GOVERNMENTAL AGENCIES

BUILDING DEPARTMENT

AGENCY: CITY OF LEE'S SUMMIT DEVELOPMENT SERVICES DEPARTMENT

PHONE #: 816.969.1200

DEVTECH@CITYOFLS.NET

FIRE MARSHALL

AGENCY: CITY OF LEE'S SUMMIT FIRE DEPARTMENT ADDRESS: 207 SE DOUGLAS, LEE'S SUMMIT, MO 64063 **CONTACT:** CHIEF JIM EDEN **PHONE #:** 816.969.1300

JIM.EDEN@CITYOFLS.NET

BUILDING DATA

PLUMBING CODE 2018 INTERNATIONAL PLUMBING CODE

MECHANICAL CODE 2018 INTERNATIONAL MECHANICAL CODE 2018 INTERNATIONAL FUEL GAS CODE ELECTRIC CODE: 2017 NATIONAL ELECTRICAL CODE ACCESSIBILITY CODE: 2009 ICC/ ANSI A117.1

ENERGY CODE: 2018 INTERNATIONAL ENERGY CONSERVATION CODE FIRE CODE: 2018 INTERNATIONAL FIRE CODE

EXIST. BUILDING OCCUPANCY EXIST. BLDG. CONSTRUCTION TYPE EXIST. BUILDING AREA:

A2 (NO CHANGES) VB (SPRINKLERED, NO CHANGES 4,161 GSF (NO CHANGES)

135 OCCUPANTS (CHANGES)

OCCUPANT LOAD CALCULATION

EXISTING BLDG OCCUPANCY LOAD

DINING AREA: 1,539 SF / 15 SF/PERSON = 103

ORDER AREA: KITCHEN / DT / SERVING / MULTI-PURPOSE

113 SF / 5 SF/PERSON = 23 1,936 SF / 200 SF/PERSON = 10 **BUSINESS AREA (OFFICE)** 69 SF / 150 SF/PERSON = 1

NEW TOTAL OCCUPANCY LOAD 137 OCCUPANTS

PROPOSED NEW F2F CANOPY AREA:

PROPOSED NEW OMD CANOPY AREA:

SCOPE OF WORK

THESE DOCUMENTS REPRESENT AN ADDITION OF A NEW DUAL LANE OUTSIDE MEAL DELIVERY CANOPY ADDITION & DUAL LANE FACE TO FACE CANOPY AND PLAY AREA CONVERSION TO

ITEMS OF IMPORTANCE

- REFER TO CIVIL PLANS FOR EXTENT OF SITE WORK
- 2. EXISTING SITE ITEMS TO REMAIN UNLESS NOTED OTHERWISE.
- 3. F2F & OMD CANOPIES BY LANE
- 4. NO CHANGES TO BUILDING FOOTPRINT & OCCUPANCY TYPE. 5. EXISTING CANOPY AT DRIVE THRU SIDE TO BE REMOVED.

PROJECT GENERAL NOTES

- 1. ELECTRICAL WORK WILL BE PERFORMED UNDER THIS CONTRACT. ALL TO REMAIN UNLESS NOTED
- 2. ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES, REGULATIONS, ORDINANCES, STANDARDS INCLUDING ADA, OTHER HANDICAP ACCESSIBILITY CODES AND INSURANCE RATING BOARDS. NO WORK SHALL COMMENCE UNTIL ALL JURISDICTIONAL PERMITS AND APPROVALS ARE OBTAINED
- 3. GENERAL CONTRACTOR SHALL COORDINATE WITH THE OWNER'S VENDORS REGARDING SCHEDULING AND SEQUENCING OF THE WORK.
- 4. THE CONSTRUCTION NOTES AND DRAWINGS ARE SUPPLIED TO ILLUSTRATE THE DESIGN AND GENERAL TYPE OF CONSTRUCTION DESIRED AND ARE INTENDED TO IMPLY THE FINEST QUALITY OF CONSTRUCTION. MATERIALS AND WORKMANSHIP THROUGHOUT AND SHALL CONFORM TO THE APPROPRIATE NATIONAL TRADE PUBLICATION.
- 5. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO FULLY EXAMINE THE SITE SPACE PRIOR TO THE START OF CONSTRUCTION. THE G.C. SHALL VERIFY ALL DIMENSIONS, (VERTICAL, HORIZONTAL AND OTHERWISE), AS WELL AS TO VERIFY THE CONDITIONS AND NATURE OF THE PROPOSED CONSTRUCTION, MATERIALS, AVAILABLE UTILITIES AND STRUCTURAL ELEMENTS. THE G.C. SHALL NOTIFY THE OWNER'S REPRESENTATIVE (OWNER'S REP), IN WRITING OF ANY AND ALL DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE CONSTRUCTION DOCUMENTS.
- 6. IT SHALL BE THE JOINT RESPONSIBILITY OF THE G.C. AND ALL SUBCONTRACTORS AND SUPPLIERS OF MATERIALS TO SECURE ALL NECESSARY ADAPTATIONS AS MAY BE REQUIRED FOR THEIR RESPECTIVE WORK, PRIOR TO ORDERING, FABRICATION OR INSTALLATION OF ANY MATERIALS, EQUIPMENT OR COMPONENTS WHICH ARE TO BE INTEGRATED INTO THE WORK. NO CLAIMS FOR ADDITIONAL COMPENSATION SHALL BE MADE OR SHALL BE VALID UNLESS WRITTEN NOTIFICATION IS RECEIVED BY THE OWNER'S REP AND THE ADDITIONAL COMPENSATION IS APPROVED IN ADVANCE OF PROCEEDING WITH THE WORK.
- 7. REFERENCE ALL DRAWINGS FOR A COMPLETE DESCRIPTION OF THE WORK 8. COMMENCEMENT OF WORK IN ANY AREA BY THE CONTRACTOR SHALL BE CONSTRUED THAT THE CONTRACTOR HAS CHECKED THE EXISTING CONDITIONS AND FOUND THEM TO BE SATISFACTORY TO ACCEPT THIS PORTION OF THE WORK.
- 9. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN IN THE DRAWINGS OR NOT & TO PROTECT THEM FROM DAMAGE DURING THE WORK. THE CONTRACTOR SHALL BEAR ALL EXPENSES OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH THE PERFORMANCE OF THE WORK.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE JOB IS IN
- PROGRESS & UNTIL JOB IS COMPLETED.
- 11. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS & SHALL MAINTAIN THE STRUCTURAL INTEGRITY OF ALL WORK.
- 12. RESTAURANT REFUSE/DUMPSTER SHALL NOT BE USED FOR CONSTRUCTION DEBRIS. 13. CAP AND SEAL OFF ANY PLUMBING/ELECTRICAL PENETRATIONS AS NECESSARY. DO NOT ABANDON ANY
- UTILITIES OR MATERIALS WITHIN THE SPACE REMOVE BACK TO THE SOURCE. 14. COVER RETURN AIR DUCTS AS NECESSARY BEFORE AND DURING CONSTRUCTION



5200 BUFFINGTON ROAD ATLANTA, GEORGIA 30349-2998 PHONE: (404) 765-8000 FAX: (404) 684-8550

S08N-104-R CUSTOM PROJECT SOLUTIONS DUAL LANE OUTSIDE MEAL DELIVERY CANOPY & DUAL LANE FACE TO FACE CANOPY ADDITION. PLAY AREA CONVERSION TO DINING

> **SUMMIT FAIR FSR #02859** 690 NW BLUE PARKWAY, LEE'S SUMMIT, MO 64086 AUGUST 2023

| REVISI | ION SCH | IEDULE | | |
|--------------------|------------------|------------------------|------------------------------|---|
| REVISION NUMBER | REVISION DATE | ISSUE DESCRIPTION | CHANGE DESCRIPTION | AFFECTED SHEETS |
| 1 | 02/19/24 | PLAY AREA REMOVAL | - | G-000, ASP-1.1, D-201, D-221, A-005, A-201, A-211, A-221, A-601, A-620, M-1.1, M-2.1, E-2.1, F-201, F-211, F-701 |
| 2 | 03/11/24 | COORDINATION REVISIONS | - | F-201 |
| 3 | 04/03/24 | DESIGN COMMENTS | - | A-221, A-601 |
| 4 | 04/17/24 | RFI #5 | - | G-000, FP-1.1 |
| 5 | 07/15/24 | COORDINATION REVISIONS | ADDED OFFSET FOOTING DETAILS | G-000, OMD-4 - OMD-10 |

ARCHITECT:

INTERPLAN LLC. 220 E CENTRAL PKWY, SUITE 4000 ALTAMONTE SPRINGS, FL 32701 **AOR:** LAUREL MARTIN, R.A., NCARB CONTACT: JESSICA CHERKASSKY PHONE (407) 645-5008 FAX (407) 629-9124 EMAIL: JCHERKASSKY@INTERPLANLLC.COM

ELECTRICAL ENGINEER

INTERPLAN LLC 220 E CENTRAL PKWY, SUITE 4000 ALTAMONTE SPRINGS FL 32701 PHONE: (407) 645-5008 ENGINEER OF RECORD:

PLUMBING ENGINEER:

INTERPLAN LLC 220 E CENTRAL PKWY SUITE 4000 ALTAMONTE SPRINGS FL 32701 PHONE: (407) 645-5008 **ENGINEER OF RECORD:**

STACY HENSON

CONTACT: MARYANA IBRAHIM CONTACT: MARYANA IBRAHIM CONTACT: MARYANA IBRAHIM

MECHANICAL ENGINEER:

INTERPLAN LLC 220 E CENTRAL PKWY, SUITE 4000 ALTAMONTE SPRINGS, FL 32701 PHONE: (407) 645-5008 ENGINEER OF RECORD: STACY HENSON

CIVIL **ENGINEER:**

GBC DESIGN, INC 565 WHITE POND DRIVE **AKRON, OH 44320** PHONE: (330) 836-0228

CANOPY SUPPLIER

LANE SUPPLY, INC. 120 FAIRVIEW ARLINGTON, TX 76010 CONTACT: JACK MEANEY, P.E. CONTACT: LARRY TOLBERT PHONE: (817) 261-9116

DRAWING INDEX

ARCHITECTURAL

COVER SHEET ARCHITECTURAL SITE PLAN- F2F CANOPY DEMOLITION FLOOR PLAN DEMOLITION REFLECTED CEILING PLAN

PROPOSED FLOOR PLAN PROPOSED REFLECTED CEILING PLAN INTERIOR DETAILS

MECHANICAL

MECHANICAL FLOOR PLAN MECHANICAL SPECIFICATIONS & SCHEDULES

PLUMBING

OMD GAS PLUMBING PLAN F2F GAS PLUMBING PLAN PLUMBING DETAILS

CANOPY POWER & LIGHTING PLAN CANOPY ELECTRICAL DETAILS

ES1.0 PHOTOMETRIC PLAN E-2.1 ELECTRICAL LIGHTING PLAN **FURNITURE**

FURNITURE FLOOR PLAN FURNITURE CORE DRILL PLAN DECOR ELEVATIONS

F2F CANOPY

CANOPY FOOTING LOCATIONS CANOPY FOOTINGS CANOPY FRAMING PLAN **CANOPY SECTIONS** CANOPY ELEVATION PLAN

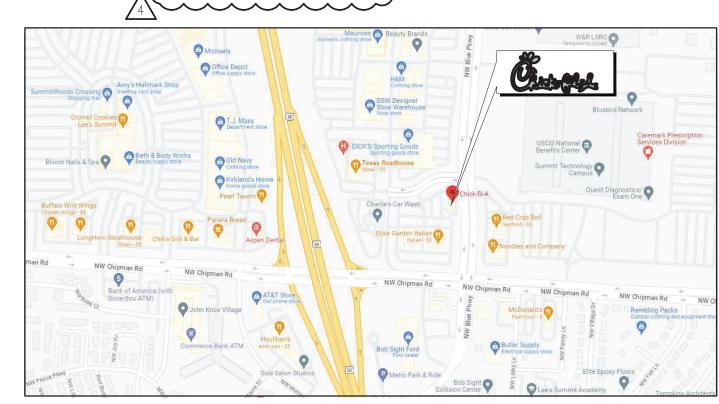
CANOPY LIGHT LAYOUT

OMD CANOPY

CANOPY FOOTING LOCATIONS CANOPY FOOTINGS CANOPY FRAMING PLAN CANOPY SECTIONS **CANOPY SECTIONS CANOPY SECTIONS** CANOPY ELEVATION PLAN

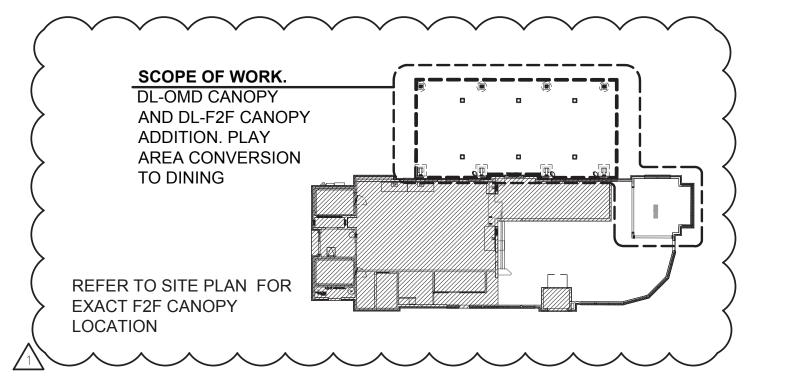
FIRE PROTECTION

FIRE SPRINKLER PLAN









KEY PLAN





5200 Buffington Road

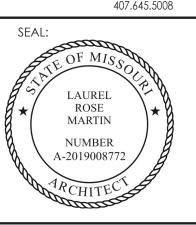
Atlanta, Georgia

30349-2998

INTERPLAN

ARCH COA #2015008774 ENG COA #2005026904

220 E. CENTRAL PKWY, STE 4000 ALTAMONTE SPRINGS, FL 3270



LAUREL ROSE MARTIN - ARCHITECT

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FSR#02859

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REVISION SCHEDULE NO. DATE DESCRIPTION 1 02/19/24 PLAY AREA REMOVAL

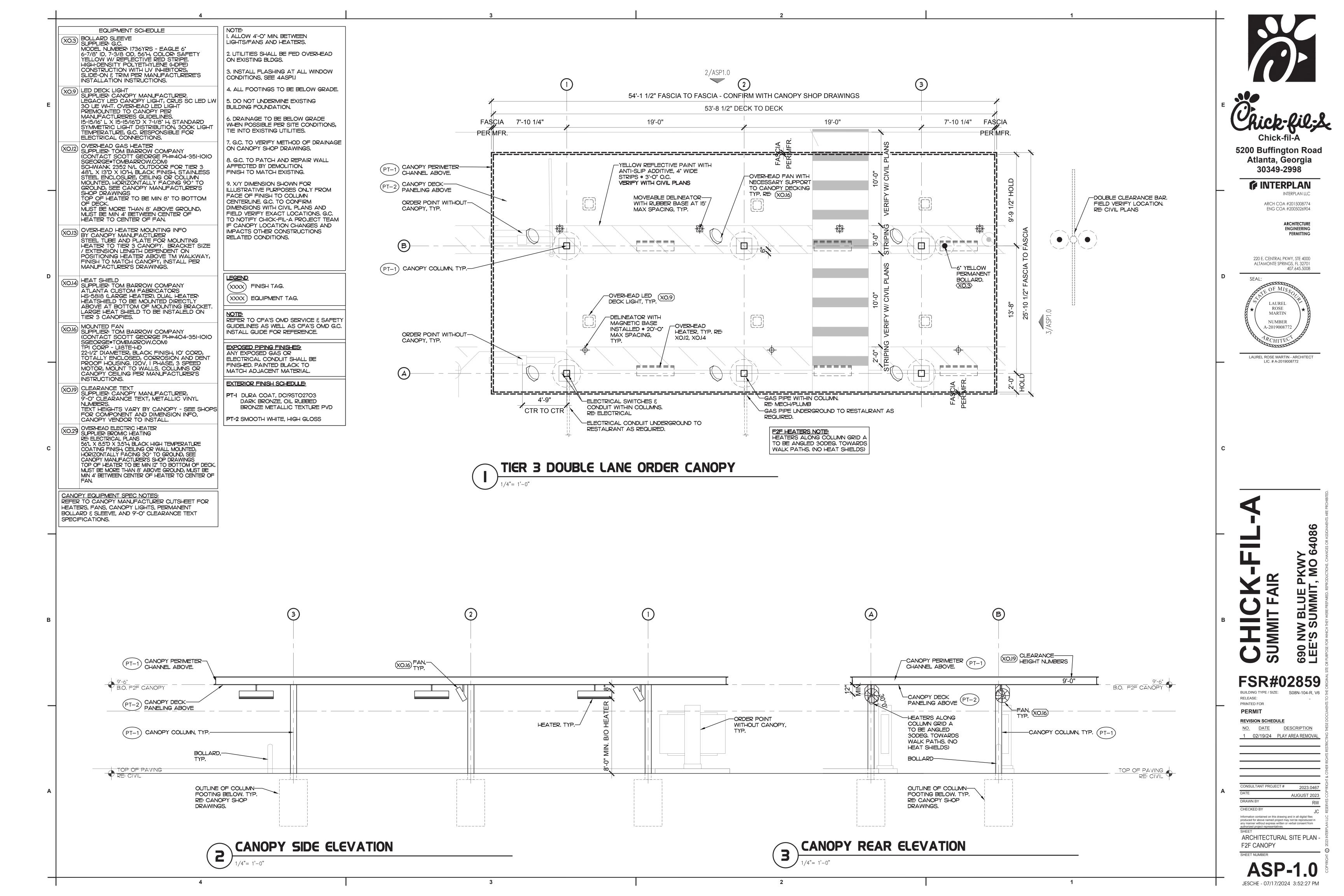
4 04/17/24 RFI#5 07/15/24 COORDINATION REVS

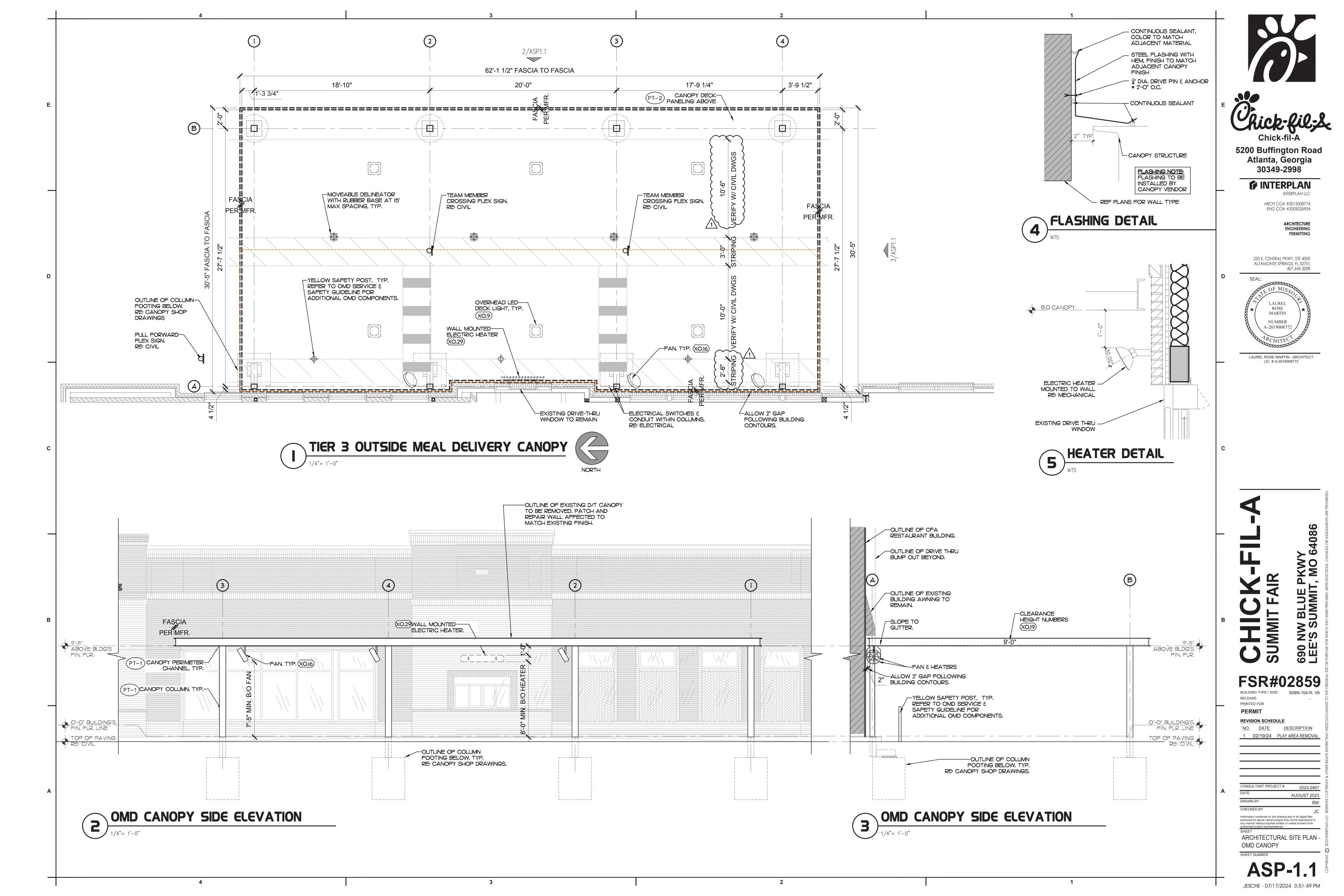
> ONSULTANT PROJECT# AUGUST 2023

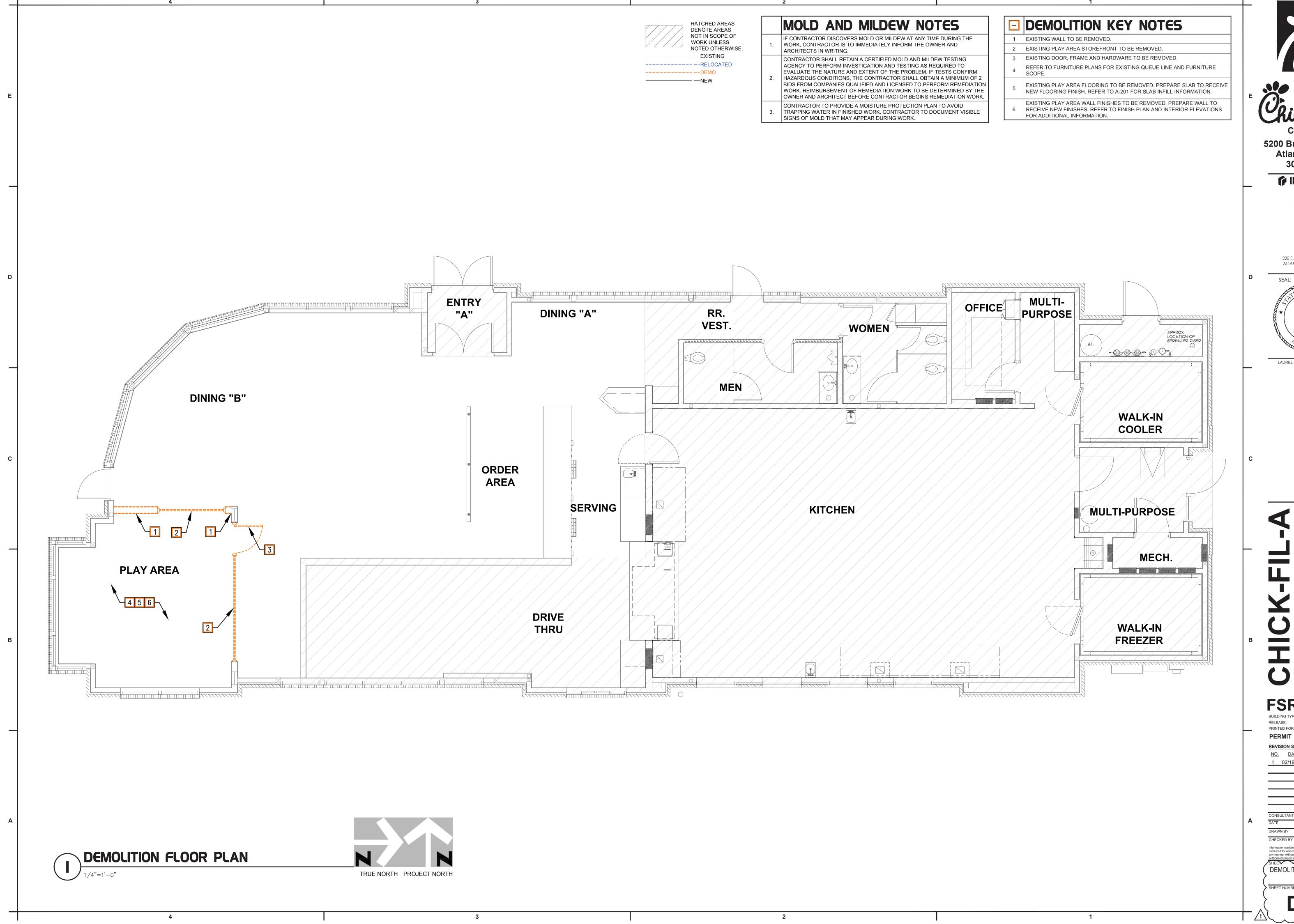
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COVER SHEET

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Erick-fil:2

5200 Buffington Road Atlanta, Georgia 30349-2998

INTERPLAN INTERPLAN LLC

ARCH COA #2015008774 ENG COA #2005026904

ARCHITECTURE

PERMITTING

220 E. CENTRAL PKWY, STE 4000 ALTAMONTE SPRINGS, FL 32701 407.645.5008



LAUREL ROSE MARTIN - ARCHITECT LIC. # A-2019008772

CHICK-FIL-A SUMMIT FAIR

690 NW BLUE PKWY LEE'S SUMMIT, MO 64086

FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, NRELEASE: PRINTED FOR

REVISION SCHEDULE

NO. DATE DESCRIPTION

02/19/24 PLAY AREA REMOVA

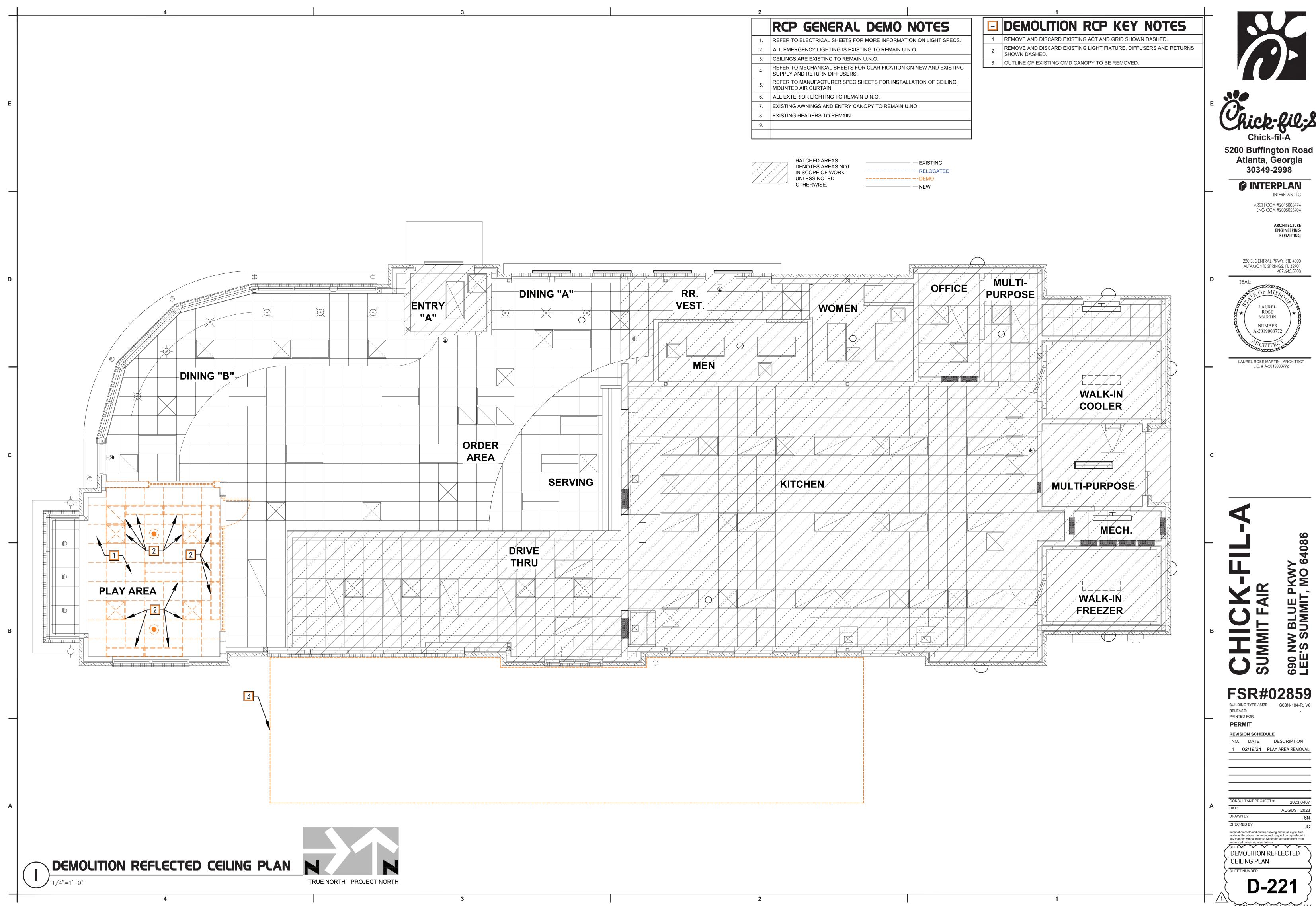
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SHEET DEMOLITION FLOOR PLAN

D-201



Atlanta, Georgia

INTERPLAN LLC

ARCH COA #2015008774

PERMITTING

LAUREL ROSE MARTIN - ARCHITECT

DEMOLITION REFLECTED

| | 4 | | 3 |
|------------------|--|------------------------------|--|
| ı | INTERIOR FINISH SCHEDULE | | |
| | CEILING FINISHES | | FLOOR FINISHES |
| ACT-2 | ACOUSTICAL CEILING TILE CERTAINTEED CEILINGS, PERFORMA SYMPHONY M, #1222BF-IOF-1, 24" X 24" X 3/4" WHITE GRID: ELITE NARROW REVEAL (CORNER BEVEL) 9/16" GRID, WHITE [VERIFY EXISTING ACT SPECIFICATION, SEE NOTE BELOW] | G-1 | FLOOR TILE GROUT (T-3 AND T-4, USE WITH PORCELAIN TILE) MAPEI, ULTRA COLOR GROUT 47 / CHARCOAL |
| PT-1A | PRIMARY INTERIOR CEILING PAINT SHERWIN WILLIAMS, PRO MAR 200 ZERO VOC PAINT SW-7011 / NATURAL CHOICE, FINISH: FLAT (SEMI-GLOSS ON HARDIE PANEL) | T-3 | PORCELAIN TILE CREATIVE MATERIALS CORPORATION LAVA LIGHT GRAY, 12"X12" GROUT: G1, JOINT WIDTH: 3/16" |
| | PRIMARY INTERIOR CEILING PAINT | | MISCELLANEOUS FINISHES |
| PT-3A | SHERWIN WILLIAMS, PRO MAR 200 ZERO VOC PAINT SW7600/ BOLERO, FINISH: FLAT | | ROLLER SHADE |
| | \WAII EINIICHEC | RS-1 | PHIFER SHEERWEAVE 4000 U61 ECO/GREYSTONE, 5% OPENNESS - NOTCHLESS 4" FASCIA, DARK BRONZE TO MATCH STOREFRONT COLOR, ROLLEASE SKYLINE CLUTCH, (HEAT SEALED |
| | WALL FINISHES PRIMARY INTERIOR WALL PAINT | | INTERNAL POCK HEM BAR), 1 10LB STAINSTEEL ROLLEASE CHAIN, CHAIN LOCATED AT JAMB ONLY, NOT IN CENTER WINDOW RE: INTERIOR ELEVATIONS |
| PT-1B | SHERWIN WILLIAMS, PRO MAR 200 ZERO VOC PAINT SW-7011 / NATURAL CHOICE, FINISH: EGGSHELL | | |
| WD-3 | WAINSCOTING PER NATIONAL ACCOUNT 1/4" PLYWOOD (RED OAK, PLAIN CUT LAUAN CORE WITH METAL TRIM) CUSTOM, FINISH: RED OAK STAINED MINWAX DRIFTWOOD. RE: DETAILS AND SHOP DRAWINGS FROM MANUFACTURER. | | |
| | WALL BASES | 1 | |
| T-4 | PORCELAIN TILE COVE BASE CREATIVE MATERIALS CORPORATION LAVA LIGHT GRAY, 6"X12" COVE BASE GROUT: G1, JOINT WIDTH: 3/16" | | |
| | INITEDIOD FINISH MOTES | | EVIEDIOD EINICH MOTEC |
| | INTERIOR FINISH NOTES | - | EXTERIOR FINISH NOTES |
| R P V E | ROVIDE 5" HIGH BAND OF 1/2" CEMENTITIOUS BOARD AT BASE OF ALL WALLS IN DINING OOMS AND VESTIBULES, 12" HIGH AT BASE OF KITCHEN WALLS. FOR ALL WALLS WITH TILE - ROVIDE FULL COVERAGE OF CEMENT BOARD SUBSTRATE FROM FLOOR TO THE HEIGHT OF VALL TILE. CEMENTITIOUS BOARD SHALL BE "DUROCK" BY U.S. GYPSUM. RE: INTERIOR LEVATIONS. OLLER SHADE WIDTH DIMENSIONS TO BE 2" LESS THAN THE FINISHED DIMENSION OF EACH VINDOW TO ACCOUNT FOR WAINSCOT TOP CAP RETURNING TO STOREFRONT - VALENCE WILL | 2. REF | SHES LISTED IN THIS SCHEDULE DO NOT REPRESENT ORIGINAL PROTOTYPE FINISHES. CONFIRM AL FINISHES TO MATCH ON SITE. ER TO EXTERIOR ELEVATIONS FOR AWNING TYPES AND CORRESPONDING FINISH. C. TO OBTAIN PAINT, COLOR, BRICK, MATERIAL SAMPLES AND TAKE PHOTOS OF SAMPLES NEXT ISTING BUILDING IN FIELD. SEND PICTURES OF SAMPLES TO ARCHITECT, CFA CONSTRUCTION AGER, AND CHICK-FIL-A DESIGN TEAM FOR APPROVAL BEFORE START OF CONSTRUCTION AS TO |
| | MAINTAIN FULL LENGTH & ROLLER SHADE WILL BE 2" LESS THAN TOTAL MEASUREMENT. TT-2/CT-45 OUTSIDE CORNERS IN PUBLIC AREAS. USE BLANKE (RE: TR-1) TRIM STRIP. SEE | NOT | PELAY THE PROJECT. |
| | ATIONAL ACCOUNTS FOR ORDERING INFORMATION. | VERIF | NOTES: Y MANUFACTURER, COLOR, AND MODEL NUMBERS WITH EXTERIOR FINISH SCHEDULE |
| 11 | OR WAINSCOTING WHERE GRAPHIC MESSAGE EXTENDS ABOVE TOP HORIZONTAL TRIM CAP, ISTALLER TO FIELD CUT VERTICAL BATTENS AND TOP CAP AT GRAPHICS AS REQUIRED. | 1. B 1.1. 1.2. 1.3. | LACK SITE SIGNAGE (MAIN ID, SECONDARY ID, DIRECTIONAL, VERIFY OTHER POSSIBLE SIGNAGE) NEW CANOPIES AT MAIN ENTRANCE AND DRIVE-THRU AWNING FRAMES (VERIFY FABRIC WITH EXTERIOR FINISH SCHEDULE)\ |
| | OR CEILING FINISHES, IF PATCHING AND REPAIRING ACT, VERIFY EXISTING SPECIFICATION RIOR TO ORDERING. | 1.4. 1.5. | DRIVE-THRU ORDER POINTS/MENU BOARDS DRIVE-THRU CLEARANCE BARS |
| N | OR EXISTING RESTAURANTS THAT NEED 6 INCH TILE FOR REPAIR, THE INSTALLER SHOULD SPECIFY EEDING A COVE BASE (DAL TILE LAVA LIGHT GREY SPEC) WITH A 6 INCH HEIGHT AND ORDER IRECTLY FROM DALTILE (CHICK-FIL-A@DALTILE.COM). | | ARK BRONZE SITE METALS, NOT MENTIONED ABOVE, INCLUDING BUT NOT LIMITED TO: BOLLARDS, DUMPSTER GATE POSTS, LIGHT POLES, HANDRAILS BUILDING METALS, NOT MENTIONED ABOVE, INCLUDING BUT NOT LIMITED TO: LIGHT FIXTURES, DOWNSPOUTS, SCUPPERS NEW BUILDING PARAPET COPINGS (IF APPLICABLE) EXISTING BUILDING PARAPET COPINGS (REPAINT TO MATCH NEW) - IF APPLICABLE |

> **INTERPLAN** INTERPLAN LLC

ARCH COA #2015008774 ENG COA #2005026904

ARCHITECTURE ENGINEERING PERMITTING

220 E. CENTRAL PKWY, STE 4000 ALTAMONTE SPRINGS, FL 32701 407.645.5008



LAUREL ROSE MARTIN - ARCHITECT LIC. # A-2019008772

690 NW BLUE PKWY LEE'S SUMMIT, MO 64086

FSR#02859

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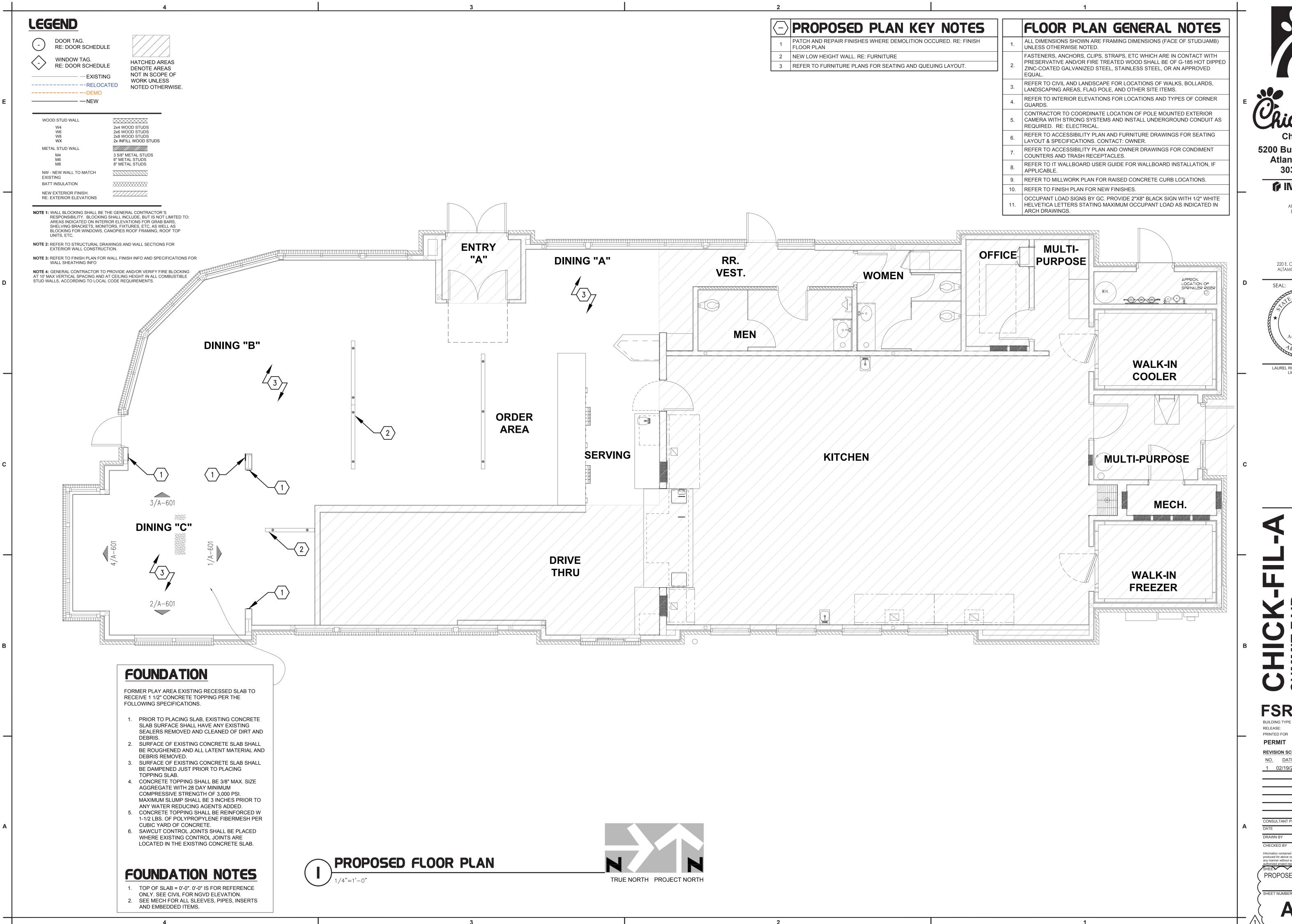
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SHEET

FINISH SCHEDULE

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INTERPLAN

ARCH COA #2015008774 ENG COA #2005026904

ARCHITECTURE

PERMITTING

220 E. CENTRAL PKWY, STE 4000 ALTAMONTE SPRINGS, FL 32701

407.645.5008 MARTIN NUMBER A-201900877

LAUREL ROSE MARTIN - ARCHITECT LIC. # A-2019008772

FSR#02859

NW SS

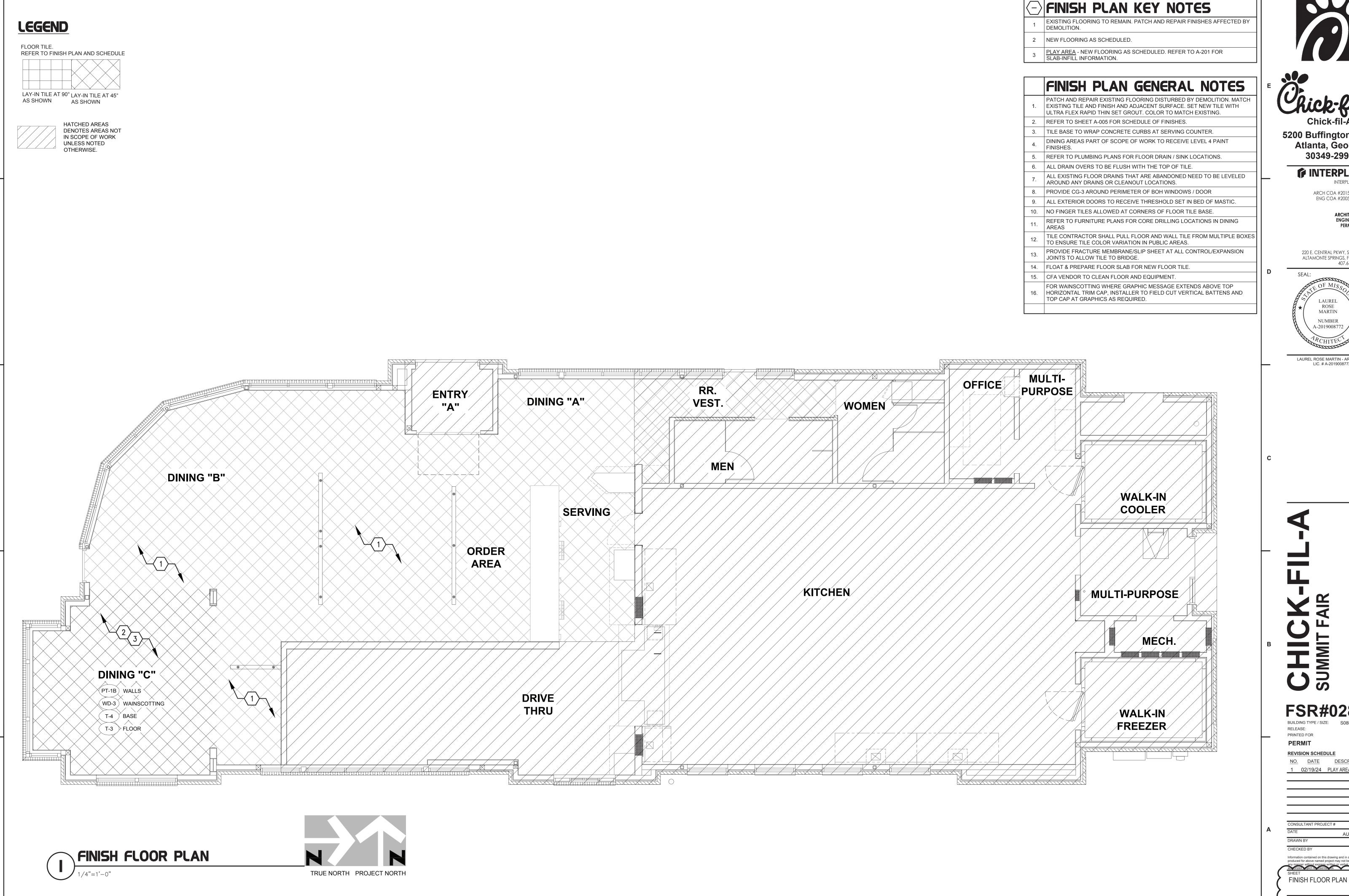
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PROPOSED FLOOR PLAN



5200 Buffington Road

Atlanta, Georgia 30349-2998

INTERPLAN INTERPLAN LLC

ARCH COA #2015008774 ENG COA #2005026904

ARCHITECTURE

220 E. CENTRAL PKWY, STE 4000 ALTAMONTE SPRINGS, FL 32701 407.645.5008

SEAL: MARTIN NUMBER A-2019008772

LAUREL ROSE MARTIN - ARCHITECT LIC. # A-2019008772

690 NW BLUE PKWY LEE'S SUMMIT, MO 64086

FSR#02859

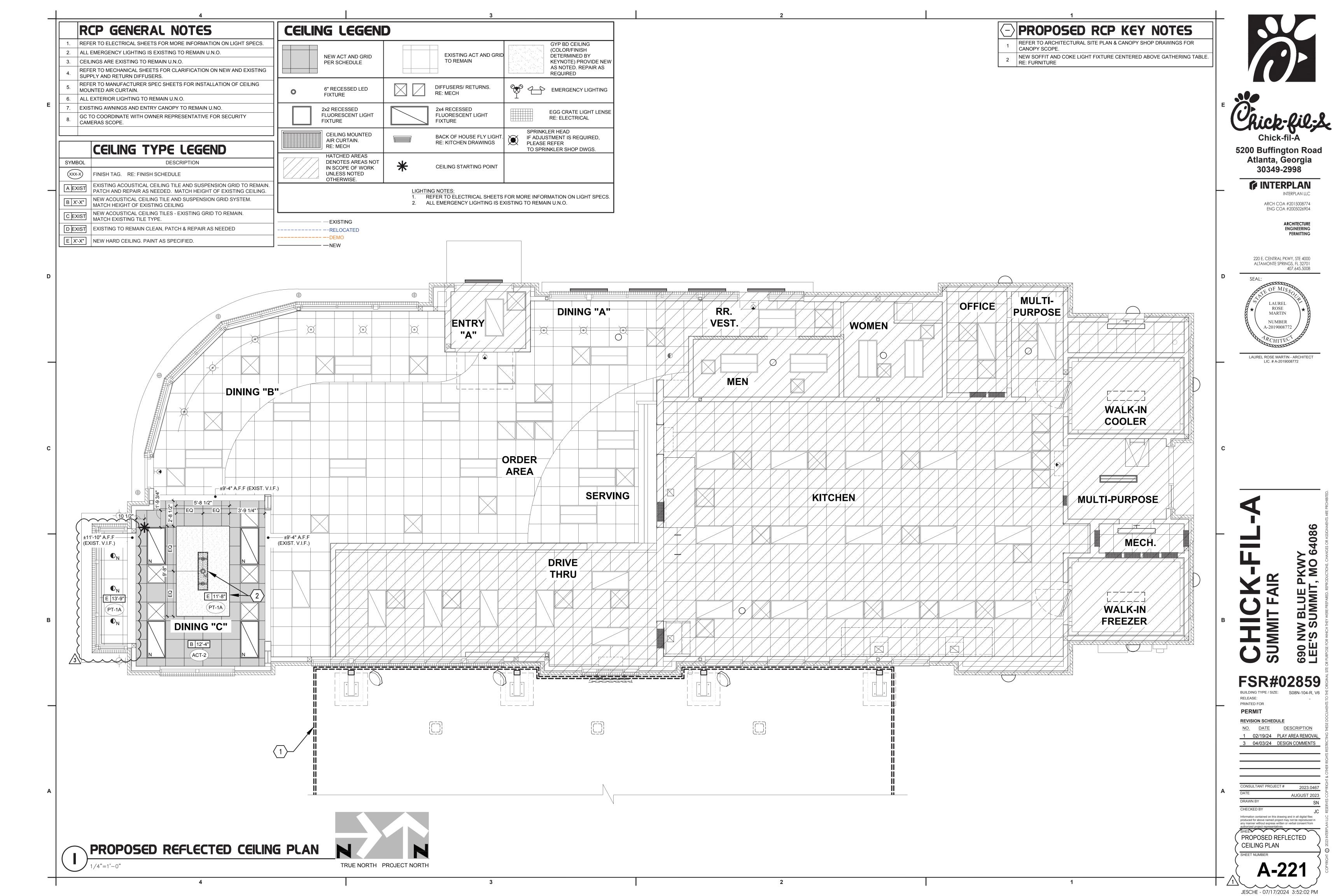
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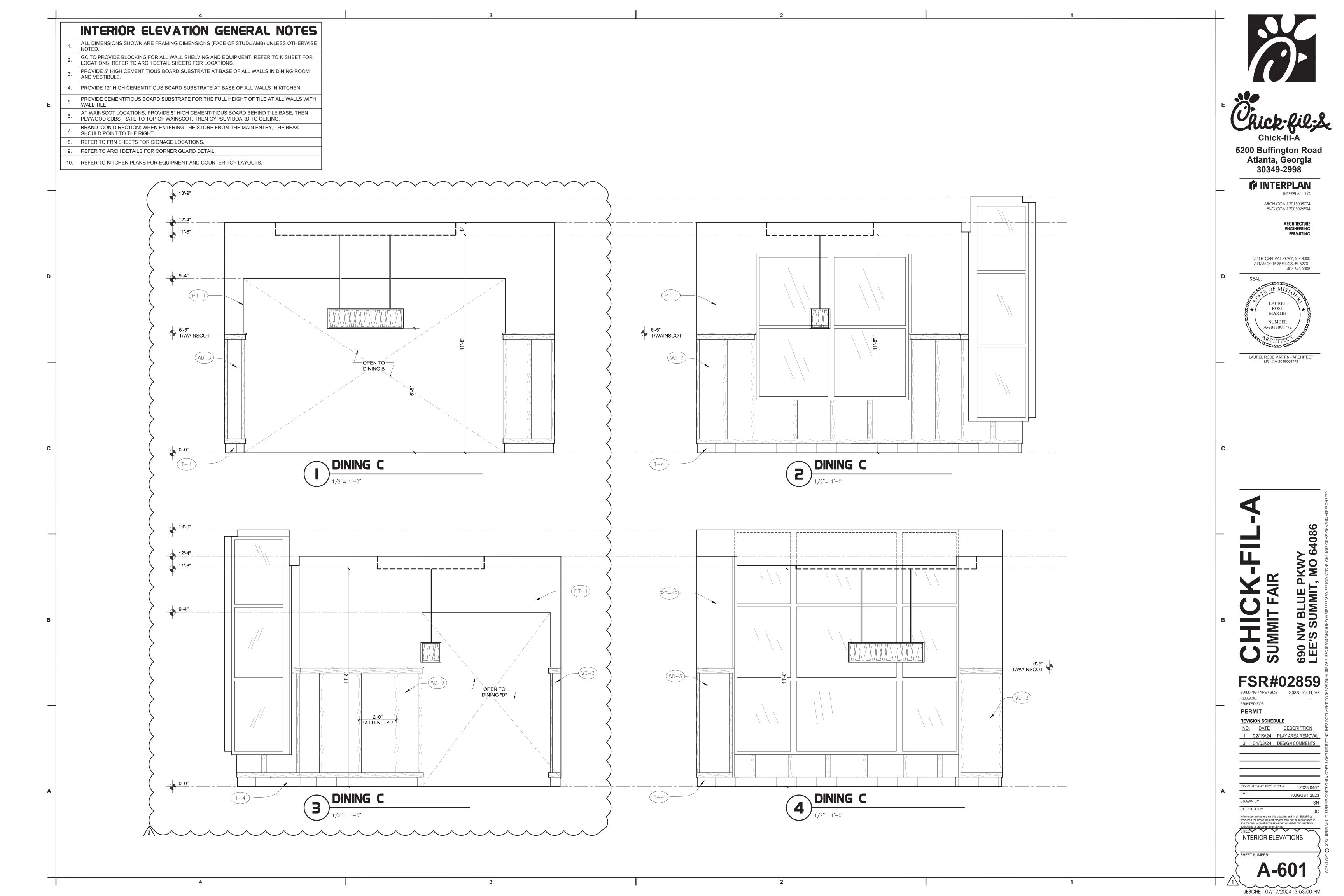
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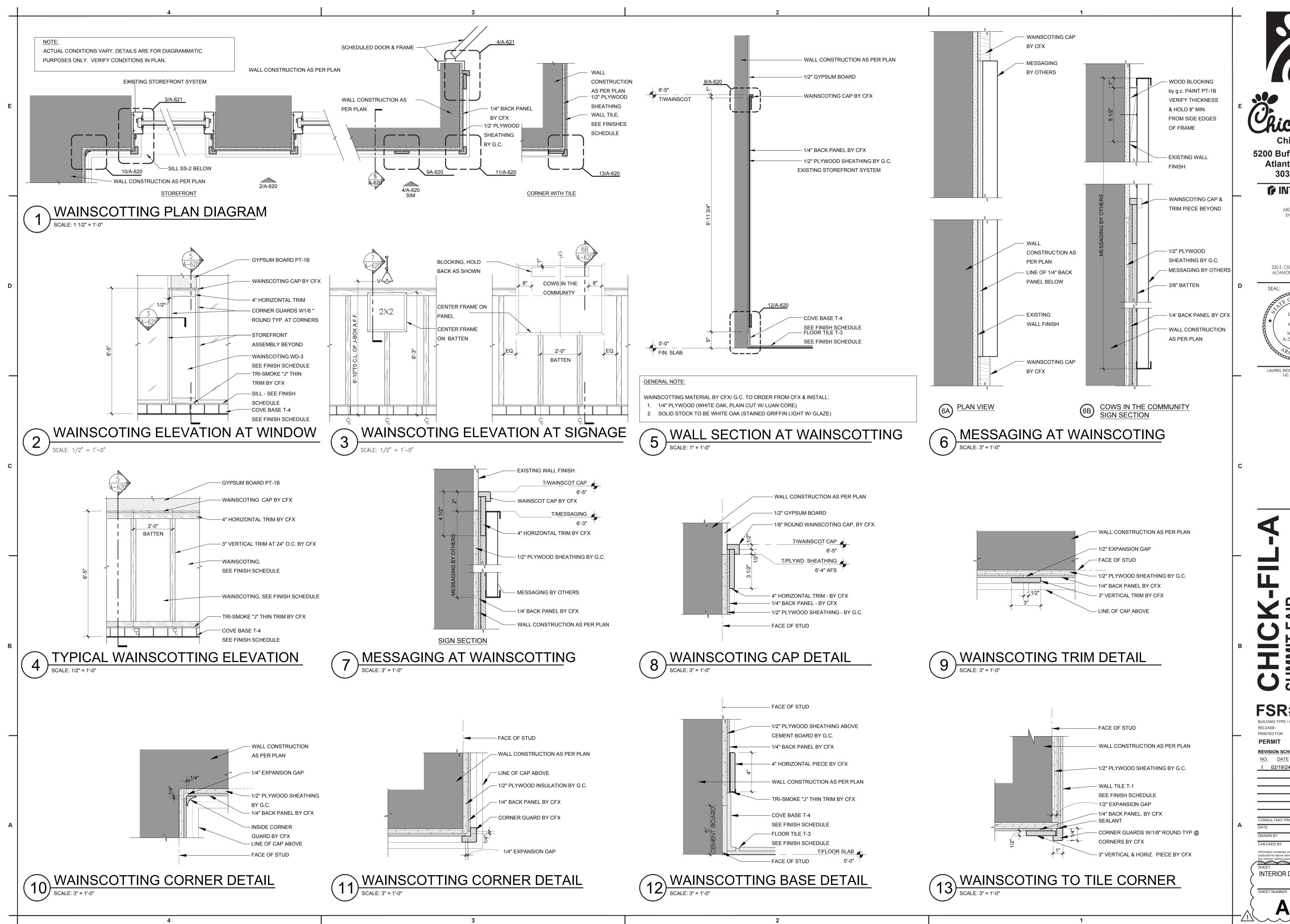
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INTERPLAN

ARCH COA #2015008774 ENG COA #2005026904

ARCHITECTURE

ENGINEERING PERMITTING

220 E. CENTRAL PKWY, STE 4000 ALTAMONTE SPRINGS, FL 32701 407.645.5008 LAUREL MARTIN A-201900877

LAUREL ROSE MARTIN - ARCHITECT LIC. # A-2019008772

690 NW BLUE PKWY LEE'S SUMMIT, MO 64086

FSR#02859

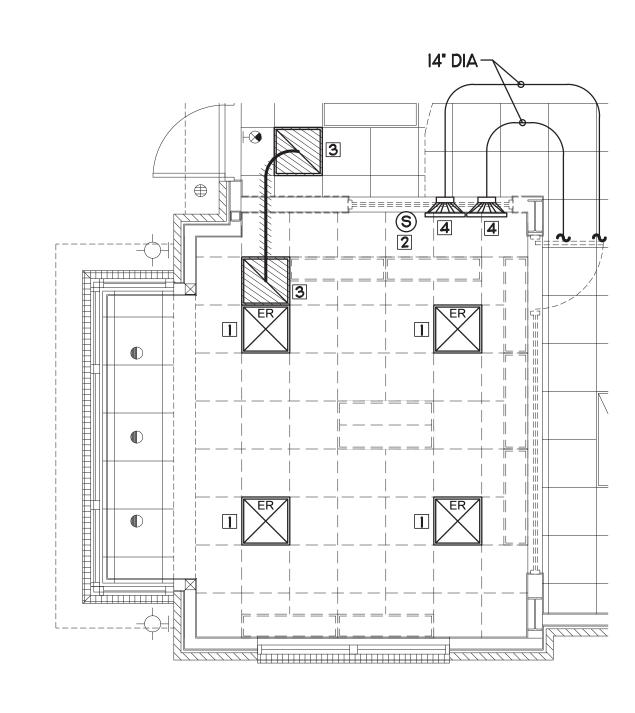
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CONSULTANT PROJECT # 2023.0467

authorized project representatives INTERIOR DETAILS

A-620

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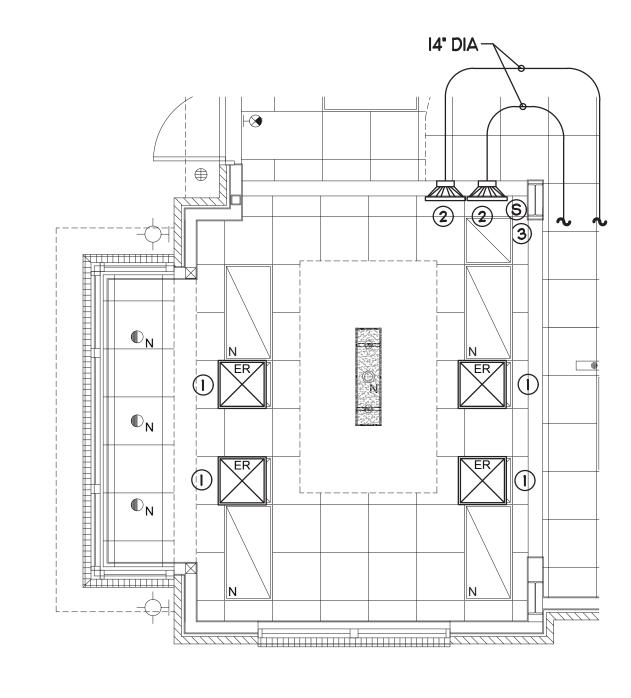


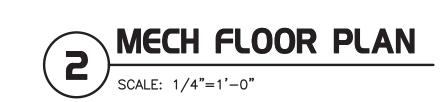
DEMOLITION KEY NOTES

- EXISTING AIR DEVICE TO BE RELOCATED.
- 2 EXISTING REMOTE TEMPERATURE SENSOR TO BE RELOCATED.
- 3 DEMOLISH EXISTING TRANSFER AIR GRILLS.
- 4 EXISTING AIR DEVICE TO REMAIN.

| DEM | OLITION LEGEND |
|-----|---|
| | EXISTING EQUIPMENT, DUCT, AIR DEVICES ETC. TO REMAIN INTACT. |
| | EXISTING EQUIPMENT, DUCT, AIR DEVICES ETC. TO BE DEMOLISHED. |

| | HVAC LEG | END | |
|----------|--|----------|--------------------------|
| A-12-400 | TYPE - NECK SIZE - CFM | EF#I | EXHAUST FAN #I (TYP.) |
| — | SPIN-IN FITTING WITH MANUAL BALANCING DAMPER, WITHOUT SCOOP | AC#I | AIR CONDITIONING UNIT #I |
| Ф—∕∑ | □ □ ○ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ | | RETURN/EXHAUST (TYP.) |
| Ф—^\ | EXISTING EQUIPMENT, DUCT, & AIR DEVICE | | SUPPLY DIFFUSER, SQ FACE |
| Ф—^\⊠ | NEW EQUIPMENT, DUCT, & AIR DEVICE | (| PLAN NOTE REFERENCE |
| 1 | THERMOSTAT | — | MANUAL VOLUME DAMPER |





MECH. KEY NOTES

- 1) EXISTING AIR DEVICE TO BE RELOCATED.
- 2 EXISTING AIR DEVICE TO BE REMAIN.
- 3 RELOCATE AC#3 THERMOSTAT WALL MOUNTED AT 5'-O" AFF, ROUTE WIRING BACK TO SUNCOAST CONTROL PANEL.



5200 Buffington Road Atlanta, Georgia 30349-2998

> **INTERPLAN** INTERPLAN LLC

ARCH COA #2015008774 ENG COA #2005026904

ARCHITECTURE ENGINEERING PERMITTING

220 E. CENTRAL PKWY, STE 4000 ALTAMONTE SPRINGS, FL 32701 407.645.5008



STACY HENSON - PROFESSIONAL ENGINEER LIC. # PE-2016036828

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SHEFT MECHANICAL FLOOR PLAN

| MARK | DESCRIPTION | LOCATION | NECK SIZE | FACE SIZE | FRAME TYPE | REMARKS | |
|-------|---|---------------------------------------|-------------|-----------|------------|---------|--|
| Α | PRICE MODEL APDC ALUMINUM SUPPLY AIR DIFFUSER WITH INDIVIDUALLY ADJUSTABLE CURVED AIR PATTERN CONTROLLERS. | DINING AREA KITCHEN TEAM MEMBER | SEE PLAN | 24X24 | LAY-IN | 1,2 | |
| NOTES | MECHANICAL CONTRACTOR SHALL PURCHA COMPANY, CONTACT MR, SCOTT GEORGE AT NOT PURCHASED THRU TOM BARROW COMP. | 7 404-351-1010, FO | R PRICING A | | | CES | |
| | | | | | | | |

SECTION CI5000 - MECHANICAL SPECIFICATIONS

PART I - GENERAL

- A. IT IS THE RESPONSIBILITY OF CONTRACTOR TO READ ALL SPECIFICATIONS AND CONSULT ALL DRAWINGS WHICH MAY AFFECT THE INSTALLATION AND COORDINATION OF HIS WORK WITH OTHER TRADES. CONTRACTOR SHALL COORDINATE AND MAKE MINOR ADJUSTMENTS IN LOCATION OF EQUIPMENT AND MATERIALS AS NECESSARY TO SECURE COORDINATION.
- B. COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL STATE AND LOCAL CODES AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE LATEST APPROVED EDITIONS OF NFPA-96, NFPA-90A, NFPA-54, SMACNA, ASHRAE 90.1 AND ASHRAE 62.
- C. SYSTEM LAYOUT IS SCHEMATIC AND EXACT LOCATIONS SHALL BE DETERMINED BY STRUCTURAL CONDITIONS, COORDINATION WITH OTHER TRADES, COORDINATION WITH FINISHES AND OTHER CONDITIONS. STRUCTURAL SUPPORTS SHALL NOT BE CUT OR ALTERED TO ASSURE FIT OF HVAC SYSTEM. TEN FOOT CLEARANCE SHALL BE MAINTAINED BETWEEN OUTSIDE AIR INTAKES AND EXHAUST FANS AND PLUMBING VENT TERMINALS.
- D. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEFECTS, REPAIRS AND REPLACEMENTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE (I) YEAR AFTER FINAL PAYMENT IS APPROVED. CONTRACTOR SHALL HONOR FACTORY WARRANTIES ON ALL EQUIPMENT PROVIDED AS PART OF THIS SYSTEM.
- E. UPON COMPLETION OF PROJECT, ALL SYSTEM EQUIPMENT AND MATERIALS SHALL BE IN NEW, CLEAN CONDITION WITH ALL DAMAGE RESTORED TO CONDITION ACCEPTABLE TO THE OWNERS REPRESENTATIVE, ALL EQUIPMENT, COMPONENTS AND DUCTWORK SHALL BE INSPECTED AND THOROUGHLY CLEANED, READY FOR USE. AT COMPLETION OF JOB, ALL MISCELLANEOUS TOOLS, SCAFFOLDING, SURPLUS MATERIALS, RUBBISH AND DEBRIS SHALL BE REMOVED BY CONTRACTOR.
- F. CONTRACTOR SHALL PROVIDE TWO SETS OF 2" MERV 8 OR HIGHER THROW AWAY TYPE FILTERS. A CLEAN SET SHALL BE PROVIDED PRIOR TO TEST AND BALANCE AND AGAIN PRIOR TO OPENING.

- 2.01 DUCTWORK (CI5735)
- A. ACCEPTABLE MANUFACTURERS OF INSULATION ARE MANVILLE, OWENS CORNING
- B. ALL DUCTWORK SHALL BE SHEET METAL, UNLESS NOTED OTHERWISE (U.N.O.).
- C. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS, U.N.O.
- D. CONSTRUCTION OF DUCTWORK SHALL MEET SMACNA I" W.C. PRESSURE CLASS STANDARD AND RECOMMENDATIONS. SMACNA SHALL BE FOLLOWED WITH RESPECT TO GAGE THICKNESS, JOINTS, REINFORCING, CONSTRUCTION, INSTALLATION AND SUPPORT FOR PRESSURE CLASS STATED. ALL TRANSVERSE JOINTS IN RECTANGULAR AND ROUND DUCT INCLUDING DUCT CONNECTION TO AIR DEVICE COLLAR SHALL BE SEALED PER SMACNA SEAL CLASS C WITH U.L. DUCT MASTIC SEALANT APPROVED FOR INTENDED USE. DUCT TAPE IS NOT AN ACCEPTABLE SUBSTITUTE FOR MASTIC UNLESS EQUAL TO HARDCAST FOIL-GRIP 1402 BUTYL RUBBER ADHESIVE TAPE.
- E. DUCT SHALL BE SUPPORTED AT BASE OF DUCT DROPS. CURB DUCT RAILS ARE NOT INTENDED TO AND SHALL NOT SUPPORT THE WEIGHT OF THE DUCT.
- F. ALL DUCT INSULATION SHALL MEET MINIMUM R-VALUE REQUIRED BY ASHRAE 90.1 LATEST EDITION. ALL DUCT WRAP SHALL BE MINIMUM 2" THICK, 3/4 PCF AND 5.6 R-VALUE INSTALLED WITH EITHER A VAPOR BARRIER WITH MAXIMUM PERMEANCE 0.05 OR A MINIMUM 2 MIL ALUMINUM REINFORCED FOIL/KRAFT FACING.
- G. ALL DUCT DROPS FROM THE ROOFTOP UNITS SHALL BE EXTERNALLY INSULATED.
- H. SUPPLY AND RETURN AIR DUCTWORK SERVING ALL AREAS SHALL BE EXTERNALLY INSULATED.
- ALL AIR CONVEYANCE COMPONENTS SUCH AS, BUT NOT LIMITED TO DUCT, DUCT PLENUMS, GRILLES/DIFFUSERS, BACK PANS, AND BOOTS SHALL BE INSULATED. INSULATION TYPE IS COVERED ELSEWHERE IN THIS SPECIFICATION.
- J. RESTROOM RECTANGULAR EXHAUST AIR DUCTWORK SHALL BE LINED WITH I" THICK, 1-1/2 PCF INSULATION.

- K. TRUNK DUCTS SHALL BE ISOLATED FROM UNIT VIBRATION WITH THE USE OF NFPA AND U.L. APPROVED FLEXIBLE CONNECTORS INSTALLED AT THE TOP OF
- L. INSULATED FLEXIBLE DUCT MAY BE UTILIZED FOR RUNOUTS TO GRILLES AND DIFFUSERS ONLY IN THE HORIZONTAL POSITION AND IN MAXIMUM LENGTHS OF 4'-O", NO EXCEPTIONS. SEE TAKE-OFF DETAIL ON DRAWING M3.I.
- M. CONSTRUCTION OF FLEXIBLE DUCTWORK SHALL INCLUDE SPIRAL METAL HELIX BONDED TO A POLYESTER CORE, FIBERGLASS INSULATION WITH POLYETHYLENE OR MYLAR VAPOR BARRIER, ALL COMPONENTS SHALL HAVE APPROPRIATE U.L. APPROVAL AND SHALL BE EQUIVALENT TO THERMAFLEX MKE.
- N. FLEXIBLE DUCT SHALL BE INSTALLED PER THE "ADC FLEXIBLE DUCT PERFORMANCE AND INSTALLATION STANDARDS, 4TH ED" USING FOIL TAPE AND DRAWBAND ON THE INNER CORE AND TAPE OR DRAWBAND ON THE OUTER
- O. DUCT TAPE SHALL BE EQUAL TO FASSON 181-B FX, 2-1/2" WIDE.

BOTH SUPPLY AND RETURN DROPS.

- IN SUPPLY DUCTWORK WHERE ANY ONE DIMENSION IS GREATER THAN 12".
- Q. RADIUSED ELBOWS MAY BE SUBSTITUTED FOR 90 DEGREE ELBOWS AT THE DISCRETION OF THE CONTRACTOR. CENTERLINE RADIUS EQUAL TO, R-W PER FIGURE NO. 2-2 IN SMACNA HVAC DUCT CONSTRUCTION STANDARDS.

P. SINGLE THICKNESS TURNING VANES SHALL BE INSTALLED AT 90 DEGREE TURNS

R. EXTERNAL INSULATION ON BOTTOM OF DUCTS 24" OR WIDER SHALL BE SUPPORTED WITH STICK PINS ON 18" CENTERS. STICK PIN WASHERS SHALL BE COVERED WITH DUCT TAPE OR MASTIC.

PART III - EXECUTION

NATIONAL ACCOUNTS

COMPANY WILL NOT BE ACCEPTED.

BE ACCEPTED.

PRICE AIR DEVICES - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DEVICES DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT

404-351-1010 FOR PRICING AND AVAILABILITY. AIR DEVICES NOT PURCHASED THRU TOM BARROW

AIR DOORS - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE AIR DOORS DIRECTLY FROM TOM BARROW COMPANY, CONTACT MR, SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. AIR DOORS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT

- A. FURNISH AND INSTALL SYSTEM IN ACCORDANCE WITH REFERENCED STANDARDS, APPLICABLE CODES, MANUFACTURER'S RECOMMENDATIONS AND AS INDICATED ON DRAWINGS.
- B. OWNER SHALL TEST AND BALANCE MECHANICAL SYSTEM IN ACCORDANCE WITH NCI OR AABC STANDARDS TO ASSURE CONFORMANCE WITH DESIGN. G.C. WILL MAKE MECHANICAL CONTRACTOR AVAILABLE DURING TEST AND BALANCE TO ASSIST TESTING AGENCY AND TO MAKE CORRECTIONS IMMEDIATELY NECESSARY. CONTRACTOR SHALL CORRECT ITEMS ON WRITTEN TEST AND BALANCE REPORT.
- C. CONTRACTOR SHALL INSTRUCT THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT THROUGH DEMONSTRATION AND EXPLANATION OF OPERATING & MAINTENANCE MANUALS.
- D. CONTRACTOR SHALL PROVIDE A "SAMPLE MAINTENANCE PROPOSAL" TO THE OWNER'S REPRESENTATIVE IN ALL MATTERS PERTAINING TO THE PROPER MAINTENANCE OF EQUIPMENT FURNISHED UNDER THIS CONTRACT.
- E. CONTRACTOR SHALL COMPLETE A/C EQUIPMENT STARTUP DOCUMENTATION PROVIDED BY OWNER.

FIELD VERIFY ALL CONDITIONS

HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT.

ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THECOSTSFOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING, THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING

AS NOTED IN THE SPECIFICATIONS, ALL WIRING LAYOUTS, LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE TO FABRICATION OF CONDUITS, DUCTS, OR PIPING, AND START OF INSTALLATION OF SAME (INCLUDING SPRINKLER PIPING WHEN PRESENT ON JOB). ANY INSTALLATION OR EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

ENGINEER OR OWNER PRIOR TO BIDDING FOR CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST. BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND

CODES AND DESIGN INTENT.

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INTERPLAN

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PERMITTING

ENG COA #2005026904

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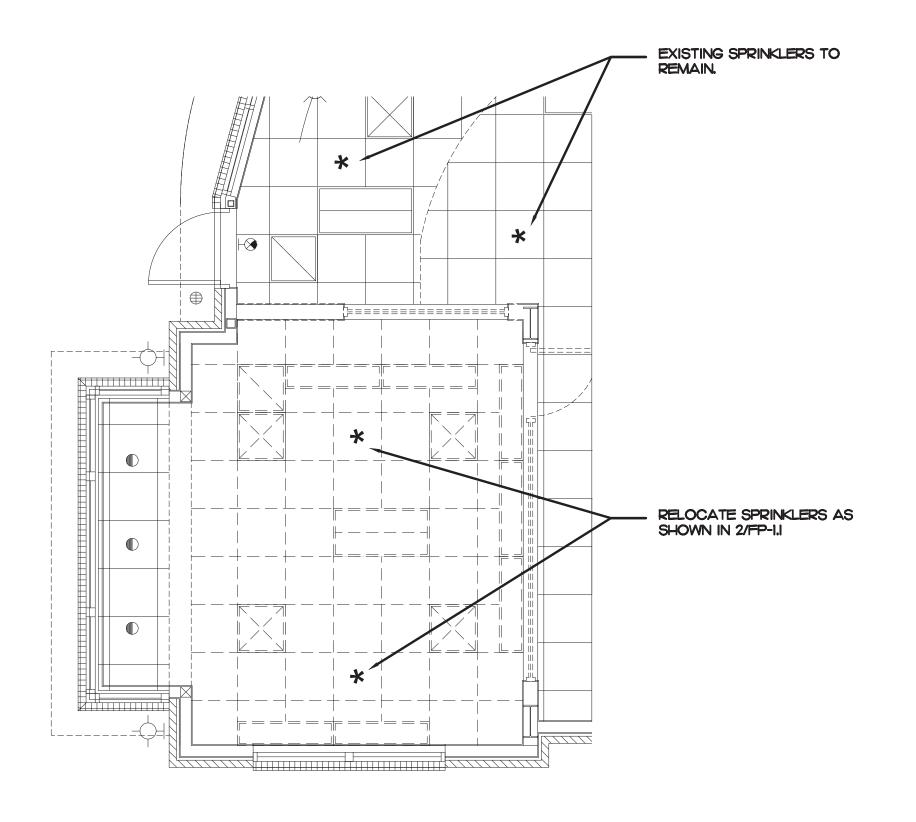
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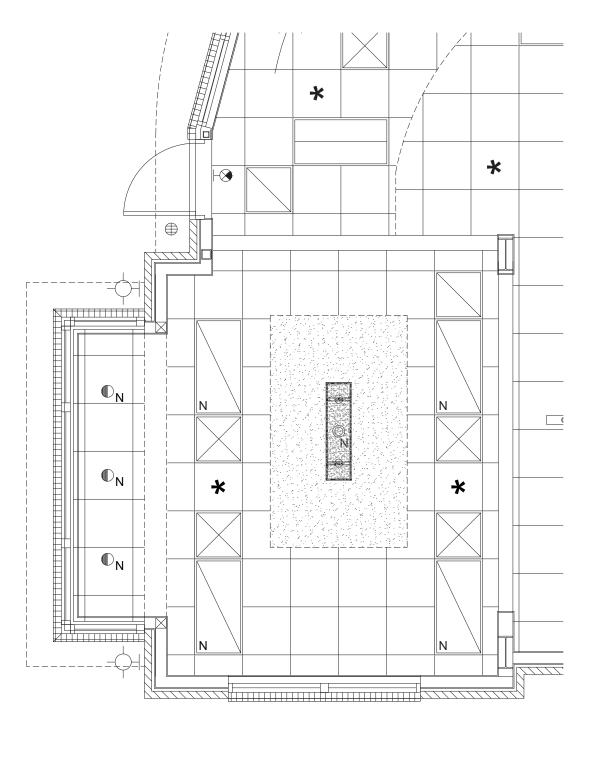
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LEGEND

★ PENDANT SPRINKLER

ORY SPRINKLER

DEMOLITION PLAN



SPRINKLER NOTES

THE WET SPRINKLER WET SPRINKLER SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH NFPA #13 (2013 EDITION) AND NFPA #14 (2013 EDITION), AND IFC (2012 EDITION). HOSE STREAM TO MEET OR EXCEED THE REQUIREMENTS OF NFPA #13 AND LOCAL AUTHORITY.

THESE DRAWINGS ARE PERFORMANCE SPECIFICATION ONLY AND ARE ONLY INTENDED TO CONVEY THE GENERAL SCOPE OF WORK. IT IS THE RESPONSIBILITY OF THE FIRE SPRINKLER CONTRACTOR TO SUBMIT SIGNED AND SEALED DRAWINGS AND HYDRAULIC CALCULATIONS TO THE AUTHORITY HAVING JURISDICTION AS DEFINED IN THE INTERNATIONAL BUILDING CODE AND NFPA #13, 14-1 WORKING

THE CONTRACTOR SHALL PROVIDE ALL MATERIAL LABOR, TRUCKING, HOISTING, ENGINEERING, SCAFFOLDING, POWER HOOK UP'S, PROTECTION, SHOP DRAWINGS, LAYOUT, EQUIPMENT, SUPERVISION, AND INSURANCE ETC. NECESSARY FOR THE FURNISHING AND INSTALLATION OF ALL SPECIFIED AND RELATED WORK IN ACCORDANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES, APPLY FOR ALL PERMITS AND PAY ALL GOVERNMENTAL TAXES, FEES AND SEAL ALL NECESSARY PLANS ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS FORM ALL DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATIONS OF INSPECTION FOR HIS/HER WORK AND DELIVER SAME TO THE OWNER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK.

THE CONTRACTOR SHALL COORDINATE WORK WITH ALL OTHER TRADES, CONTRACTOR TO COORDINATE FIRE PROTECTION EQUIPMENT LOCATIONS TO AVOID LIGHTS AND AIR DIFFUSERS.

PIPE MATERIAL AND HANGERS AND INSTALLATION METHODS SHALL BE IN ACCORDANCE WITH LATEST EDITION OF NFPA #13.

IT IS THE FIRE SPRINKLER CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADEQUATE SPRINKLER

COVERAGE IN AREAS OUTSIDE SCOPE OF WORK THAT BECOME UNPROTECTED BY EXISTING

SPRINKLERS DUE TO NEW CONSTRUCTION. PROVIDE UPRIGHT SPRINKLER HEADS IN THE NON-CONDITIONED SPACE ABOVE CEILING.

6IGI5 CRITERIA

32.004(2)(A)

THE POINT OF SERVICE IS INDICATED AT THE BACKFLOW PREVENTER. AT THIS POINT, THE SYSTEM IS DEDICATED SOLELY FOR FIRE PROTECTION PURPOSES, NO DOMESTIC WATER SHALL BE TAKEN FROM THE SYSTEM BEYOND THIS POINT FOR OTHER PURPOSES.

32.004(2)(B) THE FOLLOWING ARE APPLICABLE STANDARDS:

NFPA 13, 2013, EDITION, INSTALLATION OF SPRINKLER SYSTEMS. NFPA 24, 2010. EDITION, STANDARD FOR THE INSTALLATION OF PRIVATE OF FIRE SERVICE MAINS AND FIRE APPURTENANCES.

NFPA 25, 2011 EDITION, INSPECTION, TESTING AND MAINTENANCE OF WATER BASED FIRE PROTECTION

32.004(2)(C)

CLASSIFICATIONS OF HAZARD OCCUPANCIES FOR THE AREAS OF DESIGN SHALL BE AS FOLLOWS: (CORRIDORS,RESTROOMS,OFFICES AND OTHER SIMILAR OCCUPANCIES) LIGHT HAZARD OCCUPANCY PER NFPA# 13, 2013 EDITION. (RESTAURANT PREPARATION AREAS) ORDINARY HAZARD GROUP I PER

NFPA# 13, 2013 EDITION. (SALES FLOOR, MECHANICAL ELECTRICAL AND STORAGE ROOMS) ORDINARY HAZARD GROUP 2 PER NFPA #13, 2013 EDITION.

32.OO4(2)(D)

THE SPRINKLER SYSTEM SHALL BE WET PIPE FOR LIGHT HAZARD OCCUPANCY AND SHALL BE HYDRAULICALLY CALCULATED PER NFPA #13, 2013 EDITION AS A DENSITY OF 0.10 GPM/SQ.FT. OVER THE MOST REMOTE 1500 SQ.FT. SPRINKLER SHALL HAVE A TEMPERATURE RATING OF 155°F AND THE SPACING SHALL BE 225 SQ.FT. INCLUDE A FIRE HOSE ALLOWANCE OF IOO GPM.

THE SPRINKLER SYSTEM SHALL BE WET PIPE FOR ORDINARY HAZARD GROUP I OCCUPANCY AND SHALL BE HYDRAULICALLY CALCULATED PER NFPA #13, 2013 EDITION AS A DENSITY OF 0.15 GPM/SQ.FT, OVER THE MOST REMOTE ISOO SQ.FT. SPRINKLER SHALL HAVE A TEMPERATURE RATING OF ISS F AND THE SPACING SHALL BE 130 SQ.FT. INCLUDE A FIRE HOSE ALLOWANCE OF 100 GPM.

THE SPRINKLER SYSTEM SHALL BE WET PIPE FOR ORDINARY HAZARD GROUP 2 OCCUPANCY AND SHALL BE HYDRAULICALLY CALCULATED PER NFPA #13, 2013 EDITION AS A DENSITY OF 0.2 GPM/SQ.FT. OVER THE MOST REMOTE ISOO SQ.FT. SPRINKLER SHALL HAVE A TEMPERATURE RATING OF ISS F AND THE SPACING SHALL BE 130 SQ.FT. INCLUDE A FIRE HOSE ALLOWANCE OF 250 GPM.

32.004(2)(E)

WATER SUPPLY: THIS BUILDING WILL BE SUPPLIED BY A NEW 6' UNDERGROUND FIRE MAIN WHICH CONNECTS TO TO AN EXISTING 6" WATER MAIN LOCATED IN THE BACK OF THE BUILDING.

32.004(2)(F) SEE ATTACHED MOST RECENT FLOW TEST DATA, PROVIDED BY SPRINKLER CONTRACTOR.

32.004(2)(G)

VALVE AND ALARM REQUIREMENTS: ALL CONTROL VALVES ON THE SPRINKLER RISER AND BACKFLOW PREVENTER SHALL HAVE TAMPER SWITCHES. FLOW SWITCHES SHALL BE SET NOT TO ALARM WITH MINOR CITY WATER PRESSURE FLUCTUATIONS. HOWEVER THE FLOW OF ONE SPRINKLER HEAD SHALL PRODUCE AN ALARM CONDITION BY TRIPPING THE

FLOW SWITCH. ALL FLOW AND TAMPER SWITCHES SHALL ALSO SOUND THE ELECTRIC ALARM BELL ON THE OUTSIDE WALL. FIRE SPRINKLER CONTRACTOR SHALL VERIFY AND TEST PER NFPA#13.

32.004(2)(H)

THE LOCAL WATER PURVEYOR IS REQUESTED TO ADVISE THE ENGINEER OF RECORD IF CONDITIONS EXIST IN THEIR WATER SUPPLY THAT COULD LEAD TO MIC. SO THAT THE ENGINEER CAN DESIGN CORRECTIVE

32.004(2)(1) BACKFLOW PREVENTER AND METERING SPECIFICATIONS SHALL MEET OR EXCEED REQUIREMENTS OF LOCAL JURISDICTION.

32.004(2)(J)

YARD AND INTERIOR FIRE PROTECTION COMPONENTS: PRODUCT DATA SHEETS SHALL BE SUBMITTED BY THE SPRINKLER CONTRACTOR ALONG WITH THEIR SHOP ALL FIRE PROTECTION DEVICES AND COMPONENTS SHALL BE UL LISTED AND FM APPROVED.

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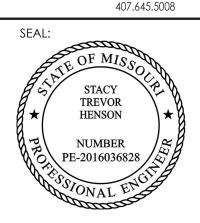
INTERPLAN INTERPLAN LLC

ARCH COA #2015008774 ENG COA #2005026904

> **ARCHITECTURE ENGINEERING**

PERMITTING

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STACY HENSON - PROFESSIONAL ENGINEER LIC. # PE-2016036828

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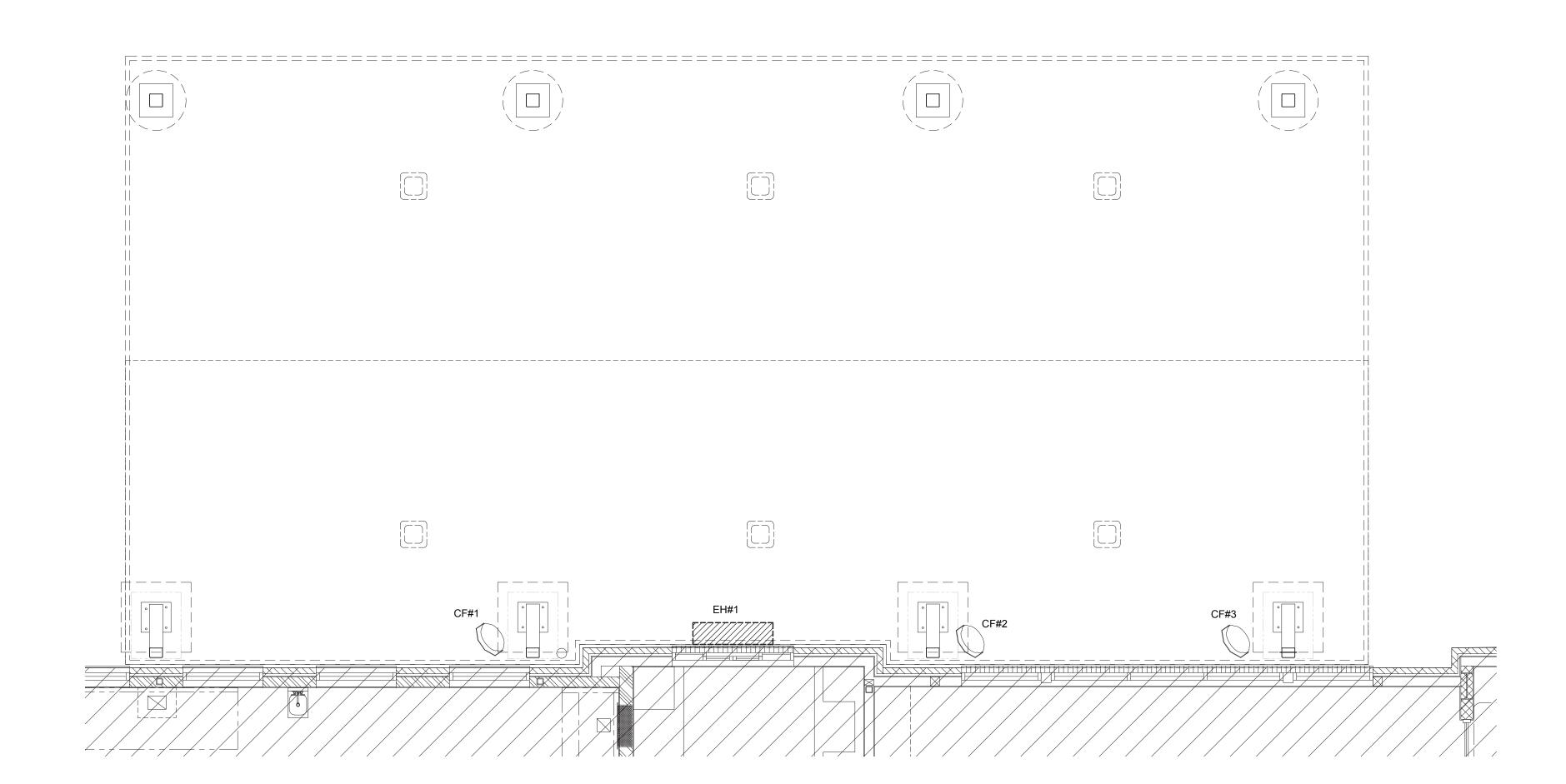
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FIRE SPRINKLER PLAN

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GAS PLUMBING PLAN - OMD CANOPY

GENERAL NOTES

COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE, AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF

2. COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.

3. EXPOSED GAS PIPING SHALL BE PAINTED BY GENERAL CONTRACTOR. USE ANTI-CORROSIVE PAINT AND COORDINATE WITH CFA CONSTRUCTION MANAGER.

FIELD VERIFY ALL CONDITIONS

NOTE! AS NOTED IN THE SPECIFICATIONS, ALL WIRING LAYOUTS, PIPING LAYOUTS AND DUCT LAYOUTS ARE SCHEMATIC. EXACT LOCATIONS SHALL BE DETERMINED BY THE CONSTRUCTION AND STRUCTURE OF THE BUILDING AND SHALL BE VERIFIED AND COORDINATED IN THE FIELD. EACH TRADE CONTRACTOR SHALL VERIFY WITH THE GENERAL CONTRACTOR THAT HE HAS THOROUGHLY REVIEWED AND COORDINATED ALL LOCATIONS AND ROUTINGS WITH ALL OTHER TRADES PRIOR TO FABRICATION OF CONDUITS, DUCTS, OR PIPING, AND START OF INSTALLATION OF SAME (INCLUDING SPRINKLER PIPING WHEN PRESENT ON JOB). ANY INSTALLATION OR CONSTRUCTION CONFLICTS WHICH OCCUR IN THE FIELD SHALL BE RESOLVED BY THE TRADE CONTRACTOR TO THE SATISFACTION OF THE OWNER AND ARCHITECT AND AT NO EXPENSE TO THE OWNER, ARCHITECT AND/OR GENERAL CONTRACTOR.

THE CONTRACTOR SHALL CONTACT THE ARCHITECT, ENGINEER OR OWNER PRIOR TO BIDDING FOR INTERPRETATIONS AND CLARIFICATIONS OF THE DESIGN AND INCLUDE IN HIS BID ALL COSTS TO MEET THE DESIGN INTENT. CLARIFICATIONS MADE BY THE ARCHITECT, ENGINEER OR OWNER AFTER BIDDING WILL BE FINAL AND SHALL BE IMPLEMENTED AT CONTRACTORS COST.

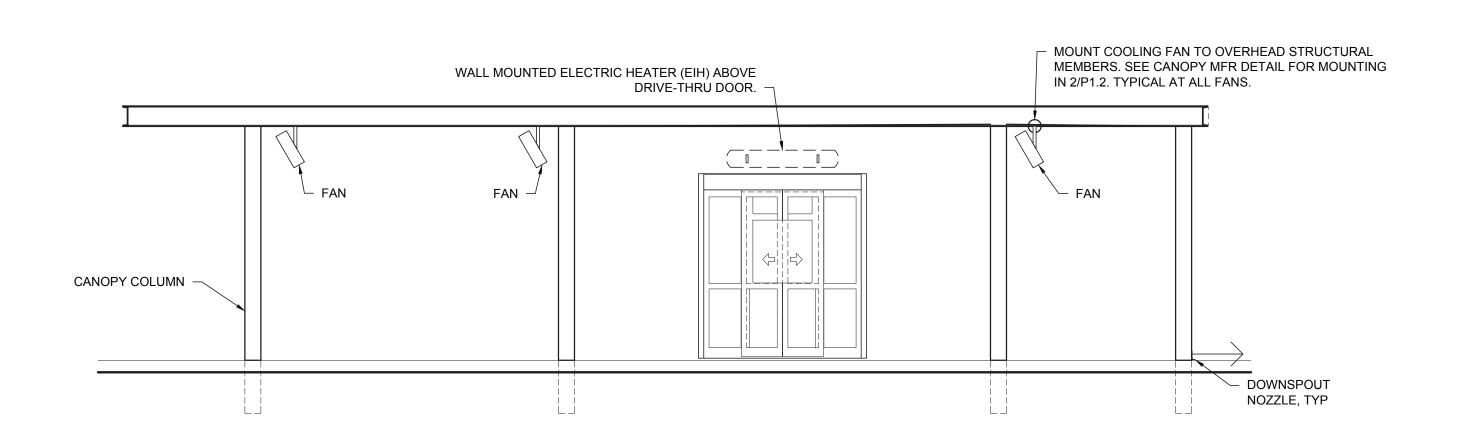
BIDDING CONTRACTORS SHALL HAVE A WORKING KNOWLEDGE OF LOCAL CODES AND ORDINANCES AND SHALL INCLUDE IN THEIR BIDS THE COSTS FOR ALL WORK INSTALLED IN STRICT ACCORDANCE WITH GOVERNING CODES, THE PLANS AND SPECIFICATIONS NOT WITHSTANDING. THE CONTRACTOR SHALL ALERT ARCHITECT, ENGINEER OR OWNER OF ANY APPARENT DISCREPANCIES BETWEEN GOVERNING CODES AND DESIGN INTENT.

| NATIONAL | ACCOUNTS |
|----------|-----------------|

SCHWANK INFRARED HEATER PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT

COOK FAN PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED.

| LEGEND | | | | | | |
|--------|----------------------------|--|--|--|--|--|
| CF#1 | CIRCULATING FAN #1 (TYP) | | | | | |
| EH#1 | ELECTRIC HEATER #1 (TYP) | | | | | |
| | NEW GAS PIPING ABOVE GRADE | | | | | |
| | NEW GAS PIPING BELOW GRADE | | | | | |
| B/G | BELOW GRADE | | | | | |
| EC | ELECTRICAL CONTRACTOR | | | | | |
| MC | MECHANICAL CONTRACTOR | | | | | |



HEATER FAN SECTION

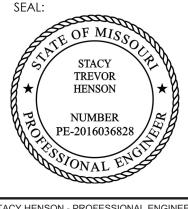
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INTERPLAN

ARCH COA #2015008774 ENG COA #2005026904

ARCHITECTURE

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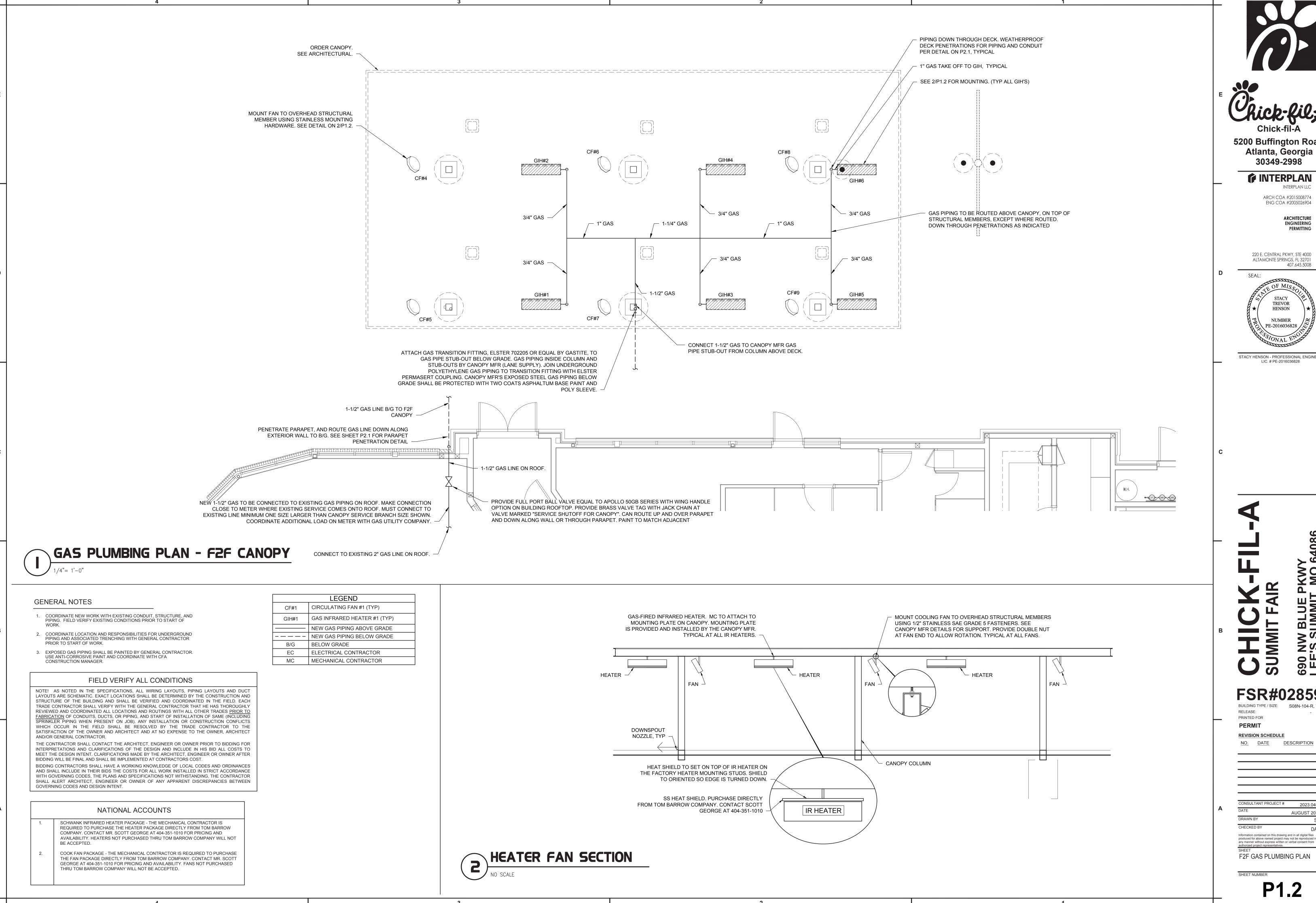
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OMD GAS PLUMBING

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INTERPLAN

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F2F GAS PLUMBING PLAN

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GAS CONNECTION SCHEDULE **EQUIPMENT** GAS LOAD 480,000 BTU'S EXISTING AC#1 150,000 BTU'S EXISTING AC#2 240,000 BTU'S EXISTING AC#3 150,000 BTU'S EXISTING AC#4 EXISTING WATER HEATER 80,000 BTU'S (6) 50,000 BTU'S NEW GAS HEATERS (6) TOTAL CONNECTED LOAD 1,400,000 BTU'S REMARKS: . EQUIVALENT TO 1,400 CFH @ pressure drop 0.5 IN. W.C. W/ DEVELOP LENGTH OF 279 FT (METER TO GIH#6) 2. 7" w.c. DELIVERY PRESSURE.

| | | | GAS FIR | ED INF | RARED | HEATER SCHE | DULE | |
|------|--------|------------------|----------------|--------|-------|---------------|---------------|--------------|
| MARK | MADK | INPUT (MBH) | FRAME SIZE | | | MOUNTING TYPE | MODEL | MANUFACTURER |
| | IVIARK | IIVI OT (IVIDIT) | LENGTH | WIDTH | | MODEL | IWANOFACTORER | |
| | GIH | 50.0 | 48" | 13" | 10" | BRACKET | 2352-NG | SCHWANK |
| | | | | | | | | |

REMARKS 1. STEEL BURNER WITH CERAMIC BURNER TILES.

2. STAINLESS STEEL LENS WITH BLOCK EMISSIVE COATING.

3. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO CANOPY DECK, FACING DOWNWARD, 12" LATERALLY FROM THE SIDE OF THE HEATER

3. VERIFY GAS LOAD OF EXISTING EQUIPMENT.

4. MOUNTING BRACKET PROVIDED AND INSTALLED BY CANOPY MFR.

5. PROVIDE HEAT SHIELD ABOVE EACH HEATER AT THE BOTTOM OF THE BRACKET.

| | CIRCULATING FAN SCHEDULE | | | | | | | | | | |
|---------|---|--|--------------------|--------------|--------------|--|--|--|--|--|--|
| MARK | CFM | RPM | HP | MODEL | MANUFACTURER | | | | | | |
| CF | 5,750 | 1,625 | 1/8 | U18TE-HD | TPI | | | | | | |
| REMARKS | 1. ALUMINUM PADDLE WITH STEEL HUB/SPIDER PROPELLER | | | | | | | | | | |
| | 2. 360° ROTAT | 2. 360° ROTATING HEAD HORIZONTALLY AND VERTICALLY | | | | | | | | | |
| | 3. OSHA COMI | PLIANT DOU | BLE LOCKING, COATE | D STEEL WIRE | GUARD | | | | | | |
| | 4. 3-SPEED, TOTALLY ENCLOSED, PERMANENTLY LUBRICATED BALL BEARING MOTOR | | | | | | | | | | |
| | 5. FACTORY P | RE-WIPED P | OWER CORD | | | | | | | | |
| | 6. PROVIDE FACTORY WALL MOUNTING BRACKET. SEE DETAIL 3/M2.1 FOR TYPICAL INSTALLATION INSTRUCTIONS | | | | | | | | | | |
| | IN 1" HIGH WH OF CANOPY C | 7. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO UNDERSIDE OF CANOPY OR EXISTING OVERHANG, FACING DOWNWARD, 12" LATERALLY FROM THE FAN LOCATION | | | | | | | | | |
| | 8. REMOVE PU | JLL CHAIN EX | XTENSION AT ON/OFF | SWITCH IN FI | ELD | | | | | | |
| | 9. FACTORY C | ERTIFIED FO | R OUTDOOR INSTAL | LATION. | | | | | | | |

NOTE:

NO SCALE

CONTRACTOR TO VERIFY EXISTING GAS SYSTEM CAN HANDLE NEW GAS LOAD. RESIZE AND INSTALL NEW GAS PIPING AS REQUIRED IF EXISTING GAS PIPING IS UNDERSIZED FOR NEW GAS LOAD AND PIPE LENGTH. FIELD VERIFY EXACT CONDITIONS PRIOR TO BID.

NON ADJUSTABLE MODEL DB610 PIPE STAND TO BE USED FOR NON-ELEVATED PIPING INSTALLED

NATIONAL ACCOUNTS SCHWANK INFRARED HEATER PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE HEATER PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. HEATERS NOT PURCHASED THRU TOM BARROW COMPANY WILL NOT BE ACCEPTED. TPI FAN PACKAGE - THE MECHANICAL CONTRACTOR IS REQUIRED TO PURCHASE THE FAN PACKAGE DIRECTLY FROM TOM BARROW COMPANY. CONTACT MR. SCOTT GEORGE AT 404-351-1010 FOR PRICING AND AVAILABILITY. FANS NOT PURCHASED THRU TOM BARROW

IMPORTANT NOTE - PLEASE READ

NUMBERS OF GAS INFRARED HEATERS AND CIRCULATING FANS WILL BE DETERMINED BY SITE-SPECIFIC CANOPY LAYOUT AND EQUIPMENT LOCATIONS, AS INDICATED ON ARCHITECTURAL PLANS.

GENERAL NOTES

COMPANY WILL NOT BE ACCEPTED.

1. COORDINATE NEW WORK WITH EXISTING CONDUIT, STRUCTURE AND PIPING. FIELD VERIFY EXISTING CONDITIONS PRIOR TO START OF WORK.

2. COORDINATE LOCATION AND RESPONSIBILITIES FOR UNDERGROUND PIPING AND ASSOCIATED TRENCHING WITH GENERAL CONTRACTOR PRIOR TO START OF WORK.

3. EXPOSED GAS PIPING SHALL BE PAINTED BY GENERAL CONTRACTOR.

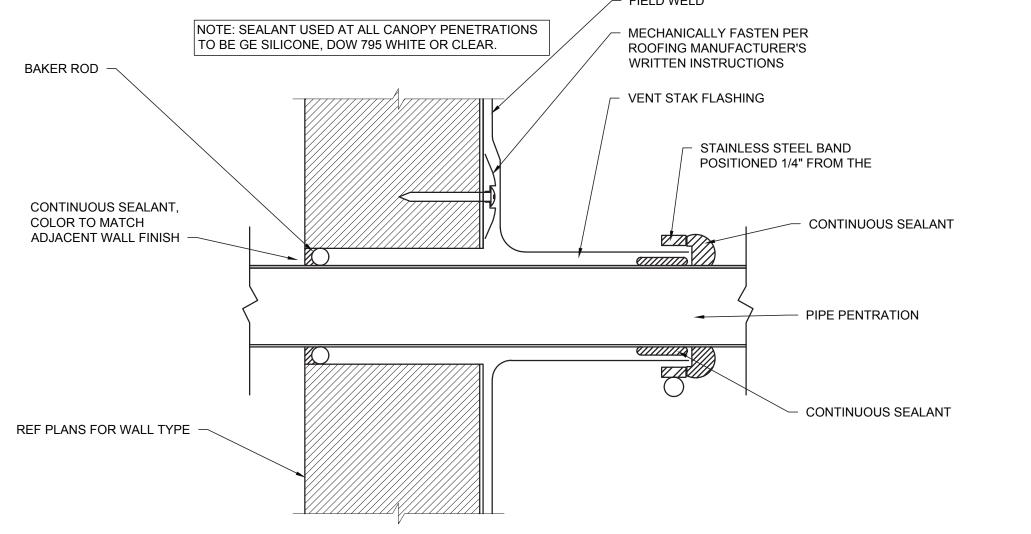
| | | | | ELE | CTRIC HEATE | R SCHEDULI | Ē | | | |
|---------|--|--|----------|---------------|------------------|----------------|-----------------|------------------------------------|--|--|
| MARK | OUTPUT (kW) | FRAME SIZE | | MOUNTING TYPE | MODEL | MANUFACTURER | VOLTAGE | | | |
| IVIARK | | LENGTH | WIDTH | DEPTH | MOONTING TIPE | IVIODEL | WANOFACTORER | VOLTAGE | | |
| EIH | 5.4-5.9 | 56" | 8.5" | 3.5" | BRACKET | BH04200-35(33) | BROMIC | 208V(230-240V) / 60Hz / 28.4A(25A) | | |
| REMARKS | DRIVE-THRU | 1. PROVIDE ROTARY TIMER SWITCH (TORK#C502H-2 HOUR MAX) TO BE MOUNTED INSIDE DRIVE-THRU AREA NEXT TO DRIVE-THRU DOOR. LABEL SWITCH FOR OUTSIDE HEATER | | | | | | | | |
| | 2. BLACK HIGH TEMPERATURE COATING 3. PROVIDE ENGRAVED PLASTIC LABEL AT EACH UNIT WITH UNIT DESIGNATION IN 1" HIGH WHITE LETTERS ON A BLACK BACKGROUND. MOUNT TO CANOPY DECK, FACING DOWNWARD, 12" LATERALLY FROM THE SIDE OF THE HEATER | | | | | | | | | |
| | 4. MOUNTING INSTALLATION | _ | _ | _ | Y MANUFACTURER | AND INSTALLED |) BY CONTRACTOR | R. FOLLOW MANUFACTURERS | | |
| | 5. PROVIDE 2 | -POLE 40-A | MP BREAK | (ER IN A P | ANEL WITH AVAILA | BLE CAPACITY. | | | | |

DISTANCE BETWEEN PIPESTANDS

MC TO PROVIDE DUAL LEVEL

SUPPORT TO ACCOMMODATE BOTH GAS PIPING AND CONDUIT.

NOT TO EXCEED 8'-0".



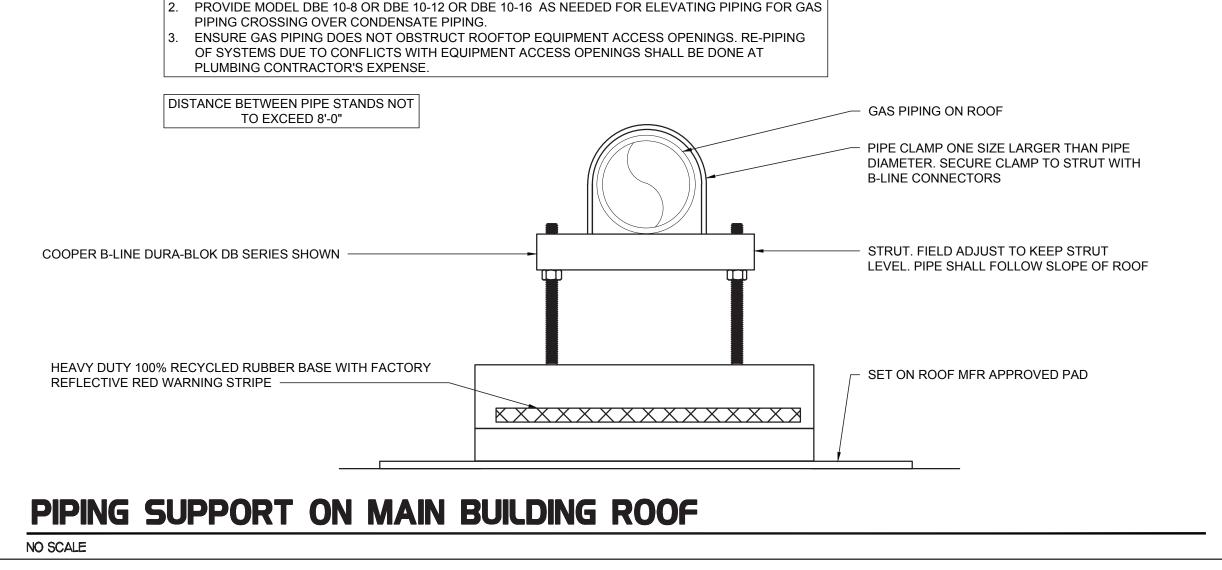
PARAPET PENETRATION DETAIL

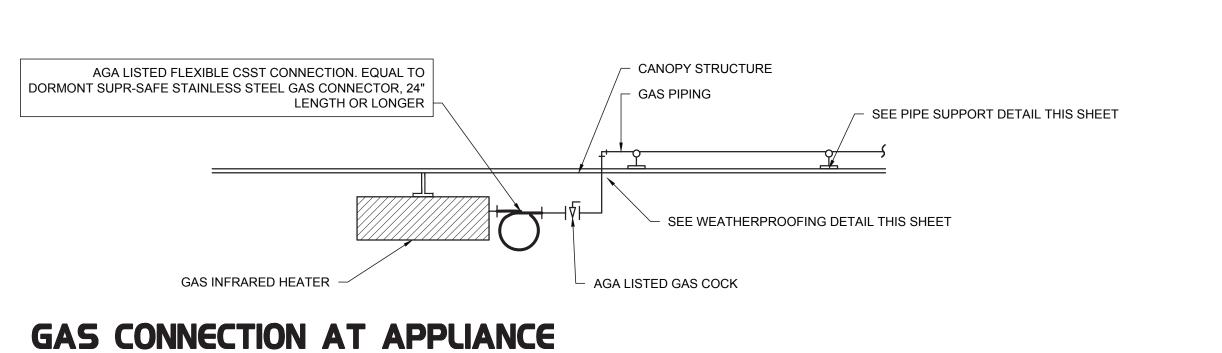
NO SCALE

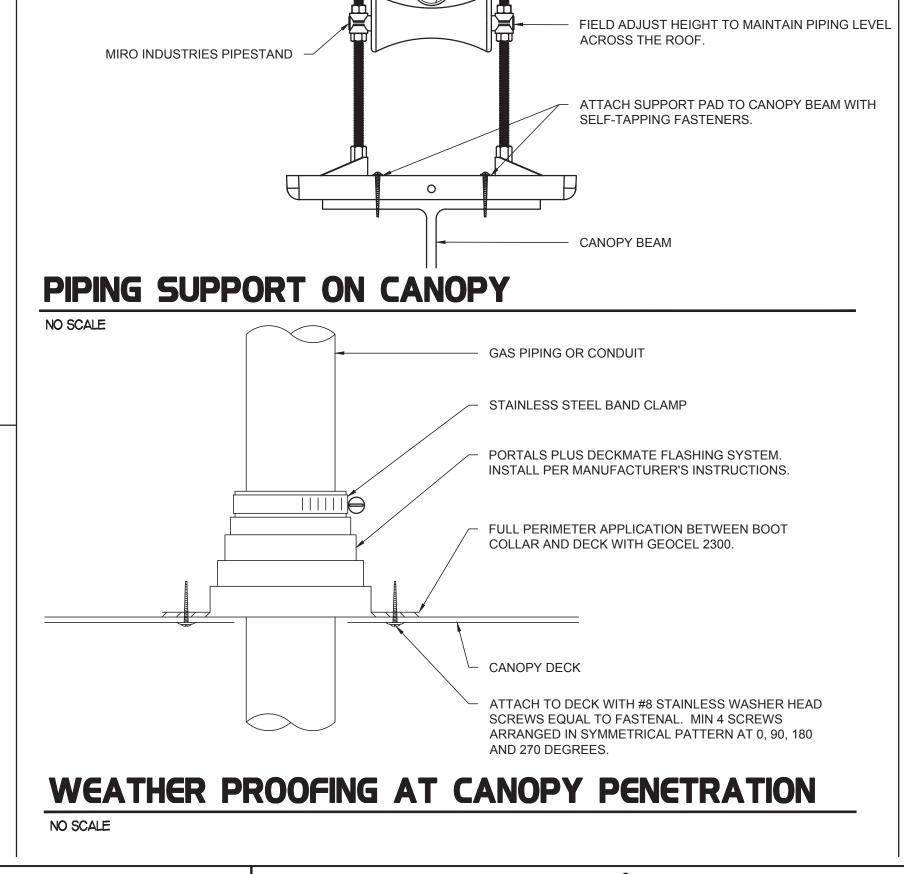
GAS PIPING AND CONDUIT ON ROOF

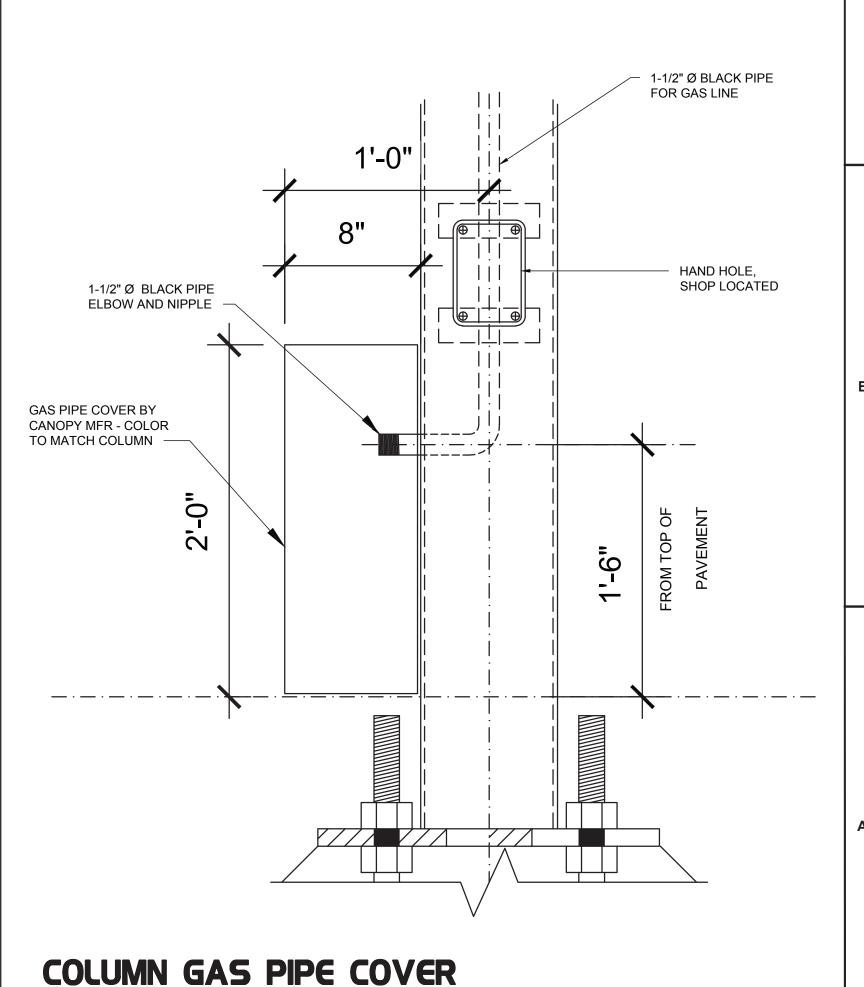
ADD SECOND LEVEL WHERE ROUTING BOTH GAS

PIPING AND CONDUIT ALONG SAME STRUCTURAL









Chick-fil-A

5200 Buffington Road
Atlanta, Georgia
30349-2998

INTERPLAN
INT

SUMMIT FAIR
690 NW BLUE PKWY
1 FF'S SUMMIT MO 64086

FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, V6

RELEASE: - PRINTED FOR

PERMIT

REVISION SCHEDULE

NO. DATE DESCRIPTION

CONSULTANT PROJECT # 2023.0467

DATE AUGUST 2023

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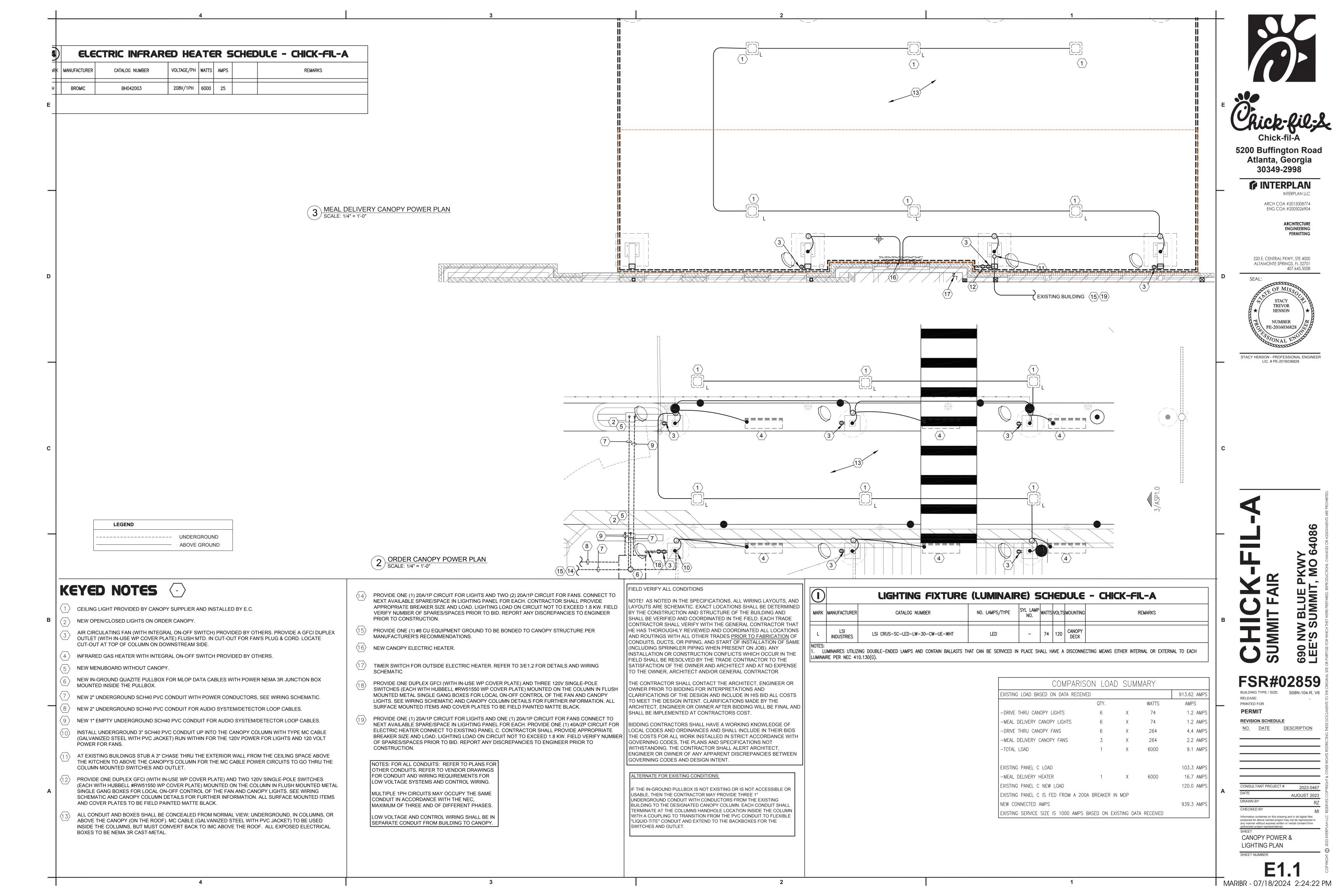
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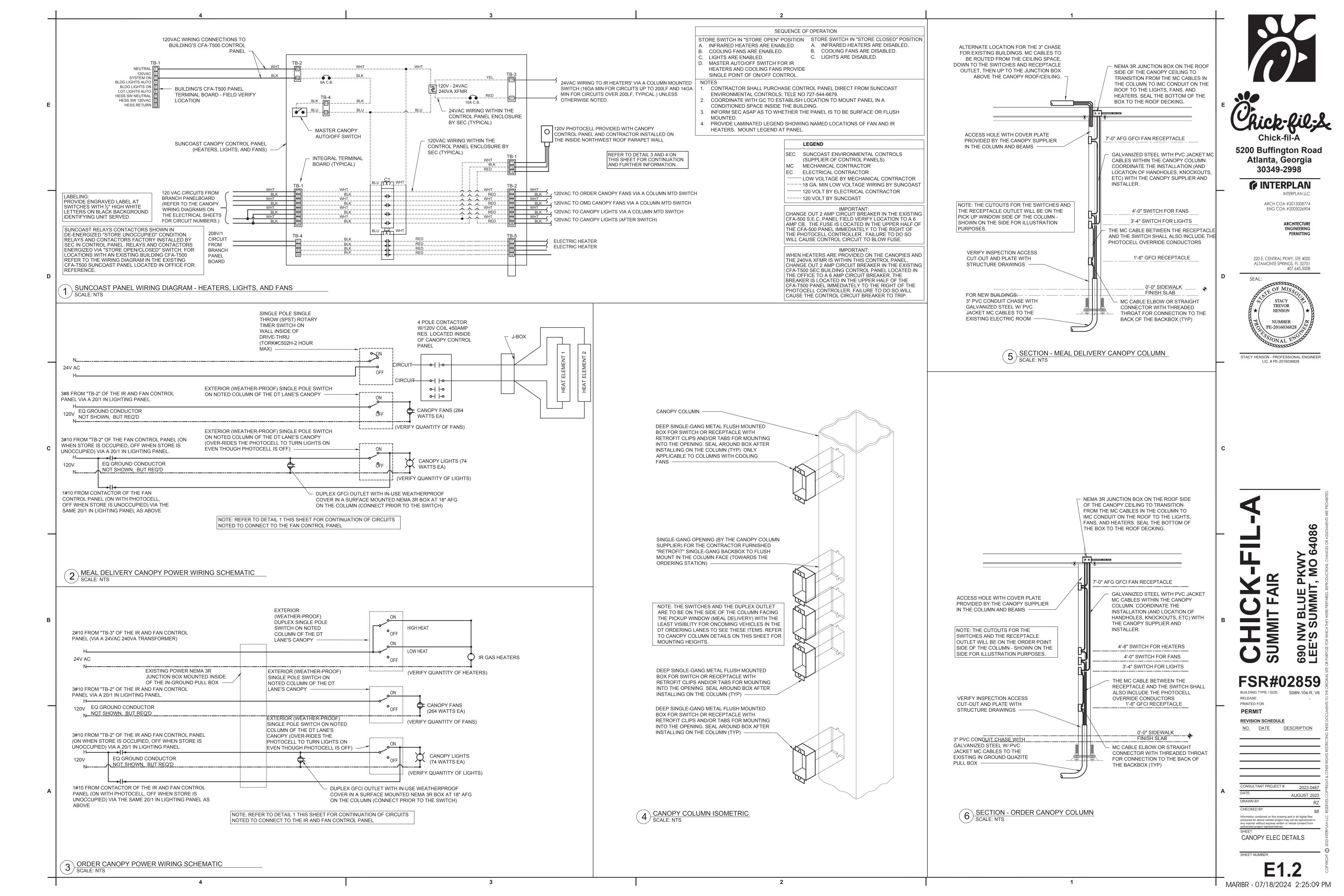
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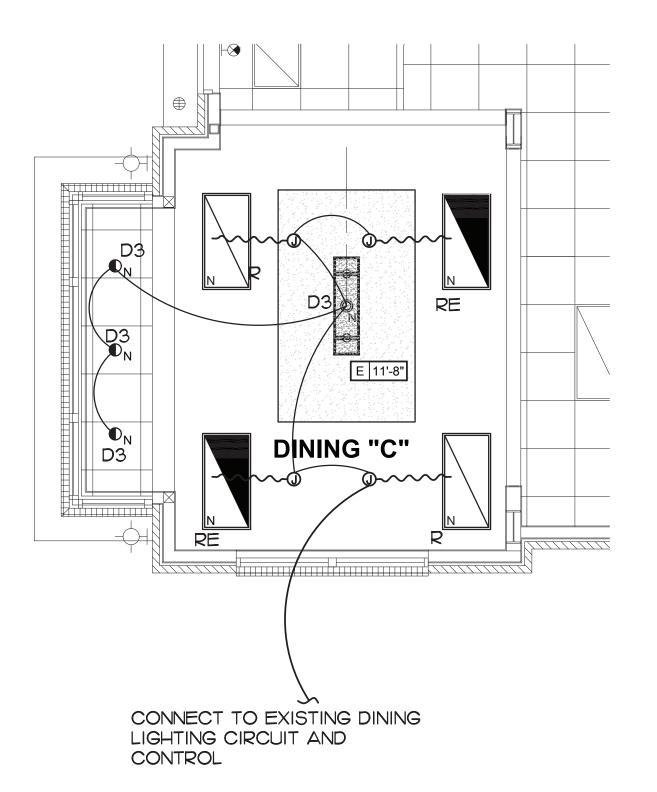
SHEET

PLUMBING DETAILS

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| | | LIGHTING FIXTURE (LUMINAIRE) SCHEDULE - CHICK-FIL-A | | | | | | | | |
|------|--------------|---|-----------------------|--------------|-------|-------|----------|--|--|--|
| MARK | MANUFACTURER | CATALOG NUMBER | NO. LAMPS/TYPE | SYL LAMP NO. | WATTS | VOLTS | MOUNTING | REMARKS | | |
| Α | LITHONIA | 2GTL-472L-A12125V-EZ1-LP840 | INTEGRAL WITH FIXTURE | _ | 52.3 | 120 | RECESSED | 2'X4' STATIC LED TROFFER RATED 7200 LUMENS, 4000K COLOR TEMP | | |
| AE | LITHONIA | 2GTL-472L-A12125V-EZ1-LP840-EL14L | INTEGRAL WITH FIXTURE | - | 52.3 | 120 | RECESSED | SAME AS 'A' WITH EMERGENCY BATTERY PACK. SEE PLAN NOTES ABOUT LAMP SWITCHING | | |
| R | LITHONIA | 2RTL4-48L-EZ1-LP830 | LED | _ | 48 | 120 | RECESSED | 2'X4' VOLUMETRIC RECESSED LIGHTING | | |
| RE | LITHONIA | 2RTL4-48L-EZ1-EL14L-LP830 | LED | _ | 48 | 120 | RECESSED | SAME AS R WITH EMERGENCY BATTERY PACK | | |
| D3 | LITHONIA | LDN6-30/20-L06AR-LSS-MVOLT | FURNISHED | _ | 22.6 | 120 | RECESSED | | | |

LUMINAIRES UTILIZING DOUBLE-ENDED LAMPS AND CONTAIN BALLASTS THAT CAN BE SERVICED IN PLACE SHALL HAVE A DISCONNECTING MEANS EITHER INTERNAL OF EXTERNAL TO EACH LUMINAIRE PER NEC 410.130(G). THE LIGHTING FIXTURE PACKAGE IS AVAILABLE THROUGH A NATIONAL ACCOUNT PROGRAM. REFER TO SHEET E4.2, SECTION 16500 FOR VENDOR INFORMATION.

THE FLUORESCENT BALLAST CATALOG NUMBER INDICATES OSRAM AND ALL LAMP DESIGNATIONS ARE FOR OSRAM/SYLVANIA PER A NATIONAL ACCOUNT AGREEMENT.

THE ASTERIK (*) BESIDE THE FIXTURE MARK IN THE ABOVE SCHEDULE INDICATES THE FIXTURE IS A NON-PROTOTYPICAL LIGHT FIXTURE PER THE CFA NATIONAL HERITAGE PROTOTYPE.

SECTION CI6124

PART I - PRODUCTS

I.OI ACCEPTABLE MANUFACTURERS

SUPPORTING DEVICES AND HANGERS

SUPPORTING DEVICES AND HANGERS SHALL BE MANUFACTURED BY RACO FASTENERS, OR APPROVED EQUIVALENT.

PART 2 - EXECUTION

INSTALLATION

- SECURE CONDUITS TO WITHIN 3' OF EACH OUTLET BOX, JUNCTION BOX, CABINET, FITTING, ETC., AND AT INTERVALS NOT TO EXCEED TEN FEET (IO') AND IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE. IN SEISMIC ZONES, SUPPORT CONDUITS I" AND UNDER AT 6' INTERVALS.
- B. INSTALL CLAMPS SECURED TO STRUCTURE FOR FEEDER AND OTHER CONDUITS ROUTED AGAINST THE STRUCTURE. USE DROP RODS AND HANGERS OR RACKS TO SUPPORT CONDUITS RUN APART FROM THE STRUCTURE
- PROVIDE AND INSTALL SUITABLE ANGLE IRON, CHANNEL IRON OR STEEL METAL FRAMING WITH ACCESSORIES TO SUPPORT OR BRACE ELECTRICAL EQUIPMENT INCLUDING SAFETY SWITCHES, FIXTURES, PANELBOARDS, ETC.
- USE OF CHAINS, PERFORATED IRON, BALING WIRE, OR TIE WIRE FOR SUPPORTING CONDUIT RUNS IS NOT PERMITTED.
- E. FOR SUPPORT OF LOW VOLTAGE WIRING NOT REQUIRED TO BE IN CONDUIT, BUNDLE CABLES TOGETHER IN A NEAT MANNER USING APPROVED NYLON TIE WRAPS. BUNDLED CABLES SHALL BE SUPPORTED WITH "J" HOOKS ON TELEPHONE TYPE BRIDLE RINGS, A MINIMUM OF 6 FEET ON CENTERS. CLEARLY IDENTIFY ALL DIFFERING TYPES OF CABLES BEING RUN AND TAG WITH TAPE TAGS REGARDING TELEPHONE, POS SYSTEM, MUSIC/COMMUNICATION, SECURITY, ETC. FOR VARIOUS SYSTEM UTILIZING SAID CABLE. IDENTIFICATION TAPE SHALL BE PROVIDED AT MINIMUM INTERVALS OF 25 FEET ON CENTER AND WITHIN EACH BUILDING SPACE.
- F. PROVIDE A SYSTEM OF SUPPORTING DEVICES AND HANGERS TO INSURE SECURE SUPPORT OR BRACING FOR CONDUIT, ELECTRICAL EQUIPMENT, INCLUDING SAFETY SWITCHES, FIXTURES, PANELBOARDS, OUTLET BOXES, JUNCTION BOXES, CABINETS, ETC.

SECTION C16500 LIGHTING FIXTURES (LUMINAIRES)

PART I - GENERAL

I.OI ACCEPTABLE MANUFACTURERS AND VENDORS

A. LIGHTING FIXTURES INDICATED ON LIGHTING FIXTURE SCHEDULE ARE TO BE PURCHASED FROM THE NATIONAL ACCOUNT VENDOR FOR THE REGION OF THE PROJECT (VERIFY REGION DESIGNATION WITH OWNER'S REPRESENTATIVE):

I. ACCU-SERV LIGHTING - NORTH REGION AND SOUTHEAST REGION. CONTACT AT ACCU-SERV: BOB HARPRING AT 877-707-7378, FAX - 502-961-0357, EMAIL - BHARPRING@ACCU-SERV.COM

- 2. VILLA LIGHTING CENTRAL REGION, SOUTHWEST REGION, AND WEST REGION. CONTACT AT VILLA LIGHTING: DAVE CHRISTANELL AT 800-325-0963, FAX- 314-531-8720, EMAIL - DAVECOVILLALIGHTING.COM
- B. BALLASTS TO BE ELECTRONIC BALLAST PROVIDED WITH LIGHTING FIXTURE BY THE MANUFACTURER.
- C. LAMPS TO BE OSRAM-SYLVANIA AND WILL TYPICALLY BE PROVIDED WITH THE LUMINAIRE BY THE LIGHTING MANUFACTURER.

1.02 FIXTURE REQUIREMENTS

- A. PROVIDE REGULATING, HPF BALLASTS IN ALL HID LIGHTING FIXTURES. HID LAMP TYPES SHALL BE AS INDICATED ON THE DRAWINGS.
- B. RECESSED FLUORESCENT LIGHTING FIXTURE BALLASTS SHALL BE PROVIDED WITH INTEGRAL THERMAL PROTECTION.
- C. PROVIDE ENERGY-SAVING INSTANT OR RAPID START LAMPS FOR ALL FLUORESCENT FIXTURES.
- D. ALL LAMPS AND BALLASTS SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NATIONAL ENERGY POLICY ACT OF 1992 AND ANY OTHER APPLICABLE CODES OR CRITERIA.
- E. ALL COMPONENTS OF RECESSED FIXTURES SHALL BE ACCESSIBLE WITHOUT DISTURBING FIXTURE IN OR ON CEILING.
- F. ENERGY SAVING BALLASTS AND ENERGY SAVING LAMPS PROVIDED SHALL BE COMPATABLE FOR
- G. EXTERIOR FIXTURES AND POLES SHALL BE SUITABLE FOR EXTERIOR USE, SHALL BE UL LISTED. AND SHALL BE A STANDARD DESIGN FOR EXTERIOR APPLICATION.
- H. EXTERIOR POLES FOR FIXTURES WITH LUMINAIRES INSTALLED SHALL BE DESIGNED FOR MAXIMUM CONSTANT VELOCITY WIND LOAD WITH LUMINAIRES INSTALLED, APPLICABLE TO THE GEOGRAPHIC AREA.

CONTROLS

A. LIGHTING CONTACTORS SHALL BE SQUARE-D, GENERAL ELECTRIC, CUTLER-HAMMER OR SIEMENS OF TYPES AND QUANTITY SHOWN ON DRAWINGS, EXCEPT THOSE FURNISHED WITH THE SWITCHGEAR AS PART OF THE **NATIONAL ACCOUNT PROGRAM** BY SUNCOAST ENVIRONMENTAL CONTROLS (SEC).

EMERGENCY LIGHTING UNITS

- A. BATTERIES SHALL SUPPLY EMERGENCY POWER FOR LIGHTING WITH MINIMUM OPERATING TIME OF 1-1/2 HOURS.
- B. EMERGENCY LIGHTING SHALL BE AUTOMATICALLY OPERATIONAL UPON NORMAL UTILITY POWER FAILURE.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. LIGHTING FIXTURES SHALL BE STRUCTURALLY SUPPORTED. FLUORESCENT FIXTURES MOUNTED IN SUSPENDED CEILINGS SHALL BE SUPPORTED BY AND ATTACHED TO CEILING SYSTEM AS REQUIRED BY NEC ARTICLE 410. IN ADDITION, FLUORESCENT TROFFERS SHALL BE SUPPORTED AT TWO OPPOSITE CORNERS TO BUILDING STRUCTURE.
- RECESSED FIXTURES IN DROPPED CEILING AREAS SHALL BE CONNECTED TO POWER SOURCE USING FLEXIBLE CONDUIT. FLEXIBLE CONDUIT SHALL CONTAIN A SEPARATE INSULATED GREEN NO. 12 COPPER GROUND WIRE. FLEXIBLE CONDUIT SHALL BE CONNECTED TO JUNCTION BOX AND FIXTURE. GREEN GROUND WIRE SHALL PROVIDE GROUND CONTINUITY BETWEEN CONDUIT SYSTEM AND FIXTURE. GROUNDING CONDUCTORS SHALL BE PERMANENTLY AND MECHANICALLY CONNECTED BETWEEN FIXTURE AND CONDUIT SYSTEM SO AS TO BE ELECTRICALLY CONTINUOUS.
- C. FIXTURES SURFACE MOUNTED ON EXPOSED TEE BAR CEILINGS SHALL USE GRIP CLAMPS ON TEE BARS TO SUPPORT FIXTURES.
- D. WIRE SHALL BE CONTINUOUS FROM SPLICE IN OUTLET BOX OF BUILDING WIRING SYSTEM TO LAMP SOCKET OR BALLAST TERMINALS.
- E. MAINTAIN THE INTEGRITY OF ENCLOSURES ON ENCLOSED AND GASKETED FIXTURES. MINIMIZE THE NUMBER OF ENCLOSURE PENETRATIONS AND MAKE SUCH PENETRATIONS WATER AND DUST TIGHT WITH APPROPRIATE GASKETS AND FITTINGS.
- F. CONCRETE BASES SHALL BE PROVIDED FOR ALL EXTERIOR GROUND MOUNTED OR POLE MOUNTED FIXTURES.
- G. INSTALL ACCESSORIES FURNISHED WITH EACH FIXTURE.
- H. WIRING FROM POLE BASES TO POLE MOUNTED LUMINAIRE SHALL BE NO. 12 WITH FUSE PROTECTION PROVIDED BY A 30 AMP, 600 VOLT WATERPROOF FUSEHOLDER WITH BUSSMAN 'LIMITRON' FUSE OF AMPERE RATING 3 TIMES THE LOAD CURRENT.



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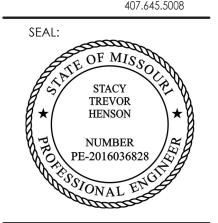
INTERPLAN

ARCH COA #2015008774

ENG COA #2005026904

ARCHITECTURI

220 E. CENTRAL PKWY, STE 4000 ALTAMONTE SPRINGS, FL 3270



STACY HENSON - PROFESSIONAL ENGINEER LIC. # PE-2016036828

≥ w

FSR#02859

RELEASE: PRINTED FOR

PERMIT REVISION SCHEDULE

NO. DATE DESCRIPTION 1 02/19/24 PLAY AREA REMOVAL

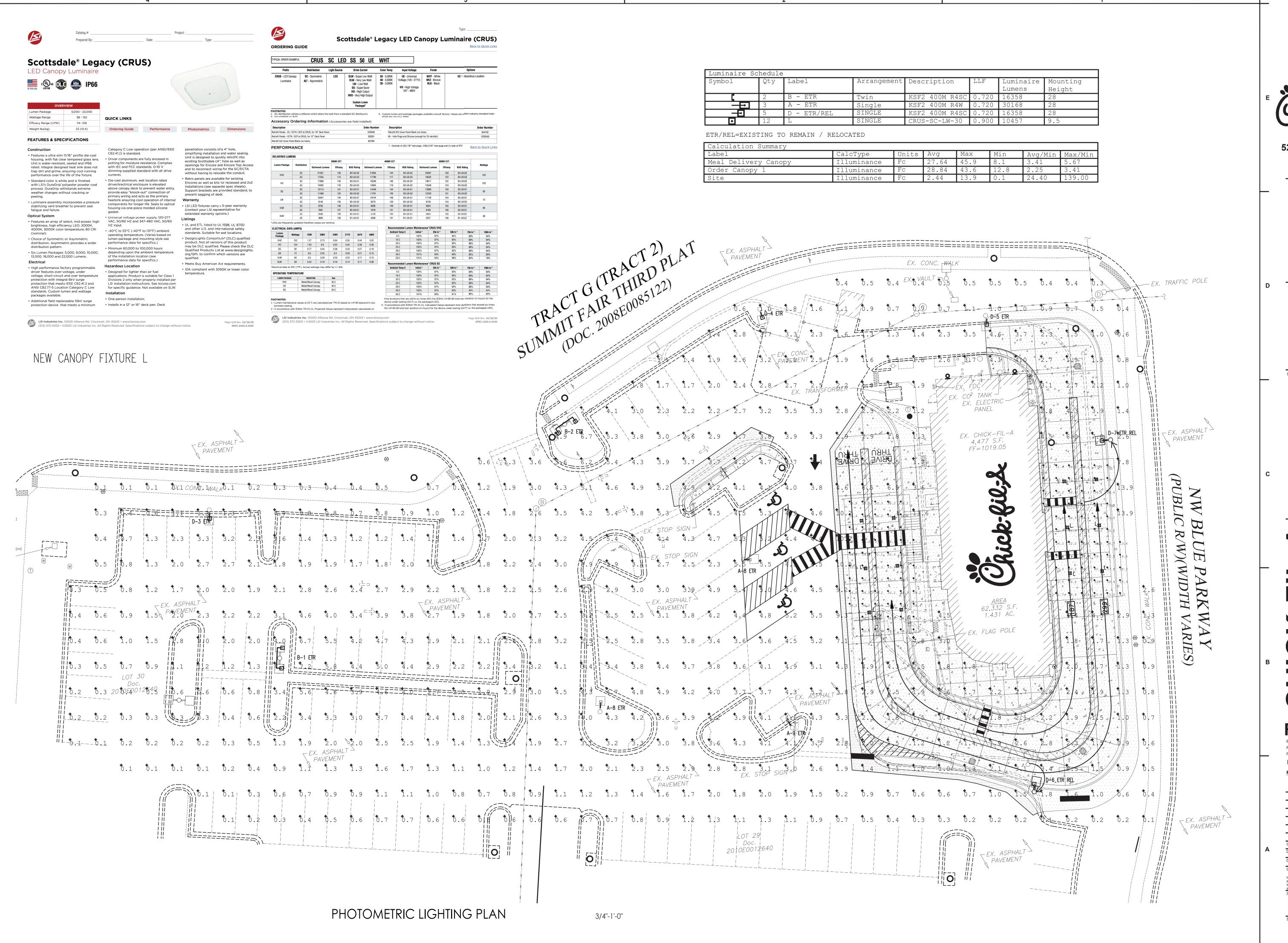
CONSULTANT PROJECT # 2023.0467

AUGUST 2023

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SHEET NUMBER

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Chick-fil-&

5200 Buffington Road Atlanta, Georgia 30349-2998

INTERPLAN INTERPLAN LLC

ARCH COA #2015008774 ENG COA #2005026904

> ARCHITECTURE ENGINEERING

PERMITTING

220 E. CENTRAL PKWY, STE 4000 ALTAMONTE SPRINGS, FL 32701

SEAL:

STACY
TREVOR
HENSON

NUMBER
PE-2016036828

STACY HENSON - PROFESSIONAL ENGINEER LIC. # PE-2016036828

SUMMIT FAIR

SO NW BLUE PKWY

FSR#02859

BUILDING TYPE / SIZE: S08N-104-R, V6
RELEASE: -

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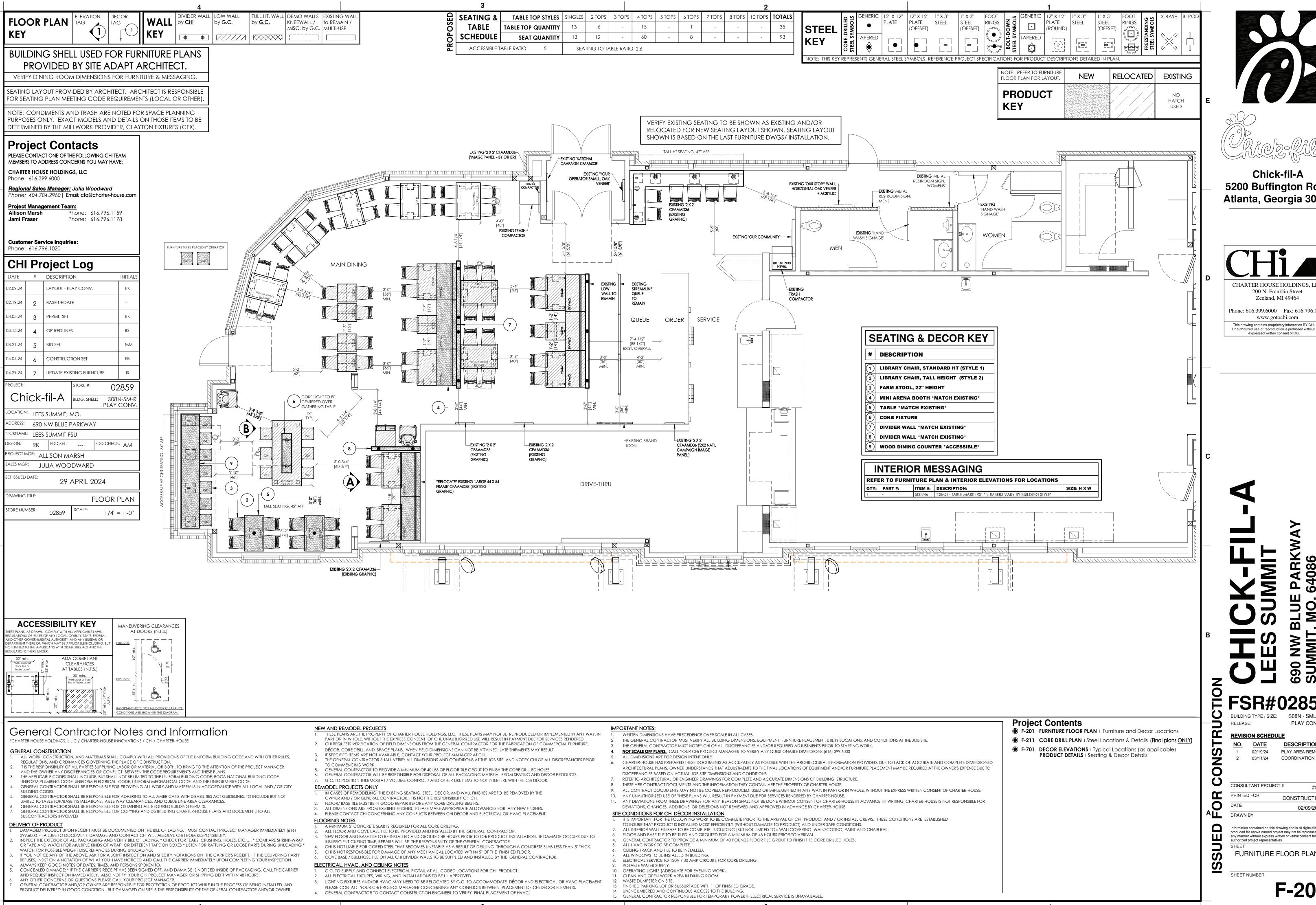
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PHOTOMETRIC LIGHTING

PLAN
SHEET NUMBER

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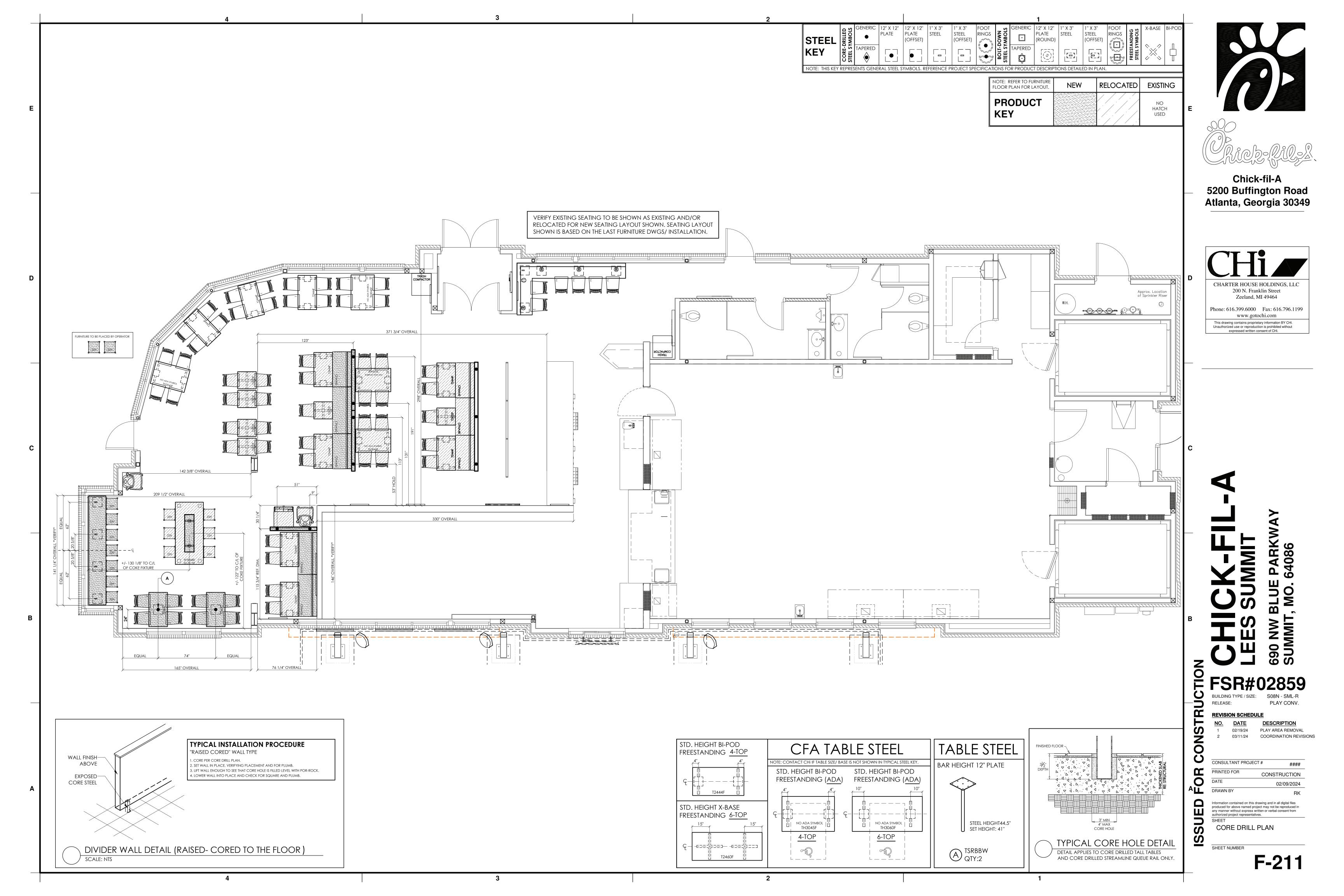


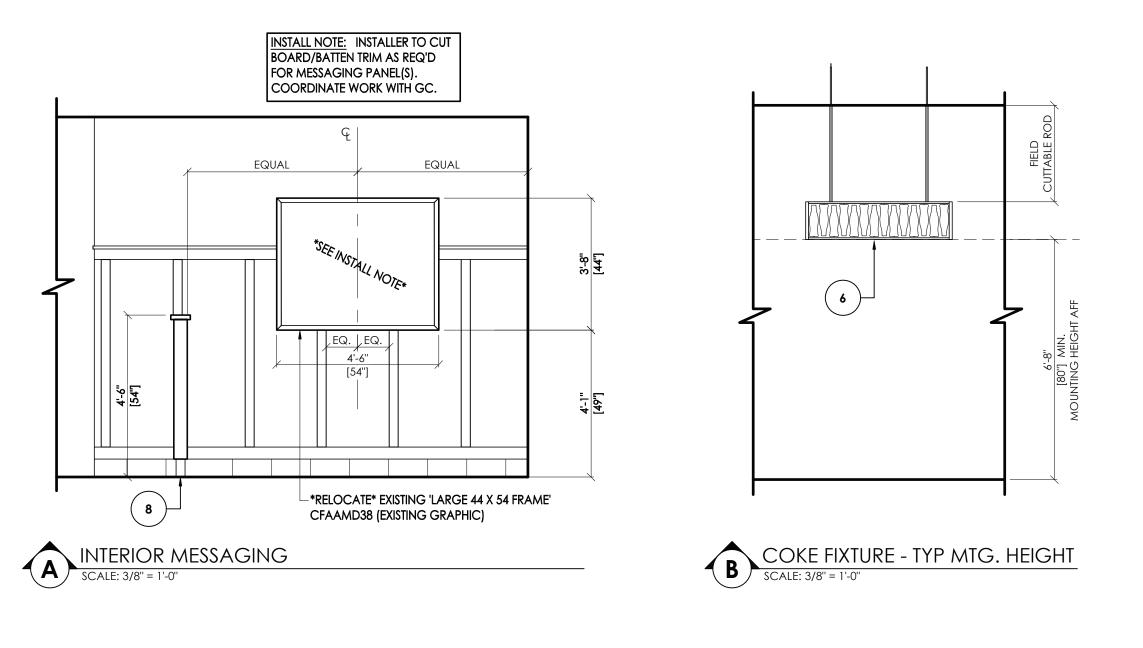
DESCRIPTION 02/19/24

PLAY AREA REMOVAL COORDINATION REVISIONS 03/11/24

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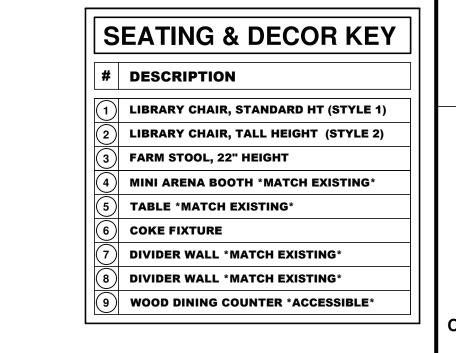
MATCH EXISTING

SS-1

DIVIDER WALL

7 SCALE: 3/8" = 1'-0"

| MATERIAL | CODE | MANUFACTURER | PRODUCT SPECIFICATION | SIZE | CONTACT / ADDITIONAL INFORMATION | SUPPLIER | INSTALLER | REVISIO |
|------------------|----------|--------------------------|--------------------------------------|------|----------------------------------|----------|-----------|---------|
| IVIA I ERIAL | CODE | WANGFACTOREK | PRODUCT SPECIFICATION | 3126 | CONTACT / ADDITIONAL INFORMATION | SUPPLIER | INSTALLER | KEVISIO |
| STEEL | | | | | | | | |
| | S-1 | N/A | BLACK WRINKLE | N/A | CHI MANUFACTURING | CHI | N/A | |
| | S-2 | N/A | RESOLVE SILVER METALLIC | N/A | CHI MANUFACTURING | CHI | N/A | |
| | S-3 | N/A | DARK CHERRY | N/A | CHI MANUFACTURING | CHI | N/A | |
| | S-4 | N/A | TRI-SMOKE MINI TEX. #T1-7060 | N/A | CHI MANUFACTURING | CHI | N/A | |
| | S-5 | | | | | | | |
| | S-6 | N/A | TIGER 89/80419 RAL 9011-FINE TEXTURE | N/A | CHI MANUFACTURING | CHI | N/A | |
| UPHOLSTERY | • | • | | | · | | | |
| | UPH-1 | CF STINSON | SLEEK, SLK38, CHARISMA (VINYL) | N/A | CHI UPHOLSTERY DISTRIBUTOR | CHI | N/A | |
| | UPH-2 | ARC COM | DURANGO, AC-67567 RED (VINYL) | N/A | CHI UPHOLSTERY DISTRIBUTOR | CHI | N/A | |
| | UPH-3 | CF STINSON | MONTANA, CFASB, SABLE BROWN (VINYL) | N/A | CHI UPHOLSTERY DISTRIBUTOR | CHI | N/A | |
| | UPH-4 | MOMENTUM | FOLD | N/A | CHI UPHOLSTERY DISTRIBUTOR | CHI | N/A | |
| PLASTIC LAMINATE | <u> </u> | | | | <u>'</u> | - | | |
| | PL-1 | WILSONART | CAFELLE 7933-38 | N/A | LOCAL DISTRIBUTOR | CHI | N/A | |
| | PL-2 | PIONITE | CAVALCADE SOUTH, AT650 | N/A | LOCAL DISTRIBUTOR | CHI | N/A | |
| | PL-3 | WILSONART | PINNACLE WALNUT, 7992-38 | N/A | LOCAL DISTRIBUTOR | CHI | N/A | |
| SOLID SURFACE | ' | I | - | - | | | ' | · |
| | SS-1 | AVONITE | F1-9144, PALERMO | N/A | LOCAL DISTRIBUTOR | CHI | N/A | |
| | NOTE: DA | RK SOLID SURFACES SHOW M | ORE WEAR OVER TIME | • | | - | • | ' |
| EDGE BAND | | | | | | | | |
| | EB-1 | N/A | REHAU, NUBIAN BROWN | N/A | CHI MANUFACTURING | CHI | N/A | |
| DECORATIVE BOARD | ' | 1 | | - | | <u>'</u> | | ' |
| | DB-1 | NOT USED | | | | | | |
| TRIMS | | | | | | | | - |
| | TR-1 | NOT USED | | | | | | |
| | TR-2 | N/A | FURNITURE GRADE DURANODIC | N/A | CHI MANUFACTURING | CHI | N/A | |
| WOOD | | | | l . | <u> </u> | | - | |
| | WD-1 | N/A | SOLID WHITE OAK | N/A | CHI MANUFACTURING | CHI | N/A | |
| GLASS | 1 | I. | ı | L | 1 | I | | |
| | GL-1 | NOT USED | | | | | | |
| | | N/A | COKE GLASS - SMART GLASS JEWELRY | N/A | CHI MANUFACTURING | CHI | N/A | |



INTERIOR MESSAGING PANELS TO GET MOUNTED DIRECTLY

OVER THE BOARD/BATTEN WALL FINISH AS SHOWN $\underline{ ext{UNLESS}}$

NOTED OTHERWISE TO CUT UPPER HORIZONTAL TRIM & VERTICAL BOARD & BATTEN TRIM.

REFER TO CHI ELEVATIONS FOR INTERIOR MESSAGING &/OR DECOR MOUNTING LOCATIONS ONLY. REFER TO

ARCHITECTURAL SHEETS FOR WALL FINISH INFORMATION.

INSTALL NOTE:
INSTALLER TO CUT BOARD/BATTEN TRIM AS REQUIRED FOR

MESSAGING PANEL(S). COORDINATE WORK WITH GC.





Chick-fil-A 5200 Buffington Road Atlanta, Georgia 30349



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REVISION SCHEDULE 02/19/24 PLAY AREA REMOVAL ION REVISIONS

| NO. | 2 | 03/11/24 | COORDINATIO | |
|----------------------|----------------------|----------|-------------|--|
| O | CONSULTANT PROJECT # | | | |
| $\mathbf{\tilde{c}}$ | PRINTE | D FOR | CONSTRUC | |
| | DATE | | 02/09 | |
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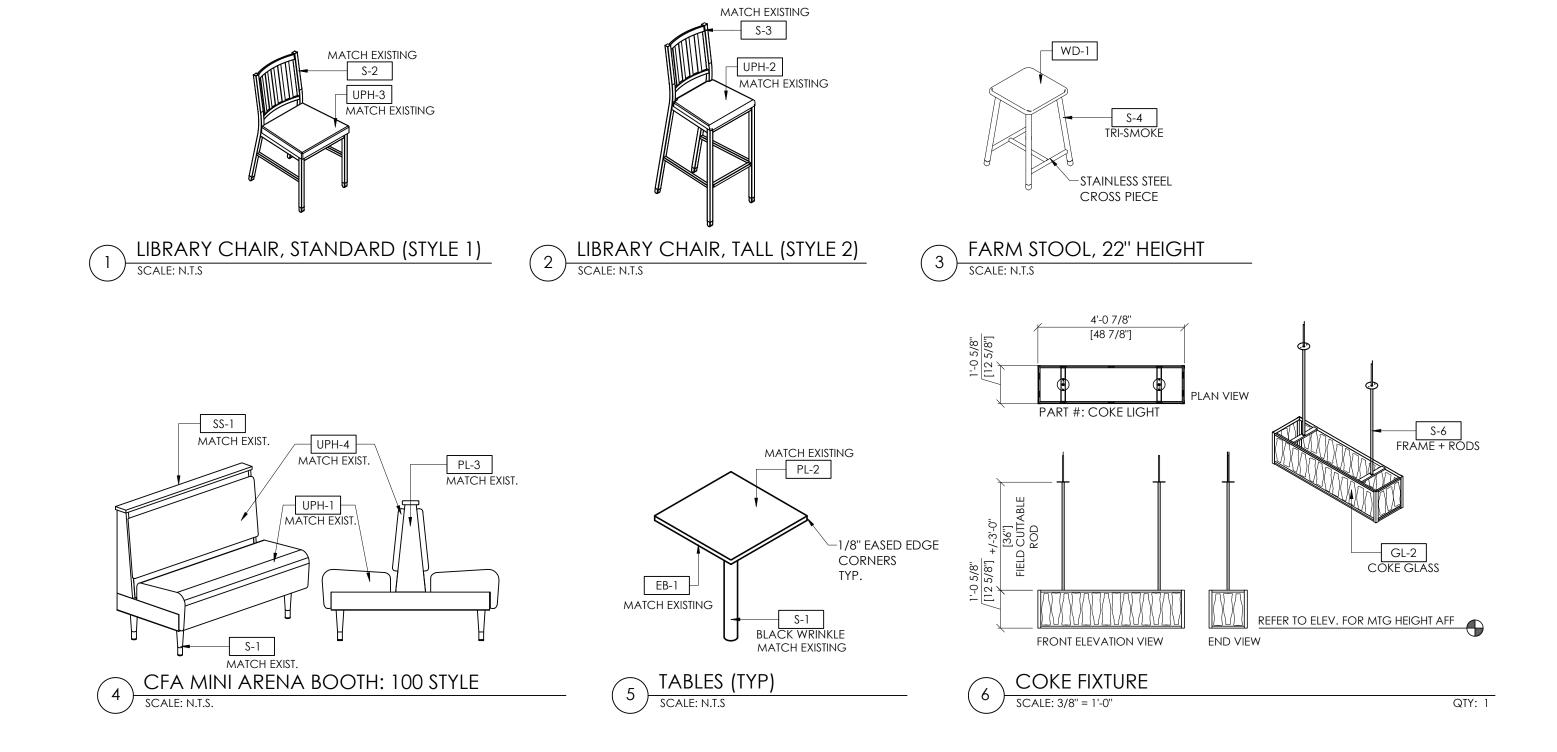
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DECOR ELEVATIONS PRODUCT DETAILS

SHEET NUMBER

S

F-701



CLEAT TO-**ADJACENT**

TR-2

PL-1

S-1

MATCH EXISTING

MATCH EXISTING

WALL

SS-1

8 DIVIDER WALL
SCALE: 3/8" = 1'-0"

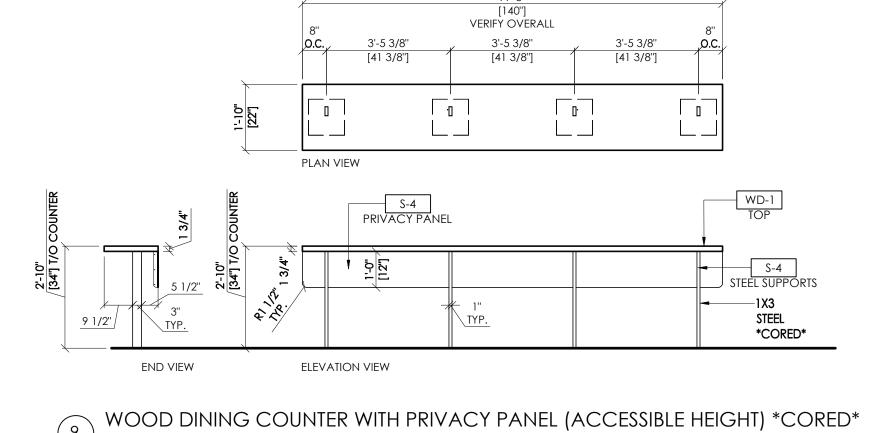
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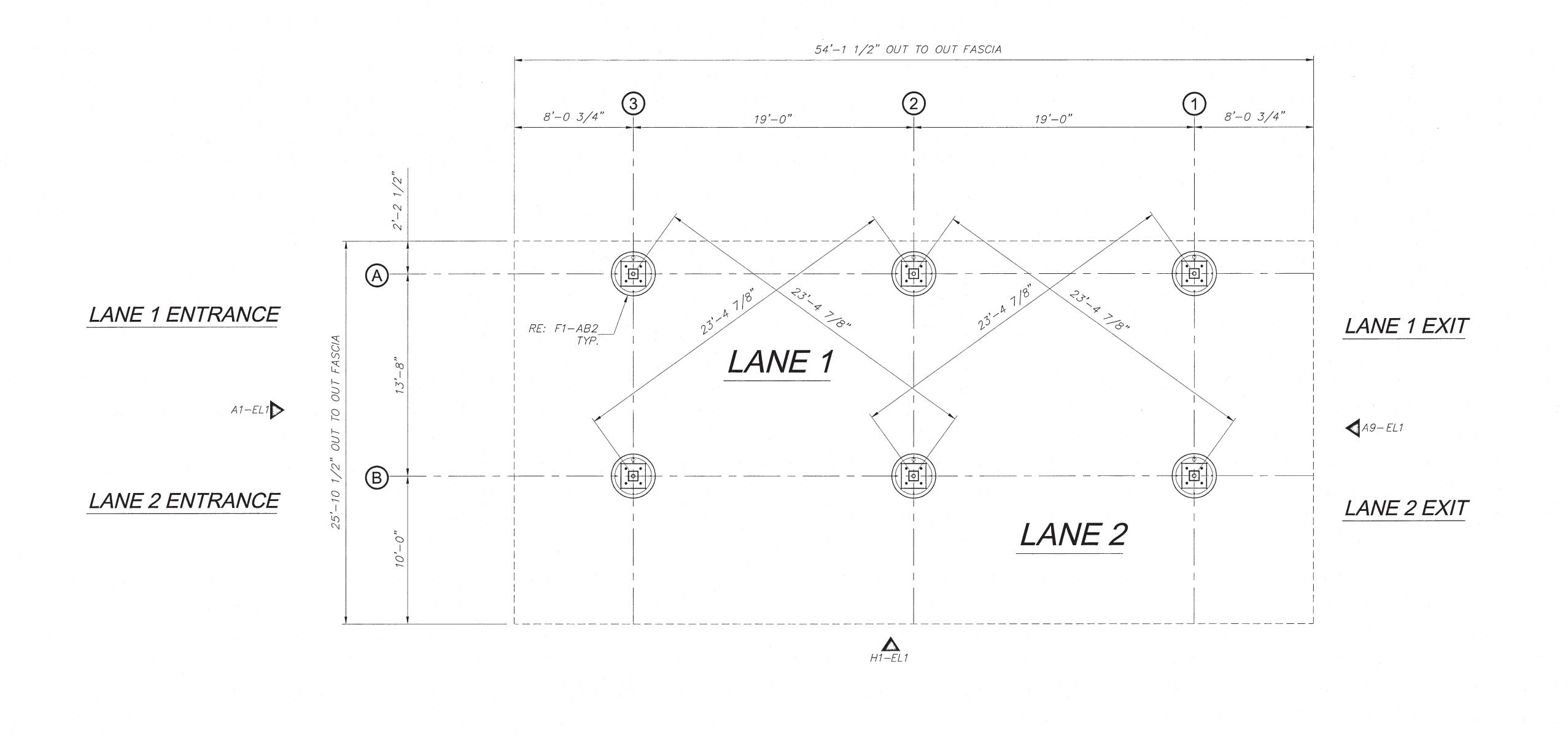
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TR-2

PL-1

S-1 MATCH EXISTING





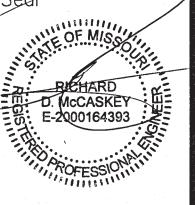
$DEAD\ LOAD = 3\ p.s.f.(DECK + LIGHTS) +$ WEIGHT OF STRUCTURAL COMPONENTS $LIVE\ LOAD\ =\ 20\ p.s.f.$ VERY IMPORTANT: $SNOW LOAD = 20^{\circ} p.s.f.$ WIND LOAD V,ULT = 116 m.p.h. EXP. CSURVEY ROD AFTER FOOTINGS ARE POURED PLEASE WIND V.ASD = 90 m.p.h. EXP C OR TAPE PROVIDE LANE CO. WITH THE FOOTING BLDG CODE = MISSOURI BUILDING CODE 2018 ELEVATIONS ON THE ELEVATION SHEET ADOPTING 2018 INTERNATIONAL BUILDING CODE ATTACHED. EQUIVALENT LATERAL FORCE PROCEDURE _TRANSIT LATERAL FORCE RESISTING SYSTEM = CANTILEVERED HIGHEST POINT OF DRIVE COLUMN SYSTEM-ORDINARY STEEL MOMENT FRAME Pf = 20 p.s.f. Ce = 1.2 Ct = 1.2 ls = 1.0W = DRIFT LOADS NOT CONSIDEREDPd = DRIFT LOADS NOT CONSIDERED TOP OF - FOOTING * SITE CLASS = DSs(0.2) = 0.099S1(1.0) = 0.068 $\dot{S}DS' = 0.11$ SD1 = 0.11Fa = 1.60Fv = 2.40imes must provide this information. R = 1.25IMPORTANCE FACTOR = 1.0RISK CATEGORY = II SEISMIC DESIGN CATEGORY = D CS = 0.084CONSTRUCTION TYPE = IIB Sheet OCCUPANCY CATEGORY = A2TOTAL SEISMIC BASE SHEAR BOTH DIRECTIONS = 0.84 KIPS DESIGN LOADS

N. T. S.

5200 Buffington R Atlanta Georgia, 30349—2998

Revisions:

Mark Date



SEP 07 2023

C.O.A. 2001015838

I A NIE SERVE MALE NO. 12 AND ADDRESS. SUPPLY, INC. 120 FAIRVIEW ARLINGTON, TX. 76010 (817) 261-9116

IOTICE: THIS DOCUMENT IS THE PROPERTY OF LANE COMPANY, IETHER THIS DOCUMENT NOR ANY DATA OR INFORMATION IETHER THIS DOCUMENT NOR ANY DATA OR INFORMATION REPRODUCED IN ANY MANNER, DANED OTHERWISE DISPOSED OF, OR USED FOR ANY PURPOSE ANTICOLOR WITHOUT THE PROPOSED FOR WHITE PERMISSION OF LANE OMPANY, IF THE DOCUMENT IS LOANED BY OR WITH THE COMPANY, IF THE DOCUMENT, IN EDITOR OF THE PROPOSED OF LANE OF THE PROPERTY OF THE PROPOSED TO THE PROPOSED OF THE PROPOSED OF THE PROPOSED OF THE SPECIFICALLY AUTHORIZED WORK FOR HIGH OF THE SPECIFICALLY AUTHORIZED WORK FOR HIGH IF WEST USED.

Chick-fil-A #02859 690 NW BLUE PARKWAY. LEE'S SUMMIT,MO

SHEET TITLE

CANOPY FOOTING LOCATIONS

Job No.: <u>LSC: 75966</u> : <u>02859</u> Store . 8.30.23

Drawn By Checked By: RM

F2FC-I

ABI OF 2

COLUMN AND FOOTING LOCATIONS

1/4" = 1'-0"

N. T. S.

. ALL FOUNDATION WORK BY OTHERS AND SUBJECT TO LOCAL APPROVAL

2. THE FOUNDATION DESIGN IS BASED UPON SECTION 1807.3.2.2-IBC 2018 EDITION. THE DESIGN CRITERIA SELECTED ASSUMES: SITE CLASS D MATERIAL OR BETTER, SOIL BEARING CAPACITY OF 1,500 p.s.f. AND A PASSIVE SOIL PRESSURE OF 100 p.s.f. PER FOOT OF DEPTH.

DRILLED SHAFT FOOTINGS SHALL BE INSTALLED PER ACI STD. 336. CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM TO ACI STANDARD 318-14 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

5. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE (F'C) AT THE END OF 28 DAYS SHALL BE 2500 PSI MIN.

6. REINFORCING STEEL SHALL BE GRADE 60 AND CONFORM TO ASTM A615 LATEST REVISION.

DETAILING, FABRICATION AND PLACEMENT OF REINFORCING BARS SHALL COMPLY WITH ACI 315, ACI 318 AND CRSI STANDARDS.

ANCHOR BOLTS SHALL CONFORM TO ASTM F1554-GR36. LANE IS NOT RESPONSIBLE FOR FOOTING POURED PRIOR

TO PERMITTING. 10. FOOTINGS ARE DESIGNED TO BE CONSTRAINED AT THE TOP BY A 6" SLAB. IF THEY ARE NOT, PLEASE NOTIFY LANE SUPPLY CO.

11. POUR FOOTINGS TO SAME TOP ELEVATION. 12. USE MASTER FLOW 928 NON-SHRINK GROUT OR EQUIVALENT F'm=5000 p.s.i.

13. G.C. TO ENSURE THAT FOOTINGS DO NOT INTERFERE WITH UNDERGROUND UTILITIES

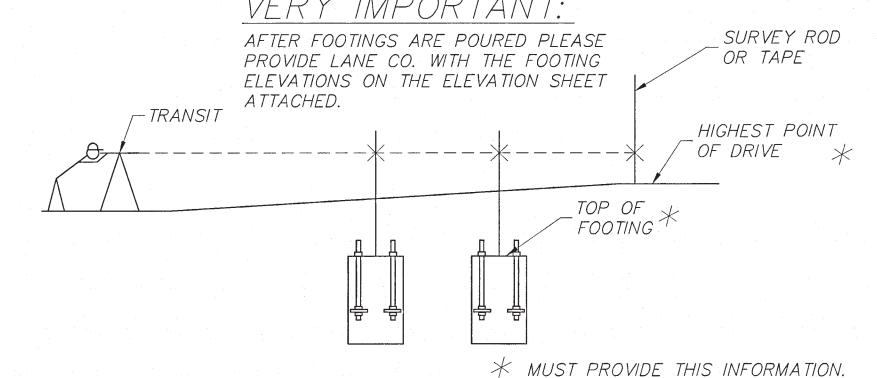
TOP OF ALL CANOPY FOOTINGS ARE TO BE POURED A MINIMUM OF 12" BELOW FINISHED GRADE OR AS REQUIRED BY LOCAL CODES AND ORDINANCES.

2. IT IS THE OWNERS RESPONSIBILITY TO CONVEY TO ALL CONTRACTORS THAT IT IS THEIR RESPONSIBILITY TO INSURE THAT THE SITE IS PROPERLY EXCAVATED AND GRADED. DURING CONCRETE FORMING PRIOR TO AND AFTER THE POUR, THE CONCRETE SHOULD BE CHECKED FOR PROPER ELEVATION.

SQUARE AND CORRECT DIMENSIONS. 3. MEASUREMENTS FOR ANCHOR BOLTS ARE EXACT AND SHOULD BE RECHECKED TO INSURE PROPER LOCATION.

4. CORRECTION OF LOCATION, OF ELEVATION AND OF DIMENSIONAL ERRORS MUST BE MADE PRIOR TO THE ARRIVAL OF THE ERECTION CREW AND PRIOR TO THE ERECTION OF THE STRUCTURE.

5. AFTER THE FORMS HAVE BEEN REMOVED, ALL TRENCHES, HOLES AND UNEVEN SITE CONDITIONS MUST BE LEVELED TO INSURE A SAFE WORKING AND ACCESS AREA ACCEPTABLE TO LOCAL, STATE, FEDERAL AND OSHA

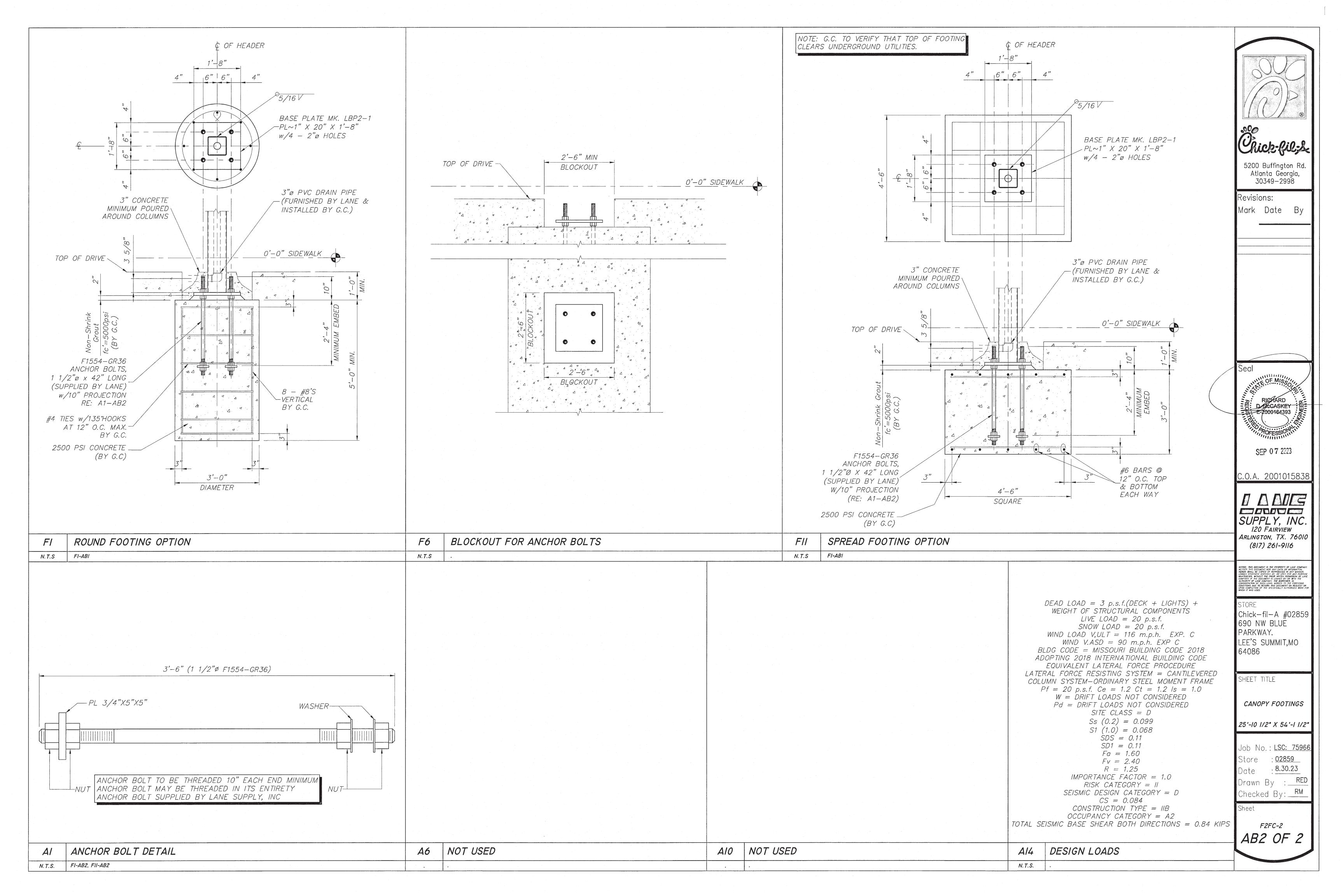


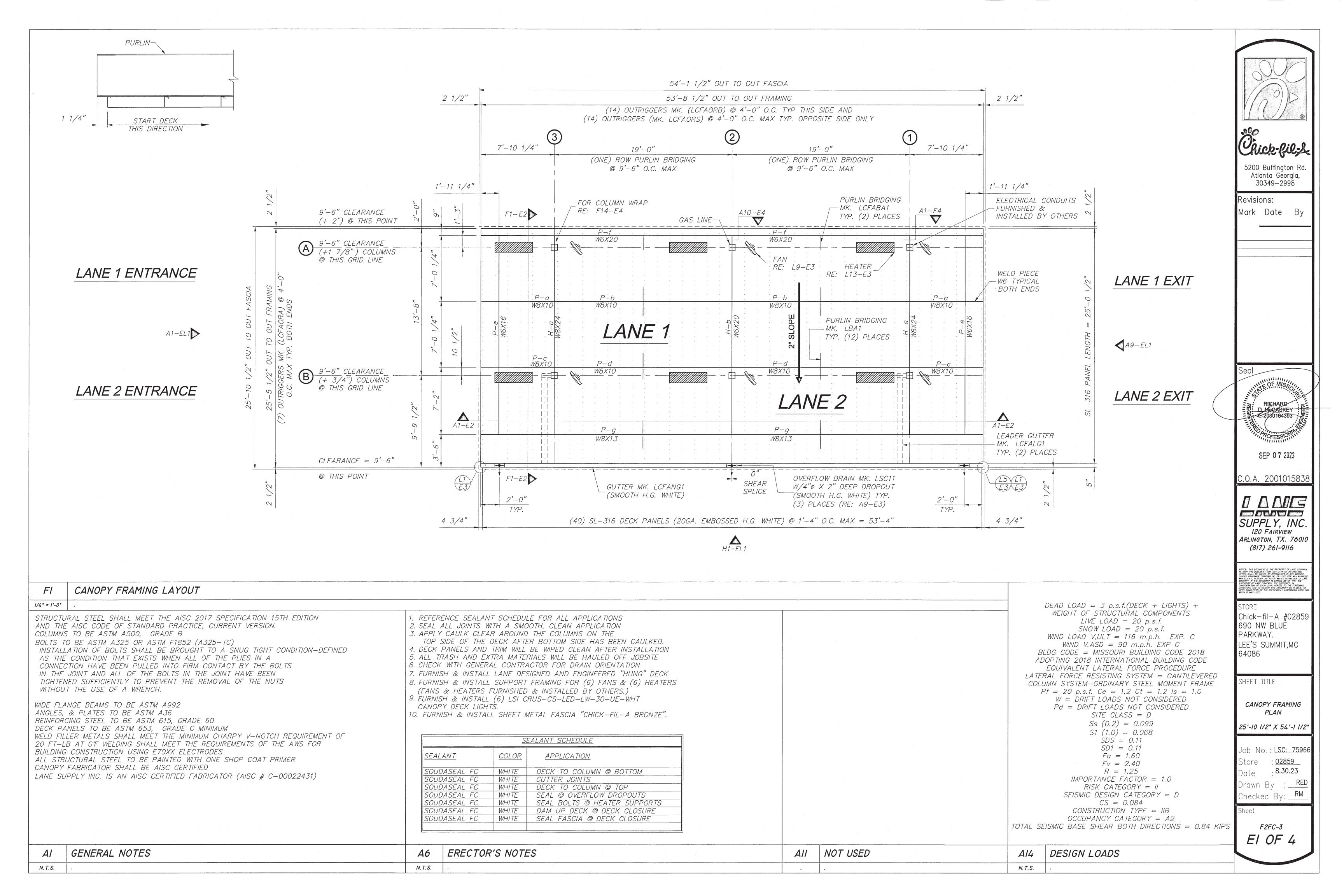
AGENCIES.

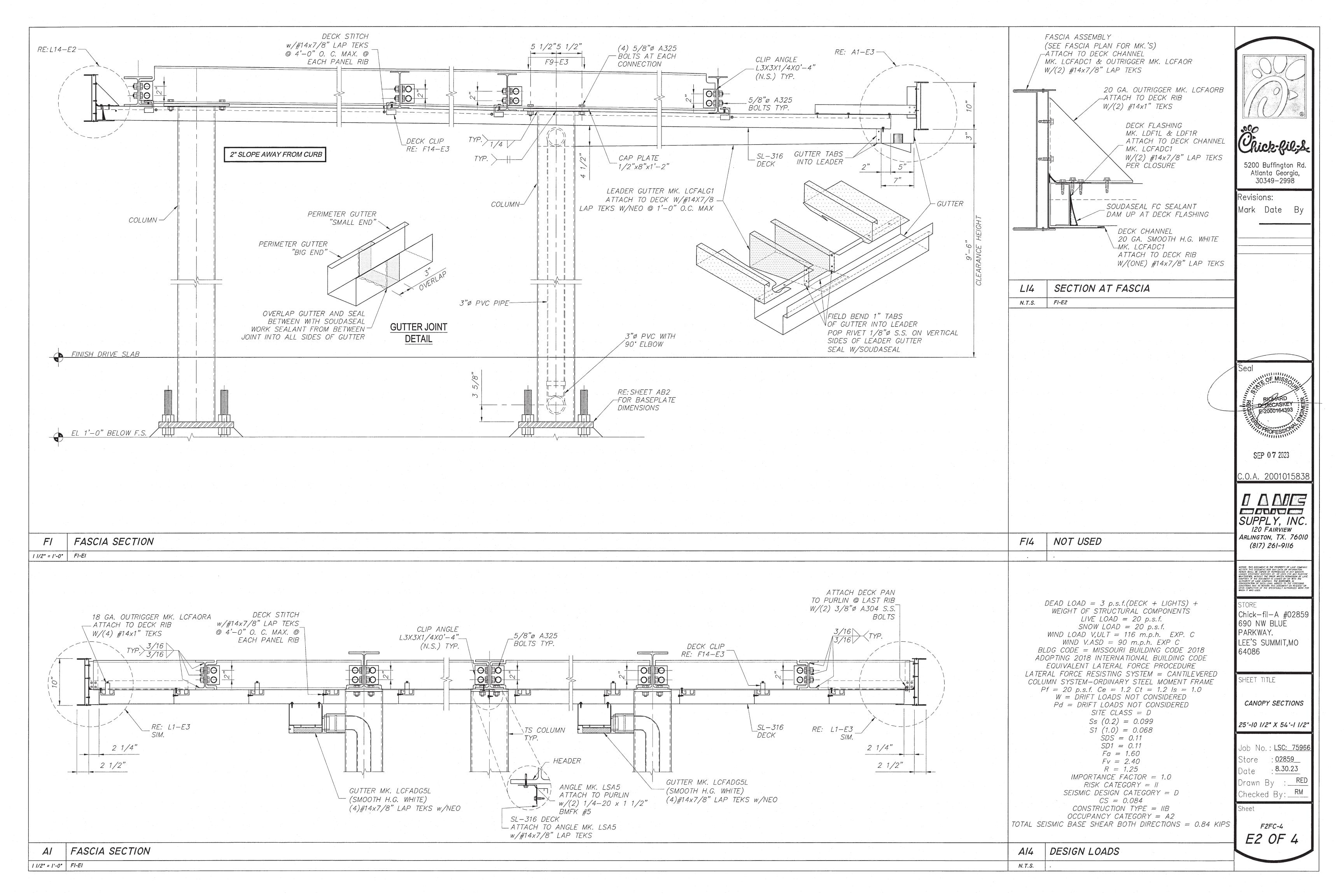
FOUNDATION NOTES GENERAL NOTES

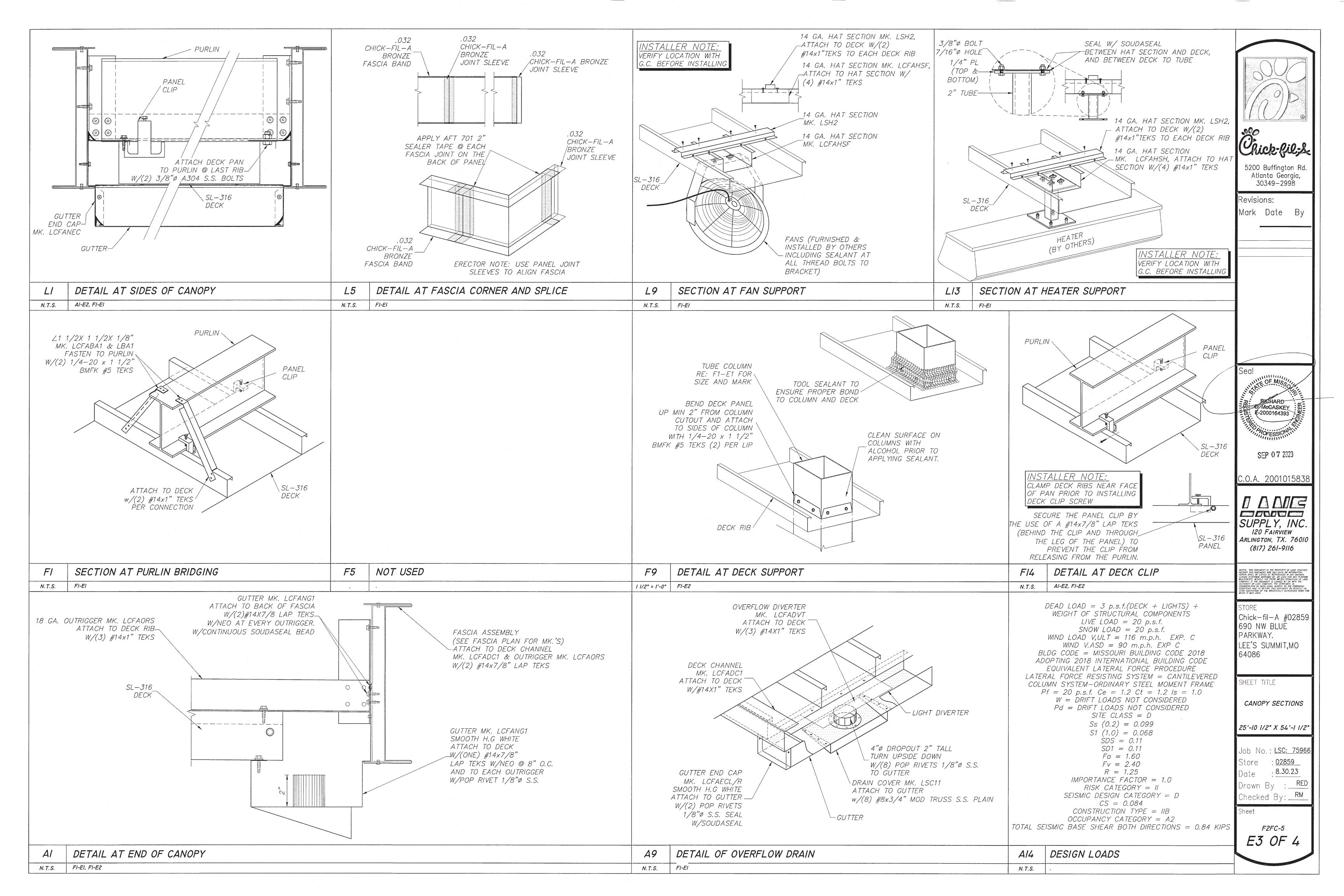
FOOTING ELEVATIONS

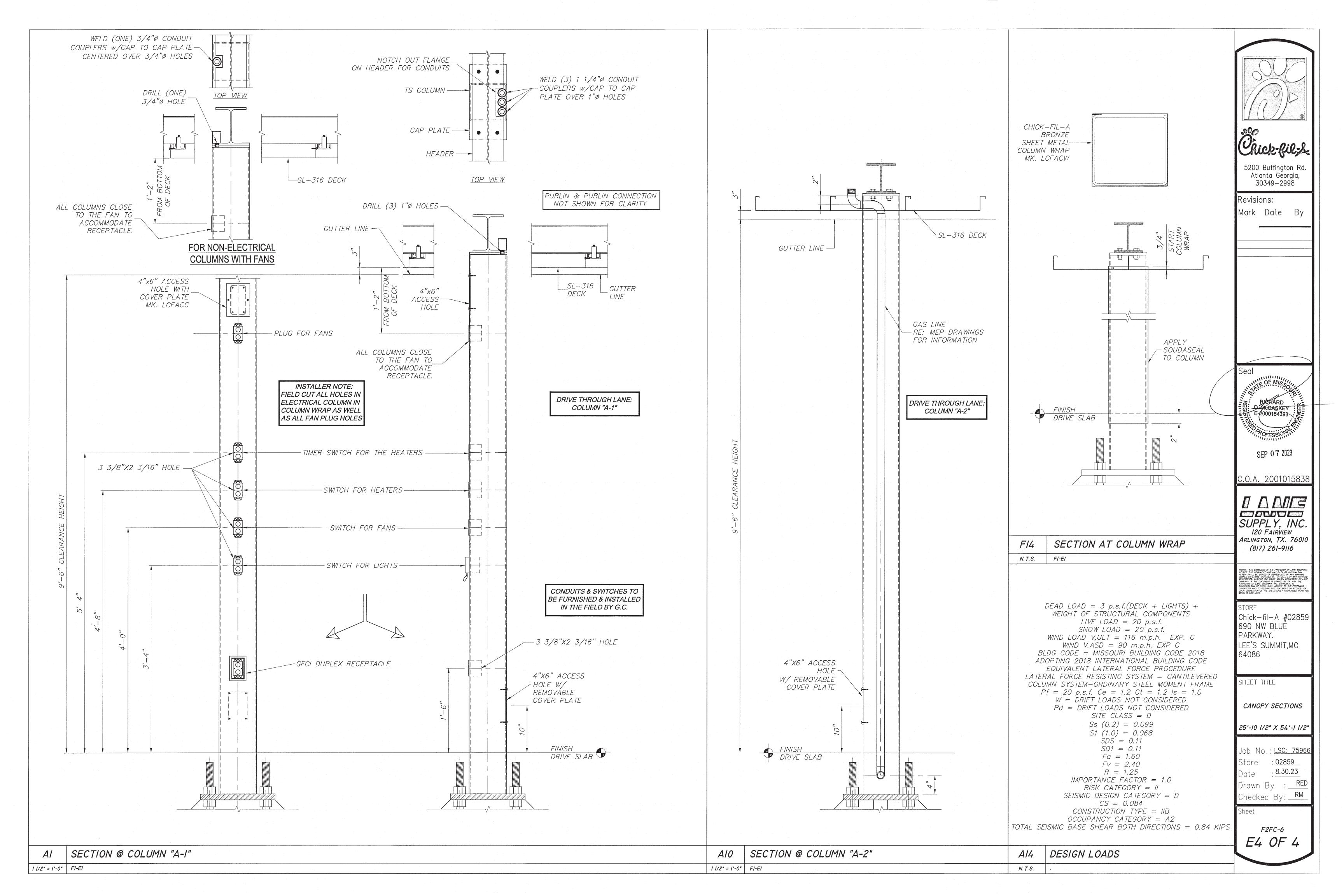
N. T. S. N.T.S.

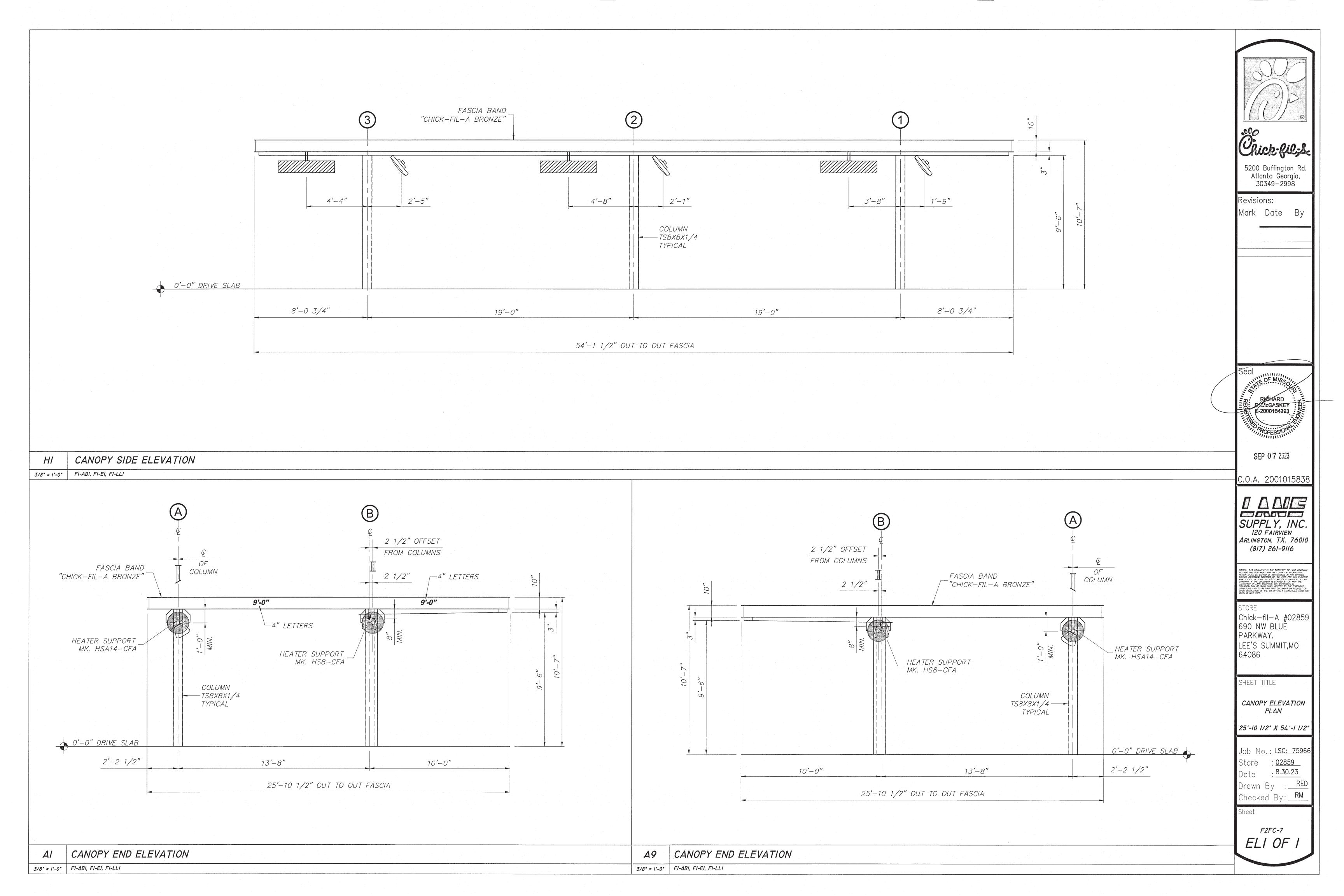


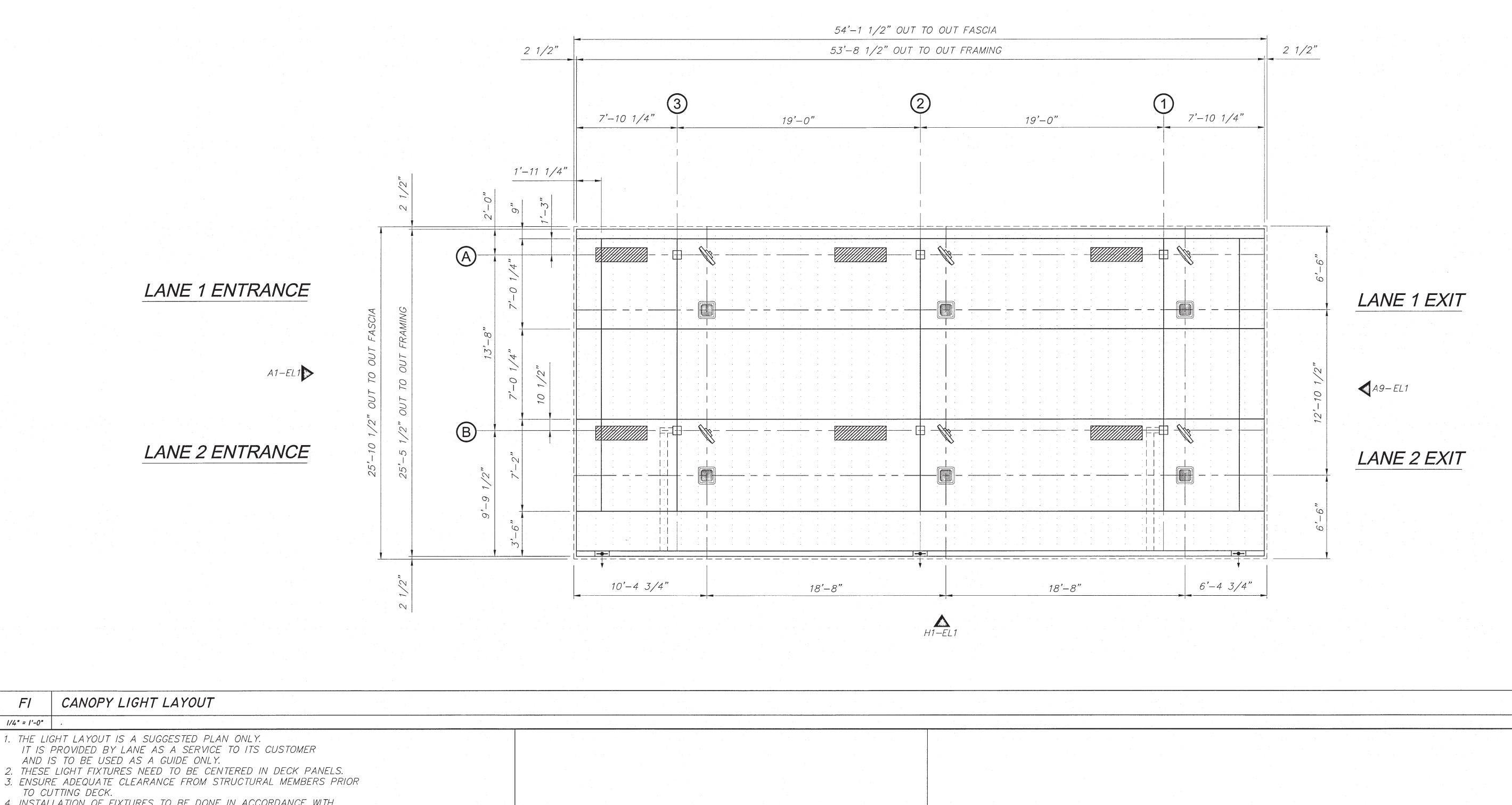


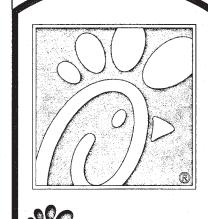






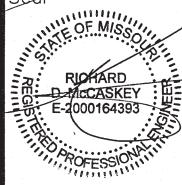






Revisions:

Mark Date By



SEP 07 2023

C.O.A. 2001015838

I A NIE SUPPLY, INC.
120 FAIRVIEW
ARLINGTON, TX. 76010 (817) 261-9116

Chick-fil-A #02859 690 NW BLUË PARKWAY. LEE'S SUMMIT,MO

SHEET TITLE

CANOPY LIGHT LAYOUT

25'-10 1/2" X 54'-1 1/2"

Job No.: <u>LSC: 75966</u> : <u>02859</u> 8.30.23

Drawn By : RE

Checked By: RM

LLI OF I

1/4" = 1'-0"

1. THE LIGHT LAYOUT IS A SUGGESTED PLAN ONLY. IT IS PROVIDED BY LANE AS A SERVICE TO ITS CUSTOMER

3. ENSURE ADEQUATE CLEARANCE FROM STRUCTURAL MEMBERS PRIOR

4. INSTALLATION OF FIXTURES TO BE DONE IN ACCORDANCE WITH MANUFACTURES INSTRUCTIONS AND RECOMMENDATIONS.

5. IF LIGHTS INTERFERE WITH LEADER GUTTERS MOVE ROW LIGHTS TO THE NEXT DECK.

LEGEND:

INDICATES LSI CRUS-SC-LED-LW-30-CW-UE-WHT CANOPY DECK LIGHTS.

INDICATES DECK STITCHING.

MOUNTED FANS/HEATERS (BY OTHERS) RE: SHEET É3 FOR MOUNTING SUPPORT

N. T. S.

INDICATES MOUNTED FAN

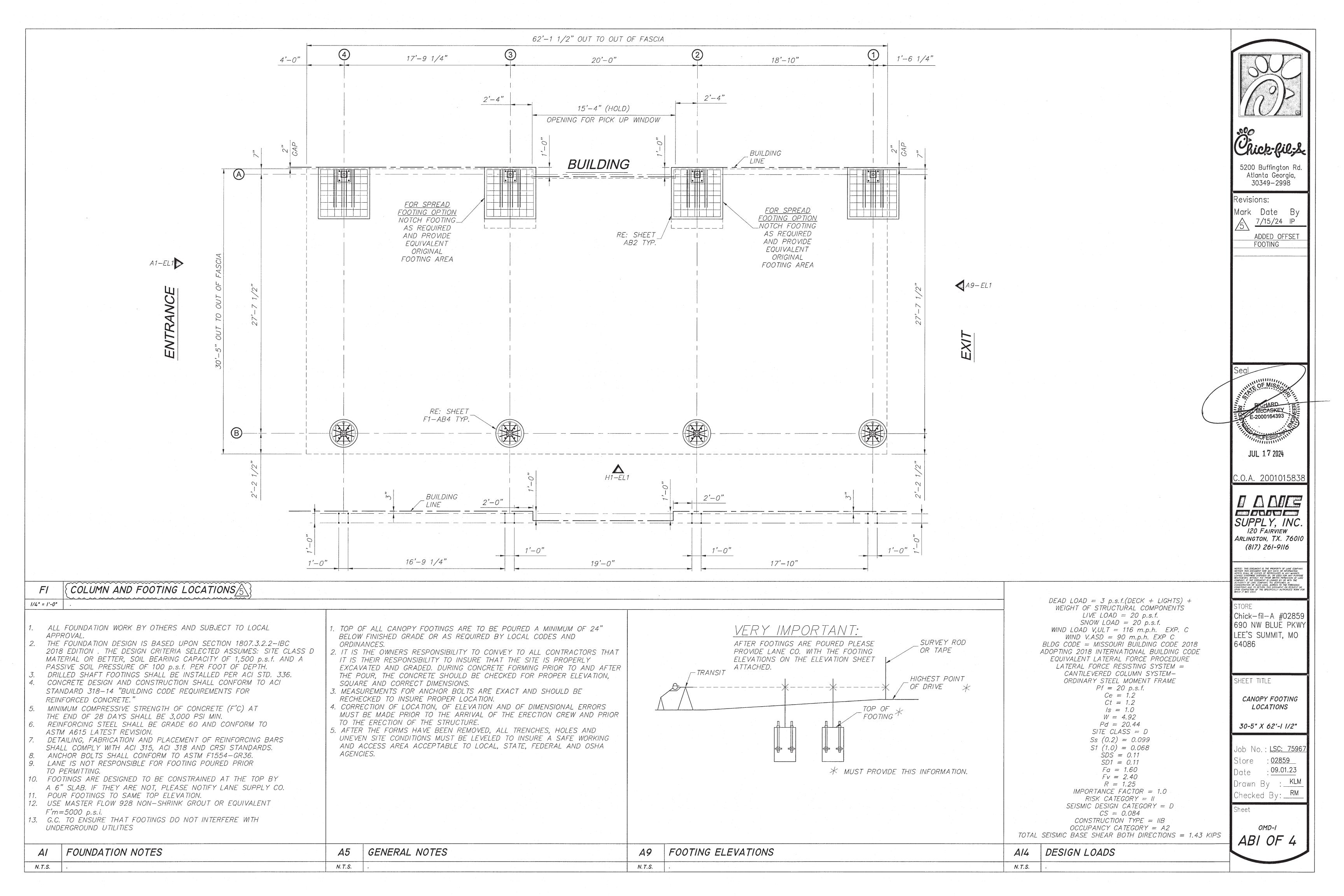
GENERAL NOTES

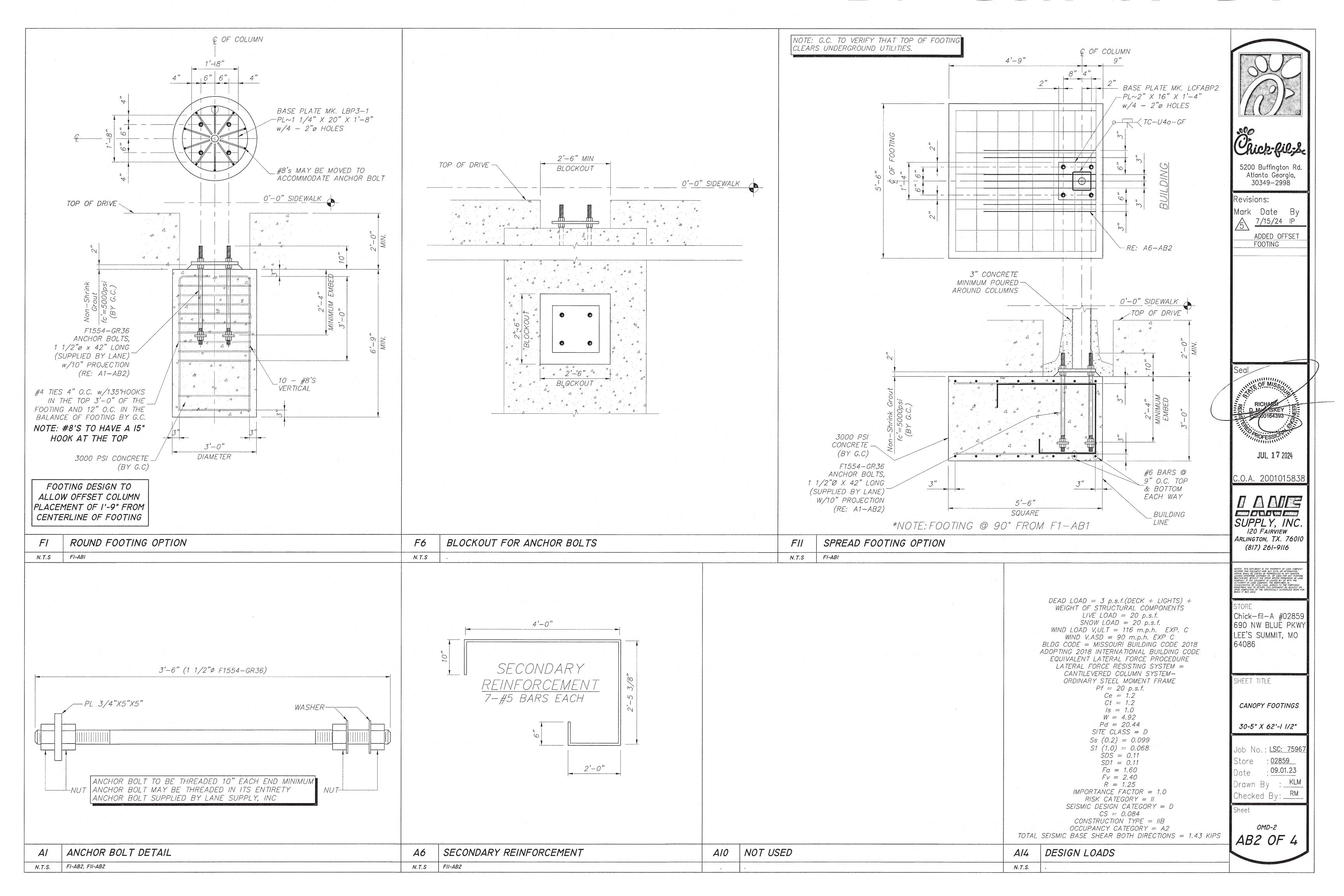


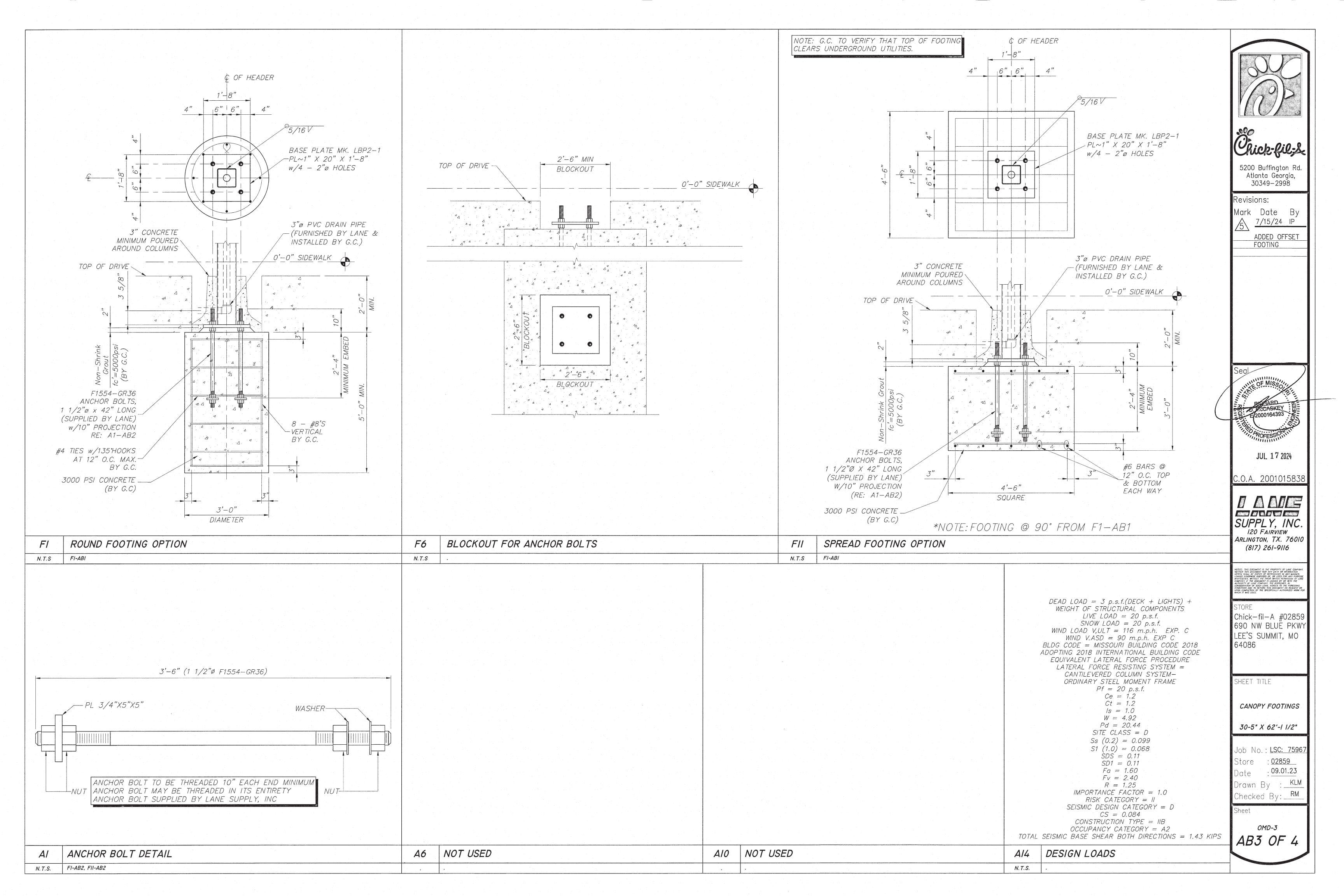
INDICATES MOUNTED HEATER

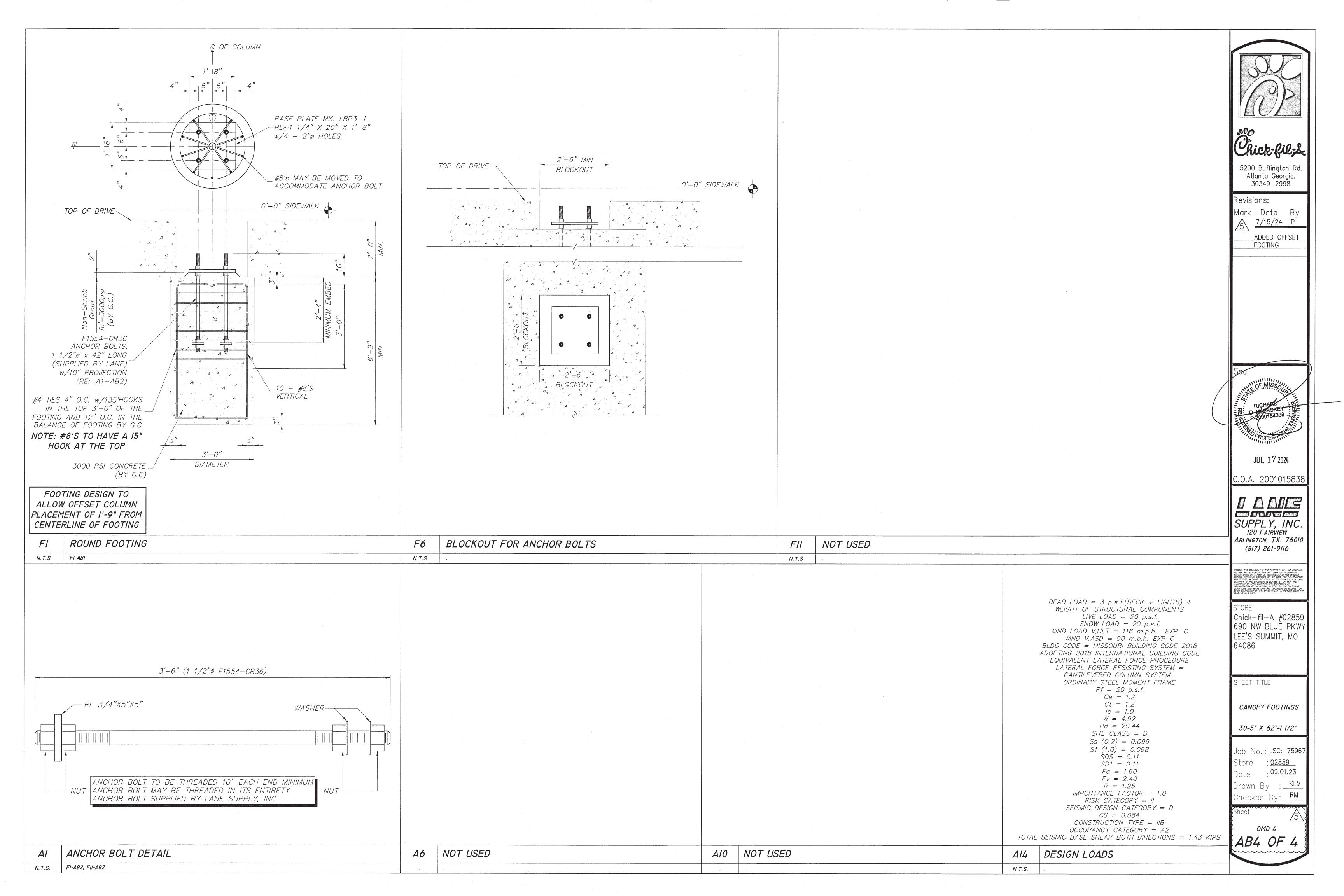
NOT USED

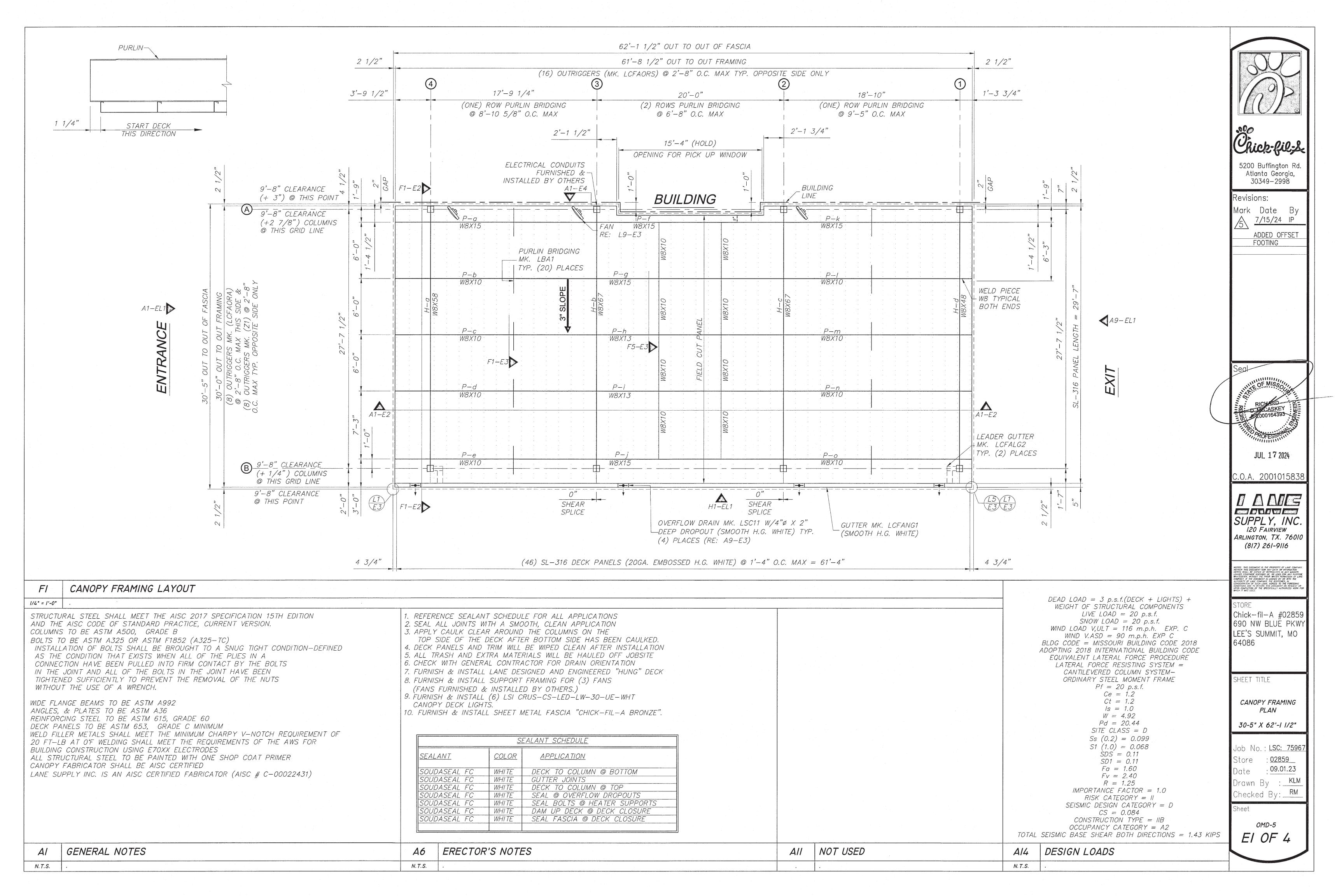
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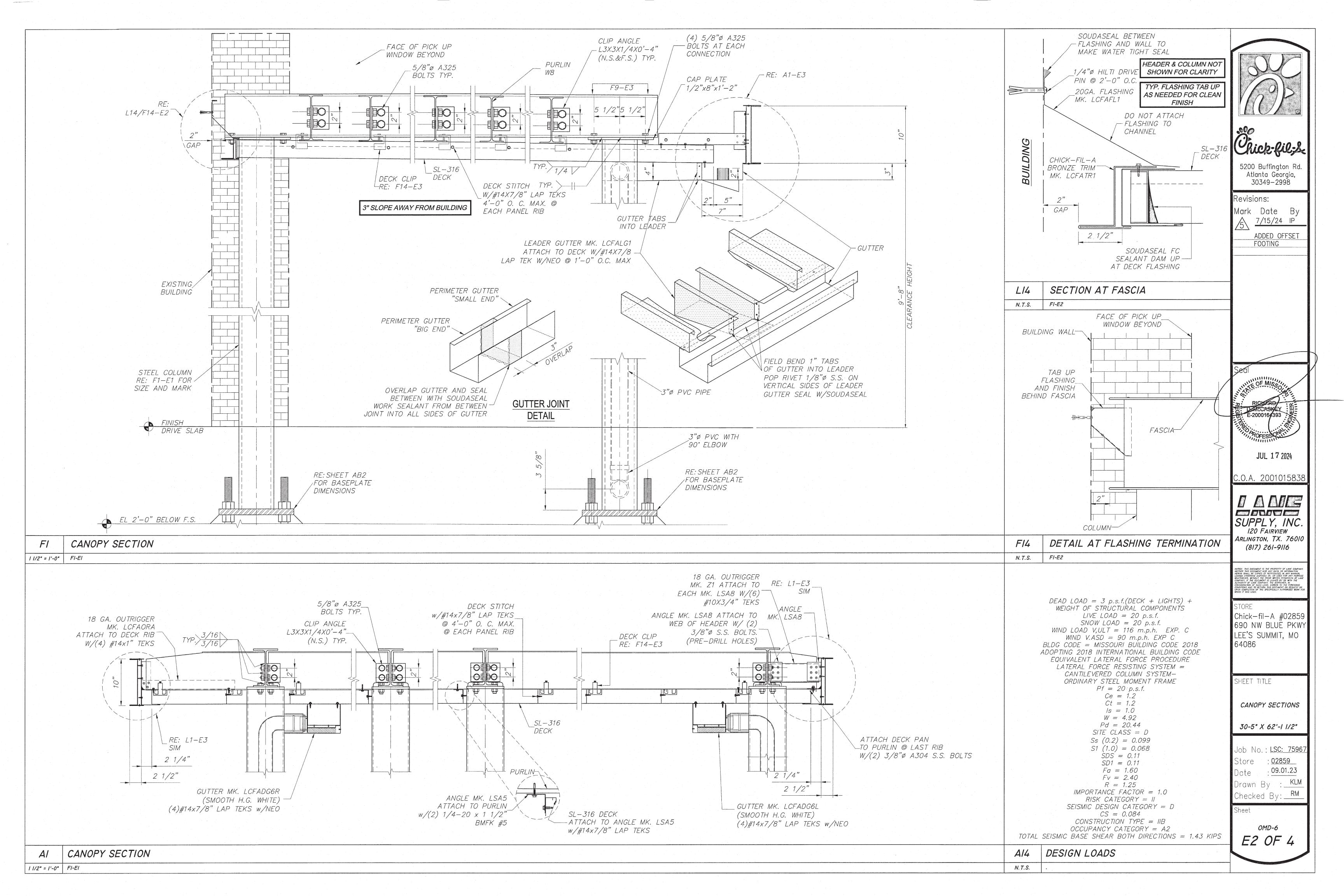


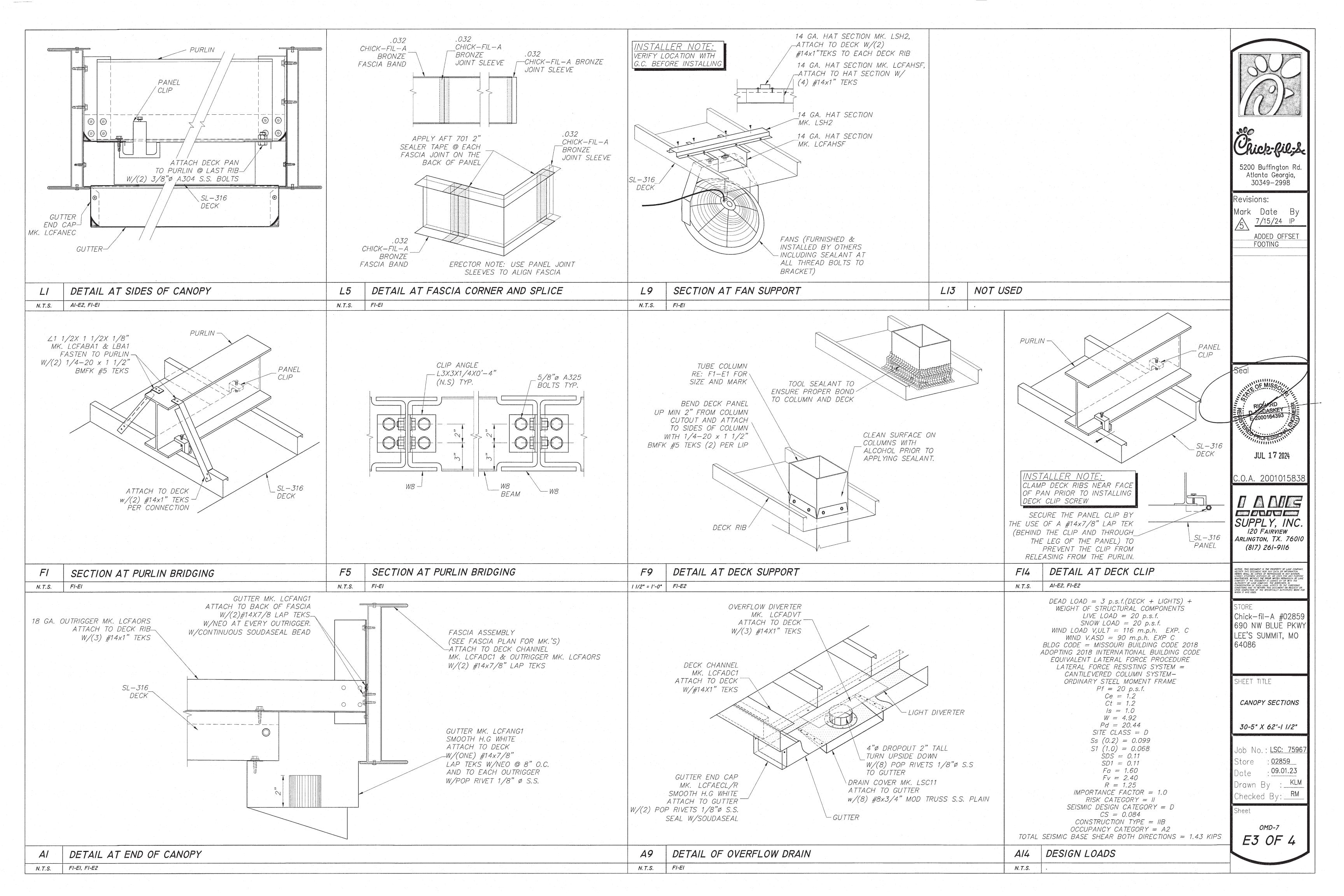


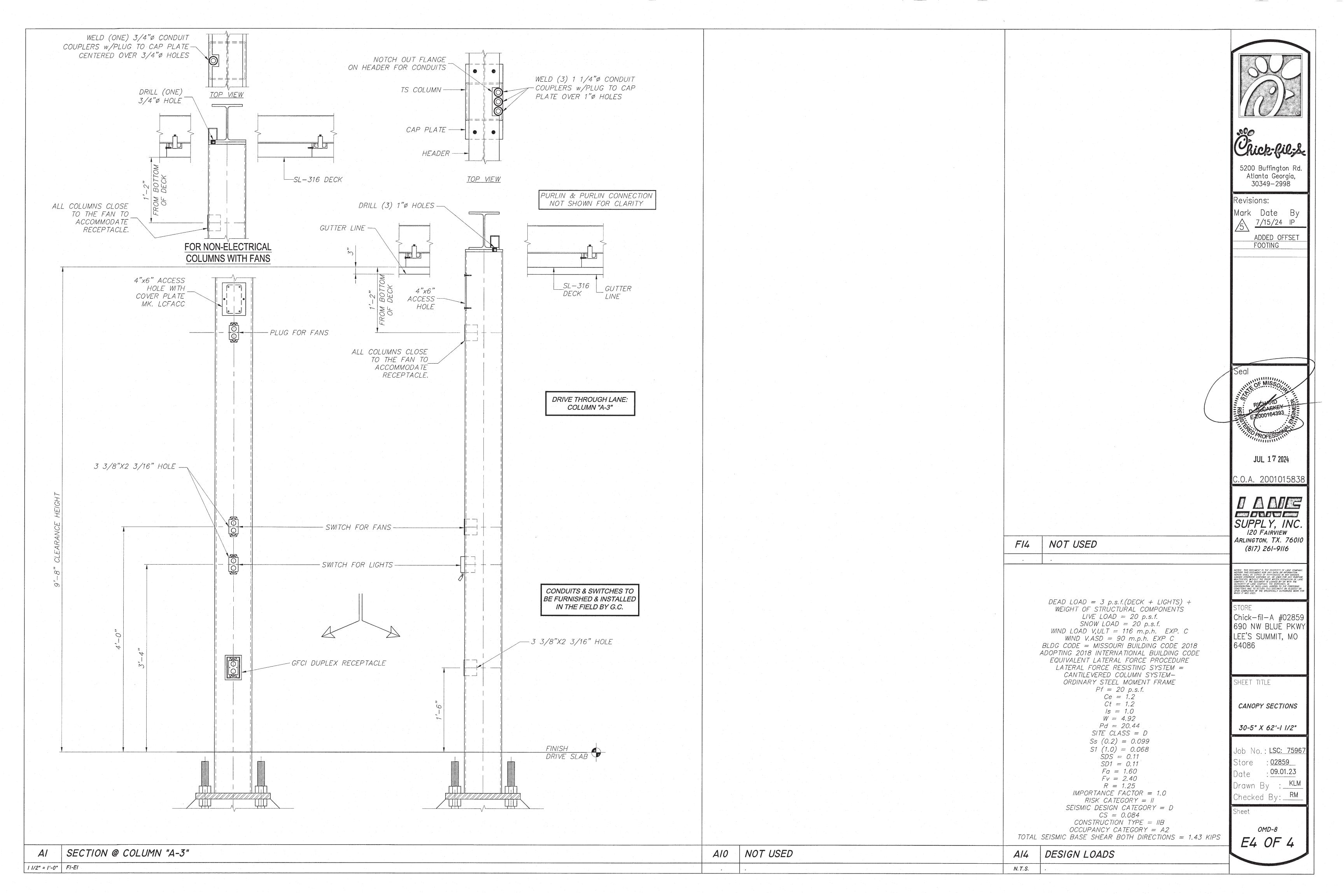


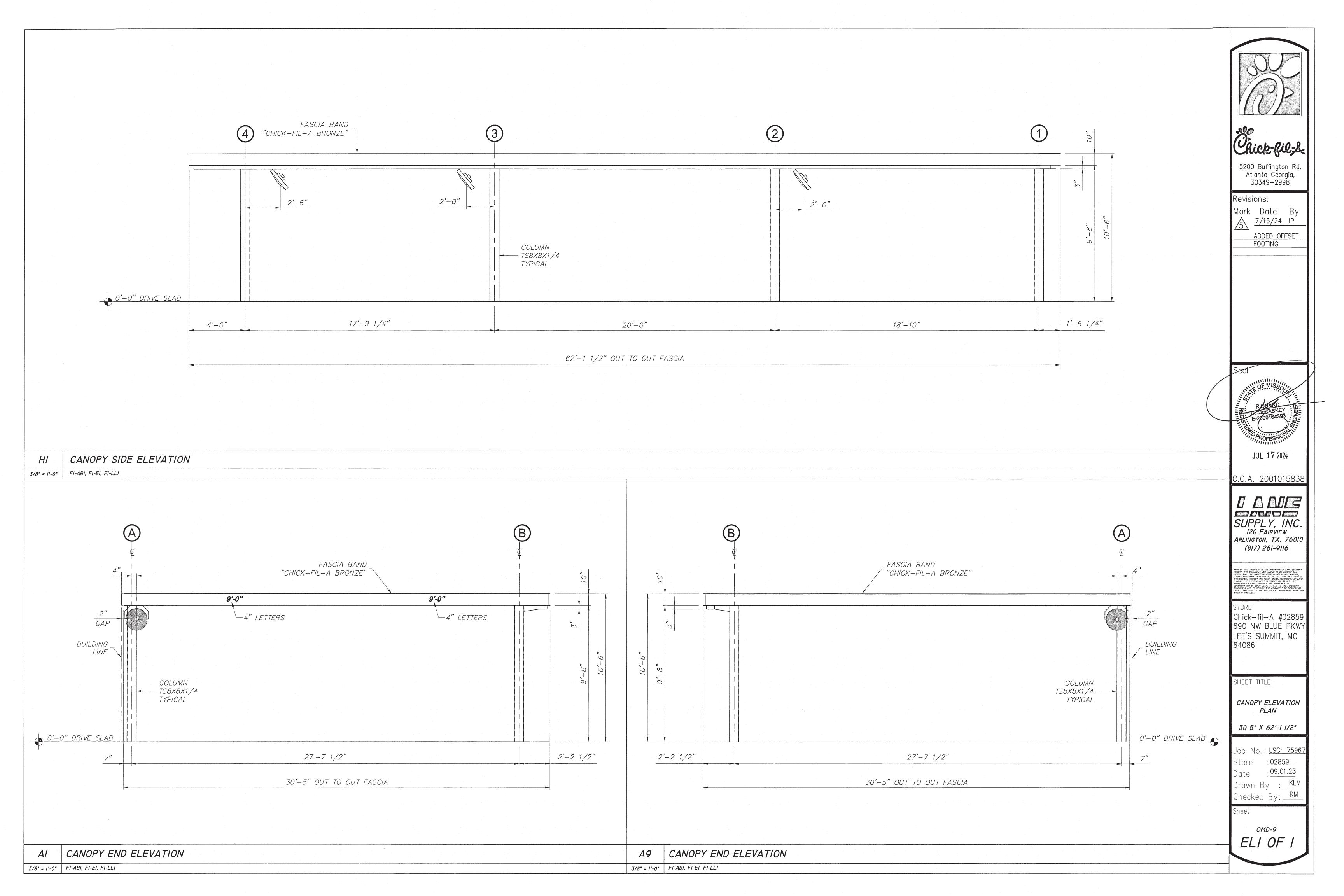


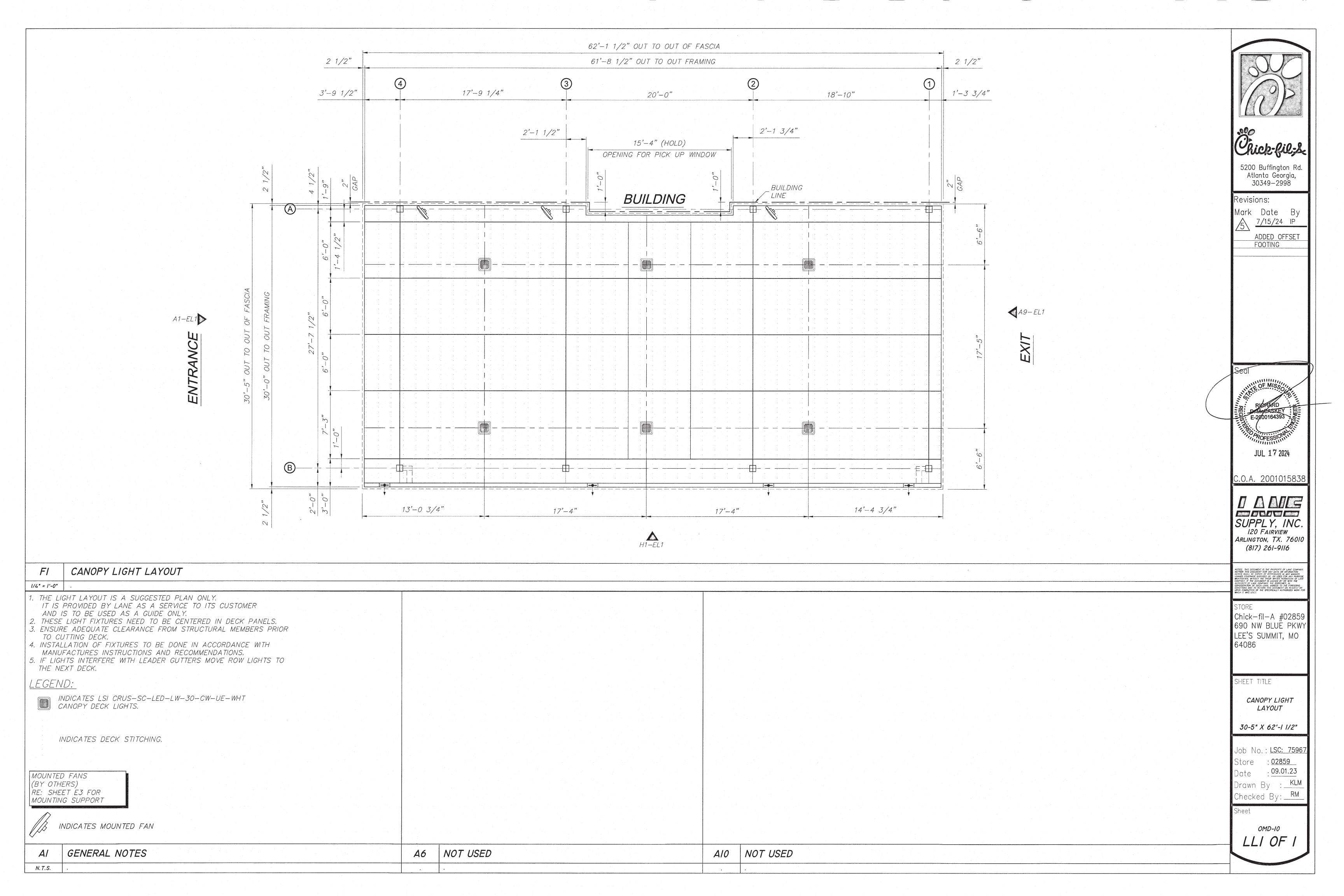














LANE SUPPLY, INC.

120 Fairview Arlington, TX 76010 817-261-9116

DESIGN CALCULATIONS FOR:

Chick-fil-A #02859 Order Canopy 690 NW Blue Parkway Lee's Summit, MO

Six-Column Canopy:

25'-5" X 53'-9" Canopy

Lane Reference Number :

LSC-75966

Date:

01-Sep-23

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Canopy Calculations:

Design Loads: 1-2

Deck Design: 3

Purlin Design: 4-8

Header Design: 9-10

Column & Foundation Design:

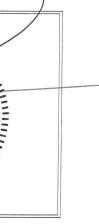
11-12

Attachments:

Lane St.-316 Deck Panel Properties
Lane Standard Base Plate Design

Design Sketch

Engineer's Seal:



C.O.A. 2001015838

SEP 07 2023

McGASKEY 2000164393 Calculations By: Lane Supply, Inc. LSC -75966 Customer: Chick-fil-A #02859 Order Canopy By: JO Project: 25'-5" X 53'-9" Canopy Check:

Code:

Missouri Building Code 2018 2018 International Builling Code

Roof Loads:

Dead Load = 3.00 psf (SL-316 Deck) Live/Snow Load = 20.00 psf

TOTAL = 23.00 psf

Fascia Load:

Height = 10.00 in. plf

Dead Load = 5.83

Wind Loads:

Risk Category = 11 V, ULT Speed = 116 m.p.h. Exp C V, ASD Speed = 90 m.p.h. Exp C Height = 15 Kd = 0.85 Kh = 0.85 G= 0.85 14.93 psf

Lateral Load = $1.0 (H) \cdot qz =$ 16.00 psf Deck Uplift = $-1.7 (V) \cdot G \cdot qz =$ -21.58 psf Frame Uplift = $-1.1 (V) \cdot G \cdot qz =$ -13.96 psf

qz =

Base Shear: V =

 $CS \cdot W =$

0.084 · W

Site Class = D Ss(0.2) =0.099 S1(1.0) =0.068 Fa = 1.60 Fv = 2.40 SM1 = Fv•S1 = 0.16 SMS = Fa·Ss = 0.16 SD1 = 2/3·SM1 = 0.11 SDS = 2/3.SMS = 0.11 1.25 R= Risk Category = 11

CS = (SDS/R) =0.084 (12.8-2)

B

Seismic Design Category Based on SDS: A Seismic Design Category Based on SD1: В

Design Category:

Section 7.1--Symbols & Notation

```
Ce =
           1.2
                    Exposure Factor as determined from Table 7-2
Ct =
           1.2
                    Thermal factor as determined from Table 7-3
 D = Snow Density in pcf as determined from Eq. 7-4
      Height of balanced snow load determined by dividing Pf by D, in feet.
hd = Height of snow drift, in feet
hc = Clear height from top of balanced snow to top of parapet, ft
hr =
          0.83
                     = Fascia height, ft
ls =
           1.0
                     = Importance factor (see Table 7-4).
Pf = Snow load on flat roofs, psf.
Pg =
                     =ground snow, psf.
           20
Pd = Maximum intensity of drift surcharge load, psf.
         25.875
                    = Length of roof upwind of the drift, feet
lu =
 w = Width of snow drift, in feet
```

Section 7.3--Flat-Roof Snow Loads, Pf

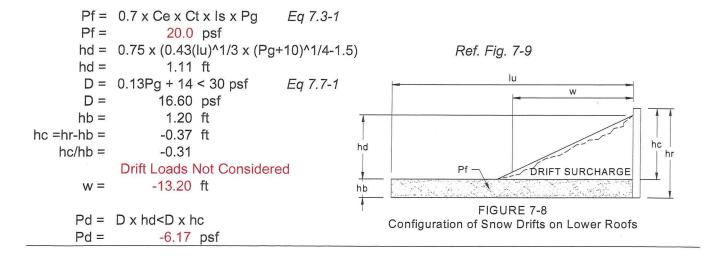
The snow load, Pf, on a roof with a slope equal to or less than 15° shall be calculated in psf using equation 7.3-1, but not less than the following minimum values for low slope roofs: where Pg is 20 psf or less Pf = I(Pg), where Pg exceeds 20 psf, Pf = 20 (I).

Section 7.7 & Section 7.8

The geometrey of the surcharge load due to snow drifting shall be approximated by a triangle as shown in figure 7-8. Drift loads shall be superimposed on the balanced snow load. If hc/hb is less than 0.2, drift loads are not required to be applied. The height of such drifts shall be taken as 0.75 x hd as determined from Fig 7-9, with lu equal to the length of the roof upwind of the projection or parapet wall. If the side of a roof projection is less than 15 ft long, a drift load is not required to be applied to that side. If the height, hd, is equal to or less than hc, the drift width shall equal 4hd and the drift height shall equal hd. If this height exceeds hc, the drift width, w, shall equal 4 hd²/hc and the drift height shall equal hc. However, the drift width w shall not exceed 8hc. The maximum intensity of the drift surcharge load, pd, equals hd x D where the snow density, D, is defined by Eq 7.7-

Section 7.10--Rain-On-Snow Surcharge Load

For locations where Pg is 20 psf or less but not zero, all roofs with a slope less than W/50, shall have a 5 psf rain-on-snow surcharge load appled to establish the design snow loads. This rain-on-snow augmented design load applies only to the balanced load case and need not be used in combination with drift, sliding, unbalanced, or partial loads.



| P1 | | | | | P2 |
|----------------------|-------------------|-----|------------------|---------|--|
| V | o 23.00 | psf | 0 | | V |
| ^A | B^ | | ^C | _ |)^ |
| X1> L1 | > < | L2 | > < | L3 | > < X2> |
| Wd= | 3.00 psf | | X1= 0.75 | | |
| WI= | 20.00 psf | | L1= 7.02 | | |
| Deck: Ww= | -21.58 psf | | L2= 7.02 | | |
| Frame : Ww= | -13.96 psf | | L3= 7.17 | | |
| P1= P2= | 5.83 plf | | X2= 3.50 | π | |
| P2- | 5.83 plf | | D A -d | 40.0 | C If |
| | | | RAd= RAI= | | 6 plf 1 plf |
| | | | Frame : RAW= | -60.0 | |
| | | | Deck: RAw= | -92.8 | () |
| MAd= | 5.22 ft-lbs/ft | | RA(d+l)= | 105.3 | |
| MAI= | 5.63 ft-lbs/ft | | Frame : RA(d+w)= | -40.6 | |
| Deck : MAw= | -6.07 ft-lbs/ft | | Deck : RA(d+w)= | -73.4 | The second secon |
| MA(d+1)= | 10.84 ft-lbs/ft | - | 200111111(0111) | 7011 | . р |
| Deck: MA(d+w)= | -0.85 ft-lbs/ft | | RBd= | 20.3 | 2 plf |
| | | | RBI= | 140.4 | |
| | | | Frame: RBw= | -97.4 | 7 plf |
| | | | Deck: RBw= | -150.6 | |
| MAB(d+I)= | 139.12 ft-lbs/ft | | RB(d+l)= | 160.7 | 5 7 |
| Deck: MAB(d+w)= | -114.04 ft-lbs/ft | | Frame : RB(d+w)= | -77.1 | • |
| • | | | Deck : RB(d+w)= | -130.3 | 1 plf |
| MBC(d+I)= | 141.71 ft-lbs/ft | | RCd= | 15.8 | 7 plf |
| Deck : MBC(d+w)= | -114.47 ft-lbs/ft | | RCI= | 141.88 | B plf |
| | | | Frame : RCw= | -87.1 | 1 plf |
| | | | Deck: RCw= | -134.63 | |
| MCD(d+I)= | 128.90 ft-lbs/ft | | RC(d+I)= | 157.74 | 1. A. C. |
| Deck: MCD(d+w)= | -77.16 ft-lbs/ft | | Frame : RC(d+w)= | -71.24 | • |
| | | | Deck : RC(d+w)= | -118.76 | 6 plf |
| | | | RDd= | 32.50 |) plf |
| MDd= | 38.79 ft-lbs/ft | | RDI= | 158.76 | • |
| MDI= | 122.50 ft-lbs/ft | | Frame: RDw= | -110.83 | |
| Deck: MDw= | -132.17 ft-lbs/ft | | Deck: RDw= | -171.29 | |
| MD(d+l)= | 161.29 ft-lbs/ft | | RD(d+l)= | 191.26 | 6 plf |
| Deck: MD(d+w)= | -93.37 ft-lbs/ft | | Frame : RD(d+w)= | -78.34 | |
| | | | Deck : RD(d+w)= | -138.79 | 9 plf |
| USE 20 GAUGE G | | | | * | |
| +S=.3961 in^3 -S=.30 | 36 in^3 FY=40 ksl | | | | |

| BEAM DESI | GN: | P-a | | | | | | |
|--------------|-----------|--------------------|--------|---------|--------------------|--------------|---------|-----|
| Wd= | | 1.5 | | | P | | | |
| WI= | 140.42 | ? plf | | | V | 170.74 | plf | - |
| Ww= | | • | | | - | ^A | B^ | |
| Pd= | | | | | <> | < | L> | |
| PI= | | lbs | | | | | | |
| Pw= | | lbs | Defle | ctions: | (inches) | Overhang | Midspan | _ |
| L= | | | | DL= | | 0.000 | 0.000 | |
| X= | 1.94 | ft | | L+LL= | | -0.002 | 0.004 | |
| | | | (+dov | vnward, | , -upward) | | | |
| MA(d) = | | ft-lbs | | | | RAd= | | |
| MA(I) = | | ft-lbs | | | | RAI= | 732 | lbs |
| MA(w) = | | ft-lbs | _ | | | RAw= | | lbs |
| MA(d+l) = | 399 | ft-lbs lu= | | 1.33 | ft | RA(d+l)= | 944 | lbs |
| MA(d+w) = | -47 | ft-lbs lu= | | 1.94 | ft | RA(d+w)= | -296 | lbs |
| | | | | | | | | |
| | | | | | | RBd= | 67 | lbs |
| | | | | | | RBI(Max)= | 415 | lbs |
| | | | | | | RBw= | -257 | lbs |
| MAB(d+I)= | | ft-lbs lu= | | 5.92 | ft | RB(d+l)= | 482 | lbs |
| MAB(d+w)= | -271 | ft-lbs lu= | | 1.33 | ft | RB(d+w)= | -191 | lbs |
| | | | | | | | | |
| <u></u> | USE: | W8X10 | | Fy = | 50 | ksi | | |
| DE 414 DE016 | | | | | | | | |
| BEAM DESIG | | P-b | 16 | | | | | |
| | Wd= | | | | | | | |
| | WI= | 140.42 | • | | | | | |
| | Ww= | -97.47 | 100 | | | | | |
| | L= | 19.00 | π | | | | | |
| | | 170.74 | - le | | | | | |
| | | 170.74 | рп | | | | | |
| | | | 1 | > | Dd- | 200 | llaa | |
| | | < | L | | Rd= | 288 | | |
| | Md= | 1368.2 | ft lbo | | RI= | 1334 | | |
| | MI= | 6336.3 | | - | Rw= | -926 | | |
| , | Mw= | -4398.2 | | | R(d+l)= R(d+w)= | 1622 -638 | | |
| | 10100- | -4390.2 | It-IDS | | K(u+w)- | -030 | IDS | |
| | M(d+l)= | 7704.5 | ft_lhe | | Lu= | 9.50 | ft | ОК |
| | M(d+w)= | -3030.1 | | | Lu= | 1.33 | | OK |
| | W(G · W)- | -0000.1 | ונ-וטס | | Lu- | 1.33 | 11 | |
| | | | | | | | | |
| | USE: | W8X10 | | Fy = | 50 | ksi | | |
| _ | | Deflections | in al | \ | N4: ala | | | |
| | | Deflections: (| inches |) | Midspan | | | |
| | | DL= | | | 0.100 | | | |
| | | DL+LL= (+downward, | TIPLE | -4) | 0.560 | | | |
| | | | | | | | | |

| BEAM DESIGN | N: | P-c | | | | | | | |
|-------------|---------|----------------|-----------|---------|----------|-----------|--|-----|--|
| Wd= | 25.87 | | | | IP | | The state of the s | | |
| WI= | 141.88 | B plf | | | V | 167.74 | l plf | | |
| Ww= | -87.11 | plf | | | | ^A | B ['] | ١ | |
| Pd= | 36.39 | lbs | | | <> | < | L> | 1 | |
| PI= | 0.00 | lbs | | | | | | | |
| Pw= | 0.00 | lbs | Defle | ctions: | inches) | Overhang | Midspan | | |
| L= | 5.92 | ! ft | | DL= | | 0.000 | 0.000 | | |
| X= | 1.94 | ft | | L+LL= | | -0.002 | 0.004 | | |
| | | | (+dov | vnward, | -upward) | | | | |
| MA(d) = | 119 | ft-lbs | | | | RAd= | 183 | lbs | |
| MA(I) = | 266 | ft-lbs | | | | RAI= | 740 | lbs | |
| MA(w) = | -164 | ft-lbs | | | | RAw= | | lbs | |
| MA(d+l) = | | ft-lbs lu= | | 1.33 | ft | RA(d+l)= | | lbs | |
| MA(d+w) = | | ft-lbs lu= | | 1.94 | | RA(d+w)= | | | |
| | | | | | | () | | | |
| | | | | | | RBd= | 56 | lbs | |
| | | | | | | RBI(Max)= | | lbs | |
| | | | | | | RBw= | | | |
| MAB(d+l)= | 676 | ft-lbs lu= | | 5.92 | ft | RB(d+l)= | | lbs | |
| MAB(d+w)= | | ft-lbs lu= | | 1.33 | | RB(d+w)= | | | |
| (, | | 11 100 10 | | 1.00 | | (Carw) | 17.7 | 100 | |
| | USE: | W8X10 | | Fy = | 50 | ksi | | | |
| | | | | | | | | | |
| BEAM DESIGN | l: | P-d | | | | | | | |
| | Wd= | 25.87 | plf | | | | | | |
| | WI= | 141.88 | plf | | | | | | |
| | Ww= | -87.11 | plf | | | | | | |
| | L= | 19.00 | ft | | | | | | |
| | | | | | | | | | |
| | | 167.74 | plf | | | | | | |
| | | ٨ | | ٨ | | | | | |
| | | < | L | > | Rd= | 246 | lbs | | |
| | | | | | RI= | 1348 | lbs | | |
| | Md= | 1167.3 | ft-lbs | | Rw= | -828 | lbs | | |
| | MI= | 6402.1 | ft-lbs | | R(d+I)= | 1594 | | | |
| | Mw= | -3930.9 | | | R(d+w)= | -582 | | | |
| | | | | | , | | | | |
| | M(d+l)= | 7569.4 | ft-lbs | | Lu= | 9.50 | ft | OK | |
| | M(d+w)= | -2763.6 | ft-lbs | | Lu= | 1.33 | | OK | |
| | | | | | | | | | |
| | | | | | | | | | |
| 17.0 | USE: | W8X10 | | Fy = | 50 | ksi | | | |
| | | D (1 .: | | | | | | | |
| | | | inches' | | Midspan | | | | |
| | | Deflections: (| IIICHES, | | | | | | |
| | _ | DL= | iiiciies, | | 0.085 | | | | |
| | | | | | | | | | |

| | | Λ | B A | ES | AOI | ١. |
|---|---|----------|------|-------|-------|----|
| - | _ | Δ | 11// | - | 11-11 | |

Р-е

| P1d = | 212.11 | lbs | | P1 | P | 2 |
|-------|---------|-----|-------|------|-------|----|
| P1I = | 732.00 | lbs | ۸ === | ▼ | ▼ | p |
| P1w = | -508.10 | lbs | | | | В |
| P2d = | 183.17 | lbs | | X1 | X2 | X3 |
| P2I = | 739.60 | lbs | | | L | |
| P2w = | -454.12 | lbs | | | | - |
| | | | | X1 = | 7.02 | ft |
| Wd = | 16.00 | plf | | X2 = | 7.02 | ft |
| WI = | 0.00 | plf | | X3 = | 7.17 | ft |
| Ww = | 0.00 | plf | | L = | 21.21 | ft |

| RAd = RAI = | 373 740 | lbs | |
|----------------|------------|----------|-----|
| RAw = | -493 | 10000 01 | |
| RA(d+I) = | 1113 | lbs | |
| RA(d+w) = | -120 | lbs | 181 |
| | | | |
| RBd = | 361 | lbs | |
| RBI = | 732 | lbs | |
| RBw = | -469 | lbs | |
| RB(d+I) = | 1093 | lbs | |
| RB(d+w) = | -108 | lbs | |

| MAB(dI) = | 2301 | ft-lbs | | | |
|--------------|-------|--------|------|----------|----|
| MAB(II) = | 5246 | ft-lbs | | | |
| MAB(wl) = | -3464 | ft-lbs | | | |
| MAB(dI+II) = | 7520 | ft-lbs | lu = | 7.17 | ft |
| MAB(dl+wl) = | -1236 | ft-lbs | lu = | 7.17 | ft |
| | | | | | |

Deflection

dI = 0.202 in dI+II = 0.665 in

| USE: W6X16 | Fy = | 50 ksi |
|------------|------|--------|
| | | |

| P1d= P1I= | 25.09 lbs 0.00 lbs | 12.1 | | P2 | | | | |
|--------------|-----------------------|-------------|----|----------|---------|----------------|----|---|
| | | W | | V | | | | |
| P1w= | 0.00 lbs | e e | | 1 | | A 🛆 | | В |
| P2d= | 373.46 lbs | 1 | X1 | | X2 | A A | X3 | |
| P2I= | 739.60 lbs | - | | >< | | > 4 | | |
| P2w= | -493.36 lbs | | | | | | | |
| Wd = | 39.36 plf | | | RAd= | 1272.1 | 2 lbs | | |
| WI = | 86.01 plf | | | RAI= | 2602.1 | 7 lbs | | |
| Ww = | -60.04 plf | | | RAw= | -1786.4 | | | |
| | | | - | RAd+I= | 3874.2 | | | |
| | | | | RAd+w= | -514.3 | 6 lbs | | |
| X1= | 1.94 ft | | | | | | | |
| X2= | 5.92 ft | | | RBd= | 183.3 | 4 lbs | | |
| X3= | 19.00 ft | | | RBI= | | 5 lbs | | |
| | | | | RBw= | -319.3 | 2 lbs | | |
| | | | | RBd+l= | 630.4 | 9 lbs | | |
| | | | | RBd+w= | -135.9 | 7 lbs | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | MA(d)= | 3621 ft-lbs | | | | | | |
| | $M\Delta(I)=$ | 7020 ft-lbe | | | | | | |

| MA(d)= | 3621 | ft-lbs | | | | |
|-----------|-------|--------|------|------|----|--|
| MA(I)= | 7029 | ft-lbs | | | | |
| MA(w)= | -4771 | ft-lbs | | | | |
| MA(d+I)= | 10649 | ft-lbs | lu = | 1.33 | ft | |
| MA(d+w)= | -1150 | ft-lbs | lu = | 5.92 | ft | |
| | | | | | | |
| MAB(d+I)= | 1557 | ft-lbs | lu = | 9.50 | ft | |
| MAB(d+w)= | -439 | ft-lbs | lu = | 1.33 | ft | |

Deflections

| | ОН | SPAN | | |
|--------------|-------|--------|--|--|
| dl (in)= | 0.221 | -0.023 | | |
| dl+ll (in) = | 0.616 | -0.045 | | |

| USE: | W6X20 | Fy = | 50 | ksi | |
|------|-------|------|----|-----|--|
| | | | | - | |

| P1d= | 46.30 | lbs | P1 | | IP2 | | | | |
|------|---------|-----|----|----|--------|---------|---|-----|---|
| P1I= | 0.00 | lbs | 1 | | 1 | | | | |
| P1w= | 0.00 | lbs | | | V | | A \ | | p |
| P2d= | 361.16 | lbs | | X1 | | X2 | A / | X3 | В |
| P2I= | 732.00 | lbs | - | | | //Z | *************************************** | 7.0 | |
| P2w= | -468.87 | lbs | | | | | | | |
| Wd = | 45.50 | plf | | | RAd= | 1402.4 | 17 lbs | | |
| WI = | 158.76 | plf | | | RAI= | 3972.8 | 32 lbs | | |
| Ww= | -110.83 | plf | | | RAw= | -2718.2 | 20 lbs | | |
| | | | | - | RAd+l= | 5375.2 | 29 lbs | | |
| | | | | | RAd+w= | -1315.7 | 3 lbs | | |
| X1= | 1.94 | ft | | | | | | | |
| X2= | 5.92 | ft | | | RBd= | 226.7 | 5 lbs | | |
| X3= | 19.00 | ft | | | RBI= | 1022.5 | 4 lbs | | |
| | | | | | RBw= | -726.9 | 8 lbs | | |
| | | | | | RBd+l= | 1249.2 | 9 lbs | | |
| | | | | | RBd+w= | -500.2 | 23 lbs | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

| MA(d)= | 3904 | ft-lbs | | | | |
|-----------|-------|--------|------|------|----|--|
| MA(I)= | 9228 | ft-lbs | | | | |
| MA(w)= | -6193 | ft-lbs | | | | |
| MA(d+I)= | 13132 | ft-lbs | lu = | 1.33 | ft | |
| MA(d+w)= | -2289 | ft-lbs | lu = | 5.92 | ft | |
| | | | | | | |
| MAB(d+I)= | 3803 | ft-lbs | lu = | 9.50 | ft | |
| MAB(d+w)= | -1915 | ft-lbs | lu = | 1.33 | ft | |
| | | | | | | |

Deflections

| | ОН | SPAN |
|--------------|-------|--------|
| dl (in)= | 0.239 | -0.018 |
| dl+ll (in) = | 0.624 | 0.067 |

| USE: W8X13 | Fv = | 50 ksi | |
|------------|------|--------|--|

| P1d = | | 2 lbs | | P1 | | | P2 | 1.5 | -3 | | P4 |
|--------------------|--|--------|--|-----|----------|----------------|--------------|----------|------------|----------|------|
| P1I = | 2602 | 2 lbs | | Γ | | | _' _ | Ι, | , | | 1, 4 |
| P1w = | -1786 | 3 lbs | , | | | | | | | | |
| P2d = | 358 | 5 lbs | | 1 | manana a | _z A | | 1 | В | A | |
| P2I = | 1749 | 9 lbs | | X | 1 | X2 | | X3 | X4 B | /////X5 | |
| P2w = | -1183 | 3 lbs | | | | | | | | | |
| P3d = | | 2 lbs | | | | | X1 = | 1.25 | 5 ft | | |
| P3I = | | B lbs | | | | | X2 = | 5.77 | | | |
| P3w = | -1058 | | | | | | X3 = | 7.02 | | | |
| P4d = | | 2 lbs | | | | | X4 = | 0.88 | | | |
| P4I = | 3973 | | | | | | X5 = | 6.29 | | | |
| P4w = | -2718 | | | | | | V 2 - | 0.28 | 7 11 | | |
| P4W = | -2/10 | Sui | | | | | | | | | |
| Wd = | 24.00 | • | | | | | | | | | |
| WI = | |) plf | | | | | | | | | |
| Ww= | 0.00 |) plf | | | | | | | | | |
| | | | | | | | | | | | |
| | RAd= | = | 1128 | lbs | | | | RBd= | 271 | 3 lbs | |
| | RAI= | | 2135 | lbs | | | | RBI= | 795 | 7 lbs | |
| | RAw= | = | -1450 | lbs | | | | RBw= | -529 | 3 lbs | |
| - | RAd+l= | | 3263 | lbs | | - | | RBd+l= | 1067 |) lbs | |
| | RAd+w= | | -322 | lbs | | | | RBd+w= | -258 | 3 lbs | |
| MA(DL): | -1608.9 | ft-lbs | | | | | | | | | |
| MA(LL): | -3252.7 | | | | | | | | | | |
| MA(WL): | 2233.1 | | | | | | | | Deflection | | |
| MA(DL+LL): | -4861.6 | | lu = | | 1.25 | ft | | DL = | | 2 in | |
| MA(DL+WL): | | ft-lbs | | | 1.25 | | | DL+LL = | | in | |
| MA(DL: WL). | 024.2 | 11-103 | iu – | | 1.20 | 11 | | DL ILL - | 0.00 |) | |
| | | 0544 | - | | | | | | | | |
| | 1001.0 | SPAN | Commence of the Commence of th | | = 00 | | | | Deflection | | |
| M(DL+LL): | -4861.6 | | | | 7.02 | | | DL = | -0.06 | | |
| M(DL+WL): | 624.2 | ft-lbs | lu = | | 7.02 | ft | | DL+LL = | -0.08 | 3 in | |
| | | | | | | | | | | | |
| MB(DL): | -9298.9 | ft_lhe | | | | | | | | | |
| MB(LL): | -24995.6 | | | | | | | | | | |
| | 17102.0 | | | | | | | | Deflection | | |
| MB(WL): MB(DL+LL): | -34294.5 | | lu = | | 6.29 | £4 | | DI - | | l lm | |
| | | | | | | | | DL = | 0.11 | | |
| MB(DL+WL): | 7803.1 | IL-IDS | iu = | | 6.29 | П | | DL+LL = | 0.38 | s in | |
| | USE: | W8X2 | 1 | | Fy = | | 50 ks | oi | | | |
| _ | OOL. | 110/12 | | | ' y - | | JU K | 31 | <u> </u> | | |
| | The second secon | | | | | | | | | | |

| P1d = P1l = P1w = | 89 | 7 lbs 4 lbs 9 lbs | , | P1 | | | P2 | 2 | Р3 | | | P4 |
|-------------------------|-----------|-------------------------|-------|-----|--------|---------|--------------|-----------------|--------------|----------------|--------|----|
| P2d = P2l = P2w = | 57 266 | 6 lbs 8 lbs 2 lbs | | > | <17/// | A X2 | | Х3 | - | х ⁴ | /// X5 | |
| P3d = P3l = | 492 | 2 lbs 2 lbs 6 lbs | | | | | X1 = X2 = | | 5 ft 7 ft | | | |
| P3w = | | | | | | | X3 = | | 2 ft | | | |
| P4d = | 453 | 3 lbs | | | | | X4 = | | 8 ft | | | |
| P4I = | 204 | 5 lbs | | | | | X5 = | | 9 ft | | | |
| P4w = | -1454 | 4 lbs | | | | | | | | | | |
| Wd = | 20.00 | | | | | | | | | | | |
| WI = | |) plf | | | | | | | | | | |
| Ww= | 0.00 |) plf | | | | | | | | | | |
| | RAd= | | 690 | | | | | RBd: | = | 1622 | lbs | |
| | RAI= | | 1749 | | | | | RBI: | = | 6554 | | |
| | RAw= | | -1204 | | | _ | | RBw: | | -4396 | | |
| | RAd+I= | | 2438 | | | | | RBd+l | | 8177 | | |
| | RAd+w= | - | -514 | lbs | | | | RBd+w | = | -2774 | lbs | |
| MA(DL): | -474.0 | ft-lbs | | | | | | | | | | |
| MA(LL): | | | | | | | | | | | | |
| MA(WL): | | ft-lbs | | | | _ | | | De | eflection | | |
| MA(DL+LL): | | | lu = | | 1.25 | | | DL = | | -0.00 | in | |
| MA(DL+WL): | 324.3 | ft-lbs | lu = | | 1.25 | ft | | DL+LL = | | -0.00 | in | |
| | | SPAN | I | | | | | | De | flection | | |
| M(DL+LL): | 4724.0 | | | | 7.02 | ft | | DL = | | -0.01 | in | |
| M(DL+WL): | -1549.8 | | | | 7.02 | | | DL+LL = | | 0.01 | | |
| MP(DL): | -3249.1 | ft lbo | | | | | | | | | | |
| MB(DL): | -3249.1 | | | | | | | | | | | |
| MB(LL): | 9147.8 | | | | | | | | D | flootice | | |
| MB(WL): MB(DL+LL): | -16116.1 | | lu = | | 6.29 | ft | | DL = | ь | flection | in | |
| MB(DL+UL): | 5898.7 | | | | 6.29 | | | DL = DL+LL = | | 0.06 | | |
| WID(DL ' VV L). | 3030.7 | פטו-וו | iu – | | 0.23 | ıt | | DLTLL - | | 0.30 | 1[1 | |
| | USE: | W6X2 | 0 | | Fy = | | 50 k | si | | | | |
| | | | | | | | | | _ | | | |

| Column Des | ign | | | AISC | 15th ed, Use I | First Order An | alysis Criteria |
|-------------|------------------------------|-------|------------------|----------------|------------------|----------------|-----------------|
| | P DL = 2 | .71 | kips | | Clr. Ht.= | 9.50 | ft |
| | P LL = 7 | .96 | kips | | Fascia Ht.= | 1.00 | ft |
| | PWL = -5 | .30 | kips | | Col. Trib= | 19.27 | ft |
| E | Base Shear = 0 | .20 | kips | | Wind Load= | 16.00 | psf |
| Total E | Base Shear = 0 | .84 | kips | | # of COL.= | 2 | _ |
| MWL = | w(Fascia Ht•2.5•Col Trib./# | of co | ol•L)+ w(Wrap•1/ | 2 Clr. Ht^2) | Max All. Defl = | 1.20 | in |
| M Seis = | Base Shear x L | | | N | Max Defl Ratio = | L/ | 100 |
| M Unbal = | Live Load x Col. Trib.x (Car | ору | Width/2)^2/2 | | Max Defl. = | 0.13 | in, OK |
| L = | Clr. Ht. + Fascia Ht/2 | | | | | | |
| Pr = | 10.67 kips 1.6F | r<0 | .5Py First-Or | der Analysis A | Allowed (A-7-1 | 1) | |
| Py = | 326.60 kips | | | | | | |
| N = | 0.00 •Yi (A-7- | 2) | | Use: | TS8X8X1/4 | FERENCE | |
| B2 = | 1.05 OK, A-8- | 6 | | Fy = | 46.00 | ksi | |
| MWL = | 4.58 kip-ft | | | K = | 1.00 | | |
| M Seis = | 1.98 kip-ft | | | L, Col = | 10.00 | ft | |
| M DL(Nod) = | 0.11 kip-ft | | | A = | 7.10 | in^2 | |
| M LL(Nod) = | 0.33 kip-ft | | | l = | 70.70 | in^4 | |
| M Unbal DL= | 0.00 kip-ft | | | Cm = | 1.00 | | |
| M Unbal LL= | 0.00 kip-ft | | | Pe1 = | 447.31 | kips | |
| M Unbal WL= | 0.00 kip-ft | | | B1 = | 1.04 | (A-8-3) | |
| | | | | P,AII = | 177.38 | kips | |
| , | 1 | | _ 1 | M, All = | 44.10 | kip-ft | |
| | Load Combination | | Pr, Kips | Mr, Kip-ft | Equation | Result | |
| | D+L | | 10.67 | 0.47 | 0.04 | OK | |
| | D+W | | 2.71 | 4.88 | 0.12 | OK | |
| | D+0.7E | | 2.71 | 1.56 | 0.04 | OK | |
| | D+0.75W+0.75L | | 8.68 | 3.95 | 0.11 | OK | |
| | D+0.525E+0.75L | | 8.68 | 1.46 | 0.06 | OK | |

| Top Connection : | Standard Cap Plate | Base Plate : | LBP 8 - 20 | |
|------------------|--------------------|--------------|------------|--|

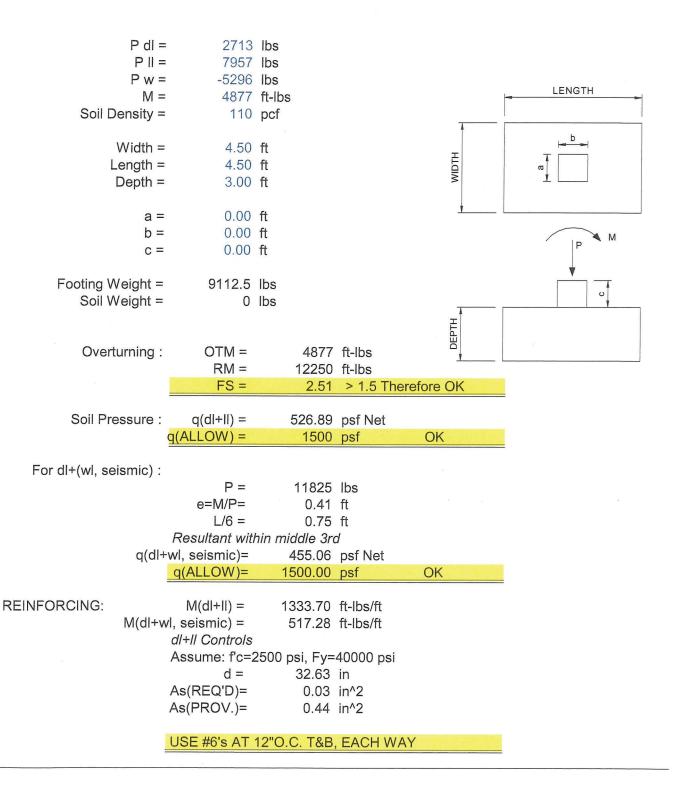
Foundation: (Restrained at Grade)

d^2=(4.25*M)/(S3*b)

M(MAX)=4877 ft-lbs Pmax= 10.67 kips S3= 100 PCF X d Footing Area= 7.07 ft^2 b= 3.000 ft Bearing= 1509.44 psf d=4.103 ft Footing= Round USE: 3.00 FT.RND. X 5.00 ft deep footing

As=12*M/(jd*24000)= 0.0653 in^2

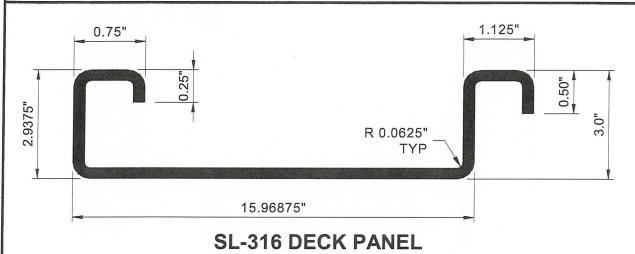
USE: 8 #8's (RND. Cage) w/ #4 Ties @ 12" O.C. w/135 hooks





LANE SUPPLY, INC.

120 Fairview Arlington, Texas 76010 817-261-9116



| | Section Properties | | | | | | | | | | | |
|------|--------------------|---------------|----------|---------------------|---------------------|---------------------|---------------------|---------------|---------------|--|--|--|
| Gage | Wt, psf | Thickness, in | ASTM 653 | +I, in ⁴ | -I, in ⁴ | +S, in ³ | -S, in ³ | +M, ft-lbs/ft | -M, ft-lbs/ft | | | |
| 20 | 2.20 | 0.0359 | Grade 40 | 0.9346 | 0.4680 | 0.3961 | 0.3036 | 592.70 | 454.44 | | | |
| 20 | 2.20 | 0.0000 | Grade 50 | 0.9208 | 0.4522 | 0.3879 | 0.2880 | 725.86 | 538.92 | | | |
| 18 | 2.93 | 0.0478 | Grade 40 | 1.2486 | 0.6827 | 0.5329 | 0.4377 | 797.77 | 655.28 | | | |
| 10 | 2.90 | 0.0470 | Grade 50 | 1.2129 | 0.6518 | 0.5141 | 0.4296 | 962.09 | 803.92 | | | |

Notes:

- 1 Designed per AISI Cold Formed Steel Manual, 2016 ed.
- 2 Complete calculations are available upon request.
- 3 ± M is allowable bending moment.

Issued 12-5-17



120 Fairview Arlington, Texas 76010 817-261-9116 FAX 817-275-1660

STANDARD BASE PLATE DESIGN

| LE | 3P | # | M | P _{BOLT} | Bolt Dia. | t REQ'D | t ACTUAL | Weld Req'd | Weld Actual | Base Plate |
|----|----|----|--------|-------------------|--------------|---------|----------|---------------|----------------|---------------|
| (D | | M) | (ft-k) | (k) | (in) | (in) | (in) | (1/16 in) | (in) | Mark |
| 8 | _ | 10 | 10 | 5.58 | 1 1/2 | 0.72 | 3/4 | 1.52 | 1/4 | LBP 1 |
| 8 | - | 20 | 20 | 10.91 | 1 1/2 | 0.99 | 1 | 3.03 | 5/16 | LBP 2 |
| 8 | - | 30 | 30 | 16.00 | 1 1/2 | 1.17 | 1 1/4 | 4.55 | 5/16 | LBP 3 |
| 8 | - | 40 | 40 | 20.87 | 1 1/2 | 1.32 | 1 1/2 | 6.06 | F.P. | LBP 4 |
| 8 | - | 50 | 50 | 26.09 | 1 1/2 | 1.46 | 1 1/2 | 7.58 | F.P. | LBP 5 |

TS 8 X 8 COLUMN:

D= 8 in.

e= 2 in.

b,d= 8 in.

CONSTANTS:

A36 Steel Plate

E70xx Electrode

A307 Anchor Bolts

Fy = 36 ksi

Fw = 0.928 k/in/16th

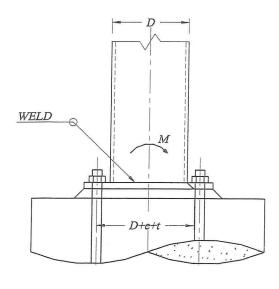
Ft = 20 ksi

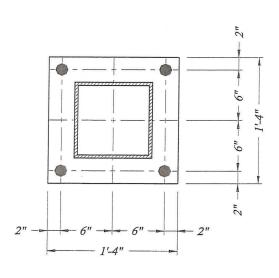
EQUATIONS:

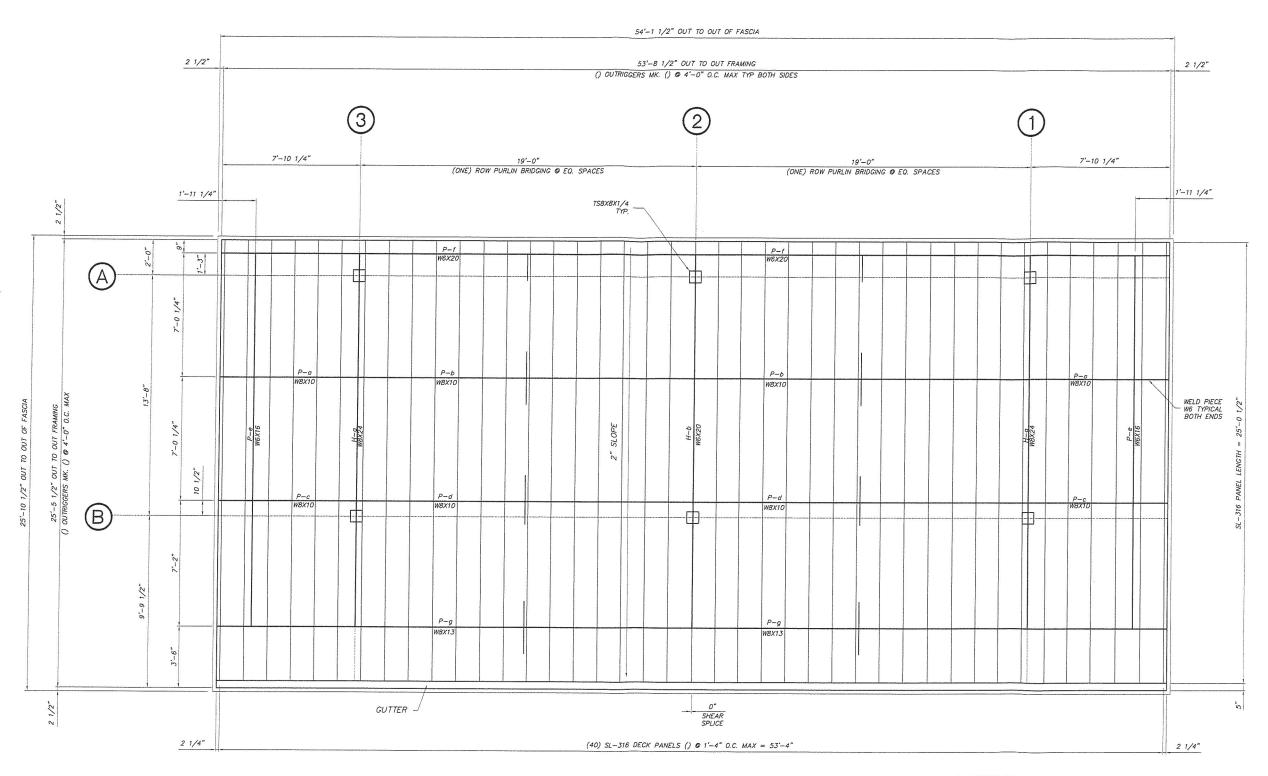
$$P_{BOLT} = \frac{M \times 12 \text{ in/ft}}{2 \text{ bolts } (D+e+t)}$$

$$Weld = \frac{M \times 12 \text{ in/ft}}{S_{\text{weld}} \times F_{\text{W}}} = \frac{M \times 12 \text{ in/ft}}{F_{\text{W}} (bd+d^{2}/3)}$$

$$t_{RBQD} = \sqrt{\frac{6 \times P \times e \times 2 \text{ bolts}}{0.75 \times Fy \times (D+2t)}}$$







DESIGN LOADS:

DEAD LOAD = 3 p.s.f.(DECK + LIGHTS) + WEIGHT OF STRUCTURAL COMPONENTS
LIVE. LOAD = 20 p.s.f.
SNOW LOAD = 20 p.s.f.
WHID LOAD V.LLT = 116 m.p.h. EXP. C
WIND V.ASD = 90 m.p.h. EXP. C
BLOC CODE = MISSOURI BUILDING CODE 2018
ADDITING 2018 INTERNATIONAL BUILDING CODE
EQUIVALENT LATERAL FORCE PROCEDURE

LATERAL FORCE RESISTING SYSTEM = CANTILLEYRED COLUMN SYSTEM-ORDINARY STEEL MOMENT FRAME
Pf = 20 p.s.f.
Ce = 1.2
LT = 1.2
S = 1.0
W = DRIFT LOADS NOT CONSIDERED
Pd = DRIFT LOADS NOT CONSIDERED
Pd = DRIFT LOADS NOT CONSIDERED
SITE CLASS = 0
SS (0.2) = 0.099
S1 (1.0) = 0.058
SD = 0.11
SD = 0.11
F0 = 1.60
FY = 2.40
R = 1.52
IMPORTANCE FACTOR = 1.0
RISK CATEGORY = II
SEISMIC DESIGN CATEGORY = II
CONSTRUCTION TYPE = IIB
COLUMNIC BASE SHEAR BOTH DIRECTIONS = 0.84 KIPS





120 Fairview Arlington, TX 76010 817-261-9116

DESIGN CALCULATIONS FOR:

Chick-fil-A #02859 Outside Meal Delivery Canopy 690 NW Blue Parkway Lee's Summit, MO

Eight-Column Canopy: 30'-0" X 61'-9" Canopy Lane Reference Number: LSC-75967 Rev 1

Date: 13-Jul-24

TABLE OF CONTENTS:

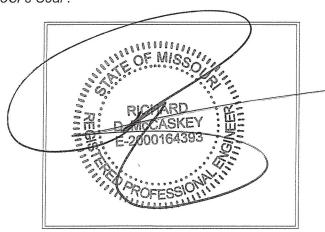
Canopy Calculations:

Design Loads: 1-2
Deck Design: 3-6
Purlin Design: 7-14
Header Design: 15-18
Column & Foundation Design: 19-24

Attachments:

Lane SL-316 Deck Panel Properties Lane Offset Base Plate Design Design Sketch

Engineer's Seal:



C.O.A. 2001015838

JUL 17 2024

Calculations By: Lane Supply, Inc. LSC -75967 Rev Customer: Chick-fil-A #02859 Outside Meal Delivery Canopy By: JO Project: 30'-0" X 61'-9" Canopy Check:

Code:

Missouri Building Code 2018

Roof Loads:

2018 International Builling Code Dead Load = 3.00 (SL-316 Deck) psf

Live/Snow Load = 20.00 psf

TOTAL = 23.00 psf

Fascia Load:

Height = 10.00 in. plf

Dead Load = 5.83

Wind Loads:

Risk Category = 11 V, ULT Speed =

116 m.p.h. Exp V, ASD Speed = 90 m.p.h. Exp

Height = 15 ft

Kd =0.85 Kh = 0.85 0.85 G =

qz =14.93 psf

Lateral Load =

 $1.0 (H) \cdot qz =$ $-1.7 (V) \cdot G \cdot qz =$

16.00 psf

Deck Uplift = Frame Uplift =

-21.58 psf

 $-1.1 (V) \cdot G \cdot qz =$

-13.96 psf

Base Shear: V =

 $CS \cdot W =$

0.084 · W

Site Class = D

Risk Category = 11 Ss(0.2) =0.099

S1(1.0) =

0.068 Fa = 1.60

Fv = 2.40

SMS = Fa·Ss = 0.16 (11.4-1)

SM1 = Fv•S1 = 0.16 (11.4-2)

SDS = 2/3.SMS = 0.11 (11.4-3)

SD1 = 2/3•SM1 = 0.11 (11.4-4)

R =1.25

0.084 (12.8-2) CS = (SDS/R) =

Seismic Design Category Based on SDS:

Α

Seismic Design Category Based on SD1:

В

Design Category:

B

Section 7.1.2--Symbols & Notation

```
Exposure Factor as determined from Table 7.3-1
Ce =
          1.2
                    Thermal factor as determined from Table 7.3-2
Ct =
          1.2
D = Snow Density in pcf as determined from Eq. 7.7-1
hb = Height of balanced snow load determined by dividing Pf by D, in feet.
hd = Height of snow drift, in feet
hc = Clear height from top of balanced snow to top of parapet, ft
                    = Fascia height, ft
hr =
                    = Importance factor (see Table 1.5-2).
ls =
          1.0
Pf = Snow load on flat roofs, psf.
                    =ground snow, psf.
           20
Pa =
Pd = Maximum intensity of drift surcharge load, psf.
```

= Length of roof upwind of the drift, feet |u| =

w = Width of snow drift, in feet

Section 7.3--Flat-Roof Snow Loads, Pf

The snow load, Pf, on a roof with a slope equal to or less than 5° shall be calculated in psf using equation 7.3-1, but not less than the following mimimum values for low slope roofs: where Pg is 20 psf or less Pf = I(Pg), where Pg exceeds 20 psf, Pf = 20 (I).

Section 7.7 & Section 7.8

The geometrey of the surcharge load due to snow drifting shall be approximated by a triangle as shown in figure 7.7-2. Drift loads shall be superimposed on the balanced snow load. If hc/hb is less than 0.2, drift loads are not required to be applied. The height of such drifts shall be taken as 0.75 x hd as determined from Fig 7.6-1, with lu equal to the length of the roof upwind of the projection or parapet wall. If the side of a roof projection is less than 15 ft long, a drift load is not required to be applied to that side. If the height, hd, is equal to or less than hc, the drift width shall equal 4hd and the drift height shall equal hd. If this height exceeds hc, the drift width, w, shall equal 4 hd2/hc and the drift height shall equal hc. However, the drift width w shall not exceed 8hc. The maximum intensity of the drift surcharge load, pd, equals hd x D where the snow density, D, is defined by Eq 7.7-

Section 7.10--Rain-On-Snow Surcharge Load

For locations where Pg is 20 psf or less but not zero, all roofs with a slope less than W/50, shall have a 5 psf rain-on-snow surcharge load appled to establish the design snow loads. This additional load applies only to the slped roof (balanced) load case and need not be used in combination with drift, sliding, unbalanced, or partial loads.

```
Pf = 0.7 \times Ce \times Ct \times Is \times Pg
                                           Ea 7.3-1
        Pf =
                       20.0 psf
        hd = 0.75 x (0.43(lu)^1/3 x (Pg+10)^1/4-1.5) Ref. Fig. 7.6-1
        hd =
                      1.23 ft
        D = 0.13Pg + 14 < 30 psf
                                            Eq 7.7-1
                     16.60 psf
        D =
                       1.20 ft
        hb =
hc = hr - hb =
                      4.80 ft
    hc/hb =
                      3.98
                                                             hd
               Consider Drift
                                                                                        DRIFT SURCHARGE
        w =
                      4.92 ft
                                                             hb
                                                                               FIGURE 7.7-2
       Pd = D x hd < D x hc
                                                                  Configuration of Snow Drifts on Lower Roofs
                     20.44 psf
       Pd =
```

| ח | 0 | ^ | k | |
|---|---|---|---|--|

| | - | ~I | 1 | 7 | - | 01 | 0 | N | |
|---|---|----|-----|----|---|----|---|---|--|
| D | = | J٦ | ٠ L | וע | = | וכ | J | N | |

| P1 | | | | | | | P2 |
|--|-------------|-----------|-------|--|---------|-------|-----|
| | PSF | 0 | 0 | 0 | | | V |
| ^A | | ^B | ^C | ^D | | ^E | |
| <l< td=""><td>1></td><td> <></td><td> <</td><td><l4< td=""><td>ļ></td><td><</td><td>X2> </td></l4<></td></l<> | 1> | <> | < | <l4< td=""><td>ļ></td><td><</td><td>X2> </td></l4<> | ļ> | < | X2> |
| | 0.00 | | V4 | 4 75 | r. | | |
| Wd: | | | X1= | 1.75 | | | |
| WI: | | | L1= | 6.00 | | | |
| Deck: Ww | | | L2= | 6.00 | | | |
| Frame: Ww | | • | L3= | 6.00 | | | |
| P1: | | | L4= | 7.25 | | | |
| P2: | = 5.83 | ріт | X2= | 3.00 | π | | |
| | | | | | | | |
| | | | | RAd= | 22.55 | plf | |
| MAd= | = 14.80 | ft-lbs/ft | | RAI= | 100.10 | | |
| MAI: | | ft-lbs/ft | Fr | ame : RAw= | -69.88 | • | |
| Deck: MAw | | ft-lbs/ft | | RA(d+l)= | 122.65 | | |
| MA(d+l)= | | | Frame | e: RA(d+w)= | -47.33 | | |
| Deck: MA(d+w)= | | ft-lbs/ft | , | | | 1 | |
| 200K: 1111 (C 11) | | | | RBd= | 15.53 | plf | |
| | | | | RBI= | 120.00 | | |
| MAB(d+l)= | 96.23 | ft-lbs/ft | Fr | ame: RBw= | -80.21 | • | |
| Deck : MAB(d+w)= | | ft-lbs/ft | | RB(d+l)= | 135.53 | | |
| 2 3 3 1 1 1 1 1 (3 1 1) | | | Frame | e: RB(d+w)= | -64.68 | | |
| MBC(d+l)= | 103.50 | ft-lbs/ft | | | | | |
| Deck : MBC(d+w)= | | ft-lbs/ft | | RCd= | 18.00 | plf | |
| , | | | | RCI= | 120.00 | plf | |
| MCD(d+I)= | 103.50 | ft-lbs/ft | Fr | ame : RCw= | -83.77 | plf | |
| Deck: MCD(d+w)= | -83.60 | ft-lbs/ft | | RC(d+l)= | 138.00 | plf | |
| | | | Frame | : RC(d+w)= | -65.77 | plf | |
| MDE(d+l)= | 136.01 | ft-lbs/ft | | | | | |
| Deck : MDE(d+w)= | -91.25 | ft-lbs/ft | | RDd= | 15.60 | plf | |
| | | | | RDI= | 132.50 | plf | |
| | | | Fr | ame : RDw= | -83.83 | | |
| MEd= | 31.00 | ft-lbs/ft | | RD(d+I)= | 148.10 | plf | |
| MEI= | 90.00 | ft-lbs/ft | Frame | : RD(d+w)= | -68.23 | plf | |
| Deck: MEw= | | ft-lbs/ft | | | | | |
| ME(d+l)= | | ft-lbs/ft | | REd= | 29.98 | | |
| Deck : ME(d+w)= | -66.10 | ft-lbs/ft | | REI= | 144.91 | • | |
| | | | Fr | ame : REw= | -101.17 | | |
| | | | | RE(d+I)= | 174.90 | 10.00 | |
| | | | Frame | : RE(d+w)= | -71.18 | plf | |
| | 105 05 155 | DEOL: | | | | | |
| USE 20 GAI | JGE GRADE C | DECK | | | | | |

| wd= ws= Deck: ww= Frame: ww= P= (Drift Surcharge)Pm= L= X= (Drift Length) Wd= | 3.00 20.00 -21.58 -13.96 5.83 20.44 6.00 1.75 4.92 | psf psf psf plf psf ft | SURCHARGE Wd A A A B MIMILIA A A A A A A B MIMILIA A A A A A A A B MIMILIA A A A A A A A A B MIMILIA A A A A A A A A B MIMILIA A A A A A B MIMILIA A A A A A A A B MIMILIA A A A A A A A B MIMILIA A A A A A A A B MIMILIA A A A A A A A A A A A A |
|---|--|---------------------------------------|---|
| RAd= | 22.55 | plf | RBd= 6.53 plf |
| RAs= | 151.33 | plf | RBs= 53.98 plf |
| Frame : RAw= | -69.88 | plf | Frame: RBw= -38.32 plf |
| Deck: RAw= | -108.00 | plf | Deck: RBw= -59.23 plf |
| RA(d+s)= | 173.88 | plf | RB(d+s)= 60.52 plf |
| Frame : RA(d+w)= | -47.33 | plf | Frame: $RB(d+w)=$ -31.79 plf |
| Deck : RA(d+w)= | -85.45 | plf | Deck: RB(d+w)= -52.69 plf |
| | | | |
| MAd = | -14.80 | ft-lbs/ft | |
| MAs = | -58.21 | ft-lbs/ft | |
| Deck: MAw = | 33.04 | ft-lbs/ft | |
| MA(d+s)= | -73.01 | ft-lbs/ft | MAB(d+s)= 79.59 ft-lbs/ft |
| Deck: MA(d+w)= | 18.24 | ft-lbs/ft | Deck: $MAB(d+w)=$ -74.73 ft-lbs/ft |

USE 20 GAUGE GRADE C DECK +S=.3961 in^3 -S=.3036 in^3 FY=40 ksl

DECK DESIGN:

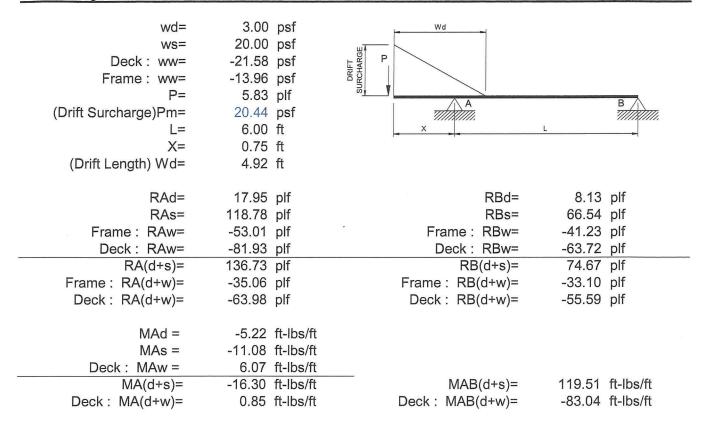
| 3.00 psf | 23.00 psf | |
|------------------|--|---|
| 20.00 psf | ^A | B^ |
| -21.58 psf | < L | > |
| -13.96 psf | | |
| | Rd= | 9.00 plf |
| 6.00 ft | RI= | 60.00 plf |
| | Frame : Rw= | -41.89 plf |
| | Deck : Rw= | -64.73 plf |
| | | |
| 103.50 ft-lbs/ft | R(d+I)= | 69.00 plf |
| -83.60 ft-lbs/ft | Frame: R(d+w)= | -32.89 plf |
| | Deck: R(d+w)= | -55.73 plf |
| | 20.00 psf -21.58 psf -13.96 psf 6.00 ft | 20.00 psf -21.58 psf < L -13.96 psf Rd= 6.00 ft Rl= Frame : Rw= Deck : Rw= 103.50 ft-lbs/ft R(d+l)= -83.60 ft-lbs/ft Frame : R(d+w)= |

USE 20 GAUGE GRADE C DECK

| | | _ | 1 | | - | 1 | 1 | | |
|-----|---|---|----|-----|-----|----|----|---|---|
| - 1 | 1 | - | K. | 1) | - ' | SI | -1 | N | • |
| | | | | | | | | | |

Deck 2

| P1 | 00 PSF | 0 | 0 | | | P2 |
|---------------------------|-----------------|------------------------|----------------|------------|------|----------|
| ^Д | 70 1 01 | ^B | 0 0 ^C ^D | | ^E | <u>v</u> |
| | L1> | _ | < < | L4> | - | X2> |
| Wo | |) psf | | 75 ft | | |
| W | | | | 00 ft | | |
| Deck: Wv | | • | | 00 ft | | |
| Frame: Wv | | 1.50 | | 00 ft | | |
| P | | B plf | | 25 ft | | |
| P2 | ?= 5.83 | B plf | X2= 3. | 00 ft | | |
| | | | RA | d- 17.05 | nlf | |
| MAd | I- 5.22 | ft-lbs/ft | RA RA | | 100 | |
| MA | | ft-lbs/ft | Frame: RA | | 100 | |
| Deck: MAw | | ft-lbs/ft | RA(d+ | | | |
| MA(d+l | | ft-lbs/ft | Frame : RA(d+w | | 9.70 | |
| Deck: MA(d+w) | | ft-lbs/ft | 1141101101 | , | ρ | |
| | | | RB | d= 17.13 | plf | |
| | | | RE | | 100 | |
| MAB(d+l) | = 100.91 | ft-lbs/ft | Frame: RBv | | • | |
| Deck: MAB(d+w) | | ft-lbs/ft | RB(d+ | | | |
| | | | Frame: RB(d+w | ·)= -65.99 | plf | |
| MBC(d+I) | = 103.50 | ft-lbs/ft | | | | |
| Deck: MBC(d+w) | = -83.60 | ft-lbs/ft | RC | d= 18.00 | plf | |
| | | | RC | | • | |
| MCD(d+I) | | ft-lbs/ft | Frame: RC | | - | |
| Deck: MCD(d+w) | = -83.60 | ft-lbs/ft | RC(d+ | • | | |
| | 100.01 | s. 11 (s. | Frame : RC(d+w | r)= -65.77 | plf | |
| MDE(d+I) | | ft-lbs/ft | | 45.00 | | |
| Deck: MDE(d+w) | = -91.25 | ft-lbs/ft | RD | | | |
| * | | | RD | | | |
| ME | _ 24.00 | £4 11 /£4 | Frame: RDv | | | |
| MEd MEI | | ft-lbs/ft | RD(d+l | | | |
| Deck: MEw | | ft-lbs/ft ft-lbs/ft | Frame : RD(d+w |)= -68.23 | рп | |
| ME(d+l) | | ft-lbs/ft | RE | d= 29.98 | nlf | |
| ME(d+i) Deck : ME(d+w) | | ft-lbs/ft | RE | | | |
| Deck. ML(UTW) | -00.10 | 11-103/11 | Frame: REv | | • | |
| | | | RE(d+l | | | |
| | | | Frame : RE(d+w | in contra | | |
| | | | | | | |
| | UGE GRADE | | | | | |
| +S=.3961 in/\ | 3 -S=.3036 in^3 | - Y =4U KSI | | | | |



USE 20 GAUGE GRADE C DECK

+S=.3961 in^3 -S=.3036 in^3 FY=40 ksl

DECK DESIGN:

| 2201122010111 | | | |
|---------------|------------------|-----------------|------------|
| Wd= | 3.00 psf | 23.00 psf | |
| WI= | 20.00 psf | ^A | B^ |
| Deck: Ww= | -21.58 psf | < L | > |
| Frame : Ww= | -13.96 psf | · | |
| | • | Rd= | 9.00 plf |
| L= | 6.00 ft | RI= | 60.00 plf |
| | | Frame : Rw= | -41.89 plf |
| | | Deck: Rw= | -64.73 plf |
| M(d+l)= | 103.50 ft-lbs/ft | R(d+I)= | 69.00 plf |
| Deck: M(d+w)= | -83.60 ft-lbs/ft | Frame : R(d+w)= | -32.89 plf |
| BOOK : W(d·W) | 00.00 11 100/11 | Deck : R(d+w)= | -55.73 plf |
| | | | |

USE 20 GAUGE GRADE C DECK

| BEAM DESIGN: | | P-a | | | | |
|---|--|---|---|---|---|---------------------------------|
| Wd= | 37.55 | plf | P | | | |
| WI= | 151.33 | B plf | V | 188.88 | plf | |
| Ww= | -69.88 | B plf | · · · · · · | ^A | B^ | |
| Pd= | 29.20 | lbs | <x></x> | < | L> | |
| PI= | 0.00 | lbs | • | | | |
| Pw= | | lbs | Deflections: (inches) | Overhang | Midspan | |
| L= | 17.77 | ft | DL= | -0.029 | 0.051 | |
| X= | 3.79 | ft | DL+LL= | -0.160 | 0.268 | |
| | | | (+downward, -upward) | | | |
| MA(d) = | 381 | ft-lbs | | RAd= | 527 | lbs |
| MA(I) = | 1088 | ft-lbs | | RAI= | 1980 | lbs |
| MA(w) = | -502 | ft-lbs | | RAw= | -914 | lbs |
| MA(d+I) = | | ft-lbs lu= | 1.33 ft | RA(d+l)= | 2506 | |
| MA(d+w) = | | ft-lbs lu= | 3.79 ft | RA(d+w)= | -388 | |
| | | | | | | university (1907) |
| | | | | RBd= | 312 | lbs |
| | | | | RBI(Max)= | 1345 | |
| | | | | RBw= | -593 | |
| MAB(d+I)= | 7267 | ft-lbs lu= | 8.89 ft | RB(d+l)= | 1657 | |
| MAB(d+w)= | | ft-lbs lu= | 1.33 ft | RB(d+w)= | -280 | |
| Wir (B(a·w) | 1210 | 11 100 10 | 1.00 11 | (d.w) | 200 | 100 |
| | USE: | W8X15 | Fy = 50 | ksi | | |
| | OOL. | *************************************** | 13 | KOI | | |
| DEALL DEGICAL | | | | | | |
| BEAM DESIGN: | | P-b | | | | |
| Wd= | 25.53 | | P | | | |
| CONTRACTOR OF THE PROPERTY OF | 25.53 120.00 | plf | l P v | 145.53 | plf | |
| Wd= | | plf plf | P _v | 145.53 | plf B^ | |
| Wd= Wl= | 120.00 | plf plf plf | V | 145.53 ^A < | B^ | |
| Wd= Wl= Ww= | 120.00 -80.21 | plf plf plf lbs | V | ^A | B^ | |
| Wd= WI= Ww= Pd= | 120.00 -80.21 33.51 | plf plf plf lbs lbs | V | ^A | B^ | |
| Wd= WI= Ww= Pd= PI= | 120.00 -80.21 33.51 0.00 | plf plf plf lbs lbs | <> | ^A < | B^ L> | |
| Wd= WI= Ww= Pd= PI= Pw= | 120.00 -80.21 33.51 0.00 0.00 | plf plf plf lbs lbs lbs ft | v <> Deflections: (inches) | ^A < Overhang | B^ L> Midspan | |
| Wd= WI= Ww= Pd= PI= Pw= L= | 120.00 -80.21 33.51 0.00 0.00 17.77 | plf plf plf lbs lbs lbs ft | V <x> Deflections: (inches) DL=</x> | ^A < Overhang -0.028 | B^ L> Midspan 0.052 | |
| Wd= WI= Ww= Pd= PI= Pw= L= X= | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 | plf plf plf lbs lbs lbs ft | V <x> Deflections: (inches) DL= DL+LL=</x> | ^A < Overhang -0.028 | B^ L> Midspan 0.052 0.321 | lbs |
| Wd= WI= Ww= Pd= Pl= Pw= L= X= | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 | plf plf plf lbs lbs ft ft | V <x> Deflections: (inches) DL= DL+LL=</x> | ^A < Overhang -0.028 -0.190 RAd= | B^ L> Midspan 0.052 | |
| Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs | V <x> Deflections: (inches) DL= DL+LL=</x> | ^A < Overhang -0.028 -0.190 RAd= RAl= | B^ L> Midspan 0.052 0.321 375 1570 | lbs |
| Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | Deflections: (inches) DL= DL+LL= (+downward, -upward) | ^A < Overhang -0.028 -0.190 RAd= RAI= RAw= | B^ L> Midspan 0.052 0.321 375 1570 -1049 | lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(l) = MA(w) = MA(d+l) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 1173 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= | V <x> Deflections: (inches) DL= DL+LL= (+downward, -upward) 1.33 ft</x> | ^A < Overhang -0.028 -0.190 RAd= RAl= RAw= RA(d+I)= | B^ L> Midspan 0.052 0.321 375 1570 -1049 1944 | lbs lbs |
| Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 1173 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | Deflections: (inches) DL= DL+LL= (+downward, -upward) | ^A < Overhang -0.028 -0.190 RAd= RAI= RAw= | B^ L> Midspan 0.052 0.321 375 1570 -1049 | lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(l) = MA(w) = MA(d+l) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 1173 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= | V <x> Deflections: (inches) DL= DL+LL= (+downward, -upward) 1.33 ft</x> | ^A < Overhang -0.028 -0.190 RAd= RAI= RAw= RA(d+I)= RA(d+w)= | B^ L> Midspan 0.052 0.321 375 1570 -1049 1944 -675 | lbs lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(l) = MA(w) = MA(d+l) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 1173 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= | V <x> Deflections: (inches) DL= DL+LL= (+downward, -upward) 1.33 ft</x> | ^A < Overhang -0.028 -0.190 RAd= RAI= RAw= RA(d+I)= RA(d+w)= RBd= | B^ L> Midspan 0.052 0.321 375 1570 -1049 1944 -675 | lbs lbs lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(l) = MA(w) = MA(d+l) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 1173 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= | V <x> Deflections: (inches) DL= DL+LL= (+downward, -upward) 1.33 ft</x> | ^A < Overhang -0.028 -0.190 RAd= RAl= RAw= RA(d+I)= RA(d+w)= RBd= RBI(Max)= | B^ L> Midspan 0.052 0.321 375 1570 -1049 1944 -675 209 1066 | lbs lbs lbs lbs |
| Wd= Wi= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(l) = MA(w) = MA(d+l) = MA(d+w) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 1173 -266 | plf plf plf lbs lbs ft ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= ft-lbs lu= | v <x> Deflections: (inches) DL= DL+LL= (+downward, -upward) 1.33 ft 3.79 ft</x> | ^A < Overhang -0.028 -0.190 RAd= RAl= RAw= RA(d+I)= RA(d+w)= RBd= RBI(Max)= RBw= | B^ L> Midspan 0.052 0.321 375 1570 -1049 1944 -675 209 1066 -680 | lbs lbs lbs lbs lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = MA(d+I) = MA(d+I) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 1173 -266 | plf plf plf lbs lbs lbs ft ft ft ft-lbs ft-lbs ft-lbs lu= ft-lbs lu= | V <x> Deflections: (inches) DL= DL+LL= (+downward, -upward) 1.33 ft 3.79 ft 8.89 ft</x> | ^A < Overhang -0.028 -0.190 RAd= RAl= RAw= RA(d+I)= RA(d+w)= RBd= RBI(Max)= RBw= RB(d+I)= | B^ L> Midspan 0.052 0.321 375 1570 -1049 1944 -675 209 1066 -680 1276 | lbs lbs lbs lbs lbs lbs lbs lbs |
| Wd= Wi= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(l) = MA(w) = MA(d+l) = MA(d+w) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 1173 -266 | plf plf plf lbs lbs ft ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= ft-lbs lu= | v <x> Deflections: (inches) DL= DL+LL= (+downward, -upward) 1.33 ft 3.79 ft</x> | ^A < Overhang -0.028 -0.190 RAd= RAl= RAw= RA(d+I)= RA(d+w)= RBd= RBI(Max)= RBw= | B^ L> Midspan 0.052 0.321 375 1570 -1049 1944 -675 209 1066 -680 | lbs lbs lbs lbs lbs lbs lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = MA(d+I) = MA(d+I) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 1173 -266 | plf plf plf lbs lbs lbs ft ft ft ft-lbs ft-lbs ft-lbs lu= ft-lbs lu= ft-lbs lu= | V <x> Deflections: (inches) DL= DL+LL= (+downward, -upward) 1.33 ft 3.79 ft 8.89 ft 1.33 ft</x> | ^A < Overhang | B^ L> Midspan 0.052 0.321 375 1570 -1049 1944 -675 209 1066 -680 1276 | lbs lbs lbs lbs lbs lbs lbs lbs |
| Wd= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = MA(d+V) = | 120.00 -80.21 33.51 0.00 0.00 17.77 3.79 311 863 -577 1173 -266 | plf plf plf lbs lbs lbs ft ft ft ft-lbs ft-lbs ft-lbs lu= ft-lbs lu= | V <x> Deflections: (inches) DL= DL+LL= (+downward, -upward) 1.33 ft 3.79 ft 8.89 ft 1.33 ft</x> | ^A < Overhang -0.028 -0.190 RAd= RAl= RAw= RA(d+I)= RA(d+w)= RBd= RBI(Max)= RBw= RB(d+I)= | B^ L> Midspan 0.052 0.321 375 1570 -1049 1944 -675 209 1066 -680 1276 | lbs lbs lbs lbs lbs lbs lbs lbs |

| Wd= 28.00 pff Wi= 120.00 pff Wi= 20.00 pff Wi= 23.77 pff Pd= 35.00 lbs Pl= 0.00 lbs | BEAM DESIGN: | | P-c | | | | | |
|---|---|---|---|--|--|---|-------------------------------------|---|
| Ww | Wd= | 28.00 | plf | P | | | | |
| Ww | WI= | 120.00 | plf | V | 148.00 | plf | | |
| Pd= | Ww= | -83.77 | plf | | ^A | B^ | : | |
| P = | Pd= | | • | < | X> < | L> | | |
| Pw | | | | , | , | | | |
| MA(d) = 3.79 ft | | | | Deflections: (inch | nes) Overhang | Midspan | | |
| MA(d) = 334 ft-lbs RAd = 409 lbs MA(l) = 863 ft-lbs RA(l = 1570 lbs RA(l = 1979 | L= | 17.77 | ft | DL= | -0.031 | 0.058 | • | |
| MA(d) = 334 ft-lbs RAd = 409 lbs MA(l) = 863 ft-lbs RA(l = 1570 lbs RA(l = 1570 | X= | 3.79 | ft | DL+LL= | -0.193 | 0.326 | | |
| MA(d) = MA(d) | | | | (+downward, -up | | | | |
| MA(I) = | MA(d) = | 334 | ft-lbs | , | ACCOUNT AND ADD | 409 | lbs | |
| MA(d+l) = MA(d+l) = MA(d+l) = 1197 ft-lbs lu= 1.33 ft RA(d+l) = 1979 lbs MA(d+w) = -268 ft-lbs lu= 1.33 ft RA(d+w) = 1979 lbs MA(d+w) = -268 ft-lbs lu= 1.33 ft RA(d+w) = -687 lbs RBd= 230 lbs RBI(Max) = 1066 lbs RBI(Max) = 1066 lbs RBI(Max) = 1066 lbs RBI(Max) = 1066 lbs RBI(d+w) = -710 lbs MAB(d+w) = -2070 ft-lbs lu= 1.33 ft RB(d+w) = 1296 lbs MAB(d+w) = -2070 ft-lbs lu= 1.33 ft RB(d+w) = -480 lbs BEAM DESIGN: P-d Wl= 132.50 plf V 158.10 plf Wl= 132.50 plf V 158.10 plf Ww = -83.83 plf P-d No0 lbs No lbs Pl= 0.00 lbs Deflections: (inches) Overhang Midspan L= 17.77 ft DL= -0.028 0.052 X= 3.79 ft DL+L= -0.028 0.052 X= 3.79 ft DL+L= -0.028 0.052 MA(d) = 317 ft-lbs MA(l) = 952 ft-lbs lu= 1.33 ft RAd= 377 lbs RAW 1733 lbs RAW 1735 lbs RAW 174 lbs lu= 1.33 ft RA(d+w) = -1097 lbs RBW 1747 lbs | | | | | | | | |
| MA(d+i) = | | | | | | | | |
| MA(d+w) = -268 ft-lbs lu = 3.79 ft RA(d+w) = -687 lbs RBd = 230 lbs RBl(Max) = 1066 lbs RBw = -710 lbs RB(d+l) = 1296 lbs RBl(d+w) = -2070 ft-lbs lu = 1.33 ft RB(d+w) = 1296 lbs RBl(d+w) = -480 lbs RBl(d+w) = -680 lbs RBl(d+w) = -711 lbs RBl(| | | | 1_33_ff | | | | |
| MAB(d+l) | | | | | | | | |
| MAB(d+I)= 5677 ft-lbs lu= 8.89 ft RB(d+I)= 1066 lbs RB(d+I)= -710 lbs MAB(d+w)= 5677 ft-lbs lu= 8.89 ft RB(d+I)= 1296 lbs MAB(d+w)= -2070 ft-lbs lu= 1.33 ft RB(d+w)= 1296 lbs BEAM DESIGN: P-d Wd= 25.60 plf IP V 158.10 plf ABA Ww= -83.83 plf Y 158.10 plf BAA Pd= 35.03 lbs IS IS IS Pw= 0.00 lbs Deflections: (inches) Overhang Midspan L= 17.77 ft DL= -0.028 0.052 X= 3.79 ft DL= -0.207 0.349 (+downward, -upward) (Hownward, -upward) RAd= 377 lbs MA(d)= 317 ft-lbs RAH= 1733 lbs MA(d+I)= 1269 ft-lbs lu= 1.33 ft RA(d+I)= 2111 lbs MA(d+w)= -286 ft-lbs lu= 3.79 ft RB(d+w)= -719 lbs | 1VI) 1(G · VV) | 200 | 11 100 10 | 0.70 11 | 10 ((a·w) | 007 | 100 | |
| MAB(d+I)= 5677 ft-lbs lu= 8.89 ft RB(d+I)= 1066 lbs RB(d+I)= -710 lbs MAB(d+w)= 5677 ft-lbs lu= 8.89 ft RB(d+I)= 1296 lbs MAB(d+w)= -2070 ft-lbs lu= 1.33 ft RB(d+w)= 1296 lbs BEAM DESIGN: P-d Wd= 25.60 plf IP V 158.10 plf ABA Ww= -83.83 plf Y 158.10 plf BAA Pd= 35.03 lbs IS IS IS Pw= 0.00 lbs Deflections: (inches) Overhang Midspan L= 17.77 ft DL= -0.028 0.052 X= 3.79 ft DL= -0.207 0.349 (+downward, -upward) (Hownward, -upward) RAd= 377 lbs MA(d)= 317 ft-lbs RAH= 1733 lbs MA(d+I)= 1269 ft-lbs lu= 1.33 ft RA(d+I)= 2111 lbs MA(d+w)= -286 ft-lbs lu= 3.79 ft RB(d+w)= -719 lbs | | | | | RBd= | 230 | lbs | |
| MAB(d+I)= 5677 ft-lbs lu= 8.89 ft RB(d+I)= 1296 lbs MAB(d+w)= -2070 ft-lbs lu= 8.89 ft RB(d+I)= 1296 lbs USE: W8X10 Fy = 50 ksi BEAM DESIGN: P-d Wd= 25.60 plf y 158.10 plf WW= -83.83 plf y 158.10 plf Pl= 0.00 lbs plf y 158.10 plf Pw= 0.00 lbs DL= -0.028 0.052 20.52 X= 3.79 ft DL= -0.020 0.349 10.00 10.00 10.00 10.00 10.00 10.00 | | | | | | | | |
| MAB(d+I)= 5677 ft-lbs lu= 8.89 ft RB(d+I)= 1296 lbs MAB(d+W)= -2070 ft-lbs lu= 8.89 ft RB(d+I)= 1296 lbs MAB(d+W)= -2070 ft-lbs lu= 8.89 ft RB(d+I)= 1296 lbs USE: W8X10 Fy = 50 ksi BEAM DESIGN: Wd= 25.60 plf Y 158.10 plf Wd= 23.83 plf A B^A Pd= 35.03 lbs A B^A Pd= 35.03 lbs Pd= A B^A Pd= 35.03 lbs Pd= 128.10 plf Wd= 20.00 lbs Pl= 0.00 lbs Pl= 0.028 0.028 0.052 0.028 0.052 0.028 0.028 0. | | | | | | | | |
| MAB(d+w) = | MAB(d+1)= | 5677 | ft-lbs lu= | 8.89 ft | | | | |
| BEAM DESIGN: | , , | | | | , , | | | |
| P-d Wd= | 1111 (B (G 11) | 2010 | 11.50 14 | 1100 11 | /\2(\d^{11}) | | | |
| Wd= 25.60 plf IP Wl= 132.50 plf V 158.10 plf Ww= -83.83 plf A B^A Pd= 35.03 lbs I I Pl= 0.00 lbs Deflections: (inches) Overhang Midspan L= 17.77 ft DL= -0.028 0.052 X= 3.79 ft DL= -0.207 0.349 (+downward, -upward) RAd= 377 lbs RAl= 1733 lbs MA(I) = 952 ft-lbs RAl= 1733 lbs RAW= -1097 lbs MA(d+I) = 1269 ft-lbs lu= 1.33 ft RA(d+I)= 2111 lbs MA(d+w) = -286 ft-lbs lu= 3.79 ft RA(d+w)= -719 lbs RBI(Max) = 1177 lbs RBW= -711 lbs RBW= -711 lbs RB(d+I)= 1387 lbs MAB(d+w) = -2158 ft-lbs lu= 1.33 ft RB(d+w)= -501 lbs | | USE: | W8X10 | Fy = | 50 ksi | | | |
| Wd= 25.60 plf IP Wl= 132.50 plf V 158.10 plf Ww= -83.83 plf A B^A Pd= 35.03 lbs I I Pl= 0.00 lbs Deflections: (inches) Overhang Midspan L= 17.77 ft DL= -0.028 0.052 X= 3.79 ft DL= -0.207 0.349 (+downward, -upward) RAd= 377 lbs RAl= 1733 lbs MA(I) = 952 ft-lbs RAl= 1733 lbs RAW= -1097 lbs MA(d+I) = 1269 ft-lbs lu= 1.33 ft RA(d+I)= 2111 lbs MA(d+w) = -286 ft-lbs lu= 3.79 ft RA(d+w)= -719 lbs RBI(Max) = 1177 lbs RBW= -711 lbs RBW= -711 lbs RB(d+I)= 1387 lbs MAB(d+w) = -2158 ft-lbs lu= 1.33 ft RB(d+w)= -501 lbs | | | | | | | et. | |
| WI= 132.50 plf v 158.10 plf Ww= -83.83 plf A B^A Pd= 35.03 lbs PI= 0.00 lbs Pw= 0.00 lbs DU= -0.028 0.052 X= 3.79 ft DL= -0.207 0.349 (+downward, -upward) MA(I) = 952 ft-lbs MA(W) = -603 ft-lbs MA(d+I) = 1269 ft-lbs lu= 1.33 ft MA(d+w) = -286 ft-lbs lu= 3.79 ft | DEAL DECION | | | | | | | |
| Ww= -83.83 plf A B^A Pd= 35.03 lbs <x < td=""> < </x <> | CONTRACTOR OF THE PROPERTY OF | | | | | | | |
| Pd= 35.03 lbs | Wd= | | plf | P | | | | - |
| Pl= | Wd= Wl= | 132.50 | plf plf | P v | 158.10 | plf | | |
| Pw= 0.00 lbs Deflections: (inches) Overhang Midspan L= 17.77 ft DL= -0.028 0.052 X= 3.79 ft DL+LL= -0.207 0.349 MA(d) = 317 ft-lbs RAd= 377 lbs MA(l) = 952 ft-lbs RAl= 1733 lbs MA(w) = -603 ft-lbs RAw= -1097 lbs MA(d+l) = 1269 ft-lbs lu= 1.33 ft RA(d+l)= 2111 lbs MA(d+w) = -286 ft-lbs lu= 3.79 ft RBd= 210 lbs RBI(Max) = 1177 lbs RBw= -711 lbs MAB(d+l) = 6084 ft-lbs lu= 8.89 ft RB(d+l)= 1387 lbs MAB(d+w) = -2158 ft-lbs lu= 1.33 ft RB(d+w)= -501 lbs | Wd= WI= Ww= | 132.50 -83.83 | plf plf plf | v | ^A | В^ | | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= | 132.50 -83.83 35.03 | plf plf plf lbs | v | ^A | В^ | | |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= | 132.50 -83.83 35.03 | plf plf plf lbs | v | ^A | В^ | | |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= Pl= | 132.50 -83.83 35.03 0.00 | plf plf plf lbs lbs | <u>v</u> < | ^A X> < | B^ L> | , | |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= PI= Pw= | 132.50 -83.83 35.03 0.00 0.00 | plf plf plf lbs lbs | v < | ^A X> < es) Overhang | B^ L> Midspan | | |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= PI= Pw= L= | 132.50 -83.83 35.03 0.00 0.00 17.77 | plf plf plf lbs lbs lbs ft | Deflections: (inch | ^A X> < es) Overhang -0.028 | B^ L> Midspan 0.052 | | |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= PI= Pw= L= | 132.50 -83.83 35.03 0.00 0.00 17.77 | plf plf plf lbs lbs lbs ft | Deflections: (inch DL= DL+LL= | ^A X> < es) Overhang -0.028 -0.207 | B^ L> Midspan 0.052 | , | |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= Pl= Pw= L= X= | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 | plf plf plf lbs lbs ft ft | Deflections: (inch DL= DL+LL= | ^A X> < es) Overhang -0.028 -0.207 vard) | B^ L> Midspan 0.052 0.349 | lbs | |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= Pl= Pw= L= X= | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 | plf plf plf lbs lbs ft ft | Deflections: (inch DL= DL+LL= | ^A X> < es) Overhang -0.028 -0.207 ward) RAd= | B^ L> Midspan 0.052 0.349 | | |
| | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 | plf plf plf lbs lbs ft ft-lbs ft-lbs | Deflections: (inch DL= DL+LL= | ^A X> < es) Overhang -0.028 -0.207 ward) RAd= RAl= | B^ L> Midspan 0.052 0.349 377 1733 | lbs | |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 -603 | plf plf plf lbs lbs ft ft-lbs ft-lbs ft-lbs | Deflections: (inch DL= DL+LL= (+downward, -upv | ^A X> < es) Overhang -0.028 -0.207 ward) RAd= RAI= RAw= | B^ L> Midspan 0.052 0.349 377 1733 -1097 | lbs lbs | |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(V) = MA(d+I) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 -603 1269 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= | Deflections: (inch DL= DL+LL= (+downward, -upv | ^A X> < es) Overhang -0.028 -0.207 vard) RAd= RAl= RAw= RA(d+l)= | B^ L> Midspan 0.052 0.349 377 1733 -1097 2111 | lbs lbs | |
| MAB(d+l)= 6084 ft-lbs lu= 8.89 ft RB(d+l)= 1387 lbs MAB(d+w)= -2158 ft-lbs lu= 1.33 ft RB(d+w)= -501 lbs | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(V) = MA(d+I) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 -603 1269 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= | Deflections: (inch DL= DL+LL= (+downward, -upv | ^A X> < es) Overhang -0.028 -0.207 vard) RAd= RAl= RAw= RA(d+l)= | B^ L> Midspan 0.052 0.349 377 1733 -1097 2111 | lbs lbs | |
| MAB(d+l)= 6084 ft-lbs lu= 8.89 ft RB(d+l)= 1387 lbs MAB(d+w)= -2158 ft-lbs lu= 1.33 ft RB(d+w)= -501 lbs | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(l) = MA(w) = MA(d+l) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 -603 1269 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= | Deflections: (inch DL= DL+LL= (+downward, -upv | ^A X> < es) Overhang -0.028 -0.207 ward) RAd= RAl= RAw= RA(d+I)= RA(d+w)= | B^ L> Midspan 0.052 0.349 377 1733 -1097 2111 -719 | lbs lbs lbs lbs | |
| $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(V) = MA(d+I) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 -603 1269 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= | Deflections: (inch DL= DL+LL= (+downward, -upv | ^A X> < es) Overhang -0.028 -0.207 ward) RAd= RAl= RAw= RA(d+I)= RA(d+w)= RBd= | B^ L> Midspan 0.052 0.349 377 1733 -1097 2111 -719 | lbs lbs lbs lbs | |
| MAB(d+w)= -2158 ft-lbs lu= 1.33 ft RB(d+w)= -501 lbs | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(V) = MA(d+I) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 -603 1269 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= | Deflections: (inch DL= DL+LL= (+downward, -upv | ^A X> < es) Overhang -0.028 -0.207 ward) RAd= RAl= RAw= RA(d+I)= RA(d+w)= RBd= RBI(Max)= | B^ L> Midspan 0.052 0.349 377 1733 -1097 2111 -719 210 1177 | lbs lbs lbs lbs lbs | |
| | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(l) = MA(w) = MA(d+l) = MA(d+w) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 -603 1269 -286 | plf plf plf lbs lbs ft ft ft ft-lbs ft-lbs ft-lbs ft-lbs lu= ft-lbs lu= | Deflections: (inch DL= DL+LL= (+downward, -upv | ^AX> < es) | B^ L> Midspan 0.052 0.349 377 1733 -1097 2111 -719 210 1177 -711 | lbs lbs lbs lbs lbs lbs lbs | |
| USE: W8X10 Fy = 50 ksi | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = MA(d+I) = MA(d+W) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 -603 1269 -286 | plf plf plf lbs lbs lbs ft ft ft ft-lbs ft-lbs ft-lbs lu= ft-lbs lu= | Deflections: (inch DL= DL+LL= (+downward, -upv 1.33 ft 3.79 ft | ^AX> < es) | B^ L> Midspan 0.052 0.349 377 1733 -1097 2111 -719 210 1177 -711 1387 | Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs | |
| | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = MA(d+I) = MA(d+I) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 -603 1269 -286 6084 -2158 | plf plf plf lbs lbs lbs ft ft ft ft-lbs ft-lbs ft-lbs lu= ft-lbs lu= ft-lbs lu= | Deflections: (inch DL= DL+LL= (+downward, -upv 1.33 ft 3.79 ft 8.89 ft 1.33 ft | ^AX> < es) | B^ L> Midspan 0.052 0.349 377 1733 -1097 2111 -719 210 1177 -711 1387 | Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs | |
| | Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = MA(d+I) = MA(d+I) = | 132.50 -83.83 35.03 0.00 0.00 17.77 3.79 317 952 -603 1269 -286 6084 -2158 | plf plf plf lbs lbs lbs ft ft ft ft-lbs ft-lbs ft-lbs lu= ft-lbs lu= ft-lbs lu= | Deflections: (inch DL= DL+LL= (+downward, -upv 1.33 ft 3.79 ft 8.89 ft 1.33 ft | ^AX> < es) | B^ L> Midspan 0.052 0.349 377 1733 -1097 2111 -719 210 1177 -711 1387 | Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs | |

| BEAM DES | | P-e | | | | | | |
|----------------|--|---|--|--|--|--|--------------------------|---|
| Wd= | | 8 plf | | | P | | 2.3 | |
| WI= | | | | | V | 184.90 | | = |
| Ww= | | (*) | | | | ^A | . B^ | |
| Pd= | | 7 lbs | | | <> | < | L> | |
| PI= | |) lbs | D-fl- | -4: | (!) | 0 | N 41 -1 | |
| Pw= | | O lbs | Defie | DL= | (inches) | Overhang | Midspan | = |
| L= X= | | 7 II 9 ft | _ | =JL+ =L+LL | | -0.046 -0.242 | 0.083 | |
| ^- | 3.7 | 9 11 | | | -upward) | -0.242 | 0.408 | |
| MA(d) = | 11 | 3 ft-lbs | (+400 | viiwaiu, | -upwaru) | RAd= | 574 | lbe |
| MA(I) = | | 2 ft-lbs | | | | RAI= | | |
| MA(w) = | | ft-lbs | | | | RAw= | | |
| MA(d+1) = | | ft-lbs lu= | _ | 1.33 | ft | RA(d+I)= | | |
| MA(d+w) = | |) ft-lbs lu= | | 3.79 | | RA(d+w)= | | |
| Wirt(a.w) = | -200 | 71-103 IU- | | 5.75 | 11 | TCA(GTW)- | -143 | 103 |
| | | | | | | RBd= | 330 | lhs |
| | | | | | | RBI(Max)= | | |
| | | | | | | RBw= | | |
| MAB(d+I)= | 7077 | ft-lbs lu= | | 8.89 | ft | RB(d+l)= | | |
| MAB(d+w)= | | ft-lbs lu= | | 1.33 | | RB(d+w)= | | |
| 1111 12 (4 11) | | 11 100 10 | | 1.00 | | (Carw) | 020 | 155 |
| | USE: | W8X10 | | Fy = | 50 | ksi | | |
| | | | | | | | - | |
| BEAM DESI | CNI. | D (| | | | | | |
| DE/ (IVI DEOI | GIV: | P-f | | | | | | |
| DL/IIII DLOI | GN: Wd= | | plf | | | | | |
| BEAW BEOF | THE RESIDENCE OF THE PARTY OF T | 32.95 118.78 | plf | OP A CONTROL OF THE STATE OF TH | | | | MANASTER TO SERVICE AND |
| DE/ WIDEOI | Wd= | 32.95 118.78 -53.01 | plf plf | | | | | |
| BEAMBEON | Wd= WI= | 32.95 118.78 -53.01 | plf plf | | | | | |
| BEAMBLO | Wd= WI= Ww= | 32.95 118.78 -53.01 20.00 | plf plf ft | | | | | |
| BEAMBLO | Wd= WI= Ww= | 32.95 118.78 -53.01 20.00 | plf plf ft | | | | | |
| BEAMBEON | Wd= WI= Ww= | 32.95 118.78 -53.01 20.00 | plf plf ft plf | | | | | |
| BEAMBLO | Wd= WI= Ww= | 32.95 118.78 -53.01 20.00 | plf plf ft plf | ^> | Rd= | 330 | | |
| BEANIBLO | Wd= Wl= Ww= L= | 32.95 118.78 -53.01 20.00 151.73 | plf plf ft plf | ^> | RI= | 1188 | lbs | |
| BLAWIBLO | Wd= Wl= Ww= L= Md= | 32.95 118.78 -53.01 20.00 151.73 | plf plf ft plf L | ^> | RI= Rw= | 1188 -530 | lbs lbs | |
| BEANTBEOT | Wd= Wl= Ww= L= Md= Ml= | 32.95 118.78 -53.01 20.00 151.73 1647.7 5938.8 | plf plf ft plf L ft-lbs ft-lbs | ^ > | RI= Rw= R(d+I)= | 1188 -530 1517 | lbs lbs | |
| BLAWIBLO | Wd= Wl= Ww= L= Md= | 32.95 118.78 -53.01 20.00 151.73 1647.7 5938.8 | plf plf ft plf L ft-lbs ft-lbs | ^> | RI= Rw= | 1188 -530 | lbs lbs | |
| BLAWI BLOT | Wd= Wl= Ww= L= Md= Ml= Mw= | 32.95 118.78 -53.01 20.00 151.73 < 1647.7 5938.8 -2650.7 | plf plf ft plf L ft-lbs ft-lbs | | RI= Rw= R(d+I)= R(d+w)= | 1188 -530 1517 -201 | lbs lbs lbs | OK |
| BEANTBEOT | Wd= Wl= Ww= L= Md= Ml= Mw= | 32.95 118.78 -53.01 20.00 151.73 < 1647.7 5938.8 -2650.7 7586.4 | plf plf ft plf L ft-lbs ft-lbs ft-lbs | | RI= Rw= R(d+I)= R(d+w)= Lu= | 1188 -530 1517 -201 6.67 | lbs lbs lbs lbs | OK |
| BEAW BEOF | Wd= Wl= Ww= L= Md= Ml= Mw= | 32.95 118.78 -53.01 20.00 151.73 < 1647.7 5938.8 -2650.7 7586.4 | plf plf ft plf L ft-lbs ft-lbs ft-lbs | > | RI= Rw= R(d+I)= R(d+w)= | 1188 -530 1517 -201 | lbs lbs lbs lbs | OK OK |
| DEAN DECI | Wd= Wl= Ww= L= Md= Ml= Mw= | 32.95 118.78 -53.01 20.00 151.73 < 1647.7 5938.8 -2650.7 7586.4 | plf plf ft plf L ft-lbs ft-lbs ft-lbs | | RI= Rw= R(d+I)= R(d+w)= Lu= | 1188 -530 1517 -201 6.67 | lbs lbs lbs lbs | |
| DEANN DECI | Wd= Wl= Ww= L= Md= Mw= M(d+I)= M(d+w)= | 32.95 118.78 -53.01 20.00 151.73 / < 1647.7 5938.8 -2650.7 7586.4 -1003.0 | plf plf ft plf L ft-lbs ft-lbs ft-lbs | - | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= | 1188 -530 1517 -201 6.67 1.33 | lbs lbs lbs lbs | |
| DEAN DECI | Wd= Wl= Ww= L= Md= Ml= Mw= | 32.95 118.78 -53.01 20.00 151.73 < 1647.7 5938.8 -2650.7 7586.4 | plf plf ft plf L ft-lbs ft-lbs ft-lbs | ^> > | RI= Rw= R(d+I)= R(d+w)= Lu= | 1188 -530 1517 -201 6.67 1.33 | lbs lbs lbs lbs | |
| DEAN DECI | Wd= Wl= Ww= L= Md= Mw= M(d+I)= M(d+w)= | 32.95 118.78 -53.01 20.00 151.73 1647.7 5938.8 -2650.7 7586.4 -1003.0 | plf plf ft plf L ft-lbs ft-lbs ft-lbs ft-lbs | Fy = | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= | 1188 -530 1517 -201 6.67 1.33 | lbs lbs lbs lbs | |
| DEAN DECI | Wd= Wl= Ww= L= Md= Mw= M(d+I)= M(d+w)= | 32.95 118.78 -53.01 20.00 151.73 / 1647.7 5938.8 -2650.7 7586.4 -1003.0 | plf plf ft plf L ft-lbs ft-lbs ft-lbs ft-lbs | Fy = | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= 50 Midspan | 1188 -530 1517 -201 6.67 1.33 | lbs lbs lbs lbs | |
| DEANN DECI | Wd= Wl= Ww= L= Md= Mw= M(d+I)= M(d+w)= | 32.95 118.78 -53.01 20.00 151.73 1647.7 5938.8 -2650.7 7586.4 -1003.0 W8X15 Deflections: | plf plf ft plf L ft-lbs ft-lbs ft-lbs ft-lbs | Fy = | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= 50 Midspan 0.085 | 1188 -530 1517 -201 6.67 1.33 | lbs lbs lbs lbs | |
| BEANT BEOT | Wd= Wl= Ww= L= Md= Mw= M(d+I)= M(d+w)= | 32.95 118.78 -53.01 20.00 151.73 / < 1647.7 5938.8 -2650.7 7586.4 -1003.0 W8X15 Deflections: DL= | plf plf ft plf L ft-lbs ft-lbs ft-lbs ft-lbs | Fy = | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= 50 Midspan | 1188 -530 1517 -201 6.67 1.33 | lbs lbs lbs lbs | |

| BEAM DESIGN: | P-g | | | | | |
|---|---|--|---|--|------------------------------------|----------|
| Wd= | THE RESERVE AND DESCRIPTION OF THE PERSON NAMED IN | plf | | | Mary and the same of the public of | |
| WI= | | • | | | | |
| Ww= | | | | | | |
| L= | | | | | | |
| L- | 20.00 | 11 | | | | |
| | 158.67 | plf | | | | |
| | Λ | ٨ | | | | |
| | < | L> | Rd= | 321 | lbs | |
| | | 5000 | RI= | 1265 | | |
| Md= | 1606.5 | ft-lbs | Rw= | -831 | | |
| MI= | | | R(d+l)= | 1587 | | - |
| Mw= | | | R(d+w)= | -510 | | |
| 10100 | -4100.0 | 11-103 | r(a·w)- | -010 | 103 | |
| M(d+l)= | 7933.4 | ft-lbs | Lu= | 6.67 | ft | ОК |
| M(d+w)= | | | Lu= | 1.33 | | OK |
| W(d·W) | 2010.0 | 11 155 | Lu | 1.00 | 10 | OK . |
| | | | | | | |
| USE: | W8X15 | Fy = | 50 k | (si | | |
| | | | | | | |
| | Deflections: (| (inches) | Midspan | | | |
| | DL= | | 0.083 | | | |
| | DL+LL= | | 0.410 | | | |
| | (+downward, | -upward) | | | | |
| BEAM DESIGN: | P-h | | | | | |
| Wd= | 31.00 | plf | | | | |
| WI= | 120.00 | plf | | | | |
| Ww= | -83.77 | plf | | | | |
| L= | 20.00 | | | | | |
| | 20.00 | π | | | | |
| | 20.00 | π | | | | |
| | 151.00 | | | | | |
| | | | | | | |
| | 151.00 | | Rd= | 310 | lbs | |
| | 151.00 | plf | | | | |
| | 151.00 ^ < | plf ^ L> | RI= | 1200 | lbs | |
| Md= | 151.00 ^ < 1550.0 | plf L> ft-lbs | RI= Rw= | 1200 -838 | lbs lbs | |
| Md= MI= | 151.00 ^ < 1550.0 6000.0 | plf | RI= Rw= R(d+I)= | 1200 -838 1510 | lbs lbs lbs | |
| Md= | 151.00 ^ < 1550.0 | plf | RI= Rw= | 1200 -838 | lbs lbs lbs | |
| Md= Ml= Mw= | 151.00 ^ < 1550.0 6000.0 -4188.7 | plf L> ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= | 1200 -838 1510 -528 | lbs lbs lbs lbs | |
| Md= Ml= Mw= M(d+I)= | 151.00 ^ < 1550.0 6000.0 -4188.7 7550.0 | plf L> ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= | 1200 -838 1510 -528 6.67 | lbs lbs lbs lbs | OK OK |
| Md= Ml= Mw= | 151.00 ^ < 1550.0 6000.0 -4188.7 | plf L> ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= | 1200 -838 1510 -528 | lbs lbs lbs lbs | OK OK |
| Md= Ml= Mw= M(d+I)= M(d+w)= | 151.00 ^ < 1550.0 6000.0 -4188.7 7550.0 | plf L> ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= | 1200 -838 1510 -528 6.67 | lbs lbs lbs lbs | |
| Md= Ml= Mw= M(d+I)= | 151.00 ^ < 1550.0 6000.0 -4188.7 7550.0 | plf L> ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= | 1200 -838 1510 -528 6.67 1.33 | lbs lbs lbs lbs | |
| Md= Ml= Mw= M(d+I)= M(d+w)= | 151.00 ^ < 1550.0 6000.0 -4188.7 7550.0 -2638.7 | plf L> ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= | 1200 -838 1510 -528 6.67 1.33 | lbs lbs lbs lbs | |
| Md= Ml= Mw= M(d+I)= M(d+w)= | 151.00 ^ < 1550.0 6000.0 -4188.7 7550.0 -2638.7 W8X13 Deflections: (i | plf L> ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= 50 ks | 1200 -838 1510 -528 6.67 1.33 | lbs lbs lbs lbs | |
| Md= Ml= Mw= M(d+I)= M(d+w)= | 151.00 ^ < 1550.0 6000.0 -4188.7 7550.0 -2638.7 W8X13 Deflections: (i | plf L> ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= 50 ks Midspan 0.097 | 1200 -838 1510 -528 6.67 1.33 | lbs lbs lbs lbs | |
| Md= Ml= Mw= M(d+I)= M(d+w)= | 151.00 ^ < 1550.0 6000.0 -4188.7 7550.0 -2638.7 W8X13 Deflections: (i | plf L> ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= 50 ks | 1200 -838 1510 -528 6.67 1.33 | lbs lbs lbs lbs | |

| BEAM DESI | IGN: | P-i | | | | | |
|------------------|--|--|---|--|---|--------------------------|----------|
| | Wd= | | plf | | | | |
| | WI= | | - | | | | |
| | Ww= | | • | | | | |
| | L= | | • | | | | |
| | _ | | | | | | |
| | | 161.10 | nlf | | | | |
| | | ^ | Λ | | | | |
| | | < | L> | Rd= | 286 | lhs | |
| | | 1 ~ | | RI= | 1325 | | |
| | Md= | 1430.0 | ft_lhe | Rw= | -838 | | |
| | MI= | | _ | R(d+l)= | 1611 | | |
| | Mw= | | | R(d+w)= | -552 | | |
| | IVIV | 7101.7 | 11-10-3 | 11(a · w) | -002 | 103 | |
| | M(d+l)= | 8055.0 | ft_lhe | Lu= | 6.67 | ft | ОК |
| | M(d+w)= | | | Lu= | 1.33 | | OK |
| | M(G·W) | -2101.1 | 11-105 | Lu- | 1.55 | 11 | OK |
| | | | | | | | |
| | USE: | W8X13 | Ev = | 50 k | voi | | |
| | USE. | VVOXIO | Fy = | 30 F | (5) | | |
| | | Deflections: (| (inches) | Midonon | | | |
| | | Deflections. (| inches) | Midspan 0.090 | | | |
| | | DL+LL= | | | | | |
| | | | | 0.505 | | | |
| DEAMADEOU | | (+downward, | -upwaru) | | | | |
| | | D i | | | | | |
| BEAM DESIG | AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN | P-j | nlf | | | | |
| BEAM DESIG | Wd= | 44.98 | | | | | |
| BEAM DESIG | Wd= WI= | 44.98 144.91 | plf | | | | |
| BEAM DESIG | Wd= WI= Ww= | 44.98 144.91 -101.17 | plf plf | | | | |
| BEAM DESIG | Wd= WI= | 44.98 144.91 | plf plf | | | | |
| BEAM DESIG | Wd= WI= Ww= | 44.98 144.91 -101.17 20.00 | plf plf ft | | | | |
| BEAM DESIG | Wd= WI= Ww= L= | 44.98 144.91 -101.17 20.00 189.90 | plf plf ft plf | | | | |
| BEAM DESIG | Wd= WI= Ww= L= | 44.98 144.91 -101.17 20.00 189.90 | plf plf ft | ۔۔۔ | 450 | lha | |
| BEAM DESIG | Wd= WI= Ww= L= | 44.98 144.91 -101.17 20.00 189.90 | plf plf ft plf | Rd= | 450 | | |
| BEAM DESIG | Wd= WI= Ww= L= | 44.98 144.91 -101.17 20.00 189.90 | plf plf ft plf | RI= | 1449 | lbs | |
| BEAM DESIG | Wd= WI= Ww= L= | 44.98 144.91 -101.17 20.00 189.90 ^ < | plf plf ft plf | RI= Rw= | 1449 -1012 | lbs lbs | |
| BEAM DESIG | Wd= WI= Ww= L= Md= MI= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 | plf plf ft plf L> ft-lbs ft-lbs | RI= Rw= R(d+I)= | 1449 -1012 1899 | lbs lbs | |
| BEAM DESIG | Wd= WI= Ww= L= | 44.98 144.91 -101.17 20.00 189.90 ^ < | plf plf ft plf L> ft-lbs ft-lbs | RI= Rw= | 1449 -1012 | lbs lbs | |
| BEAM DESIG | Wd= WI= Ww= L= Md= MI= Mw= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 -5058.3 | plf plf ft plf L> ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= | 1449 -1012 1899 -562 | lbs lbs lbs | OI/ |
| BEAM DESIG | Wd= Wl= Ww= L= Md= Ml= Mw= M(d+l)= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 -5058.3 9494.9 | plf plf ft plf L> ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= | 1449 -1012 1899 -562 6.67 | lbs lbs lbs lbs | OK |
| BEAM DESIG | Wd= WI= Ww= L= Md= MI= Mw= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 -5058.3 | plf plf ft plf L> ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= | 1449 -1012 1899 -562 | lbs lbs lbs lbs | OK OK |
| BEAM DESIGNATION | Wd= Wl= Ww= L= Md= Ml= Mw= M(d+l)= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 -5058.3 9494.9 | plf plf ft plf L> ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= | 1449 -1012 1899 -562 6.67 | lbs lbs lbs lbs | |
| BEAM DESIG | Wd= WI= Ww= L= Md= MI= Mw= M(d+I)= M(d+w)= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 -5058.3 9494.9 -2809.1 | plf plf ft plf L> ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= | 1449 -1012 1899 -562 6.67 1.33 | lbs lbs lbs lbs | |
| BEAM DESIG | Wd= WI= Ww= L= Md= MI= Mw= M(d+I)= M(d+w)= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 -5058.3 9494.9 | plf plf ft plf L> ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= | 1449 -1012 1899 -562 6.67 1.33 | lbs lbs lbs lbs | |
| BEAM DESIG | Wd= WI= Ww= L= Md= MI= Mw= M(d+I)= M(d+w)= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 -5058.3 9494.9 -2809.1 | plf plf ft plf L> ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= 50 k | 1449 -1012 1899 -562 6.67 1.33 | lbs lbs lbs lbs | |
| BEAM DESIG | Wd= WI= Ww= L= Md= MI= Mw= M(d+I)= M(d+w)= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 -5058.3 9494.9 -2809.1 W8X15 Deflections: (i | plf plf ft plf L> ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= 50 k | 1449 -1012 1899 -562 6.67 1.33 | lbs lbs lbs lbs | |
| BEAM DESIG | Wd= WI= Ww= L= Md= MI= Mw= M(d+I)= M(d+w)= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 -5058.3 9494.9 -2809.1 W8X15 Deflections: (i | plf plf ft plf L> ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= 50 k Midspan 0.116 | 1449 -1012 1899 -562 6.67 1.33 | lbs lbs lbs lbs | |
| BEAM DESIG | Wd= WI= Ww= L= Md= MI= Mw= M(d+I)= M(d+w)= | 44.98 144.91 -101.17 20.00 189.90 ^ < 2249.2 7245.7 -5058.3 9494.9 -2809.1 W8X15 Deflections: (i | plf plf ft plf L> ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs ft-lbs | RI= Rw= R(d+I)= R(d+w)= Lu= Lu= 50 k | 1449 -1012 1899 -562 6.67 1.33 | lbs lbs lbs lbs | |

| BEAM DESIGN. | | P-K | | | | | | |
|------------------------|--------|----------|-----|----------------|----------|-------------------------------|----------------------|------------|
| Wd= | 37.55 | - | | | P | | | |
| WI= | 151.33 | | | | V | 188.88 | plf | = |
| Ww= | -69.88 | 3 plf | | | | ^A | B^ | |
| Pd= | 29.20 |) lbs | | | <> | < | L> | |
| PI= | 0.00 |) lbs | | | , | | | |
| Pw= | 0.00 |) lbs | | Deflections: | (inches) | Overhang | Midspan | |
| L= | 18.83 | 3 ft | | DL= | , | -0.016 | 0.074 | - |
| X= | 1.31 | | | DL+LL= | | -0.083 | 0.379 | |
| ~ | | | | (+downward, | -upward) | 0.000 | 0.0.0 | |
| MA(d) = | 71 | ft-lbs | | (aominara, | apwara | RAd= | 436 | lhe |
| MA(I) = | | ft-lbs | | | | RAI= | 1631 | |
| MA(w) = | | ft-lbs | | | | RAW= | -753 | |
| | | | lu- | _ 1 22 | £4 | | | |
| MA(d+I) = | | ft-lbs | | 1.33 | | RA(d+I)= | 2066 | |
| MA(d+w) = | 10 | ft-lbs | Iu= | 1.31 | π | RA(d+w)= | -317 | IDS |
| | | | | | | RBd= | 350 | lbs |
| | | | | | | RBI(Max)= | 1425 | |
| | | | | | | RBw= | -655 | |
| MAB(d+l)= | 8339 | ft-lbs | lu= | 9.42 | ft | RB(d+l)= | 1775 | |
| MAB(d+w)= | | ft-lbs | | 1.33 | | RB(d+w)= | -305 | |
| Wir (D(a·w) | 1400 | It ibs | iu | 1.00 | TC. | ND(d·W) | -500 | 103 |
| 123 | USE: | W8X1 | 5 | Fy = | 50 | ksi | | |
| | | | | | | | | |
| BEAM DESIGN: | | P-I | | | | | | |
| Wd= | 25.53 | 550 | | | P | | | |
| WI= | 120.00 | | | 1 | V | 145.53 | plf | : |
| Ww= | -80.21 | - | | | | ^A | В^ | |
| Pd= | 33.51 | | | | <> | < | L> | |
| PI= | 0.00 | lbs | | | | | | |
| Pw= | 0.00 | lbs | | Deflections: (| inches) | Overhang | Midspan | |
| L= | 18.83 | ft | | DL= | | -0.017 | 0.078 | |
| X= | 1.31 | ft | | DL+LL= | | -0.100 | 0.454 | |
| | | | | (+downward, | -upward) | | | |
| MA(d) = | 66 | ft-lbs | | , | | RAd= | 311 | lbs |
| MA(I) = | | ft-lbs | | | | RAI= | 1293 | |
| MA(w) = | | ft-lbs | | | | RAw= | -864 | |
| MA(d+I) = | | ft-lbs | lu= | 1.33 | ft | RA(d+l)= | 1604 | |
| MA(d+w) = | | ft-lbs | | 1.31 | | RA(d+w)= | -553 | |
| 1VI/ ((U · VV) - | -5 | ורוטט | iu- | 1.51 | 11 | (u · w)- | -555 | IDO |
| | | | | | | | | |
| , | | | | | | RBd= | 237 | lbs |
| , , , | | | | | | RBd= RBI(Max)= | 237 1130 | |
| | | | | | | RBI(Max)= | 1130 | lbs |
| | 6420 | ft-lbs l | lu= | 9 42 | ff | RBI(Max)= RBw= | 1130 -752 | lbs lbs |
| ЛАВ(d+I)= | | ft-lbs I | | 9.42 1.33 | | RBI(Max)= RBw= RB(d+I)= | 1130 -752 1367 | lbs lbs |
| ЛАВ(d+I)= ЛАВ(d+w)= | | ft-lbs I | | 9.42 1.33 | | RBI(Max)= RBw= | 1130 -752 | lbs lbs |

BEAM DESIGN:

P-k

| BEAM DESIG | | P-m | | | | | | |
|--|--|---|-----------------------|--|--|--|--|-------------------------------------|
| Wd= | 28.00 | | | | P | | | |
| WI= | 120.00 | plf | | | V | 148.00 | plf | _ |
| Ww= | -83.77 | ' plf | | | | ^A | B^ | |
| Pd= | 35.00 | lbs | | | <> | < | L> | |
| PI= | | lbs | | | | | | |
| Pw= | 0.00 | lbs | | Deflections: | (inches) | Overhang | Midspan | _ |
| L= | 18.83 | ft | | DL= | | -0.019 | 0.086 | |
| X= | 1.31 | ft | | DL+LL= | | -0.102 | 0.462 | |
| | | | | (+downward | , -upward) | | | |
| MA(d) = | 70 | ft-lbs | | | | RAd= | 339 | lbs |
| MA(I) = | 103 | ft-lbs | | | | RAI= | 1293 | lbs |
| MA(w) = | -72 | ft-lbs | | | | RAw= | -903 | lbs |
| MA(d+I) = | 173 | ft-lbs | lu= | 1.33 | ft | RA(d+l)= | 1632 | lbs |
| MA(d+w) = | -2 | ft-lbs | lu= | 1.31 | ft | RA(d+w)= | -564 | lbs |
| , | | | | | | , | | |
| | | | | | | RBd= | 260 | lbs |
| | | | | | | RBI(Max)= | 1130 | |
| | | | | | | RBw= | -785 | |
| MAB(d+I)= | 6527 | ft-lbs | lu= | 9.42 | ft | RB(d+l)= | 1390 | |
| MAB(d+w)= | | ft-lbs | | 1.33 | | RB(d+w)= | -525 | |
| 1011 (C (C) | 2172 | 11 100 | 10 | 1.00 | | (C) | 020 | 150 |
| | USE: | W8X | 10 | Fy = | 50 | ksi | | |
| = | | | | | | | | |
| | | | | | | | | |
| BEAM DESIG | CONTRACTOR AND ADDRESS OF THE PARTY OF THE P | P-n | | | | | | |
| Wd= | 25.60 | plf | | | P | | | |
| Wd= Wl= | 25.60 132.50 | plf plf | | | P v | 158.10 | plf | |
| Wd= Wl= Ww= | 25.60 132.50 -83.83 | plf plf plf | Manager to the second | | V | ^A | В^ | |
| Wd= WI= Ww= Pd= | 25.60 132.50 -83.83 35.03 | plf plf plf lbs | × | | V | 158.10 ^A < | В^ | |
| Wd= WI= Ww= Pd= Pl= | 25.60 132.50 -83.83 35.03 0.00 | plf plf plf lbs lbs | | | <> | ^A < | B^ L> | |
| Wd= WI= Ww= Pd= | 25.60 132.50 -83.83 35.03 0.00 0.00 | plf plf plf lbs lbs | | Deflections: (| <> | ^A < Overhang | B^ L> Midspan | |
| Wd= WI= Ww= Pd= Pl= Pw= L= | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 | plf plf plf lbs lbs lbs ft | | DL= | <> | ^A < Overhang -0.017 | B^ L> Midspan 0.078 | |
| Wd= Wl= Ww= Pd= Pl= Pw= | 25.60 132.50 -83.83 35.03 0.00 0.00 | plf plf plf lbs lbs lbs ft | | DL= DL+LL= | <x> (inches)</x> | ^A < Overhang | B^ L> Midspan | |
| Wd= WI= Ww= Pd= Pl= Pw= L= | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 | plf plf plf lbs lbs lbs ft | | DL= | <x> (inches)</x> | ^A < Overhang -0.017 | B^ L> Midspan 0.078 0.493 | |
| Wd= WI= Ww= Pd= Pl= Pw= L= | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 | plf plf plf lbs lbs lbs ft | | DL= DL+LL= | <x> (inches)</x> | ^A < Overhang -0.017 | B^ L> Midspan 0.078 | lbs |
| Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 | plf plf plf lbs lbs lbs ft | | DL= DL+LL= | <x> (inches)</x> | ^A < Overhang -0.017 -0.109 | B^ L> Midspan 0.078 0.493 313 1428 | lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 | plf plf plf lbs lbs ft ft | | DL= DL+LL= | <x> (inches)</x> | ^A < Overhang -0.017 -0.109 RAd= | B^ L> Midspan 0.078 0.493 | lbs |
| Wd= WI= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 -72 | plf plf plf lbs lbs ft ft ft-lbs | lu= | DL= DL+LL= | <x> (inches) -upward)</x> | ^A < Overhang -0.017 -0.109 RAd= RAI= | B^ L> Midspan 0.078 0.493 313 1428 | lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 -72 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | | DL= DL+LL= (+downward, | v <x> (inches) -upward)</x> | Overhang -0.017 -0.109 RAd= RAI= RAW= | Midspan 0.078 0.493 313 1428 -903 | lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 -72 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | | DL= DL+LL= (+downward, | v <x> (inches) -upward)</x> | ^A < Overhang -0.017 -0.109 RAd= RAI= RAw= RA(d+I)= | Midspan 0.078 0.493 313 1428 -903 1741 | lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 -72 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | | DL= DL+LL= (+downward, | v <x> (inches) -upward)</x> | ^A < Overhang -0.017 -0.109 RAd= RAI= RAw= RA(d+I)= | Midspan 0.078 0.493 313 1428 -903 1741 | lbs lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 -72 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | | DL= DL+LL= (+downward, | v <x> (inches) -upward)</x> | ^A < Overhang -0.017 -0.109 RAd= RAl= RAw= RA(d+I)= RA(d+w)= | B^ L> Midspan 0.078 0.493 313 1428 -903 1741 -590 | lbs lbs lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 -72 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | | DL= DL+LL= (+downward, | v <x> (inches) -upward)</x> | Overhang -0.017 -0.109 RAd= RAl= RAw= RA(d+I)= RA(d+w)= RBd= | Midspan 0.078 0.493 313 1428 -903 1741 -590 | lbs lbs lbs lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = MA(d+W) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 -72 182 -4 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | lu= | DL= DL+LL= (+downward, | v <> (inches) -upward) ft ft | ^A < Overhang -0.017 -0.109 RAd= RAI= RAw= RA(d+I)= RA(d+W)= RBd= RBI(Max)= RBW= | Midspan 0.078 0.493 313 1428 -903 1741 -590 237 1248 | lbs lbs lbs lbs lbs lbs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 -72 182 -4 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | lu= lu= | DL= DL+LL= (+downward, 1.33 1.31 | v <x> (inches) -upward) ft ft</x> | ^A < Overhang | B^ L> Midspan 0.078 0.493 313 1428 -903 1741 -590 237 1248 -786 | Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = MA(d+I) = MA(d+W) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 -72 182 -4 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | lu= lu= | DL= DL+LL= (+downward, 1.33 1.31 | v <x> (inches) -upward) ft ft</x> | ^A < Overhang -0.017 -0.109 RAd= RAI= RAw= RA(d+I)= RA(d+W)= RBd= RBI(Max)= RBW= | B^ L> Midspan 0.078 0.493 313 1428 -903 1741 -590 237 1248 -786 1485 | Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs |
| Wd= Wl= Ww= Pd= Pl= Pw= L= X= MA(d) = MA(I) = MA(w) = MA(d+I) = MA(d+I) = MA(d+W) = | 25.60 132.50 -83.83 35.03 0.00 0.00 18.83 1.31 68 114 -72 182 -4 | plf plf plf lbs lbs ft ft ft-lbs ft-lbs ft-lbs | lu= lu= lu= | DL= DL+LL= (+downward, 1.33 1.31 | v <x> (inches) -upward) ft ft</x> | ^A < Overhang | B^ L> Midspan 0.078 0.493 313 1428 -903 1741 -590 237 1248 -786 1485 | Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs Ibs |

| BEAM DESIG | N: | P-o | | | | | | |
|------------|---------|------------|--------------|---|-----------|---------|-----|--|
| Wd= | 39.98 | plf | | P | | | | |
| WI= | 144.91 | plf | , | V | 184.90 | plf | _ | |
| Ww= | -101.17 | plf | | | ^A | B^ | - | |
| Pd= | 42.27 | lbs | | <x< td=""><td>> <</td><td>L> </td><td></td><td></td></x<> | > < | L> | | |
| PI= | 0.00 | lbs | | | | | | |
| Pw= | 0.00 | lbs | Deflections: | (inches) | Overhang | Midspan | | |
| L= | 18.83 | ft | DL= | 7 | -0.027 | 0.123 | | |
| X= | 1.31 | ft | DL+LL= | | -0.127 | 0.577 | | |
| | | | (+downward, | -upward) | | | | |
| MA(d) = | 90 | ft-lbs | | | RAd= | 476 | lbs | |
| MA(I) = | 125 | ft-lbs | | | RAI= | 1561 | lbs | |
| MA(w) = | -87 | ft-lbs | | | RAw= | -1090 | lbs | |
| MA(d+I) = | 215 | ft-lbs lu= | 1.33 | ft | RA(d+l)= | 2037 | lbs | |
| MA(d+w) = | 3 | ft-lbs lu= | 1.31 | ft | RA(d+w)= | -614 | lbs | |
| | | | | | | | | |
| | | | | | RBd= | 372 | lbs | |
| | | | | | RBI(Max)= | 1365 | lbs | |
| | | | | | RBw= | -948 | lbs | |
| MAB(d+I)= | 8153 | ft-lbs lu= | 9.42 | ft | RB(d+l)= | 1736 | lbs | |
| MAB(d+w)= | -2714 | ft-lbs lu= | 1.33 | ft | RB(d+w)= | -576 | lbs | |
| | | | | | | | | |
| | USE: | W8X10 | Fy = | 5 | 50 ksi | | | |

| P1d= P1l= | 527 1980 | | | | P1 | , | P2 | P3 | | P4 | | P5 ▼ | |
|--------------|-------------|-----|---------|---------------|-----|----|--------|--------|-------|----|-----|----------------|-------------------------|
| P1w= | -914 | lbs | nda | A ///// X1 | 1 . | _ | | I | | Ĭ | \/F | ı E | 3 6 <i>111111111</i> |
| P2d= | 375 | lbs | 'IIIII | ////// X1 | X | .2 | X3 | | X4 | - | X5 | X | .6 mm |
| P2I= | 1570 | lbs | | | | | | | | | | | |
| P2w= | -1049 | lbs | | | | | | | | | | | |
| P3d= | 409 | lbs | | | | | X1 = | | 1.38 | ft | | | |
| P3I= | 1570 | lbs | | | | | X2 = | | 6.00 | ft | | | |
| P3w= | -1096 | lbs | | | | | X3 = | | 6.00 | ft | | | |
| P4d= | 377 | lbs | | | | | X4 = | | 6.00 | ft | | | |
| P4I= | 1733 | lbs | | | | | X5 = | | 7.25 | ft | | | |
| P4w= | -1097 | lbs | | | | | X6 = | | 1.00 | ft | | | |
| P5d= | 574 | lbs | | | | | L = | | 27.63 | ft | | | |
| P5I= | 1896 | lbs | | | | | | | | | | | |
| P5w= | -1323 | lbs | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| Wd= | 58.00 | plf | | | | | | | | | | | |
| WI= | 0.00 | | | | | | | | | | | | |
| Ww= | 0.00 | - | | | | | | | | | | | |
| | | • | | | , | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | RA(d)= | | 1921 | lbs | | | | | | | | | |
| | RA(I)= | | 4428 | lbs | | | | | | | | | |
| | RA(w)= | | -2579 | lbs | | | | | | | | | |
| _ | RA(d+l)= | | 6348 | lbs | | | | | | | | | |
| | RA(d+w)= | | -658 | lbs | | | | | | | | | |
| | | | | | | | | Deflec | tion | | | | |
| | | | | | | | dl= | | 0.24 | in | | | |
| | | | | | | | dl+ll= | | 0.77 | in | | | |
| | RB(d)= | | 1943 | lbs | | | | | | | | | |
| | RB(I)= | | 4320 | lbs | | | | | | | | | |
| | RB(w)= | | -2901 | lbs | | | | | | | | | |
| - | RB(d+l)= | | 6264 | lbs | | | | | | | | | |
| | RB(d+w)= | | -957 | lbs | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| M | span(d+l) = | 3 | 37979.5 | ft-lbs | lu= | | 7.25 | | | | | | |
| | pan(d+w) = | | -5290.7 | ft-lbs | lu= | | 7.25 | ft | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

Fy =

50 ksi

USE: W8X58

| P1d= P1l= | 642 2532 | | | P1 | | P2 | P3 | 3 | P4 | | P5 | |
|--------------|--|--|-------------------|------|---|----------|--------|---------------|----|----|-----|--|
| P1w= | -1123 | lbs "" | A ///// X1 | 1 | | 20 12000 | 1 | THE PROPERTY. | | | ı В | |
| P2d= | 531 | lbs | ////// X1 | X | 2 | X3 | | X4 | - | X5 | X6 | |
| P2I= | 2332 | lbs | | | | | | | | | | |
| P2w= | -1511 | lbs | | | | | | | | | | |
| P3d= | 540 | lbs | | | | X1 = | | 1.38 | ft | | | |
| P3I= | 2266 | lbs | | | | X2 = | | 6.00 | ft | | | |
| P3w= | -1548 | lbs | | | | X3 = | | 6.00 | ft | | | |
| P4d= | 496 | | | | | X4 = | | 6.00 | | | | |
| P4I= | 2502 | | | | | X5 = | | 7.25 | | | | |
| P4w= | -1549 | | | | | X6 = | | 1.00 | | | | |
| P5d= | 780 | | | | | L = | | 27.63 | ft | | | |
| P5I= | 2737 | | | | | | | | | | | |
| P5w= | -1870 | lbs | | | | | | | | | | |
| Wd= | 67.00 | | | | | | | | | | | |
| WI= | 0.00 | plf | | | | | | | | | | |
| Ww= | 0.00 | plf | | | | | | | | | | |
| - | RA(d)= RA(I)= RA(w)= RA(d+I)= RA(d+w)= | 2379 6131 -3504 8510 -1125 | lbs lbs lbs | | | | | | | | | |
| | ((3) | | | | | | Deflec | tion | | | | |
| | | | | - | | dl= | | 0.25 | in | | | |
| | | | | | | dl+ll= | | 0.89 | in | | | |
| | RB(d)= | 2460 | lbs | | | | | | | | | |
| | RB(I)= | 6238 | lbs | | | | | | | | | |
| | RB(w)= | -4098 | lbs | | | | | | | | | |
| | RB(d+I)= | 8698 | | | | | | | | | | |
| | RB(d+w)= | -1638 | lbs | | | | | | | | | |
| M | span(d+l) = | 52564.0 | ft_lhe | lu= | | 7.25 | ft | | | | | |
| | pan(d+w) = | -9379.9 | | | | 7.25 | | | | | | |
| IVIO | pan(a.w) = | 3070.9 | 11 103 | iu - | | 7.20 | | | | | | |

50 ksi

Fy =

USE: W8X67

| P1d= P1l= | 679 2613 | | | P1 | | P2 ▼ | P3 ▼ | P4 ▼ | P\$ | 5 |
|--------------|--|-------------------------------|-----------------|-----|-------|--------------|------------|---------|-----|---|
| P1w= | -1185 | lbs | A X1 | 1 | 2.2.2 | 1 | 1 | 1 | 1 | B |
| P2d= | 558 | lbs | 7/////////// X1 | | X2 | X3 | X4 | X | 5 | X6"//////////////////////////////////// |
| P2I= | 2395 | lbs | | | | | | | | |
| P2w= | -1583 | | | | | | | | | |
| P3d= | 570 | | | | | X1 = | 1.38 | | | |
| P3I= | 2330 | | | | | X2 = | 6.00 | | | |
| P3w= | -1623 | | | | | X3 = | 6.00 | | | |
| P4d= | 523 | | | | | X4 = | 6.00 | | | |
| P4I= | 2573 | | | | | X5 = | 7.25 | | | |
| P4w= | -1624 | | | | | X6 = | 1.00 | | | |
| P5d= | 822 | | | | | L = | 27.63 | ft | | |
| P5I= | 2814 | | | | | | | | | |
| P5w= | -1960 | lbs | | | | | | | | |
| Wd= | 67.00 | plf | | | | | | | | |
| WI= | 0.00 | plf | | | | | | | | |
| Ww= | 0.00 | plf | | | | | | | | |
| _ | RA(d)= RA(I)= RA(w)= RA(d+I)= | 2460 6311 -3679 8771 | lbs lbs | | _ | | | | | |
| | RA(d+w)= | -1219 | | | | | | | | |
| | | | | | | | Deflection | | | |
| | | | | | | dl= | 0.26 | | | |
| | | | | | | dl+ll= | 0.91 | in | | |
| | RB(d)= | 2543 | | | | | | | | |
| | RB(I)= | 6414 | | | | | | | | |
| - | RB(w)= | -4295 | | | _ | | | | | |
| | RB(d+l)= | 8957 | | | | | | | | |
| | RB(d+w)= | -1752 | ibs | | | | | | | |
| | | | | | | 200 00 00 00 | 30 | | | |
| | pan(d+l) = | 54091.1 | | | | 7.25 1 | | | | |
| ıvısp | an(d+w) = | -10082.3 | TT-IDS | iu= | | 7.25 f | π | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

USE: W8X67 Fy = 50 ksi

| P1d= P1l= | 436 1631 | lbs lbs | | P1 ▼ | | P2 | P3 ▼ | P4 | P5 |
|--------------|-------------|------------|---|----------------|----|---------|-----------|--------|---|
| P1w= | -753 | lbs ,,,, | A //////////////////////////////////// | ı | | | 1 | 1 | B |
| P2d= | 311 | lbs | <i>M</i> (((()), X1 | - | X2 | X3 | X4 | X5 | X6"//////////////////////////////////// |
| P2I= | 1293 | | | | | | | | |
| P2w= | -864 | lbs | | | | | | | |
| P3d= | 339 | lbs | | | | X1 = | 1.38 | ft | |
| P3I= | 1293 | lbs | | | | X2 = | 6.00 | ft | |
| P3w= | -903 | lbs | | | | X3 = | 6.00 | ft | |
| P4d= | 313 | lbs | | | | X4 = | 6.00 | ft | |
| P4I= | 1428 | lbs | | | | X5 = | 7.25 | ft | |
| P4w= | -903 | lbs | | | | X6 = | 1.00 | ft | |
| P5d= | 476 | lbs | | | | L= | 27.63 | ft | |
| P5I= | 1561 | lbs | | | | | | | |
| P5w= | -1090 | lbs | | | | | | | |
| | | | | | | | | | |
| Wd= | 48.00 | plf | | | | | | | |
| WI= | 0.00 | plf | | | | | | | |
| Ww= | 0.00 | plf | | | | | | | |
| | | | | | | | | | |
| | RA(d)= | 1591 | lbs | | | | | | |
| | RA(I)= | | lbs | | | | | | |
| | RA(w)= | -2124 | | | | | | | |
| ·- | RA(d+l)= | | Blbs | | - | | | | |
| | RA(d+w)= | | lbs | | | | | | |
| | | | | | | D | eflection | | |
| | | | | | | dl= | 0.25 i | n | |
| | | | | | | dI+II= | 0.78 i | n | |
| | RB(d)= | 1610 | lbs | | | | | | |
| | RB(I)= | 3559 | lbs | | | | | | |
| | RB(w)= | -2389 | lbs | | | | | | |
| _ | RB(d+l)= | 5169 | lbs | | _ | | | | |
| | RB(d+w)= | -779 | lbs | | | | | | |
| | | | | | | | | | |
| M | span(d+l) = | 31342.8 | ft-lbs | lu= | | 7.25 ft | | | |
| | pan(d+w) = | -4297.5 | ft-lbs | lu= | | 7.25 ft | | | |
| | ··· | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |

50 ksi

Fy =

USE: W8X48

| Column Des | sign | Col Line A | | AISC | 15th ed, Use I | First Order An | alysis Criteria |
|-------------|-------------------|--------------------|-----------------|-----------------|------------------|----------------|-----------------|
| | P DL = | 2.46 | kips | | Clr. Ht.= | 10.17 | ft |
| | P LL = | 6.31 | kips | | Fascia Ht.= | 1.00 | ft |
| | PWL= | -3.68 | kips | | Col. Trib= | 19.36 | ft |
| E | Base Shear = | 0.21 | kips | | Wind Load= | 16.00 | psf |
| Total E | Base Shear = | 1.43 | kips | | # of COL.= | 2 | |
| MWL = | w(Fascia Ht•2.5 | 5•Col Trib./# of c | ol·L)+ w(Wrap·1 | /2 Clr. Ht^2) | Max All. Defl = | 1.28 | in |
| M Seis = | Base Shear x L | | | N | Max Defl Ratio = | L/ | 100 |
| M Unbal = | Live Load x Co | I. Trib.x (Canopy | Width/2)^2/2 | | Max Defl. = | 0.16 | in, OK |
| L= | Clr. Ht. + Fascia | a Ht/2 | | | | | |
| Pr= | 8.77 | kips 1.6Pr<0 | 0.5Py First-O | rder Analysis A | Allowed (A-7-1 | 1) | |
| Py = | 326.60 | kips | | | | | |
| N = | 0.00 | •Yi (A-7-2) | | Use: | TS8X8X1/4 | | |
| B2 = | 1.05 | OK, A-8-6 | | Fy = | 46.00 | ksi | |
| MWL = | 4.96 | kip-ft | | K = | 1.00 | | |
| M Seis = | 2.25 | kip-ft | | L, Col = | 10.67 | ft | 4 |
| M DL(Nod) = | 0.11 | kip-ft | | A = | 7.10 | in^2 | |
| M LL(Nod) = | 0.28 | kip-ft | |] = | 70.70 | in^4 | |
| M Unbal DL= | 0.00 | kip-ft | | Cm = | 1.00 | | |
| M Unbal LL= | 0.00 | kip-ft | | Pe1 = | 393.14 | kips | |
| M Unbal WL= | 0.00 | kip-ft | | B1 = | 1.04 | (A-8-3) | |
| | | | | P,AII = | 175.01 | kips | |
| | | | | M, All = | 44.10 | kip-ft | |
| | Load Comb | ination | Pr, Kips | Mr, Kip-ft | Equation | Result | |
| | D+L | | 8.77 | 0.41 | 0.03 | OK | |
| | D+W | | 2.46 | 5.25 | 0.13 | OK | |
| | D+0.7E | | 2.46 | 1.75 | 0.05 | OK | |
| | D+0.75W+0.7 | 4 00000000 | 7.19 | 4.19 | 0.12 | OK | |
| | D+0.525E+0. | 75L | 7.19 | 1.56 | 0.06 | OK | |

| Top Connection : Standard Cap Plate | Offset Base Plate: MODLBP 8 - 20 |
|-------------------------------------|----------------------------------|
| | |

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| From Column | | | | | |
|--|-------------|------|-----------------|--------------|-------------------|
| | 0.40 | | | | |
| P dl = | | kips | | | |
| P II = | 6.31 | kips | | | |
| P wl = | -3.68 | kips | | | |
| | | | | | |
| Soil Density = | 110 | pcf | | | |
| Width = | 5.50 | ft | Unbalanced Load | d to Column | |
| Length = | 5.50 | ft | M dI = | 0.00 kip-ft | LENGTH |
| Depth = | 3.00 | ft | M II = | 0.00 kip-ft | LENGTH/2 LENGTH/2 |
| e = | 2.08 | ft | M wl = | 0.00 kip-ft | -+ |
| a = | 0.00 | ft | From Lateral | · | |
| b = | 0.00 | ft | M wl = | 4.96 kip-ft | #TOWN |
| C = | 0.00 | ft | M el = | 2.82 kip-ft | - b - |
| | | | | | M |
| Ke | ern = L/6 = | | 0.92 ft | | P |
| Footing V | Veight = | | 13.61 kips | | * |
| The second secon | Veight = | | 0.00 kips | | 0 |
| | roigin | | o.oo kapo | | реетн Н |
| Total Loads to Sp | oread Foo | ting | | | |
| PDL = | 16.07 | | MDL = | 5.13 kip-ft | |
| PLL = | 6.31 | - | MLL = | 13.15 kip-ft | |
| PWL = | -3.68 | | MWL = | -2.71 kip-ft | |
| | | • | MEL = | 2.82 kip-ft | |
| | | | | | |

| | | | | Soil Pressure |
|--------------------|----------|------------|---------|---------------|
| Load Combination | Pr, Kips | Mr, Kip-ft | ecc, ft | psf |
| D+L | 22.38 | 18.27 | 0.82 | 1068.92 |
| D+W | 12.39 | 2.42 | 0.19 | 166.84 |
| 0.6D+W | 10.05 | 0.37 | 0.04 | 15.37 |
| 0.6D+0.7E | 13.73 | 5.05 | 0.37 | 305.84 |
| D+0.7E | 16.07 | 7.10 | 0.44 | 457.31 |
| D+0.75W+0.75L | 18.05 | 12.95 | 0.72 | 733.74 |
| D+0.75(0.7E)+0.75L | 20.81 | 16.47 | 0.79 | 951.59 |

q(ALLOW)= 1500.00 psf OK

REINFORCING:

M = 17867.31 ft-lbs/ft

Assume: f'c=3000 psi, Fy=40000 psi

d = 32.63 in

As(REQ'D)=

0.38 in^2

As(PROV.)=

0.59 in^2

OK

USE #6's AT 9"O.C. T&B, EACH WAY

| | d^2=(4.25*M)/(| (S3*b) | | | | | |
|------|----------------------|-------------------------|-----------|------|--|--------------|------|
| | M(MAX)= S3= | | PCF X d | | Pmax= Footing Area= | 8.77 7.07 | ft^2 |
| | b= d= Footing= | 3.000 6.633 Round | | | Bearing= | 1240.83 | psr |
| | USE: | 3.00 | FT.RND. X | • (| 6.75 ft deep footing | | |
| | As=12*M/(jd*24 | 4000)= | 0.2759 | in^2 | | | |
| USE: | | | | | w/135 degree hooks egree Hooks In The E | | |

Col Line A

Footing design to allow offset column placement of 1'-9" from centerline of footing.

Foundation: (Restrained at Grade)

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| Column Des | ign | Col Line B | | AISC | 15th ed, Use I | First Order And | alysis Criteria |
|-------------|-------------------|--------------------|------------------|--------------|------------------|-----------------|-----------------|
| | P DL = | 2.54 | kips | | Clr. Ht.= | 10.17 | ft |
| | P LL = | 6.41 | kips | | Fascia Ht.= | 1.00 | ft |
| | PWL= | -4.29 | kips | | Col. Trib= | 19.36 | ft |
| Е | Base Shear = | 0.21 | kips | | Wind Load= | 16.00 | psf |
| | | | | | # of COL.= | 2 | |
| MWL = | w(Fascia Ht•2.5 | •Col Trib./# of co | ol•L)+ w(Wrap•1/ | 2 Clr. Ht^2) | Max All. Defl = | 1.28 | in |
| M Seis = | Base Shear x L | | | P | Max Defl Ratio = | L/ | 100 |
| M Unbal = | Live Load x Col | . Trib.x (Canopy | Width/2)^2/2 | | Max Defl. = | 0.16 | in, OK |
| L= | Clr. Ht. + Fascia | a Ht/2 | | | | | |
| Pr= | 8.96 | kips 1.6Pr<0 | 0.5Py First-Or | der Analysis | Allowed (A-7-1 |) | |
| Py = | 326.60 | kips | | | | | |
| N = | 0.00 | •Yi (A-7-2) | | Use: | TS8X8X1/4 | | |
| B2 = | 1.05 | OK, A-8-6 | | Fy = | 46.00 | ksi | |
| MWL = | 4.96 | kip-ft | | K = | 1.00 | | |
| M Seis = | 2.25 | kip-ft | | L, Col = | 10.67 | ft | |
| M DL(Nod) = | 0.11 | kip-ft | | A = | 7.10 | in^2 | |
| M LL(Nod) = | 0.29 | kip-ft | | 1= | 70.70 | in^4 | |
| M Unbal DL= | 0.00 | kip-ft | | Cm = | 1.00 | | |
| M Unbal LL= | 0.00 | kip-ft | | Pe1 = | 393.14 | kips | |
| M Unbal WL= | 0.00 | kip-ft | | B1 = | 1.04 | (A-8-3) | |
| | | | | P,AII = | 175.01 | kips | |
| | | | | M, All = | 44.10 | kip-ft | |
| | Load Combi | nation | Pr, Kips | Mr, Kip-ft | Equation | Result | |
| | D+L | | 8.96 | 0.42 | 0.04 | OK | |
| | D+W | - | 2.54 | 5.26 | 0.13 | OK | |
| | D+0.7E | | 2.54 | 1.76 | 0.05 | OK | |
| | D+0.75W+0.7 | 75L | 7.35 | 4.20 | 0.12 | OK | |
| | D+0.525E+0. | 75L | 7.35 | 1.57 | 0.06 | OK | |

| Top Connection : | Standard Cap Plate | Base Plate : | LBP 8 - 20 | |
|------------------|--------------------|--------------|------------|--|
| | | | | |

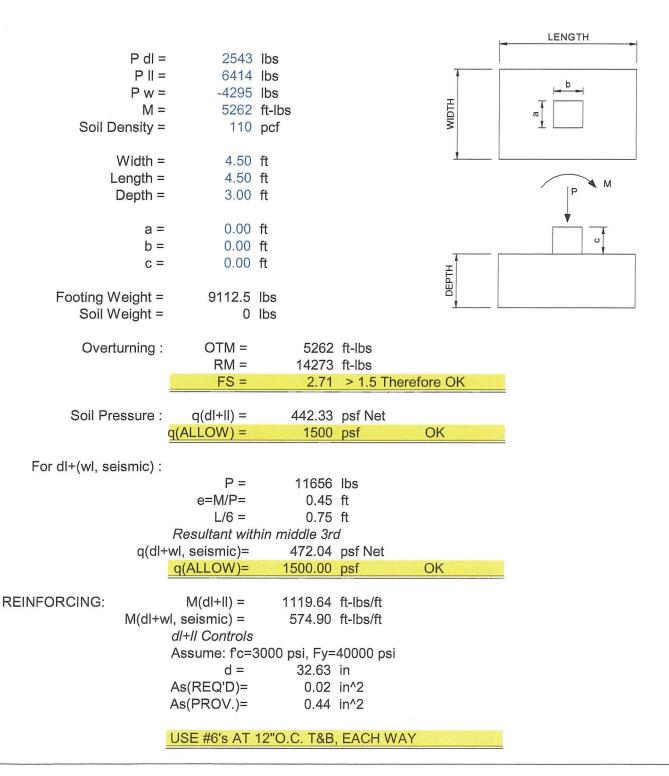
Foundation: (Restrained at Grade)

d^2=(4.25*M)/(S3*b)

| M(MAX)= | 5262 | ft-lbs | Pmax= | 8.96 | kips | |
|----------|-------|-----------|----------------------|---------|------|--|
| S3= | 100 | PCF X d | Footing Area= | 7.07 | ft^2 | |
| b= | 3.000 | ft | Bearing= | 1267.17 | psf | |
| d= | 4.209 | ft | | | | |
| Footing= | Round | | | | | |
| USE: | 3.00 | FT.RND. X | 5.00 ft deep footing | | | |

As=12*M/(jd*24000)= 0.0705 in^2

USE: 8 #8's (RND. Cage) w/ #4 Ties @ 12" O.C. w/135 hooks



| | , | | | | | | |
|----------------|--------|-----------|------|----------------------|---------|------|--|
| d^2=(4.25*M)/(| S3*b) | | | | | | |
| M(MAX)= | 20937 | ft-lbs | | Pmax= 8.96 | | | |
| S3= | 100 | PCF X d | | Footing Area= | 7.07 | ft^2 | |
| b= | 3.000 | ft | | Bearing= | 1267.17 | psf | |
| d= | 6.669 | ft | | | | | |
| Footing= | Round | | | | | | |
| USE: | 3.00 | FT.RND. X | | 6.75 ft deep footing | | | |
| As=12*M/(jd*24 | 1000)= | 0.2804 | in^2 | | x = | | |

10 #8's (RND. Cage) w/ #4 Ties @ 4" O.C. w/135 degree hooks In The Top

3'-0" of The Footing, #4 Ties @ 12" o.c w/ 135 Degree Hooks In The Balance of Footing

Col Line B

Footing design to allow offset column placement of 1'-9" from centerline of footing.

Foundation: (Restrained at Grade)

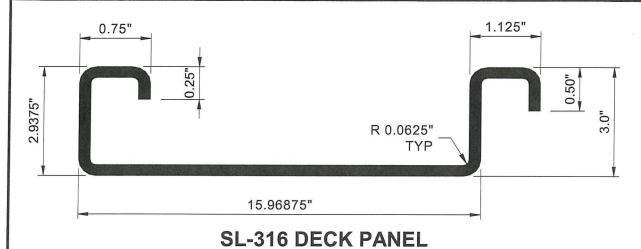
USE:

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LANE SUPPLY, INC.

120 Fairview Arlington, Texas 76010 817-261-9116



| | Section Properties | | | | | | | | | | |
|---------|--------------------|---------------|----------|---------------------|---------------------|---------------------|---------------------|---------------|---------------|--|--|
| Gage | Wt, psf | Thickness, in | ASTM 653 | +l, in ⁴ | -I, in ⁴ | +S, in ³ | -S, in ³ | +M, ft-lbs/ft | -M, ft-lbs/ft | | |
| 20 2.20 | 2 20 | 0.0359 | Grade 40 | 0.9346 | 0.4680 | 0.3961 | 0.3036 | 592.70 | 454.44 | | |
| | 2.20 | | Grade 50 | 0.9208 | 0.4522 | 0.3879 | 0.2880 | 725.86 | 538.92 | | |
| 18 2.93 | 2 03 | 0.0478 | Grade 40 | 1.2486 | 0.6827 | 0.5329 | 0.4377 | 797.77 | 655.28 | | |
| | 2.50 | | Grade 50 | 1.2129 | 0.6518 | 0.5141 | 0.4296 | 962.09 | 803.92 | | |

Notes:

- 1 Designed per AISI Cold Formed Steel Manual, 2016 ed.
- 2 Complete calculations are available upon request.
- 3 ± M is allowable bending moment.

Issued 12-5-17

Moment = 20.00 kip-ft
Column = TS8X8X1/4

D = 8 in.
e1 = 8 in.
e2 = 4 in.

Anchor Bolts = 11/2 in
t plate = 2.00 in

A36 Steel Plate Fy = 36 ksi

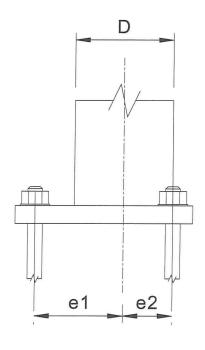
E70 Electrode Fw = 0.928 kips / in / 16th A307 Anchor Bolts Ft = 20 ksi

Clockwise Moment

Pbolt = 8.57 kips < 35.3, OK t(req'd) = 1.04 in t(actual) = 2.00 in Weld(req'd) = 3.03 /16th's Weld(actual) = F.P. /16th's

Counter-Clokwise Moment

Pbolt = 12.00 kips < 35.3, OK





120 Fairview Arlington, Texas 76010 817-261-9116 FAX 817-275-1660

STANDARD BASE PLATE DESIGN

| L | BP | # | M | P _{BOLT} | Bolt Dia. | t _{REQ'D} | t _{ACTUAL} | Weld Req'd | Weld Actual | Base Plate |
|-----|----|----|--------|-------------------|--------------|--------------------|---------------------|---------------|----------------|---------------|
| _(D | - | M) | (ft-k) | (k) | (in) | (in) | (in) | (1/16 in) | (in) | Mark |
| 8 | - | 10 | 10 | 5.58 | 1 1/2 | 0.72 | 3/4 | 1.52 | 1/4 | LBP 1 |
| 8 | - | 20 | 20 | 10.91 | 1 1/2 | 0.99 | 1 | 3.03 | 5/16 | LBP 2 |
| 8 | - | 30 | 30 | 16.00 | 1 1/2 | 1.17 | 1 1/4 | 4.55 | 5/16 | LBP 3 |
| 8 | - | 40 | 40 | 20.87 | 1 1/2 | 1.32 | 1 1/2 | 6.06 | F.P. | LBP 4 |
| 8 | - | 50 | 50 | 26.09 | 1 1/2 | 1.46 | 1 1/2 | 7.58 | F.P. | LBP 5 |

TS 8 X 8 COLUMN:

D= 8 in.

e= 2 in.

b,d= 8 in.

CONSTANTS:

A36 Steel Plate

E70xx Electrode

A307 Anchor Bolts

Fy = 36 ksi

Fw = 0.928 k/in/16th

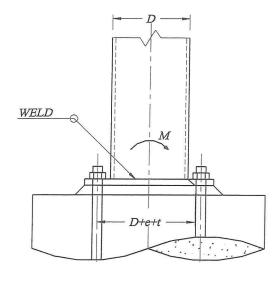
Ft = 20 ksi

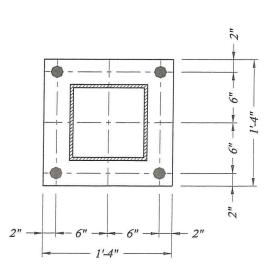
EQUATIONS:

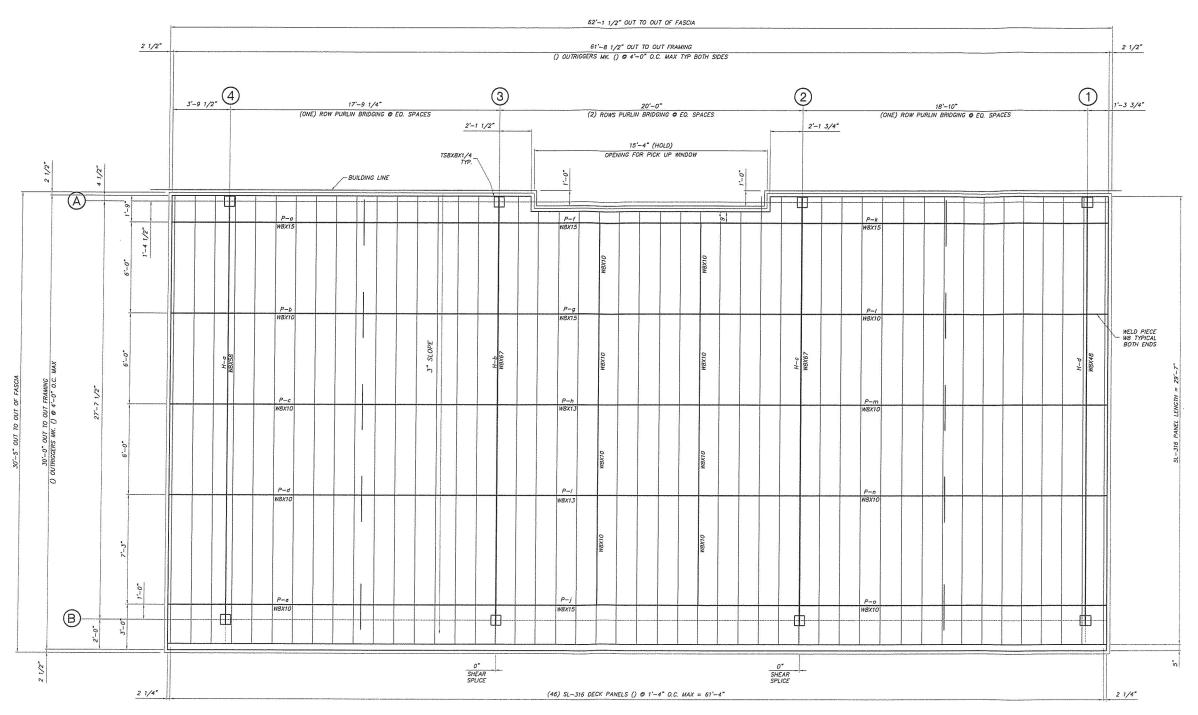
$$P_{BOLT} = \frac{M \times 12 \text{ in/ft}}{2 \text{ bolts (D+e+t)}}$$

$$Weld = \frac{M \times 12 \text{ in/ft}}{S \text{ weld } \times FW} = \frac{M \times 12 \text{ in/ft}}{FW (bd+d^2/3)}$$

$$t_{REQD} = \sqrt{\frac{6 \times P \times e \times 2 \text{ bolts}}{0.75 \times Fy \times (D+2t)}}$$







DESIGN LOADS:

DEAD LOAD = 3 p.s.f.(DECX + LIGHTS) + WEIGHT OF STRUCTURAL COMPONENTS

LIGHT LOAD = 20 p.s.f.

SHOW LOAD = 20 p.s.f.

WIND LOAD VLII = 116 m.p.h. EXP. C

WIND V.ASD = 90 m.p.h. EXP. C

BLGC CODE = WINSSOURI BULLING COOL 2018

ADDPTING 2018 WITERNATONAL BULLING COOL E

COUNTAINT LIFERAL FORCE PROCEDURA

LATERAL FORCE RESISTING SYSTEM = CANTILE VERBE COLUMN SYSTEM—ORDINARY STEEL MOMENT FRAME

CC = 1.2

LS = 1.0

W = 4.92

PA = 20.44

SITE CLASS = D

SS (0.2) = 0.099

SI (1.0) = 0.058

SDS = 0.11

SD1 = 0.11

Fo = 1.60

Fo = 1.60

Fo = 1.60

Fo = 1.60

Fo = 2.60

IMPORTAMEE FACTOR = 1.0

RISK CATEGORY = II

SCIMIC CONSON CATEGORY = D

CONSTRUCTION THE IBB

COCUPANCY CATEGORY = A2

TOTAL SEISMIC BASE SHAR BOTH DIRECTIONS = 1,43 KIPS