



BUC-EE'S

A DEVELOPMENT OF

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

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BUC-EE'S TRAVEL CENTER

BENTON, ARKANSAS

74K - L - 2024 - Q2

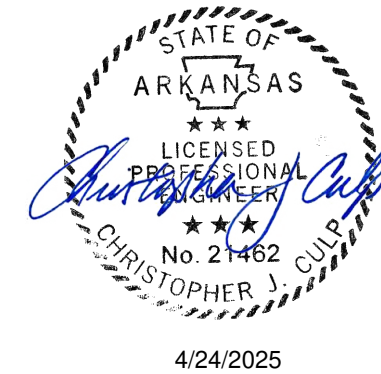
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EXPIRES 12/31/2025

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

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FP1.03

FIRE SPRINKLER FLOOR
PLAN - AREA C

LSL PROJECT NUMBER: 2024-107.000

BENTON, ARKANSAS

HYDRAULIC DESIGN	
SYSTEM # 1	UNDER CHILLER PLANTROOM
REMOTE AREA #	G
SPRINKLERS CALCULATED	6 SPRINKLERS
SPRINKLER DENSITY REQ'D	6@20 PSI PER FM GLOBAL
AREA OF DISCHARGE	6 SPRINKLERS
HOSE ALLOWANCE	250 GPM
SYSTEM FLOW DEMAND AT SRC	938 GPM
SYSTEM PRESSURE DEMAND AT SRC	108.6 PSI
SYSTEM SAFETY FACTOR	13.9 PSI
HOSE ALLOWANCE NOT INCLUDED IN FLOW DEMAND	

FIRE SPRINKLER	
Key Value	Keynote Text
1	COORDINATE GRADE BEAM CORE AND OTHER REQUIREMENTS WITH STRUCTURAL ENGINEER.
2	NONCOMBUSTIBLE, CONCEALED SPACE. SPRINKLER PROTECTION NOT REQUIRED PER NFPA 13.
3	SPRINKLER PROTECTION NOT REQUIRED FOR NONCOMBUSTIBLE CANOPY PER NFPA 13. NO STORAGE PERMITTED UNDER CANOPY.
4	PROVIDE DRY PENDENT TYPE SPRINKLERS WITHIN COOLER/FREEZERS. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION. COORDINATE EXACT LOCATION OF SPRINKLER AT COOLERS/FREEZERS WITH LIGHTS, EVAPORATORS AND OTHER OBSTRUCTIONS. NOTE THAT FINAL LIGHT AND EVAPORATOR LOCATIONS MAY DIFFER FROM THOSE SHOWN ON PLANS.
5	PROVIDE DRY SYSTEM SPRINKLER COVERAGE FOR AREA SHOWN IN ACCORDANCE WITH CRITERIA LISTED ON FP0.03.
6	KITCHEN HOOD FIRE SUPPRESSION SYSTEM BY OTHERS. COORDINATE TEMPERATURE RATING OF SPRINKLERS NEAR HEAT PRODUCING SOURCES IN ACCORDANCE WITH NFPA 13 FOR ANTICIPATED AMBIENT CEILING TEMPERATURES.
7	PROVIDE A TRIP TEST CONNECTION OR MANIFOLD LOCATED ON THE END OF THE MOST DISTANT SPRINKLER PIPE PER NFPA 13 REQUIREMENTS.
8	PROVIDE AUXILIARY DRAIN FOR TRAPPED PIPING PER NFPA 13.
9	PROVIDE NEW DRY RISER SYSTEM WITH A FLOOR MOUNTED COMPRESSOR.

HYDRAULIC DESIGN	
SYSTEM # 1	COMPACTOR ENCLOSURE
REMOTE AREA #	D
SPRINKLERS CALCULATED	13 SPRINKLERS
SPRINKLER DENSITY REQ'D	0.20 GPM/SQ FT
AREA OF DISCHARGE	925 SQ. FT. / ENTIRE AREA
HOSE ALLOWANCE	250 GPM
SYSTEM FLOW DEMAND AT SRC	621 GPM
SYSTEM PRESSURE DEMAND AT SRC	28.1 PSI
SYSTEM SAFETY FACTOR	85.7 PSI
HOSE ALLOWANCE NOT INCLUDED IN FLOW DEMAND	

HYDRAULIC DESIGN	
SYSTEM # 1	ICE ROOM/TOOL ROOM
REMOTE AREA #	C
SPRINKLERS CALCULATED	15 SPRINKLERS
SPRINKLER DENSITY REQ'D	0.30 GPM/SQ FT
AREA OF DISCHARGE	1343 SQ. FT. / ENTIRE AREA
HOSE ALLOWANCE	500 GPM
SYSTEM FLOW DEMAND AT SRC	957 GPM
SYSTEM PRESSURE DEMAND AT SRC	36.2 PSI
SYSTEM SAFETY FACTOR	86.2 PSI
HOSE ALLOWANCE NOT INCLUDED IN FLOW DEMAND	

NOTE: ICE ROOM / TOOL ROOM SHALL BE CALCULATED USING THE ROOM DESIGN METHOD. WALLS, DOORS AND OPENINGS INTO THE ROOM SHALL BE FIRE RATED.

HYDRAULIC DESIGN	
SYSTEM # 1	CONVENIENCE STORAGE
REMOTE AREA #	B
SPRINKLERS CALCULATED	18 SPRINKLERS
SPRINKLER DENSITY REQ'D	18 SPKRS @ 28 PSI PER FM
AREA OF DISCHARGE	1525 SQ FT
HOSE ALLOWANCE	500 GPM
SYSTEM FLOW DEMAND AT SRC	1586 GPM
SYSTEM PRESSURE DEMAND AT SRC	104.3 PSI
SYSTEM SAFETY FACTOR	14.0 PSI
HOSE ALLOWANCE NOT INCLUDED IN FLOW DEMAND	

