2018 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2 FAMILY DWELLINGS AND TOWNHOUSES)

NAME OF PROJECT: T & L COATS BUILDING #2 (FOUR TENANT UP-FIT)

ADDRESS: HIGHWAY 27 COATS ZIP CODE: 27527

OWNER/AUTHORIZED AGENT: ROBERT BAREFOOT PHONE #: (910) 890-3256 EMAIL: WRBAREFOOT@YAHOO.COM

OWNED BY: ☐ CITY/COUNTY ☒ PRIVATE ☐ STATE

CODE ENFORCEMENT JURISDICTION: ☐ CITY _____ ☒ COUNTY HARNETT ☐ STATE

LEAD DESIGN PROFESSIONAL: CRUSE & ASSOCIATES, P.A.

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE NO.	E-MAIL
ARCHITECTURAL BUILDING	CRUSE & ASSOCIATES, P.A.	RANDY CRUSE, PE	18909	910-892-4429	RCRUSE@CRUSEASSOCIATES.COM
CIVIL					
ELECTRICAL	CRUSE & ASSOCIATES, P.A.	RANDY CRUSE, PE	18909	910-892-4429	RCRUSE@CRUSEASSOCIATES.COM
FIRE ALARM					
PLUMBING	CRUSE & ASSOCIATES, P.A.	RANDY CRUSE, PE	18909	910-892-4429	RCRUSE@CRUSEASSOCIATES.COM
MECHANICAL	CRUSE & ASSOCIATES, P.A.	RANDY CRUSE, PE	18909	910-892-4429	RCRUSE@CRUSEASSOCIATES.COM
SPRINKLER-STANDPIPE					
STRUCTURAL (FOUNDATION)	CRUSE & ASSOCIATES, P.A.	RANDY CRUSE, PE	18909	910-892-4429	RCRUSE@CRUSEASSOCIATES.COM
RETAINING WALLS >5' HIGH					
OTHER					

("OTHER" SHOULD INCLUDE FIRMS AND INDIVIDUALS SUCH AS TRUSS, PRECAST, PRE-ENGINEERED, INTERIOR DESIGNERS, ETC.)

2018 EDITION NC BUILDING CODE: ☐ NEW BUILDING ☐ ADDITION ☐ RENOVATION

☒ 1ST TIME INTERIOR COMPLETIONS

☐ SHELL/CORE-CONTACT THE LEAD INSPECTION JURISDICTION FOR POSSIBLE ADDITIONAL PROCEDURES & REQUIREMENTS

☐ PHASED CONSTRUCTION-SHELL/CORE-CONTACT THE LEAD INSPECTION JURISDICTION FOR FOR POSSIBLE ADDITIONAL PROCEDURES & REQUIREMENTS

2018 NC EXISTING BUILDING CODE: ☐ PRESCRIPTIVE ☐ REPAIR ☐ CHAPTER 14

ALTERATION: ☐ LEVEL I ☐ LEVEL II ☐ LEVEL III

☐ HISTORIC PROPERTY ☐ CHANGE OF USE

CONSTRUCTED: (DATE)_____ CURRENT OCCUPANCY(S): (CH. 3) _____

RENOVATED: (DATE) _____ PROPOSED OCCUPANCY(S) (CH. 3): _____

OCCUPANCY CATEGORY (TABLE 1604.5): CURRENT: ☐ I ☐ II ☐ III ☐ IV

PROPOSED: ☐ I ☐ II ☐ III ☐ IV

BASIC BUILDING DATA:

CONSTRUCTION TYPE: ☐ I-A ☐ I-B ☐ II-A ☒ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B

SPRINKLERS: ☒ NO ☐ PARTIAL ☐ YES ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

STANDPIPES: ☒ NO ☐ YES CLASS ☐ I ☐ II ☐ III ☐ WET ☐ DRY

PRIMARY FIRE DISTRICT: ☒ NO ☐ YES FLOOD HAZARD AREA: ☐ NO ☐ YES

SPECIAL INSPECTIONS REQUIRED: ☒ NO ☐ YES (CONTACT THE LOCAL INSPECTION JURISDICTION FOR ADDITIONAL PROCEDURES & REQUIREMENTS)

GROSS BUILDING AREA:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3RD FLOOR			
2ND FLOOR			
MEZZANINE			
1ST FLOOR	7,000	7,000 UP-FIT	
BASEMENT			
TOTAL GROSS AREA:	7,000		

TOTAL BUILDING = 7,000 SQ. FT.
TENANT 1 = 1,750 SQ. FT.
TENANT 2 = 1,750 SQ. FT.
TENANT 3 = 1,750 SQ. FT.
TENANT 4 = 1,750 SQ. FT.

ALLOWABLE AREA

PRIMARY OCCUPANCY CLASSIFICATION(S):

ASSEMBLY ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5

BUSINESS ☒

EDUCATIONAL ☐

FACTORY ☐ F-1 MODERATE ☐ F-2 LOW

HAZARDOUS ☐ H-1 DETONATE ☐ H-2 DEFLAGRATE ☐ H-3 COMBUST ☐ H-4 HEALTH ☐ H-5 HPM

INSTITUTIONAL ☐ I-1 CONDITION ☐ 1 ☐ 2; ☐ I-2 CONDITION ☐ 1 ☐ 2; ☐ I-3 CONDITION ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5; ☐ I-4

MERCANTILE ☐

RESIDENTIAL ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4

STORAGE ☐ S-1 MODERATE ☐ S-2 LOW ☐ HIGH-PILED ☐ PARKING GARAGE ☐ OPEN ☐ ENCLOSED ☐ REPAIR GARAGE ☐ UTILITY AND MISCELLANEOUS

ACCESSORY OCCUPANCY CLASSIFICATION(S): _____

INCIDENTAL USES(TABLE 509): _____

SPECIAL USES(CHAPTER 4-LIST CODE SECTIONS): _____

SPECIAL PROVISIONS(CHAPTER 5-LIST CODE SECTIONS): _____

MIXED OCCUPANCY: ☐ NO ☒ YES SEPARATION: ____HR. EXCEPTION: _____

☒ NON-SEPARATED USE(508.3) THE REQUIRED TYPE OF CONSTRUCTION FOR THE BUILDING SHALL BE DETERMINED BY APPLYING THE HEIGHT AND AREA LIMITATIONS FOR EACH OF THE APPLICABLE OCCUPANCIES TO THE ENTIRE BUILDING. THE MOST RESTRICTIVE TYPE OF CONSTRUCTION, SO DETERMINED, SHALL APPLY TO THE ENTIRE BUILDING.

☐ SEPARATED USE (508.4) SEE BELOW FOR AREA CALCULATIONS FOR EACH STORY, THE AREA OF THE OCUPANCY SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL FLOOR AREA OF EACH USE DIVIDED BY THE ALLOWABLE FLOOR AREA FOR EACH USE SHALL NOT EXCEED 1.

$$\frac{\text{ACTUAL AREA OF OCCUPANCY A}}{\text{ALLOWABLE AREA OF OCCUPANCY A}} + \frac{\text{ACTUAL AREA OF OCCUPANCY B}}{\text{ALLOWABLE AREA OF OCCUPANCY B}} \leq 1$$

$$\frac{\quad}{\quad} + \frac{\quad}{\quad} + \ldots\ldots = \frac{\quad}{\quad} \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1,5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2,3]
1	BUSINESS	7,000	23,000	-	23,000

[1] FRONTAGE AREA INCREASES FROM SECTION 506.2 ARE COMPUTED THUS:

A. PERIMETER WHICH FRONTS A PUBLIC WAY OR OPEN SPACE HAVING 20 FEET MINIMUM WIDTH = _____(F)
B. TOTAL BUILDING PERIMETER =_____(P)
C. RATIO (F/P) = _____ (F/P)
D. W = MINIMUM WIDTH OF PUBLIC WAY = _____ (W)
E. PERCENT OF FRONTAGE INCREASE ↳ = 100[F/P-0.25] X W/30=_____ (%)

[2] UNLIMITED AREA APPLICABLE UNDER CONDITIONS OF SECTION 507.

[3] MAXIMUM BUILDING AREA = TOTAL NUMBER OF STORIES IN THE BUILDING x D (MAXIMUM 3 STORIES) (506.2).

[4] THE MAXIMUM AREA OF OPEN PARKING GARAGES MUST COMPLY WITH 406.5.4.

[5] FRONTAGE INCREASE IS BASED ON THE UNSPRINKLERED AREA VALUE IN TABLE 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE[1]
BUILDING HEIGHT IN FEET (TABLE 504.3)[2]	FEET 55	23'-8"	
BUILDING HEIGHT IN STORIES (TABLE 504.4)[3]	STORIES 3	STORIES 1	

1. PROVIDE CODE REFERENCE IF THE "SHOWN ON PLANS" QUANTITY IS NOT BASED ON TABLE 504.3 OR 504.4.
2. THE MAXIMUM HEIGHT OF AIR TRAFFIC CONTROL TOWERS MUST COMPLY WITH TABLE 412.3.1.
3. THE MAXIMUM HEIGHT OF OPEN PARKING GARAGES MUST COMPLY WITH TABLE 406.5.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ REDUCTION)	DETAIL AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
STRUCTURAL FRAME, INCLUDING COLUMNS, GIRDERS, TRUSSES	-	0	-	-	-	-	-
BEARING WALLS	-	-	-	-	-	-	-
EXTERIOR	-	-	-	-	-	-	-
NORTH		0	-	-	-	-	-
EAST		0	-	-	-	-	-
WEST		0	-	-	-	-	-
SOUTH		0	-	-	-	-	-
INTERIOR	-	0	-	-	-	-	-
NONBEARING WALLS & PARTITIONS	-	-	-	-	-	-	-
EXTERIOR	-	0	-	-	-	-	-
NORTH	-	0	-	-	-	-	-
EAST	-	0	-	-	-	-	-
WEST	-	0	-	-	-	-	-
SOUTH	-	0	-	-	-	-	-
INTERIOR	-	0	-	-	-	-	-
FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	-	0	-	-	-	-	-
FLOOR CEILING ASSEMBLY	-	-	-	-	-	-	-
COLUMNS SUPPORTING FLOORS	-	-	-	-	-	-	-
ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS	-	0	-	-	-	-	-
ROOF CEILING ASSEMBLY	-	-	-	-	-	-	-
COLUMNS SUPPORTING ROOF	-	-	-	-	-	-	-
SHAFT ENCLOSURES-EXIT	-	-	-	-	-	-	-
SHAFT ENCLOSURES-OTHER	-	-	-	-	-	-	-
CORRIDOR SEPARATION		0	-				-
OCCUPANCY SEPARATION	-	-	-	-	-	-	-
PARTY/FIRE WALL SEPARATION	-	-	-	-	-	-	-
SMOKE BARRIER SEPARATION	-	-	-	-	-	-	-
TENANT/DWELLING UNIT/ SLEEPING UNIT SEPARATION	-	-	-	-	-	-	-
INCIDENTAL USE SEPARATION							

*INDICATE SECTION NUMBER PERMITTING REDUCTION

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
82'	UP; NS	NO LIMIT	42%

LIFE SAFETY SYSTEM REQUIREMENTS:

EMERGENCY LIGHTING:	☐ NO	☒ YES
EXIT SIGNS:	☐ NO	☒ YES
FIRE ALARM:	☒ NO	☐ YES
SMOKE DETECTION SYSTEMS:	☒ NO	☐ YES ☐ PARTIAL _____
CARBON MONOXIDE DETECTION:	☒ NO	☐ YES

LIFE SAFETY PLAN REQUIREMENTS:

LIFE SAFETY PLAN SHEET #, IF PROVIDED LS-1 OF 1

ACCESSIBLE DWELLING UNITS N/A
(SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING-SEE SITE PLAN-SEE SITE PLAN
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
	24	37	2			2

PLUMBING FIXTURE REQUIREMENTS
(TABLE 2902.1)

USE		WATERCLOSETS			URINALS	LAVATORIES			SERVICE SINK	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
TENANT 1	REQUIRED	-	-	1	-	-	-	1	*	*	*
BUSINESS	PROVIDED	-	-	1	-	-	-	1	*	*	*
TENANT 2	REQUIRED	-	-	1	-	-	-	1	*	*	*
BUSINESS	PROVIDED	-	-	1	-	-	-	1	*	*	*
TENANT 3	REQUIRED	-	-	1	-	-	-	1	*	*	*
BUSINESS	PROVIDED	-	-	1	-	-	-	1	*	*	*
TENANT 4	REQUIRED	-	-	1	-	-	-	1	-	-	-
BUSINESS	PROVIDED	-	-	1	-	-	-	1	1	1	1

*NCSBC 2902.6

SPECIAL APPROVALS

SPECIAL APPROVAL: (LOCAL JURISDICTION, DEPARTMENT OF INSURANCE, OSC, DPI, DHHS, ICC, ETC., DESCRIBE BELOW)

_____

_____

_____

DESIGN LOADS: STRUCTURAL DESIGN-EXISTING BUILDING

SNOW (I_S) -
SEISMIC (I_E) -

LIVE LOADS: ROOF - PSF; MEZZANINE - PSF; FLOOR - PSF

GROUND SNOW LOAD: - PSF

WIND LOAD: BASIC WIND SPEED - MPH (ASCE-7)
EXSPOSURE CATEGORY -

SEISMIC DESIGN CATEGORY ☐ A ☐ B ☐ C ☐ D

PROVIDE THE FOLLOWING SEISMIC DESIGN PARAMETERS:

OCCUPANCY CATEGORY (TABLE 1604.5) ☐ I ☐ II ☐ III ☐ IV

SPECTRAL RESPONSE ACCELERATION S_S _____%g S_1 _____%g

SITE CLASSIFICATION (ASCE 7): ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F

DATA SOURCE: ☐ FIELD TEST ☐ PRESUMPTIVE ☐ HISTORICAL DATA

BASIC STRUCTURAL SYSTEM (CHECK ONE)

☐ BEARING WALL ☐ DUAL W/SPECIAL MOMENT FRAME
☐ BUILDING FRAME ☐ DUAL W/INTERMEDIATE R/C OR SPECIAL STEEL
☐ MOMENT FRAME ☐ INVERTED PENDULUM

ANALYSIS PROCEDURE ☐ SIMPLIFIED ☐ EQUIVALENT LATERAL FORCE ☐ DYNAMIC

ARCHITECTURAL, MECHANICAL, COMPONENTS ANCHORED? ☐ YES ☐ NO

LATERAL DESIGN CONTROL: EARTHQUAKE ☐ WIND ☐

SOIL BEARING CAPACITIES:

FIELD TEST (PROVIDE COPY OF TEST REPORT) _____ PSF

PRESUMPTIVE BEARING CAPACITY _____ PSF

PILE SIZE, TYPE, AND CAPACITY _____

ENERGY REQUIREMENTS:

THE FOLLOWING DATA SHALL BE CONSIDERED MINIMUM AND ANY SPECIAL ATTRIBUTE REQUIRED TO MEET THE ENERGY CODE SHALL ALSO BE PROVIDED. EACH DESIGNER SHALL FURNISH THE REQUIRED PORTIONS OF THE PROJECT INFORMATION FOR THE PLAN DATA SHEET. IF PERFORMANCE METHOD, STATE THE ANNUAL ENERGY COST FOR THE STANDARD REFERENCE DESIGN VS THE ANNUAL ENERGY COST FOR THE PROPOSED DESIGN.

EXISTING BUILDING ENVELOPE COMPLIES WITH CODE: ☐ NO ☐ YES (THE REMAINDER OF THIS SECTION IS NOT APPLICABLE)

EXEMPT BUILDING ☐ NO ☐ YES PROVIDE CODE OR STATUTORY REFERENCE: _____

CLIMATE ZONE: ☐ 3A ☒ 4A ☐ 5A

METHOD OF COMPLIANCE: ENERGY CODE ☐ PERFORMANCE ☒ PRESCRIPTIVE
ASHRAE 90.1 ☐ PERFORMANCE ☐ PRESCRIPTIVE

OTHER: ☐ PERFORMANCE (SPECIFY SOURCE) _____

THERMAL ENVELOPE (PRESCRIPTIVE METHOD ONLY)

ROOF/CEILING ASSEMBLY (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY R-19 + R-11 LS WITH R-3 THERMAL BLOCKS
U-VALUE OF TOTAL ASSEMBLY: N/A
R-VALUE OF INSULATION: N/A
SKYLIGHTS IN EACH ASSEMBLY N/A
U-VALUE OF SKYLIGHT: N/A
TOTAL SQUARE FOOTAGE OF SKYLIGHTS IN EACH ASSEMBLY N/A

EXTERIOR WALLS (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY R-0.0+R-15.8 CI, WITH BRICK VENEER
U-VALUE OF TOTAL ASSEMBLY: _____
R-VALUE OF INSULATION: N/A
OPENINGS (WINDOWS OR DOORS WITH GLAZING) DOUBLE PANE, H.M. FRAME
U-VALUE OF ASSEMBLY 0.45 SOLAR HEAT GAIN COEFFICIENT: N/A
PROJECTION FACTOR N/A DOOR R-VALUES 1.3

WALLS BELOW GRADE (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY N/A
U-VALUE OF TOTAL ASSEMBLY N/A R-VALUE OF INSULATION: N/A

FLOORS OVER UNCONDITIONED SPACE (EACH ASSEMBLY):
DESCRIPTION OF ASSEMBLY N/A
U-VALUE OF TOTAL ASSEMBLY N/A R-VALUE OF INSULATION: N/A

FLOOR SLAB ON GRADE
DESCRIPTION OF ASSEMBLY SLAB-ON-GRADE
R-VALUE OF INSULATION: R-15 TO BOTTOM OF FOOTING
U-VALUE OF TOTAL ASSEMBLY -
HORIZONTAL / VERTICAL REQUIREMENT -
SLAB HEATED ? NO

Summary:

ENERGY CODE:	2018 NORTH CAROLINA STATE BUILDING CODE: ENERGY CONSERVATION CODE
BUILDING CODE:	2018 NORTH CAROLINA STATE BUILDING CODE: BUILDING CODE
MECHANICAL CODE:	2018 NORTH CAROLINA STATE BUILDING CODE: MECHANICAL CODE
PLUMBING CODE:	2018 NORTH CAROLINA STATE BUILDING CODE: PLUMBING CODE
ELECTRICAL CODE:	2020 NATIONAL ELECTRIC CODE
ACCESSIBILITY CODE:	ICC/ANSI 117.1-2009 AMERICAN NATIONAL STANDARD ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES
CONSTRUCTION:	II-B
OCCUPANCY:	BUSINESS

SHEET INDEX

NOTICE TO CONTRACTOR
All construction must comply with current NC Building Codes and is subject to field inspection and verification.
Reviewed for Code Compliance
02/13/2023
Harnett COUNTY NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 18909 ENGINEER RANDY L CRUSE
12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
PHONE: (910) 892-4429
FAX: (910) 892-5162
LICENSE NO.: C-1721

DATE 12-19-22
DRAWN BY BAM
JOB NO. 22-60

SHEET NO.
BD-1 OF 1

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
BUSINESS (TENANT 1)	2	2	200'	63'–10"	35'–8"	69'–0"
BUSINESS (TENANT 2)	2	2	200'	46'–2"	35'–8"	69'–0"
BUSINESS (TENANT 3)	2	2	200'	46'–0"	35'–8"	69'–0"
BUSINESS (TENANT 4)	2	2	200'	59'–1"	35'–8"	69'–0"

1. CORRIDOR DEAD ENDS (SECTION 1020.4)
2. BUILDINGS WITH SINGLE EXITS (TABLE 1006.3.2(2)), SPACES WITH ONE MEANS OF EGRESS (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
BUSINESS (TENANT 1)	1,750	100 GROSS	18	N/A	.2	N/A	3.6"	N/A	70"
BUSINESS (TENANT 2)	1,750	100 GROSS	18	N/A	.2	N/A	3.6"	N/A	70"
BUSINESS (TENANT 3)	1,750	100 GROSS	18	N/A	.2	N/A	3.6"	N/A	70"
BUSINESS (TENANT 4)	1,750	100 GROSS	18	N/A	.2	N/A	3.6"	N/A	70"

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 REQUIREMENTS:

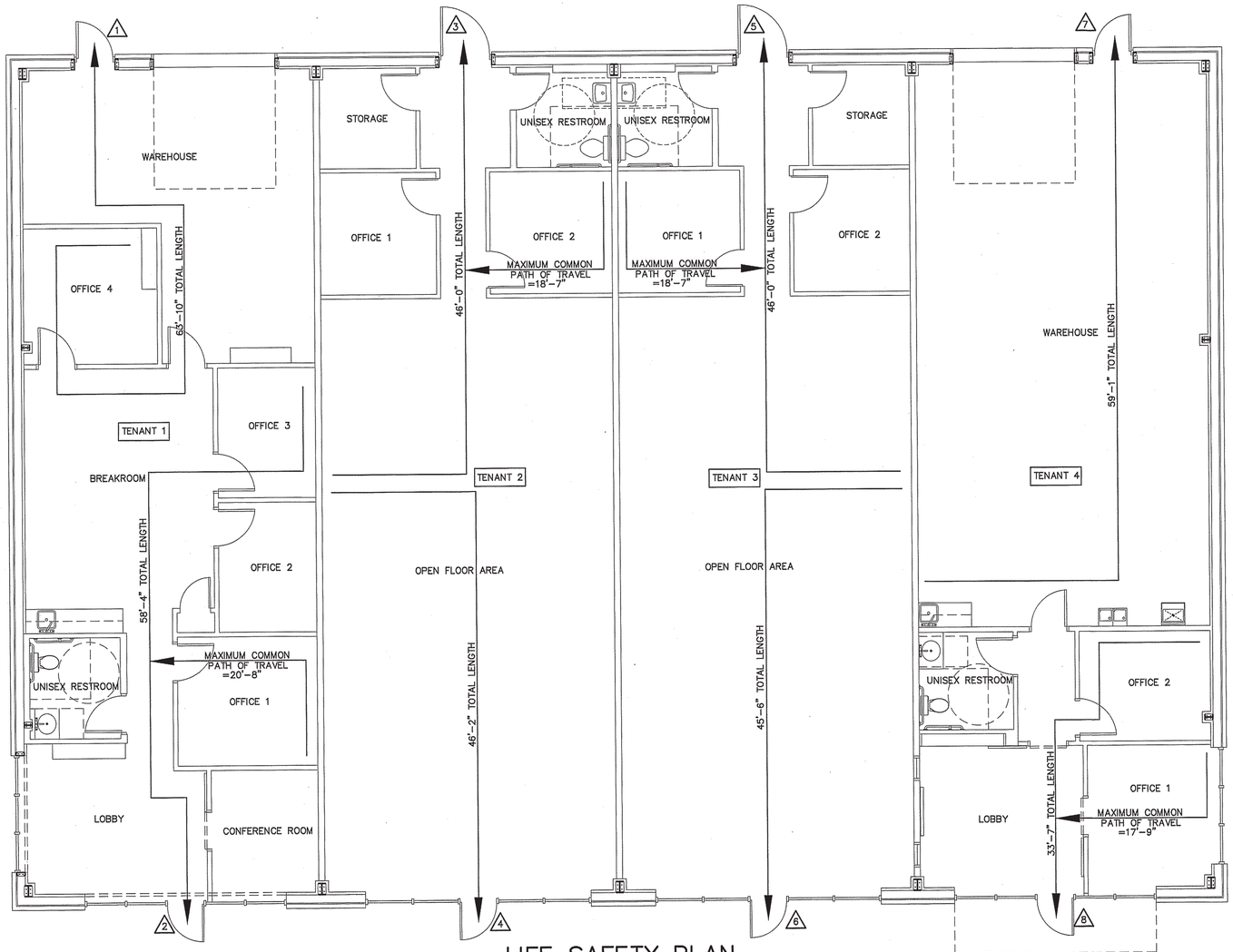
- ☒ FIRE AND/OR SMOKE RATED WALL LOCATIONS (CHAPTER 7) – SEE NOTE 1
- ☒ ASSUMED AND REAL PROPERTY LINE LOCATIONS – SEE NOTE 2
- ☒ EXTERIOR WALL OPENING AREA WITH RESPECT TO DISTANCE TO ASSUMED PROPERTY LINES (705.8) – SEE NOTE 3
- ☒ OCCUPANCY TYPES FOR EACH AREA AS IT RELATES TO OCCUPANT LOAD CALCULATION (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. UNLIMITED (ALL 30' OR GREATER)
4. NO DEAD ENDS; 20' ALLOWED.
5. NO RATING REQUIRED 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

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 = 9 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
2. 35" CLEAR WIDTH DIVIDED BY .2" = 175 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 9 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
3. 35" CLEAR WIDTH DIVIDED BY .2" = 175 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 9 PERSON CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
4. 35" CLEAR WIDTH DIVIDED BY .2" = 175 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 9 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
5. 35" CLEAR WIDTH DIVIDED BY .2" = 175 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 9 PERSON CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
6. 35" CLEAR WIDTH DIVIDED BY .2" = 175 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 9 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
7. 35" CLEAR WIDTH DIVIDED BY .2" = 175 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 9 PERSON CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.
8. 35" CLEAR WIDTH DIVIDED BY .2" = 175 OCCUPANTS CALCULATED OCCUPANCY PER EXIT = 9 PEOPLE CALCULATED OCCUPANCY DOES NOT EXCEED MAXIMUM CAPACITY OF EXIT.



LIFE SAFETY PLAN
SCALE: 3/16" = 1'–0"

THIS FACILITY HAS NO STORAGE ABOVE 12' A.F.F. AND IS NOT INTENDED FOR USE AS VEHICLE STORAGE, PARKING GARAGE OR OR REPAIR GARAGE.

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.

NORTH CAROLINA PROFESSIONAL SEAL 18909 ENGINEER SANDY L. CRUSE
12/19/22

UP–FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS

NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Durham, North Carolina 27704
PHONE: (919) 682-0368
FAX: (919) 682-5162
LICENSE NO.: C–1721

DATE	12–19–22
DRAWN BY	BAM
JOB NO.	22–60

SHEET NO.
LS–1 OF 1

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	REGALYN 4869.004	LAVATORY WALL-TYPE, CAST IRON	4" CENTERSET WALL MOUNT SINK, WHITE W/1340.227 METERING FAUCET PROVIDE PIPE WRAP AND BAFFLE UNDER LAVATORY
P-3	BOSCH	US7-2 PRO	7.2 KW POINT OF USE WATER HEATER	240V, 1ø
P-4	OASIS	PG8ACSL	SPLIT LEVEL ELECTRIC WATER COOLER	BARRIER – FREE
P-5	AMERICAN STANDARD	AQUALYN 0476.028	SELF RIMMING DROP IN SINK	1340.227 FAUCET. PROVIDE W/BASKET DRAIN
P-6	FIAT	SERV-A-SINK L-1	23" SINGLE BASIN FREE STANDING MOP SINK	
P-7	JUST	SL-1921-A-GR	1 COMPARTMENT SINK	SELECTED BY OWNER
P-8	WOODFORD	MOD-65	HOSE BIB FREEZE PROOF	ANTI-SIPHONING WITH VACCUM BREAKER, SELF DRAINING.
P-9	STATE	PCE 50 20LSA	50 GAL 4.5 KW WATER HEATER	HEATER IS 32-1/4" TALL; ALLOW FOR MINIMUM CLEARANCES DURING INSTALLATION

* VERIFY ALL FIXTURES WITH OWNER BEFORE PURCHASE OR INSTALLATION

TENANT ONE

PLUMBING CALCULATIONS

ITEM	# OF	FIXTURE COLD	UNITS HOT	(EACH) TOTAL	FIXTURE COLD	UNITS HOT	(TOTAL) TOTAL	FIXTURE UNITS (WASTE)
FLUSH TANK WATER CLOSET	1	5.0	–	5.0	5.0	–	5.0	4/4
LAVATORY	2	1.5	1.5	2	3.0	3.0	4.0	1/2
TOTAL 17.0 GPM		–	–	–	8.0	3.0	9.0	6.0

WATER SUPPLY PIPE SIZE: MINIMUM 3/4"

TENANT TWO OR THREE

PLUMBING CALCULATIONS

ITEM	# OF	FIXTURE COLD	UNITS HOT	(EACH) TOTAL	FIXTURE COLD	UNITS HOT	(TOTAL) TOTAL	FIXTURE UNITS (WASTE)
FLUSH TANK WATER CLOSET	1	5.0	–	5.0	5.0	–	5.0	4/4
LAVATORY	1	1.5	1.5	2	1.5	1.5	2.0	1/1
TOTAL 17.0 GPM		–	–	–	6.5	1.5	7.0	5.0

WATER SUPPLY PIPE SIZE: MINIMUM 3/4"

TENANT FOUR

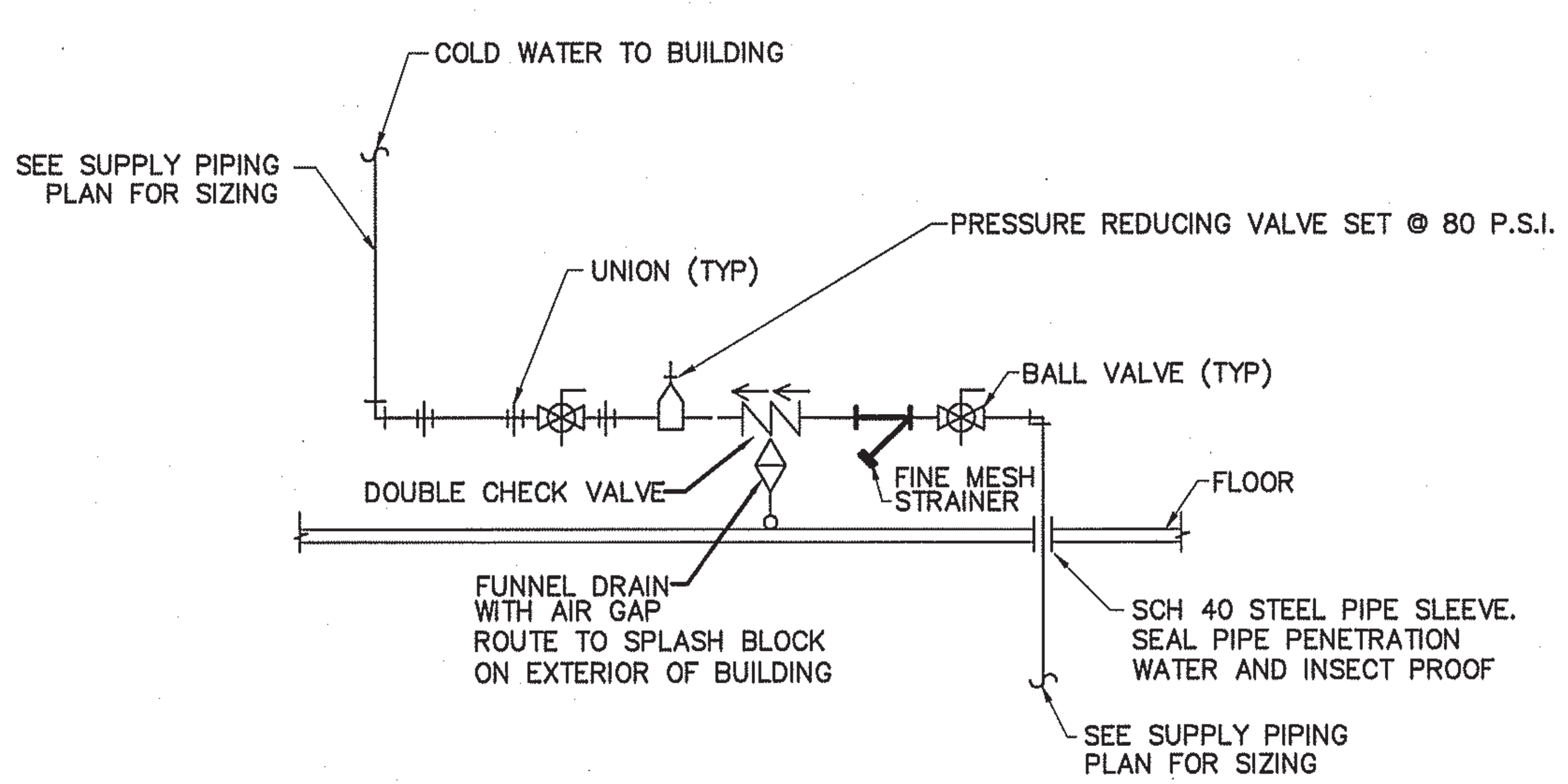
PLUMBING CALCULATIONS

ITEM	# OF	FIXTURE COLD	UNITS HOT	(EACH) TOTAL	FIXTURE COLD	UNITS HOT	(TOTAL) TOTAL	FIXTURE UNITS (WASTE)
FLUSH TANK WATER CLOSET	1	5.0	–	5.0	5.0	–	5.0	4/4
LAVATORY	2	1.5	1.5	2	3.0	3.0	4.0	1/4
DRINKING FOUNTAIN	2	.25	–	.25	.50	–	.50	0.5/1.0
MOP SINK	1	2.25	2.25	3.0	2.25	2.25	3.0	2/2
TOTAL 25.0 GPM		–	–	–	10.75	5.25	12.5	11.0

WATER SUPPLY PIPE SIZE: MINIMUM 1"

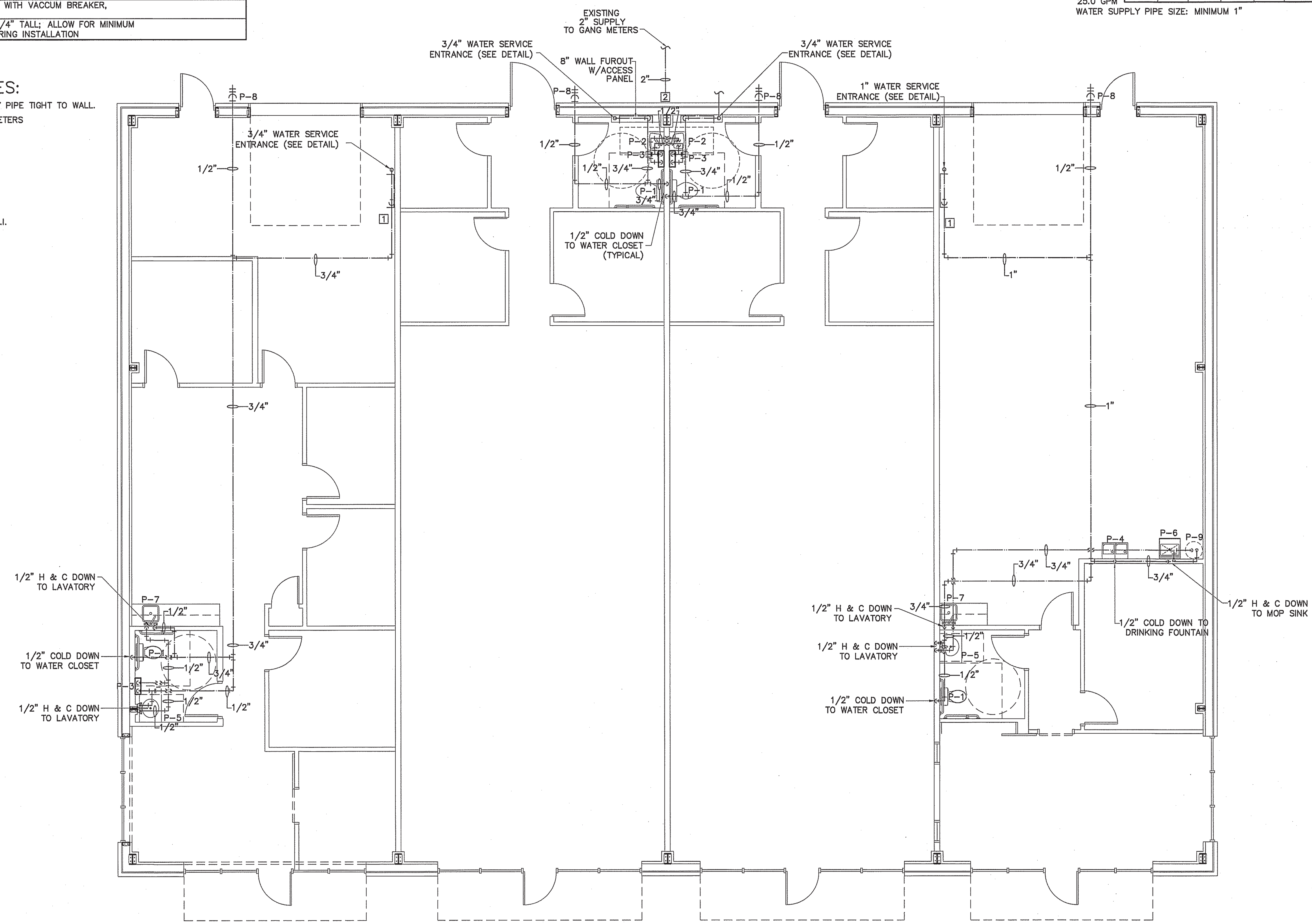
KEYNOTES:

1. INSTALL SUPPLY PIPE TIGHT TO WALL.
2. GANG WATER METERS



DETAIL–WATER SERVICE ENTRANCE AS REQUIRED

NOT TO SCALE



PLUMBING WASTE & VENT PIPING PLAN

SCALE: 3/16" = 1'-0"

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 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"
ELEC. WATER COOLER	1/2"	–	2"	1 1/2"
FLOOR DRAIN			3"	2"
MOP SINK	1/2"	1/2"	3"	2"

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18909 RANDY L. CRUSE 12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Edgerton St. Dunn, North Carolina 28334
PH: (910) 892-4429
FAX: (910) 892-5162
LICENSE NO.: C-1721

DATE 12-19-22
DRAWN BY BAM
JOB NO. 22-60

SHEET NO. P-1 OF 3

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	REGALYN 4869.004	LAVATORY WALL-TYPE, CAST IRON	4" CENTERSET WALL MOUNT SINK, WHITE W/1340.227 METERING FAUCET PROVIDE PIPE WRAP AND BAFFLE UNDER LAVATORY
P-3	BOSCH	US7-2 PRO	7.2 KW POINT OF USE WATER HEATER	240V, 1ø
P-4	OASIS	PGBACSL	SPLIT LEVEL ELECTRIC WATER COOLER	BARRIER - FREE
P-5	AMERICAN STANDARD	AQUALYN 0476.028	SELF RIMMING DROP IN SINK	1340.227 FAUCET. PROVIDE W/BASKET DRAIN
P-6	FIAT	SERV-A-SINK L-1	23" SINGLE BASIN FREE STANDING MOP SINK	
P-7	JUST	SL-1921-A-GR	1 COMPARTMENT SINK	SELECTED BY OWNER
P-8	WOODFORD	MOD-65	HOSE BIB FREEZE PROOF	ANTI-SIPHONING WITH VACCUM BREAKER, SELF DRAINING.
P-9	STATE	PCE 50 20LSA	50 GAL 4.5 KW WATER HEATER	HEATER IS 32-1/4" TALL; ALLOW FOR MINIMUM CLEARANCES DURING INSTALLATION

* VERIFY ALL FIXTURES WITH OWNER BEFORE PURCHASE OR INSTALLATION

TENANT ONE

PLUMBING CALCULATIONS

ITEM	# OF	FIXTURE UNITS (EACH) COLD	HOT	TOTAL	FIXTURE UNITS (TOTAL) COLD	HOT	TOTAL	FIXTURE UNITS (WASTE)
FLUSH TANK WATER CLOSET	1	5.0	–	5.0	5.0	–	5.0	4/4
LAVATORY	2	1.5	1.5	2	3.0	3.0	4.0	1/2
TOTAL 17.0 GPM		–	–	–	8.0	3.0	9.0	6.0

WATER SUPPLY PIPE SIZE: MINIMUM 3/4"

TENANT TWO OR THREE

PLUMBING CALCULATIONS

ITEM	# OF	FIXTURE UNITS (EACH) COLD	HOT	TOTAL	FIXTURE UNITS (TOTAL) COLD	HOT	TOTAL	FIXTURE UNITS (WASTE)
FLUSH TANK WATER CLOSET	1	5.0	–	5.0	5.0	–	5.0	4/4
LAVATORY	1	1.5	1.5	2	1.5	1.5	2.0	1/1
TOTAL 17.0 GPM		–	–	–	6.5	1.5	7.0	5.0

WATER SUPPLY PIPE SIZE: MINIMUM 3/4"

TENANT FOUR

PLUMBING CALCULATIONS

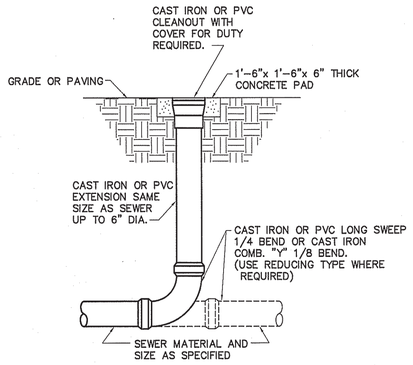
ITEM	# OF	FIXTURE UNITS (EACH) COLD	HOT	TOTAL	FIXTURE UNITS (TOTAL) COLD	HOT	TOTAL	FIXTURE UNITS (WASTE)
FLUSH TANK WATER CLOSET	1	5.0	–	5.0	5.0	–	5.0	4/4
LAVATORY	2	1.5	1.5	2	3.0	3.0	4.0	1/4
DRINKING FOUNTAIN	2	.25	–	.25	.50	–	.50	0.5/1.0
MOP SINK	1	2.25	2.25	3.0	2.25	2.25	3.0	2/2
TOTAL 25.0 GPM		–	–	–	10.75	5.25	12.5	11.0

WATER SUPPLY PIPE SIZE: MINIMUM 1"

NOTE:
DASHED LINES REPRESENT EXISTING WASTE PIPE AS INSTALLED IN SHELL BUILDING.

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"
ELEC. WATER COOLER	1/2"	–	2"	1 1/2"
FLOOR DRAIN			3"	2"
MOP SINK	1/2"	1/2"	3"	2"

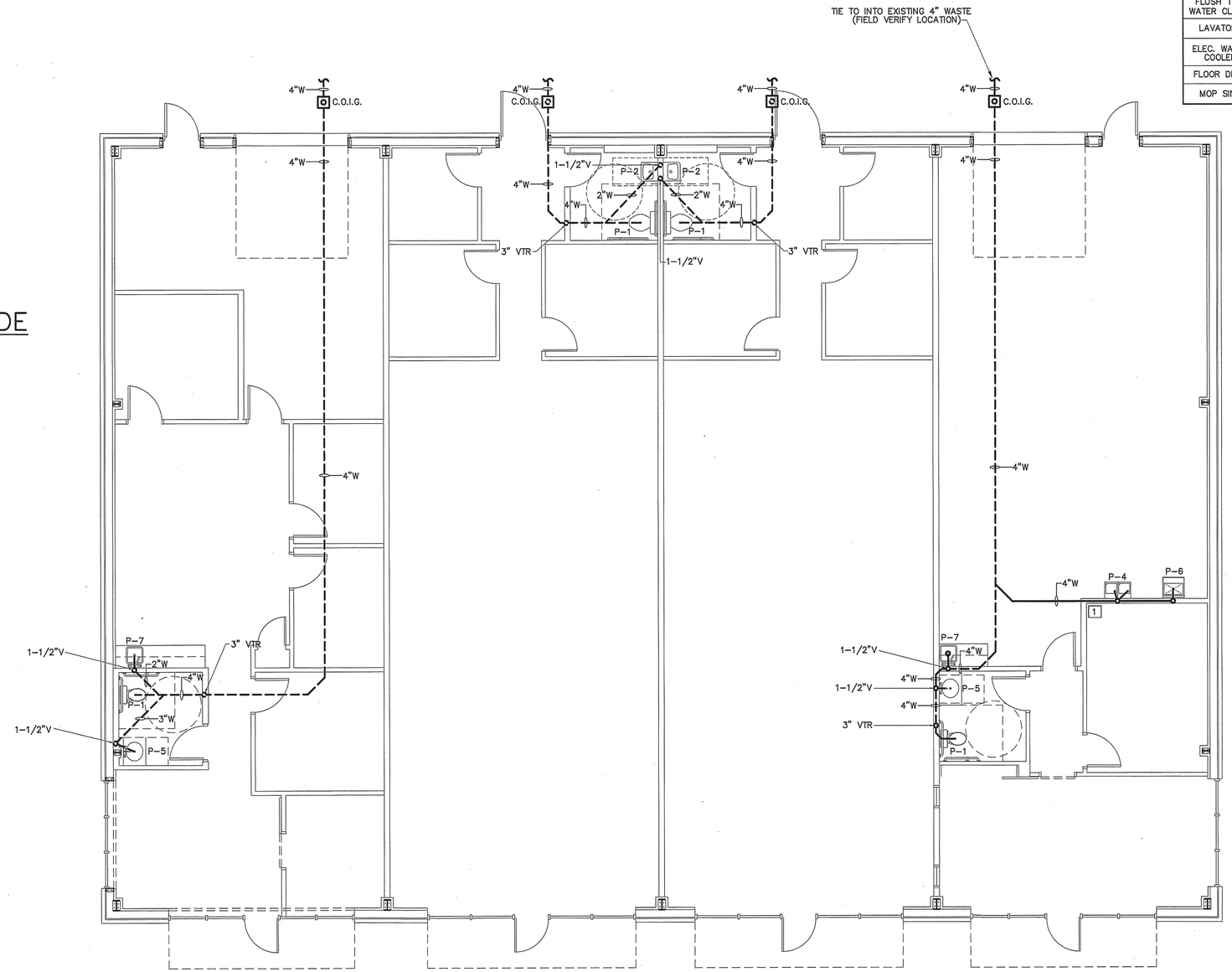


DETAIL-CLEAN OUT AT GRADE

NOT TO SCALE

PLUMBING LEGEND

DESCRIPTION	SYMBOL
COLD WATER	CW
HOT WATER	HW
COLD WATER (FILTERED)	FL
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	FS
SHOCK ABSORBER W/BALL VALVE SHUT-OFF	SA SIZE PER MANUF. RECOMMENDATIONS
CHANGE IN PIPE SIZE	



1 CUT AND PATCH CONCRETE AS REQUIRED FOR NEW SECTION OF 4" WASTE PIPE.

PLUMBING WASTE & VENT PIPING PLAN

SCALE: 3/16" = 1'-0"

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS

NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
PH. (910) 892-4453
FAX. (910) 892-5162
LICENSE NO.: C-1721

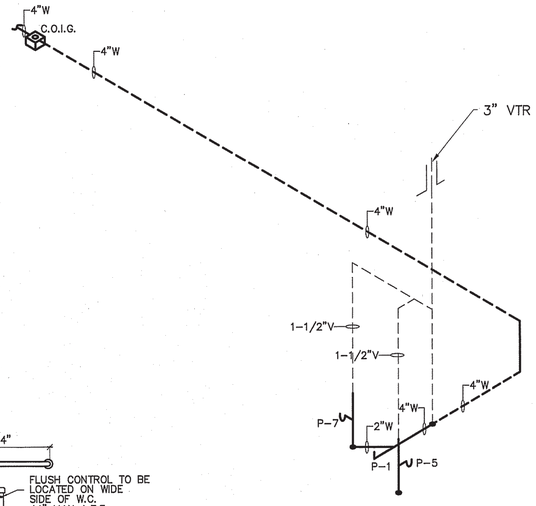
DATE 12-19-22
DRAWN BY BAM
JOB NO. 22-60

SHEET NO.
P-2 OF 3

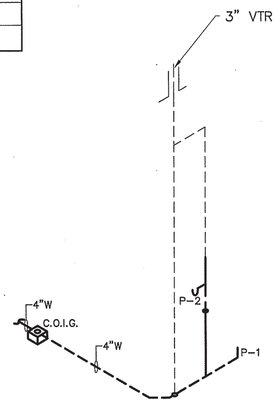
PLUMBING FIXTURE SCHEDULE

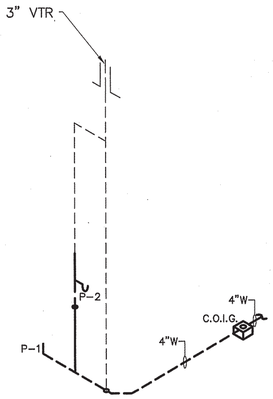
MARK	MAKE	MODEL	DESCRIPTION	NOTES
P-1	AMERICAN STANDARD	CADET 2377.100	EL 1.6/PA 16.5"HC ELONGATED WATER CLOSET HC ACCESSIBLE, TANK TYPE	WHITE 5311.012 SEAT
P-2	AMERICAN STANDARD	REGALYN 4869.004	LAVATORY WALL-TYPE, CAST IRON	4" CENTERSET WALL MOUNT SINK, WHITE W/1340.227 METERING FAUCET PROVIDE PIPE WRAP AND BAFFLE UNDER LAVATORY
P-3	BOSCH	US7 2 PRO	7.2 KW POINT OF USE WATER HEATER	240V, 1ø
P-4	OASIS	PG8ACSL	SPLIT LEVEL ELECTRIC WATER COOLER	BARRIER - FREE
P-5	AMERICAN STANDARD	AQUALYN 0476.028	SELF RIMMING DROP IN SINK	1340.227 FAUCET. PROVIDE W/BASKET DRAIN
P-6	FIAT	SERV-A-SINK L-1	23" SINGLE BASIN FREE STANDING MOP SINK	
P-7	JUST	SL-1921-A-GR	1 COMPARTMENT SINK	SELECTED BY OWNER
P-8	WOODFORD	MOD-65	HOSE BIB FREEZE PROOF	ANTI-SIPHONING WITH VACCUM BREAKER, SELF DRAINING.
P-9	STATE	PCE 50 20LSA	50 GAL 4.5 KW WATER HEATER	HEATER IS 32-1/4" TALL; ALLOW FOR MINIMUM CLEARANCES DURING INSTALLATION

* VERIFY ALL FIXTURES WITH OWNER BEFORE PURCHASE OR INSTALLATION

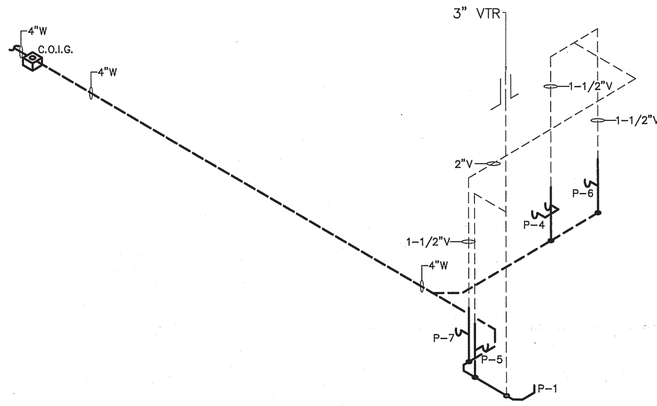


(TENANT ONE)
PLUMBING WASTE & VENT PIPING PLAN
NOT TO SCALE

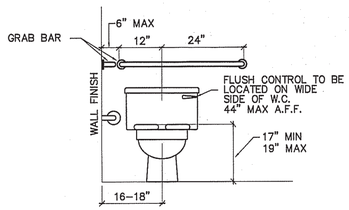


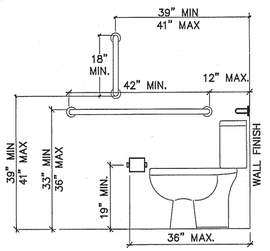


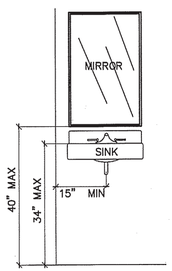
(TENANT TWO & THREE)
PLUMBING WASTE & VENT PIPING PLAN
NOT TO SCALE

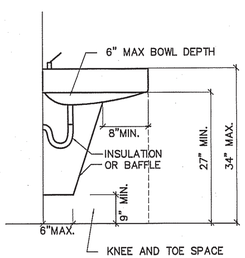


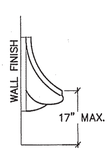
(TENANT FOUR)
PLUMBING WASTE & VENT PIPING PLAN
NOT TO SCALE







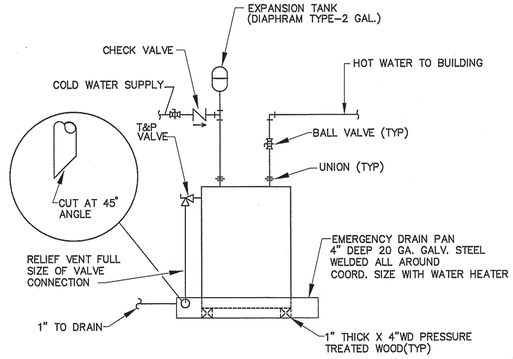




RESTROOM ACCESSIBILITY DETAILS
SCALE: 1/2" = 1'-0"

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		



DETAIL-WATER HEATER
NOT TO SCALE

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.

NORTH CAROLINA PROFESSIONAL SEAL 18909 ENGINEER RANDY L CRUSE 12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, 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

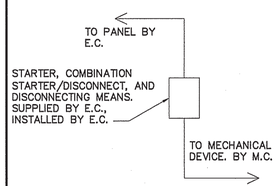
DATE 12-19-22
DRAWN BY BAM
JOB NO. 22-60

SHEET NO.
P-3 OF 3

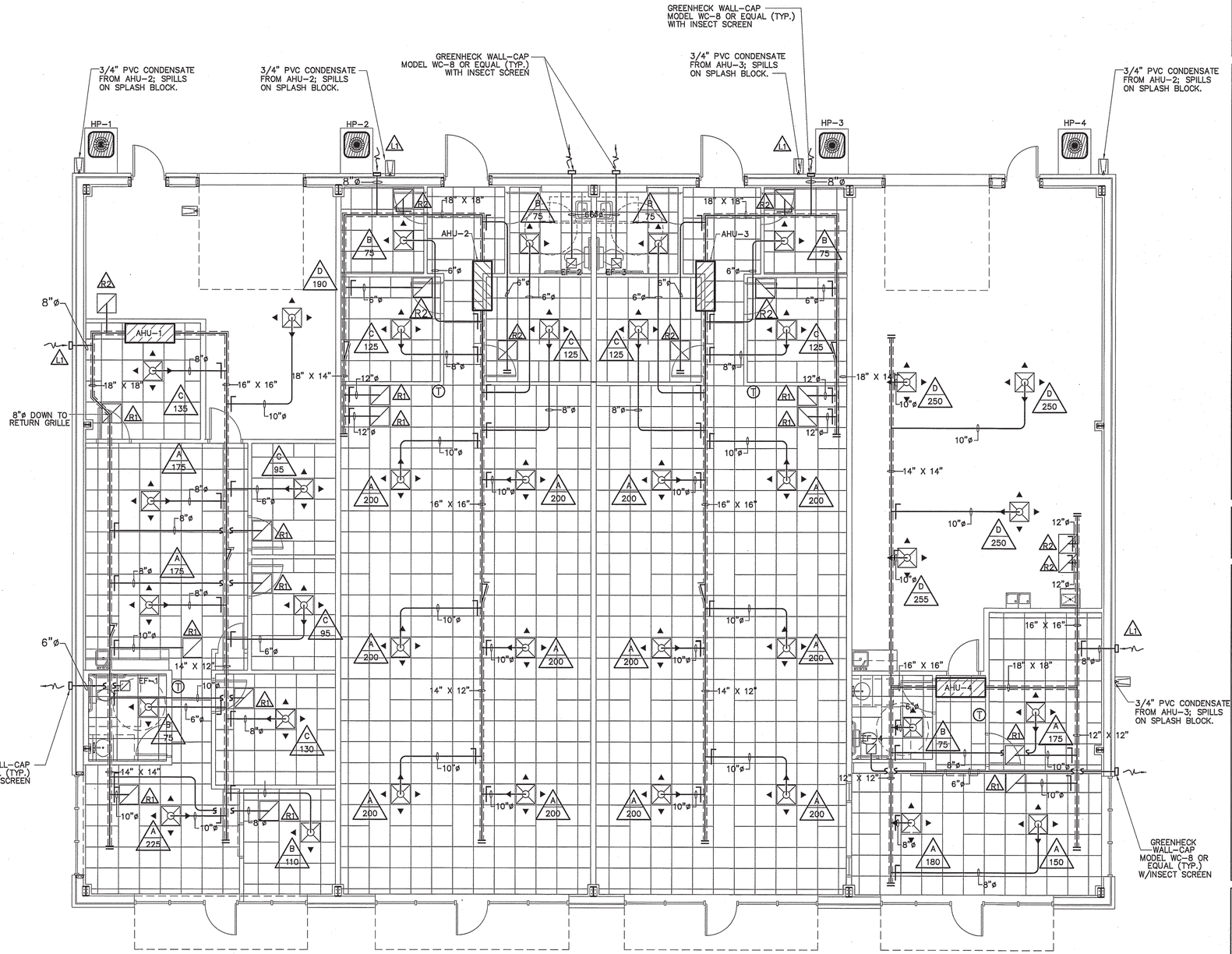
MECHANICAL SYMBOL LEGEND

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
(S) OR (SD)	(S) OR (SD)	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
(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)
		EXHAUST FAN

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.



MECHANICAL HVAC PLAN

SCALE: 3/16" = 1'-0"

NOTE: MAINTAIN A MINIMUM SEPARATION OF 10' BETWEEN EXHAUST AND INTAKE GRILLES.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18909 SANDY L. CRUSE 12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Riverton St.
Dunn, North Carolina 28334
PH: (910) 892-4148
FAX: (910) 892-4148
LICENSE NO.: C-1721

DATE 12-19-22
DRAWN BY BAM
JOB NO. 22-60

SHEET NO.
M-1 OF 2

EXHAUST FAN SCHEDULE

MARK	MAKE	MODEL	TYPE	CFM	EXTERNAL S.P. IN (W.G.)	WATTS	ELECTRICAL VOLT	PH	HZ	NOTES
EF-1	GREENHECK	SP-B90	CEILING FAN	75	.25	49.7	115	1ø	60	WALL CAP, INSECT SCREEN, W/BACK DRAFT DAMPER

LOUVER SCHEDULE

MARK	DESCRIPTION	CFM	APPROXIMATE OUTSIDE DIMENSIONS (W X H)	FREE AREA(SF)	MAXIMUM VELOCITY OR S.P. DROP	MATERIAL	FINISH	MANUFACTURER	MODEL NO.	NOTES
L1	WALL LOUVER	177	12"W X 12"H	0.5	500 FPM	ALUMINUM	COLOR ANODIZED MATCH METAL PANELS*	HART & COOLEY	1530ZF	

REGISTER, GRILLE, & DIFFUSER SCHEDULE*

MARK	DESCRIPTION	MAX. NC	NECK	BORDER TYPE	MATERIAL	FINISH	MANUFACTURER	MODEL NUMBER	ACCESSORIES / NOTES
A	DIFFUSER-4-WAY	30	9"X9"	LAY-IN	STEEL	WHITE	TITUS	TDC 9X9 3 26 2	SQ-TO-RND
B	DIFFUSER-2-WAY	30	6"X6"	LAY-IN	STEEL	WHITE	TITUS	TDC 6X6 3 26 2	SQ-TO-RND
C	DIFFUSER-4-WAY	30	6"X6"	LAY-IN	STEEL	WHITE	TITUS	TDC 6X6 3 26 4	SQ-TO-RND
D	DIFFUSER-4-WAY	30	9"X9"	SURFACE	STEEL	WHITE	TITUS	TDC 6X6 3 26 4	SQ-TO-RND
R1	RETURN GRILLE	30	10"X10"	LAY-IN	STEEL	WHITE	TITUS	23RL 10X10 3 26	SQ-TO-RND
R2	RETURN GRILLE	30	10"X10"	SURFACE	STEEL	WHITE	TITUS	23RL 10X10 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

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

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 14' AND SHALL NOT BE USED TO FORM ELBOWS. CONNECTIONS FROM RECTANGULAR TO ROUND DUCT SHALL BE MADE WITH MANUFACTURED 45 DEG. LATERAL TAPS.
3. SUPPLY AND RETURN DUCTWORK SHALL BE INSULATED WITH FIBERGLASS INSULATION WITH A MINIMUM THERMAL RESISTANCE OF R-8.0 (IN UNCONDITIONED AREAS) AND AN "FSK" VAPOR BARRIER. DIFFUSERS SHALL BE INSULATED WITH FIBERGLASS INSULATION WITH VAPOR BARRIER. ALL JOINTS SHALL BE TAPED WITH A FOIL BACKED TAPE TO PROVIDE A CONTINUOUS VAPOR BARRIER.
4. THE ELECT. CONTRACTOR SHALL SUPPLY, AND MECH. CONTRACTOR SHALL INSTALL A SMOKE DETECTOR IN THE RETURN AIR DUCTWORK, THE EVAPORATOR FAN AND THE COMPRESSOR SHALL BE INTERLOCKED WITH THE SMOKE DETECTORS SO THAT THE COMPRESSOR AND THE EVAPORATOR FAN ARE DE-ENERGIZED WHEN SMOKE IS DETECTED. THE SMOKE DETECTORS SHALL HAVE A SUFFICIENT NUMBER OF CONTACTS TO INTERFACE WITH THE BUILDING FIRE ALARM SYSTEM.
5. ALL DUCTWORK SHALL BE SEALED AIR TIGHT WITH SEALING COMPOUND.
6. THIS CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF OTHER TRADES PRIOR TO INSTALLATION OF ANY OF HIS PIPING, DUCTWORK, OR EQUIPMENT.
7. 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.
8. 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.
9. ALL EQUIPMENT SHALL BE LOCATED AND INSTALLED TO PROVIDE MAXIMUM SPACE FOR MAINTENANCE AND SERVICE.
10. ALL ELBOWS IN DUCTWORK SHALL BE RADIUS ELBOWS, UNLESS NOTED OTHERWISE. WHERE SQUARE ELBOWS ARE SHOWN, INSTALL TURNING VANES.
11. MECHANICAL CONTRACTOR TO FIELD COORDINATE LOCATION OF MECHANICAL SYSTEMS WITH ELECTRICAL AND PLUMBING SYSTEMS. COORDINATE WITH ALL OTHER SYSTEMS AS NECESSARY.
12. MECHANICAL WORK INCLUDES DEMOLITION, RELOCATION, IN EXISTING & NEW WORK AS APPLICABLE. MECHANICAL CONTRACTOR TO SUPPLY A COMPLETE SYSTEM IN EACH AREA.
13. DUCT SIZES SHOWN ARE NET DIMENSIONS.

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-1,2,3,4	RHEEM	RH1T-4821STAN	240/1ø/60	.46	177	1600	40.0	3/8	7/8	15.0	9.6	47.0	34.1	44.5	28.8	9.0	56	60

SPLIT SYSTEM HEAT PUMP UNITS

MARK	MANUF.	MODEL	VOLTAGE	# COMP.	MIN. CIRC. AMPACITY	M.O.C.P.	UNIT FLA.	ACCESSORIES
HP-1,2,3,4	RHEEM	RP1548AJ1	240/1ø/60	1	26	40	21.3	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 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.

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

(TYPICAL OF EACH TENANT)
METHOD OF COMPLIANCE:

PRESCRIPTIVE ☒ ENERGY COST BUDGET ☐

THERMAL ZONE 4A - HARNETT COUNTY, NC

EXTERIOR DESIGN CONDITIONS

WINTER DRY BULB 16 DEG. F.

SUMMER DRY BULB 92 DEG. F.

INTERIOR DESIGN CONDITIONS

WINTER DRY BULB 70 DEG. F.

SUMMER DRY BULB 74 DEG. F.

RELATIVE HUMIDITY 54%

BUILDING HEATING LOAD 31.6 MBH

BUILDING COOLING LOAD 3.8 TONS

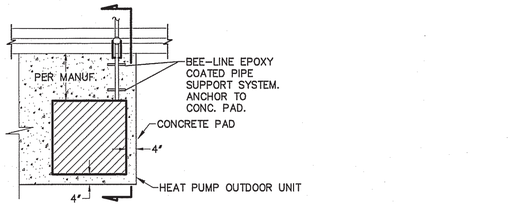
MECHANICAL SPACE CONDITIONING SYSTEM

UNITARY
DESCRIPTION OF UNIT - HEAT PUMP
HEATING EFFICIENCY - 9.0 HSPF
COOLING EFFICIENCY - 15.0 SEER
SIZE CATEGORY OF UNIT - <65K

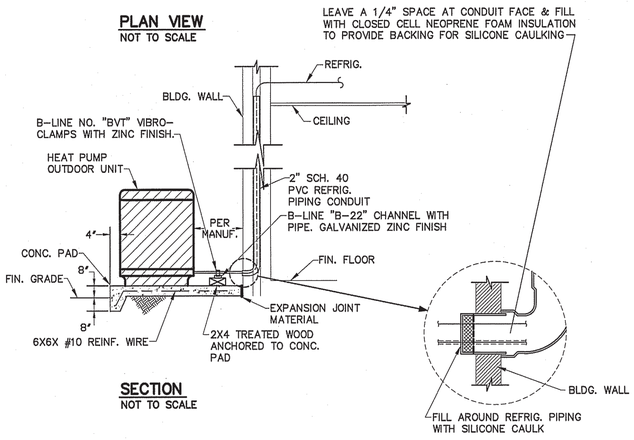
BOILER—NOT APPLICABLE IN THIS PROJECT

CHILLER—NOT APPLICABLE IN THIS PROJECT

LIST EQUIPMENT EFFICIENCIES



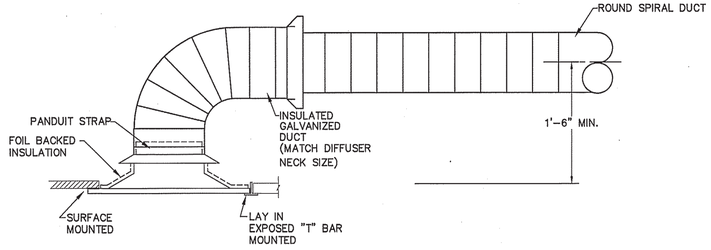
PLAN VIEW
NOT TO SCALE



SECTION
NOT TO SCALE

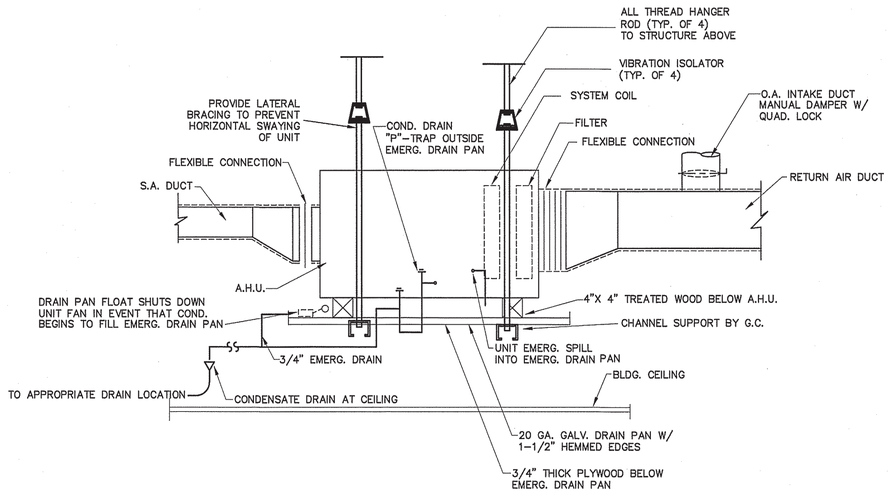
DETAIL-TYPICAL HEAT PUMP OUTDOOR UNIT

NOT TO SCALE



DETAIL-CEILING DIFFUSER CONNECTION

NOT TO SCALE



TYPICAL DETAIL AT AIR HANDLING UNITS

NOT TO SCALE

NORTH CAROLINA PROFESSIONAL SEAL 18909 ENGINEER ANDY L. CRUSE
12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Selma, North Carolina 27576
PH: (919) 965-4429
FAX: (919) 965-5168
LICENSE NO.: C-1721

DATE 12-19-22
DRAWN BY BAM
JOB NO. 22-60

SHEET NO.
M-2 OF 2

LIGHT FIXTURE SCHEDULE

MARK	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMPS	BALLASTS	WATTAGE	REMARKS
A	8' LED STRIPLIGHT	LITHONIA	TZ1D L96 14000LM FST MVOLT 40K 80CRI WH	LED		121	INCLUDE HC36 HANGER CHAIN
B	2X4 LED FLAT PANEL LAY-IN	LITHONIA	CPANL 2X4 40/50/60LM 35K-40LM	LED		42.0	INCLUDE WSX D DIMMING OCCUPANCY WALL SWITCH
C	2X4 LED FLAT PANEL LAY-IN	LITHONIA	CPANL 2X4 40/50/60LM 35K-40LM	LED		32.0	INCLUDE WSX D DIMMING OCCUPANCY WALL SWITCH
D	LED WALLPACK	-		LED		28	SELECTED BY OWNER
F	GOOSENECK EXTERIOR LIGHT	-		LED		52	SELECTED BY OWNER
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				

* ALL FIXTURE SELECTIONS TO BE VERIFIED BY OWNER BEFORE PURCHASE. *
** SIGN LETTERING TO BE ON TIMECLOCK OR PHOTOCELL

LIGHTING DATA FOR N.C. ENERGY CODE (TENANT 1)

AREA USE	AREA FT^2	WATTS PER FT^2 ALLOWED	TOTAL WATTS ALLOWED	TOTAL WATTS USED	TOTAL WATTS LEFT OVER
WAREHOUSE	500	1.2	600	484	116
OFFICE	1,250	1.3	1,625	704	921
TOTAL	1,750		2,225	1,188	1,037

LIGHTING DATA FOR N.C. ENERGY CODE (TENANT 2 & 3)

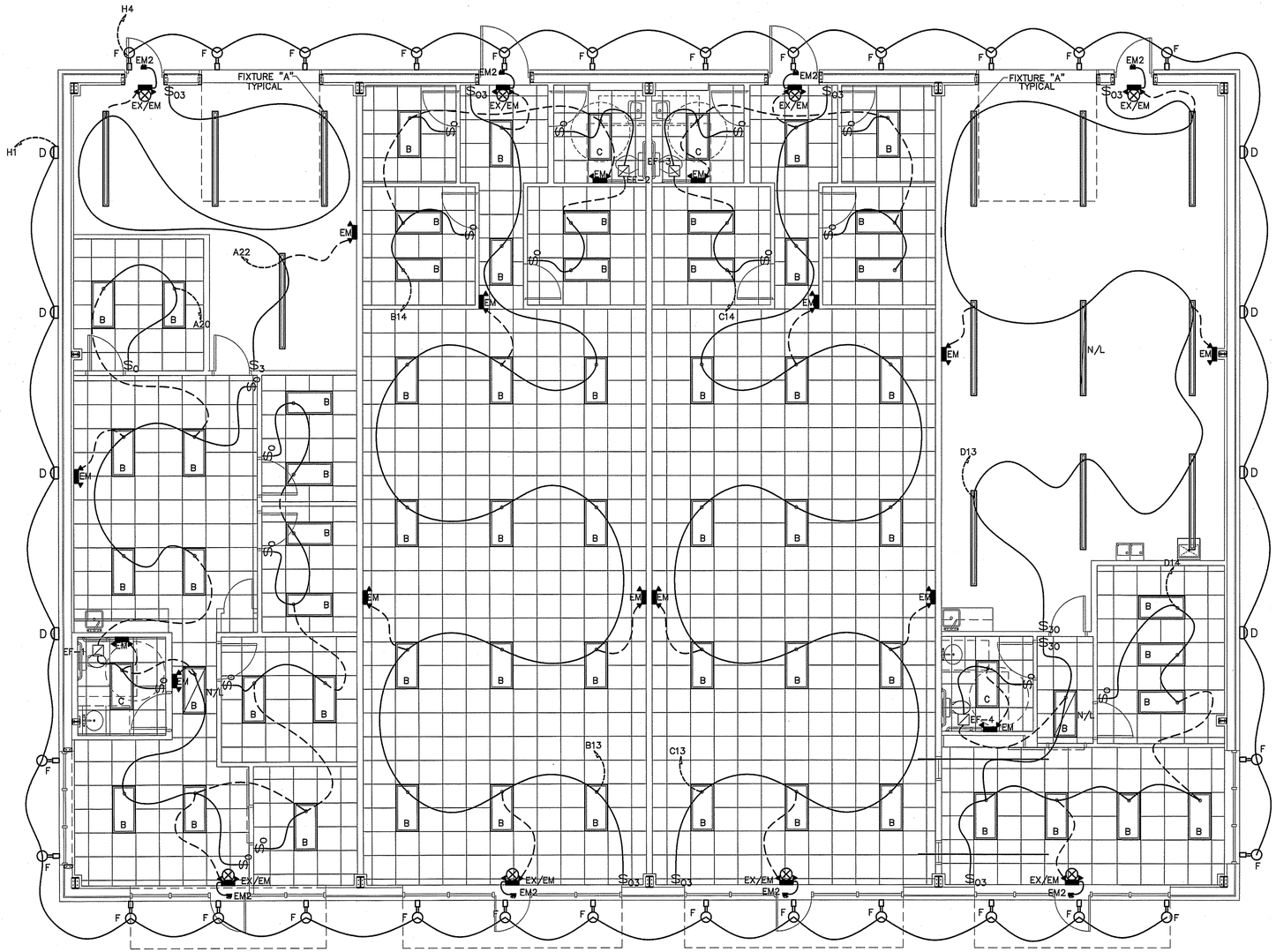
AREA USE	AREA FT^2	WATTS PER FT^2 ALLOWED	TOTAL WATTS ALLOWED	TOTAL WATTS USED	TOTAL WATTS LEFT OVER
OFFICE (TENANT 2)	1,750	1.3	2,275	830	1,445
OFFICE (TENANT 3)	1,750	1.3	2,275	830	1,445
TOTAL	3,500		2,275	1,660	2,890

LIGHTING DATA FOR N.C. ENERGY CODE (TENANT 4)

AREA USE	AREA FT^2	WATTS PER FT^2 ALLOWED	TOTAL WATTS ALLOWED	TOTAL WATTS USED	TOTAL WATTS LEFT OVER
WAREHOUSE	1,200	1.2	1,440	1,089	351
OFFICE	550	1.3	715	326	389
TOTAL	1,750		2,155	1,415	740

ELECTRICAL LEGEND

MARK	DESCRIPTION
	QUAD RECEPTACLE
	DUPLEX RECEPTACLE
T	TIMER WITH NO HOLD MECHANISM
	CEILING MOUNTED DUPLEX RECEPTACLE
	FLUORESCENT FIXTURE
	SWITCHED BRANCH CIRCUIT
	UNSWITCHED BRANCH CIRCUIT
	120/208 VOLT CIRCUIT
S_M	MOTION DETECTING SINGLE-POLE SWITCH ON TIMER
⊗	'EXIT' LIGHT FIXTURE, TYPE 'EX'
	BATTERY OPERATED EMERG. LT. (2-HEAD, WALL MTD.)
$S_{3(4)}$	MOTION DETECTING 3-WAY SWITCH (4-WAY SWITCH) WITH TIMER
	FUSED DISCONNECT SWITCH
	CEILING MOUNTED FUSED DISCONNECT SWITCH
	TELEPHONE
J	JUNCTION BOX
$S	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
N/L	UNSWITCHED FIXTURE
$S_O	OCCUPANCY SENSING SINGLE-POLE SWITCH NOT ON TIMER
	DUPLEX RECEPTACLE
	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)



ELECTRICAL LIGHTING PLAN
SCALE: 3/16" = 1'-0"

NORTH CAROLINA REGISTERED PROFESSIONAL ENGINEER SEAL 18909 ANDY L. CRUSE 12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS	
NO.	

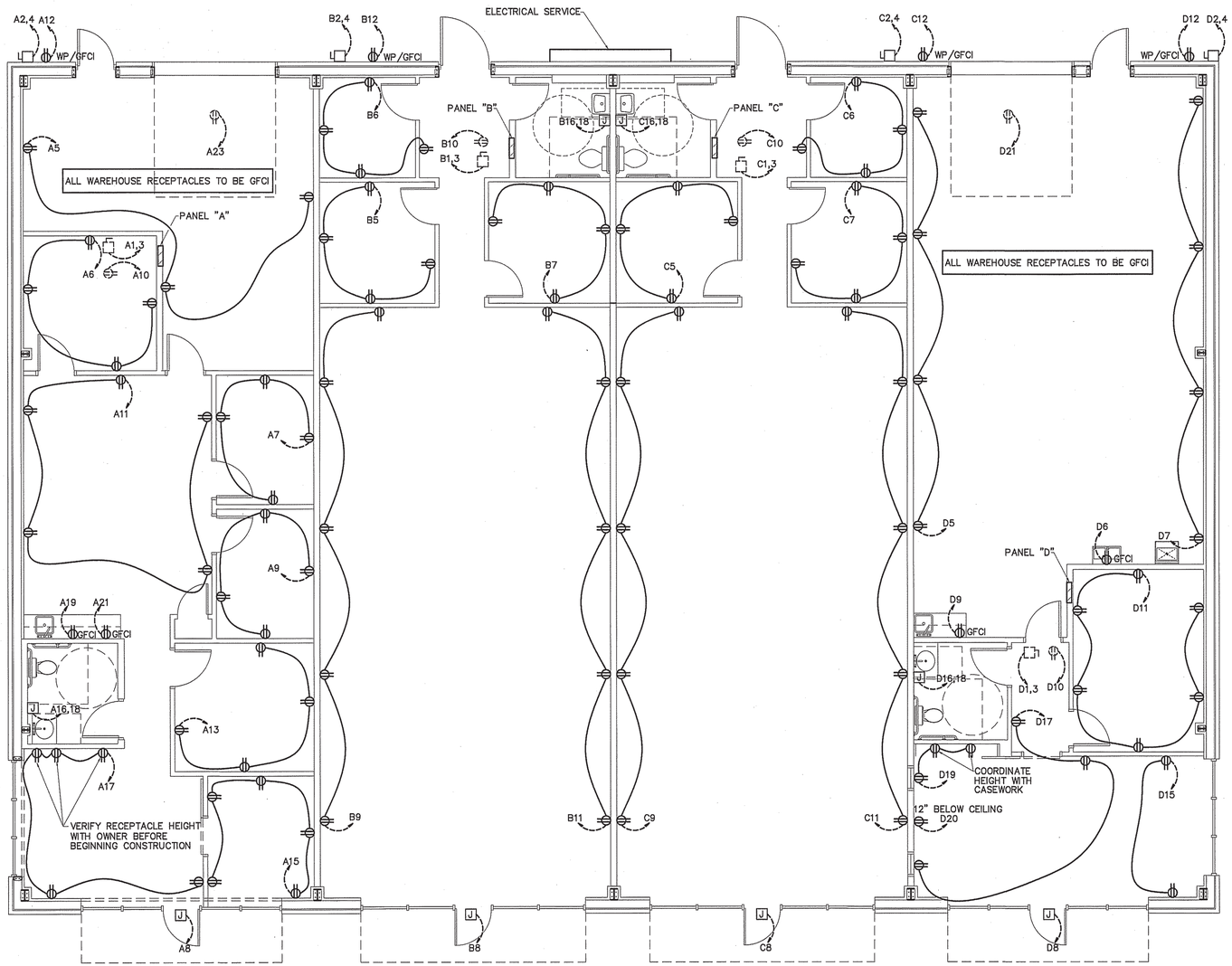
Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
Phone: (910) 892-5102
FAX: (910) 892-5182
LICENSE NO.: C-1721

DATE	12-19-22
DRAWN BY	BAM
JOB NO.	22-60

SHEET NO.
E-1 OF 4

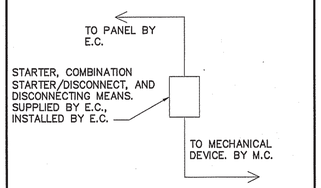
ELECTRICAL LEGEND

MARK	DESCRIPTION
	QUAD RECEPTACLE
	DUPLEX RECEPTACLE
T	TIMER WITH NO HOLD MECHANISM
	CEILING MOUNTED DUPLEX RECEPTACLE
	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
$	SINGLE POLE SWITCH OR TIMER AS APPLICABLE
N/L	UNSWITCHED FIXTURE
$O	OCCUPANCY SENSING SINGLE-POLE SWITCH NOT ON TIMER
	DUPLEX RECEPTACLE
	EMERGENCY LIGHT REMOTE WEATHERHEAD(S)



ELECTRICAL POWER PLAN
SCALE: 3/16" = 1'-0"

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:
1. VERIFY DATA/PHONE JACK LOCATIONS, QUANTITY, AND CONFIGURATIONS WITH OWNER BEFORE BEGINNING CONSTRUCTION.

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18909 ENGINEER CINDY L. CRUSE 12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
PH: (910) 892-5161
FAX: (910) 892-5162
LICENSE NO.: C-1721

DATE	12-19-22
DRAWN BY	BAM
JOB NO.	22-60

SHEET NO.
E-2 OF 4

TENANT 2

PANEL: B SCHEDULE: ___ MANUFACTURER: SQ. D NO. OF SPACES 42
VOLTS: 120/240 AMPS: 200 TYPE: NQOD MOUNTING: FLUSH
ENCLOSURE: NEMA 1 ϕ: 1 SHORT CIRCUIT RATING: 22K
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
40.0		1	2	60	AIR HANDLING UNIT #2	o		HEAT PUMP UNIT # 2	40	2	2	21.3	
	40.0	3					o				4		21.3
6.0		5	1	20	OFFICE 1 RECEPTACLES	o		STORAGE RECEPTACLES	20	1	6	6.0	
	6.0	7	1	20	OFFICE 2 RECEPTACLES		o	BUILDING SIGN	20	1	8		5.0
7.5		9	1	20	OPEN FLOOR AREA RECEPTS.	o		AHU CONV. RECEPTACLE	20	1	10	1.5	
	7.5	11	1	20	OPEN FLOOR AREA RECEPTS.		o	HEAT PUMP CONV. RECEPT.	20	1	12		1.5
4.9		13	1	20	FRONT AREA LIGHTING	o		OFFICE AREA LIGHTS	20	1	14	2.4	
	X	15	1	20	SPARE		o	POINT OF USE WATER HEATER	40	2	16		30.0
X		17	1	20	SPARE	o					18	30.0	
	X	19	1	20	SPARE		o	SPARE	20	1	20		X
X		21	1	20	SPARE	o		SPARE	20	1	22	X	
	X	23	1	20	SPARE		o	SPARE	20	1	24		X
X		25	1	20	SPARE	o		SPARE	20	1	26	X	
	X	27	1	20	SPARE		o	SPARE	20	1	28		X
X		29	1	20	SPARE	o		SPARE	20	1	30	X	
	X	31	1	20	SPARE		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		SPARE	20	1	42	X	

L1 = 119.6 A
L2 = 111.3 A

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

TENANT 3

PANEL: C SCHEDULE: ___ MANUFACTURER: SQ. D NO. OF SPACES 42
VOLTS: 120/240 AMPS: 200 TYPE: NQOD MOUNTING: FLUSH
ENCLOSURE: NEMA 1 ϕ: 1 SHORT CIRCUIT RATING: 22K
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
40.0		1	2	60	AIR HANDLING UNIT #3	o		HEAT PUMP UNIT # 3	40	2	2	21.3	
	40.0	3					o				4		21.3
6.0		5	1	20	OFFICE 1 RECEPTACLES	o		STORAGE ROOM RECEPTACLES	20	1	6	6.0	
	6.0	7	1	20	OFFICE 2 RECEPTACLES		o	BUILDING SIGN	20	1	8		5.0
7.5		9	1	20	OPEN FLOOR AREA RECEPTS.	o		AHU CONV. RECEPTACLE	20	1	10	1.5	
	7.5	11	1	20	OPEN FLOOR AREA RECEPTS.		o	HEAT PUMP CONV. RECEPT.	20	1	12		1.5
4.9		13	1	20	FRONT AREA LIGHTING	o		OFFICE AREA LIGHTS	20	1	14	2.4	
	X	15	1	20	SPARE		o	POINT OF USE WATER HEATER	40	2	16		30.0
X		17	1	20	SPARE	o					18	30.0	
	X	19	1	20	SPARE		o	SPARE	20	1	20		X
X		21	1	20	SPARE	o		SPARE	20	1	22	X	
	X	23	1	20	SPARE		o	SPARE	20	1	24		X
X		25	1	20	SPARE	o		SPARE	20	1	26	X	
	X	27	1	20	SPARE		o	SPARE	20	1	28		X
X		29	1	20	SPARE	o		SPARE	20	1	30	X	
	X	31	1	20	SPARE		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		SPARE	20	1	42	X	

L1 = 119.6 A
L2 = 111.3 A

FEEDER SCHEDULE

UNIT	FEEDERS	FUSED DISCONNECT	CONDUIT
AHU-1,2,3,4	(2)#6CU,(1)#8CU GND	60	3/4"
HP-1,2,3,4	(2)#10CU,(1)#12CU GND	60	3/4"
P.O.U. HEATER	(2)#10CU,1#10CU GND	60	3/4"

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 ☐

TENANT 1

ELECTRICAL LOAD CALCULATIONS

1750 SQUARE FEET		VA
NONCONTINUOUS LOADS:		
36 RECEPTACLES @ 180 VA EA.	6480	
1ST 10000		6480
REMAINDER @ 50%		0
TOTAL		6480
CONTINUOUS LOADS:		
GENERAL LIGHTING LOAD VA/SQ. FT.		
1750 SQ. FT. 1.3	2275	
2275 X 1.25		2844
AIR HANDLING UNIT		9600
HEAT PUMP UNITS		5112
EQUIPMENT:		10176
25% OF LARGEST MOTOR		822
GRAND TOTAL		35034

146 AMPS @ 120/240V, 1ø, 60HZ

TENANT 2 AND 3

ELECTRICAL LOAD CALCULATIONS

1750 SQUARE FEET		VA
NONCONTINUOUS LOADS:		
24 RECEPTACLES @ 180 VA EA.	4320	
1ST 10000		4320
REMAINDER @ 50%		0
TOTAL		4320
CONTINUOUS LOADS:		
GENERAL LIGHTING LOAD VA/SQ. FT.		
1750 SQ. FT. 1.3	2275	
2275 X 1.25		2844
AIR HANDLING UNIT		9600
HEAT PUMP UNITS		5112
EQUIPMENT:		7800
25% OF LARGEST MOTOR		822
GRAND TOTAL		30498

127 AMPS @ 120/240V, 1ø, 60HZ

TENANT 4

ELECTRICAL LOAD CALCULATIONS

1750 SQUARE FEET		VA
NONCONTINUOUS LOADS:		
25 RECEPTACLES @ 180 VA EA.	6120	
1ST 10000		6120
REMAINDER @ 50%		0
TOTAL		6120
CONTINUOUS LOADS:		
GENERAL LIGHTING LOAD VA/SQ. FT.		
1750 SQ. FT. 1.3	2275	
2275 X 1.25		2844
AIR HANDLING UNIT		9600
HEAT PUMP UNITS		5112
EQUIPMENT:		10656
25% OF LARGEST MOTOR		822
GRAND TOTAL		35154

146 AMPS @ 120/240V, 1ø, 60HZ

TENANT 1

PANEL: A SCHEDULE: ___ MANUFACTURER: SQ. D NO. OF SPACES 42
VOLTS: 120/240 AMPS: 200 TYPE: NQOD MOUNTING: FLUSH
ENCLOSURE: NEMA 1 ϕ: 1 SHORT CIRCUIT RATING: 22K
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
40.0		1	2	60	AIR HANDLING UNIT #1	o		HEAT PUMP UNIT # 1	40	2	2	21.3	
	40.0	3					o				4		21.3
4.5		5	1	20	WAREHOUSE RECEPTACLES	o		OFFICE 4 RECEPTACLES	20	1	6	6.0	
	6.0	7	1	20	OFFICE 3 RECEPTACLES		o	BUILDING SIGN	20	1	8		5.0
6.0		9	1	20	OFFICE 2 RECEPTACLES	o		AHU CONV. RECEPTACLE	20	1	10	1.5	
	7.5	11	1	20	BREAKROOM RECEPTACLES		o	HEAT PUMP CONV. RECEPT.	20	1	12		1.5
6.0		13	1	20	OFFICE 1 RECEPTACLES	o		SPARE	20	1	14	X	
	7.5	15	1	20	CONFERENCE ROOM RECEPTS.		o	POINT OF USE WATER HEATER	40	2	16		30.0
7.5		17	1	20	LOBBY RECEPTACLES	o					18	30.0	
	3.0	19	1	20	COUNTER RECEPTACLE		o	OFFICE LIGHTING	20	1	20		6.2
3.0		21	1	20	COUNTER RECEPTACLE	o		WAREHOUSE LIGHTING	20	1	22	4.0	
	13.8	23	1	20	GARAGE DOOR OPENER		o	SPARE	20	1	24		X
X		25	1	20	SPARE	o		SPARE	20	1	26	X	
	X	27	1	20	SPARE		o	SPARE	20	1	28		X
X		29	1	20	SPARE	o		SPARE	20	1	30	X	
	X	31	1	20	SPARE		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		SPARE	20	1	42	X	

L1 = 129.8 A
L2 = 141.3 A

TENANT 4

PANEL: D SCHEDULE: ___ MANUFACTURER: SQ. D NO. OF SPACES 42
VOLTS: 120/240 AMPS: 200 TYPE: NQOD MOUNTING: FLUSH
ENCLOSURE: NEMA 1 ϕ: 1 SHORT CIRCUIT RATING: 22K
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
40.0		1	2	60	AIR HANDLING UNIT #4	o		HEAT PUMP UNIT #4	40	2	2	21.3	
	40.0	3					o				4		21.3
6.0		5	1	20	WAREHOUSE RECEPTACLES	o		DRINKING FOUNTAIN	20	1	6	5.6	
	6.0	7	1	20	WAREHOUSE RECEPTACLES		o	BUILDING SIGN	20	1	8		5.0
3.0		9	1	20	COUNTER RECEPTACLE	o		AHU CONV. RECEPTACLE	20	1	10	1.5	
	9.0	11	1	20	OFFICE 2 RECEPTACLES		o	HEAT PUMP CONV. RECEPT.	20	1	12		1.5
9.1		13	1	20	WAREHOUSE LIGHTING	o		OFFICE AREA LIGHTS	20	1	14	3.1	
	3.0	15	1	20	LOBBY 1 RECEPTACLES		o	POINT OF USE WATER HEATER	40	2	16		30.0
4.5		17	1	20	LOBBY RECEPTACLES	o					18	30.0	
	4.5	19	1	20	LOBBY CASEWORK RECEPTS.		o	LOBBY TELEVISION	20	1	20		5.0
13.8		21	1	20	OVERHEAD DOOR OPENER	o		SPARE	20	1	22	X	
	X	23	1	20	SPARE		o	SPARE	20	1	24		X
X		25	1	20	SPARE	o		SPARE	20	1	26	X	
	X	27	1	20	SPARE		o	SPARE	20	1	28		X
X		29	1	20	SPARE	o		SPARE	20	1	30	X	
	X	31	1	20	SPARE		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		SPARE	20	1	42	X	

L1 = 137.9 A
L2 = 125.3 A

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 AWG CONDUCTORS SHALL BE USED FOR 20 AMP BRANCH CIRCUIT HOME RUNS EXCEEDING 50 FT. TO THE JUNCTION POINT. 20 AMP BRANCH CIRCUIT WIRING SHALL BE NO. 10 AWG THROUGHOUT IF THE CIRCUIT IS LONGER THAN 100 FEET TOTAL LENGTH.

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 2017 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.

NORTH CAROLINA PROFESSIONAL SEAL 18909 ENGINEER MANDY L. CRUSE 12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS

NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Dunn, North Carolina 28334
PH: (910) 892-4182
FAX: (910) 892-4182
LICENSE NO.: C-1721

DATE 12-19-22
DRAWN BY BAM
JOB NO. 22-60

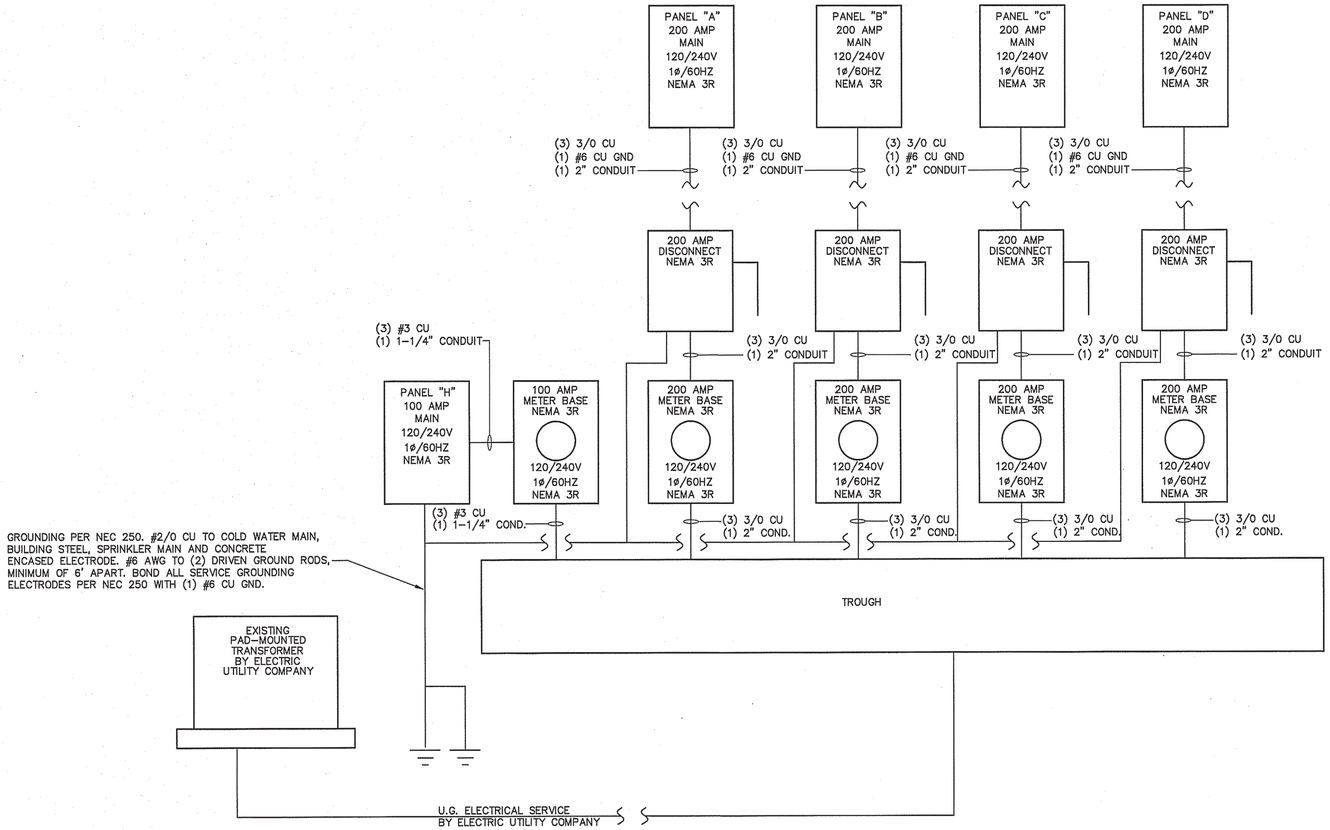
SHEET NO.
E-3 OF 4

HOUSE PANEL

PANEL: H SCHEDULE: MANUFACTURER: SQ. D NO. OF SPACES 30
VOLTS: 120/240 AMPS: 100 TYPE: NQOD MOUNTING: SURFACE
ENCLOSURE: NEMA 3R ϕ: 1 SHORT CIRCUIT RATING: 22K
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
7.0		1	1	20	FRONT & LEFT EXT. LIGHTING	o		SPARE	20	1	2	X	
	2.0	3	1	20	BUILDING SIGN		o	REAR & RIGHT EXT. LIGHTING	20	1	4		7.0
X		5	1	20	SPARE	o		SPARE	20	1	6	X	
	X	7	1	20	SPARE		o	SPARE	20	1	8		X
X		9	1	20	SPARE	o		SPARE	20	1	10	X	
	X	11	1	20	SPARE		o	SPARE	20	1	12		X
X		13	1	20	SPARE	o		SPARE	20	1	14	X	
	X	15	1	20	SPARE		o	SPARE	20	1	16		X
X		17	1	20	SPARE	o		SPARE	20	1	18	X	
	X	19	1	20	SPARE		o	SPARE	20	1	20		X
X		21	1	20	SPARE	o		SPARE	20	1	22	X	
	X	23	1	20	SPARE		o	SPARE	20	1	24		X
X		25	1	20	SPARE	o		SPARE	20	1	26	X	
	X	27	1	20	SPARE		o	SPARE	20	1	28		X
X		29	1	20	SPARE	o		SPARE	20	1	30	X	

L1 = 7.0 A
L2 = 9.0 A



ELECTRICAL RISER DIAGRAM

NOT TO SCALE

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 18909 ENGINEER RANDY L CRUSE
12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS

NO.	

Cruse And Associates, P.A.
414 E. Edgerton St.
Raleigh, North Carolina 28604
PH: (919) 882-4488
FAX: (919) 882-5162
LICENSE NO.: C-1721

DATE 12-19-22
DRAWN BY BAM
JOB NO. 22-60

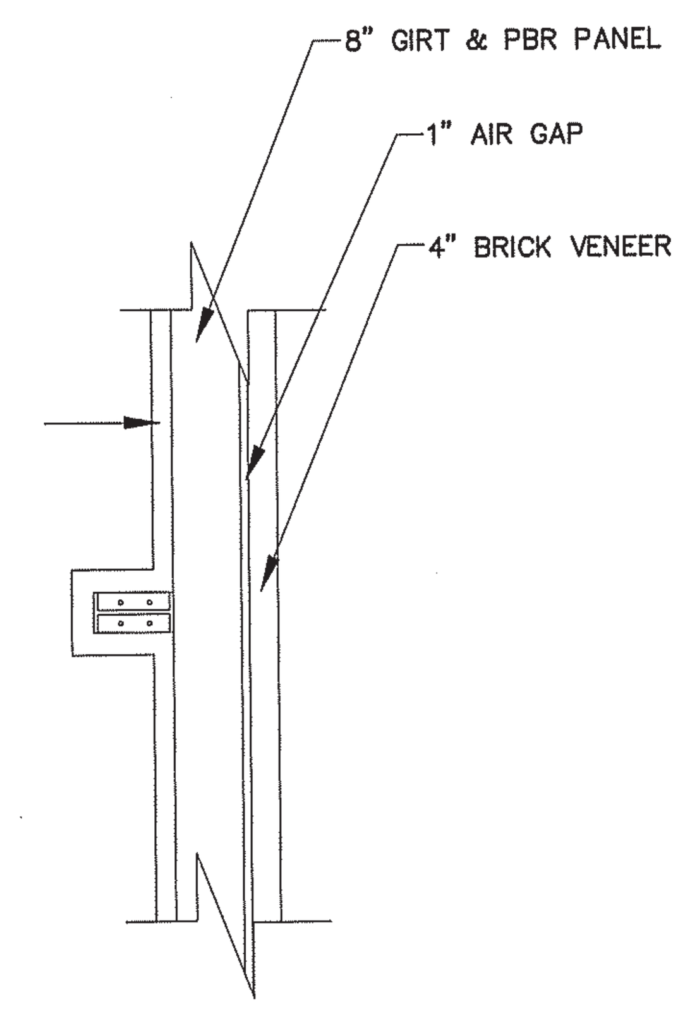
SHEET NO.
E-4 OF 4

DOOR SCHEDULE

DOOR NO.	DOOR SIZE WIDE	HIGH	THICK.	REMARKS
01	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD SLIDING DOOR
02	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
03	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
04	2'-6"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
05	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
06	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
07	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
08	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
09	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
10	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
11	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
12	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
13	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
14	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
15	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
16	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
17	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
18	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
19	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD DOOR: HM FRAME
20	3'-0"	7'-0"	1 3/4"	INTERIOR WOOD SLIDING DOOR

KEYNOTES:

1. FUROUT WALL & PROVIDE ACCESS PANEL FOR DOMESTIC WATER SUPPLY FOR WATER SERVICE ENTRANCE (SEE SHEET P-1)
2. 2-1/2" 20 GA. METAL STUD @ 16" O.C.
3. 6" 18 GA METAL STUDS @ 16" O.C. TO ROOF DECK
4. 3-5/8" 20 GA. METAL STUD @ 16" O.C.
5. 6" 20 GA METAL STUDS @ 16" O.C.

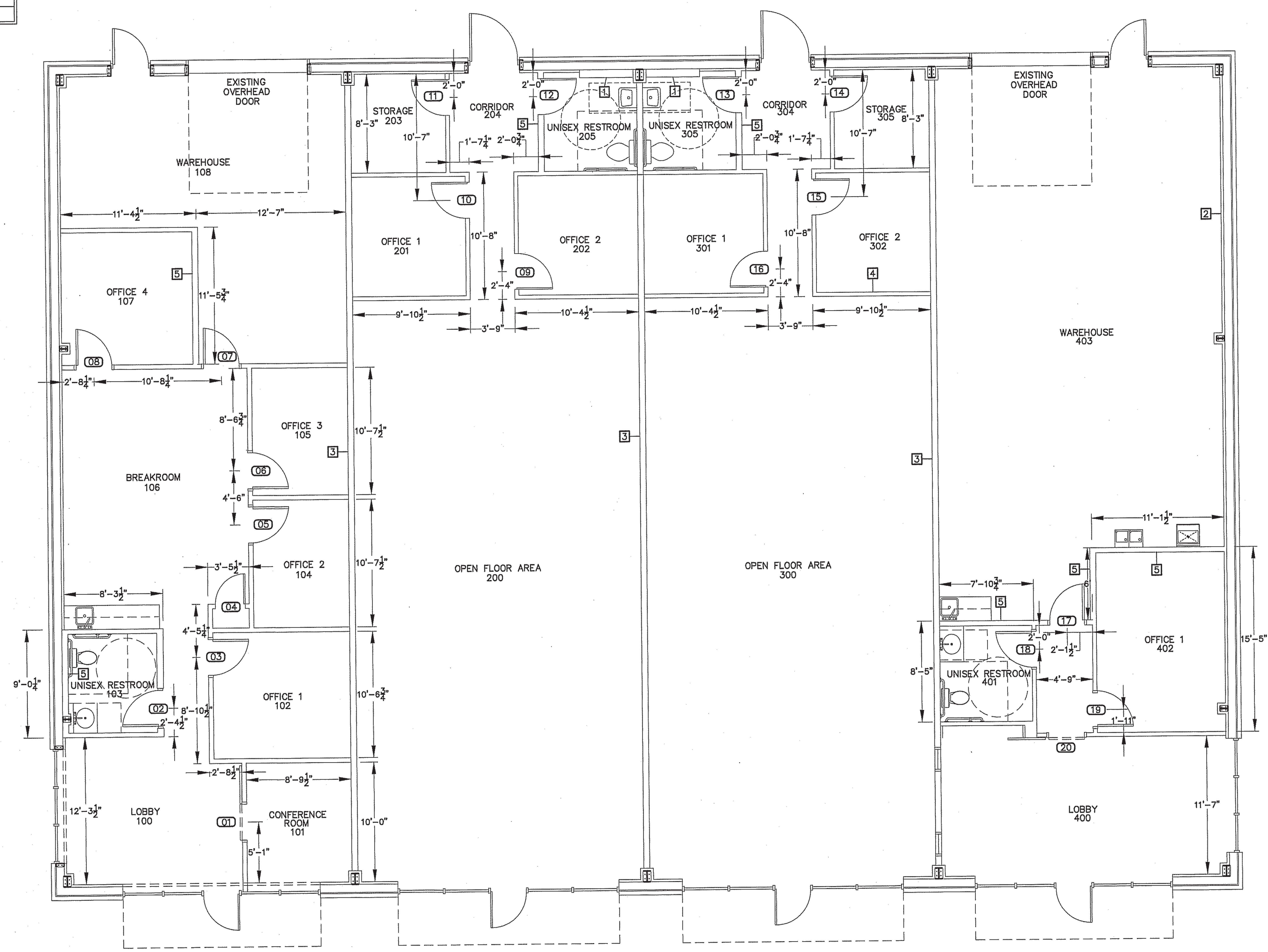


PROPOSED WALL DETAIL
SCALE: NOT TO SCALE

ROOM

ROOM NO.	ROOM NAME	FLOOR: CONCRETE	CARPET*	TILE	VCT	LVT		BASE: WOOD	CERAMIC TILE	RUBBER BASE	NONE	WALLS: BRICK	1/2" DRYWALL	CERAMIC TILE	FRP	CEIL. HT.	CLG.: 2X2 CEILING TILE	NONE	DRYWALL	VINYL	REMARKS
100	LOBBY					X				X			X			10'-0"+/-	X				
101	CONFERENCE ROOM					X				X			X			10'-0"+/-	X				
102	OFFICE					X				X			X			10'-0"+/-	X				
103	UNISEX RESTROOM					X				X			X			10'-0"+/-	X				
104	OFFICE 2					X				X			X			10'-0"+/-	X				
105	OFFICE 3					X				X			X			10'-0"+/-	X				
106	BREAKROOM					X				X			X			10'-0"+/-	X				
107	OFFICE 4					X				X			X			10'-0"+/-	X				
108	WAREHOUSE	X									X					NONE		X			
200	OPEN FLOOR AREA					X				X			X			11'-0"+/-	X				*
201	OFFICE 1					X				X			X			10'-0"+/-	X				
202	OFFICE 2					X				X			X			10'-0"+/-	X				
203	STORAGE					X				X			X			10'-0"+/-	X				
204	CORRIDOR					X				X			X			10'-0"+/-	X				
205	UNISEX RESTROOM					X				X			X			10'-0"+/-	X				
300	OPEN FLOOR AREA					X				X			X			11'-0"+/-	X				*
301	OFFICE 1					X				X			X			10'-0"+/-	X				
302	OFFICE 2					X				X			X			10'-0"+/-	X				
303	STORAGE					X				X			X			10'-0"+/-	X				
304	CORRIDOR					X				X			X			10'-0"+/-	X				
305	UNISEX RESTROOM					X				X			X			10'-0"+/-	X				
400	LOBBY					X				X			X			11'-0"+/-	X				*
401	UNISEX RESTROOM					X				X			X			10'-0"+/-	X				
402	OFFICE 1					X				X			X			10'-0"+/-	X				
403	WAREHOUSE	X									X					NONE		X			

OWNER TO VERIFY ALL COLORS, HEIGHTS, AND FINISHES BEFORE ORDERING MATERIALS
*COORDINATE CEILING HEIGHT WITH HEIGHT OF STOREFRONT GLASS.



PROPOSED FLOOR PLAN
SCALE: 3/16" = 1'-0"

NORTH CAROLINA PROFESSIONAL SEAL 18909 ENGINEER RANDY L. CRUSE 12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS	
NO.	

Cruse And Associates, P.A.
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PH: (910) 892-4429
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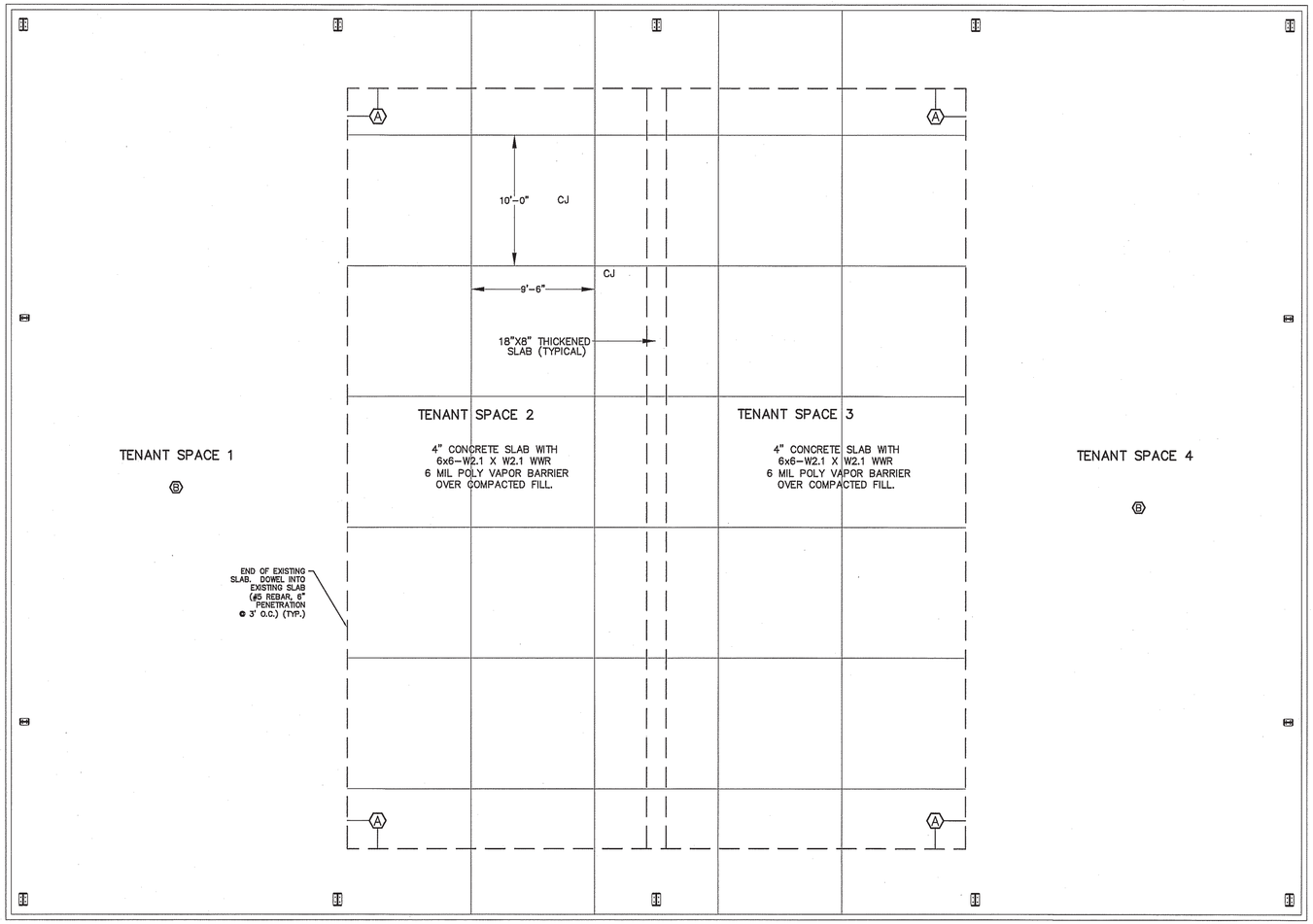
LICENSE NO.: C-1721

DATE 12-19-22
DRAWN BY BAM
JOB NO. 22-60

SHEET NO.
F-1 OF 2

FOUNDATION NOTES:

1. FIELD VERIFY THE SIZE, LOCATIONS, ELEVATIONS, AND DETAILS OF ALL EXISTING CONSTRUCTION AND CONDITIONS THAT AFFECT THE WORK AND INFORM THE ENGINEER OF ANY DISCREPANCIES IN DIMENSION SIZES, LOCATIONS AND CONDITIONS BEFORE PROCEEDING WITH THE WORK.
2. PROVIDE ALL SHORING, SHEETING, UNDERPINNING, AND OTHER MEANS REQUIRED TO PROTECT AND MAINTAIN THE SAFETY, INTEGRITY, AND STABILITY OF ALL EXISTING AND NEW CONSTRUCTION THAT MAY BE AFFECTED BY THE WORK.
3. CONCRETE SHALL DEVELOP COMPRESSIVE STRENGTHS (F'C) AT 28 DAYS AS FOLLOWS: FOUNDATIONS, WALLS, FOOTING, ETC. 3000 PSI
   SLABS ON GRADE 3000 PSI
4. ALL BUILDING FOOTINGS AND FOUNDATIONS ARE DESIGNED BASED UPON A MINIMUM ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF. IF SUITABLE SOIL CAPABLE OF SUSTAINING THIS CAPACITY IS NOT FOUND AT THE ELEVATIONS INDICATED, THE ENGINEER SHALL BE NOTIFIED AND THE FOUNDATIONS SHALL BE CHANGED IN ELEVATION AND/OR SIZE AS DETERMINED BY THE ENGINEER.
5. CONCRETE BAR REINFORCEMENT SHALL BE NEW BILLET STEEL CONFORMING TO THE STANDARD SPECIFICATION FOR DEFORMED BILLET STEEL BARS FOR CONCRETE REINFORCEMENT ASTM A-615, GRADE 60.
6. ALL STRUCTURAL FILL INSIDE THE BUILDING SHALL BE SELECTED FILL COMPACTED TO 96% MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT (ASTM D-698)
7. ALL DETAILING, FABRICATION AND ERECTION OF REINFORCING STEEL SHALL CONFORM TO ACI "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES " (ACI-315-80).
8. PROVIDE CORNER BARS AT ALL FOOTING CORNERS AND STEPS UNLESS OTHERWISE NOTED. BARS SHALL BE A MINIMUM OF 4'-0" LONG AND HAVE THE SAME SIZE AND SPACING AS HORIZONTAL REINFORCING.
9. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND A-82.
10. CONTINUOUS REINFORCING BARS SHALL BE LAPPED 48 BAR DIAMETERS AT ALL SPLICES UNLESS OTHERWISE NOTED.
12. STANDARD CONSTRUCTION JOINTS AND EXPANSION JOINTS SHALL BE LOCATED AS SHOWN ON THE PLANS.
13. ALL CONCRETE SHALL BE PROTECTED AGAINST FREEZING FOR SEVEN DAYS AFTER POURING.
14. FLOOR SLAB TO BE POURED ON 6 MIL POLYETHELENE FILM OVER 4" THICK DRAINAGE FILL, COMPACTED FILL, OR OVER EXISTING CONCRETE SLAB.
15. REFER TO MECHANICAL, ELECTRICAL, PLUMBING, AND ARCHITECTURAL DRAWINGS AND CONSULT ALL AFFECTED SUBCONTRACTORS FOR LOCATIONS AND SIZES OF REQUIRED OPENINGS AND CAST-IN-ITEMS IN CONCRETE WORK. ALL OPENINGS ON THE STRUCTURAL DRAWINGS SHALL BE SHOWN ON SHOP DRAWINGS FOR APPROVAL.



KEY NOTES:

Ⓐ PERIMETER OF NEW CONCRETE SLAB. DOWEL INTO EXISTING SLAB.

Ⓑ EXISTING CONCRETE SLAB & FOOTINGS.

FOUNDATION PLAN

SCALE: 3/16" = 1'-0"

NOTES:

1. ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF TO VERIFIED BY CONTRACTOR.
2. CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
3. CONTROL JOINTS TO BE PLACED AS SHOWN ON PLAN.
4. SEE METAL BUILDING DRAWINGS FOR ACTUAL COLUMN LOCATIONS.

NOTES:

1. G.C. TO VERIFY ALL EQUIPMENT SIZES, ELECTRICAL, PLUMBING AND GAS REQUIREMENTS BEFORE BEGINNING CONSTRUCTION.

NORTH CAROLINA PROFESSIONAL SEAL 18909 ENGINEER RANDY L CRUSE 12/19/22

UP-FIT PLANS FOR:
T&L COATS
BUILDING #2
COATS, NORTH CAROLINA

REVISIONS	
NO.	

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F-2 OF 2