LIFE SAFETY PLAN REQUIREMENTS:

- ☒ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7) – SEE NOTE 1
- ☒ ASSUMED AND REAL PROPERTY LINE LOCATIONS – SEE NOTE 2
- ☒ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8) – SEE NOTE 3
- ☒ OCCUPANCY TYPES FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
- ☒ OCCUPANT LOADS FOR EACH AREA
- ☒ EXIT ACCESS TRAVEL DISTANCES (1017)
- ☒ COMMON PATH OF TRAVEL DISTANCES (1006.2.1 & 1006.3.2(1))
- ☒ DEAD END LENGTHS (1020.4) – SEE NOTE 4
- ☒ CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
- ☒ MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
- ☒ ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
- ☒ A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATED FLOOR/CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION. SEE NOTE 5
- ☒ LOCATION OF DOORS WITH PANIC HARDWARE (1008.1.10) – SEE NOTE 6
- ☒ LOCATION OF DOORS WITH DELAYED EGRESS LOCKS AND AND THE AMOUNT OF DELAY (1008.1.9.7) – SEE NOTE 7
- ☒ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1008.1.9.8) – SEE NOTE 7
- ☒ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES – SEE NOTE 7
- ☒ LOCATION OF EMERGENCY ESCAPE WINDOWS (1029) – SEE NOTE 7
- ☒ THE SQUARE FOOTAGE OF EACH FIRE AREA (902) – SEE NOTE 8
- ☒ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT (407.5) – SEE NOTE 9
- ☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

LIFE SAFETY PLAN NOTES:

1. NO RATED WALLS.
2. ALL ASSUMED AND REAL PROPERTY LINES ≥30'
3. ASSUMED PROPERTY LINES = 35'; UNLIMITED; 705.8.1 EXC. 2
4. NO DEAD ENDS OVER 20'; 20' ALLOWED
5. NO RATING REQUIRED FOR THIS STRUCTURE.
6. PANIC HARDWARE NOT REQUIRED.
7. NO DELAYED EGRESS LOCKS, ELECTROMAGNETIC LOCKS, HOLD OPEN DEVICES, OR EMERGENCY ESCAPE WINDOWS
8. FIRE AREAS DO NOT EXCEED CODE ALLOWANCE
9. BUILDING MEETS CODE REQUIREMENTS WITHOUT SUBDIVISION INTO SMOKE COMPARTMENTS; NO SMOKE COMPARTMENTS

EXIT REQUIREMENTS:
NUMBER AND ARRANGEMENTS OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NO. OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS [1,3] (SECTION 1016–1021)	
	REQ'D.	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1017.2)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
BUILDING 1	2	2	200'	132'–0"	85'–6"	145'–6"
OFFICE	1	2	200'	48'–6"	31'–3"	36'

1. CORRIDOR DEAD ENDS (SECTION 1020.4)
2. BUILDINGS W/SINGLE EXITS (TABLE 1006.3.2(2)), SPACES W/ONE EXIT OR EXIT ACCESS DOORWAY (TABLE 1006.2.1)
3. COMMON PATH OF TRAVEL (SECTION 1029.8)

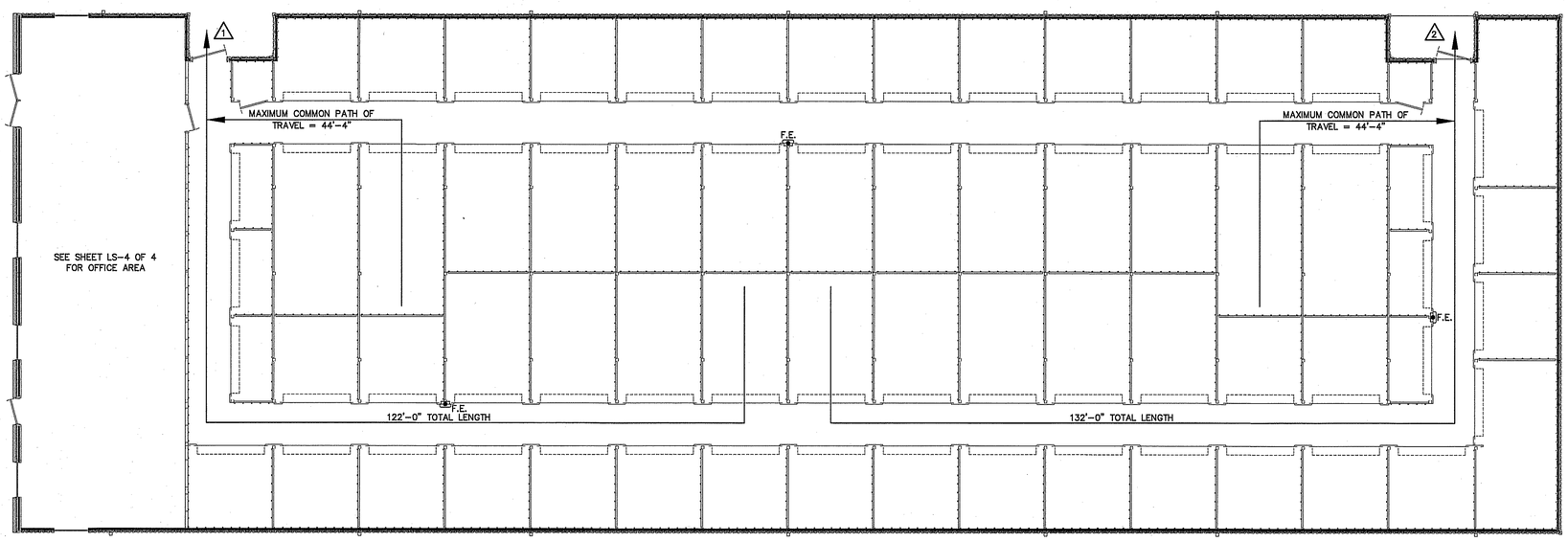
EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a)	(b)		(c)					
				EGRESS WIDTH PER OCCUPANT (TABLE 1005.1)		EXIT WIDTH (in)			
	AREA[1] SQ. FT.	AREA[1] PER OCCUPANT (TABLE 1004.1.2)	CALCULATED OCCUPANT LOAD (a/b)			REQUIRED WIDTH (SECTION 1005.1) (a/b) x c		ACTUAL WIDTH SHOWN ON PLANS	
				STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL
BUILDING 1	9,600	500 GROSS	20	N/A	.2	N/A	4.4"	N/A	94"
OFFICE	1,200	100 GROSS	12	N/A	.2	N/A	2.4"	N/A	108"
TOTAL	10,800								

1. SEE TABLE 1004.1.2 TO DETERMINE WHETHER NET OR GROSS AREA IS APPLICABLE SEE DEFINITION "AREA, GROSS" AND "AREA, NET" (SECTION 1002, DEFINED IN CHAPTER 2)
2. MINIMUM STAIRWAY WIDTH (SECTION 1011.2); MIN. CORRIDOR WIDTH (SECTION 1020.2); MIN. DOOR WIDTH (SECTION 1010.1.1)
3. MINIMUM WIDTH OF EXIT PASSAGEWAY (SECTION 1024)
4. SEE SECTION 1005.6 FOR CONVERGING EXITS.
5. THE LOSS OF ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50% OF THE TOTAL REQUIRED (SECTION 1005.5)
6. ASSEMBLY OCCUPANCIES (SECTION 1029)

MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.1)

1. 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 10 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
2. 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 10 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.



NOTE:
AREA/ROOM/SPACE DESIGNATIONS USED ON LIFE SAFETY PLANS ARE EXCLUSIVE TO LIFE SAFETY PLAN ONLY, AND ARE NOT INDICATIVE OF ANY ACTUAL SPACE DESIGNATIONS USED ELSEWHERE.

LEGEND

F.E. FIRE EXTINGUISHER CLASS ABC 10 POUNDS

LIFE SAFETY PLAN BUILDING "1"

SCALE: 1/8" = 1'–0"

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER RANDY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Fuquay-Varina, North Carolina 28526
Phone: (919) 552-5100
FAX: (919) 552-5102
LICENSE NO.: C-1721

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SHEET NO.
LS-1 OF 4

LIFE SAFETY PLAN REQUIREMENTS:

- ☒ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7) – SEE NOTE 1
- ☒ ASSUMED AND REAL PROPERTY LINE LOCATIONS – SEE NOTE 2
- ☒ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8) – SEE NOTE 3
- ☒ OCCUPANCY TYPES FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
- ☒ OCCUPANT LOADS FOR EACH AREA
- ☒ EXIT ACCESS TRAVEL DISTANCES (1017)
- ☒ COMMON PATH OF TRAVEL DISTANCES (1006.2.1 & 1006.3.2(1))
- ☒ DEAD END LENGTHS (1020.4) – SEE NOTE 4
- ☒ CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
- ☒ MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
- ☒ ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
- ☒ A SEPARATE SCHEMATIC PLAN INDICATING WHERE FIRE RATED FLOOR/CEILING AND/OR ROOF STRUCTURE IS PROVIDED FOR PURPOSES OF OCCUPANCY SEPARATION. SEE NOTE 5
- ☒ LOCATION OF DOORS WITH PANIC HARDWARE (1008.1.10) – SEE NOTE 6
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- ☒ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1008.1.9.8) – SEE NOTE 7
- ☒ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES – SEE NOTE 7
- ☒ LOCATION OF EMERGENCY ESCAPE WINDOWS (1029) – SEE NOTE 7
- ☒ THE SQUARE FOOTAGE OF EACH FIRE AREA (902) – SEE NOTE 8
- ☒ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT (407.5) – SEE NOTE 9
- ☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

LIFE SAFETY PLAN NOTES:

1. SEE LEGEND FOR RATED WALLS.
2. ALL ASSUMED AND REAL PROPERTY LINES $\geq$30'
3. ASSUMED PROPERTY LINES = 10'; UNLIMITED; 705.8.1 EXC. 2
4. NO DEAD ENDS OVER 20'; 20' ALLOWED
5. NO RATING REQUIRED FOR THIS STRUCTURE.
6. PANIC HARDWARE NOT REQUIRED.
7. NO DELAYED EGRESS LOCKS, ELECTROMAGNETIC LOCKS, HOLD OPEN DEVICES, OR EMERGENCY ESCAPE WINDOWS
8. FIRE AREAS DO NOT EXCEED CODE ALLOWANCE
9. BUILDING MEETS CODE REQUIREMENTS WITHOUT SUBDIVISION INTO SMOKE COMPARTMENTS; NO SMOKE COMPARTMENTS

EXIT REQUIREMENTS:
NUMBER AND ARRANGEMENTS OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NO. OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS [1,3] (SECTION 1016–1021)	
	REQ'D.	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1017.2)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
BUILDING 2 (AREA 1)	2	2	200'	142'–9"	106'–0"	175'–0"
BUILDING 2 (AREA 2)	2	2	200'	102'–0"	102'–0"	140'–0"

1. CORRIDOR DEAD ENDS (SECTION 1020.4)
2. BUILDINGS W/SINGLE EXITS (TABLE 1006.3.2(2)), SPACES W/ONE EXIT OR EXIT ACCESS DOORWAY (TABLE 1006.2.1)
3. COMMON PATH OF TRAVEL (SECTION 1029.8)

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a)	(b)		(c)		EXIT WIDTH (in)			
	AREA[1] SQ. FT.	AREA[1] PER OCCUPANT (TABLE 1004.1.2)	CALCULATED OCCUPANT LOAD (a/b)	EGRESS WIDTH PER OCCUPANT (TABLE 1005.1)		REQUIRED WIDTH (SECTION 1005.1) (a/b) x c		ACTUAL WIDTH SHOWN ON PLANS	
				STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL
BUILDING 2 (AREA 1)	12,000	500 GROSS	24	N/A	.2	N/A	4.8"	N/A	94"
BUILDING 2 (AREA 2)	11,700	500 GROSS	24	N/A	.2	N/A	4.8"	N/A	94"
TOTAL	23,700		48						

1. SEE TABLE 1004.1.2 TO DETERMINE WHETHER NET OR GROSS AREA IS APPLICABLE SEE DEFINITION "AREA, GROSS" AND "AREA, NET" (SECTION 1002, DEFINED IN CHAPTER 2)
2. MINIMUM STAIRWAY WIDTH (SECTION 1011.2); MIN. CORRIDOR WIDTH (SECTION 1020.2); MIN. DOOR WIDTH (SECTION 1010.1.1)
3. MINIMUM WIDTH OF EXIT PASSAGEWAY (SECTION 1024)
4. SEE SECTION 1005.6 FOR CONVERGING EXITS.
5. THE LOSS OF ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50% OF THE TOTAL REQUIRED (SECTION 1005.5)
6. ASSEMBLY OCCUPANCIES (SECTION 1029)

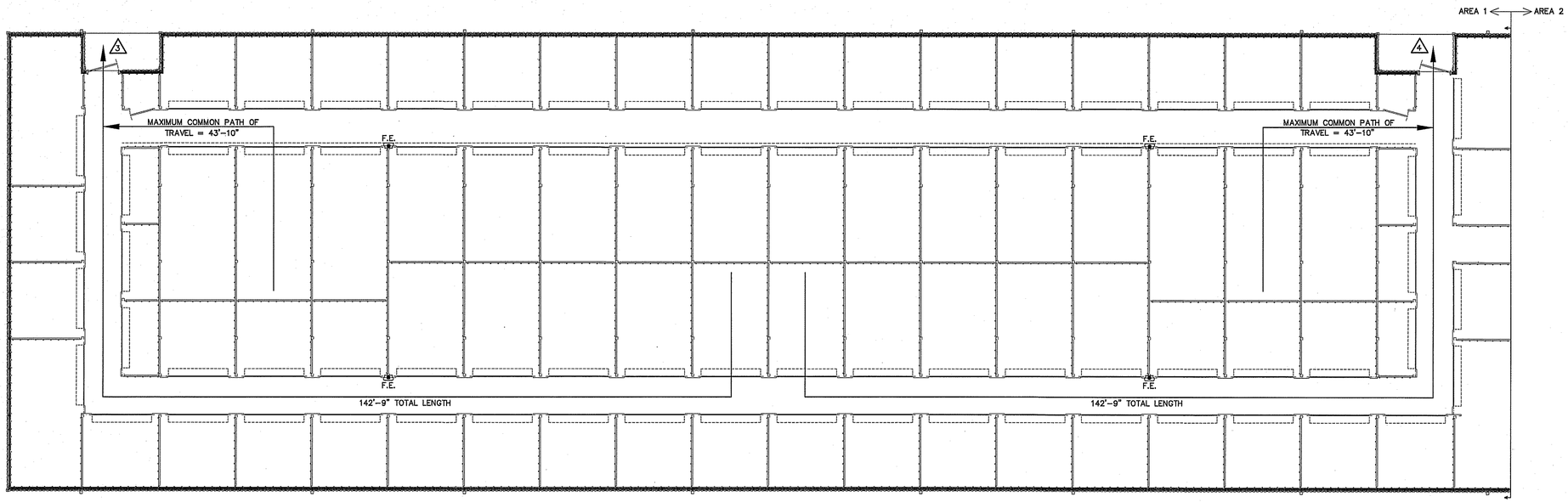
MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.1)

3 — 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 12 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.

4 — 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 12 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.

5 — 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 12 PERSON CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.

6 — 47" CLEAR WIDTH DIVIDED BY .2" = 235 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 12 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.



LEGEND

3 HOUR RATED WALL U419

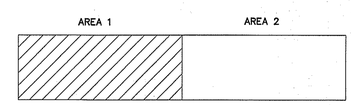
NOTE:
AREA/ROOM/SPACE DESIGNATIONS USED ON LIFE SAFETY PLANS ARE EXCLUSIVE TO LIFE SAFETY PLAN ONLY, AND ARE NOT INDICATIVE OF ANY ACTUAL SPACE DESIGNATIONS USED ELSEWHERE.

LEGEND

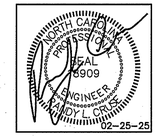
F.E. FIRE EXTINGUISHER CLASS ABC 10 POUNDS

LIFE SAFETY PLAN BUILDING "2"

SCALE: 1/8" = 1'–0"



KEYPLAN



PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	
1.	03/10/2025

Cruse And Associates, P.A.
414 E. Edgerton St.
Raleigh, North Carolina 28534
PH: (919) 832-4439
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SHEET NO.
LS-2 OF 4

LIFE SAFETY PLAN REQUIREMENTS:

- ☒ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7) – SEE NOTE 1
- ☒ ASSUMED AND REAL PROPERTY LINE LOCATIONS – SEE NOTE 2
- ☒ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8) – SEE NOTE 3
- ☒ OCCUPANCY TYPES FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (TABLE 1004.1.2)
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MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.1)

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LIFE SAFETY PLAN NOTES:

1. SEE LEGEND FOR RATED WALLS.
2. ALL ASSUMED AND REAL PROPERTY LINES ≥30'
3. ASSUMED PROPERTY LINES = 10'; UNLIMITED; 705.8.1 EXC. 2
4. NO DEAD ENDS OVER 20'; 20' ALLOWED
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6. PANIC HARDWARE NOT REQUIRED.
7. NO DELAYED EGRESS LOCKS, ELECTROMAGNETIC LOCKS, HOLD OPEN DEVICES, OR EMERGENCY ESCAPE WINDOWS
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EXIT REQUIREMENTS:
NUMBER AND ARRANGEMENTS OF EXITS

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NO. OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS [1,3] (SECTION 1016–1021)	
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BUILDING 2 (AREA 2)	2	2	200'	102'–0"	102'–0"	140'–0"

1. CORRIDOR DEAD ENDS (SECTION 1020.4)
2. BUILDINGS W/SINGLE EXITS (TABLE 1006.3.2(2)), SPACES W/ONE EXIT OR EXIT ACCESS DOORWAY (TABLE 1006.2.1)
3. COMMON PATH OF TRAVEL (SECTION 1029.8)

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a)	(b)		(c)		EXIT WIDTH (in)			
	AREA[1] SQ. FT.	AREA[1] PER OCCUPANT (TABLE 1004.1.2)	CALCULATED OCCUPANT LOAD (a/b)	EGRESS WIDTH PER OCCUPANT (TABLE 1005.1)		REQUIRED WIDTH (SECTION 1005.1) (a/b) x c		ACTUAL WIDTH SHOWN ON PLANS	
				STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL
BUILDING 2 (AREA 1)	12,000	500 GROSS	24	N/A	.2	N/A	4.8"	N/A	94"
BUILDING 2 (AREA 2)	11,700	500 GROSS	24	N/A	.2	N/A	4.8"	N/A	94"
TOTAL	23,700		48						

1. SEE TABLE 1004.1.2 TO DETERMINE WHETHER NET OR GROSS AREA IS APPLICABLE SEE DEFINITION "AREA, GROSS" AND "AREA, NET" (SECTION 1002, DEFINED IN CHAPTER 2)
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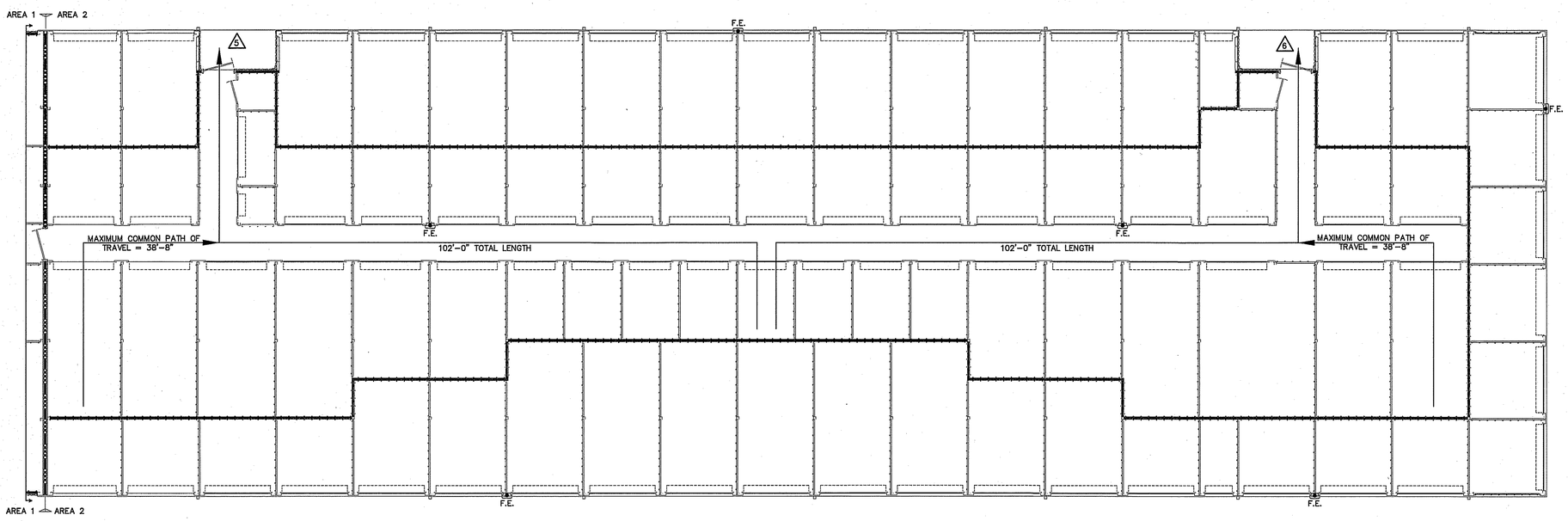


LEGEND

3 HOUR RATED WALL U419

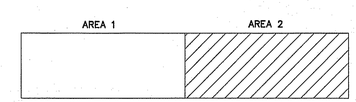
NOTE:
AREA/ROOM/SPACE DESIGNATIONS USED ON LIFE SAFETY PLANS ARE EXCLUSIVE TO LIFE SAFETY PLAN ONLY, AND ARE NOT INDICATIVE OF ANY ACTUAL SPACE DESIGNATIONS USED ELSEWHERE.

LEGEND

F.E. FIRE EXTINGUISHER CLASS ABC 10 POUNDS

LIFE SAFETY PLAN BUILDING "2"

SCALE: 1/8" = 1'–0"



KEYPLAN

NORTH CAROLINA PROFESSIONAL SEAL 5909 ENGINEER RANDY L. CRUSE 02–25–25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	
1.	03/10/2025

Cruse And Associates, P.A.
416 E. Edgerton St.
Raleigh, North Carolina 28534
PH: (919) 832-4459
FAX: (919) 832-4162
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JOB NO.	24–31

SHEET NO.
LS-3 OF 4

LIFE SAFETY PLAN REQUIREMENTS:

- ☒ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7) – SEE NOTE 1
- ☒ ASSUMED AND REAL PROPERTY LINE LOCATIONS – SEE NOTE 2
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- ☒ DEAD END LENGTHS (1020.4) – SEE NOTE 4
- ☒ CLEAR EXIT WIDTHS FOR EACH EXIT DOOR
- ☒ MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.3)
- ☒ ACTUAL OCCUPANT LOAD FOR EACH EXIT DOOR
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- ☒ LOCATION OF DOORS WITH ELECTROMAGNETIC EGRESS LOCKS (1008.1.9.8) – SEE NOTE 7
- ☒ LOCATION OF DOORS EQUIPPED WITH HOLD-OPEN DEVICES – SEE NOTE 7
- ☒ LOCATION OF EMERGENCY ESCAPE WINDOWS (1029) – SEE NOTE 7
- ☒ THE SQUARE FOOTAGE OF EACH FIRE AREA (902) – SEE NOTE 8
- ☒ THE SQUARE FOOTAGE OF EACH SMOKE COMPARTMENT (407.5) – SEE NOTE 9
- ☐ NOTE ANY CODE EXCEPTIONS OR TABLE NOTES THAT MAY HAVE BEEN UTILIZED REGARDING THE ITEMS ABOVE

MAXIMUM CALCULATED OCCUPANT LOAD CAPACITY EACH EXIT DOOR CAN ACCOMMODATE BASED ON EGRESS WIDTH (1005.1)

1. 35" CLEAR WIDTH DIVIDED BY .2" = 175 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 6 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
2. 70" CLEAR WIDTH DIVIDED BY .2" = 350 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 6 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.

LIFE SAFETY PLAN NOTES:

1. NO RATED WALLS.
2. ALL ASSUMED AND REAL PROPERTY LINES ≥30'
3. ASSUMED PROPERTY LINES = 35'; UNLIMITED; 705.8.1 EXC. 2
4. NO DEAD ENDS OVER 20'; 20' ALLOWED
5. NO RATING REQUIRED FOR THIS STRUCTURE.
6. PANIC HARDWARE NOT REQUIRED.
7. NO DELAYED EGRESS LOCKS, ELECTROMAGNETIC LOCKS, HOLD OPEN DEVICES, OR EMERGENCY ESCAPE WINDOWS
8. FIRE AREAS DO NOT EXCEED CODE ALLOWANCE
9. BUILDING MEETS CODE REQUIREMENTS WITHOUT SUBDIVISION INTO SMOKE COMPARTMENTS; NO SMOKE COMPARTMENTS

EXIT REQUIREMENTS: NUMBER AND ARRANGEMENTS OF EXITS

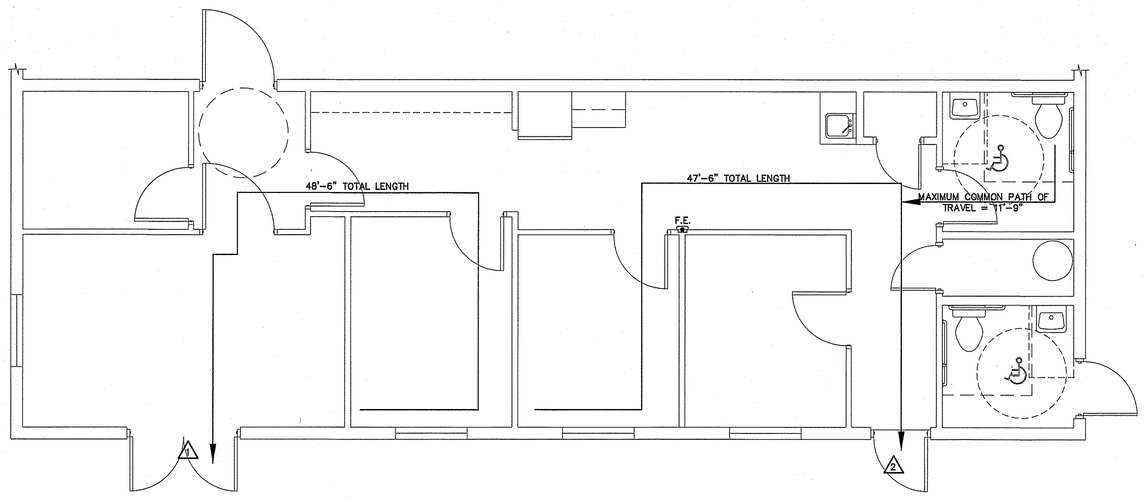
FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NO. OF EXITS		TRAVEL DISTANCE		ARRANGEMENT MEANS OF EGRESS [1,3] (SECTION 1016–1021)	
	REQ'D.	SHOWN ON PLANS	ALLOWABLE TRAVEL DISTANCE (TABLE 1017.2)	ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	REQUIRED DISTANCE BETWEEN EXIT DOORS	ACTUAL DISTANCE SHOWN ON PLANS
BUILDING 1	2	2	200'	132'–0"	85'–6"	145'–6"
OFFICE	1	2	200'	48'–6"	31'–3"	36"

1. CORRIDOR DEAD ENDS (SECTION 1020.4)
2. BUILDINGS W/SINGLE EXITS (TABLE 1006.3.2(2)), SPACES W/ONE EXIT OR EXIT ACCESS DOORWAY (TABLE 1006.2.1)
3. COMMON PATH OF TRAVEL (SECTION 1029.8)

EXIT WIDTH

USE GROUP OR SPACE DESCRIPTION	(a)	(b)		(c)		EXIT WIDTH (In)			
	AREA[1] SQ. FT.	AREA[1] PER OCCUPANT (TABLE 1004.1.2)	CALCULATED OCCUPANT LOAD (a/b)	EGRESS WIDTH PER OCCUPANT (TABLE 1005.1)		REQUIRED WIDTH (SECTION 1005.1) (a/b) x c		ACTUAL WIDTH SHOWN ON PLANS	
				STAIR	LEVEL	STAIR	LEVEL	STAIR	LEVEL
BUILDING 1	9,600	500 GROSS	20	N/A	.2	N/A	4.4"	N/A	94"
OFFICE	1,200	100 GROSS	12	N/A	.2	N/A	2.4"	N/A	108"
TOTAL	10,800								

1. SEE TABLE 1004.1.2 TO DETERMINE WHETHER NET OR GROSS AREA IS APPLICABLE SEE DEFINITION "AREA, GROSS" AND "AREA, NET" (SECTION 1002, DEFINED IN CHAPTER 2)
2. MINIMUM STAIRWAY WIDTH (SECTION 1011.2); MIN. CORRIDOR WIDTH (SECTION 1020.2); MIN. DOOR WIDTH (SECTION 1010.1.1)
3. MINIMUM WIDTH OF EXIT PASSAGEWAY (SECTION 1024)
4. SEE SECTION 1005.6 FOR CONVERGING EXITS.
5. THE LOSS OF ONE MEANS OF EGRESS SHALL NOT REDUCE THE AVAILABLE CAPACITY TO LESS THAN 50% OF THE TOTAL REQUIRED (SECTION 1005.5)
6. ASSEMBLY OCCUPANCIES (SECTION 1029)



LIFE SAFETY PLAN BUILDING "1" (OFFICE)

SCALE: 1/4" = 1'–0"

NOTE:
AREA/ROOM/SPACE DESIGNATIONS USED ON LIFE SAFETY PLANS ARE EXCLUSIVE TO LIFE SAFETY PLAN ONLY, AND ARE NOT INDICATIVE OF ANY ACTUAL SPACE DESIGNATIONS USED ELSEWHERE.

LEGEND

F.E. FIRE EXTINGUISHER CLASS ABC 10 POUNDS

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER BRADY L. CRUSE
02–25–25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
PH: (910) 892-5123
FAX: (910) 892-5162
LICENSE NO.: C-1721

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JOB NO.	24–31

SHEET NO.
LS-4 OF 4

ROOM		FLOOR						BASE			WALLS			CEIL. HT.	CLG.			REMARKS
ROOM NO.	ROOM NAME	CONCRETE	CARPET*	TILE	VCT	LVT	WOOD	CERAMIC TILE	RUBBER BASE	NONE	BRICK	5/8" DRYWALL	CERAMIC TILE	FRP	2X4 CEILING TILE	NONE	DRYWALL	VINYL	
100	SALES OFFICE			X				X			X			8'-0"+/-			X		
101	MECHANICAL ROOM			X				X			X			8'-0"+/-			X		
102	LOCKER ROOM			X				X			X			8'-0"+/-			X		
103	OFFICE # 1			X				X			X			8'-0"+/-			X		
104	OFFICE # 2			X				X			X			8'-0"+/-			X		
105	OFFICE #3			X				X			X			8'-0"+/-			X		
106	KITCHENETTE			X				X			X			8'-0"+/-			X		
107	CLOSET			X				X			X			8'-0"+/-			X		
108	RESTROOM #1			X				X			X			8'-0"+/-			X		
109	CLOSET			X				X			X			8'-0"+/-			X		
110	RESTROOM #2			X				X			X			8'-0"+/-			X		

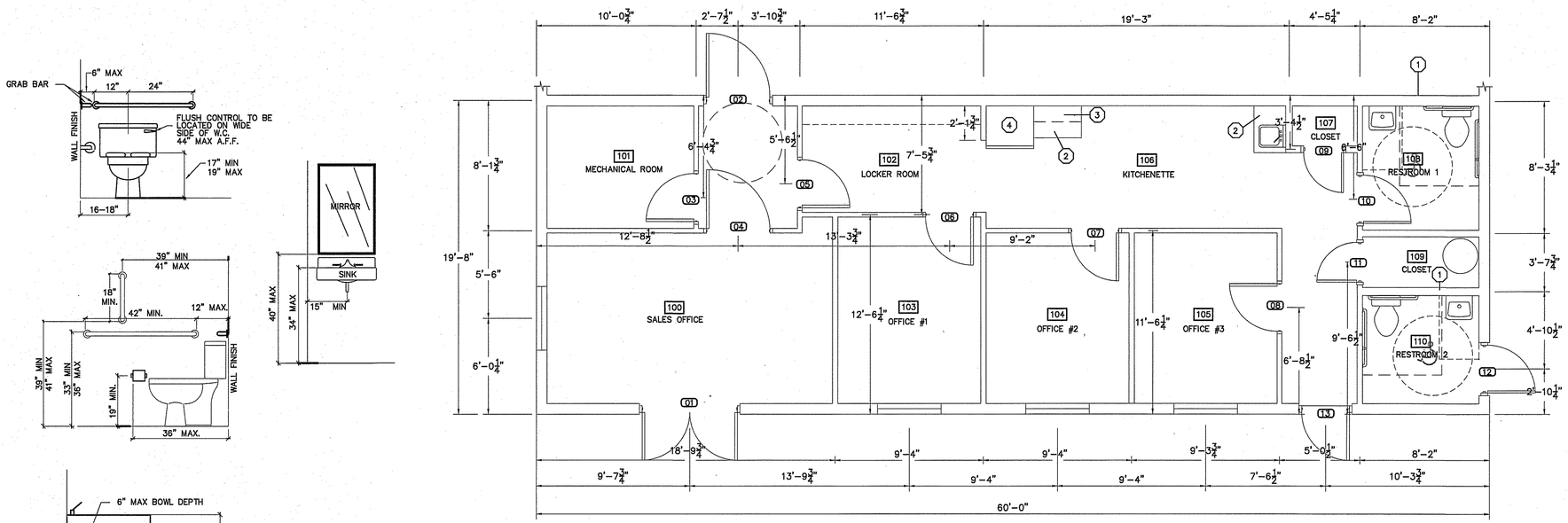
OWNER TO VERIFY ALL COLORS AND FINISHES BEFORE ORDERING MATERIALS
COORDINATE ALL CEILING HEIGHTS WITH DUCTWORK

DOOR SCHEDULE

DOOR NO.	DOOR SIZE WIDE	HIGH	THICK.	REMARKS
01	6'-0"	7'-0"	1 3/4"	EXTERIOR STOREFRONT DOOR WITH H.M. FRAME
02	4'-0"	7'-0"	1 3/4"	INTERIOR METAL DOOR WITH H.M. FRAME
03	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR WITH H.M. FRAME
04	4'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR WITH H.M. FRAME
05	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR WITH H.M. FRAME
06	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR WITH H.M. FRAME
07	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR WITH H.M. FRAME
08	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR WITH H.M. FRAME
09	2'-6"	7'-0"	1 3/4"	INTERIOR WOOD DOOR WITH H.M. FRAME
10	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR WITH H.M. FRAME
11	2'-6"	7'-0"	1 3/4"	INTERIOR WOOD DOOR WITH H.M. FRAME
12	3'-0"	7'-0"	1 3/4"	EXTERIOR METAL DOOR WITH H.M. FRAME
13	3'-0"	7'-0"	1 3/4"	EXTERIOR STOREFRONT DOOR WITH H.M. FRAME

VERIFY TYPES AND SIZES WITH OWNER BEFORE ORDERING.
PROVIDE ALL HARDWARE AS REQUIRED. ALL HARDWARE TO BE A.D.A. COMPLIANT.
VERIFY HARDWARE FINISHES & STYLES WITH OWNER BEFORE ORDERING.

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER BRADY L. CRUSE
02-25-25



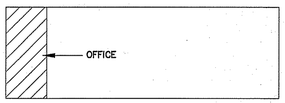
RESTROOM ACCESSIBILITY DETAILS
SCALE: 1/2" = 1'-0"

PROPOSED FLOOR PLAN BUILDING "1" (OFFICE)
SCALE: 1/4" = 1'-0"

KEY NOTES:

1. WET WALLS. SEE NOTES.
2. BASE CABINET SELECTED BY OWNER
3. WALL CABINET SELECTED BY OWNER
4. REFRIGERATOR, SELECTED BY OWNER

NOTES:
INTERIOR WALLS; 3-5/8", 20 GA. METAL STUDS @ 16" O.C.
"WET WALLS" (1) : 6", 20 GA METAL STUDS @ 16" O.C.



KEY PLAN
SCALE: NTS

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
PH: (910) 892-5168
FAX: (910) 892-5182
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DATE	02-25-25
DRAWN BY	BAM
JOB NO.	24-31

SHEET NO.
F-1 OF 1

PLUMBING LEGEND

DESCRIPTION	SYMBOL
COLD WATER	CW
HOT WATER	HW
COLD WATER (FILTERED)	
RECIRCULATED WATER	HWR
VENT PIPING	V
WASTE PIPING	NEW / EXISTING W
CLEAN OUT IN GRADE	C.O.I.G.
FLOOR CLEAN OUT	F.C.O.
NON FREEZE HOSE BIBB	NFHB
FLOOR DRAIN	F.D.
CHECK VALVE	
BALL VALVE	
GATE VALVE	
SHUT-OFF VALVE	
DOUBLE CHECK VALVE	
FIXTURE DESIGNATION	P--
MOUNTING HEIGHT	MH
POINT OF CONNECTION NEW TO EXISTING	
FLOOR SINK	
SHOCK ABSORBER W/BALL VALVE SHUT-OFF	SA SIZE PER MANUF. RECOMMENDATIONS
CHANGE IN PIPE SIZE	

PLUMBING FIXTURE SCHEDULE

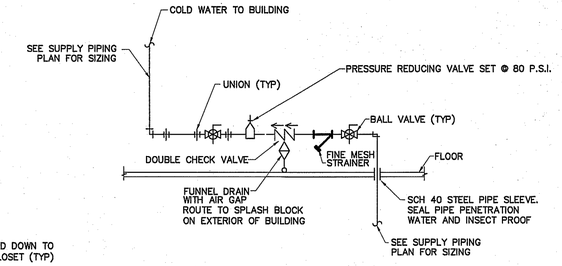
MARK	MAKE	MODEL	DESCRIPTION	NOTES
P-1	AMERICAN STANDARD	CADET 2377.100	EL 1.6/PA 16.5"HC ELONGATED WATER CLOSET HC ACCESSIBLE, TANK TYPE	WHITE 5311.012 SEAT
P-2	AMERICAN STANDARD	LUCERNE 0355	WALL HUNG LAVATORY	1340.225 FAUCET. PROVIDE W/BASKET DRAIN FAUCET HOLES 4" O..C.
P-3	–	–	SINGLE BOWL SINK	VERIFY SIZE, TYPE, & MOUNTING W/OWNER BEFORE ORDERING FIXTURE. COORDINATE WITH COUNTER TOP SUPPLIER. PROVIDE WITH FAUCET & DRAIN.
P-4	STATE	4.5KW WATER HEATER		240V, 1ø

* VERIFY ALL FIXTURES WITH OWNER BEFORE PURCHASE OR INSTALLATION

PLUMBING CALCULATIONS

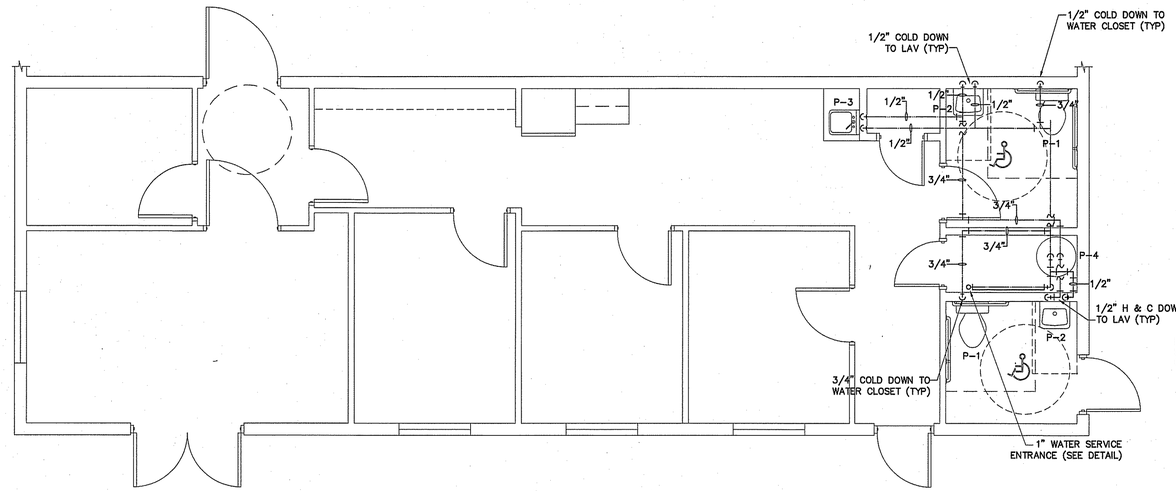
ITEM	# OF	FIXTURE UNITS (EACH) COLD	FIXTURE UNITS (EACH) HOT	FIXTURE UNITS (EACH) TOTAL	FIXTURE UNITS (TOTAL) COLD	FIXTURE UNITS (TOTAL) HOT	FIXTURE UNITS (TOTAL) TOTAL	FIXTURE UNITS (WASTE)
FLUSH TANK WATER CLOSET	2	5.0	–	5.0	10.0	–	10.0	4/8
LAVATORY	3	1.5	1.5	2	4.5	4.5	6.0	1/3
TOTAL 18.0 GPM		–	–	–	14.5	4.5	16.0	11.0

WATER SUPPLY PIPE SIZE: MINIMUM 1"



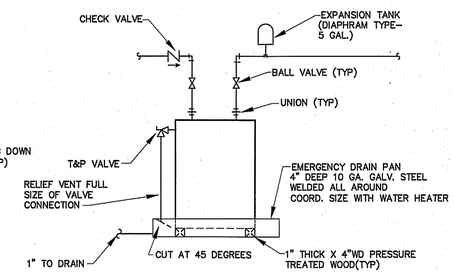
DETAIL–WATER SERVICE ENTRANCE

NOT TO SCALE



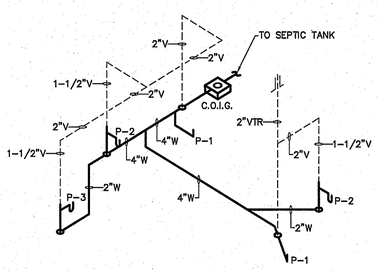
PLUMBING SUPPLY PLAN BUILDING "1" (OFFICE)

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



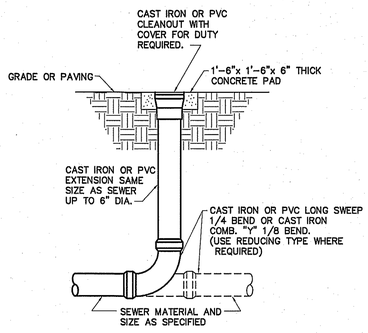
DETAIL–WATER HEATER

NOT TO SCALE



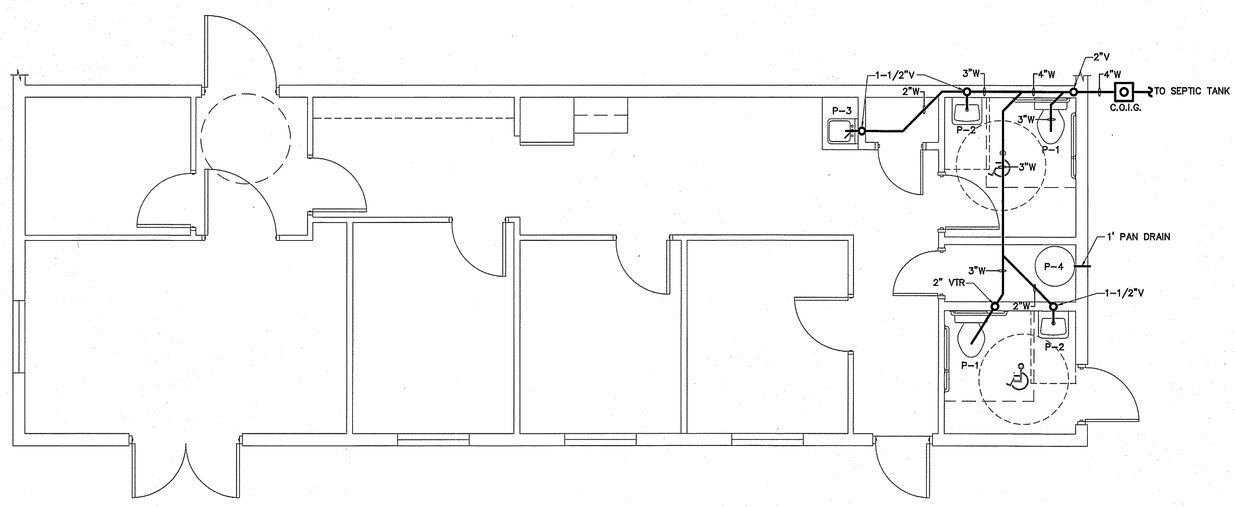
WASTE & VENT RISER DIAGRAM

NOT TO SCALE



DETAIL–CLEAN OUT AT GRADE

NOT TO SCALE



PLUMBING WASTE PLAN BUILDING "1" (OFFICE)

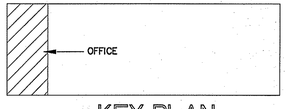
SCALE: 1/4" = 1'-0"

GENERAL PLUMBING NOTES

1. ALL WORK SHALL BE IN COMPLIANCE WITH APPLICABLE LOCAL, STATE, AND NATIONAL CODES.
2. CONTRACTORS SHALL COORDINATE PIPING WITH ALL OTHER TRADES.
3. CONTRACTOR SHALL REFER TO ARCHITECTURAL/STRUCTURAL DRAWINGS FOR DIMENSIONS.
4. CONTRACTOR SHALL FURNISH AND INSTALL DIELECTRIC UNIONS AT ALL CONNECTIONS BETWEEN DISSIMILAR METALS.
5. CONTRACTOR SHALL FURNISH AND INSTALL ESCUTCHEONS AND COVER PLATES AT ALL FINISHED WALLS, CEILINGS AND FLOOR OPENINGS.
6. PIPING SHALL BE DISINFECTED IN ACCORDANCE WITH STATE AND LOCAL CODE. (REFER TO SPECIFICATIONS.)
7. ALL PIPING SHALL BE TESTED FOR LEAKS. IF ANY LEAKS ARE DETECTED THE PIPING SHALL BE REPAIRED, RESOLDERED OR REPLACED AND RETESTED.
8. ALL SOLDER SHALL BE OF THE LEAD FREE TYPE.
9. WATER HEATER SHALL BE SUPPLIED WITH FACTORY INSTALLED T&P VALVES AND SHALL HAVE UNIONS AND ISOLATION VALVES.
10. DOMESTIC WATER SUPPLY PIPING SHALL BE COPPER OR CPVC. PEX IS ALLOWED WHERE PERMITTED BY CODE.
11. WASTE AND VENT PIPING SHALL BE SCH. 40 PVC OR HEAVY DUTY CAST IRON UNDER TRAFFIC AREAS.
12. INSTALL THERMOSTATICALLY CONTROLLED MIXING VALVES AS NEEDED TO ENSURE HOT WATER TEMPERATURE TO ALL HAND WASHING LOCATIONS DOES NOT EXCEED 110°F.
13. ALL FLOOR DRAINS & HUB DRAINS SHALL BE PROVIDED WITH TRAP PRIMER EXCEPT FLOOR DRAINS IN TOILETS WHERE HOSE BIBS ARE PROVIDED.
14. HOT WATER PIPING SHALL BE INSULATED WITH 1" THICK FIBROUS GLASS INSULATION. COLD WATER PIPING SHALL BE INSULATED WITH 1/2" FIBROUS GLASS INSULATION. VAPOR BARRIER SHALL BE APPLIED TO EACH.

PLUMBING CONNECTION SCHEDULE

FIXTURE	C.W.	H.W.	WASTE	VENT
FLUSH TANK WATER CLOSET	1/2"	–	3"	2"
LAVATORY	1/2"	1/2"	2"	1 1/2"
FLOOR DRAIN			3"	2"



KEY PLAN

SCALE: NTS

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER BRADY CRUSE
02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Raleigh, North Carolina 28534
PH: (919) 862-4139
FAX: (919) 862-5162
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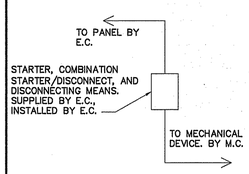
SHEET NO.	P-1 OF 1

CONNECTION SCHEDULE



ALL STARTERS, COMBINATION STARTER/DISCONNECTS, AND DISCONNECTING MEANS, SUPPLIED BY E.C. FOR MECHANICAL EQUIPMENT AS REQUIRED BY NEC AND MECHANICAL EQUIPMENT MANUFACTURER'S REQUIREMENTS.

NOTE:

VERIFY THERMOSTAT LOCATION WITH OWNER PRIOR TO INSTALLING.

GENERAL NOTE:

MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES FOR ALL HVAC EQUIPMENT.

GENERAL NOTES:

1. RUN ALL DUCTWORK TIGHT TO CEILING INSULATION.
2. FASTEN ALL CONDENSATE LINES TO WALLS OR CEILINGS WHERE APPLICABLE.
3. 7-DAY PROGRAMMABLE T'STAT WITH LOCKING COVER.
4. PROVIDE AND INSTALL CONCRETE SPLASH BLOCK, ONE PER 3 HEAT PUMPS MIN.
5. INSTALL FLOAT SWITCH IN AUXILIARY PAN TO STOP UNIT IN EVENT OF CONDENSATE OVERFLOW.

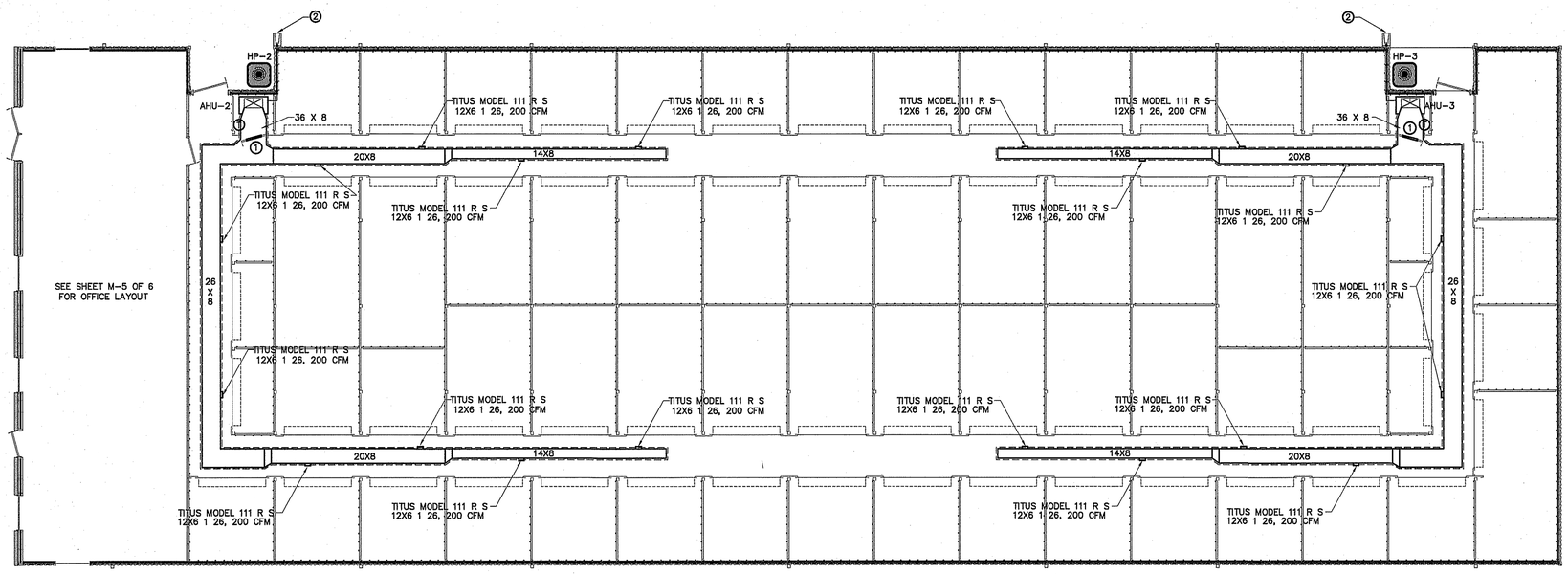
MECHANICAL SYMBOL LEGEND

SINGLE LINE	DOUBLE LINE	DESCRIPTION
-		TAKE OFF TO SUPPLY AIR REGISTER WITH EXT. INSUL. DUCTWORK
-		BRANCH TAKEOFF FROM MAIN TRUNK DUCT WITH EXT. INSUL. DUCTWORK
-		END CAP
D OR D -	D OR D	DUCT SMOKE DETECTOR
A.D. -		ACCESS DOOR
-	-	VOLUME CONTROL DAMPER (TYP) / CEILING DIFFUSER / FLEXIBLE DUCTWORK (14' MAX.)
-	-	ONE SIDED REDUCING TRANSITION
F.D.(1-1/2)		F.D.=FIRE DAMPER (1-1/2)=RATED FOR 1-1/2 HRS.
-		RETURN AIR OR EXHAUST GRILLE
-	-	TWO SIDED TRANSITION
(1-WAY) (2-WAY) (3-WAY) (4-WAY) -		SUPPLY AIR CEILING DIFFUSER, ARROW INDICATES DIRECTION OF BLOW & ACTIVE DIFFUSER SIDES
CUSHION HEAD -		(1)CUSHION HEAD @ BRANCH OR DIFFUSER RUNOUT (2)CUSHION HEAD IS EQUAL TO 1-1/2 WIDTH OF THE BRANCH DUCT OR DIFFUSER RUNOUT
-		R.A. OR EXHAUST DUCT TURNS DOWN @ 90 DEGS.
-	-	MANUAL VOLUME CONTROL DAMPER W/ QUADRANT LOCKING DEVICE
-	-	TWO SIDED TRANSITION
-		ELECT. DUCT INSERT HEATER WITH CONTROL PANEL
-		AHU W/FLEXIBLE CONNECTION AT SUPPLY AND RETURN DUCT
-		KEY NOTE
MARK / XXX		CFM-DIFFUSER, REGISTER OR GRILLE (SEE SCHEDULE)
① -		EXHAUST FAN

DOOR SIZE / DUCT HEIGHT
8X8 / 10"
10X10 / 12"
12X12 / 14" & LARGER

KEY NOTES:

1. 16" X 16" TRANSFER GRILL INSTALLED IN DOOR (TYPICAL)
2. 3/4" CONDENSATE LINE FROM EACH AHU TO SPLASH BLOCKS



MECHANICAL HVAC PLAN BUILDING "1"

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

NORTH CAROLINA PROFESSIONAL SEAL 8909 ENGINEER MARDY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS

NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
TEL. (910) 892-4168
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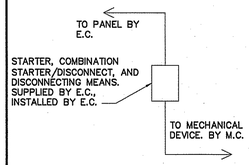
SHEET NO.
M-1 OF 5

CONNECTION SCHEDULE



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NOTE:

VERIFY THERMOSTAT LOCATION WITH OWNER PRIOR TO INSTALLING.

GENERAL NOTE:

MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES FOR ALL HVAC EQUIPMENT.

GENERAL NOTES:

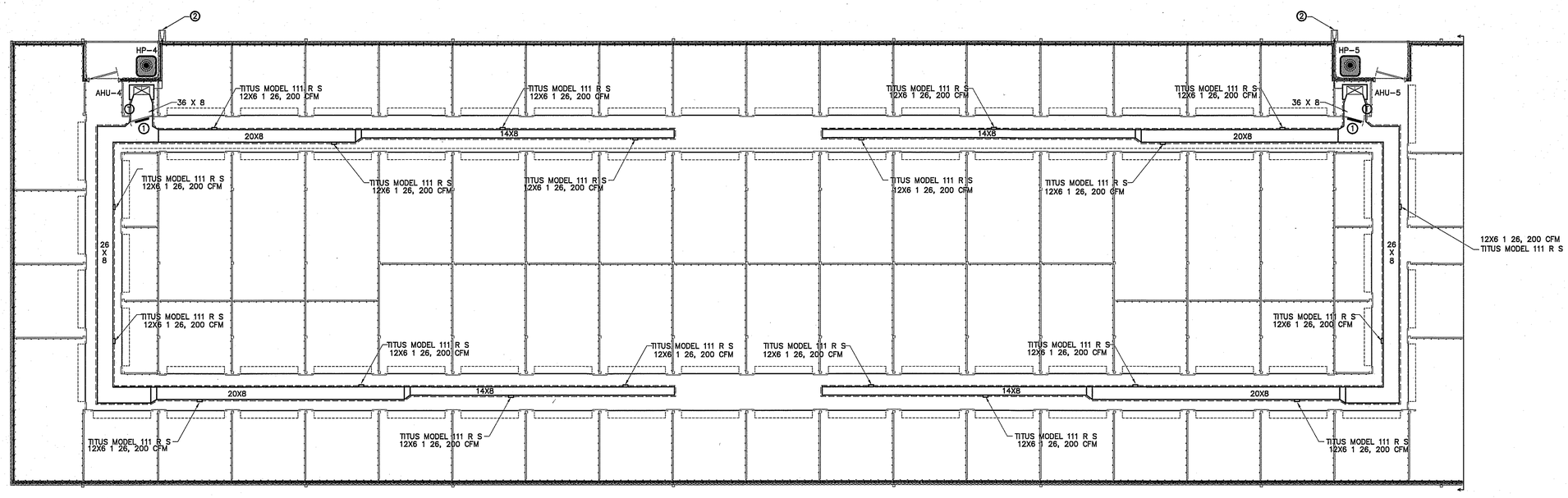
1. RUN ALL DUCTWORK TIGHT TO CEILING INSULATION.
2. FASTEN ALL CONDENSATE LINES TO WALLS OR CEILINGS WHERE APPLICABLE.
3. 7-DAY PROGRAMMABLE T'STAT WITH LOCKING COVER.
4. PROVIDE AND INSTALL CONCRETE SPLASH BLOCK, ONE PER 3 HEAT PUMPS MIN.
5. INSTALL FLOAT SWITCH IN AUXILIARY PAN TO STOP UNIT IN EVENT OF CONDENSATE OVERFLOW.

MECHANICAL SYMBOL LEGEND

SINGLE LINE	DOUBLE LINE	DESCRIPTION
		TAKE OFF TO SUPPLY AIR REGISTER WITH EXT. INSUL. DUCTWORK
		BRANCH TAKEOFF FROM MAIN TRUNK DUCT WITH EXT. INSUL. DUCTWORK
		END CAP
D OR DD	D OR DD	DUCT SMOKE DETECTOR
A.D.		ACCESS DOOR — DOOR SIZE / DUCT HEIGHT: 8X8 / 10"; 10X10 / 12"; 12X12 / 14" & LARGER
		VOLUME CONTROL DAMPER (TYP); CEILING DIFFUSER; FLEXIBLE DUCTWORK (14' MAX.)
		ONE SIDED REDUCING TRANSITION
F.D.(1-1/2)		F.D.=FIRE DAMPER (1-1/2)=RATED FOR 1-1/2 HRS.
		RETURN AIR OR EXHAUST GRILLE
		TWO SIDED TRANSITION
		(1-WAY) (2-WAY) (3-WAY) (4-WAY) SUPPLY AIR CEILING DIFFUSER, ARROW INDICATES DIRECTION OF BLOW & ACTIVE DIFFUSER SIDES
CUSHION HEAD		(1)CUSHION HEAD @ BRANCH OR DIFFUSER RUNOUT (2)CUSHION HEAD IS EQUAL TO 1-1/2 WIDTH OF THE BRANCH DUCT OR DIFFUSER RUNOUT
		R.A. OR EXHAUST DUCT TURNS DOWN @ 90 DEGS.
		MANUAL VOLUME CONTROL DAMPER W/ QUADRANT LOCKING DEVICE
		TWO SIDED TRANSITION
		ELECT. DUCT INSERT HEATER WITH CONTROL PANEL
		AHU W/FLEXIBLE CONNECTION AT SUPPLY AND RETURN DUCT
		KEY NOTE
X / XXX		MARK; CFM-DIFFUSER, REGISTER OR GRILLE (SEE SCHEDULE)
1		EXHAUST FAN

KEY NOTES:

1. 16" X 16" TRANSFER GRILL INSTALLED IN DOOR (TYPICAL)
2. 3/4" CONDENSATE LINE FROM EACH AHU TO SPLASH BLOCKS
3. PROVIDE CONDENSATE PUMP IF GRAVITY DRAIN IS NOT AVAILABLE. COORDINATE ELECTRICAL REQUIREMENTS WITH E.C. AS APPLICABLE.



MECHANICAL HVAC PLAN BUILDING "2"

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

LEGEND

3 HOUR RATED WALL U419

AREA 1 AREA 2

KEYPLAN

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER MANDY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	
1.	03/11/2025

Cruse And Associates, P.A.
414 E. Edgerton St. 28534
Pine Hill, North Carolina
PH: (910) 892-4418
FAX: (910) 892-5162
LICENSE NO.: C-1721

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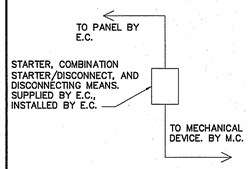
DATE	02-25-25
DRAWN BY	BAM
JOB NO.	24-31

SHEET NO. M-2 OF 5

CONNECTION SCHEDULE



ALL STARTERS, COMBINATION STARTER/DISCONNECTS, AND DISCONNECTING MEANS, SUPPLIED BY E.C. FOR MECHANICAL EQUIPMENT AS REQUIRED BY NEC AND MECHANICAL EQUIPMENT MANUFACTURER'S REQUIREMENTS.

GENERAL NOTES:

1. RUN ALL DUCTWORK TIGHT TO CEILING INSULATION.
2. FASTEN ALL CONDENSATE LINES TO WALLS OR CEILINGS WHERE APPLICABLE.
3. 7-DAY PROGRAMMABLE T'STAT WITH LOCKING COVER.
4. PROVIDE AND INSTALL CONCRETE SPLASH BLOCK, ONE PER 3 HEAT PUMPS MIN.
5. INSTALL FLOAT SWITCH IN AUXILIARY PAN TO STOP UNIT IN EVENT OF CONDENSATE OVERFLOW.

NOTE:

VERIFY THERMOSTAT LOCATION WITH OWNER PRIOR TO INSTALLING.

GENERAL NOTE:

MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES FOR ALL HVAC EQUIPMENT.

MECHANICAL SYMBOL LEGEND

SINGLE LINE	DOUBLE LINE	DESCRIPTION
		TAKE OFF TO SUPPLY AIR REGISTER WITH EXT. INSUL. DUCTWORK
		BRANCH TAKEOFF FROM MAIN TRUNK DUCT WITH EXT. INSUL. DUCTWORK
		END CAP
D OR D	D OR D	DUCT SMOKE DETECTOR
A.D.		ACCESS DOOR

DOOR SIZE	DUCT HEIGHT
8X8	10"
10X10	12"
12X12	14" & LARGER

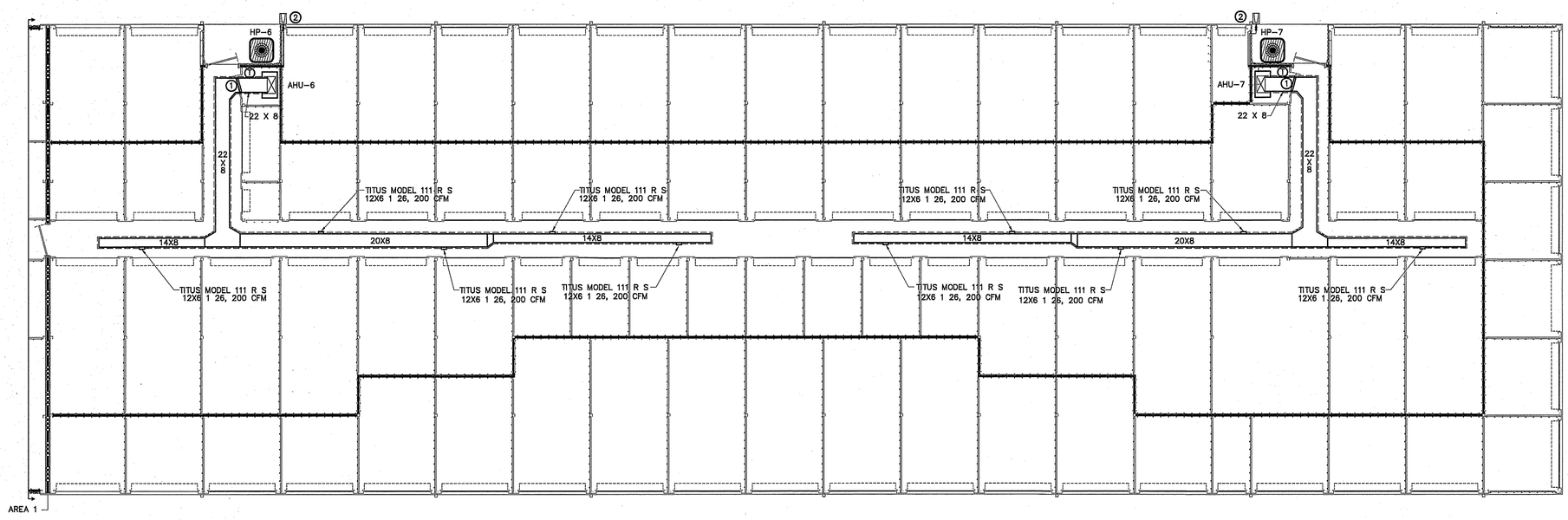
SINGLE LINE	DOUBLE LINE	DESCRIPTION
		VOLUME CONTROL DAMPER (TYP) / CEILING DIFFUSER / FLEXIBLE DUCTWORK (14' MAX.)
		ONE SIDED REDUCING TRANSITION
F.D.(1-1/2)		F.D.=FIRE DAMPER (1-1/2)=RATED FOR 1-1/2 HRS.
		RETURN AIR OR EXHAUST GRILLE
		TWO SIDED TRANSITION

SINGLE LINE	DOUBLE LINE	DESCRIPTION
	(1-WAY) (2-WAY) (3-WAY) (4-WAY)	SUPPLY AIR CEILING DIFFUSER, ARROW INDICATES DIRECTION OF BLOW & ACTIVE DIFFUSER SIDES
CUSHION HEAD		(1)CUSHION HEAD @ BRANCH OR DIFFUSER RUNOUT (2)CUSHION HEAD IS EQUAL TO 1-1/2 WIDTH OF THE BRANCH DUCT OR DIFFUSER RUNOUT
		R.A. OR EXHAUST DUCT TURNS DOWN @ 90 DEGS.
		MANUAL VOLUME CONTROL DAMPER W/ QUADRANT LOCKING DEVICE
		TWO SIDED TRANSITION

	ELECT. DUCT INSERT HEATER WITH CONTROL PANEL
	AHU W/FLEXIBLE CONNECTION AT SUPPLY AND RETURN DUCT
	KEY NOTE
X / XXX	MARK / CFM-DIFFUSER, REGISTER OR GRILLE (SEE SCHEDULE)
	EXHAUST FAN

KEY NOTES:

1. 16" X 16" TRANSFER GRILL INSTALLED IN DOOR (TYPICAL)
2. 3/4" CONDENSATE LINE FROM EACH UNIT TO SPLASH BLOCKS
3. PROVIDE CONDENSATE PUMP IF GRAVITY DRAIN IS NOT AVAILABLE. COORDINATE ELECTRICAL REQUIREMENTS WITH E.C. AS APPLICABLE.

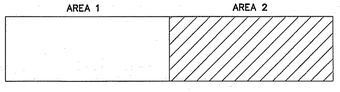


MECHANICAL HVAC PLAN BUILDING "2"

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

LEGEND

3 HOUR RATED WALL U419



KEYPLAN

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER RANDY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	
1.	03/11/2025

Cruse And Associates, P.A.
414 E. Edgerton St.
Raleigh, North Carolina 28534
phone: (919) 832-5162
FAX: (919) 832-5162
LICENSE NO.: C-1721

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DATE	02-25-25
DRAWN BY	BAM
JOB NO.	24-31

SHEET NO. M-3 OF 5

MECHANICAL SYMBOL LEGEND

SINGLE LINE	DOUBLE LINE	DESCRIPTION
		TAKE OFF TO SUPPLY AIR REGISTER WITH EXT. INSUL. DUCTWORK
		BRANCH TAKEOFF FROM MAIN TRUNK DUCT WITH EXT. INSUL. DUCTWORK
		END CAP
D OR DR	D OR DR	DUCT SMOKE DETECTOR
A.D.		ACCESS DOOR — DOOR SIZE / DUCT HEIGHT: 8X8 / 10", 10X10 / 12", 12X12 / 14" & LARGER
		VOLUME CONTROL DAMPER (TYP); CEILING DIFFUSER; FLEXIBLE DUCTWORK (14' MAX.)
		ONE SIDED REDUCING TRANSITION
F.D.(1-1/2)		F.D.=FIRE DAMPER (1-1/2)=RATED FOR 1-1/2 HRS.
	A / 70	RETURN AIR OR EXHAUST GRILLE
		TWO SIDED TRANSITION
		SUPPLY AIR CEILING DIFFUSER, ARROW INDICATES DIRECTION OF BLOW & ACTIVE DIFFUSER SIDES (1-WAY) (2-WAY) (3-WAY) (4-WAY)
CUSHION HEAD		(1)CUSHION HEAD @ BRANCH OR DIFFUSER RUNOUT (2)CUSHION HEAD IS EQUAL TO 1-1/2 WIDTH OF THE BRANCH DUCT OR DIFFUSER RUNOUT
		R.A. OR EXHAUST DUCT TURNS DOWN @ 90 DEGS.
		MANUAL VOLUME CONTROL DAMPER W/ QUADRANT LOCKING DEVICE
		TWO SIDED TRANSITION
		ELECT. DUCT INSERT HEATER WITH CONTROL PANEL
		AHU W/FLEXIBLE CONNECTION AT SUPPLY AND RETURN DUCT
		KEY NOTE
X / XXX		MARK; CFM-DIFFUSER, REGISTER OR GRILLE (SEE SCHEDULE)
		EXHAUST FAN

NOTE:
VERIFY THERMOSTAT LOCATION WITH OWNER PRIOR TO INSTALLING. FILTER ALL OUTSIDE AIR.

GENERAL NOTE:
MAINTAIN MANUFACTURER'S REQUIRED CLEARANCES FOR ALL HVAC EQUIPMENT.

OUTSIDE AIR REQUIREMENTS
OFFICE – 0.06 CFM/SF X 1200 SF = 72 CFM 12 PEOPLE X 5 CFM/PERSON = 60 CFM 132 CFM FOR OFFICE AHU-1.

REGISTER, GRILLE, & DIFFUSER SCHEDULE*

MARK	DESCRIPTION	MAX. NC	NECK	BORDER TYPE	MATERIAL	FINISH	MANUFACTURER	MODEL NUMBER	ACCESSORIES / NOTES
A	DIFFUSER-4-WAY	30	6"X6"	LAY-IN	STEEL	WHITE	TITUS	TDC 6X6 3 26 4	SQ-TO-RND
B	DIFFUSER-2-WAY	30	6"X6"	LAY-IN	STEEL	WHITE	TITUS	TDC 6X6 3 26 2	SQ-TO-RND
R1	RETURN GRILLE	30	20"X20"	LAY-IN	STEEL	WHITE	TITUS	23RL 20X20 24X24 3 26	SQ-TO-RND

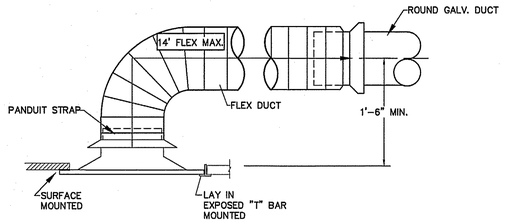
* VERIFY CEILING TYPE BEFORE ORDERING, NARROW TEE REQUIREMENTS, PLASTER FRAMES ETC. TO BE INCLUDED WITH DIFFUSERS AT NO ADDITIONAL COST TO OWNER

EXHAUST FAN SCHEDULE

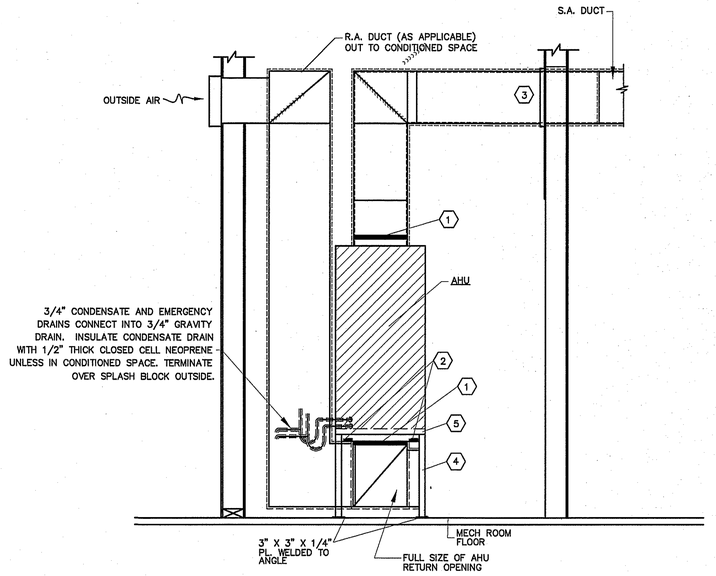
MARK	MAKE	MODEL	TYPE	CFM	EXTERNAL S.P. IN (W.G.)	AMPS	ELECTRICAL VOLT	PH	HZ	NOTES
EF-1,2	GREENHECK	SP-A90	CEILING FAN	70	.125	.34	115	1ø	60	WC-8 WALL CAP

LOUVER SCHEDULE

MARK	DESCRIPTION	SERVES	CFM	APPROXIMATE OUTSIDE DIMENSIONS (W X H)	MODEL
L1	OUTSIDE AIR LOUVER	VARIES	*	12"X12"	HART & COOLEY 15302F 12X12 W/ INSECT SCREEN



DIFFUSER DETAIL
NOT TO SCALE



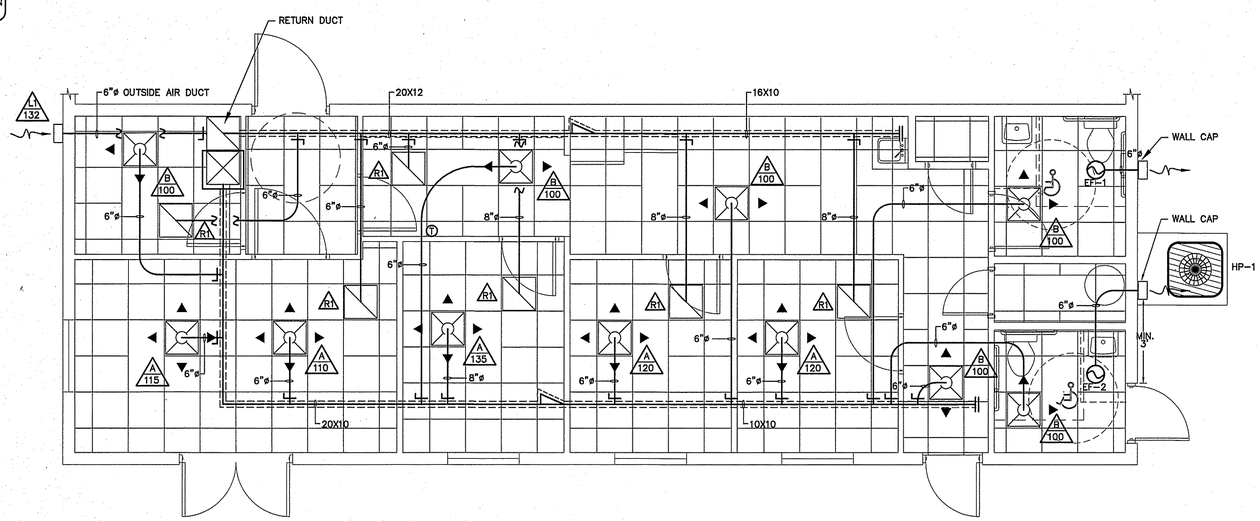
TYPICAL DETAIL–FLOOR MOUNTED AHU (OFFICE)
NOT TO SCALE

NOTES:

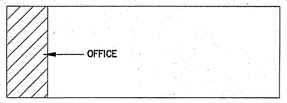
1. FLEXIBLE CONNECTION
2. NEOPRENE-IN-SHEAR VIBRATION ISOLATORS
3. SHEET METAL COLLAR AT WALL PENETRATION
4. 1-1/2" X 1-1/2" X 3/16" ANGLE AHU SUPPORT STAND WITH ALL WELDED CONSTRUCTION. PAINT WITH 1 COAT OF PRIMER AND FINISH WITH (2) COATS GRAY HIGH GLOSS MACHINE ENAMEL, MARTIN SENOUR OR EQUAL.
5. 1" PLEATED FILTER

PROVIDE PROGRAMMABLE THERMOSTAT FOR EACH SYSTEM.

GENERAL NOTE:
COORDINATE CEILING HEIGHT WITH TRUNK DUCT HEIGHT. CEILING COULD REQUIRE LOWERING TO LESS THAN 8' IN SOME AREAS.



HVAC MECHANICAL PLAN BUILDING "1" (OFFICE)
SCALE: 1/4" = 1'-0"



KEY PLAN
SCALE: NTS

NORTH CAROLINA PROFESSIONAL SEAL 18909 ENGINEER BARRY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS
NO.

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
(910) 892-5162
FAX: (910) 892-5162
LICENSE NO.: C-1721

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DATE	02-25-25
DRAWN BY	BAM
JOB NO.	24-31

SHEET NO.
M-4 OF 5

AIR HANDLER UNIT

AHU NO.	MANUFACTURER	MODEL	VOLTAGE	E.S.P.	OUTSIDE AIR (CFM)	CFM	UNIT FLA	REF LINES GAS	REF LINES LIQ.	SEER	HTR KW (240)	COOLING CAPACITY (MBH) TOTAL	COOLING CAPACITY (MBH) SENS.	HEATING CAPACITY (MBH) HIGH	HEATING CAPACITY (MBH) LOW	HSPF	MIN. CIRC. AMPACITY	M.O.C.P.
AHU-6,7	TRANE	TEM4A0B31M31	240/1/60	.46	–	1000	32.0	3/4	3/8	14.3	7.68	28.4	22.4	27.2	18.5	8.5	43	45
AHU-1	TRANE	TEM4A0B42S41	240/1/60	.46	N/A	1200	32.0	7/8	3/8	14.8	7.68	38.4	26.8	34.0	22.4	9.0	45	45
AHU-2,3	TRANE	TEM4A0C61M51	240/1/60	.46	–	2000	32.0	1-1/8	3/8	14.5	7.68	56.8	42.8	54.9	36.2	8.5	48	50
AHU-4,5	TRANE	TEM4A0C61M51	240/1/60	.46	–	2000	32.0	1-1/8	3/8	14.5	7.68	56.8	42.8	54.9	36.2	8.5	48	50

** PROVIDE OUTDOOR THERMOSTAT TO LOCK OUT SUPPLEMENTAL ELECTRIC HEAT AT OUTDOOR TEMPERATURES ABOVE 40°F.

SPLIT SYSTEM HEAT PUMP UNITS

MARK	MANUF.	MODEL	VOLTAGE	# COMP.	MIN. CIRC. AMPACITY	M.O.C.P.	UNIT FLA.	ACCESSORIES
HP-6,7	TRANE	4TWR5030N1000A	240/1/60	1	17	25	13.6	EXCLUDE 8,18
HP-1	TRANE	4TWR5036N1000A	240/1/60	1	18	30	14.8	EXCLUDE 8,18
HP-2,3	TRANE	4TWR5048N1000A	240/1/60	1	26	40	21.3	EXCLUDE 8,18
HP-4,5	TRANE	4TWR5060H1000A	240/1/60	1	32	50	26.5	EXCLUDE 8,18

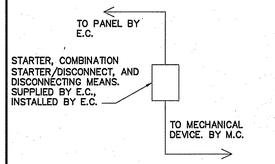
ACCESSORIES

1 TIME-DELAY RELAY
2 CYCLE PROTECTOR
3 EVAPORATOR FREEZE PROTECTOR
4 ISOLATION RELAY
5 TXV
6 HIGH PRESSURE SWITCH
7 LIQUID SOLENOID VALVE
8 LOW-AMBIENT CONTROLLER
9 FILTER DRIER (LIQUID LINE)
10 OUTDOOR T'STAT TO LOCK OUT AUX. HT. (SET @ 40° F ADJ)
11 LOW PRESSURE CONTROL
12 CRANKCASE HEATER
13 DISCHARGE LINE MUFFLER
14 SUCTION AND LIQUID LINE SHUT OFF VALVES
15 THERMOSTAT (SEE NOTE)
16 SUPPORT FEET
17 COIL GUARDS
18 HUMIDISTAT

COOLING CAPACITY @ 80 DEG. F DB/67 DEG WB AIR ENTERING INDOOR UNIT & 95 DEG. F DB AIR ENTERING OUTDOOR UNIT
HEATING CAPACITY: HIGH TEMP = 70 DEG F DB INDOOR EAT & 47 DEG F DB/43 DEG F WB AIR ENTERING OUTDOOR UNIT
LOW TEMP = 70 DEG F DB INDOOR EAT & 17 DEG F DB/15 DEG F WB ENTERING OUTDOOR UNIT

T-STAT: THE NUMBER OF STAGES OF HEATING/COOLING SHALL MATCH THE NUMBER OF STAGES OF HEAT AVAILABLE IN THE HPIU OR THE NUMBER OF STAGES OF COOLING AVAILABLE IN THE HPOU. PROVIDE WITH T-STAT; 7 DAY PROGRAMMABLE, DIGITAL.

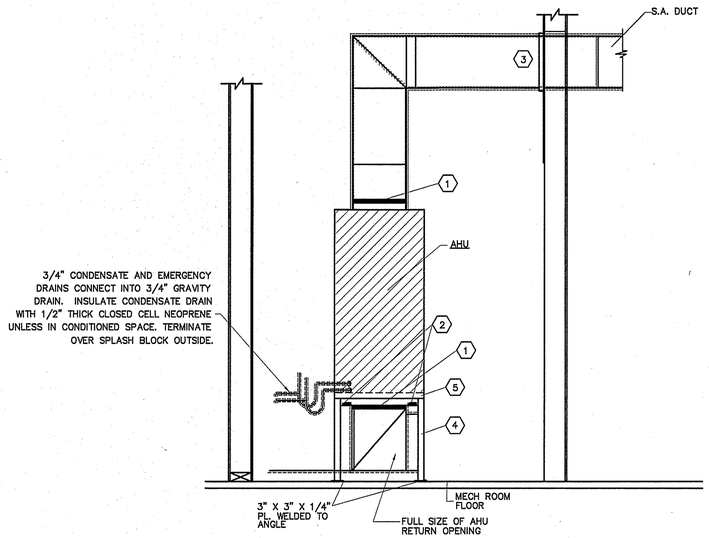
CONNECTION SCHEDULE



ALL STARTERS, COMBINATION STARTER/DISCONNECTS, AND DISCONNECTING MEANS, SUPPLIED BY E.C. FOR MECHANICAL EQUIPMENT AS REQUIRED BY NEC AND MECHANICAL EQUIPMENT MANUFACTURER'S REQUIREMENTS.

GENERAL NOTE:

ELECTRICAL & MECHANICAL CONTRACTORS TO COORDINATE & VERIFY ALL EQUIPMENT REQUIREMENTS BEFORE ORDERING EQUIPMENT.



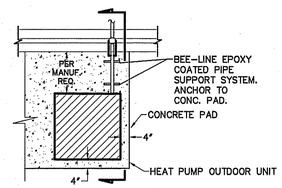
TYPICAL DETAIL – FLOOR MOUNTED AHU (STORAGE UNITS)

NOT TO SCALE

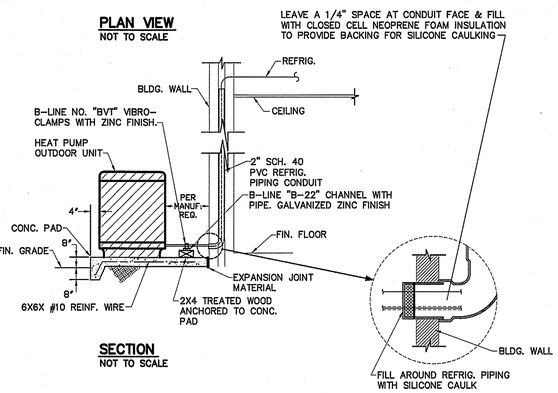
NOTES:

1. FLEXIBLE CONNECTION
2. NEOPRENE-IN-SHEAR VIBRATION ISOLATORS
3. SHEET METAL COLLAR AT WALL PENETRATION
4. 1-1/2" X 1-1/2" X 3/16" ANGLE AHU SUPPORT STAND WITH ALL WELDED CONSTRUCTION. PAINT WITH 1 COAT OF PRIMER AND FINISH WITH (2) COATS GRAY HIGH GLOSS MACHINE ENAMEL, MARTIN SENOUR OR EQUAL.
5. 1" PLEATED FILTER

PROVIDE PROGRAMMABLE THERMOSTAT FOR EACH SYSTEM.



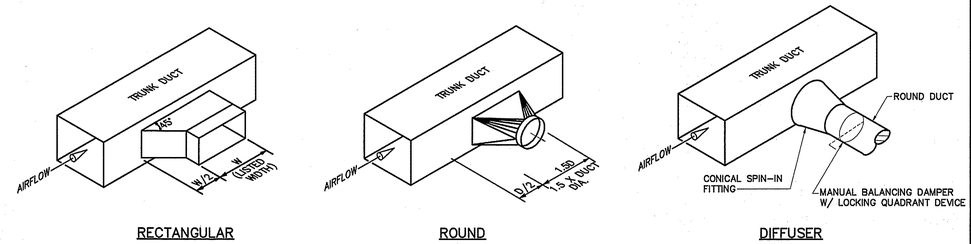
PLAN VIEW
NOT TO SCALE



SECTION
NOT TO SCALE

DETAIL–TYPICAL HEAT PUMP OUTDOOR UNIT

NOT TO SCALE



RECTANGULAR ROUND DIFFUSER

TYPICAL LATERAL TO REGISTER OR BRANCH DUCT

NOT TO SCALE

MECHANICAL NOTES (GENERAL)

1. DUCTWORK LAYOUTS ARE SCHEMATIC. ALL RISES, DROPS, OFFSETS, AND TRANSITIONS REQUIRED BUT ARE NOT SHOWN SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE OWNER.
2. DUCTWORK SHALL BE GALVANIZED STEEL AND SHALL BE CONSTRUCTED IN COMPLIANCE WITH SMACNA STANDARDS FOR LOW VELOCITY DUCTWORK. DUCT SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. FLEXIBLE RUNOUTS SHALL NOT EXCEED 15' AND SHALL NOT BE USED TO FORM ELBOWS. CONNECTIONS FROM RECTANGULAR TO ROUND DUCT SHALL BE MADE WITH MANUFACTURED 45 DEG. LATERAL TAPS.
3. ALL DUCTWORK SHALL BE SEALED AIR TIGHT WITH SEALING COMPOUND.
4. ALL ELBOWS IN DUCTWORK SHALL BE RADIUS ELBOWS, UNLESS NOTED OTHERWISE. WHERE SQUARE ELBOWS ARE SHOWN, INSTALL TURNING VANES. DUCT SIZES SHOWN ARE NET INTERIOR DIMENSIONS.
5. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER TRADES PRIOR TO INSTALLATION OF ANY OF HIS PIPING, DUCTWORK, OR EQUIPMENT.
6. THE MECHANICAL CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE MECHANICAL PLANS, SCHEDULES, AND DETAILS PRIOR TO INSTALLATION OF THE MECHANICAL SYSTEMS AND REVIEW ANY CONFLICTS THAT ARE NOTED WITH THE ENGINEER.
7. IT WILL BE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO ENSURE THAT ITEMS TO BE FURNISHED UNDER HIS CONTRACT WILL FIT THE SPACE AVAILABLE. HE SHALL MAKE NECESSARY FIELD MEASUREMENTS TO ASCERTAIN SPACE REQUIREMENTS, INCLUDING THOSE FOR CONNECTIONS AND SHALL FURNISH AND INSTALL SUCH SIZES AND SHAPES OF EQUIPMENT THAT ARE THE TRUE AND INTENT MEANING OF THE PLANS AND SPECIFICATIONS. HE SHALL PROVIDE THE ENGINEER SCALED DRAWINGS OF ALL MECHANICAL DRAWINGS.
8. ALL EQUIPMENT SHALL BE LOCATED AND INSTALLED TO PROVIDE MAXIMUM SPACE FOR MAINTENANCE AND SERVICE.
9. PROVIDE FACTORY OR FIELD INSTALLED DRAIN PANS UNDER ALL COOLING COIL UNITS. INSTALL DRAIN PAN FLOAT TO SHUT DOWN UNIT FAN IN EVENT THAT CONDENSATE BEGINS TO FILL EMERGENCY DRAIN PAN. RUN ALL CONDENSATE DRAIN LINES TO APPROPRIATE DRAIN.

"OFFICE"
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
THERMAL ZONE 4A - HARNETT COUNTY, NC

EXTERIOR DESIGN CONDITIONS

WINTER DRY BULB 22 DEG. F.
SUMMER DRY BULB 96 DEG. F.

INTERIOR DESIGN CONDITIONS

WINTER DRY BULB 70 DEG. F.
SUMMER DRY BULB 75 DEG. F.
RELATIVE HUMIDITY 55%

BUILDING HEATING LOAD 26 MBH
BUILDING COOLING LOAD 3 TONS

MECHANICAL SPACE CONDITIONING SYSTEM

UNITARY
DESCRIPTION OF UNIT – HEAT PUMP
HEATING EFFICIENCY – 9.0 HSPF
COOLING EFFICIENCY – 14.8 SEER
SIZE CATEGORY OF UNIT – ≤ 65,000 BTUH
BOILER
SIZE CATEGORY. IF OVERSIZED, STATE REASON: N/A
CHILLER
SIZE CATEGORY. IF OVERSIZED, STATE REASON: N/A

LIST EQUIPMENT EFFICIENCIES SEE SCHEDULE

BUILDING "1"
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
THERMAL ZONE 4A - HARNETT COUNTY, NC

EXTERIOR DESIGN CONDITIONS

WINTER DRY BULB 22 DEG. F.
SUMMER DRY BULB 96 DEG. F.

INTERIOR DESIGN CONDITIONS

WINTER DRY BULB 59 DEG. F.
SUMMER DRY BULB 80 DEG. F.
RELATIVE HUMIDITY 55%

BUILDING HEATING LOAD 64 MBH
BUILDING COOLING LOAD 8.0 TONS

MECHANICAL SPACE CONDITIONING SYSTEM

UNITARY
DESCRIPTION OF UNIT – HEAT PUMP
HEATING EFFICIENCY – 8.5 HSPF
COOLING EFFICIENCY – 14.5 SEER
SIZE CATEGORY OF UNIT – ≤ 65,000 BTUH
BOILER
SIZE CATEGORY. IF OVERSIZED, STATE REASON: N/A
CHILLER
SIZE CATEGORY. IF OVERSIZED, STATE REASON: N/A

LIST EQUIPMENT EFFICIENCIES SEE SCHEDULE

BUILDING "2"
MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT
THERMAL ZONE 4A - HARNETT COUNTY, NC

EXTERIOR DESIGN CONDITIONS

WINTER DRY BULB 22 DEG. F.
SUMMER DRY BULB 96 DEG. F.

INTERIOR DESIGN CONDITIONS

WINTER DRY BULB 59 DEG. F.
SUMMER DRY BULB 80 DEG. F.
RELATIVE HUMIDITY 55%

BUILDING HEATING LOAD 142 MBH
BUILDING COOLING LOAD 15.0 TONS

MECHANICAL SPACE CONDITIONING SYSTEM

UNITARY
DESCRIPTION OF UNIT – HEAT PUMP
HEATING EFFICIENCY – 8.5 HSPF
COOLING EFFICIENCY – 15.0 SEER
SIZE CATEGORY OF UNIT – ≤ 65,000 BTUH
BOILER
SIZE CATEGORY. IF OVERSIZED, STATE REASON: N/A
CHILLER
SIZE CATEGORY. IF OVERSIZED, STATE REASON: N/A

LIST EQUIPMENT EFFICIENCIES SEE SCHEDULE

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER BARRY L. CRUSE
02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS
NO.

Cruse And Associates, P.A.
414 E. Edgerton St.
Raleigh, North Carolina 28634
PH: (919) 882-4433
FAX: (919) 882-5242
LICENSE NO.: C-1721

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DATE 02-25-25
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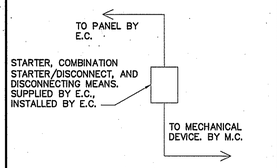
JOB NO. 24-31

SHEET NO.
M-5 OF 5

CONNECTION SCHEDULE



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LIGHT FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	BALLASTS	WATTAGE	REMARKS
A	8' LED STRIP W/WIRE GUARD	DAYBRITE	CLX L96 10000LM SEF WD MVOLT 40K 80 CRI WH	LED		71.0	WITH (2) 48" WIRE GUARDS WGCLX48
B	KEYLESS FIXTURE WITH WIREGUARD AND LED LAMP	–	–	LED A19	–	13	WITH WIRE GUARD
C	3" LED RECESSED DOWNLIGHT	ACULUX	AX3 D G4 12LM 35K 80CRI 50D GZ1 120 ICAT 3DP CS SF WET	LED		11.0	TO BE ON PHOTOCELL
D	LED WALL PACKS	LITHONIA	TWR1 LED 3 50K MVOLT ON TIMER	18 LEDS	LED	58.4	W/CUTOFF
EM	EMERGENCY LIGHT WITH BATTERY BACKUP	MCPHILBEN	CAXR6L24W6				
EX	LED TYPE EXIT LIGHT WITH BATTERY BACKUP	MCPHILBEN	CXXL3RW				
EM2	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)	MCPHILBEN	CR2CSWA				

1. ALL FIXTURE SELECTIONS TO BE VERIFIED BY OWNER BEFORE PURCHASE.
2. SIGN LETTERING TO BE ON TIMECLOCK OR PHOTOCELL
3. LED WALLPACKS ON PHOTOCELL.

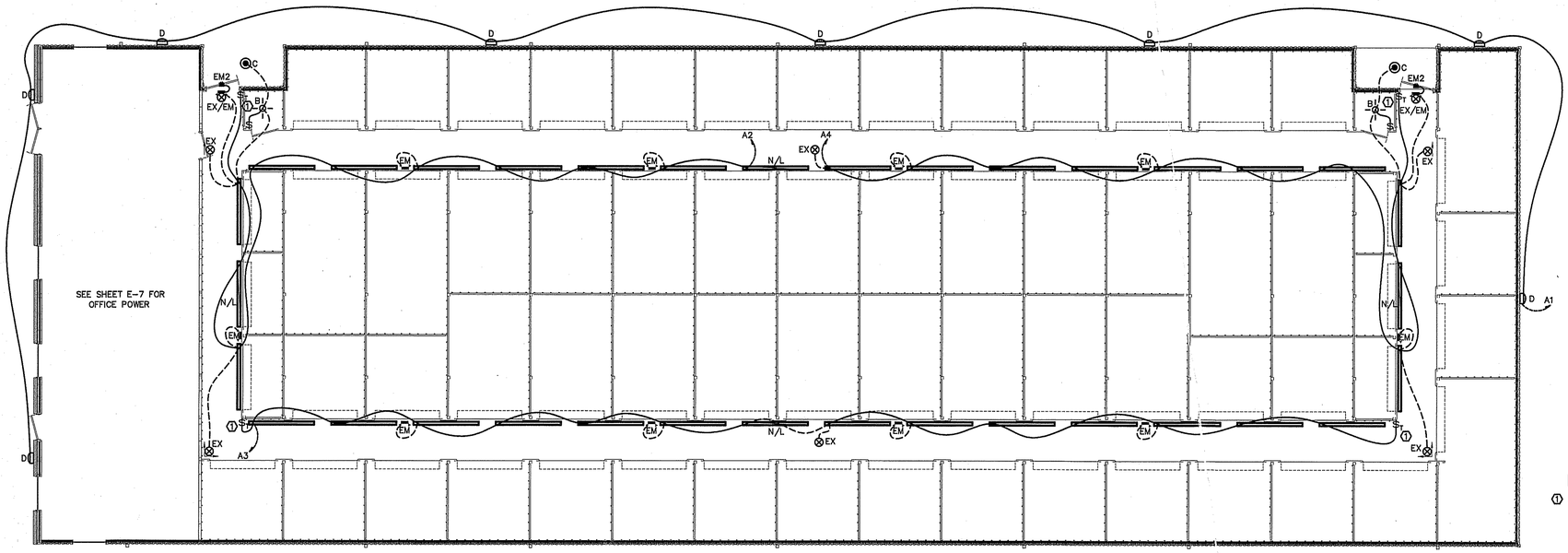
LIGHTING DATA FOR N.C. ENERGY CODE (BUILDING "1")

AREA USE	AREA FT^2	WATTS PER FT^2 ALLOWED	TOTAL WATTS ALLOWED	TOTAL WATTS USED	TOTAL WATTS LEFT OVER
STORAGE	9,600	0.63	11,520	2,440	9,080
OFFICE	1,200	1.3	1,560	552	1,008
TOTAL	10,800		13,080	2,992	10,088

NOTE:
1. VERIFY LOCATION OF LIGHTS & RECEPTACLES WITH OWNER BEFORE CONSTRUCTION.
2. COORDINATE LOCATION OF 8' STRIP LIGHTS IN CORRIDOR WITH DUCT WORK WHERE APPLICABLE.
3. ALL LIGHT FIXTURES IN CORRIDORS TO BE MOUNTED ON THE WALLS WHERE APPLICABLE.
4. ALL CORRIDOR LIGHTS TO BE SWITCHED BY MOTION SENSORS OR TIMERS LOCATED AS SHOWN. PROVIDE 30 MINUTE RUN TIME SETTING AND NO HOLD CAPABILITY. VERIFY WHICH TYPE OF DEVICE AND IT'S CAPABILITIES WITH THE OWNER BEFORE ORDERING EQUIPMENT.

ELECTRICAL LEGEND

MARK	DESCRIPTION
	QUAD RECEPTACLE
	DUPLEX RECEPTACLE
T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
	HIGH WALL MOUNTED DUPLEX RECEPTACLE APROXIMATELY 12" BELOW CEILING
	FLUORESCENT FIXTURE
	SWITCHED BRANCH CIRCUIT
	UNSWITCHED BRANCH CIRCUIT
	120/208 VOLT CIRCUIT
$_M	MOTION DETECTING SINGLE-POLE SWITCH ON TIMER
	'EXIT' LIGHT FIXTURE, TYPE 'EX'
	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
$_{3(4)}	MOTION DETECTING 3-WAY SWITCH (4-WAY SWITCH) WITH TIMER
	FUSED DISCONNECT SWITCH
	CEILING MOUNTED FUSED DISCONNECT SWITCH
	TELEPHONE
J	JUNCTION BOX
$_T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
N/L	UNSWITCHED FIXTURE
$_O	OCCUPANCY SENSING SINGLE-POLE SWITCH NOT ON TIMER
	280V RECEPTACLE
	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)



KEY NOTE:
1. SEE NOTE 4.

ELECTRICAL LIGHTING PLAN BUILDING "1"

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

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER RANDY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Raleigh, North Carolina 28534
PHONE: (919) 833-1150
FAX: (919) 832-5162
LICENSE NO.: C-1721

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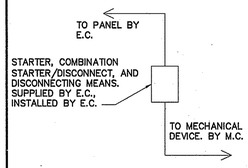
JOB NO.	24-31

SHEET NO.
E-1 OF 8

CONNECTION SCHEDULE



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LIGHT FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	BALLASTS	WATTAGE	REMARKS
A	8' LED STRIP W/WIRE GUARD	DAYBRITE	CLX L96 10000LM SEF WD MVOLT 40K 80 CRI WH	LED		71.0	WITH (2) 48" WIRE GUARDS WGCLX48
B	KEYLESS FIXTURE WITH WIREGUARD AND LED LAMP	–	–	LED A19	–	13	WITH WIRE GUARD
C	3" LED RECESSED DOWNLIGHT	ACULUX	AX3 D G4 12LM 35K 80CRI 50D GZ1 120 ICAT 3DP CS SF WET	LED		11.0	TO BE ON PHOTOCELL
D	LED WALL PACKS	LITHONIA	TWR1 LED 3 50K MVOLT ON TIMER	18 LEDS	LED	58.4	W/CUTOFF
EM	EMERGENCY LIGHT WITH BATTERY BACKUP	MCPHILBEN	CAXR6L24W6				
EX	LED TYPE EXIT LIGHT WITH BATTERY BACKUP	MCPHILBEN	CXXL3RW				
EM2	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)	MCPHILBEN	CR2CSWA				

1. ALL FIXTURE SELECTIONS TO BE VERIFIED BY OWNER BEFORE PURCHASE.
2. SIGN LETTERING TO BE ON TIMECLOCK OR PHOTOCELL
3. LED WALLPACKS ON PHOTOCELL.

LIGHTING DATA FOR N.C. ENERGY CODE (BUILDING "2")

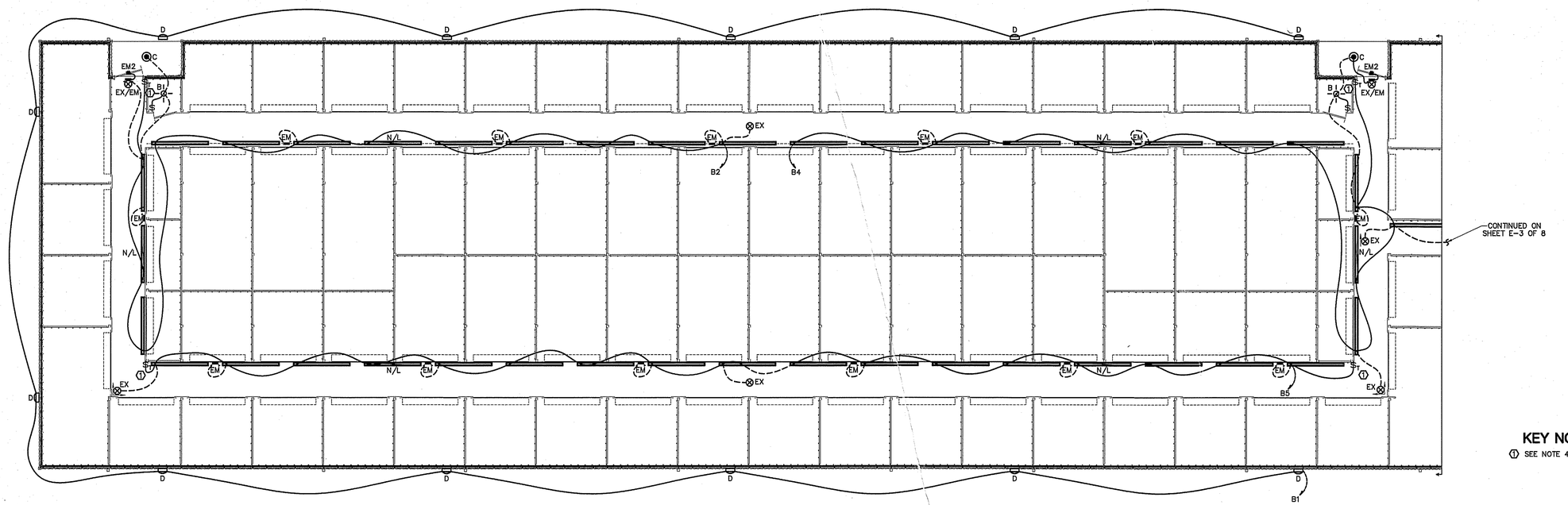
AREA USE	AREA FT^2	WATTS PER FT^2 ALLOWED	TOTAL WATTS ALLOWED	TOTAL WATTS USED	TOTAL WATTS LEFT OVER
STORAGE	23,700	1.2	28,440	4,470	23,970
TOTAL	23,700		28,440	4,470	23,970

NOTE:

1. VERIFY LOCATION OF LIGHTS & RECEPTACLES WITH OWNER BEFORE CONSTRUCTION.
2. COORDINATE LOCATION OF 8' STRIP LIGHTS IN CORRIDOR WITH DUCT WORK WHERE APPLICABLE.
3. ALL LIGHT FIXTURES IN CORRIDORS TO BE MOUNTED ON THE WALLS WHERE APPLICABLE.
4. ALL CORRIDOR LIGHTS TO BE SWITCHED BY MOTION SENSORS OR TIMERS LOCATED AS SHOWN. PROVIDE 30 MINUTE RUN TIME SETTING AND NO HOLD CAPABILITY. VERIFY WHICH TYPE OF DEVICE AND IT'S CAPABILITIES WITH THE OWNER BEFORE ORDERING EQUIPMENT.

ELECTRICAL LEGEND

MARK	DESCRIPTION
	QUAD RECEPTACLE
	DUPLEX RECEPTACLE
T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
	HIGH WALL MOUNTED DUPLEX RECEPTACLE APROXIMATELY 12" BELOW CEILING
	FLUORESCENT FIXTURE
	SWITCHED BRANCH CIRCUIT
	UNSWITCHED BRANCH CIRCUIT
	120/208 VOLT CIRCUIT
P_M	MOTION DETECTING SINGLE-POLE SWITCH ON TIMER
	'EXIT' LIGHT FIXTURE, TYPE 'EX'
	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
$_{3(4)}$	MOTION DETECTING 3-WAY SWITCH (4-WAY SWITCH) WITH TIMER
	FUSED DISCONNECT SWITCH
	CEILING MOUNTED FUSED DISCONNECT SWITCH
	TELEPHONE
J	JUNCTION BOX
P_T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
N/L	UNSWITCHED FIXTURE
P_O	OCCUPANCY SENSING SINGLE-POLE SWITCH NOT ON TIMER
	280V RECEPTACLE
	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)



ELECTRICAL LIGHTING PLAN BUILDING "2"

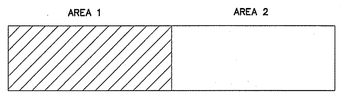
SCALE: 1/8" = 1'-0"

KEY NOTE:

1. SEE NOTE 4.

LEGEND

3 HOUR RATED WALL U419



KEYPLAN

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16909 JAMES L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	
1.	03/11/2025

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
PH: (910) 892-4162
FAX: (910) 892-4162
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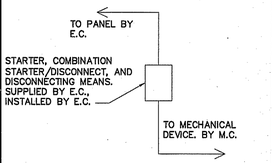
SHEET NO.
E-2 OF 8

CONNECTION SCHEDULE



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LIGHT FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	BALLASTS	WATTAGE	REMARKS
A	8' LED STRIP W/WIRE GUARD	DAYBRITE	CLX L96 10000LM SEF WD MVOLT 40K 80 CRI WH	LED		71.0	WITH (2) 48" WIRE GUARDS WGCLX48
B	KEYLESS FIXTURE WITH WIREGUARD AND LED LAMP	–	–	LED A19	–	13	WITH WIRE GUARD
C	3" LED RECESSED DOWNLIGHT	ACULUX	AX3 D G4 12LM 35K 80CRI 50D GZ1 120 ICAT 3DP CS SF WET	LED		11.0	TO BE ON PHOTOCELL
D	LED WALL PACKS	LITHONIA	TWR1 LED 3 50K MVOLT ON TIMER	18 LEDS	LED	58.4	W/CUTOFF
EM	EMERGENCY LIGHT WITH BATTERY BACKUP	MCPHILBEN	CAXR6L24W6				
EX	LED TYPE EXIT LIGHT WITH BATTERY BACKUP	MCPHILBEN	CXXL3RW				
EM2	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)	MCPHILBEN	CR2CSWA				

1. ALL FIXTURE SELECTIONS TO BE VERIFIED BY OWNER BEFORE PURCHASE.
2. SIGN LETTERING TO BE ON TIMECLOCK OR PHOTOCELL
3. LED WALLPACKS ON PHOTOCELL.

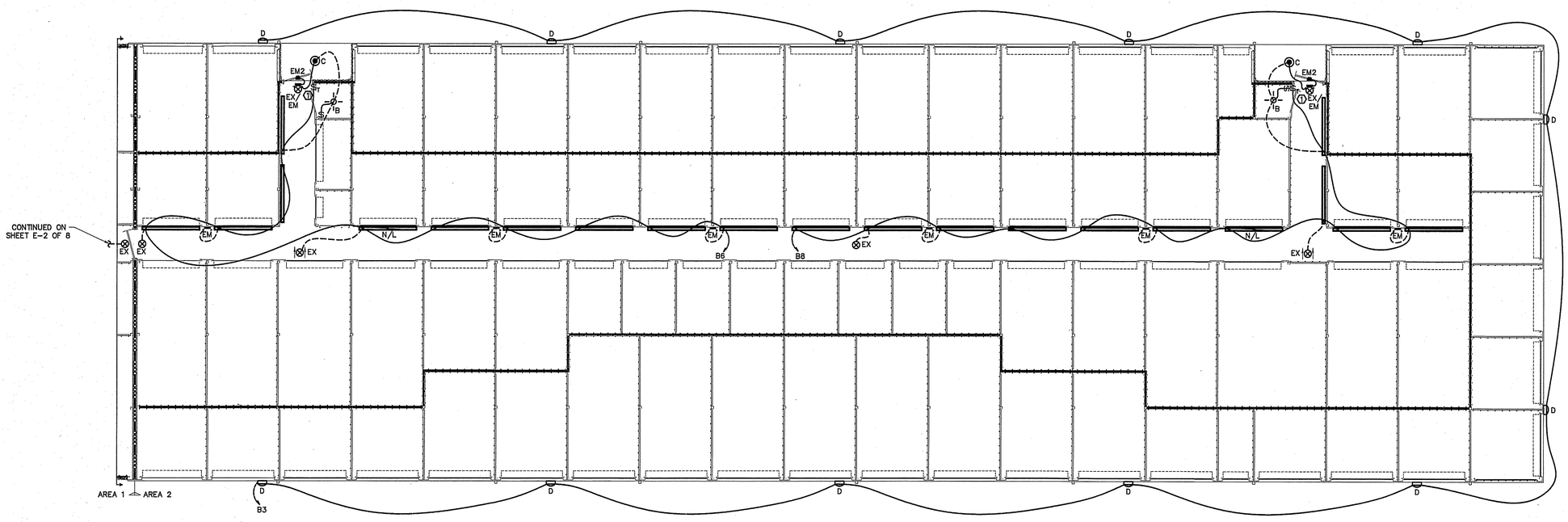
LIGHTING DATA FOR N.C. ENERGY CODE (BUILDING "2")

AREA USE	AREA FT^2	WATTS PER FT^2 ALLOWED	TOTAL WATTS ALLOWED	TOTAL WATTS USED	TOTAL WATTS LEFT OVER
STORAGE	23,700	1.2	28,440	4,470	23,970
TOTAL	23,700		28,440	4,470	23,970

NOTE:
1. VERIFY LOCATION OF LIGHTS & RECEPTACLES WITH OWNER BEFORE CONSTRUCTION.
2. COORDINATE LOCATION OF 8' STRIP LIGHTS IN CORRIDOR WITH DUCT WORK WHERE APPLICABLE.
3. ALL LIGHT FIXTURES IN CORRIDORS TO BE MOUNTED ON THE WALLS WHERE APPLICABLE.
4. ALL CORRIDOR LIGHTS TO BE SWITCHED BY MOTION SENSORS OR TIMERS LOCATED AS SHOWN. PROVIDE 30 MINUTE RUN TIME SETTING AND NO HOLD CAPABILITY. VERIFY WHICH TYPE OF DEVICE AND IT'S CAPABILITIES WITH THE OWNER BEFORE ORDERING EQUIPMENT.

ELECTRICAL LEGEND

MARK	DESCRIPTION
	QUAD RECEPTACLE
	DUPLEX RECEPTACLE
T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
	HIGH WALL MOUNTED DUPLEX RECEPTACLE APROXIMATELY 12" BELOW CEILING
	FLUORESCENT FIXTURE
	SWITCHED BRANCH CIRCUIT
	UNSWITCHED BRANCH CIRCUIT
	120/208 VOLT CIRCUIT
$M	MOTION DETECTING SINGLE-POLE SWITCH ON TIMER
	'EXIT' LIGHT FIXTURE, TYPE 'EX'
	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
$3(4)	MOTION DETECTING 3-WAY SWITCH (4-WAY SWITCH) WITH TIMER
	FUSED DISCONNECT SWITCH
	CEILING MOUNTED FUSED DISCONNECT SWITCH
	TELEPHONE
J	JUNCTION BOX
$T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
N/L	UNSWITCHED FIXTURE
$O	OCCUPANCY SENSING SINGLE-POLE SWITCH NOT ON TIMER
	280V RECEPTACLE
	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)



KEY NOTE:
1. SEE NOTE 4.

ELECTRICAL LIGHTING PLAN BUILDING "2"

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

LEGEND

3 HOUR RATED WALL U419

AREA 1 AREA 2

KEYPLAN

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER RANDY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	
1.	03/11/2025

Cruse And Associates, P.A.
414 E. Blount St.
Wilmington, North Carolina 28334
PH: (910) 892-4429
FAX: (910) 892-3182
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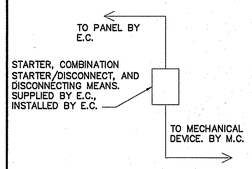
SHEET NO.
E-3 OF 8

CONNECTION SCHEDULE



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NOTE:

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2. COORDINATE LOCATION OF 8' STRIP LIGHTS IN CORRIDOR WITH DUCT WORK WHERE APPLICABLE.
3. ALL LIGHT FIXTURES IN CORRIDORS TO BE MOUNTED ON THE WALLS WHERE APPLICABLE.
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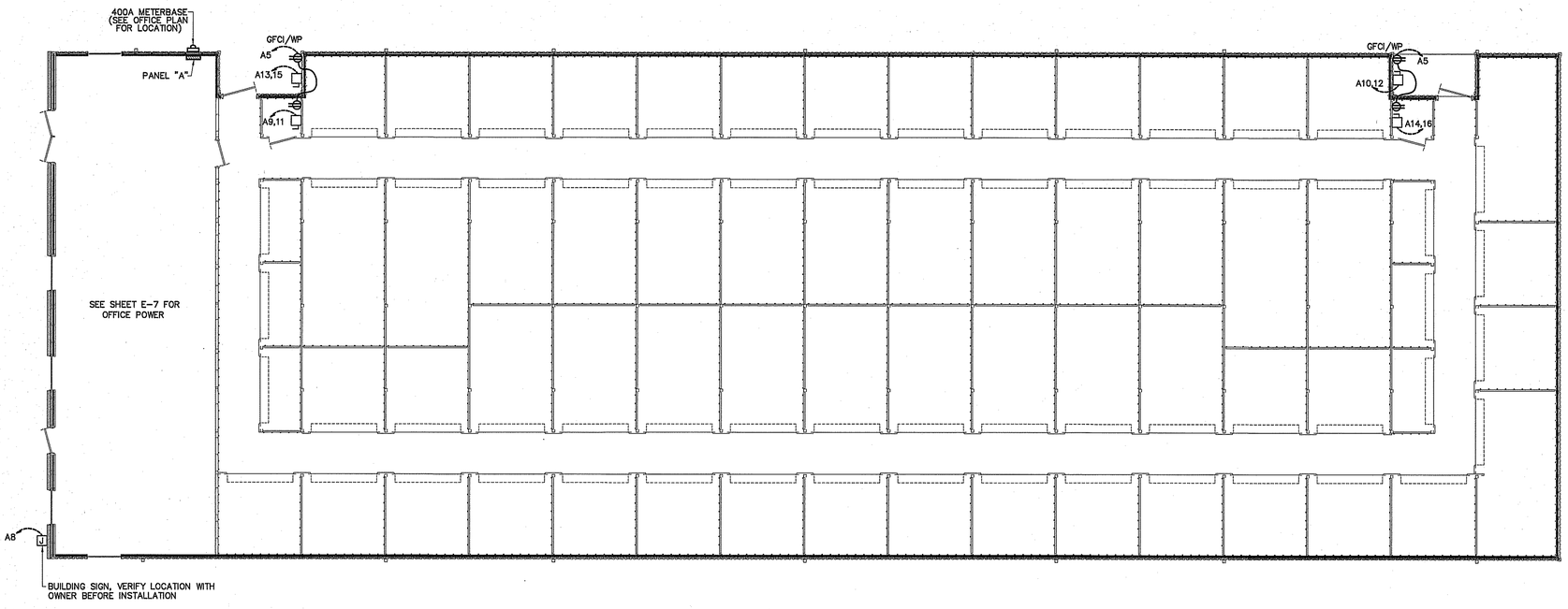
ELECTRICAL LEGEND

MARK	DESCRIPTION
	QUAD RECEPTACLE
	DUPLEX RECEPTACLE
T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
	HIGH WALL MOUNTED DUPLEX RECEPTACLE APROXIMATELY 12" BELOW CEILING
	FLUORESCENT FIXTURE
	SWITCHED BRANCH CIRCUIT
	UNSWITCHED BRANCH CIRCUIT
	120/208 VOLT CIRCUIT
$M	MOTION DETECTING SINGLE-POLE SWITCH ON TIMER
⊗	'EXIT' LIGHT FIXTURE, TYPE 'EX'
	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
$3(4)	MOTION DETECTING 3-WAY SWITCH (4-WAY SWITCH) WITH TIMER
	FUSED DISCONNECT SWITCH
	CEILING MOUNTED FUSED DISCONNECT SWITCH
	TELEPHONE
J	JUNCTION BOX
T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
N/L	UNSWITCHED FIXTURE
$O	OCCUPANCY SENSING SINGLE-POLE SWITCH NOT ON TIMER
	280V RECEPTACLE
	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)



ELECTRICAL POWER PLAN BUILDING "1"

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

NORTH CAROLINA PROFESSIONAL SEAL 16909 ENGINEER BARRY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
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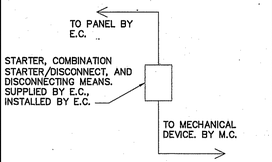
SHEET NO.
E-4 OF 8

CONNECTION SCHEDULE



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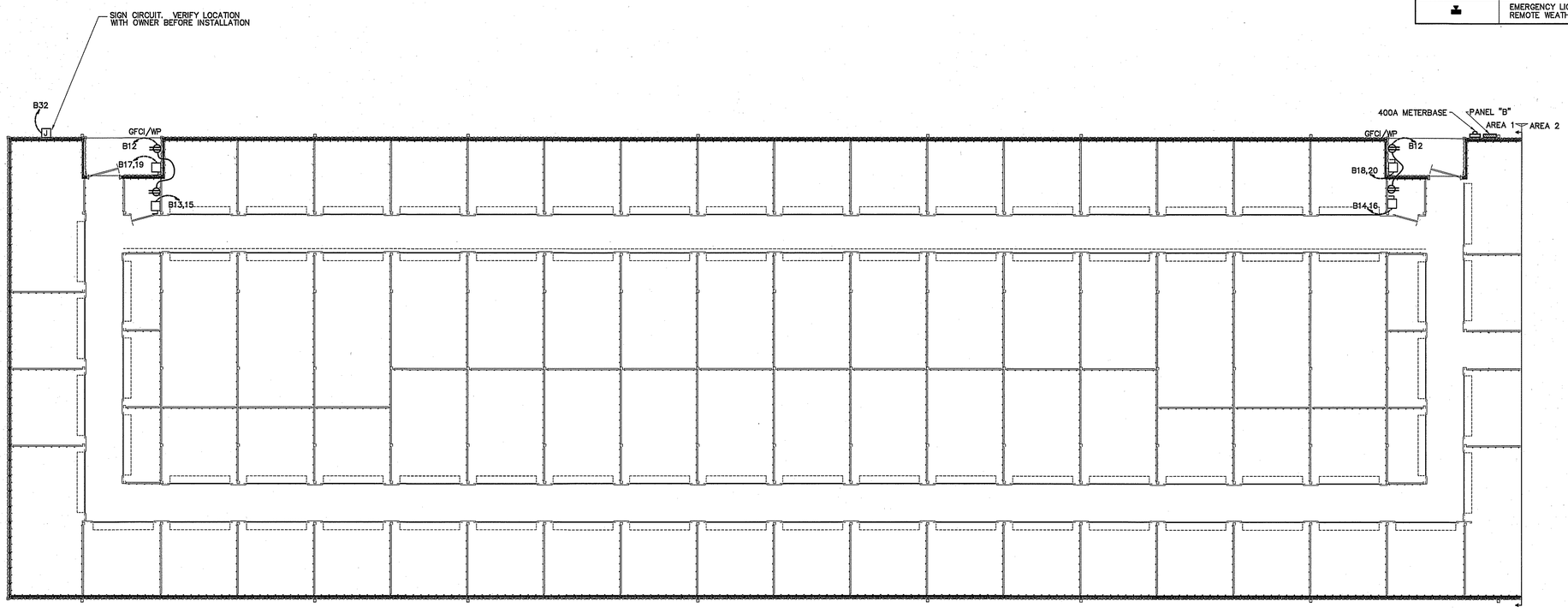
ELECTRICAL LEGEND

MARK	DESCRIPTION
	QUAD RECEPTACLE
	DUPLEX RECEPTACLE
T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
	HIGH WALL MOUNTED DUPLEX RECEPTACLE APROXIMATELY 12" BELOW CEILING
	FLUORESCENT FIXTURE
	SWITCHED BRANCH CIRCUIT
	UNSWITCHED BRANCH CIRCUIT
	120/208 VOLT CIRCUIT
$M	MOTION DETECTING SINGLE-POLE SWITCH ON TIMER
	'EXIT' LIGHT FIXTURE, TYPE 'EX'
	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
$3(4)	MOTION DETECTING 3-WAY SWITCH (4-WAY SWITCH) WITH TIMER
	FUSED DISCONNECT SWITCH
	CEILING MOUNTED FUSED DISCONNECT SWITCH
	TELEPHONE
J	JUNCTION BOX
T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
N/L	UNSWITCHED FIXTURE
$O	OCCUPANCY SENSING SINGLE-POLE SWITCH NOT ON TIMER
	280V RECEPTACLE
	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)

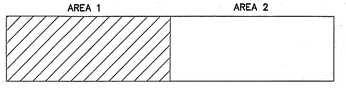


ELECTRICAL POWER PLAN BUILDING "2"

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

LEGEND

3 HOUR RATED WALL U419



KEYPLAN

NORTH CAROLINA PROFESSIONAL SEAL 8909 ENGINEER RANDY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	
1.	03/11/2025

Cruse And Associates, P.A.
414 E. Edgerton St.
Raleigh, North Carolina 28534
Phone: (919) 834-4139
FAX: (919) 832-5152
LICENSE NO.: C-1721

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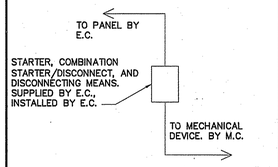
JOB NO.	24-31

SHEET NO.
E-5 OF 8

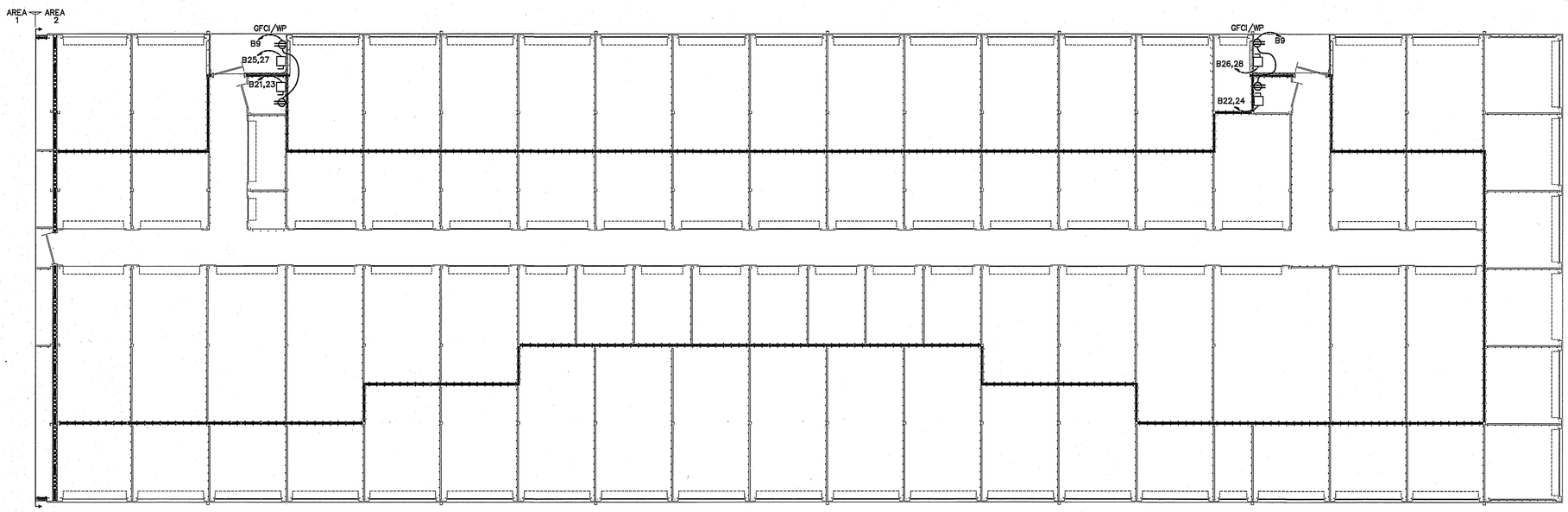
CONNECTION SCHEDULE



ALL STARTERS, COMBINATION STARTER/DISCONNECTS, AND DISCONNECTING MEANS, SUPPLIED BY E.C. FOR MECHANICAL EQUIPMENT AS REQUIRED BY NEC AND MECHANICAL EQUIPMENT MANUFACTURER'S REQUIREMENTS.

ELECTRICAL LEGEND

MARK	DESCRIPTION
	QUAD RECEPTACLE
	DUPLEX RECEPTACLE
T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
	HIGH WALL MOUNTED DUPLEX RECEPTACLE APROXIMATELY 12" BELOW CEILING
	FLUORESCENT FIXTURE
	SWITCHED BRANCH CIRCUIT
	UNSWITCHED BRANCH CIRCUIT
	120/208 VOLT CIRCUIT
$M	MOTION DETECTING SINGLE-POLE SWITCH ON TIMER
⊗	"EXIT" LIGHT FIXTURE, TYPE 'EX'
	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
$3(4)	MOTION DETECTING 3-WAY SWITCH (4-WAY SWITCH) WITH TIMER
	FUSED DISCONNECT SWITCH
	CEILING MOUNTED FUSED DISCONNECT SWITCH
	TELEPHONE
J	JUNCTION BOX
T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
N/L	UNSWITCHED FIXTURE
$O	OCCUPANCY SENSING SINGLE-POLE SWITCH NOT ON TIMER
	280V RECEPTACLE
	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)

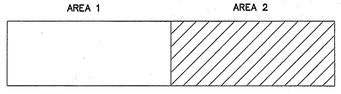


ELECTRICAL POWER PLAN BUILDING "2"

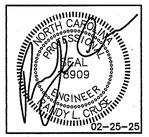
SCALE: 1/8" = 1'-0"

LEGEND

3 HOUR RATED WALL
U419



KEYPLAN



PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS	
NO.	
1.	03/11/2025

Cruse And Associates, P.A.
414 E. Edgerton St.
Raleigh, North Carolina 28634
PH: (919) 892-4189
FAX: (919) 892-5162
LICENSE NO.: C-1721

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SHEET NO.
E-6 OF 8

LIGHT FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	BALLASTS	WATTAGE	REMARKS
A	8' LED STRIP W/WIRE GUARD	DAYBRITE	CLX L96 10000LM SEF WD MVOLT 40K 80 CRI WH	LED		71.0	WITH (2) 48" WIRE GUARDS WGCLX48
B	KEYLESS FIXTURE WITH WIREGUARD AND LED LAMP	–	–	LED A19	–	13	WITH WIRE GUARD
C	3" LED RECESSED DOWNLIGHT	ACULUX	AX3 D G4 12LM 35K 80CRI 50D GZ1 120 ICAT 3DP CS SF WET	LED		11.0	TO BE ON PHOTOCELL
D	LED WALL PACKS	LITHONIA	TWR1 LED 3 50K MVOLT ON TIMER	18 LEDS	LED	58.4	W/CUTOFF
F	SURFACE MOUNTED 2X4 LED FLAT PANEL	LITHONIA	CPANL 2X4 40/50/60LM 35K–40LM	LED		42.0	INCLUDE WSX D DIMMING OCCUPANCY WALL SWITCH
G	SURFACE MOUNTED 2X4 LED FLAT PANEL	LITHONIA	CPANL 2X4 40/50/60LM 35K–40LM	LED		32.0	INCLUDE WSX D DIMMING OCCUPANCY WALL SWITCH
EM	EMERGENCY LIGHT WITH BATTERY BACKUP	MCPHILBEN	CAXR6L24W6				
EX	LED TYPE EXIT LIGHT WITH BATTERY BACKUP	MCPHILBEN	CXXL3RW				
EM2	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)	MCPHILBEN	CR2CSWA				

1. ALL FIXTURE SELECTIONS TO BE VERIFIED BY OWNER BEFORE PURCHASE.
2. SIGN LETTERING TO BE ON TIMECLOCK OR PHOTOCELL
3. LED WALLPACKS ON PHOTOCELL.

LIGHTING DATA FOR N.C. ENERGY CODE (BUILDING "I")

AREA USE	AREA FT^2	WATTS PER FT^2 ALLOWED	TOTAL WATTS ALLOWED	TOTAL WATTS USED	TOTAL WATTS LEFT OVER
STORAGE	9,600	0.63	11,520	2,440	9,080
OFFICE	1,200	1.3	1,560	538	1,022
TOTAL	10,800		13,080	2,978	10,102

NOTE:
COORDINATE LOCATION OF SECURITY, CATV, INTERNET, PHONE, OR OTHER SYSTEMS OUTLETS WITH OWNER BEFORE BEGINNING CONSTRUCTION.

ELECTRICAL LEGEND

MARK	DESCRIPTION
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	DUPLEX RECEPTACLE
T	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
	HIGH WALL MOUNTED DUPLEX RECEPTACLE APROXIMATELY 12" BELOW CEILING
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	TELEPHONE/DATA
J	JUNCTION BOX
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N/L	UNSWITCHED FIXTURE
$_O	OCCUPANCY SENSING SINGLE–POLE SWITCH NOT ON TIMER
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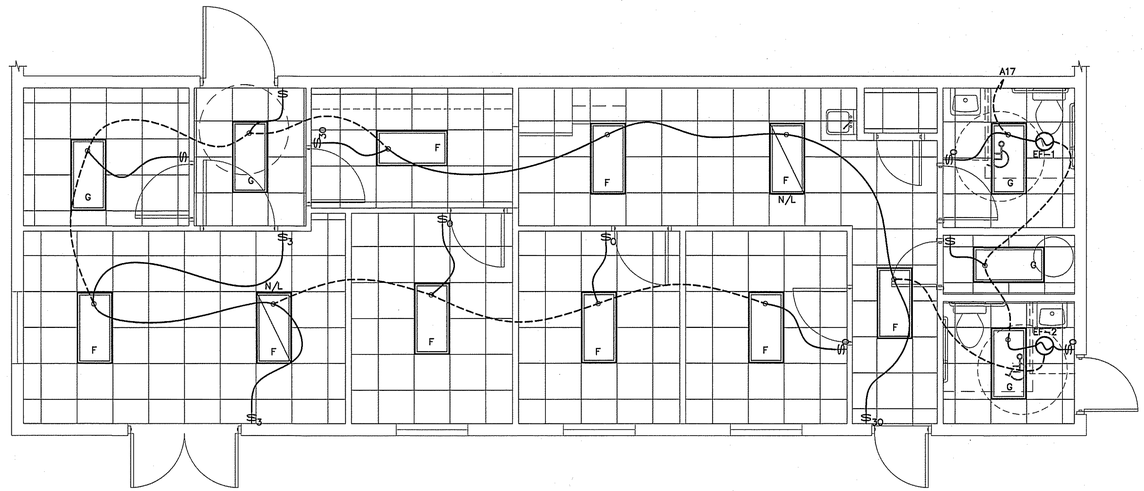
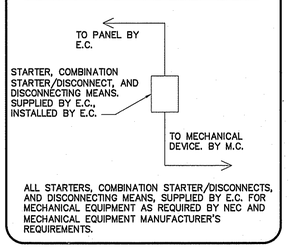


ELECTRICAL LIGHTING PLAN OFFICE

SCALE: 1/4" = 1'–0"

CONNECTION SCHEDULE



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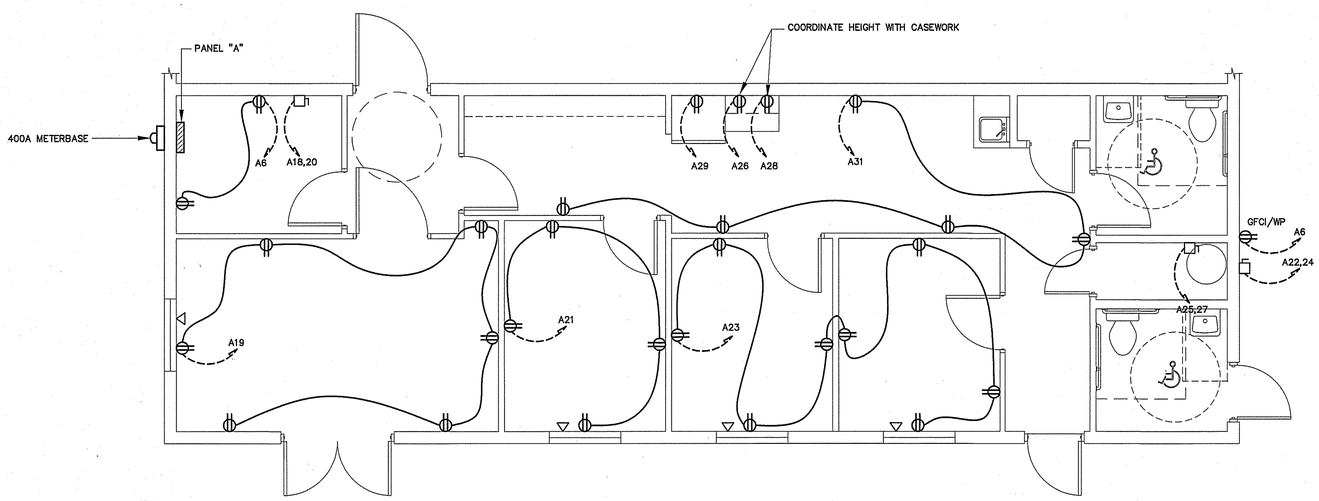

ELECTRICAL POWER PLAN OFFICE

SCALE: 1/4" = 1'–0"

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER MANDY L. CRUSE 02–25–25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS
NO.

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
PH.: (910) 892-5168
FAX: (910) 892-5162
LICENSE NO.: C-1721

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DATE	02–25–25
DRAWN BY	BAM
JOB NO.	24–31

SHEET NO.
E-7 OF 8

ELECTRICAL NOTES (GENERAL)

1. THE ELECTRICAL INSTALLATION, EQUIPMENT, MATERIALS, AND WORKMANSHIP SHALL, AS A MINIMUM, BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC), OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), ALL APPLICABLE FEDERAL, STATE, COUNTY, AND LOCAL CODES, LAWS, AND ORDINANCES, AND RULINGS OF THE INSPECTION AUTHORITIES HAVING JURISDICTION. ALL FEES, PERMITS, ETC., ASSOCIATED WITH THE ELECTRICAL WORK SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

2. THE DRAWINGS GENERALLY INDICATE THE WORK TO BE INSTALLED, BUT DO NOT SHOW ALL BENDS, BOXES, FITTINGS, AND SPECIALTIES WHICH MAY BE REQUIRED FOR A COMPLETE INSTALLATION. ALL SUCH ITEMS REQUIRED TO COMPLETE THE INSTALLATION ACCORDING TO INDUSTRY ACCEPTED PRACTICES SHALL BE INCLUDED IN THE BID.

3. ALL EQUIPMENT AND MATERIALS SHALL BE NEW AND LISTED AND LABELED BY UNDERWRITERS LABORATORIES, INC.

4. ALL PENETRATIONS OF FIRE WALLS SHALL BE SEALED WITH APPROVED SEALING MATERIALS TO MAINTAIN THE FIRE RATING OF THE WALLS.

5. THE CONTRACTOR SHALL VERIFY WIRE AND FUSE/CIRCUIT BREAKER SIZING FOR ALL MECHANICAL EQUIPMENT PRIOR TO PURCHASING MATERIALS AND INSTALLING BRANCH CIRCUITS.

6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES TO AVOID INTERFERENCES AND CONFLICTS. APPARENT INTERFERENCES OR CONFLICTS SHALL BE REPORTED TO THE PRIME CONTRACTOR AND RESOLVED PRIOR TO PROCEEDING WITH THE WORK IN QUESTION.

7. THE ELECTRICAL CONTRACTOR SHALL CONNECT BRANCH CIRCUITS TO THE MAIN LINE TERMINALS OF EQUIPMENT FURNISHED BY OTHER CONTRACTORS. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING ANY NECESSARY SWITCHES, DISCONNECTS, OR OVERCURRENT PROTECTION AHEAD OF SUCH EQUIPMENT.

8. RACEWAYS ARE SHOWN SCHEMATICALLY AND MAY BE REROUTED IN THE FIELD. THEY SHALL BE INSTALLED AT RIGHT ANGLES TO OR PARALLEL WITH BUILDING LINES. THEY SHALL BE RUN CONCEALED WITHIN WALLS OR BUILDING STRUCTURES WHEREVER POSSIBLE.

9. ALL RACEWAYS, EQUIPMENT, ETC., ABOVE A SUSPENDED CEILING SHALL BE MOUNTED A MINIMUM OF 18" ABOVE THE CEILING SO AS NOT TO BLOCK ANY TILE OR FIXTURE ACCESS.

10. THE MINIMUM ALLOWABLE SIZE FOR ANY CONDUIT, IMC, OR EMT SHALL BE 1/2" AND MAY BE USED FOR 2#12 WIRE SWITCHLEGS ONLY. A SWITCHLEG SHALL BE DEFINED AS THE RUN OF CONDUIT FROM THE SWITCH OUTLET BOX TO THE FIRST OUTLET BEING SWITCHED.

11. FULL WEIGHT GALVANIZED RIGID STEEL CONDUIT SHALL BE USED IN THE FOLLOWING AREAS:

A. ON THE EXTERIOR OF THE BUILDING OR ROOF,

B. VERTICAL DROPS WHERE THE CONDUIT CANNOT BE ANCHORED TO WALLS OR OTHER SUPPORT STRUCTURES,

C. WHERE SUBJECT TO MECHANICAL DAMAGE.

12. ALL WIRE AND CABLE SHALL BE COPPER AND HAVE 600 VOLT THHN-THWN INSULATION. ALUMINUM WIRING SHALL NOT BE PERMITTED.

13. THE MINIMUM WIRE SIZE SHALL BE #12 AWG EXCEPT FOR CONTROL WIRING, WHICH MAY BE #14 AWG. CONTROL WIRING SHALL USE STRANDED CONDUCTORS UNLESS OTHERWISE NOTED.

14. ALL METAL RACEWAY SYSTEMS SHALL BE MADE ELECTRICALLY CONTINUOUS. THE RACEWAY SYSTEM SHALL NOT BE THE SOLE GROUNDING METHOD. AN INSULATED COPPER GROUNDING CONDUCTOR SHALL BE INSTALLED FOR ALL FEEDERS AND BRANCH CIRCUITS. AT RECEPTACLES, A GREEN GROUND CONDUCTOR SHALL BE CONNECTED TO THE GROUND TERMINAL OF THE RECEPTACLE.

15. THE ELECTRICAL CONTRACTOR SHALL COORDINATE FUSE AND DISCONNECT SWITCH SIZES WITH THE MECHANICAL EQUIPMENT SUPPLIER PRIOR TO PURCHASE AND INSTALLATION OF BRANCH CIRCUIT EQUIPMENT. IF EQUIPMENT SIZING CHANGES FROM DESIGN SIZES, CIRCUITS SHALL BE RESIZED ACCORDINGLY.

16. LIGHT FIXTURES FOR INSTALLATION IN A SUSPENDED CEILING SHALL BE SECURELY FASTENED TO THE CEILING SUSPENSION SYSTEM IN A MANNER TO PREVENT FIXTURES FROM FALLING. IN ADDITION, 16 GAGE WIRE HANGERS SHALL BE FASTENED TO THE FOUR CORNERS OF THE FIXTURES.

17. CONNECTIONS TO FIXTURES INSTALLED IN SUSPENDED CEILINGS SHALL BE MADE WITH FLEXIBLE METAL CONDUIT TO ALLOW THE FIXTURE TO BE LIFTED OUT OF THE GRID AND MOVED TO AN ADJACENT GRID LOCATION.

18. BREAKERS SUPPLYING HVAC OR REFRIGERATION EQUIPMENT SHALL BE HACR TYPE.

19. 3/4" CONDUIT IS MINIMUM ALLOWABLE SIZE EXCEPT AS INDICATED IN #10. CONDUIT FILL NOT TO EXCEED 40% AS PERMITTED BY THE NATIONAL ELECTRIC CODE.

20. ALL CONDUCTORS TO BE INSTALLED IN CONDUIT (EXCEPT WHERE ROMEX IS INSTALLED). EMT FITTINGS TO BE COMPRESSION TYPE, INSULATED THROAT.

21. NOT USED

22. DATA, SECURITY, THEATRICAL, AND VIDEO SYSTEMS TO BE PROVIDED BY OWNER. ROUGH-IN OF OUTLETS AND CONDUIT WILL BE BY CONTRACTOR AS SHOWN ON DRAWINGS.

23. NOT USED

24. NO. 10 CU AWG CONDUCTORS SHALL BE USED FOR 20 AMP BRANCH CIRCUIT HOMERUNS EXCEEDING 50 FT. TO THE JUNCTION POINT.
20 AMP BRANCH CIRCUIT WIRING SHALL BE NO. 10 CU AWG THROUGHOUT IF THE CIRCUIT IS LONGER THAN 100 FEET TOTAL LENGTH.
20 AMP BRANCH CIRCUIT WIRING SHALL BE NO. 8 CU AWG THROUGHOUT IF THE CIRCUIT IS LONGER THAN 200 FEET TOTAL LENGTH.
20 AMP BRANCH CIRCUIT WIRING SHALL BE NO. 6 CU AWG THROUGHOUT IF THE CIRCUIT IS LONGER THAN 400 FEET TOTAL LENGTH.
20 AMP BRANCH CIRCUIT SHALL BE NOT EXCEED 500' FEET IN TOTAL LENGTH. (UNLESS MARKED OTHERWISE)

25. CONDUCTORS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET. SPLICES WILL NOT BE MADE EXCEPT WITHIN ACCESSIBLE OUTLET OR JUNCTION BOXES, TROUGHS, OR GUTTERS.

26. MAKE CONDUCTOR LENGTHS FOR PARALLEL CIRCUITS EQUAL.

27. INSTALL TELEPHONE OUTLETS WITH 3/4" EMPTY CONDUIT AND PULL CORD. STUB OUT ABOVE CEILING. PHONE SYSTEM INSTALLED BY OWNER.

28. ALL CONDUIT WITHOUT CONDUCTORS SHALL HAVE NYLON PULLCORDS INSTALLED.

29. THE CONTRACTOR SHALL MAKE A COMPLETE REVIEW OF THE PLANS, SCHEDULES, AND DETAILS PRIOR TO INSTALLATION, AND REVIEW ANY CONFLICTS THAT ARE NOTED WITH THE ENGINEER.

30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FEES FOR PERMITS AND INSPECTIONS. THE CONTRACTOR WILL ALSO BE RESPONSIBLE FOR ELECTRIC UTILITY CONNECTION FEES AND LINE EXTENSION FEES.

31. ELECTRICAL CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION WHICH DEVELOPS OBJECTIONABLE NOISES SHALL BE MADE FROM THE CONDUIT SYSTEM WITH SHORT LENGTHS OF FLEXIBLE "LIQUID-TITE" CONDUIT.

32. ALL WIRE TERMINATIONS AND EQUIPMENT TO BE RATED FOR 75° C MINIMUM.

33. ELECTRICAL CONTRACTOR TO MAINTAIN 2' OF SEPARATION ON RECEPTACLES ON OPPOSITE SIDES OF ANY FIRE RATED WALL PER 2021 N.E.C. 300.21.

34. WIRING TO DISCONNECT SWITCH AND DISCONNECT SWITCH SHALL BE FURNISHED BY THE ELECTRICAL CONTRACTOR. WIRING FROM THE DISCONNECT TO THE EQUIPMENT SHALL BE BY THE MECHANICAL CONTRACTOR.

BUILDING "1"

PANEL: "A" SCHEDULE: ___ MANUFACTURER: SQ. D. NO. OF SPACES 42
VOLTS: 120/240 AMPS: 400 TYPE: "NQOD" MOUNTING: SURFACE
ENCLOSURE: NEMA 1 : ϕ 1 SHORT CIRCUIT RATING: 22,000
MAIN: ☒ MLO: ☐ TOP FEED: ☐ BOTTOM FEED: ☒ COPPER BUS: ☒ GROUND BAR KIT: ☐ NEUTRAL BAR KIT: ☐

L1	L2	CIRCUIT	POLES	TRIP	ASSIGNMENT	PHASE L1	PHASE L2	ASSIGNMENT	TRIP	POLES	CIRCUIT	L1	L2
3.4		1	1	20	WALLPACKS	o		LEFT FRONT CORRIDOR LTS.	20	1	2	6.1	
	8.3	3	1	20	REAR CORRIDOR LIGHTS		o	RIGHT FRONT CORRIDOR LTS.	20	1	4		6.1
3.0		5	1	20	HVAC UNITS #2 CONV. RECS.	o		HVAC #1/MECH. RM. RECS.	20	1	6	4.5	
	X	7	1	20	SPARE		o	BUILDING SIGN	20	1	8		5.0
32.0		9	2	50	AHU-2	o		HP-3	40	2	10	21.3	
	32.0	11					o				12		21.3
21.3		13	2	40	HP-2	o		AHU-3	50	2	14	32.0	
	21.3	15					o				16		32.0
5.8		17	1	20	OFFICE LIGHTING	o		AHU-1	45	2	18	32.0	
	9.0	19	1	20	RECEPTIONIST		o				20		32.0
6.0		21	1	20	OFFICE 1 RECEPTACLES	o		HP-1	30	2	22	14.8	
	12.0	23	1	20	OFFICES 2 & 3 RECEPTS.		o				24		14.8
18.8		25	2	30	WATER HEATER	o		MICROWAVE	20	1	26	12.5	
	18.8	27					o	COFFEE MAKER	20	1	28		8.0
6.7		29	1	20	REFRIGERATOR	o		SPARE	20	1	30	X	
	7.5	31	1	20	BREAK ROOM RECEPTACLES		o	SPARE	20	1	32		X
X		33	1	20	SPARE	o		SPARE	20	1	34	X	
	X	35	1	20	SPARE		o	SPARE	20	1	36		X
X		37	1	20	SPARE	o		SPARE	20	1	38	X	
	X	39	1	20	SPARE		o	SPARE	20	1	40		X
X		41	1	20	SPARE	o		GATE OPENER	20	1	42	5.0	

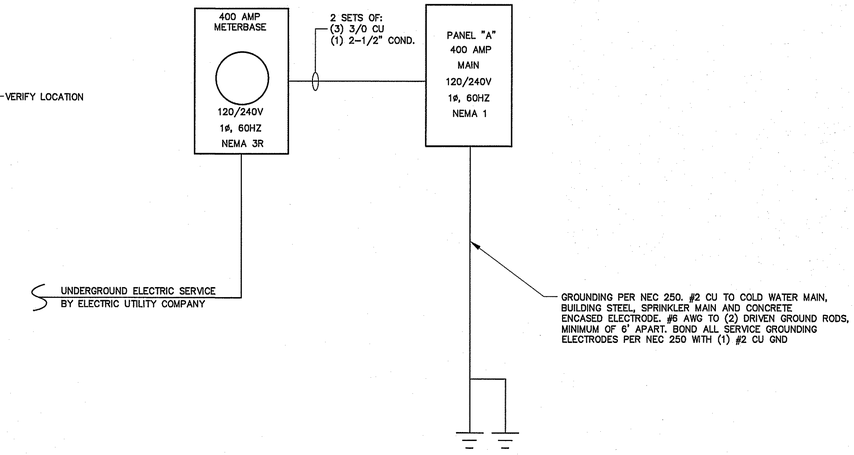
L1 = 225.2 A
L2 = 228.1 A

VERIFY LOCATION

NOTE:
VERIFY AIC RATING & LUG SPACE WITH UTILITY COMPANY BEFORE ORDERING PANELS.

FEEDER SCHEDULE

UNIT	FEEDERS	FUSED DISCONNECT	CONDUIT
AHU-1,2,5,6	2#8 CU, 1#10 CU GND	60	3/4"
AHU-3,4,7	2#6 CU, 1#8 CU GND	60	3/4"
HEAT PUMP 1,6	2#12 CU, 1#12 CU GND	30	3/4"
HEAT PUMP 2,7	2#10 CU, 1#12 CU GND	30	3/4"
HEAT PUMP 3,4,5	2#8 CU, 1#10 CU GND	60	3/4"



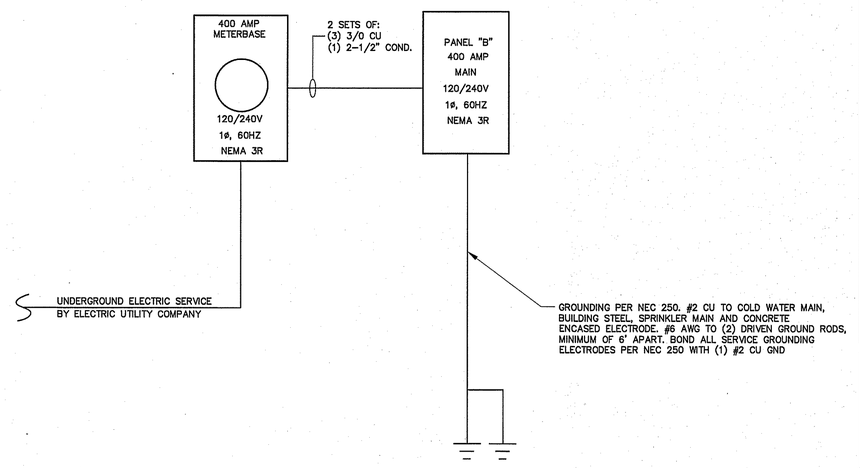
ELECTRICAL RISER DIAGRAM
NOT TO SCALE
(BUILDING 1)

BUILDING "2"

PANEL: "B" SCHEDULE: ___ MANUFACTURER: SQ. D. NO. OF SPACES 42
VOLTS: 120/240 AMPS: 400 TYPE: "NQOD" MOUNTING: SURFACE
ENCLOSURE: NEMA 3R : ϕ 1 SHORT CIRCUIT RATING: 22,000
MAIN: ☒ MLO: ☐ TOP FEED: ☐ BOTTOM FEED: ☒ COPPER BUS: ☒ GROUND BAR KIT: ☐ NEUTRAL BAR KIT: ☐

L1	L2	CIRCUIT	POLES	TRIP	ASSIGNMENT	PHASE L1	PHASE L2	ASSIGNMENT	TRIP	POLES	CIRCUIT	L1	L2
5.8		1	1	20	WALLPACKS	o		RIGHT FRONT CORRIDOR LTS.	20	1	2	7.2	
	5.8	3	1	20	WALLPACKS		o	RIGHT FRONT CEN. CORR. LTS.	20	1	4		6.7
10.1		5	1	20	REAR RIGHT SIDE CORR. LTS.	o		LEFT FRONT CEN. CORR. LTS.	20	1	6	6.1	
	X	7	1	20	SPARE		o	LEFT FRONT CORRIDOR LTS.	20	1	8		6.7
6.0		9	1	20	HVAC UNITS 6/7 CONV. RECS.	o		SPARE	20	1	10	X	
	X	11	1	20	SPARE		o	HVAC UNITS 4/5 CONV RECS	20	1	12		6.0
32.0		13	2	50	AHU-4	o		AHU-5	50	2	14	32.0	
	32.0	15					o				16		32.0
26.5		17	2	25	HP-4	o		HP-5	50	2	18	26.5	
	26.5	19					o				20		26.5
32.0		21	2	45	AHU-6	o		AHU-7	45	2	22	32.0	
	32.0	23					o				24		32.0
13.6		25	2	25	HP-6	o		HP-7	25	2	26	13.6	
	13.6	27					o				28		13.6
X		29	1	20	SPARE	o		SPARE	20	1	30	X	
	X	31	1	20	SPARE		o	BUILDING SIGN	20	1	32		5.0
X		33	1	20	SPARE	o		SPARE	20	1	34	X	
	X	35	1	20	SPARE		o	SPARE	20	1	36		X
X		37	1	20	SPARE	o		SPARE	20	1	38	X	
	X	39	1	20	SPARE		o	SPARE	20	1	40		X
X		41	1	20	SPARE	o		SPARE	20	1	42	X	

L1 = 243.4 A
L2 = 238.4 A



ELECTRICAL RISER DIAGRAM
NOT TO SCALE
(BUILDING 2)

ELECTRICAL SYSTEM AND EQUIPMENT METHOD OF COMPLIANCE:

ENERGY CODE:	PRESCRIPTIVE ☒	PERFORMANCE ☐
ASHRAE 90.1:	PRESCRIPTIVE ☐	PERFORMANCE ☐

REFER TO DRAWINGS FOR RISER DIAGRAM AND PANEL SCHEDULES

LIGHTING SCHEDULE

LAMP TYPE REQUIRED IN FIXTURE: SEE SCHEDULE
NUMBER OF LAMPS IN FIXTURE:
BALLASTS TYPE USED IN FIXTURE:
NUMBER OF BALLASTS IN FIXTURE:
TOTAL WATTAGE PER FIXTURE:
TOTAL INTERIOR WATTAGE SPECIFIED VS. ALLOWED:
TOTAL EXTERIOR WATTAGE SPECIFIED VS. ALLOWED:

ADDITIONAL PRESCRIPTIVE COMPLIANCE

506.2.1 MORE EFFICIENT MECHANICAL EQUIPMENT ☐
506.2.2 REDUCED LIGHTING POWER DENSITY ☒
506.2.3 ENERGY RECOVERY VENTILATION SYSTEMS ☐
506.2.4 HIGHER EFFICENCY SERVICE WATER HEATING ☐
506.2.5 ON-SITE SUPPLY OF RENEWABLE ENERGY ☐
506.2.6 AUTOMATIC DAYLIGHTING CONTROL SYSTEMS ☐

BUILDING 1

ELECTRICAL LOAD CALCULATIONS

10,800 SQUARE FEET	VA
NONCONTINUOUS LOADS:	
30 RECEPTACLES @ 180 VA EA.	5400
1ST 10000	5400
REMAINDER @ 50%	0
TOTAL	5400
CONTINUOUS LOADS:	
GENERAL LIGHTING LOAD VA/SQ. FT.	
9600 SQ. FT. 1.2	11520
11520 x 1.25	14400
GENERAL LIGHTING LOAD VA/SQ. FT.	
1200 SQ. FT. 1.3	1560
1560 x 1.25	1950
AIR HANDLER UNIT	23040
HEAT PUMPS	13776
EQUIPMENT:	7760
25% OF LARGEST MOTOR	1092
GRAND TOTAL	67418

281 AMPS @ 120/240V, 1ø, 60HZ

BUILDING 2

ELECTRICAL LOAD CALCULATIONS

23,700 SQUARE FEET	VA
NONCONTINUOUS LOADS:	
8 RECEPTACLES @ 180 VA EA.	1440
1ST 10000	1440
REMAINDER @ 50%	0
TOTAL	1440
CONTINUOUS LOADS:	
GENERAL LIGHTING LOAD VA/SQ. FT.	
23,700 SQ. FT. 0.25	5925
5925 x 1.25	7406
AIR HANDLER UNIT	30720
HEAT PUMPS	19248
EQUIPMENT:	600
25% OF LARGEST MOTOR	1092
GRAND TOTAL	60506

252 AMPS @ 120/240V, 1ø, 60HZ

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER BRADY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS
NO.

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
(910) 892-5165
FAX: (910) 892-5162
LICENSE NO.: C-1721

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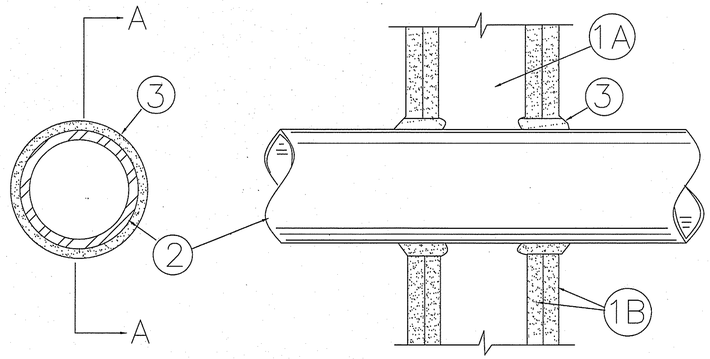
DATE 02-25-25
DRAWN BY BAM
JOB NO. 24-31

SHEET NO.
E-8 OF 8

System No. W-L-1001

June 15, 2005

F Ratings — 1, 2, 3 and 4 Hr (See Items 2 and 3)
T Ratings — 0, 1, 2, 3, and 4 Hr (See Item 3)
L Rating At Ambient — less than 1 CFM/sq ft
L Rating At 400 F — less than 1 CFM/sq ft



SECTION A–A

1. Wall Assembly — The 1, 2, 3 or 4 hr fire–rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300 or U400 Series Wall or Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs (max 2 h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3–5/8 in. (92 mm) wide by 1–3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board* — Nom 1/2 or 5/8 in. (13 or 16 mm) thick, 4 ft. (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 26 in. (660 mm).

2. Through–Penetrant — One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between pipe, conduit or tubing and periphery of opening shall be min of 0 in / (0 mm). (point contact) to max 2 in. (51 mm) Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. Steel Pipe — Nom 24 in. (610 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. Iron Pipe — Nom 24 in. (610 mm) diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in (305 mm) diam (or smaller) or Class 50 (or heavier) ductile iron pressure pipe.

C. Conduit — Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in (102 mm) diam (or smaller) steel electrical metallic tubing

D. Copper Tubing — Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing

E. Copper Pipe — Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.

F. Through Penetrating Product* — Flexible Metal Piping The following types of steel flexible metal gas piping may be used:

1. Nom 2 in. (51 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

OMEGA FLEX INC

2. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

GASTITE, DIV OF TITEFLEX

3. Nom 1 in. (25 mm) diam (or smaller) steel flexible metal gas piping. Plastic covering on piping may or may not be removed on both sides of floor or wall assembly.

WARD MFG L L C

3. Fill, Void or Cavity Material* — Caulk or Sealant — Min 5/8. , 1–1/4,1–7/8 and 2–1/2 in. (16, 32, 48 and 64 mm) thickness of caulk for 1, 2, 3 and 4 hr rated assemblies, respectively, applied within annulus, flush with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to gypsum board/penetrant interface at point contact location on both sides of wall. The hourly F Rating of the firestop system is dependent upon the hourly fire rating of the wall assembly in which it is installed, as shown in the following table. The hourly T Rating of the firestop system is dependent upon the type or size of the pipe or conduit and the hourly fire rating of the wall assembly in which it is installed, as tabulated below:

Max Pipe or Conduit Diam In (mm)	F Rating Hr	T Rating Rating Hr
1 (25)	1 or 2	0+, 1 or 2
1 (25)	3 or 4	3 or 4
4 (102)	1 or 2	0
6 (152)	3 or 4	0
12 (305)	1 or 2	0

+When copper pipe is used, T Rating is 0 h.

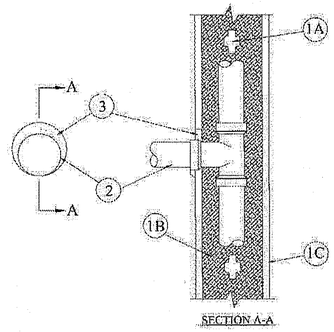
3M COMPANY ? CP 25WB+ or FB–3000 WT.

*Bearing the UL Classification Mark

System No. W-L-2179

September 17, 2001

F Rating — 1 Hr
T Rating — 1 Hr



SECTION A-A

1. Wall Assembly — The fire rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced max 16 in. OC. The steel studs to be min 3–5/8 in. wide and spaced max 24 in. OC.

B. Insulation, Glass Fiber* — R–13 fiber glass insulation installed entirely within single stud cavity of nonmetallic pipe (item 2).

C. Gypsum Board* — One layer of nom 5/8 in. thick gypsum wallboard, as specified in the individual Wall and Partition Design. Max diam of opening is 3–3/4 in.

2. Nonmetallic Pipe — Nonmetallic pipe, installed within stud cavity and connected to nonmetallic tee. Nonmetallic pipe penetrating wall assembly on one side of wall to be installed either concentrically or eccentrically within the firestop system. The annular space between pipe and periphery of opening shall be min 0 in. (point contact) to max 1 in. Pipe to be rigidly supported on penetrating side of wall assembly. The following types of and sizes of nonmetallic pipes and tees may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. diam (or smaller) Schedule 40 cellular core or solid core PVC pipe and tee for use in vented (drain, waste or vent) or closed (process and supply) piping systems.

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. diam (or smaller) SDR17 CPVC pipe and tee for use in vented (drain, waste or vent) or closed (process and supply) piping systems.

C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 2 in. diam (or smaller) Schedule 40 cellular or solid core ABS pipe and tee for use in vented (drain, waste or vent) or closed (process and supply) piping systems.

3. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall. At point contact locations between wallboard and pipe, a min 1/2 in. diam bead of fill material shall be applied at the pipe/wallboard interface.

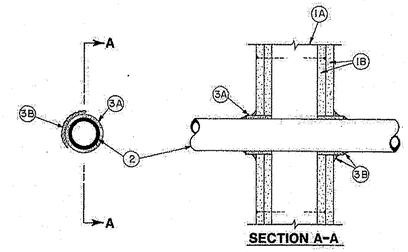
JOHNS MANVILLE INTERNATIONAL INC — FireTemp™ CI, FireTemp™ CE

*Bearing the UL Classification Mark

System No. W-L-2003

November 20, 2009

F Ratings — 1 and 2 Hr (See Item 3)
T Ratings — 1 and 2 Hr (See Item 3)
L Rating At Ambient — 7 CFM/sq ft (See Item 3B)
L Rating At 400 F — less than 1 CFM/sq ft (See Item 3B)



SECTION A-A

1. Wall Assembly — The 1 or 2 hr fire–rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC with nom 2 by 4 in. (51 by 102 mm) lumber end plates and cross braces. Steel studs to be min 3–5/8 in. (92 mm) wide by 1–3/8 in. (35 mm) deep channels spaced max 24 in. (610 mm) OC.

B. Gypsum Board* — 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400 or V400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 3–1/8 in. (79 mm).

2. Through Penetrants — One nonmetallic pipe or conduit to be centered in the through opening. The annular space between pipe or conduit and periphery of opening shall be min 1/4 in. (6 mm) and max 3/8 in. (10 mm). Pipe or conduit to be rigidly supported on both sides of the floor–ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

B. Rigid Nonmetallic Conduit++ — Nom 2 in. (51 mm) diam (or smaller)(Schedule 40 or 80) PVC conduit installed in accordance with the National electric Code (NFPA No. 70).

C. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.

D. Cellular Core Polyvinyl Chloride (ccPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

E. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

F. Cellular Core Acrylonitrile Butadiene Styrene (ccABS) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

3. Firestop System — Installed symmetrically on both sides of wall assembly. The hourly F and T Ratings for the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. The details of the firestop system shall be as follows.

A. Fill, Void or Cavity Material* — Wrap Strip — Nom 1/4 in. (6 mm) thick intumescent elastomeric material faced on one side with aluminum foil, supplied in 2 in. (51 mm) wide strips. Nom 2 in. (51 mm) wide strip tightly wrapped around nonmetallic pipe (foil side out) with seam butted. Wrap strip layer securely bound with steel wire or aluminum foil tape and slid into annular space approx 1–1/4 in. (32 mm) such that approx 3/4 in. (19 mm) of the wrap strip protrudes from the wall surface.

3M COMPANY — FS–195+

B. Fill, Void or Cavity Material* — Caulk, Sealant or Putty — Min 5/8 in. (16 mm) thickness of caulk or putty applied into annular space between wrap strip and periphery of opening. A nom 1/4 in. (6 mm) diam bead of caulk or putty to be applied to the wrap strip/wall interface and to the exposed edge of the wrap strip layers approx 3/4 in. (19 mm) from the wall surface.

3M COMPANY — CP 25WB+ caulk or MP+ Stix putty, IC 15WB+ caulk, FireDam 150+ caulk or FB–3000 WT sealant. (Note: L Ratings apply only when Type CP 25WB+ caulk or FB–3000 WT sealant is used. CP 25WB+ and FireDam 150+ not suitable for use with CPVC pipes.)

C. Foil Tape — (not shown) — Nom 4 in. (102 mm) wide, 3 mil thick aluminum tape wrapped around pipe prior to the installation of the wrap strip (item 3A). Min of one wrap, flush with both sides of wall and proceeding outward. Tape is not required for pipes shown in Items 2A, 2B and 2C.

*Bearing the UL Classification Mark

PENETRATION DETAILS

NOT TO SCALE

NORTH CAROLINA PROFESSIONAL SEAL 19909 ENGINEER BARRY L. CRUSE 02-25-25

PROPOSED BUILDINGS FOR:
HIGHWAY 42 STORE ALL
HOLLY SPRINGS, NORTH CAROLINA

REVISIONS

NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Raleigh, North Carolina 28304
PH: (919) 832-4439
FAX: (919) 832-3182
LICENSE NO. C-17721

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DATE 02–25–25
DRAWN BY BAM
JOB NO. 24–31

SHEET NO.
PME 1 OF 1