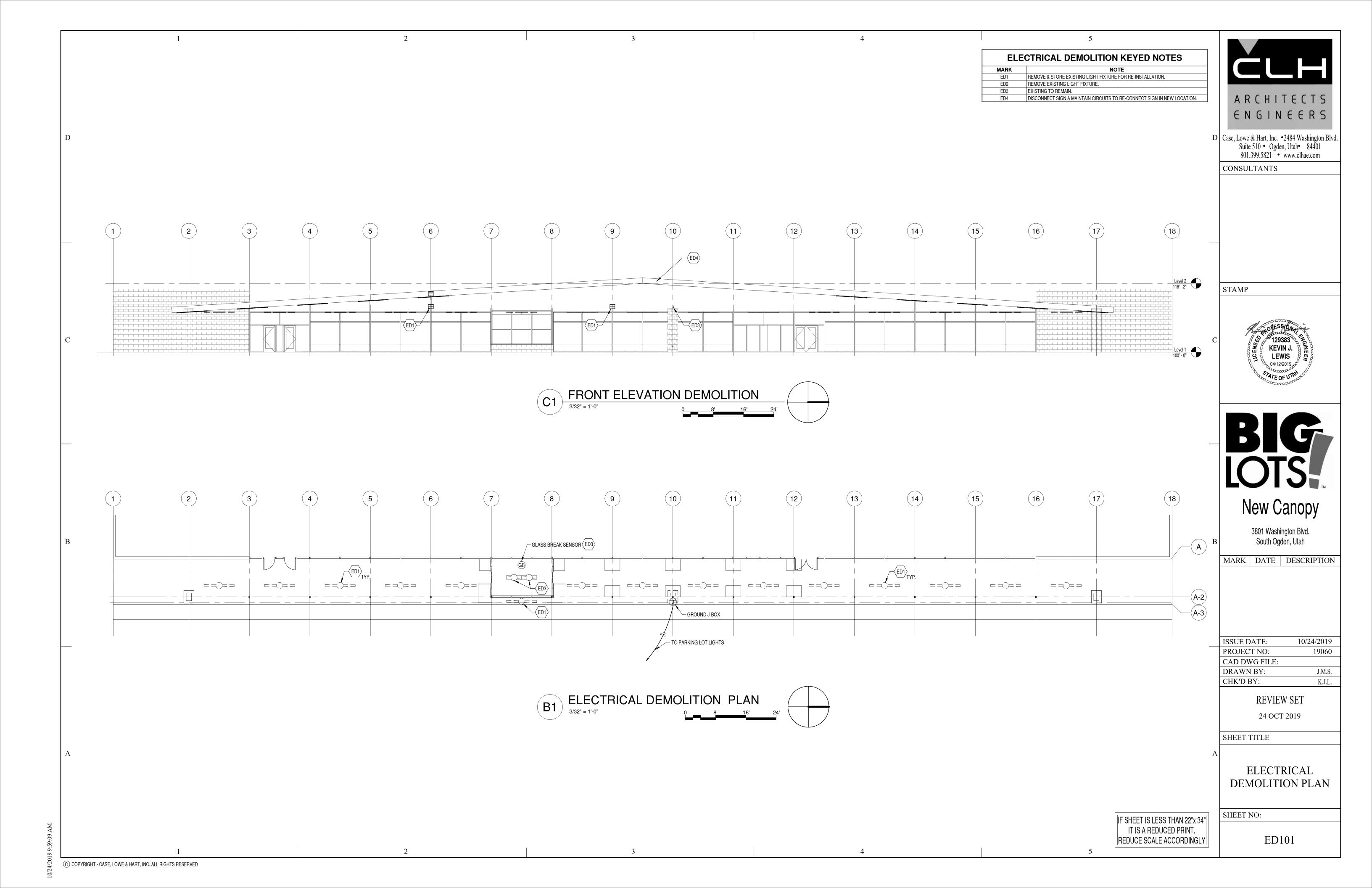
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A. GENERAL

- THE STRUCTURAL NOTES ARE INTENDED TO COMPLEMENT THE PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONSTRUCTION DOCUMENTS. SPECIFIC NOTES AND DETAILS ON THE DRAWINGS SHALL GOVERN OVER THE STRUCTURAL NOTES AND TYPICAL DETAILS.
- 2. THESE DRAWINGS (AND, WHERE APPLICABLE, ACCOMPANYING WRITTEN SPECIFICATIONS) ARE THE ONLY CONTRACT DOCUMENTS PROVIDED BY ARW ENGINEERS FOR THE PROJECT REPRESENTED HEREIN. NOTHING IN ANY DIGITAL MODEL OR DIGITAL FILE RELATED TO THIS PROJECT SHALL BE TAKEN TO SUPERSEDE ANY INFORMATION SHOWN IN THESE DRAWINGS (INCLUDING, BUT NOT LIMITED
- 3. THE ARCHITECTURAL DRAWINGS ARE THE PRIME CONTRACT DRAWINGS. THE STRUCTURAL DRAWINGS ARE SUPPLEMENTARY TO AND MUST BE USED IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND OTHER CONSULTANTS DRAWINGS. ALL OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND STRUCTURAL ENGINEER BEFORE PROCEEDING WITH ANY WORK INVOLVED. IN CASE OF CONFLICT, FOLLOW THE MOST STRINGENT REQUIREMENT AS DIRECTED BY THE ARCHITECT AT NO ADDITIONAL COST TO THE OWNER.
- 4. SEE SPECIFICATIONS FOR REQUIRED SUBMITTALS. SUBMITTALS SHALL BE MADE IN A TIMELY MANNER AS INDICATED IN SPECIFICATIONS. REVIEW OF SUBMITTALS BY ARW ENGINEERS IS FOR GENERAL COMPLIANCE ONLY AND IS NOT INTENDED AS APPROVAL. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL SIZES, DIMENSIONS, AND ELEVATIONS ON SUBMITTALS AS RELATED TO DESIGN DOCUMENTS. PREPARATION OF SHOP DRAWINGS FOR STRUCTURAL ELEMENTS WILL REQUIRE INFORMATION (I.E. DIMENSIONS, ETC.) FOUND IN THE ARCHITECTURAL, STRUCTURAL, AND OTHER CONSULTANTS DRAWINGS.
- THE CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AT THE SITE. IF ACTUAL CONDITIONS DIFFER FROM THOSE SHOWN ON CONTRACT DOCUMENTS, CONTRACTOR SHALL NOTIFY ARCHITECT PRIOR TO FABRICATION OR CONSTRUCTION OF ANY AFFECTED ELEMENTS.
- 6. THE CONTRACTOR SHALL COORDINATE AND VERIFY ALL LOCATIONS AND SIZES OF MECHANICAL EQUIPMENT OR OTHER EQUIPMENT BEFORE FABRICATING AND ERECTING STRUCTURAL ELEMENTS. SIZES AND LOCATIONS THAT DIFFER FROM THOSE SHOWN ON THE CONTRACT DOCUMENTS SHALL BE REPORTED TO THE ARCHITECT.
- THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST TO THE ARCHITECT FOR ARCHITECT AND/OR ENGINEER APPROVAL BEFORE PROCEEDING WITH ANY CHANGES, MODIFICATIONS, OR SUBSTITUTIONS.
- 8. OBSERVATION VISITS TO THE SITE BY ARW ENGINEERS FIELD REPRESENTATIVES SHALL NEITHER BE CONSTRUED AS INSPECTION NOR APPROVAL OF CONSTRUCTION.
- 9. DURING AND AFTER CONSTRUCTION, BUILDER AND/OR OWNER SHALL KEEP LOADS ON STRUCTURE WITHIN THE LIMITS OF DESIGN LOADS AS NOTED IN THESE DOCUMENTS.
- 10. TYPICAL OR SIMILAR DETAILS AND SECTIONS SHALL APPLY WHERE SPECIFIC DETAILS ARE NOT SHOWN. TYPICAL OR SIMILAR DETAILS REFER TO THE CONDITION ADDRESSED AND ARE NOT NECESSARILY DETAILS LABELED "TYPICAL" OR "SIMILAR" IN THE PLANS AND DOCUMENTS.
- 11. DRAWINGS AND DETAILS HAVE BEEN PREPARED WITH THE INTENT TO VISUALLY REPRESENT INFORMATION PROVIDED IN SCALED FORM; HOWEVER CONTRACTOR/SUPPLIERS SHOULD NOT SCALE PLANS OR DETAILS FOR DIMENSIONAL INFORMATION.
- 12. THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY SHORING AND BRACING FOR ALL STRUCTURAL ELEMENTS UNTIL THE ENTIRE STRUCTURAL SYSTEM IS COMPLETED. DESIGN OF ALL SHORING AND BRACING IS BY OTHERS AT NO ADDITIONAL COST TO THE OWNER.
- 13. ENGINEER SHALL NOT BE RESPONSIBLE FOR ACTIVITIES UNDER CONTROL OF THE CONTRACTOR SUCH AS CONSTRUCTION SITE SAFETY, MEANS, METHODS AND SEQUENCING OF CONSTRUCTION. ENGINEER SHALL NOT BE RESPONSIBLE FOR FABRICATION, ERECTION AND CONSTRUCTION REQUIREMENTS AS PRESCRIBED BY OSHA OR OTHER REGULATORY AGENCIES REGARDLESS OF INDICATIONS IN THESE DOCUMENTS.
- 14. NOTICE OF COPYRIGHT: THESE STRUCTURAL DRAWINGS ARE HEREBY COPYRIGHTED BY ARW ENGINEERS, ALL RIGHTS RESERVED. THESE DOCUMENTS DEFINE A STRUCTURE AND ARE INSTRUMENTS OF SERVICE, FOR ONE USE ONLY. REPRODUCTION AND DISTRIBUTION OF THESE DRAWINGS IS ONLY ALLOWED AS REQUIRED FOR REGULATORY AGENCIES AND FOR CONVEYANCE OF INFORMATION TO PARTIES INVOLVED IN THE CONSTRUCTION OF THIS PROJECT. THESE DOCUMENTS SHALL NOT BE REPRODUCED OR COPIED, IN PART OR WHOLE BY ANY PARTY FOR USE IN PREPARATION OF SHOP DRAWINGS OR OTHER SUBMITTALS.
- 15. WHERE THE WORD "SHALL" OCCURS IN THESE DRAWINGS AND ANY ACCOMPANYING SPECIFICATIONS, IT IS CONSIDERED A MANDATORY OBLIGATION AND SYNONYMOUS WITH THE PHRASE "HAS DUTY TO".

B. STATEMENT OF SPECIAL INSPECTIONS AND SPECIAL INSPECTIONS

- 1. THE DESIGNATED SEISMIC/WIND SYSTEMS AND SEISMIC/WIND-FORCE-RESISTING SYSTEMS THAT ARE SUBJECT TO SPECIAL INSPECTIONS IN ACCORDANCE WITH IBC SECTION 1705.11 AND 1705.12 ARE IDENTIFIED ON THESE DOCUMENTS WITH A CIRCLE "L". ALL OTHER ITEMS REQUIRING SPECIAL INSPECTION ARE IDENTIFIED IN THE SPECIAL INSPECTION SCHEDULE ON SHEET S004 AND S005.
- 2. SPECIAL INSPECTIONS AND TESTING ARE TO BE PROVIDED AS REQUIRED BY IBC SECTIONS 1704 THROUGH 1705 AND OTHER APPLICABLE SECTIONS OF THE IBC. THE TYPE AND FREQUENCY OF TESTING AND SPECIAL INSPECTIONS SHALL BE AS NOTED IN THE SPECIAL INSPECTION SCHEDULE, JOB SPECIFICATIONS, AND ACCORDANCE WITH IBC SECTION 110 AND CHAPTER 17. CONTRACTOR SHALL COORDINATE AND COOPERATE WITH REQUIRED INSPECTIONS.
- 3. ALL TESTING AND SPECIAL INSPECTION SHALL BE PROVIDED BY A QUALIFIED INDEPENDENT SPECIAL INSPECTION AGENCY IN ACCORDANCE WITH IBC 1704 AND AS OUTLINED IN THE JOB SPECIFICATIONS. REPORTS OF FINDINGS OR DISCREPANCIES SHALL BE NOTED AND FORWARDED TO THE CONTRACTOR, ARCHITECT, ENGINEERS, AND BUILDING OFFICIAL IN A TIMELY MANNER.
- 4. STRUCTURAL OBSERVATION VISITS SHALL BE PERFORMED BY A REPRESENTATIVE FROM ARW ENGINEERS IN ACCORDANCE WITH THE CONTRACT AS NEEDED TO OBSERVE THE CONSTRUCTION OF CRITICAL BUILDING ELEMENTS (I.E. FOOTINGS, BRACED FRAMES, MOMENT FRAMES, DRAG STRUTS AND THEIR CONNECTIONS, COLLECTORS, AND ROOF AND FLOOR DIAPHRAGMS). STRUCTURAL OBSERVATION REPORTS FOR EACH VISIT SHALL BE SENT DIRECTLY TO THE ARCHITECT FOR DISTRIBUTION TO THE CONTRACTOR AND BUILDING OFFICIAL. STRUCTURAL OBSERVATION VISITS SHALL NEITHER BE CONSTRUED AS SPECIAL INSPECTION NOR APPROVAL OF COMPLETED CONSTRUCTION.
- 5. IN ACCORDANCE WITH IBC 1704.4, THE CONTRACTOR SHALL SUBMIT A WRITTEN CONTRACTOR'S STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER. THE STATEMENT SHALL BE SUBMITTED PRIOR TO THE CONSTRUCTION OF ANY SEISMIC/WIND-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC/WIND SYSTEM, OR COMPONENT IDENTIFIED IN THESE DOCUMENTS WITH A CIRCLE "L".

C. BASIS OF DESIGN

- 1. GOVERNING BUILDING CODE : INTERNATIONAL BUILDING CODE (IBC) 2018
- RISK CATEGORY: II
- WIND DESIGN
 a. BASIC WIND SPEED (3 SECOND GUST): 103 MPH
- b. ALLOWABLE STRESS DESIGN WIND SPEED, V_{ASD}: 80 MPH
- c. WIND EXPOSURE : C
- d. INTERNAL PRESSURE COEFFICIENT, G_{CPI}: +/- 0.18......e. COMPONENT AND CLADDING DESIGN WIND PRESSURE SHALL BE AS REQUIRED PER ASCE 7-16.
- 3. SEISMIC DESIGN:
 a. SEISMIC IMPORTANCE FACTOR, I_E: 1.0
- b. SITE CLASS: D (DEFAULT)
 c. MAPPED SPECTRAL RESPONSE ACCELERATIONS: $S_S = 1.360$, $S_1 = 0.493$ d. SPECTRAL RESPONSE COEFFICIENTS: $S_{DS} = 1.088$, $S_{D1} = 0.594$
- e. SEISMIC DESIGN CATEGORY: D
 f. BASIC SEISMIC-FORCE-RESISTING SYSTEM: ORDINARY CONCENTRICALLY BRACED FRAME
- g. DESIGN BASE SHEAR : $V_{N-S} = 0.335W$, $V_{E-W} = 0.335W$
- h. SEISMIC RESPONSE COEFFICIENT, C_S: 0.335 i. RESPONSE MODIFICATION FACTOR, R: 3.25
- j. ANALYSIS PROCEDURE : EQUIVALENT LATERAL FORCE

D. FOUNDATION

- GENERAL
 a. DESIGN SOIL PRESSURE: 1500 PSF
- b. ALL FOOTINGS SHALL BE PLACED ON MECHANICALLY COMPACTED FILL COMPACTED TO NOT LESS THAN 95% OF MODIFIED PROCTOR DENSITY (ASTM D-1557).
- c. UNLESS NOTED OTHERWISE, ALL CONCRETE SLABS ON EARTH SHALL BEAR ON STRUCTURAL FILL COMPACTED TO 90% OF MODIFIED PROCTOR DENSITY (ASTM D-1557).

d. TOP OF FOOTING ELEVATIONS SHOWN ON THE FOOTING AND FOUNDATION PLAN ARE BASED ON

- PRELIMINARY GRADING INFORMATION AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION. STEPS WHERE SHOWN ARE AT APPROXIMATE LOCATIONS. ACTUAL STEP LOCATIONS SHALL BE AT THE CONTRACTOR'S DISCRETION BASED UPON FIELD CONDITIONS. ALL EXTERIOR FOUNDATIONS SHALL BEAR A MINIMUM OF ... INCHES BELOW LOWEST ADJACENT FINAL GRADE.

 e. ALL WALLS (EXCEPT CANTILEVERED RETAINING WALLS) SHALL BE ADEQUATELY BRACED AGAINST
- LATERAL MOVEMENT PRIOR TO BACKFILLING. DESIGN AND ERECTION OF BRACING/SHORING SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. BRACING SHALL REMAIN IN PLACE UNTIL SUPPORTING STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE ATTAINED FULL STRENGTH.
- f. UNLESS NOTED OTHERWISE, ALL FOOTINGS AT COLUMNS SHALL BE CENTERED BELOW COLUMNS.
 g. UNLESS NOTED OTHERWISE, ALL FOOTINGS SHALL HAVE VERTICAL FACES FORMED WITH
 STANDARD FORMING MATERIALS (WOOD, METAL, ETC.). WITH PRIOR APPROVAL OF ARCHITECT AND
 ENGINEER, CONCRETE FOR FOOTINGS CAN BE PLACED IN EXCAVATED SOIL "FORMS" PROVIDED
 THAT THE DIMENSIONS ARE INCREASED 3" ON ALL SIDE.

E. CONCRETE

- 1. ALL CONCRETE MIX DESIGNS SHALL COMPLY WITH THE REQUIREMENTS LISTED BELOW:
- a. FOOTINGS, GRADE BEAMS, FOUNDATION WALLS:
 1. WHERE THE TOP OF THE ELEMENT IS EXPOSED OR IS LOCATED WITHIN 30" OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F2):
 - a. 28 DAY COMPRESSIVE STRENGTH: 4500 PSI
 - b. MAXIMUM W/C RATIO : 0.45
 c. MAXIMUM AGGREGATE SIZE : 1"
 - d. AIR CONTENT: 4.5% +/- 1.5%

 WHERE THE TOP OF THE FLEMENT IS NOT EXPOSED OF
- 2. WHERE THE TOP OF THE ELEMENT IS NOT EXPOSED OR IS NOT LOCATED WITHIN 30" OF THE LOWEST ADJACENT GRADE (EXPOSURE CATEGORY F0):
- a. 28 DAY COMPRESSIVE STRENGTH: 3000 PSI
 b. EXTERIOR SLABS (DOCKS, ETC.) (EXPOSURE CATEGORY F2):
- 1. 28 DAY COMPRESSIVE STRENGTH: 4500 PSI
 - 2. MAXIMUM W/C RATIO : 0.45
 - B. MAXIMUM AGGREGATE SIZE : 1"
 - 4. MINIMUM AIR CONTENT: 4.5% +/- 1.5%
- WATER USED IN MIXING CONCRETE SHALL CONFORM TO ASTM C1602.
 NO PIPES, DUCTS, SLEEVES, ETC. SHALL BE PLACED IN STRUCTURAL CONCRETE UNLESS
 SPECIFICALLY DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER. NO ALUMINUM PRODUCTS
 SHALL BE EMBEDDED IN CONCRETE. PENETRATIONS THRU STRUCTURAL CONCRETE ELEMENTS MUST
 BE APPROVED BY THE ENGINEER AND SHALL BE BUILT INTO THE ELEMENT PRIOR TO CONCRETE
- 4. REFER TO ARCHITECTURAL DRAWINGS FOR MOLDS, GROOVES, ORNAMENTS, ETC. TO BE CAST IN TO CONCRETE, AND FOR EXTENT AND LOCATION OF DEPRESSIONS, CURBS, RAMPS, ETC.
- REINFORCING SHALL BE CONTINUOUSLY SUPPORTED AT 36"O.C. MAXIMUM SPACING.
 UNLESS NOTED OTHERWISE, FOR NON-DETAILED OPENINGS IN CONCRETE WALLS LARGER THAN 12" AND SMALLER THAN 24" IN ANY DIRECTION ADD (2) #5 BARS ON ALL SIDES IN ADDITION TO REGULAR WALL REINFORCING AND EXTEND 24" EACH WAY BEYOND OPENING. IF 24" IS NOT AVAILABLE ON EVERY SIDE, NOTIFY STRUCTURAL ENGINEER FOR FURTHER DIRECTION. OPENINGS SHALL HAVE A MINIMUM
- OF 12" OF CONCRETE ABOVE THE OPENING, TYP.

 7. CONSTRUCTION JOINTS NOT SHOWN ON THE PLANS SHALL BE MADE AND LOCATED SO AS TO NOT IMPAIR THE STRENGTH OF THE STRUCTURE AND AS APPROVED BY THE STRUCTURAL ENGINEER. PROVIDE 2 X 4 (SHAPED) KEYWAY IN ALL VERTICAL AND HORIZONTAL JOINTS UNLESS NOTED OR DETAILED OTHERWISE. ALL STEEL REINFORCING SHALL BE CONTINUOUS THROUGH COLD JOINTS UNLESS NOTED OTHERWISE. SEE TYPICAL DETAILS FOR COLD/CONSTRUCTION JOINTS FOR SLABS ON
- 8. WHERE NEW CONCRETE IS PLACED AGAINST PREVIOUSLY HARDENED CONCRETE, THE JOINT SHALL BE CLEAN AND FREE OF LAITANCE. IMMEDIATELY BEFORE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE PREWETTED AND STANDING WATER REMOVED.

F. ANCHOR BOLTS/EMBEDDED BOLTS

- 1. ALL ANCHOR BOLTS SHALL HAVE ASTM A-563 HEAVY HEX NUT AND ASTM F-436 WASHERS AT STANDARD OR OVERSIZED HOLES PER AISC SPECIFICATION TABLE J3.3. WHERE HOLE SIZES DO NOT COMPLY WITH THE LIMITATIONS FOR OVERSIZED HOLES THE STRUCTURAL ENGINEER SHALL BE NOTIFIED TO DETERMINE STEEL PLATE WASHER REQUIREMENTS. ANCHOR BOLTS SHALL COMPLY WITH THE FOLLOWING:
- a. AT BRACED FRAMES & MOMENT RESISTING FRAMES ASTM F1554 GRADE 105 HEADED BOLTS.(ASTM A449 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER.)
- b. AT WOOD STUD WALLS ASTM A-307 GRADE HEADED BOLTS. ANCHOR BOLTS IN TREATED LUMBER SHALL BE GALVANIZED OR STAINLESS STEEL. SEE TIMBER NOTES FOR MORE INFORMATION.
- c. AT ALL OTHER ANCHOR BOLTS (UNLESS NOTED OTHERWISE) ASTM F1554 GRADE 36 HEADED BOLTS. (ASTM A36 THREADED ROD MAY BE USED WITH DOUBLE NUT AND WASHER.)
- EMBEDDED BOLTS IN MASONRY SHALL BE (UNLESS NOTED OTHERWISE) ASTM A-307 GRADE HEADED BOLTS.
 SEE TYPICAL ANCHOR BOLT DETAIL FOR DEFINITIONS OF EMBEDMENT LENGTH, ETC.
- SEE TYPICAL ANCHOR BOLT DETAIL FOR DEFINITIONS OF EMBEDMENT LENGTH, ETC.
 FURNISH TEMPLATES AND OTHER DEVICES AS NECESSARY FOR PRESETTING ALL BOLTS PRIOR TO

USE OF STEEL PLATE WASHERS AT THE DISCRETION OF THE STRUCTURAL ENGINEER.

PLACING CONCRETE AND/OR GROUT.

5. IF THREADED RODS ARE USED AS PERMITTED ABOVE, THEY SHALL BE CLEAR OF SOIL AND DIRT.

6. WHERE REQUIRED FOR ERECTION, HOLES LARGER THAN OVERSIZED MAY BE PERMITTED WITH THE

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	Structura	al Sheet Index	
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S002	STRUCTURAL NOTES		
S003	SCHEDULES		
S004	SCHEDULES		
S005	SCHEDULES		
S101	FOOTING AND FOUNDATION PLAN		
S201	DETAILS		
S202	DETAILS		

G. ADHESIVE/MECHANICAL ANCHORS

- WITHOUT WRITTEN APPROVAL OF THE ENGINEER, CONTRACTOR SHALL NOT SUBSTITUTE POST-INSTALLED ANCHORS WHERE CAST-IN-PLACE ANCHORS ARE SPECIFIED IN THE DRAWINGS.
- 2. WHERE STRUCTURAL DETAILS SPECIFY SPECIFIC BRANDS AND/OR TYPES OF ADHESIVES OR ANCHORS, SUBSTITUTIONS OF OTHER BRANDS AND/OR TYPES IS NOT ALLOWED, WITHOUT WRITTEN APPROVAL OF THE ENGINEER

 APPROVAL OF THE ENGINEER
- ANCHORS, SUBSTITUTIONS OF OTHER BRANDS AND/OR TYPES IS NOT ALLOWED, WITHOUT WRITTEN APPROVAL OF THE ENGINEER.

 3. SUBSTITUTION REQUESTS FOR ALTERNATE PRODUCTS SHALL BE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO USE. SUBSTITUTION REQUESTS SHALL INCLUDE AN

ICC ESR OR IAPMO REPORT AND SUPPORTING CALCULATIONS INDICATING COMPLIANCE WITH DESIGN

- 4. ALL ADHESIVE/MECHANICAL ANCHORS SHALL BE INSTALLED, INCLUDING HOLE DRILLING AND PREPARATION, IN ACCORDANCE WITH AN APPROVED INDEPENDENT EVALUATION REPORT (ICC-ES, IAPMO, OR APPROVED EQUAL), AS INDICATED BELOW, AND IN ACCORDANCE WITH ALL
- MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII).

 5. ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT TIME

 OF ANCHOR INSTALLATION. ADHESIVE ANCHORS SHALL NOT BE FULLY LOADED UNTIL CONCRETE HAS REACHED DESIGN STRENGTH.
- 6. UNLESS APPROVED BY THE ENGINEER OF RECORD, CONCRETE AND DRILLED ANCHOR HOLES SHALL BE DRY AND FREE OF WATER FOR 24 HOURS PRIOR TO ADHESIVE INSTALLATION. CONTACT THE ENGINEER OF RECORD FOR GUIDANCE IF THE CONTRACTOR CHOOSES TO INSTALL IN WET OR DAMP
- 7. CONCRETE TEMPERATURE AT THE TIME OF INSTALLATION SHALL BE MONITORED BY THE CONTRACTOR. CONTRACTOR SHALL COMPLY WITH ALL MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS (MPII) RELATIVE TO SUBSTRATE TEMPERATURE.
- 8. INSTALLATION OF ADHESIVE ANCHORS HORIZONTALLY OR UPWARDLY INCLINED TO SUPPORT SUSTAINED TENSION LOADS SHALL BE PERFORMED BY PERSONNEL CERTIFIED BY AN APPLICABLE CERTIFICATION PROGRAM. CERTIFICATION SHALL INCLUDE WRITTEN AND PERFORMANCE TESTS IN ACCORDANCE WITH THE ACI/CRSI ADHESIVE ANCHOR INSTALLER CERTIFICATION PROGRAM, OR EQUIVALENT IN ACCORDANCE WITH ACI 318-11 D.9.2.2. PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INSTALLATION. CONTINUOUS SPECIAL
- INSPECTION SHALL BE PROVIDED FOR THESE ANCHORS.

 9. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO CONCRETE SHALL BE:
- a. HILTI HIT-RE 500V3 (ESR-3814), OR HILTI HIT-HY 200-A (ESR-3187).
- b. SIMPSON SET-3G (ESR-4057), OR AT-XP (ER-0263).
 c. DEWALT PURE 110+ (ESR-3298), OR AC200+ GOLD (ESR-4027-COLD WEATHER).
 10. UNLESS NOTED OTHERWISE, ALL ADHESIVE ANCHORS INTO MASONRY SHALL BE:
- a. HILTI HIT-HY 270 (ESR-4143), OR HILTI HIT-HY 200-A (ESR-3963). b. SIMPSON SET-XP (ER-0265), OR AT-XP (ER-0281).
- c. DEWALT AC100+ GOLD (ESR-3200).11. ALL MASONRY CELLS WITHIN 8" OF THE ANCHOR SHALL BE SOLID GROUTED.
- 12. THE TESTING LABORATORY WILL PERFORM VISUAL INSPECTION OF ANCHORS AND DOWELS AS SPECIFIED IN THE SPECIAL INSPECTION SCHEDULE AND THE APPROVED INDEPENDENT EVALUATION REPORT. TENSION TESTING CAN BE REQUIRED AT THE DIRECTION OF THE STRUCTURAL ENGINEER OF RECORD OR THE SPECIAL INSPECTOR.
- 13. IF REINFORCEMENT IS ENCOUNTERED DURING DRILLING, ABANDON THAT HOLE AND SHIFT THE ANCHOR LOCATION TO AVOID THE REINFORCEMENT. PROVIDE A MINIMUM SPACE OF (2) ANCHOR HOLE DIAMETERS OR 1 INCH, WHICH EVER IS LARGER, OF SOUND CONCRETE/MASONRY BETWEEN THE ANCHOR AND THE ABANDONED HOLE. FILL THE ABANDONED HOLE WITH NON-SHRINK GROUT. AT CONTRACTORS OPTION, LOCATE EXISTING REINFORCEMENT PRIOR TO DRILLING/CORING. IF THE ANCHOR OR DOWEL CANNOT BE SHIFTED AS NOTED ABOVE, THE ENGINEER WILL DETERMINE A NEW LOCATION.
 14. LOCATE REINFORCEMENT AND CONFIRM FINAL ANCHOR LOCATIONS PRIOR TO FABRICATING PLATES,
- MEMBERS, OR OTHER STEEL ASSEMBLIES ATTACHED WITH MECHANICAL ANCHORS.

H. REINFORCING STEEL

REINFORCING BAR STRENGTH REQUIREMENTS:

"a." ALL REINFORCING BARS, SHALL CONFORM TO ASTM STANDARD A-615 GRADE 60 AND ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM STANDARD A-1064 AND SHALL BE SUPPLIED IN FLAT SHEETS. ADEQUATELY TIE AND SUPPORT ALL REINFORCING STEEL AS SPECIFIED BY ACI 117, TO MAINTAIN EXACT REQUIRED POSITION.

2. HEADED SHEAR STUD ASSEMBLIES SHALL CONFORM TO ASTM A1044

- 3. STEEL DISCONTINUOUS FIBER REINFORCEMENT SHALL BE DEFORMED AND CONFORM TO ASTM A820 AND SHALL HAVE A LENGTH TO DIAMETER RATIO NOT SMALLER THAN 50 AND NOT GREATER THAN 100.

 4. HEADED DEFORMED BARS SHALL CONFORM TO ASTM A970. OBSTRUCTIONS OR INTERRUPTIONS OF
- THE BAR DEFORMATIONS, IF ANY, SHALL NOT EXTEND MORE THAN 2 BAR DIAMETERS FROM THE BEARING FACE OF THE HEAD.

 5. ALL REINFORCING STEEL SHALL BE TIED IN PLACE AND ADEQUATELY SUPPORTED PRIOR TO PLACING
- CONCRETE. WET STABBING OF ANY REINFORCING STEEL IS NOT PERMITTED, UNLESS SPECIFICALLY DETAILED OTHERWISE OR APPROVED BY THE ENGINEER.

 6. ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 1/3.
- ALL FIELD BENT DOWELS SHALL BE GRADE 40 WITH SPACING INDICATED REDUCED BY 1/3.
 UNLESS NOTED OTHERWISE, REINFORCEMENT SHALL HAVE THE FOLLOWING CONCRETE COVERAGE

 CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"
- b. EXPOSED TO EARTH OR WEATHER:
 1. #6 & LARGER 2"
- 2. #5 & SMALLER1-1/2"

ASTM A-706 REINFORCING.

- c. NOT EXPOSED TO WEATHER OR EARTH:

 1. SLABS, WALLS, JOISTS, #11 & SMALLER 3/4"
- 1. SLABS, WALLS, JOISTS, #11 & SMALLER 3/4"
 2. BEAMS, COLUMNS: MAIN REINFORCING OR TIES 1-1/2"
- d. SLAB ON GRADE:
- PLACE REINFORCING AT CENTER OF SLAB UNLESS INDICATED OTHERWISE.
 EXCEPT WHERE NOTED ON PLANS OR DETAILS CONTINUOUS REINFORCEMENT SHALL BE SPLICED AT
- POINTS OF MINIMUM STRESS BY LAPPING PER THE REBAR LAP SCHEDULE.

 9. REINFORCING STEEL MAY BE SPLICED WITH MECHANICAL COUPLERS THAT HAVE A TENSION CAPACITY OF AT LEAST 125% OF THE STRENGTH OF THE BAR. MECHANICAL COUPLERS SHALL BE A POSITIVE
- CONNECTING TYPE COUPLER, AND SHALL BE INSTALLED IN ACCORDANCE WITH AN APPROVED ICC RESEARCH REPORT. WHERE THESE ARE USED, SPLICES ON ADJACENT BARS SHALL BE STAGGERED AT LEAST 24 INCHES ALONG THE LENGTH OF THE BARS.

 10. ALL VERTICAL REINFORCING IN STRUCTURAL ELEMENTS ABOVE SHALL BE SPLICED WITH MATCHING DOWELS EMBEDDED WITHIN THE FOOTINGS OR STRUCTURE BELOW. SPLICE LENGTHS SHALL COMPLY
- WITH REBAR LAP SCHEDULE. DOWELS INTO FOOTINGS SHALL TERMINATE WITH A STANDARD HOOK, AND SHALL EXTEND TO WITHIN 4" OF THE BOTTOM OF THE FOOTING, BUT NEED NOT EXTEND MORE THAN 20" INTO FOOTING.

 11. DO NOT WELD REINFORCING EXCEPT AS NOTED ON PLANS, WHERE REINFORCING IS WELDED, USE

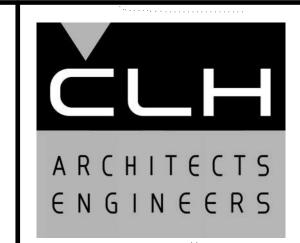
12. REINFORCING BARS, TIES, AND TENDONS SHALL BE SUPPORTED BY NYLON CONES, PLASTIC-COATED

- TIE-WIRES, OR PLASTIC-COATED CHAIRS. REINFORCING IN FOOTINGS IS PERMITTED TO BE SUPPORTED ON CONCRETE DOBIES.

 13. UNLESS NOTED OTHERWISE, HOOKS, STIRRUPS, TIES, AND OTHER BENDS IN REINFORCING STEEL SHALL MEET THE STANDARDS SET FORTH IN ACI 318/318R-14. UNLESS OTHERWISE PERMITTED BY THE ENGINEER, ALL REINFORCEMENT SHALL BE BENT COLD. REINFORCEMENT PARTIALLY EMBEDDED IN
- PERMITTED BY THE ENGINEER.

 14. UNLESS SPECIFICALLY NOTED AND/OR DETAILED IN THE STRUCTURAL DRAWINGS CONDUIT SHALL NOT BE IN CONTACT WITH REINFORCING STEEL.

CONCRETE SHALL NOT BE FIELD BENT, EXCEPT AS SHOWN ON THESE DRAWINGS OR OTHERWISE



D Case, Lowe & Hart, Inc. •2484 Washington Blve Suite 510 • Ogden, Utah• 84401 801.399.5821 • www.clhae.com

CONSULTANTS

STAMP

LOTS TO

New Canopy

3801 Washington Blvd.

South Ogden, Utah

MARK DATE DESCRIPTION

ISSUE DATE: October 21, 2019

PROJECT NO: 19060
CAD DWG FILE:
DRAWN BY: Z. Thorner
CHK'D BY: S. Vanderdoes

REVIEW SET
October 21, 2019

SHEET TITLE

STRUCTURAL NOTES

SHEET NO:

S001

- 1. STRUCTURAL STEEL SHALL BE FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING:
- a. ANSI/AISC 360-16 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS", WITH "COMMENTARY" AND "SUPPLEMENTS" AS REQUIRED BY BUILDING CODE.
- b. AISC 303-16 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES" EXCLUDING THE FOLLOWING SECTIONS: 4.4, 4.4.1, AND 4.4.2.
- c. AISI "SPECIFICATIONS FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS"
- d. AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS".
 e. AWS D1.1 AND 1.3, "STRUCTURAL WELDING CODE" (EXCEPT SPECIFIC ITEMS DO NOT APPLY IF THEY
- f. ANSI/AISC 341-16 "SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS"
- g. AWS D1.8, "STRUCTURAL WELDING CODE SEISMIC".
- 2. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING:
- a. WIDE FLANGE SHAPES AND WT SHAPES ASTM A992
- b. OTHER SHAPES AND PLATES ASTM A-36 (UNO)
 c. HOLLOW STRUCTURAL SECTIONS (HSS) ASTM A-500, GRADE C FOR SQUARE, RECTANGULAR AND ROUND SHAPES (FY = 50 KSI FOR SQUARE AND RECTANGULAR SHAPES AND 46 KSI FOR ROUND SHAPES)
- d. DEFORMED BAR ANCHORS (DBA) ASTM A-496, WELDED IN ACCORDANCE WITH AWS D1.1
 e. HEADED STUD ANCHORS (HSA) ASTM A-108, GRADE 1015 STEEL AND WELDED IN ACCORDANCE WITH AWS D1.1 FOR TYPE "B". USE 3/4" DIAMETER STUDS, UNLESS NOTED OTHERWISE.
 f. THREADED ROD ASTM A-449.
- g. NON-SHRINK GROUT ASTM C110. NON-SHRINK GROUT SHALL BE PRE-PACKAGED, NON-METALLIC, WITH A 28-DAY COMPRESSIVE STRENGTH OF 6,000 PSI.
- 3. CONNECTIONS SHALL COMPLY WITH THE STRUCTURAL DRAWINGS UNLESS WRITTEN APPROVAL TO CHANGE IS GIVEN BY THE STRUCTURAL ENGINEER.
- ALL SHOP FABRICATIONS SHALL BE PERFORMED BY AN APPROVED FABRICATOR IN ACCORDANCE WITH SECTIONS 1702 AND 1704 OF THE IBC OR WITH SHOP INSPECTION BY AN INDEPENDENT AGENCY IN ACCORDANCE WITH SECTION 1704.2.5 OF THE IBC.
 WELDING
- a. ALL WELDING AND CUTTING SHALL BE PERFORMED BY AWS QUALIFIED WELDERS IN ACCORDANCE WITH ANSI/AWS D1.1 (LATEST EDITION).
- b. USE E-70XX ELECTRODES UNLESS NOTED OTHERWISE. E-60XX MAY BE USED FOR WELDING STEEL
- c. ALL INTERSECTING STEEL SHAPES WHICH ARE NOT CONNECTED WITH BOLTS SHALL BE WELDED TOGETHER WITH A FILLET WELD ALL AROUND UNLESS NOTED OTHERWISE. WHERE WELD SIZES ARE NOT SHOWN, USE THE FOLLOWING:
- 1. WHERE THE THICKNESS OF THE CONNECTED PARTS IS EQUAL TO OR THICKER THAN 1/4", WELD SIZE SHALL BE 1/16" LESS THAN THE THICKNESS OF THE THINNEST PART.
- WHERE ANY OF THE CONNECTED PARTS IS LESS THAN 1/4" THICK, WELD SIZE SHALL BE THE SAME AS THE THICKNESS OF THE THINNEST PART.
- d. WELDING OF HSA'S (HEADED STUD ANCHORS) AND DBA'S (DEFORMED BAR ANCHORS) SHALL
 CONFORM TO THE MANUFACTURER'S SPECIFICATIONS AND AWS D1.1 REINFORCING BARS SHALL
 NOT BE SUBSTITUTED FOR HSA'S OR DBA'S.
 e. WHEREVER POSSIBLE, WELDS SHALL BE SHOP WELDS, SPECIAL CONSIDERATIONS, SUCH AS ITEM
- e. WHEREVER POSSIBLE, WELDS SHALL BE SHOP WELDS. SPECIAL CONSIDERATIONS, SUCH AS ITEMS WHICH MAY NEED ADJUSTMENT AT THE SITE, REQUIRE THAT SOME WELDS BE FIELD WELDS. WHERE QUESTIONS OR DISCREPANCIES OCCUR THE CONTRACTOR SHALL COORDINATE THE WORK BETWEEN THE SHOP FABRICATOR AND THE STEEL ERECTOR.
- f. SPECIAL PROVISIONS FOR SFRS (SEISMIC FORCE RESISTING SYSTEM):

 1. ALL WELDS DESIGNATED AS DEMAND CRITICAL WELDS SHALL BE MADE WITH FILLER METALS

 MEETING THE RECUIPEMENTS OFFICIENT IN CLAUSE OF A MICHAEL STATES.
- MEETING THE REQUIREMENTS SPECIFIED IN CLAUSES 6.1, 6.2, AND 6.3 OF AWS D1.8.

 2. ALL OTHER WELDS THAT ARE PART OF THE SFRS SHALL BE MADE WITH FILLER METALS
- MEETING THE REQUIREMENTS SPECIFIED IN CLAUSE 6.1 OF AWS D1.8.

 3. BUTT WELDS IN MEMBERS WITH DIFFERENT THICKNESSES, SUCH AS COLUMN SPLICES, SHALL

 BE TABLED AND MADE IN SUCH A MANNER THAT THE TRANSITION DOES NOT EXCEED 1 IN
- 3. BUTT WELDS IN MEMBERS WITH DIFFERENT THICKNESSES, SUCH AS COLUMN SPLICES, SHALL BE TAPERED AND MADE IN SUCH A MANNER THAT THE TRANSITION DOES NOT EXCEED 1 IN 2-1/2 INCHES. THE TRANSITION SHALL BE ACCOMPLISHED BY CHAMFERING THE THICKER PART, TAPERING THE WIDER PART, SLOPING THE WELD METAL OR BY A COMBINATION OF THESE

6. BOLTING

- a. UNLESS NOTED OTHERWISE, ALL STRUCTURAL STEEL TO STEEL CONNECTIONS SHALL USE HIGH STRENGTH BOLTS CONFORMING TO ASTM F3125 GR. A325.
- b. UNLESS NOTED OTHERWISE, ALL BOLTING IS CLASSIFIED AS NON-SLIP CRITICAL BEARING TYPE CONNECTIONS WITH THREADS INCLUDED IN SHEAR PLANE. TIGHTEN BOLTS TO A SNUG TIGHT CONDITION, WITH ALL PLIES OF THE JOINT IN FIRM CONTACT.
- c. WHERE OVERSIZED OR SLOTTED HOLES OCCUR IN THE OUTER PLY, AN ASTM F436 WASHER OR 5/16" THICK COMMON PLATE WASHER SHALL BE USED AS REQUIRED TO COMPLETELY COVER THE HOLE
- d. BOLTS SHALL BE CENTERED IN SLOTTED HOLES, UNLESS NOTED OTHERWISE.
- e. WHERE A STEEL BEAM TO BEAM CONNECTION IS NOT SHOWN, PROVIDE AN AISC STANDARD FRAMED CONNECTION SIZED FOR 1/2 OF THE TOTAL LOAD CAPACITY OF THE BEAM FOR THE SPAN AND STEEL SPECIFIED.
- 7. UNLESS NOTED OTHERWISE, WHERE STEEL BEAMS SUPPORT WOOD FRAMING OR WOOD SHEATHING, PROVIDE A CONTINUOUS DOUBLE 2x OR SINGLE 3x NAILER PLATE ON THE TOP OF THE BEAM THAT EXTENDS AT LEAST THE FULL WIDTH OF THE BEAM FLANGE. ATTACH NAILER PLATES TO WIDE-FLANGE BEAMS WITH 1/2" DIAMETER THRU BOLTS AT 24"O.C. STAGGERED. COUNTER-SINK HEAD OF BOLTS INTO TOP OF NAILER PLATE TO PROVIDE A FLUSH BEARING SURFACE.
- 8. PROVIDE FULL DEPTH WEB STIFFENER PLATES AT EACH SIDE OF STEEL BEAMS AT ALL BEARING (EXCEPT SECONDARY FRAMING) POINTS. STIFFENER PLATES SHALL BE THICKNESS SHOWN UNLESS NOTED OTHERWISE AND SHALL BE WELDED BOTH SIDES WITH FILLET WELDS ALL AROUND. FLANGE WIDTH STIFFENER THICKNESS WELD THICKNESS < 8 1/4" 1/4" 3/16"
- 8 1/4" < BF < 12 1/2" 3/8" 1/4"
 12 1/2" < BF < 18" 1/2" 5/16"

 9. FABRICATORS AND SUPPLIERS SHALL COORDINATE PAINT/FINISHES WITH REQUIREMENTS FOR DIRECT APPLIED INSULATION, FIREPROOFING, ETC. AS NOTED IN THE PROJECT SPECIFICATIONS.

 10. WHEN DETERMINING THE FIRE RESISTANCE OF ASSEMBLIES, USE THE FOLLOWING: STEEL ROOF
- MEMBERS ARE CONSIDERED UN-RESTRAINED AND STEEL FLOOR FRAMING MEMBERS ARE CONSIDERED RESTRAINED.

 11. UNLESS NOTED OTHERWISE, ALL HORIZONTAL FRAMING MEMBERS SHALL BE ERECTED WITH THE
- NATURAL CROWN UP.

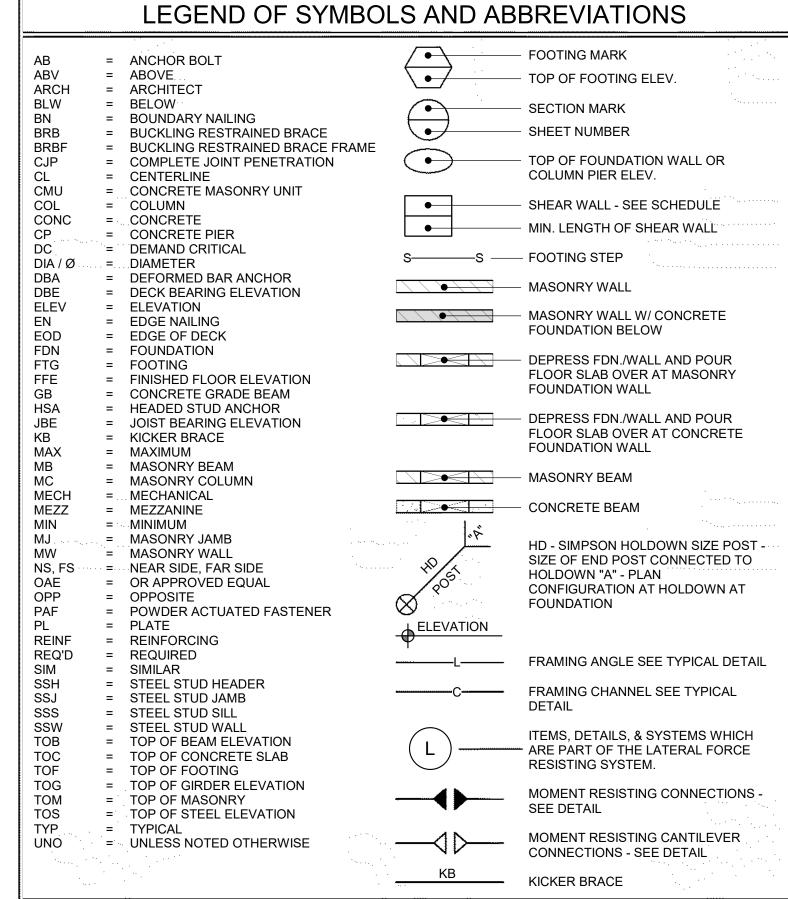
 12. UNLESS OTHERWISE SHOWN OR DETAILED IN THE PLANS, ALL STEEL COLUMNS, BEAMS, BRACES, STRUTS, ETC. SHALL BE CONTINUOUS BETWEEN CONNECTIONS OR SUPPORTS. SPLICES IN MEMBERS SHALL NOT BE PERMITTED WITHOUT WRITTEN APPROVAL BY THE ENGINEER OF RECORD.

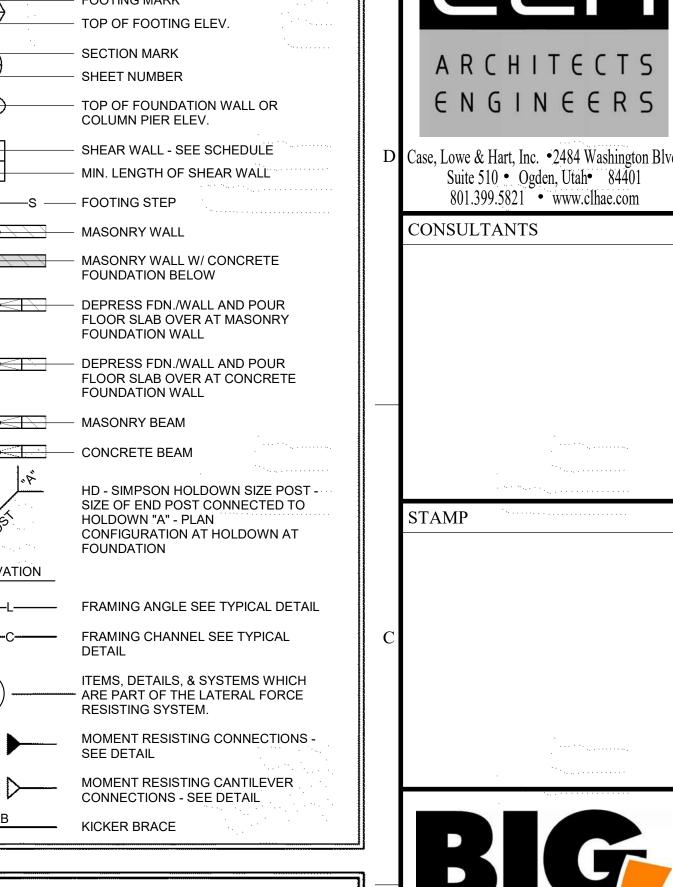
J. NON-STRUCTURAL DELEGATED DESIGNS AND DEFERRED SUBMITTALS

- NON-STRUCTURAL DELEGATED DESIGNS AND SUBSEQUENT DEFERRED SUBMITTALS ARE FOR ITEMS NOT INCLUDED IN THE STRUCTURAL DELEGATED DESIGN SECTION. THESE ARE ITEMS THAT ARE NOT CRITICAL TO THE OVERALL PERFORMANCE OF THE STRUCTURAL SYSTEM BUT THAT IMPART LOADS AND FORCES TO THE STRUCTURAL SYSTEM.
- NON-STRUCTURAL DEFERRED SUBMITTALS SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
- 3. ARW ENGINEERS WILL REVIEW NON-STRUCTURAL DEFERRED SUBMITTALS TO VERIFY DESIGN CRITERIA IS COMPLIANT WITH THE APPROVED CONSTRUCTION DOCUMENTS.
- IF THE STRUCTURAL DRAWINGS INCLUDE LOADS TO ACCOMMODATE NON-STRUCTURAL ELEMENTS,
 THE CONTRACTOR SHALL SUBMIT DOCUMENTATION INDICATING THAT THE NON-STRUCTURAL
 ELEMENTS COMPLY WITH THE LOADING CRITERIA PROVIDED HEREIN. SUCH DOCUMENTATION SHALL
 BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN.
 IF THE NON-STRUCTURAL DEFERRED SUBMITTAL INDICATES THAT THE ELEMENT WILL IMPART FORCES
 IN EXCESS OF THOSE INDICATED ON THE STRUCTURAL DRAWINGS, THE CONTRACTOR SHALL SUBMIT
 A DETAILED GRAPHICAL REPRESENTATION OF THOSE DESIGN LOADS, INCLUDING MAGNITUDE, AND
 LOCATION. THE GRAPHIC SHALL BE ACCOMPANIED BY DOCUMENTATION INDICATING THAT THE NONSTRUCTURAL ELEMENT DESIGN COMPLIES WITH THE LOADING CRITERIA PROVIDED HEREIN. THE
 LETTER SHALL BEAR THE STAMP AND SIGNATURE OF THE DESIGN PROFESSIONAL RESPONSIBLE FOR
- 6. NON-STRUCTURAL DELEGATED DESIGN ITEMS REQUIRING DEFERRED SUBMITTALS SHALL INCLUDE, BUT ARE NOT LIMITED TO :
- a. COLD FORMED STEEL STUDS / JOISTS / HEADERS / JAMBS / TRUSSES.
 b. SEISMIC BRACING OF ALL ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL ITEMS WHERE REQUIRED BY THE MOST RECENT VERSION OF ASCE 7 AND THE PROJECT CONTRACT

K. EXISTING BUILDING NOTES

- 1. ARW ENGINEERS EXPRESSLY DISCLAIMS RESPONSIBILITY FOR ANY PORTION OF THE EXISTING BUILDING NOT SPECIFICALLY ADDRESSED IN THESE DRAWINGS.
- 2. DRAWINGS AND DETAILS HAVE BEEN PREPARED TO REFLECT THE EXISTING CONDITIONS AND CONFIGURATIONS OF STRUCTURAL ELEMENTS. HOWEVER, THE CONTRACTOR IS ULTIMATELY RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS AND ALERTING THE ENGINEER OF ANY DISCREPANCIES FOUND PRIOR TO FABRICATING OR INSTALLING STRUCTURAL ELEMENTS.
- 3. THE CONTRACTOR IS RESPONSIBLE FOR MAKING SURE THAT THE BUILDING AND ELEMENTS WITHIN THE BUILDING REMAIN STABLE UNTIL CONSTRUCTION IS COMPLETE. AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SHORING OR OTHER TEMPORARY SUPPORT OF STRUCTURAL MEMBERS UNTIL THE FINAL CONFIGURATION HAS BEEN COMPLETED.







3801 Washington Blvd. South Ogden, Utah

MARK DATE DESCRIPTION

ISSUE DATE: October 21, 2019
PROJECT NO: 19060
CAD DWG FILE:
DRAWN BY: Z. Thorner

REVIEW SET

October 21, 2019

S. Vanderdoes

SHEET TITLE

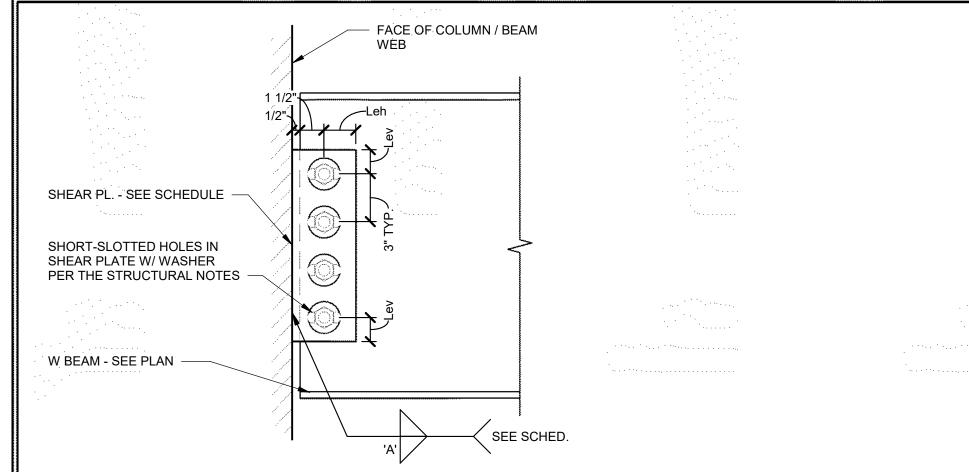
CHK'D BY:

STRUCTURAL NOTES

SHEET NO:

S002

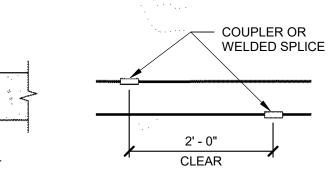
BEAM CONNECTION SCHEDULE SHEAR PLATE INFORMATION BOLTS W/ STANDARD WASHERS OVER WELD COMMENTS PL. DIMENSIONS BEAM SLOTS DEPTH W/ SHORT-Lev SLOTTED HOLES SIZE No. PL. 1/4" x 4" 1 1/2" W8 x, W10 x 3/4" Ø 3/16" 1 1/2" PL. 5/16" x 4" 3/4" Ø W12 x 1/4" W14 x 90 & PL. 5/16" x 4" 1 1/2" 3/4" Ø 2" 1/4" LIGHTER W16 x 77 & PL. 5/16" x 4" 2" 3/4" Ø 1 1/2" 1/4" LIGHTER W18 x 65 8 PL. 5/16" x 4" 3/4" Ø 1 1/2" 1/4" LIGHTER W21 x 73 & 1 1/2" PL. 5/16" x 4" 3/4" Ø 1/4" LIGHTER W24 x 94 & 1 1/2" PL. 3/8" x 4" 7/8" Ø 1/4" LIGHTER W27 x 114 & PL. 3/8" x 4" 1 1/2" 7/8" Ø 1/4" LIGHTER W30 x 124 PL. 1/2" x 4" 1" Ø 1 3/4" 2" 5/16" & LIGHTER W33 x 130 & PL. 1/2" x 4" 1 3/4" 2" 1" Ø 5/16" LIGHTER W36 x 160 & 2 1/4" 10 1-1/8" Ø PL. 1/2" x 4 1/2" 5/16" LIGHTER FACE OF COLUMN / BEAM



LENGTH

CONCRETE REINFORCING & SPLICE LENGTHS (IN)

FACE OF JOINT OR CRITICAL SECTION -FACE OF JOINT OR CRITICAL SECTION -LAP SPLICE LENGTH DEVELOPMENT LENGTH HOOK DEVELOPMENT



4	COUPLER OR WELDED SPLICE
	2' - 0" CLEAR

COMMENTS

COMMENTS

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VERT. WALL BARS, FILL ON METAL DECK	NWC	3000 PSI	17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	17	69	19	76	30
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	3000 PSI	17	22	8	22	29	8	28	36	10	33	43	12	48	62	13	55	72	15	62	17	69	19	76	30
BEAM BOTTOM BARS, COLUMN BARS	NWC	3000 PSI	17	22	8	22	29	11	28	36	14	33	43	16	48	62	19	55	72	22	62	25	69	27	76	30
FOOTING BOTTOM BARS	NWC	3000 PSI	12	16	8	14	18	8	17	22	10	20	26	12	29	38	13	33	43	15	37	17	42	19	46	30
BEAM TOP BARS	NWC	3000 PSI	22	29	8	29	38	11	36	47	14	43	56	16	63	82	19	72	94	22	81	25	90	27	98	30
SLAB ON GRADE	NWC	3000 PSI	12	16	8	14	18	8	17	22	10	20	26	12	32	42	13	42	55	15	53	17	69	19	76	30
		CONCRETE REINFORCING & SPLICE LENGTHS (IN)																								

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VERT. WALL BARS, FILL ON METAL DECK	NWC	4000 PSI	15	20	7	19	25	7	24	31	8	29	38	10	42	55	12	48	62	13	54	15	60	17	66	26	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	4000 PSI	15	20	7	19	25	7	24	31	8	29	38	10	42	55	12	48	62	13	54	15	60	17	66	26	
BEAM BOTTOM BARS, COLUMN BARS	NWC	4000 PSI	15	20	7	19	25	9	24	31	12	29	38	14	42	55	17	48	62	19	54	21	60	24	66	26	
FOOTING BOTTOM BARS	NWC	4000 PSI	12	16	7	12	16	7	15	20	8	18	23	10	25	33	12	29	38	13	33	15	36	17	40	26	
BEAM TOP BARS	NWC	4000 PSI	19	25	7	25	33	9	31	40	12	37	48	14	54	70	17	62	81	19	70	21	78	24	85	26	
SLAB ON GRADE	NWC	4000 PSI	12	16	7	12	16	7	15	20	8	18	23	10	28	36	12	36	47	13	46	15	60	17	66	26	
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VERT. WALL BARS, FILL ON METAL DECK	NWC	4500 PSI	14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	14	56	16	62	25	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	4500 PSI	14	18	7	18	23	6	23	30	8	27	35	9	40	52	11	45	59	13	51	14	56	16	62	25	
BEAM BOTTOM BARS, COLUMN BARS	NWC	4500 PSI	14	18	7	18	23	9	23	30	11	27	35	13	40	52	16	45	59	18	51	20	56	22	62	25	
 FOOTING BOTTOM BARS	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	24	31	11	27	35	13	31	14	34	16	37	25	
 BEAM TOP BARS	NWC	4500 PSI	18	23	7	24	31	9	30	39	11	35	46	13	51	66	16	59	77	18	66	20	73	22	80	25	
SLAB ON GRADE	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	27	35	11	34	44	13	44	14	56	16	62	25	
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DADLOCATION	COI	NCRETE															В	AR SIZ	ZE								
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	TYPE	STRENGTH	ℓd	ls	ℓdh	ℓd	ls	ℓdh	ℓd	ls	ldh	ℓd	ls	ℓdh	ℓd	ls	ℓdh	ℓd	ls	ℓdh	ℓd	ℓdh	ℓd	ldh	ℓd	ℓdh	
VERT. WALL BARS,	NWC	5000 PSI	13	17	6	17	22	6	22	29	7	26	34	9	38	49	10	43	56	12	48	13	54	15	59	23	

SLAB ON GRADE	NWC	4500 PSI	12	16	7	12	16	6	14	18	8	17	22	9	27	35	11	34	44	13	44	14	56	16	62	25	
														CON	CRET	E REII	NFOR	CING	& SPL	ICE LE	NGT	HS (IN)					
BAR LOCATION	СО	NCRETE															В	BAR S	IZE								***************************************
BAN LOCATION	TYPE	STRENGTH		#3			#4			#5			#6			#7			#8			#9	#	10	#	±11	COMMENTS
	1176	STILLINGTT	ℓd	ls	ℓdh	ℓd	ls	ℓdh	ℓd	ls	ℓdh	ℓd	ℓdh	ℓd	ldh	ℓd	ldh										
VERT. WALL BARS, FILL ON METAL DECK	NWC	5000 PSI	13	17	6	17	22	6	22	29	7	26	34	9	38	49	10	43	56	12	48	13	54	15	59	23	
HORIZ. WALL BARS, FOOTING TOP BARS	NWC	5000 PSI	13	17	6	17	22	6	22	29	7	26	34	9	38	49	10	43	56	12	48	13	54	15	59	23	
BEAM BOTTOM BARS, COLUMN BARS	NWC	5000 PSI	13	17	6	17	22	8	22	29	11	26	34	13	38	49	15	43	56	17	48	19	54	21	59	23	
FOOTING BOTTOM BARS	NWC	5000 PSI	12	16	6	12	16	6	13	17	7	16	21	9	23	30	10	26	34	12	29	13	32	15	36	23	
BEAM TOP BARS	NWC	5000 PSI	17	22	6	23	30	8	28	36	11	34	44	13	49	64	15	56	73	17	63	19	69	21	76	23	
SLAB ON GRADE	NWC	5000 PSI	12	16	6	12	16	6	13	17	7	16	21	9	25	33	10	32	42	12	41	13	54	15	59	23	

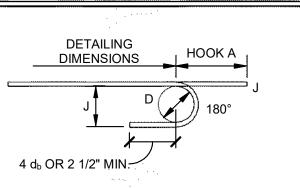
1. MECHANICAL COUPLERS MAY BE USED IN LIEU OF LAP SPLICES SHOWN. SEE STRUCTURAL NOTES FOR MINIMUM COUPLER CAPACITY. WHERE MECHANICAL COUPLERS ARE USED, STAGGER ADJACENT SPLICES A MINIMUM OF 24" AS

2. DEVELOPMENT LENGTHS SHALL BE INCREASED BY 50% FOR STRAIGHT BAR DEVELOPMENT AND 20% FOR HOOKED BARS WHERE EPOXY COATING IS USED.

3. WHEN SPLICING BARS OF DIFFERENT SIZES, USE LAP SPLICE LENGTH OF LARGER BARS UNO.

4. SPLICE BARS LARGER THAN #11 USING MECHANICAL COUPLERS.

STANDARD HOOK & BEND SCHEDULE



D = 6d_b FOR #3 THROUGH #8

D = 8d_b FOR #9 THROUGH #11

DETAILING DIMENSIONS D = 6db FOR #3 THROUGH #8 D = 8db FOR #9 THROUGH #11 C = FOR BARS IN CMU: #6 AND LARGER, PROVIDE 12db FROM POINT OF TANGENCY

6db OR 2 1/2" MIN. D 135° FROM POINT OF TANGENCY #5 AND SMALLER, PROVIDE 6db FROM POINT OF TANGENCY

DETAILING

DIMENSIONS

Case, Lowe & Hart, Inc. •2484 Washington Blvd $D = 4d_b$ FOR #3 THROUGH #5 $D = 6d_b$ FOR #6 THROUGH #8 Suite 510 • Ogden, Utah• 84401 801.399.5821 • www.clhae.com D = 8d_b FOR #9 THROUGH #11

CONSULTANTS

DIMENSION OF STANDARD 90° HOOKS, ALL GRADES DIMENSION OF STANDARD 180° HOOKS, ALL GRADES BAR SIZE #3 3" 6" #5 5" 10" 1'-0" 8" 6" #7 1'-2" 10" 7" #8 11" 8" 1'-4" 1'-7" 1'-3" 11 3/4" #10 1'-1 1/4" 1'-10" 1'-5" #11 1'-7" 1'-2 3/4" 2'-0"

NOTE: d_b = BAR DIAMETER

(2 1/2" MINIMUM)

STAMP

New Canopy

3801 Washington Blvd. South Ogden, Utah

MARK DATE DESCRIPTION

October 21, 2019 ISSUE DATE: PROJECT NO: 19060

CAD DWG FILE:

DRAWN BY: Z. Thorner CHK'D BY: S. Vanderdoes

REVIEW SET

October 21, 2019

SHEET TITLE

SCHEDULES

SHEET NO:

S003

REDUCE SCALE ACCORDINGLY

STRUCTURAL STEEL SPECIAL INSPECTION SCHEDULE

ESTABLISHED PER 2018 IBC SECTION 1705.2.1

					STRUCTURAL
					EST
INSPECTION TASKS PRIOR TO WELDING (TABLE N5.4-1)	FABRICA QUALITY C	ONTROL	SPECIAL INS QUALITY AS CONTINUOUS	SURANCE	NOTES
WELDER QUALIFICATION RECORDS AND CONTINUITY RECORDS	•			•	
WELDING PROCEDURE SPECIFICATIONS (WPSs) AVAILABLE	•		•		
MANUFACTURER CERTIFICATIONS FOR WELDING CONSUMABLES AVAILABI	LE •		•		1. PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS.
MATERIAL IDENTIFICATION (TYPE / GRADE)		•		•	OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
WELDER IDENTIFICATION SYSTEM ¹		•		•	2. CONTINUOUS - PERFORM THESE TASKS FOR EACH WELDER
FIT-UP OF GROOVE WELDS (INCLUDING JOINT GEOMETRY)					OR MEMBER. 3. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABR
* JOINT PREPARATION					AND ERECTOR.
* DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)					4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ)
* CLEANLINESS (CONDITION OF STEEL SURFACES)	······································	•		•	APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, (
* TACKING (TACK WELD QUALITY AND LOCATION)					ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONS
* BACKING TYPE AND FIT (IF APPLICABLE)					FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N6.
FIT-UP OF CJP GROOVE WELDS OFHSS T-, Y-, AND K-JOINTS WITHOUT BACKING (INCLUDING JOINT GEOMETRY)		•			 QC AND QA INSPECTORS SHALL BE QUALIFIED IN ACCORDA WITH AISC 360-16 CHAPTER N4.
* JOINT PREPARATIONS					6. NONDESTRUCTIVE TESTING PERSONNEL SHALL BE QUALIF ACCORDANCE WITH AISC 360-16 CHAPTER N4.3.
* DIMENSIONS (ALIGNMENT, ROOT OPENING, ROOT FACE, BEVEL)	•			•	7. NONDESTRUCTIVE TESTING OF WELDED JOINTS SHALL CO
					WITH AISC 360-16 CHAPTER N5.5a AND b. 8. OBSERVATION OF WELDING OPERATIONS AND VISUAL INSF
* CLEANLINESS (CONDITION OF STEEL SURFACES)					OF IN-PROCESS AND COMPLETED WELDS SHALL BE THE PF
* TACKING (TACK WELD QUALITY AND LOCATION)		_		_	METHOD TO CONFIRM THAT THE MATERIALS, PROCEDURES WORKMANSHIP ARE IN CONFORMANCE WITH THE CONSTR
CONFIGURATION AND FINISH OF ACCESS HOLES		•		•	DOCUMENTS. FOR STRUCTURAL STEEL, ALL PROVISIONS (
FIT-UP OF FILLET WELDS					D1.1 / D1.1M STRUCTURAL WELDING CODE - STEEL FOR STATICALLY LOADED STRUCTURES SHALL APPLY.
* DIMENSIONS (ALIGNMENT, GAPS AT ROOT)		•		•	9. THERMALLY CUT SURFACES OF ACCESS HOLES SHALL BE
* CLEANLINESS (CONDITION OF STEEL SURFACES)					BY QA USING MT OR PT, WHEN THE FLANGE THICKNESS EX 2 IN. (50mm) FOR ROLLED SHAPES, OR WHEN THE WEB THIC
* TACKING (TACK WELD QUALITY AND LOCATION)					EXCEEDS 2 IN. (50mm) FOR BUILT-UP SHAPES. ANY CRACK
CHECK WELDING EQUIPMENT		•			BE DEEMED UNACCEPTABLE REGARDLESS OF SIZE OR LOC 10. WHEN REQUIRED BY APPENDIX 3, TABLE A-3.1, WELDED JOI
¹ THE FABRICATOR OR ERECTOR, AS APPLICABLE, SHALL MAINTAIN A SYSTOINT OR MEMBER CAN BE IDENTIFIED. STAMPS, IF USED, SHALL BE THE			HO HAS WELDEL) <i>A</i>	REQUIRING WELD SOUNDNESS TO BE ESTABLISHED BY RADIOGRAPHICS OR ULTRASONIC INSPECTION SHALL BE TIBY QA AS PRESCRIBED. REDUCTION IN THE RATE OF UT IS
NSPECTION TASKS DURING WELDING (TABLE N5.4-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	PROHIBITED. 11. REDUCTION OF RATE OF ULTRASONIC TESTING - THE RATE
CONTROL AND HANDLING OF WELDING CONSUMABLES					IS ONLY PERMITTED TO BE REDUCED IF APPROVED BY THE
* PACKAGING		•		•	AND THE AHJ PER AISC 360-16 CHAPTER N5.5e. 12. FOR STRUCTURES IN RISK CATEGORY II, WHERE THE INITIA
* EXPOSURE CONTROL					FOR UT IS 10%, THE NDT RATE FOR AN INDIVIDUAL WELDER
NO WELDING OVER CRACKED TACK WELDS		•		•	WELDING OPERATOR SHALL BE INCREASED TO 100% SHOU REJECT RATE, THE NUMBER OF WELDS CONTAINING
ENVIRONMENTAL CONDITIONS					UNACCEPTABLE DEFECTS DIVIDED BY THE NUMBER OF WE
* WIND SPEED WITHIN LIMITS		•		•	COMPLETED, EXCEEDS 5% OF THE WELDS TESTED FOR TH WELDER OR WELDING OPERATOR. A SAMPLING OF AT LEA
* PRECIPITATION AND TEMPERATURE					COMPLETED WELDS FOR A JOB SHALL BE MADE PRIOR TO
WPS FOLLOWED					IMPLEMENTING SUCH AN INCREASE. WHEN THE REJECT RATHER WELDER OR WELDING OPERATOR, AFTER A SAMPLING
* SETTINGS ON WELDING EQUIPMENT					LEAST 40 COMPLETED WELDS, HAS FALLEN TO 5% OR LESS
* TRAVEL SPEED	··				RATE OF UT SHALL BE RETURNED TO 10%. FOR EVALUATIN REJECT RATE OF CONTINUOUS WELDS OVER 3 FT (1M) IN L
* SELECTED WELDING MATERIALS		•		•	WHERE THE EFFECTIVE THROAT IS 1 IN. (25mm) OR LESS, E
* SHIELDING GAS TYPE / FLOW RATE		7		_	IN. (300mm) INCREMENT OR FRACTION THEREOF SHALL BE CONSIDERED AS ONE WELD. FOR EVALUATING THE REJEC
* PREHEAT APPLIED					ON CONTINUOUS WELDS OVER 3 FT (1M) IN LENGTH WHERI
* INTERPASS TEMPERATURE MAINTAINED (MIN. / MAX)					EFFECTIVE THROAT IS GREATER THAN 1 IN. (25mm), EACH 6 (150mm) OF LENGTH OR FRACTION THEREOF SHALL BE
* PROPER POSITION (F, V, H, OH)					CONSIDERED ON WELD.
WELDING TECHNIQUES					 ALL NDT PERFORMED SHALL BE DOCUMENTED. FOR SHOP FABRICATION, THE NDT REPORT SHALL IDENTIFY THE TEST
* INTERDACE AND FINAL CLEANING					WELD BY PIECE MARK AND LOCATION IN THE PIECE. FOR F

•

•

•

-						CC	DNSIDERED ON WELD.
					13.	AL	L NDT PERFORMED SHALL BE DOCUMENTED. FOR SHOP
-						FΑ	BRICATION, THE NDT REPORT SHALL IDENTIFY THE TESTED
-							ELD BY PIECE MARK AND LOCATION IN THE PIECE. FOR FIELD
						W	ORK, THE NDT REPORT SHALL IDENTIFY THE TESTED WELD BY
-	·	•		•			CATION IN THE STRUCTURE, PIECE MARK, AND LOCATION IN THE
							ECE. WHEN A WELD IS REJECTED ON THE BASIS OF NDT, THE
							OT RECORD SHALL INDICATE THE LOCATION OF THE DEFECT AND
-							IE BASIS OF REJECTION
	•		•		14.		EMAND CRITICAL WELDS SHALL MEET THE PROVISION FOUND IN
					17		SC 341-16 AND WELDING METHODS, PROCEDURES AND QUALITY
	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC		***	ONTROL SHALL COMPLY WITH AWS D1.1 AND THE FOLLOWING:
-		_		_			
		•		•		a.	
	•		•				OR ADJACENT TO THE JOINT, SHALL BE REPAIRED OR
-					l		REMOVED.
					1	b.	PREHEAT AND INTER-PASS REQUIREMENTS AS OUTLINED IN
1							SECTION 3.5.
						C.	UNREPAIRED CRACKS, GOUGES, AND NOTCHES WILL NOT BE
							PERMITTED IN THE JOINT AREA.
					1	d.	USE ELECTRODES WITH CHARPY V-NOTCH ABSORBED
	_		_				ENERGY EQUAL TO OR GREATER THAN 20 FT-LBS AT 20
1	•		•		1		DEGREES FAHRENHEIT UNDER AWS A5 CLASSIFICATION TEST
-							METHODS, AND 40 FT-LBS AT 70 DEGREES FAHRENHEIT USING
1		: 1			1		TEGT DEGOEDLINES DEGOEDED IN ADDENDIN V OF ALCO SES

TEST PROCEDURES PRESCRIBED IN APPENDIX X OF AISC 358. ACCEPTABLE ELECTRODES INCLUDE E70TG-K2, E71 T-1.

	INSPECTION TASKS PRIOR TO BOLTING (TABLE N5.6-1)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	NOTES
	MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS		•	•		PERIODIC - OBSERVE THESE ITEMS ON A RANDOM BASIS.
	FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS		•		•	OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS.
	PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH IF THREADS ARE TO BE EXCLUDED FROM SHEAR PLANE)		•		•	CONTINUOUS - PERFORM THESE TASKS FOR EACH BOLTED CONNECTION. QUALITY CONTROL (QC) SHALL BE PROVIDED BY THE FABRICATOR
Г	PROPER BOLTING PROCEDURES SELECTED FOR JOINT DETAIL		•		•	AND ERECTOR
₹	CONNECTING ELEMENTS, INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS		•		•	4. QUALITY ASSURANCE (QA) SHALL BE PROVIDED BY OTHERS WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION (AHJ), APPLICABLE BUILDING CODE (ABC), PURCHASER, OWNER, OR ENGINEER OF RECORD (EOR). NONDESTRUCTIVE TESTING (NDT)
	PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED	•			•	SHALL BE PERFORMED BY THE AGENCY OR FIRM RESPONSIBLE FOR QUALITY ASSURANCE, EXCEPT AS PERMITTED IN ACCORDANCE WITH SECTION N7.
	PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS		•		•	5. FOR SNUG-TIGHT JOINTS, PRE-INSTALLATION VERIFICATION TESTING AS SPECIFIED IN TABLE N5.6-1 AND MONITORING OF THE INSTALLATION PROCEDURES AS SPECIFIED IN TABLE N5.6-2 ARE
	INSPECTION TASKS DURING BOLTING (TABLE N5.6-2)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	NOT APPLICABLE. THE QCI AND QAI NEED NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS IN SNUG-TIGHT JOINTS.
	FASTENER ASSEMBLIES, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED		•		•	6. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE TURN-OF-NUT METHOD WITH MATCHMARKING TECHNIQUES, THE DIRECT-TENSION-INDICATOR
N ,	JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION		•		•	METHOD, OR THE TWIST-OFF-TYPE TENSION CONTROL BOLT METHOD, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED IN TABLE N5.6-2. THE QCI AND QAI NEED
J	FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING		•		•	NOT BE PRESENT DURING THE INSTALLATION OF FASTENERS
	FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES		•		•	WHEN THESE METHODS ARE USED BY THE INSTALLER. 7. FOR PRETENSIONED JOINTS AND SLIP-CRITICAL JOINTS, WHEN THE INSTALLER IS USING THE CALIBRATED WRENCH METHOD OR THE TURN-OF-NUT METHOD WITHOUT MATCHMARKING, MONITORING OF BOLT PRETENSIONING PROCEDURES SHALL BE AS SPECIFIED
s	INSPECTION TASKS AFTER BOLTING (TABLE N5.6-3)	CONTINUOUS	PERIODIC	CONTINUOUS	PERIODIC	IN TABLE N5.6-2. THE QCI AND QAI SHALL BE ENGAGED IN THEIR ASSIGNED INSPECTION DUTIES DURING INSTALLATION OF
	DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	•		•		FASTENERS WHEN THESE METHODS ARE USED BY THE INSTALLER. 8. OBSERVATION OF BOLTING OPERATIONS SHALL BE THE PRIMARY METHOD USED TO CONFIRM THAT THE MATERIALS, PROCEDURES AND WORKMANSHIP INCORPORATED IN CONSTRUCTION ARE IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS AND THE PROVISIONS OF THE RCSC SPECIFICATION.

GENERAL STEEL SPECIAL INSPECTION NOTES:

- QUALITY ASSURANCE (QA) INSPECTION OF FABRICATED ITEMS SHALL BE MADE AT THE FABRICATOR'S PLANT. THE QUALITY ASSURANCE INSPECTOR (QAI) SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE FABRICATOR.
- QA INSPECTION OF THE ERECTED STEEL SYSTEM SHALL BE MADE AT THE PROJECT SITE. THE QAI SHALL SCHEDULE THIS WORK TO MINIMIZE INTERRUPTION TO THE WORK OF THE ERECTOR. WHERE A TASK IS NOTED TO BE PERFORMED BY BOTH QC AND QA, IT IS PERMITTED TO COORDINATE THE INSPECTION FUNCTION BETWEEN THE QCI AND QAI SO THAT THE INSPECTION FUNCTIONS ARE PERFORMED BY ONLY ONE PARTY. WHERE QA RELIES UPON INSPECTION FUNCTIONS PERFORMED BY QC, THE APPROVAL OF THE ENGINEER OF RECORD AND THE AUTHORITY HAVING JURISDICTION IS
- THE FABRICATOR'S QCI SHALL INSPECT THE FABRICATED STEEL TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE SHOP DRAWINGS, SUCH AS PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION. THE ERECTOR'S QCI SHALL INSPECT THE ERECTED STEEL FRAME TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE ERECTION DRAWINGS, SUCH AS BRACES, STIFFENERS,
- MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION. THE QAI SHALL BE ON THE PREMISES FOR INSPECTION DURING THE PLACEMENT OF ANCHOR RODS AND OTHER EMBEDMENTS SUPPORTING STRUCTURAL STEEL FOR COMPLIANCE WITH THE
- CONSTRUCTION DOCUMENTS. AS A MINIMUM, THE DIAMETER, GRADE, TYPE AND LENGTH OF THE ANCHOR ROD OR EMBEDDED ITEM, AND THE EXTENT OR DEPTH OF EMBEDMENT INTO THE CONCRETE. SHALL BE VERIFIED PRIOR TO PLACEMENT OF THE CONCRETE.
- THE QAI SHALL INSPECT THE FABRICATED STEEL OR ERECTED STEEL FRAME, AS APPROPRIATE, TO VERIFY COMPLIANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION DOCUMENTS, SUCH AS BRACES, STIFFENERS, MEMBER LOCATIONS AND PROPER APPLICATION OF JOINT DETAILS AT EACH CONNECTION. QUALITY ASSURANCE (QA) INSPECTIONS, EXCEPT NONDESTRUCTIVE TESTING (NDT), MAY BE WAIVED WHEN THE WORK IS PERFORMED IN A FABRICATING SHOP OR BY AN ERECTOR APPROVED BY THE
- AUTHORITY HAVING JURISDICTION (AHJ) TO PERFORM THE WORK WITHOUT QA. NOT OF WELDS COMPLETED IN AN APPROVED FABRICATOR'S SHOP MAY BE PERFORMED BY THAT FABRICATOR WHEN APPROVED BY THE AHJ. WHEN THE FABRICATOR PERFORMS THE NDT, THE QA AGENCY SHALL REVIEW THE FABRICATOR'S NDT REPORTS. AT COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE
- FABRICATOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. AT COMPLETION OF ERECTION, THE APPROVED ERECTOR SHALL SUBMIT A CERTIFICATE OF COMPLIANCE TO THE AHJ STATING THAT THE MATERIALS SUPPLIED AND WORK PERFORMED BY THE ERECTOR ARE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS.
- DENTIFICATION AND REJECTION OF MATERIAL OR WORKMANSHIP THAT IS NOT IN CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS, SHALL BE PERMITTED AT ANY TIME DURING THE PROGRESS OF THE WORK. HOWEVER, THIS PROVISION SHALL NOT RELIEVE THE OWNER OR THE INSPECTOR OF THE OBLIGATION FOR TIMELY, IN-SEQUENCE INSPECTIONS. NONCONFORMING MATERIAL AND WORKMANSHIP SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE FABRICATOR OR ERECTOR. AS APPLICABLE
- 10. NONCONFORMING MATERIAL OR WORKMANSHIP SHALL BE BROUGHT INTO CONFORMANCE, OR MADE SUITABLE FOR ITS INTENDED PURPOSE AS DETERMINED BY THE ENGINEER OF RECORD. 11. CONCURRENT WITH THE SUBMITTAL OF SUCH REPORTS TO THE AHJ, EOR OR OWNER, THE QA AGENCY SHALL SUBMIT TO THE FABRICATOR AND ERECTOR:
- (1) NONCONFORMANCE REPORTS (2) REPORTS OF REPAIR, REPLACEMENT OR ACCEPTANCE OF NONCONFORMING ITEMS.



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CONSULTANTS

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MARK DATE DESCRIPTION

ISSUE DATE: October 21, 2019 PROJECT NO: 19060

CAD DWG FILE DRAWN BY

Z. Thorner CHK'D BY: S. Vanderdoes

REVIEW SET

October 21, 2019

SHEET TITLE

SCHEDULES

SHEET NO:

S004

F SHEET IS LESS THAN 22"x 34" IT IS A REDUCED PRINT.

* INTERPASS AND FINAL CLEANING

SIZE, LENGTH AND LOCATION OF WELDS

* WELD / BASE-METAL FUSION

* CRATER CROSS SECTION

WELDS MEET VISUAL ACCEPTANCE CRITERIA

WELDS CLEANED

* CRACK PROHIBITION

* WELD PROFILES

* WELD SIZE

* UNDERCUT

* POROSITY

ARC STRIKES

HEAVY SHAPES²

REPAIR ACTIVITIES

APPROVAL OF THE EOR

K-AREA1

* EACH PASS WITHIN PROFILE LIMITATIONS

* EACH PASS MEETS QUALITY REQUIREMENTS

PLACEMENT AND INSTALLATION OF STEEL HEADED STUD ANCHORS

INSPECTION TASKS AFTER WELDING (TABLE N5.4-3)

WELD ACCESS HOLES IN ROLLED HEAVY SHAPES AND BUILT-UP

BACKING REMOVED AND WELD TABS REMOVED (IF REQUIRED)

NO PROHIBITED WELDS HAVE BEEN ADDED WITHOUT THE

VISUALLY INSPECT THE WELD ACCESS HOLE FOR CRACKS.

DOCUMENT ACCEPTANCE OR REJECTION OF WELDED JOINT OR MEMBER

VISUALLY INSPECT THE WEB K-AREA FOR CRACKS WITHIN 3 IN. (75mm) OF THE WELD)

WHEN WELDING OF DOUBLER PLATES, CONTINUITY PLATES OR STIFFENERS HAS BEEN PERFORMED IN THE K-AREA,

²AFTER ROLLED HEAVY SHAPES (SEE SECTION A3.1c) AND BUILT-UP HEAVY SHAPES (SEE SECTION A3.1d) ARE WELDED,

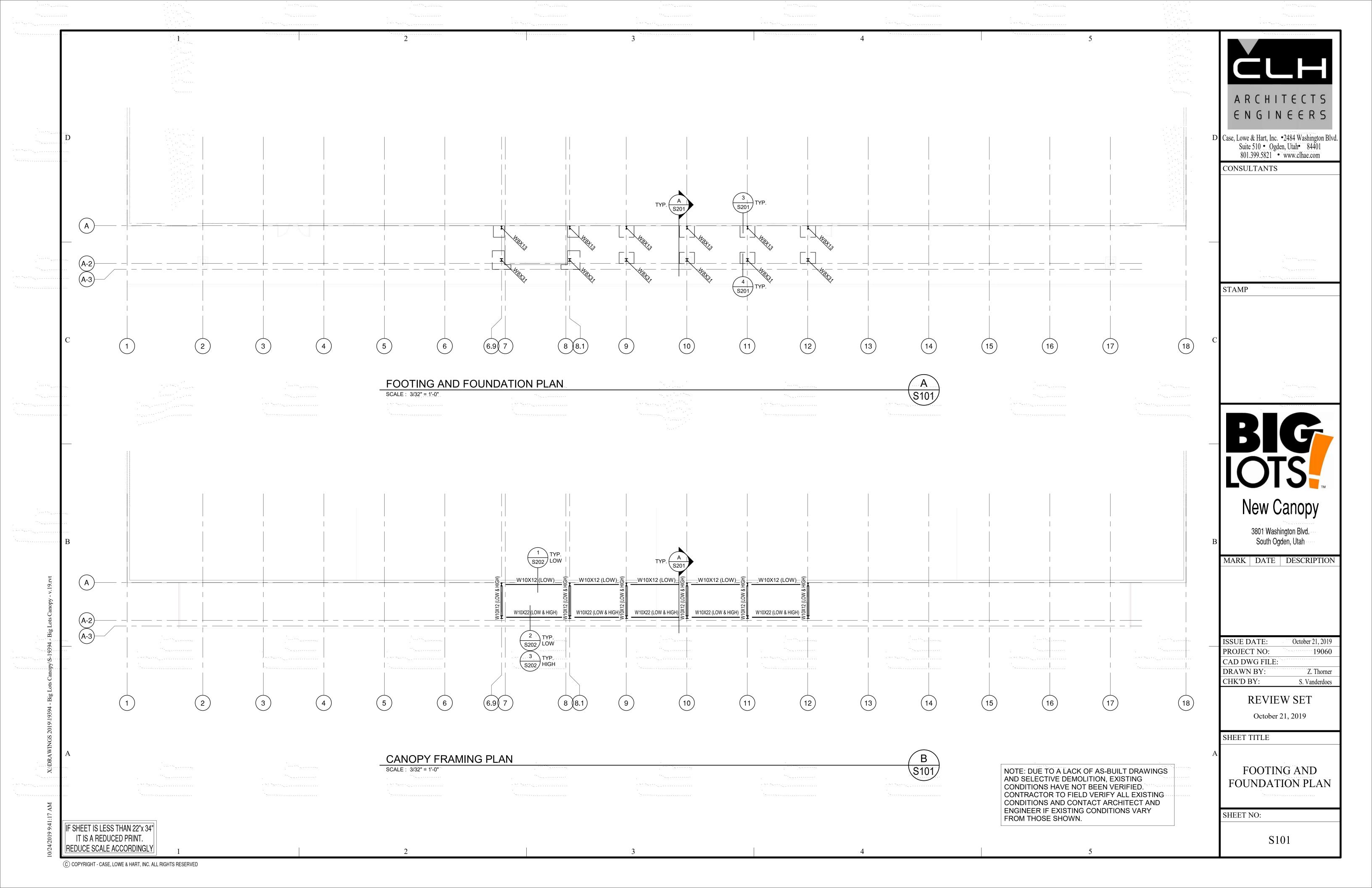
ENGINEERS

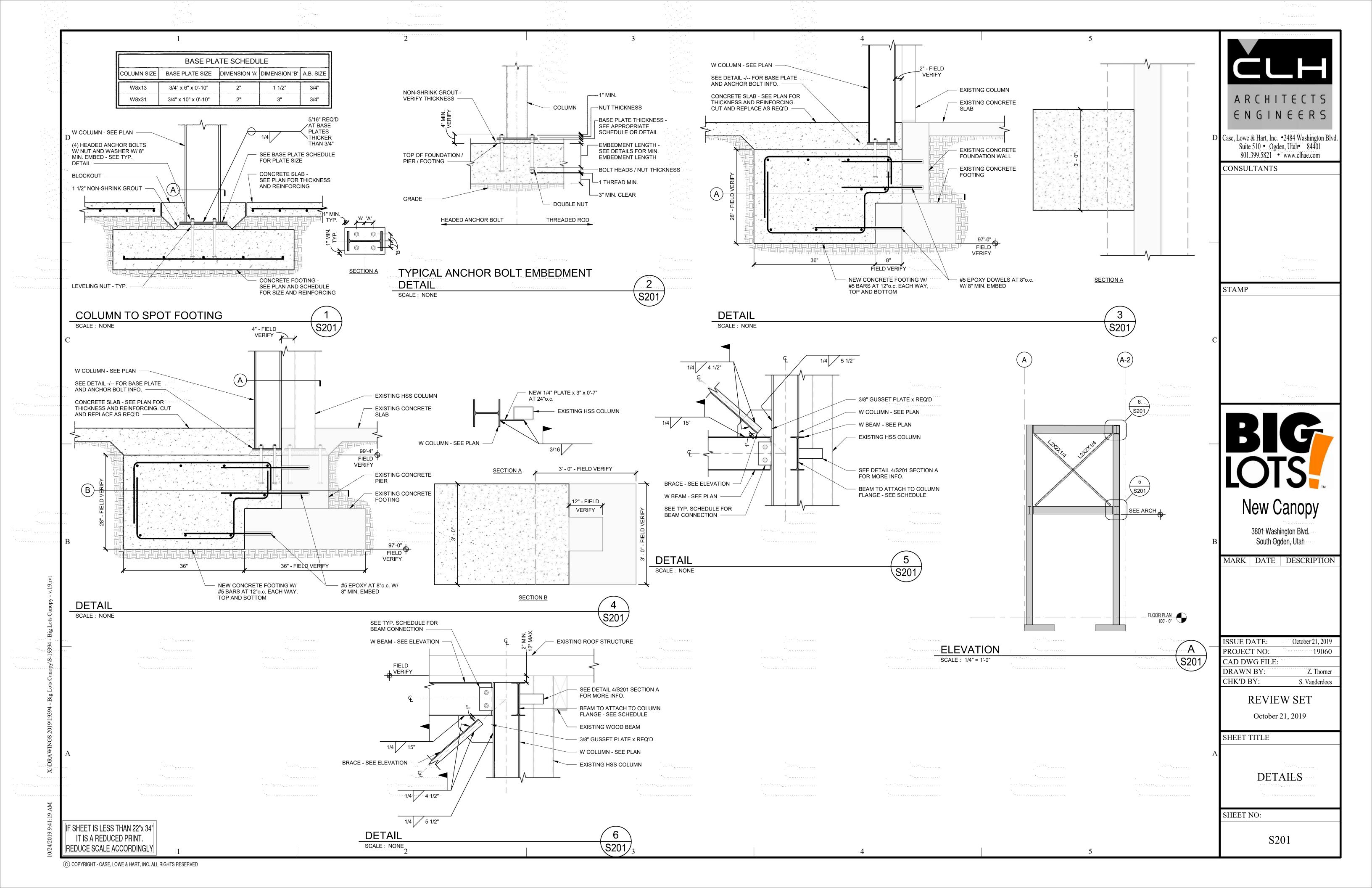
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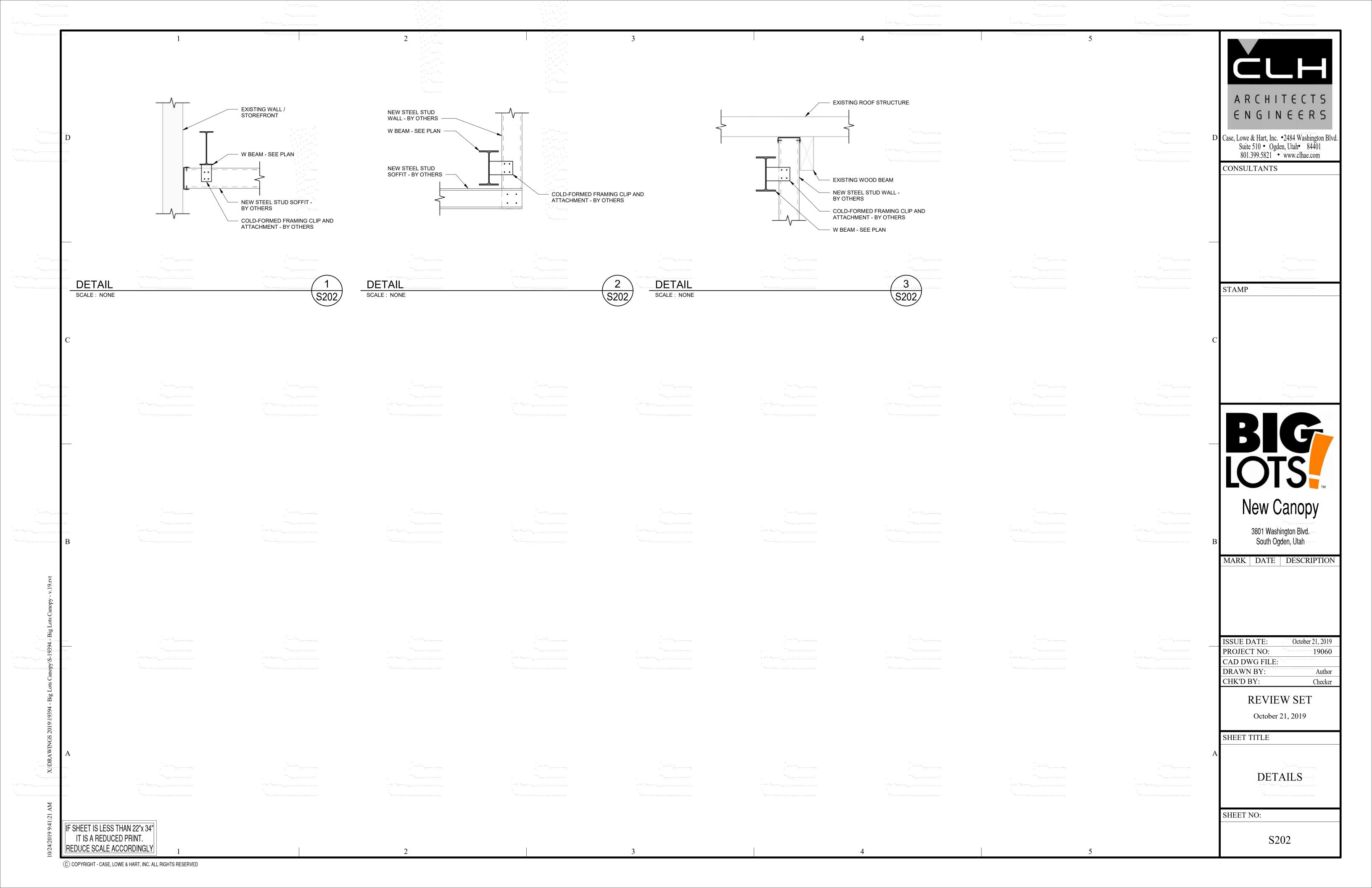
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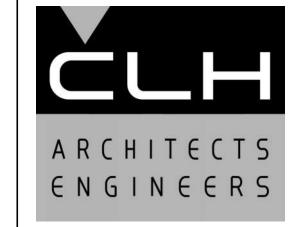
ARCHITECTURAL NOTES

- 1. THE ARCHITECTURAL DRAWINGS ARE THE PRIMARY CONTRACT DOCUMENTS.
 ANY CONFLICTS BETWEEN ARCHITECTURAL DRAWINGS AND EXISTING
 CONDITIONS AND/OR DRAWINGS OF OTHER DISCIPLINES SHALL BE IMMEDIATELY
 REPORTED TO THE ARCHITECT.
- 2. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO AY WORK. ITEMS AND DIMENSIONS BETWEEN EXISTING AND NEW PORTIONS OF THE PROJECT SHALL BE VERIFIED TO ENSURE COORDINATION.
- 3. THE CONTRACTOR SHALL SUBMIT ANY PROPOSED CHANGES OR MODIFICATIONS OF THE CONTRACT DOCUMENTS, IN WRITING, TO THE ARCHITECT BEFORE PROCEEDING WITH ANY ACTION.
- 4. WHERE SPECIFIC DETAILS ARE NOT PROVIDED, TYPICAL OR SIMILAR INDUSTRY STANDARD DETAILS SHALL APPLY. IF FURTHER DETAIL IS REQUIRED CONTACT ARCHITECT.
- 5. DETAILS ARE PROVIDED FOR VISUAL REPRESENTATION OF DESIGN INTENT. OFTEN THE DETAILS ARE BASED ON A BASIS-OF-DESIGN PRODUCT AND/OR MATERIAL AND MAY BE DIAGRAMMATIC IN NATURE.
- 6. IF A DIFFERENT PRODUCT OR MATERIAL FROM THAT INDICATED ON THE DRAWINGS OR SPECIFICATIONS IS SUBSTITUTED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALTERNATE DETAILS AS REQUIRED FOR THE ARCHITECT TO REVIEW.
- GENERALLY, DIMENSIONS SHOWN OF ARCHITECTURAL DRAWINGS ARE TAKEN FROM THE CORE STRUCTURE FACE (IE. CONCRETE WALL=FACE OF WALL; STUD WALL=FACE OF STUD).
- ANY ADDITIONAL BLOCKING, BRACING, TRIM, FLASHING, SEALANTS, ETC. REQUIRED FOR INSTALLATION OF COMPLETE SYSTEMS_ PERTAINING TO DOORS, WINDOWS, OPENINGS, PENETRATIONS, ETC. ARE EXPECTED TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR.
- ASSUME ALL GYP. BD. WALLS TO HAVE TOPSET RUBBER BASE INSTALLED UNLESS NOTED OTHERWISE.
- PROVIDE SEALANT OR TRIM AS APPROPRIATE WHERE DISSIMILAR MATERIALS COME IN CONTACT.
- PROVIDE FLOORING TRANSITION WHERE DISSIMILAR FLOORING MATERIALS 12. OCCUR.

PAINT ALL MISCELLANEOUS SURFACES, SUPPORTS, METALS, ETC. IF PERMANENTLY ATTACHED TO PAINTED SURFACE OR EXPOSED TO THE ELEMENTS.

SYMBOLS	
View Name 1/8" = 1'-0"	VIEW TITLE
0 1" 2"	GRAPHIC SCALE
	NORTH ARROW w/ TRUE NORTH
0 — - — - —	GRID INDICATOR
SIM A101	SECTION CALLOUT
1 SIM	DETAIL CALLOUT
SIM A101	DETAIL CALLOUT
1 A101 T	ELEVATION CALLOUT
Name Elevation	LEVEL / ELEVATION CALLOUT
100'-0"	SPOT ELEVATION CALLOUT
1:12	ROOF SLOPE INDICATOR
Room name	ROOM TAG
(101A)	DOOR TAG
А	WALL TAG
1t	WINDOW TAG
A	DEMOLITION KEYNOTE
Ê	FIRE RISER

& L @ #	AND ANGLE AT POUND OR NUMBER	JAN JST JT	JANITOR JOIST JOINT
AC A.F.F.	ACOUSTICAL ABOVE FINISH FLOOR	K.O.	KNOCK OUT LAMINATE
ALUM APPROX ARCH ASPH BD BITUM BLDG BLKG BRG BTM	ALUMINUM APPROXIMATE ARCHITECTURAL ASPHALT BOARD BITUMINOUS BUILDING BLOCKING BEARING BOTTOM	MAX MAS MECH MEMB MTL MFTR MH MIN MISC M.O.	LAVATORY MAXIMUM MASONRY MECHANICAL MEMBRANE METAL MANUFACTURER MANHOLE MINIMUM MISCELLANEOUS MASONRY OPENING
C C.I. C.J. C.L. CLG CLR C.M.U. C.O. C.O.T.G. CONC CONC CONSTR CONSTR CONT C.T. CTR	TOP OF FINISH CONCRETE CAST IRON CONTROL JOINT CENTER LINE CEILING CLEAR CONCRETE MASONRY UNIT CLEAN OUT CLEAN OUT AT GRADE COLUMN CONCRETE CONNECTION CONSTRUCTION CONSTRUCTION CONTINUOUS CERAMIC TILE CENTER	N N.I.C. NO or # NOM N.T.S. O.C. O.D. OFF OH OPNG OPP	MOUNTED NORTH NOT IN CONTRACT NUMBER NOMINAL NOT TO SCALE ON CENTER OUTSIDE DIAMETER (DIM) OFFICE OVERHEAD OPENING OPPOSITE PLATE
D.C.W. D.H.W. D.F. DTL DIA DIM DISP DN DRN DS	DOMESTIC COLD WATER DOMESTIC HOT WATER DRINKING FOUNTAIN DETAIL DIAMETER DIMENSION DISPENSER DOWN DRAIN DOWNSPOUT	PLAM PLYWD P.O.C. PNL PR PT Q.T. RAD R.D.	PLASTIC LAMINATE PLYWOOD POINT OF CONNECTION PANEL PAIR POINT QUARRY TILE RADIUS ROOF DRAIN
DWG E EA E.I.F.S. E.J. EL ELEC ENGR EQ EQUIP (E) EXP EXT	DRAWING EAST EACH EXTERIOR INSULATION FINISH SYSTEM EXPANSION JOINT ELEVATION ELECTRICAL ENGINEER EQUAL EQUIPMENT EXISTING EXPANSION EXTERIOR	REF REINF REQD RESIL RFG RM RS R.O. S SCH SECT SHT	REFERENCE REINFORCED REQUIRED RESILIENT ROOFING ROOM RESINOUS FLOORING ROUGH OPENING SOUTH SCHEDULE SECTION SHEET SIMILAR
F.A. F.D. FDN F.E. F.E.C. FIN FLR FLASH FLUOR F.O. F.R. FT FTG FUT	FIRE ALARM FLOOR DRAIN FOUNDATION FIRE EXTINGUISHER FIRE EXTINGUISHER CABINET FINISH FLOOR FLASHING FLUORESCENT FACE OF FIRE RATED FOOR OR FEET FOOTING FUTURE	SPECS SQ S.S. S.ST STD STL STOR STR SUSP SYM SYS TLT TRTD T & B T.O.	SPECIFICATION SQUARE SANITARY SEWER STAINLESS STEEL STANDARD STEEL STORAGE STRUCTURAL SUSPENDED SYMMETRICAL SYSTEM TOILET (ROOM) TREATED (PRESERVATIVE TOP & BOTTOM TOP OF
GA GALV GND GR G.W.B. GYP	GAUGE GALVANIZED GROUND GRADE GYPSUM WALL BOARD GYPSUM	TRANS TYP U.N.O. UT	TRANSFORMER TYPICAL UNLESS NOTED OTHERWISE URINAL
H.B. HC H.M. HORIZ HGT	HOSE BIBB HANDICAP HOLLOW METAL HORIZONTAL HEIGHT	VERT VEST W W/ WC WD	VERTICAL VESTIBULE WEST WITH WATER CLOSET WOOD
I.D. IN INSUL	INSIDE DIAMETER (DIM) INCH, INCHES INSULATION	W/O WP	WITHOUT WATERPROOF



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STAMP





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MARK DATE DESCRIPTION

ISSUE DATE: 10/24/2019
PROJECT NO: 19060
CAD DWG FILE:
DRAWN BY: KDL

REVIEW SET

24 OCT 2019

SJP

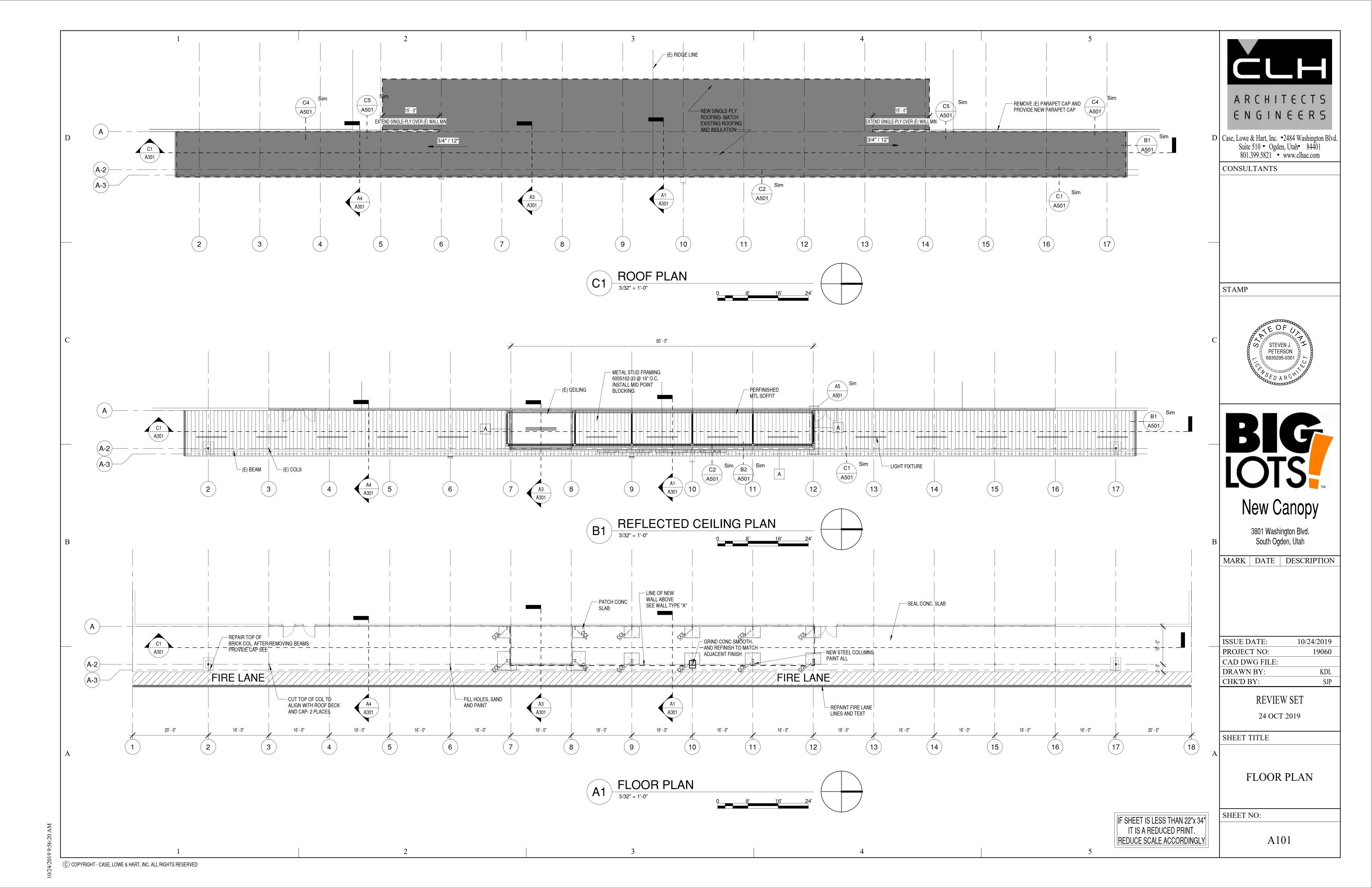
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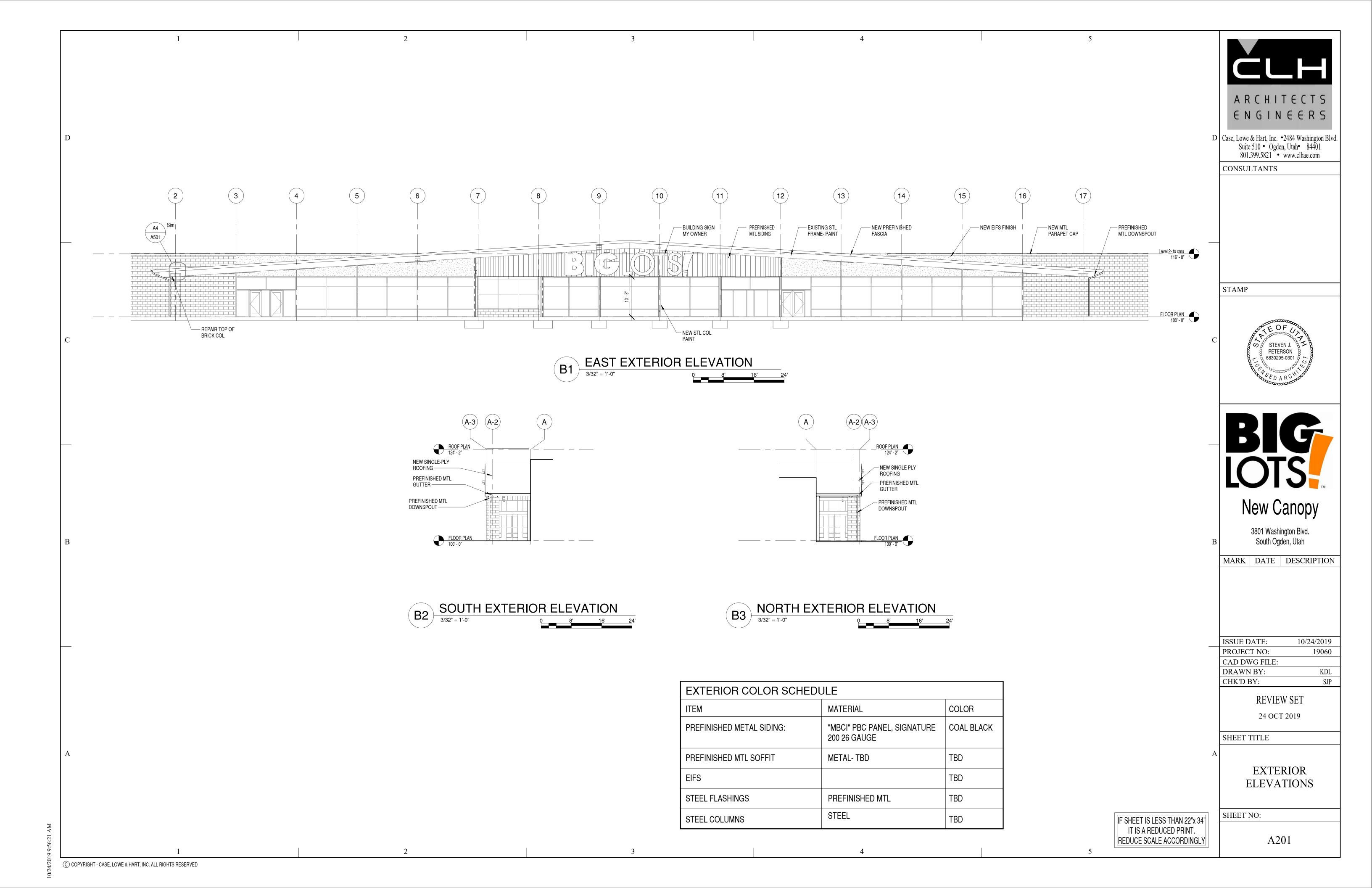
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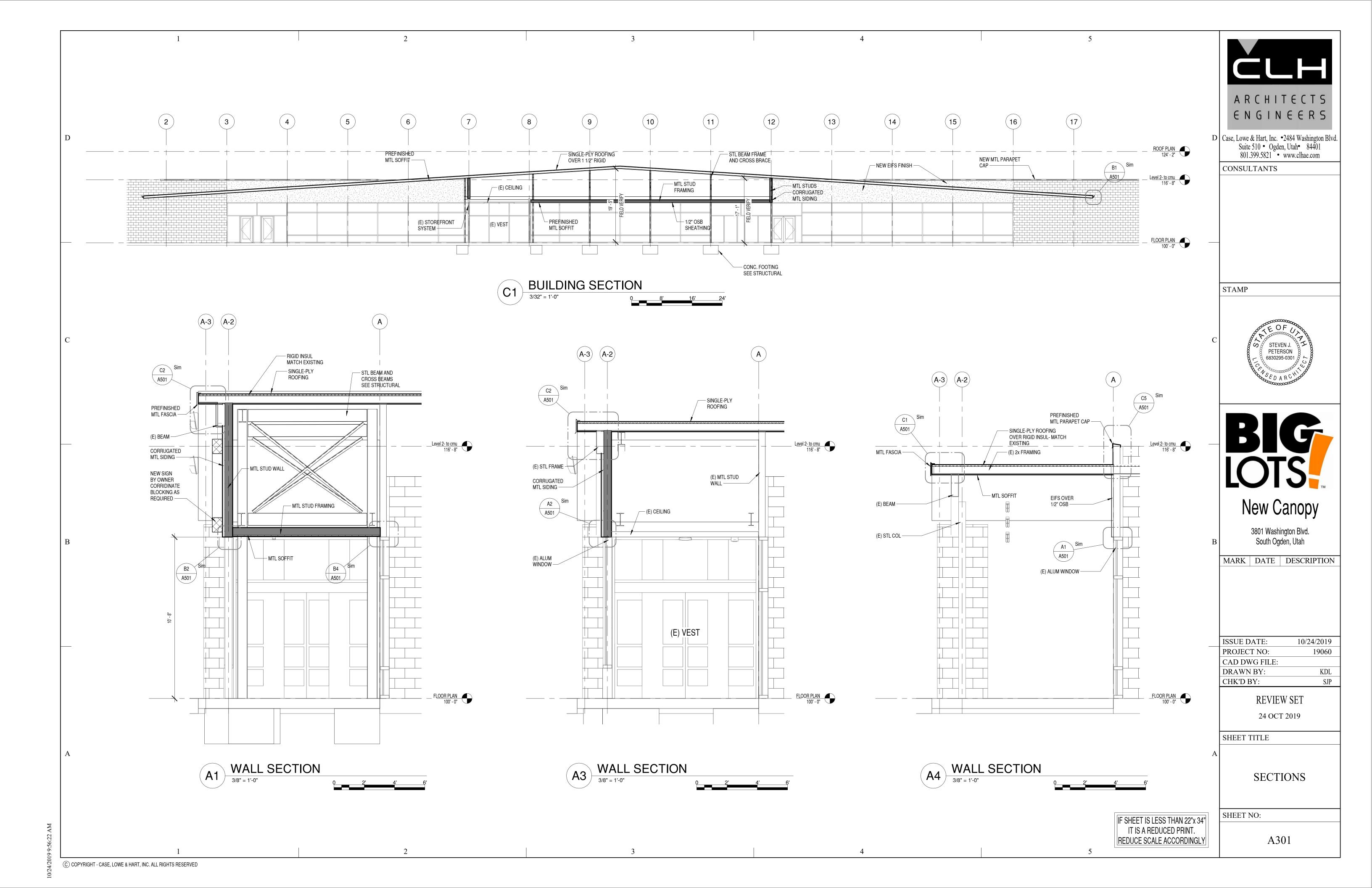
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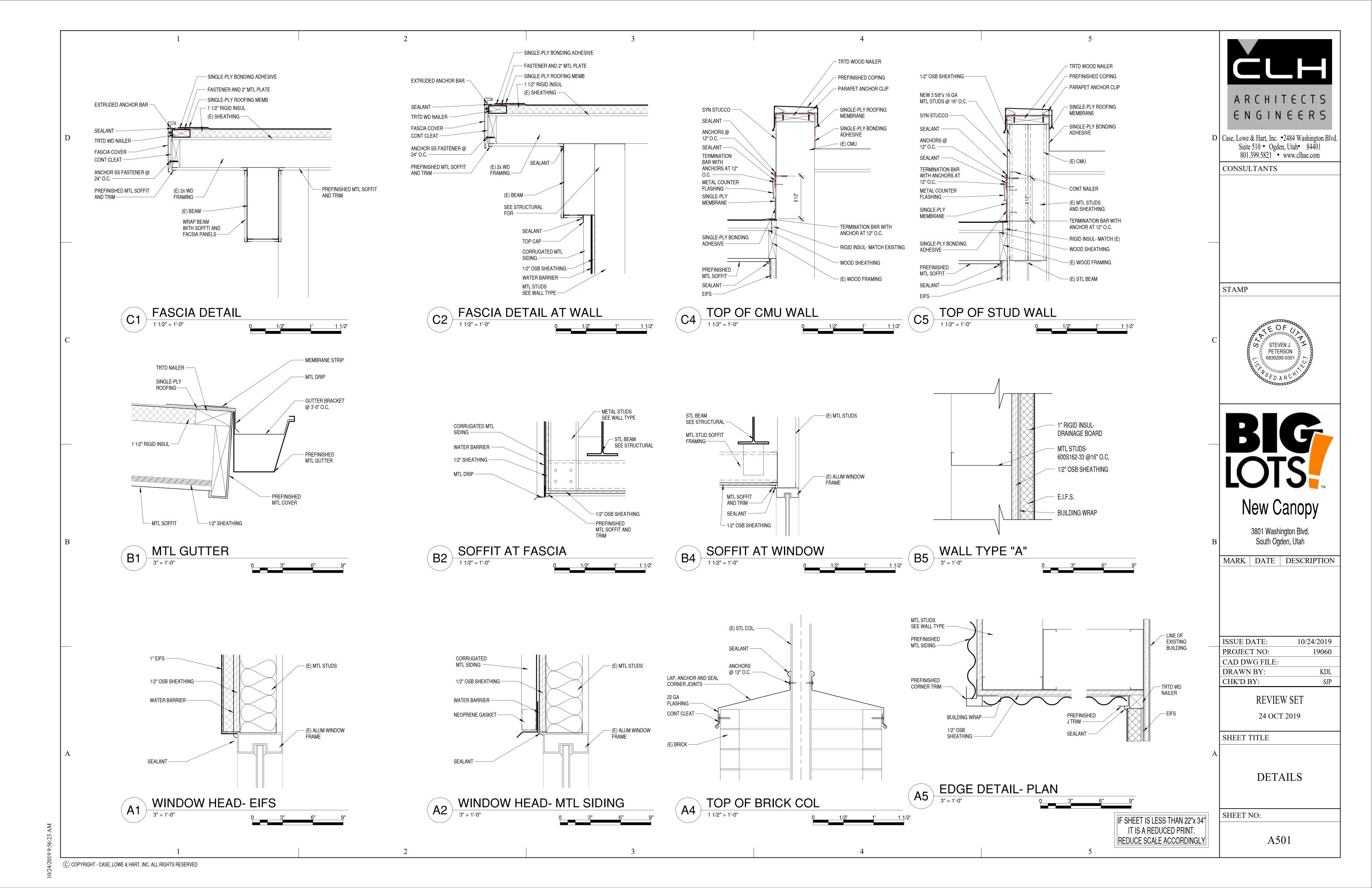
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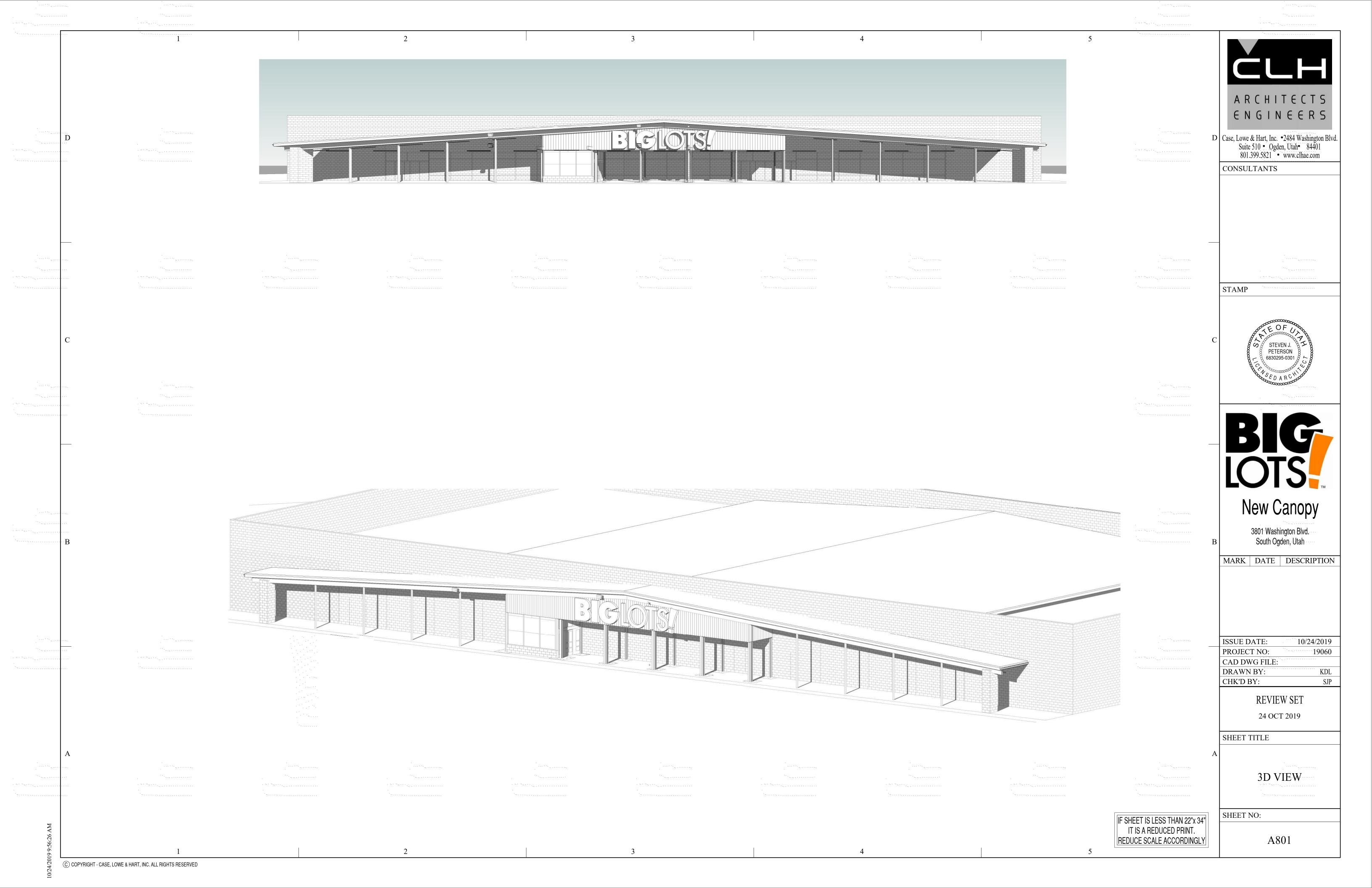
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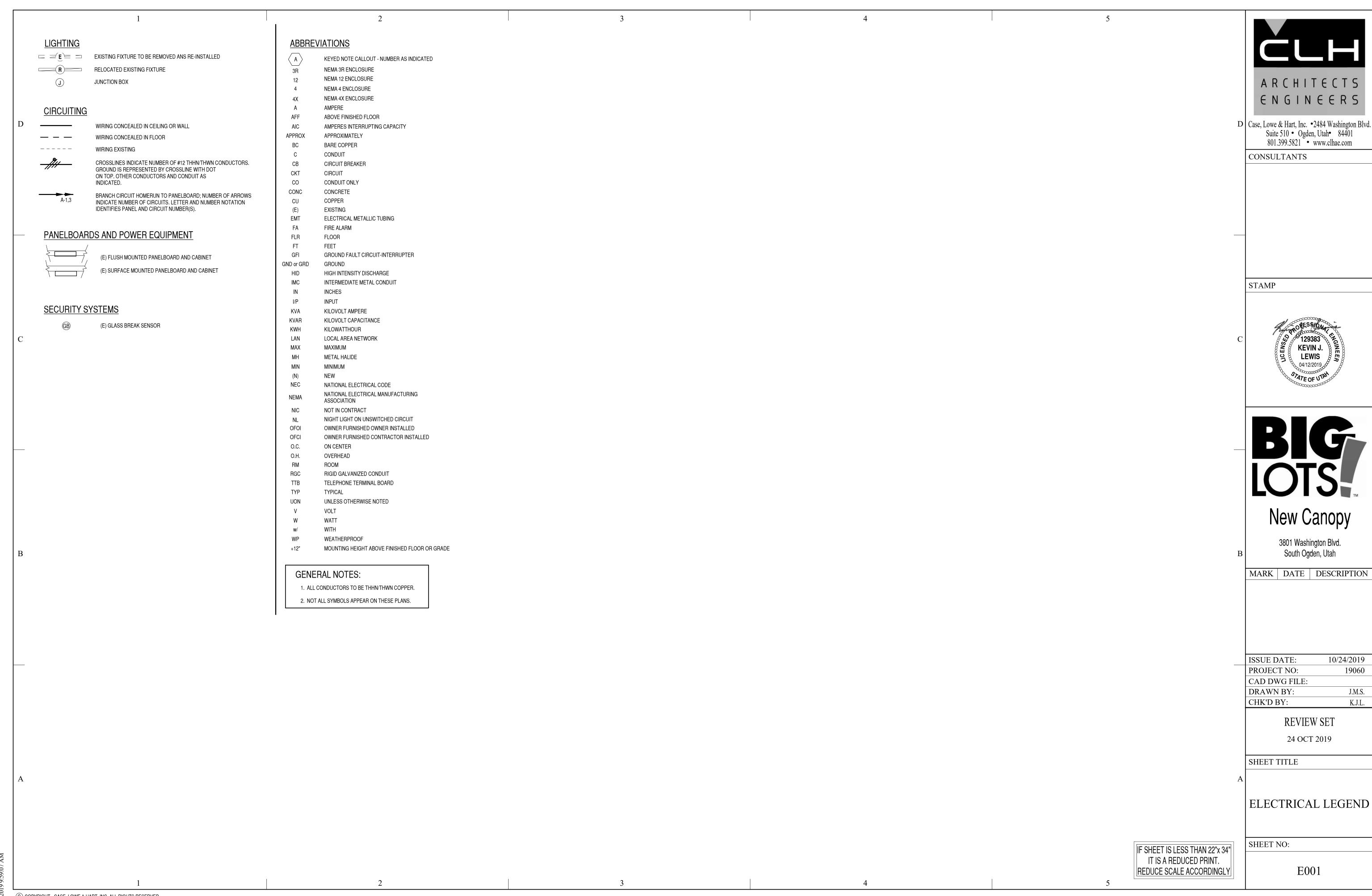












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