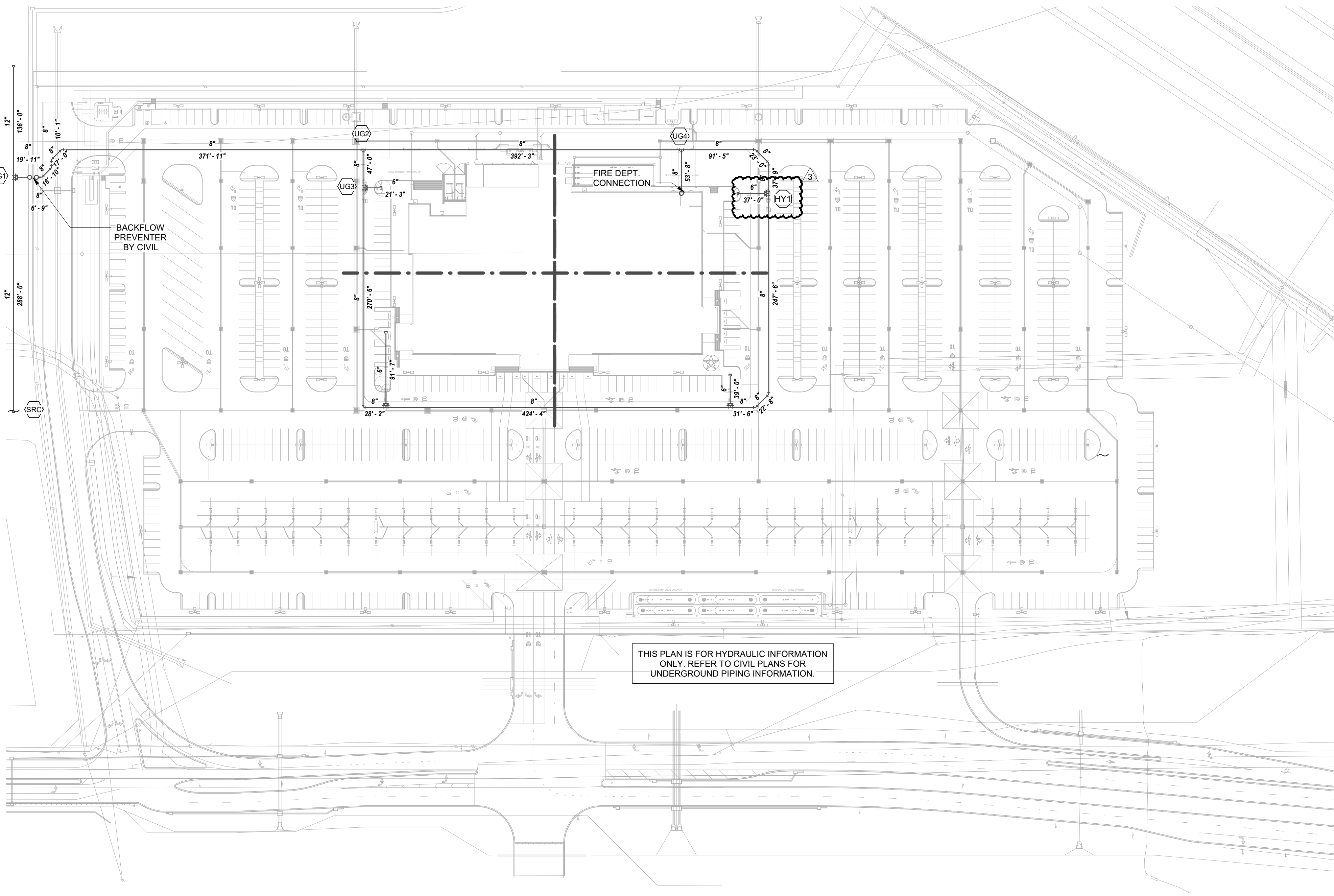


PROTECTION CRITERIA BASED ON 2019 NFPA 13 ³							
OCCUPANCY CLASSIFICATION	COMMODITY CLASSIFICATION	MAX STORAGE HEIGHT (MAX CEILING HEIGHTS) ^{B)}	ACTUAL CEILING HEIGHT	DENSITY ^{C)}	INSIDE/OUTSIDE HOSE ALLOWANCE (GPM)	MAXIMUM SPRINKLER SPACING (SQ FT)	DESIGN BASIS
TOOL ROOM ^{A)} , ICE ROOM ^{A)}	MISCELLANEOUS / INCIDENTAL STORAGE	10'-0" (25'-0")	25'-0"	NFPA 13 2019: 0.30 GPM/SQFT OVER 2000 SQFT, K11.2 FMDS 8-9: (25) K11.2 SPRINKLERS AT 7 PSI MIN.^{A)}	100/400	100	NFPA 13 2022: EH1: CHAPTER 19, FIGURE 19.2.3.1.1 & NFPA 13 2019: CHAPTER 4, TABLE 4.3.1.7.1 AND FMDS 3-26 TABLE 2.3.3.1
CONVENIENCE WAREHOUSE ^{A)} , MERCHANDISE STORAGE ^{A)} , AND TRUCK DOCK RECEIVING	CARTONED, EXPANDED PLASTIC, OPEN FRAME RACKS AND BACK-TO-BACK SHELF	10'-0" (15'-0")	15'-0"	NFPA 13 2019: 0.45 GPM/SQFT OVER 2000 SQFT, K11.2 FMDS 8-9: (19) K11.2 SPRINKLERS AT 28 PSI MIN. ^{A)}	100/400	100	NFPA 13 2019: TABLE 21.3.1 AND CHAPTER 21, TABLE 21.5.1.1 AND FMDS 8-9 TABLE 4 & TABLE 9
FOUNTAIN STORAGE ROOM, FUDGE & NUT STORAGE, COFFEE SUPPLY ROOM, AND CIGARETTE STORAGE	CARTONED, EXPANDED PLASTICS, SHELF	10'-0" (15'-0")	VARIES	NFPA 13 2019: 0.30 GPM/SQFT OVER 2000 SQFT, K8.0	100/400	100	NFPA 13 2019: EH1: CHAPTER 19, FIGURE 19.2.3.1.1 & NFPA 13 2019: CHAPTER 4, TABLE 4.3.1.7.1
OUTDOOR CHILLER PLATFORM & COMPACTOR ENCLOSURE, AND RETAIL/SALES AREAS ^{A)}	CARTONED, UNEXPANDED PLASTICS AND CLASS III, RACKS, PALLETS, AND SOLID-PILED	5'-0" FOR PLASTIC, 12'-0" UP TO CLASS III (N/A)	VARIES	NFPA 13 2019: 0.20 GPM/SQFT OVER 1500 SQFT, K5.6 FMDS 3-26: 0.20 GPM/SQFT OVER 2500 SQFT, K5.6 ^{A)}	100/150	130	NFPA 13 2019: OH2: CHAPTER 19, TABLE 19.2.3.1.1 & NFPA 13 2022: CHAPTER 4, TABLE 4.3.1.7.1.1 AND FMDS 3-26, TABLE 2.3.1.10
MECHANICAL ROOMS, ELETRICAL ROOMS, PUMP ROOMS, KITCHEN/FOOD PREP, TELECOMMUNICATIONS AREAS	CLASS II, SHELF	10'-0" N/A	VARIES	NFPA 13 2019: 0.15 GPM/SQFT OVER 1500 SQFT, K5.6	100/150	130	NFPA 13 2019: OH2: CHAPTER 19, TABLE 19.2.3.1.1 & NFPA 13 2022: CHAPTER 4, TABLE 4.3.1.7.1.1
OFFICES, RESTROOMS, CORRIDORS	N/A	N/A	VARIES	NFPA 13 2019: 0.10 GPM/SQFT OVER 1500 SQFT, K5.6	100/150	225	NFPA 13 2022: LH: CHAPTER 19, TABLE 19.2.3.1.1
WALK-IN FREEZERS, AND COOLERS ^{A)}	CARTONED, UNEXPANDED PLASTICS, AND CLASS IV, RACKS, PALLETS AND SOLID-PILED	5'-0" FOR PLASTIC, 8'-6" UP TO CLASS IV (10'-0")	VARIES	NFPA 13 2019: 0.20 GPM/SQFT OVER 1500 SQFT, K11.2 FMDS 8-9: (12) K11.2 SPRINKLERS AT 7 PSI MIN. ^{A)}	100/400	100	NFPA 13 2022: OH2: CHAPTER 19, TABLE 19.2.3.1.1 & NFPA 13 2022: CHAPTER 4, TABLE 4.3.1.7.1.1 AND FMDS 8-9, TABLE 9
BALE STORAGE UNDER CHILLER STORAGE ^{A)}	CLASS III, SOLID PILED	12'-0" (15'-0")	15'-0"	NFPA 13 2022: 0.20 GPM/SQFT OVER 1500 SQFT, K8.0 FMDS 8-22: (6) K25.2 SPRINKLERS AT 20 PSI MIN. ^{A)}	100/150	100	NFPA 13 2022: OH2: TABLE 4.3.1.7.1 AND FM ALTERNATIVE PROTECTION SCHEME

- NOTES:
- A) CONVENIENCE WAREHOUSE, MERCHANDISE STORAGE, TOOL, ICE, WALK-IN FREEZERS AND COOLERS, AND RETAIL/SALES AREAS MUST COMPLY WITH THE HIGHER DEMAND BETWEEN FMDS AND NFPA 13 PER INSURANCE REQUIREMENTS. DESIGN CRITERIA IN BOLD REPRESENTS THE HIGHER DEMAND THAT THESE ROOMS SHALL BE CALCULATED TO.
- B) COORDINATE WITH ACTUAL CEILING HEIGHTS. MAXIMUM STORAGE AND CEILING HEIGHTS LISTED PER NFPA 13 TABLES. PROVIDE AND MAINTAIN 18 INCH CLEARANCE FROM SPRINKLER DEFLECTOR TO TOP OF STORAGE (36 INCH CLEARANCE TO TOP OF STORAGE FOR CONVENIENCE WAREHOUSE, MERCHANDISE STORAGE ROOMS).
- C) COORDINATE K VALUES PER NFPA 13 MINIMUM REQUIREMENTS AND FINAL HYDRAULIC CALCULATIONS.
- D) VERIFY CURRENT EDITION OF NFPA 13 BEING USED BY JURISDICTION AND UPDATE DESIGN CRITERIA ACCORDINGLY.
- E) NOTE: ICE ROOM / TOLL ROOM SHALL BE CALCULATED USING THE ROOM DESIGN METHOD. WALLS DOORS AND OPENINGS INTO THE ROOM SHALL BE FIRE RATED.



1 HYDRAULIC NODE FIRE SPRINKLER SITE PLAN
NTS

FIRE PROTECTION GENERAL NOTES:

- PRIOR TO SUBMITTING BID, VISIT THE JOB SITE AND BECOME FULLY ACQUAINTED WITH THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND OTHER DRAWINGS FOR ADDITIONAL REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT, ENGINEER AND/OR OWNER OF CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- SYSTEM DESIGN, INSTALLATION AND MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE NFPA STANDARDS. SYSTEM SHALL ALSO MEET ALL APPLICABLE BUILDING CODES, FIRE CODES AND THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER. VERIFY REQUIREMENTS PRIOR TO BID SUBMITTAL.
- INFORMATION ON CONTRACT DOCUMENTS IS GENERAL INFORMATION AND FOR BID PURPOSES ONLY. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR THE FINAL SYSTEM DESIGN AND LAYOUT OF ALL COMPONENTS, COORDINATION WITH ALL OTHER TRADES, AND SYSTEM CALCULATIONS REQUIRED FOR APPROVAL BY THE AUTHORITY HAVING JURISDICTION, ENGINEER, AND OWNER'S INSURER.
- THE CONTRACTOR SHALL FOLLOW THE ENGINEER OF RECORD'S SYSTEM DESIGN AND LAYOUT OF ALL COMPONENTS EXCEPT WHERE MODIFICATION TO THE DESIGN IS NECESSARY. MODIFICATIONS SHALL BE REFLECTED IN THE CONTRACTOR'S SHOP DRAWINGS AND CALCULATIONS.
- DEVIATIONS FROM ENGINEER'S DESIGN WILL NOT BE CONSIDERED UNLESS A FORMALLY SUBMITTED RFI IS RECEIVED AND APPROVED.
- THE CONTRACTOR SHALL PROVIDE ALL EQUIPMENT AND LABOR REQUIRED FOR A COMPLETE AND OPERATIONAL SYSTEM AS INDICATED IN THE DRAWINGS AND SPECIFICATIONS.
- PROVIDE ADDITIONAL MATERIALS AND LABOR REQUIRED DUE TO LACK OF COORDINATION OR TO MEET AUTHORITY HAVING JURISDICTION AND INSURANCE CARRIER REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
- FORWARD COMPLETED CERTIFICATE OF COMPLETION AND CONTRACTOR MATERIAL TEST CERTIFICATES TO THE OWNER.
- REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.

WATER SUPPLY INFORMATION:

OBTAINED FROM: LOCAL WATER UTILITY & FIRE MARSHAL
LOCATION: NEARBY SITE HYDRANTS
DATE: 03/21/2024 @ 11:00 AM
STATIC PRESSURE: 125.0 PSI
RESIDUAL PRESSURE: 120.0 PSI
WATER FLOW: 1,351 GPM
WATER SUPPLY ABOVE PROVIDED FOR REFERENCE ONLY. CONTRACTOR SHALL OBTAIN AND PROVIDE CURRENT WATER SUPPLY INFORMATION IN ACCORDANCE WITH NFPA 291 WITH FIRE SPRINKLER SHOP DRAWINGS AND PRIOR TO BID SUBMITTAL.

FIRE PROTECTION SYMBOLS

ABBREVIATIONS

AFF AFG CD DI ESFR	ABOVE FINISHED FLOOR ABOVE FINISHED GRADE CANDELA DUCTILE IRON EARLY SUPPRESSION FAST RESPONSE EXISTING TO REMAIN FIRE HOSE CABINET FIRE PROTECTION CONTRACTOR GALLONS PER MINUTE JUNCTION BOX MAXIMUM MINIMUM N/A	NIC OC PIV PRV RD REV SD SF TYP UNO V W WP	NOT IN CONTRACT ON CENTER POST INDICATOR VALVE FURNISH AND INSTALL PRESSURE REDUCING VALVE RETURN DUCT REVISION SUPPLY DUCT SQUARE FEET TYPICAL UNLESS NOTES OTHERWISE VOLTS(S) WATTS WEATHERPROOF
--------------------------------	--	--	--

ANNOTATION

- FIRE PROTECTION PLAN NOTE CALLOUT
- CONNECTION POINT OF NEW WORK TO EXISTING
- DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER
- SECTION CUT DESIGNATION
- DEDICATED EQUIPMENT ACCESS TILE
- ACCESS PANEL
- HYDRAULIC REFERENCE NODE POINT

FIRE SPRINKLER PIPING

- SHUTOFF VALVE
- CHECK VALVE
- BACKFLOW PREVENTER
- CAP
- ELBOW UP
- ELBOW DOWN
- TEE UP
- TEE DOWN
- FIRE DEPARTMENT CONNECTION
- FIRE PUMP TEST HEADER
- INSPECTOR'S TEST CONNECTION / AUXILIARY DRAIN
- SPRINKLER RISER
- TOP BEAM CLAMP
- TRAPEZE HANGER

SHEET INDEX	
FP0.00	FIRE SPRINKLER GENERAL NOTES AND LEGEND
FP1.00	FIRE SPRINKLER OVERALL PLAN
FP1.01	FIRE SPRINKLER FLOOR PLAN - AREA A
FP1.02	FIRE SPRINKLER FLOOR PLAN - AREA B
FP1.03	FIRE SPRINKLER FLOOR PLAN - AREA C
FP1.04	FIRE SPRINKLER FLOOR PLAN - AREA D
FP6.01	FIRE SPRINKLER DETAILS

SPRINKLER SYMBOL LEGEND						
SYMBOL	SIZE	FINISH	STYLE	TEMP	K-FACTOR	RESPONSE TIME INDEX
	3/4"	BRASS	UPRIGHT	INT	11.2	QUICK RESPONSE
	3/4"	CHROME	RECESSED PENDENT	ORD	11.2 / 3	STORAGE, QUICK RES.
	1/2"	CHROME	RECESSED PENDENT	ORD	8.0	QUICK RESPONSE
	1/2"	BRASS	UPRIGHT	INT.	5.6	QUICK RESPONSE
	1/2"	CHROME	RECESSED PENDENT	INT.	5.6	QUICK RESPONSE
	1/2"	CHROME	RECESSED PENDENT	ORD	5.6	QUICK RESPONSE
	1 1/4"	WHITE	RECESSED PENDENT (DRY)	INT	11.2	QUICK RESPONSE
	1/2"	WHITE	CONCEALED PENDENT	ORD	5.6	QUICK RESPONSE
	1/2"	BRASS	E.C. SIDEWALL	ORD	5.6	QUICK RESPONSE
	1"	BRASS	UPRIGHT	INT.	25.2	ESFR
NOTES: 1. PROVIDE SPRINKLERS WITH OPERATING TEMPERATURES IN ACCORDANCE WITH NFPA 13 FOR MAXIMUM ANTICIPATED TEMPERATURES. 2. ALL SPRINKLERS, SPRINKLER COMPONENTS, AND SPRINKLER ASSEMBLIES SHALL BE FM LISTED AND APPROVED.						



BUC-EE'S

A DEVELOPMENT OF

Buc-ee's Benton, LLC
Saline County, AR

TEL: (979) 230-2920

BUC-EE'S TRAVEL CENTER
BENTON, ARKANSAS

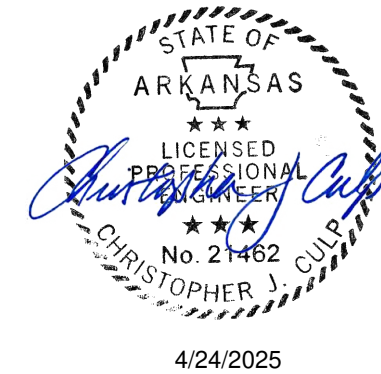
74K - L - 2024 - Q2
INTERSTATE 30 & STATE HIGHWAY 229
BENTON, ARKANSAS 72019

LAWRENCE S.
LEVINSON, A.I.A.

7800 Washington Ave., Suite 600 Houston, TX 77007
main: 713.600.3600 www.laarc.com

HENDERSON
ENGINEERS
8345 LENEXA DRIVE, SUITE 300
LENEXA, KS 66214
TEL 913.742.5000 FAX 913.742.5001
WWW.HENDERSONENGINEERS.COM
245001433
AR CORPORATE NO. 484
EXPIRES 12/31/2025

ISSUE/REVISION LOG:		
No.	DESCRIPTION	DATE
3	Revision 3 - Owner Changes	04/23/2025



ISSUED FOR REVIEW:	05/14/2024
ISSUED FOR BID:	05/14/2024
ISSUED FOR PERMIT:	05/14/2024

Copyright 2024 Lawrence S. Levinson, AIA. Warning: This document is protected by U.S. Copyright Law Under Section 102 of the U.S. Copyright and the Architectural Works Copyright Protection Act of 1990. Unauthorized reproduction and distribution of this document or any portion of it, other than for use of this particular project, is prohibited and may result in severe civil and criminal penalties, and will be prosecuted to maximum extent possible under the law.

FP0.00

FIRE SPRINKLER GENERAL
NOTES AND LEGEND

LSL PROJECT NUMBER: 2024-107.000

BENTON, ARKANSAS