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Fire Alarm

By Fire Alarm Contractor

ab	breviations	
@	AT	ea.
ø	DIAMETER	Ej
4' R	4'-0" RADIUS	Elev.
A/C	AIR CONDITIONING	EW
AFF	ABOVE FINISH FLOOR	EWC
C.I. CJ CMU	CONTROL JOINT CONCRETE MASONRY UNIT	EXT. FD
C.O.	CLEAN OUT	FF
CONC.	CONCRETE	FIN.
DF	DRINKING FOUNTAIN	GL.
DISP.	DISPOSAL	HC
DN	DOWN	htd
DS	DOWNSPOUT	INS.

drawing notations

INT.

elevation indicator

DISHWASHER



DW

DETAIL NUMBER A-000-SHEET NUMBER

detail indicator



- DETAIL NUMBER

section indicator



symbols

EARTH
GRAVEL
CONCRETE
CONCRETE MASONRY UNIT
STEEL



	Incidental Uses (Table 508 2 5)			
State of North Carolina Building Code Summany	\Box Furnace room where any piece of equipment is over 400,000 BTU per hour input.	LIFE SAFETY SYSTEM REQUIREMENTS This Section For All Project	EINERGY SUIVIVIARY This Section For New, Addition, Change of Use, and Interior Completion	
For all Commercial Projects	Rooms with boilers where the largest piece of equipment is 15 psi & 10 horsepower.		ENERGY REQUIREMENTS:	
	 Hydrogen cutoff rooms, not classified as Group H 	Emergency Lighting: 🗌 No 🛛 Yes	The following data shall be considered minimum and any special attribute required to meet the energy code shall also	
Except F & 2 Fulling und fow incluses	Incinerator Room Result of the second in a second	Fire Alarm: \square No \boxtimes Yes	energy cost budget method, state the annual energy cost budget vs. allowable annual energy cost budget.	
Name of Project: Heritage Salon	□ Paint shops, not classified as Group H, located in occupancies other than Group F. □ Laboratories & vocational shops, not classified as Group H, located in Group E or I-2.	Smoke Detection System: 🛛 No 🗌 Yes 🗌 Partial	Thermal Zone $\Box 3 \Box 4 \Box 5$	
Audress: 3117 Kodgers Kodd Suite #	Group I-3 cells equipped with padded surfaces.	ranic halawale: 🛛 🖾 NO 📋 Yes	Method of Compliance: Prescriptive (Energy Code)	Dallon Takon
Email: deman@mindspring.com Fax: 919-788-1119	Group 1-2 waste & linen collection rooms. Waste & linen collection rooms over 100 square feet.	LIFE SAFETY PLAN REQUIREMENTS	Performance (Energy Code) Preservitive (ASUBAT 00.1)	
Owned By: JMJ Comc. Cont. Private City/County State	Stationary storage battery systems having a liquid electrolyte capacity of more than 50	l ife Safety Plan Sheet :	Thermal Envelope Performance (ASHRAE 90.1)	ACHECIUIE
Code Enforcement Jurisdiction: 🖄 City 🗌 County 🗌 City / County	gallons or lithium capacity of 1,000 lbs. used for facility standby power, emergency nower or uninterrunted power supplies	☑ Fire and /or smoke rated wall locations (Chapter 7)	Roof / Ceiling Assembly	4008 Barrett Drive, Suite 203 Raleiab, NC 27609
	Rooms containing fire pumps.	\Box Assumed & real property line locations	Description of assembly	Phone 919-788-0003
PROJECT SUMMARY	Group I-2 storage rooms over 100 square feet.	Existing structures within 30' of the proposed building	R-Value of insulation	deman@mindspring.com
Building Description: Office building, B - Business occupancy, type VB (steel frame wood truss),	\square Group I-2 contribution with lensing \square Group I-2 laundries equal to or less than 100 square feet.	Occupancy types for each area as it relates to occupant load calculation (Tbl 1004.1.1)	Skylights in each assembly	
construction, 2 stories.	□ Group I-2 rooms or spaces that contain fuel-fired heating equipment.	⊠ Occupancy Load for each area. ⊠ Exit access travel distance (1016)	U-Value of skylight Total square footage of skylights	
Scope of Work: Fit-up of second floor.	Special Uses: 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 416 416 417 418	Common path of travel distance (1014.3 & 1028.8)	Exterior Walls	
Code Compliance Summary: Life Safety Plan see sheet BD1.1	$\Box 412 \Box 413 \Box 414 \Box 413 \Box 413 \Box 416 \Box 416 \Box 416 \Box 417 \Box 416 \Box 419 \Box 420 \Box 421 \Box 422 \Box 422 \Box 423 \Box 424 \Box 425 \Box 426 \Box 427$	⊠ Dead end lengths (1018.4) ⊠ Clear exit widths for each exit door	Description of assembly	
	Special Provisions: \Box 509.2 \Box 509.3 \Box 509.4 \Box 509.5 \Box 509.6 \Box 509.7 \Box 509.8 \Box 509.9	Maximum calculated occupant load capacity each exit door can accommodate	U-Value of total assembly R-Value of insulation	
Alternative Means of Compliance Request: -	$Mixed Occupancy: \square Ne \square Vec Separation: Exception:$	based on egress width (1005.1)	Openings (windows of doors with glazing)	
-	\Box Incidental Use Separation (508.2.5)	□ A separate schematic plan indicating where fire rated floor/ceiling and /or roof structure	U-Value of Assembly	
Lead Design Professional / Project Coordinator, DeVon Jolson, AlA	This separation is not exempt as a Non-separated Use (see exceptions).	is provided for purposes of occupancy separation	Projection factor	
	Non-Separated Use (508.3)	Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)	Low e required if applicable	
Architectural DeVon Tolson Architecture, Inc. DeVon Tolson, AIA NC # 5733 919-788-0003	The required type of construction for the building shall be determined by applying the	□ Location of doors with electromagnetic egress locks (1008.1.9.8)	Door R-Value Exterior Walls	
Civil	height and area limitations for each of the applicable occupancies to the entire	□ Location of acors equipped with noid-open devices □ Location of emergency escape windows (1029)	Description of assembly	
Electrical HDM Associates, Inc. Richard Thorne, PE NC #18043 757-410-0682 Fire Alarm - - - - -	- building. The most restrictive type pf construction, so determined, shall apply to the	\boxtimes The square footage of each fire area (902)	U-Value of total assembly R. Value of insulation	
Plumbing HDM Associates, Inc. Richard Thorne, PE NC #18043 757-410-0682	- entire building.	In the square tootage of each smoke compartment (407.4) Note any code exceptions or table notes that may have been utilized regarding	Openings (windows of doors with glazing)	
Mechanical HDM Associates, Inc. Richard Thorne, PE NC #18043 757-410-0682 Sprinkler - Standpipe: -	□ separated use (sub.4) - see below for area calculations.	the items above	U-Value of Assembly	
Opinital - Statuapipe. - - - Precast - - -	ror each siory, the area of the occupancy shall be such that the sum of the rations of the actual floor area of each use divide by the allowable floor area for each use shall		Projection factor	
Trusses	not exceed 1.	ACCESSIBLE DWFLLING UNITS	Low e required if applicable	
Structural - - - - Retaining Walls > 5' High - - - - -	- <u>Actual</u> + <u>Actual</u> + <u>Actual</u> + <u>Actual</u> + <u>Actual</u> = 1	(Section 1107)	Door R-Value	
Other		Total Units Accessible Accessible Type A Type A Type B Type B Total Units	Walls Adjacent to Unconditioned Space / Description of assembly	
Note: Special Inspections & Inspectors to be listed at the end of Appendix B	- + - + - + - + <= 1	Units Units Units Units Units Accessible Required Provided Required Provided Provided Provided Provided	U-Value of total assembly	
Building Code: 🛛 2012 North Carolina State Building Code (NCSBC)			R-Value of insulation	
2009 North Carolina State Building Code (NCSBC) 2006 North Carolina State Building Code (NCSBC)	Both Building & Tenant Must be Indicated on Chart Below	· · · · · · · ·	U-Value of Assembly	
2009 NC Rehab 2009 NC Rehab	(A) (B) (C) (D) (F) Ratio of (F) Separation		Low e required, if applicable	
2006 Chapter 34 (Attach Summary) 2009 Chapter 34 (Attach Summary)) Story Occupancy Per Story Area Space Sprinkler Area Space Sprinkler Area or a king Required	(Section 1106)	Door R-Value	
1995 Existing Building Code Vol 9	- Tenant	Parking Total # of Parking Spaces # of Accessible Spaces Provided Total #	Description of assembly	
Addition	2 Business 8,197 9,000 8,850 0 14,850 0.55 - 0	Area Required Provided Regular with 5' Van Spaces with 8' Accessible Area Access Aisle 1.32" AlSLE 8' AlSLE Provided	U-Value of total assembly	LEWIS
Existing Building: Renovation			R-Value of insulation	
Reconstruction Repair Alteration to Shell	· · · · · · · · · · · · · · · ·		Description of assembly	5733
Change of Use Tenant Space Change of Occupancy Note: Zaping review may be required for Change of Use or Occupancy		Total	U-Value of total assembly	
Constructed : - Original Use: -			R-Valve of insulation	
Renovated: - Current Use: -	· · · · · · · · · · · ·	STRUCTURAL DESIGN	Description of assembly	7-1-16
Proposed Use: Business	1. Open space are increases from Section 506.2 are computed thus:	DESIGN LOADS:	U-Value of total assembly	
Building Data This Section Required For All Projects	a. Open perimeter (min. 20') = ^{339'} (F) b. Total Blda Perimeter = 376 (P)	Snow (Is)	R-Value of insulation Horizontal / Vertical Requirement	
Construction Type: _ I-A _ I-B _ II-A _ II-B _ II-B _ II-B _ III-B _ III-B	c. Ratio $(F/P) = 0.901$ (F/P)	Seismic (le)	Slab heated	Heritaae Salon
$\Box \text{ IV-HT } \Box \text{ V-A} \qquad \boxtimes \text{ V-B}$	d. W = Min. width of public way = 30° W	Live Load: Roof		Fit-Up
Mixed Construction: \boxtimes No \square Yes Type:	e. % Of Hornage increase in = $100[F/P - 0.25] \times W/50 = 100[0.901-0.25] \times 1 = 85\%$	Mezzanine	MECHANICAL SYSTEMS, SERVICE SYSTEM AND EQUIPMENT	
Sprinklers: 🛛 No 🔅 Yes 🔅 NFPA 13 🔅 NFPA 13R 🔅 NFPA 230, ESFR	a. Muti-story bldg I= 200%	Floor Ground Snow Load:	Thermal Zone	
☐ Partially SPK ☐ Special Suppression Standpipes: ⊠ No □ Yes Class □ I □ II □ III □ Wet □ Dry	b. Single Story building I = 300%	Wind Load: Basic Wind Speed mph/ASCE-7)	Winter dry bulb: SFE M-1	
Fire District: 🛛 No 📋 Yes (Appendix D) 🗌 Flood Hazard	3. Unlimited area Group B,F,M,S,A-4, Section (507.1, 507.2, 507.3, 507.4, 507.7) Group A motion picture (507.10); Malls (507.11); and H-2 air craft paint hangers (507.8)	Exposure Category	Summer dry bulb:	
Building Height: 35'-0" Stories 2	4. Max. Bldg Area = total number of stories in building x E not $> 3 \text{ x E}$	Wind Base Shears (for MWFRS)	Interior Design Conditions Winter dry bulb:	3117 Rogers Road
Basement 🖾 No 🔲 Yes	5. Max. area parking garages see 406.3.5 Max area of air fratfic control see 412.1.2	SEISMIC DESIGN CATEGORY: $\Box A \Box B \Box C \square D$	Summer dry bulb:	Wake Forest NC
Mezzanine: ⊠ No ⊔ Yes High Rise: ⊠ No □ Ves	Allowable Height	Provide the following Seismic Design Parameters:	Relative Humidity:	
	Allowable (Table 503) Increase for Sprinklers Shown on Plans Code Reference	Occupancy Category (Tbl 1604.5) \square \square \parallel \square \parallel \square \parallel	Building Heating Load: Building Cooling Load:	
Gross Building Area:	Type of Construction Type VB Type VB Table 601 Bidg Height in Fact Fact 401.011 Fact 11	Spectral Response Acceleration Ss %g Si %g	Mechanical Spacing Conditioning System	
Floor Existing (Sq. Ft) New (Sq Ft) Fit-up Sub-Total	Building Height in StoriesStories2Stories +1 = $S = 2$ Table 503	Occupancy Category (Tbl 1604.5) $\Box A \Box B \Box C \Box D \Box E \Box F$	Unitary: Description of Unit:	
Ground Floor 8,213		Data Source: 🗌 Field Test 🔹 Presumptive 🗌 Historical Data	Heating efficiency: Cooling efficiency:	OWNER: JMJ Commercial Contractor
		Bearing Wall / Dual w/ Special Moment Frame	Boiler:	10713 Staahound Trail
210 FIDOI 0,197 8,197 3th Floor	This Section Required For All Projects	Building Frame Dual w/ Intermediate R/C or Special Steel	iorai polier output. It oversizea, state reason: Chiller:	Zebulon, NC
4th Floor	1	🗆 Moment Frame 🔅 Inverted Pendulum	Total Chiller capacity. If oversized, state reason: List equipment efficiencies	PROJECT NUMBER: 160001
5th Floor	Ruilding Element Eiro Dating Datail # Datail # Datail # Datail #	Seismic Base shear: Vx Vy Analysis Procedure: Dismolified Dequivalant Latoral Force Dynamic	Equipment schedules with motors (mechanical systems)	DRAWN BY: DTA
Total 16,410 8,187	Duilding cienceni rife Regid* Provided And Design # Design # Distance Regid* Provided Sheet # Detect Detect	Architectural, Mechanical Components anchored?	iviotor norsepower: Number of phases:	ISSUED / REVIEW:
Area of Project Tenant / Alteration / Renovation: 8,187	(Feet) W/ Reduction Assembly Penetration Joints		Minimum efficiency: Motor type:	
Area of Construction: 8,187	Decising would Extend Image: Provide P		# of poles:	
Allowable Area	South N/A	SUIL BEAKING CAPACITIES:	FLECTRICAL SLIMMARY	ISSUED / CONSTRUCTION: 7-1-16
Assembly $\square A-1$ $\square A-2$ $\square A-3$ $\square A-4$ $\square A-5$	LOST N/A - <td>Presumptive Rearing congrcity</td> <td>ELECTRICAL SYSTEM AND EQUIPMENT</td> <td></td>	Presumptive Rearing congrcity	ELECTRICAL SYSTEM AND EQUIPMENT	
Business X	Interior Bearing Walls	Pile size, type and capacity	Method of Compliance: 🗌 Prescriptive (Energy Code)	REVISIONS
Factory \square F-1 \square F-2	Nonbearing Wall Exterior - - - - North 0 - - - -		Performance (Energy Code)	
Hazardous 🗆 H-1 🛛 H-2 🔅 H-3 🔅 H-4 🖓 H-5	South O <td>. OFECIAL INOPECTIONO KEQUIKED: LYEO LINO</td> <td>□ riescriptive (ASHRAE 90.1) □ Performance (ASHRAE 90.1)</td> <td> </td>	. OFECIAL INOPECTIONO KEQUIKED: LYEO LINO	□ riescriptive (ASHRAE 90.1) □ Performance (ASHRAE 90.1)	
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	East - 0	PLUMBING FIXTURE REQUIREMENTS	Lighting Schedule	
Mercantile	wesi U - - - - Interior Non Bearing Walls - - - - -	This Section For All Projects	Lamp type required in fixture: SEE E-1	
Residential \square R-1 \square R-2 \square R-3 \square R-4	Structural frame including columns	Uccupancy Water Closet Urinals Lavs Showers & Drinking Fountains Use M F M F Tubs Regular Accessible	Ballast type used in the fixture:	
31010ge □ 3-1 □ 3-2 □ HIGN PIIE □ S-1 Special Condition □ Penair Carago(406.6)	Floer Construction, including supporting - - - - -	Business - 82 people 1 1 - 1 1 - 1 1 1	Number of ballast in fixture: Total wattage per fixture:	
□ S-2 Special Condition - Parking Garage: □ Open (406.3) □ Enclosed (406.4)	beams and joist. List Construction type.	41M1&41F	Total interior wattage specified vs. allowed:	
Utility & Miscellaneous	Columns Supporting Floors - - - - - -			
Accessory Occupancies:	Roof Construction, including supporting	Total Required 1 1 - 1 1 - 1 1 Total Provided 1.5	Additional Prescriptive Compliance 506.2.1 More Efficient Mechanical Equipment	THIS DOCUMENT IS THE PROPERTY OF DEVON TOLSON ARCHITECTURE, INC USE ONLY FOR THE TITLED PROJECT - ALL PIGHTS DESERVED
Assembly 🗋 A-1 🛛 🗋 A-2 🔲 A-3 🔲 A-4 🔲 A-5 Business 🗖	Dearns and Joist*** - - - - Roof Ceiling Assembly - - - - -		506.2.2 Reduced Lighting Power Density	
Education	Columns supporting Roof - - - - Shofts - Evit 1 1 DD11 - -	SPECIAL APPROVALS	506.2.4 Higher Efficiency Service Water Heating	BUIII DING DATA
racioiy □ r-1 □ r-2 Hazardous □ H-1 □ H-2 □ H-3 □ H-4 □ H-5	Shafts - Other ELEVATOR 1 1 BD1.1 UL-U419 UL-WL-1UU1 -	· Special approval:(Local Jurisdiction, DOI, OSC, DPI, DHHS, etc.	506.2.5 On-Site Supply of Renewable Energy 506.2.6 Automatic Daylight Control System	
Institutional 🗌 I-1 🔄 I-2 🔄 I-3 🔄 I-4	Shafts - Other		, ~ ,	
I-3 Use Condition Ц I	Corritidor separation - - - - - Occupancy Separation - - - - -			
Residential 🗆 R-1 🗆 R-2 🗆 R-3 🗆 R-4	Party / Fire Wall Separation			
Storage \square S-1 \square S-2 \square High pile	Incidental Use Separation			
S-1 Special Condition Repair Garage(406.6) S-2 Special Condition Retring Carage Constant (404.2) Firster = (404.4)	Smoke Barrier Separation - - - - - -			
Utility & Miscellaneous П	Tenant Separation - - - - * Indicate section number permitting reduction			
,				
				1 OF 10SHFFTS



classification, 5. Foamed Plastic* - (Optional-Not Shown) - 1-1/2 in thick max, 4 ft wide sheathing attached to concrete blocks (Item 1) ATLAS ROOFING CORP — "EnergyShield Pro Wall Insulation" and "EnergyShield Pro 2 Wall Insulation"

CARLISLE COATINGS & WATERPROOFING INC — Type R2+ Sheath

FIRESTONE BUILDING PRODUCTS CO L L C — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation

HUNTER PANELS — Types Xci-Class A, Xci 286

RMAX OPERATING L L C — "TSX-8500", "TSX-8510", "Thermasheath-XP", "ECOMAXci", "Thermasheath-3", "Durasheath-3"

THE DOW CHEMICAL CO — Types Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP) and TUFF-R[™] ci Insulation

5A, Building Units — As an alternate to Items 5, min, 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in. **RMAX OPERATING L L C** — "Thermasheath-SI", "ECOBASEci", "ThermaBase-CI"



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:

h fire rated assemblies) or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC with nom 2 by 4 in. lumber end plates and cross braces. Steel studs to be min 3-5/8 in. wide by 1-3/8 in. deep channels spaced max 24 in. OC. B. Gypsum Board* -- Nom 1/2 or 5/8 in. thick, 4 ft. 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 13-1/2 in. 2. Pipe or Conduit -- Nom 12 in. diam (or smaller) Schedule 10 (or heavier) steel pipe, nom 12 in. diam (or smaller) service weight (or heavier) cast iron soil pipe, nom 12 in. diam (or smaller) Class 50 (or heavier) ductile iron pressure pipe, nom 6 in. diam (or smaller) steel conduit, nom 4 in. diam (or smaller) steel electrical metallic tubing, nom 6 in. diam (or smaller) Type L or (or heavier) copper tubing or nom 1 in. diam (or smaller) flexible steel conduit. When copper pipe is used, max F Rating of firestop system (Item 3) is 2 h. Steel pipes or conduits larger than nom 4 in. diam may only be used in walls constructed using steel channel studs. A max of one pipe or conduit is permitted in the firestop system. Pipe or conduit to be installed near center of stud cavity width and to be rigidly supported on both sides

3. Fill, Void or Cavity Material* -- Caulk -- Caulk fill material installed to completely fill annular space between pipe or conduit and avpsum wallboard and with a min 1/4 in, diam bead of caulk applied to perimeter of pipe or conduit at its egress from the wall. Caulk installed symmetrically on both sides of wall assembly. 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



System No. C-AJ-1020 December 02, 2010

F Rating — 2 and 3 Hr (See Item 3) T Rating — 0, 3/4 and 1 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



space between the pipe or conduit and the periphery of the opening as shown in the table below:

Floor or Wall	Min Floor or Wall Thkns In.	Max Diam of Steel Pipe or Conduit In,	Min Annular Space In.	Max Annular Space In.	Min Fi l Mtl Thkns In.	Min Forming Mtl Thkns In.	F Rating Hr	T Rating Hr
F	3-3/4	1-1/2	3/8	2-1/8	ī	2-3/4	2	0
F	3-3/4	6	3/8	3/4	1	2-3/4	2	0
F	3-3/4	6	3/8	1	2	1-3/4	2	0
F	4-1/2	1-1/2	3/8	2-1/8	1	3-1/2	3	3/4
F	4-1/2	6	3/8	3/4	1	3-1/2	3	0
F	4-1/2	6	3/8	1	2	2-1/2	3	0
w	5-1/2	1-1/2	3/8	2-1/8	1	3-1/2	3	3/4
w	5-1/2	6	3/8	3/4	1	3-1/2	3	0
w	6-1/2	1-1/2	3/8	2-1/8	2	2-1/2	3	1
w	6-1/2	6	3/8	1	2	2-1/2	3	0

4. Forming Material* - Min 4.0 pcf mineral wool batt insulation firmly packed into opening as a permanent form at the min thickness specified in the above table (Item 3). Forming material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material. THERMAFIBER INC - Type SAF

5. Fill, Void or Cavity Material* - Caulk - Min thickness of fill material as specified in the above table (Item 3) applied within the annulus, flush with top surface of floor or with both surfaces of wall. UNITED STATES GYPSUM CO — Type AS

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.











PLUMBING SPECIFICATIONS

- 1. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO DESCRIBE THE INSTALLATION OF A COMPLETE, FULLY ADJUSTED AND OPERATIONAL SYSTEM.
- 2. THE CONTRACTOR SHALL PROVIDE ALL SUPERVISION, LABOR, MATERIAL, EQUIPMENT, MACHINERY AND ALL OTHER ITEMS NECESSARY TO COMPLETE THE SYSTEMS.
- 3. ALL WORK UNDER THEIR SECTION SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH STATE BUILDING CODES. IN THE EVENT THE LOCAL AUTHORITY HAVING JURISDICTION DETERMINES THERE IS A CODE VIOLATION ASSOCIATED WITH THE CONSTRUCTION DOCUMENTS AND REQUIRES ADDITIONAL WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE VIOLATION. IF THE CONTRACTOR DOES NOT CONTACT THE ENGINEER, ALL EXPENSES ASSOCIATED WITH THE VIOLATION WILL BE THE CONTRACTOR'S RESPONSIBILITY.
- 4. THE CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING THEIR BID SO AS TO BE THOROUGHLY FAMILIAR WITH THE JOB CONDITIONS AND/OR PECULIARITIES. NO EXTRA PAYMENT WILL BE ALLOWED FOR ANYTHING WHICH COULD HAVE BEEN ANTICIPATED FROM A VISIT TO THE SITE.
- 5. THE CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS PRIOR TO SUBMITTING BID AND COMMENCING WORK. ALL DISCREPANCIES AND INTERFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 6. THE CONTRACTOR SHALL CONTACT LOCAL UTILITIES TO OBTAIN ALL REQUIREMENTS, APPROVAL AND PERMITS. THE CONTRACTOR SHALL PAY ALL FEES REQUIRED FOR THE INSTALLATION OF THEIR WORK.
- 7. THE DRAWINGS ARE DIAGRAMMATIC ONLY. THE CONTRACTOR MAY NEED TO MAKE FIELD ADJUSTMENTS TO ACCOMMODATE ACTUAL FIELD CONDITIONS. CONTACT ARCHITECT FOR THEIR APPROVAL FOR ANY ADJUSTMENTS THAT WILL CHANGE THE "EXPOSED TO VIEW" APPEARANCE OF ANY GIVEN AREA OR IF THE CHANGE IMPACTS PERFORMANCE.
- 8. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR THE GENERAL CONSTRUCTION OF THE BUILDING, FOR FLOORS AND CEILING HEIGHTS, FOR LOCATIONS OF WALLS, PARTITIONS, BEAMS, ETC.
- 9. THE CONTRACTOR SHALL REVIEW THE EQUIPMENT REQUIREMENTS PRIOR TO BEGINNING WORK TO VERIFY ALL REQUIRED CONNECTIONS AND CONTACT THE ENGINEER TO CLARIFY ANY DISCREPANCIES.
- 10. CONTRACTOR SHALL VERIFY ALL LISTED MODEL NUMBERS WITH MANUFACTURERS TO INSURE PROPER APPLICATION OF EQUIPMENT.
- 11. EQUIPMENT AND MATERIALS SHALL BE HANDLED, STORED AND PROTECTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 12. THE CONTRACTOR SHALL PERFORM ANY AND ALL TRENCHING, EXCAVATION AND BACKFILLING REQUIRED FOR THE INSTALLATION OF THEIR WORK.
- 13. THE PLUMBING CONTRACTOR SHALL FURNISH ALL NECESSARY SCAFFOLDING, STAGING, RIGGING AND HOISTING REQUIRED FOR THE COMPLETION OF THEIR WORK.
- 14. ALL WORK SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND OTHER TRADES INVOLVED IN THE CONSTRUCTION PROJECT. ALL WORK SHALL BE CAREFULLY LAID OUT IN ADVANCE TO COORDINATE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL FEATURES OF CONSTRUCTION.
- 15. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.
- 16. ALL FIXTURES AND EQUIPMENT SHALL HAVE CHROME PLATED ANGLE STOP VALVE WITH ESCUTCHEONS. FIXTURES WITH FAST CLOSING VALVES SHALL HAVE ACCESSIBLE WATER HAMMER ARRESTORS.
- 17. PIPE HANGERS: CARBON STEEL, ADJUSTABLE, CLEVIS.
- 18. SHIELD FOR PIPE INSULATION SHALL BE 18 GAUGE GALVANIZED STEEL IN LOWER 180 DEGREE SEGMENT OF THE PIPE, MINIMUM 12 INCH LONG AT PIPE SUPPORT LOCATIONS.
- 19. STEEL HANGER RODS: THREADED BOTH ENDS OR CONTINUOUS THREADED.
- 20. INSTALL HANGERS, SUPPORTS, CLAMPS AND ATTACHMENTS AS REQUIRED TO PROPERLY SUPPORT PIPING FROM BUILDING STRUCTURE.
- 21. IDENTIFY PIPING, CONCEALED OR EXPOSED, IN ACCORDANCE WITH ANSI/ASME A13.1, WITH PLASTIC TAPE PIPE MARKERS. TAGS MAY BE USED ON SMALL DIAMETER PIPING. IDENTIFY SERVICE, FLOW DIRECTION AND PRESSURE. INSTALL IN CLEAR VIEW AND ALIGN WITH AXIS OF PIPING. LOCATE IDENTIFICATION NOT TO EXCEED 20 FEET ON STRAIGHT RUNS INCLUDING RISERS AND DROPS, ADJACENT TO EACH VALVE AND "T", AT EACH SIDE OF PENETRATION OF STRUCTURE OR ENCLOSURE AND AT EACH OBSTRUCTION.
- 22. HOT AND COLD WATER PIPES SHALL BE INSULATED WITH 1 INCH GLASS FIBER INSULATION; ANSI/ASME C547; "K" VALUE OF 0.24 AT 75 DEGREES F; NONCOMBUSTIBLE; KRAFT REINFORCED FOIL VAPOR BARRIER WITH SELF-SEALING ADHESIVE JOINTS.
- 23. SANITARY SEWER AND VENT PIPING SHALL BE PVC, ASTM D2665. FITTINGS: PVC JOINTS: ASTM D2564, SOLVENT WELD.
- 24. WATER PIPING SHALL BE COPPER TUBING: ASTM B88, TYPE L, HARD DRAWN. FITTINGS: ANSI/ASME B16.23, CAST BRASS, OR ANSI/ASME B16.29, WROUGHT COPPER. JOINTS: ANSI/ASTM B32, SOLDER, GRADE 95TA.
- 25. GATE VALVES SHALL BE 150 PSI RATED, BRONZE BODY, RISING STEM AND HAND WHEEL, INSIDE SCREW, DOUBLE WEDGE, OR DISC, SOLDERED ENDS.
- 26. BALL VALVES SHALL BE 150 PSI RATED, BRONZE OR STAINLESS STEEL BODY, STAINLESS STEEL BALL, TEFLON SEATS AND STUFFING BOX RING, LEVER HANDLE AND BALANCING STOPS, THREADED ENDS.
- 27. PIPING SHALL BE INSTALLED IN AN ORDERLY MANNER. PLUMB AND PARALLEL TO BUILDING STRUCTURE. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN AND FERROUS PIPE. REMOVE SCALE AND DIRT, ON INSIDE AND OUTSIDE, BEFORE ASSEMBLY.
- 28. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.
- 29. ROUTE PIPING IN ORDERLY MANNER AND MAINTAIN GRADIENT.
- 30. UPON COMPLETION OF INSTALLATION, DISINFECT THE WATER SYSTEM IN ACCORDANCE WITH THE PLUMBING CODE.
- 31. CLEAN ALL PLUMBING FIXTURES AND EQUIPMENT THOROUGHLY BEFORE FINAL INSPECTION, LEAVING ALL READY FOR USE.
- 32. ALL APPLIANCES THAT CONNECT DIRECTLY TO WATER SYSTEM SHALL BE SEPARATED WITH A BACKFLOW PREVENTER DEVICE. PROVIDE BACKFLOW PREVENTER DEVICE IF NOT SUPPLIED WITH EQUIPMENT.
- 33. INTERIOR FINISHED FLOOR CLEANOUTS SHALL BE LACQUERED CAST IRON, TWO PIECE BODY, ROUND WITH SCORIATED COVER IN SERVICE AREAS AND ROUND WITH DEPRESSED COVER TO ACCEPT FLOOR FINISH IN FINISHED FLOOR AREAS.
- 34. INTERIOR FINISHED WALL CLEANOUTS IN WALLS MADE OF TILE, BRICK, BLOCK, OR WALLBOARD SHALL CONSIST OF A TAPER-THREAD PLUG AND COVER WITH FACE FLANGE. WALLS MADE OF TERRAZZO OR CONCRETE SHALL BE TAPER-THREAD PLUG AND FLUSH WITH WALL COVER.

	PLUMBIN	IG FI	XTUR	E C	ONNE	ECTIC	ON SCHEDULE AND SPECIFICATIONS
MARK	DESCRIPTION	DRAIN (IN)	VENT (IN)	CW (IN)	HW (IN)	GAS (IN)	FIXTURE SPECIFICATIONS
P-1	WATER CLOSET - FLUSH TANK - HC	4	2	1/2	-	-	BOWL SHALL BE ANSI A112.19.2; FLOOR MOUNTED, SIPHON JET, VITREOUS CHINA, CLOSE-COUPLED CLOSET COMBINATIO WITH ELONGATED RIM 17" HIGH, INSULATED VITREOUS CHINA CLOSET TANK WITH FITTINGS, LEVER FLUSHING VALVE ON WIDE SIDE OF WATER CLOSET AND BOLT CAPS. SEAT SHALL BE SOLID WHITE PLASTIC, OPEN FRONT, EXTENDED BACK, LESS COVER, COMPLETE WITH SELF-SUSTAINING HINGE.
P-2	LAVATORY — WALL HUNG — VC — HC — I/R SENSOR	1 1/4	1 1/4	1/2	1/2	_	LAVATORY SHALL BE ANSI A112.19.2; VITREOUS CHINA, WALL HUNG LAVATORY, 19 X 17 INCH MINIMUM, WITH 4 INCH HI BACK, DRILLINGS ON 4 INCH CENTERS, RECTANGULAR BASIN WITH SPLASH LIP, FRONT OVERFLOW, AND SOAP DEPRESSIO TRIM SHALL BE ANSI A112.18–2000; INFRARED SELF–ADJUSTING SENSOR, SINGLE HOLE MOUNTING, ONE SIX VOLT LITHI BATTERY POWER SOURCE, MOUNT WITHIN SPOUT CAVITY WITH MINIMUM 200,000 CYCLES LIFE, LOW BATTERY INDICATOR WITH SENSOR ARRAY, REMOVABLE SHROUD WITH INTERNAL TEMPERATURE CONTROL, FLOW CONTROL 0.5 GPM, VANDAL RESISTANT AERATOR, STAINLESS SUPPLIES, POLISHED CHROME PLATED FINISH, ALL METAL CONSTRUCTION, 6–1/8" DIE–CAST SPOUT, METAL TRIM, OPEN GRID STRAINER, CAST BRASS P–TRAP AND ARM WITH ESCUTCHEON. P–TRAP AND RISERS SHALL BE INSULATED WITH TRUEBRO LAV GUARD PIPE COVER.
P-3	DBL. SINK – COUNTER – STAINLESS – 6" BLADE	2	1 1/2	1/2	1/2	-	SINK SHALL BE ANSI A112.19.3; DOUBLE COMPARTMENT 33 X 22 INCH OUTSIDE DIMENSIONS, 13-1/2 X 16 X 7-1/2 INCH INSIDE BOWL DIMENSIONS, 18 GAGE THICK, TYPE 302 STAINLESS STEEL, SELF-RIMMING WITH UNDERCOATING, 3-1, INCH CRUMB CUP AND CHROMED BRASS DRAIN, LEDGEBACK DRILLED FOR TRIM. TRIM SHALL BE ANSI A112.19.3; TWO HANDLE CAST BRASS DECKMOUNT FAUCET WITH POLISHED CHROMED PLATED FINISH, SWIVEL GOOSENECK SPOUT, WATER ECONOMY AERATOR, COLOR INDEXED VANDAL RESISTANT SIX INCH BLADE HANDLES, CAST BRASS P-TRAP AND ARM WITH ESCUTCHEON.
P-4	WASHER BOX	2 *(3)	1 1/2	1/2	1/2	-	WASHER VALVE BOX SHALL BE RECESSED WALL BOX FABRICATED OF REINFORCED PLASTIC WITH DRAIN OUTLET, BRASS FITTINGS FOR CONNECTING EACH SUPPLY PIPE TO VALVE, AND HOT WATER AND COLD WATER SUPPLY VALVE, 3/4" MALE HOSE THREAD WITH WATER HAMMER ARRESTORS. WASHER VALVE BOX SHALL BE SIOUX CHIEF MODEL 696–2313MF OR EQUAL. *(HORIZONTAL PIPE SHALL BE 3")
P-5	REFRIGERATOR BOX	-	-	1/2	-	_	REFRIGERATOR BOX SHALL BE RECESSED WALL BOX FABRICATED OF REINFORCED PLASTIC, BRASS FITTINGS FOR CONNECT THE SUPPLY PIPE TO VALVE, VALVE SHALL HAVE WATER HAMMER ARRESTOR, AND 1/2" INLET X 1/4" OD OUTLET COMPRESSION ANGLE VALVE. VALVE BOX SHALL BE SIOUX CHIEF MODEL 696–1010MF OR EQUAL.
EWC-1	ELECTRIC WATER COOLER - INTERIOR - HC - LOW	1 1/4	1 1/4	1/2	-	-	ELECTRIC WATER COOLER SHALL BE HANDICAPPED MOUNTED ELECTRIC WATER COOLER WITH STAINLESS STEEL TOP, VINYI ON ON STEEL BODY, ELEVATED MOUNT WITH STREAM GUARD, AUTOMATIC STREAM REGULATOR, MOUNTING BRACKET, REFRIGERATED WITH INTEGRAL AIR COOLED CONDENSER; CAPACITY OF 5 GAL/MIN OF 50° F WATER WITH INLET AT 80° F AND ROOM TEMPERATURE OF 90° F.
EWC-2	ELECTRIC WATER COOLER - INTERIOR - HIGH	1 1/4	1 1/4	1/2	-	-	ELECTRIC WATER COOLER SHALL BE ELECTRIC WATER COOLER WITH STAINLESS STEEL TOP, VINYL ON ON STEEL BODY, ELEVATED MOUNT WITH STREAM GUARD, AUTOMATIC STREAM REGULATOR, MOUNTING BRACKET, REFRIGERATED WITH INTEGE AIR COOLED CONDENSER; CAPACITY OF 5 GPM OF 50° F WATER WITH INLET AT 80° F AND ROOM TEMPERATURE OF 90°
1	SALON SINK	2	2	1/2	1/2	-	SINK PROVIDED BY OWNER. PLUMBING CONTRACTOR SHALL PROVIDE ROUGH-IN, HAIR INTERCEPTOR AND MAKE FINAL CONNECTION. COORDINATE REQUIREMENTS WITH GENERAL CONTRACTOR.
WH-1	WATER HEATER - GAS - HIGH EFFICIENCY	-	-	1 1/4	1 1/4	3/4	GAS WATER HEATER SHALL BE ANSI Z21.10.1 94% THERMAL EFFICIENCY GAS—FIRED WATER HEATERS, GLASS LINED STEE TANK, GLASS LINED CONDENSING FLUE, FOAM INSULATION PROTECTED WITH HEAVY GAUGE STEEL JACKET, FACTORY INSTALLED COMBINATION PRESSURE AND TEMPERATURE RELIEF VALVE, MICROPROCESSOR CONTROLS WITH ADJUSTABLE THERMOSTAT FROM 90° F TO 180° F. COORDINATE LOCATION OF ELECTRIC JUNCTION BOX WITH ELECTRICAL CONTRACTOR

PUMP SCHEDULE									
			FLOW	HEAD		POV	VER		
MARK	ТҮРЕ	SYSTEM	(GPM)	(FT H20)	MAX HP	RPM	VOLTS	PHASE	REMARKS
RCP-1	RECIRCULATING	HW	37	10	1/4	_	120	1	INLINE

		GAS V	VATER HEATE	R SCHED	ULE
MARK	TANK VOLUME (GAL)	INPUT (BTUH)	RECOVERY (GPH @ 100°F RISE)	H20 TEMP (*F)	REMARKS
WH-1	100	199,900	235	140	BASIS OF DESIGN AO SMITH

GENERAL COORDINATION NOTES (APPLY TO WORKING NOTES, ALL SHEETS)

 $\langle 1 \rangle$ coordinate exact location and requirements prior to beginning any work.

NOTE: ALL APPLIANCES THAT CONNECT DIRECTLY TO WATER SYSTEM SHALL BE SEPARATED WITH A BACKFLOW PREVENTER DEVICE. PROVIDE BACKFLOW PREVENTER DEVICE IF NOT SUPPLIED WITH EQUIPMENT.

WAS	STE PIPE SIZ	E CALO	CULATIO	ONS
MARK	DESCRIPTION	FU'S	# FIXT	SUBTOT
P-1	WATER CLOSET-HC	4.0	3	12.0
P-2	LAVATORY	1.0	3	3.0
P-3	DBL SINK	2.0	1	2.0
P-4	WASHER BOX	3.0	4	12.0
EWC-1	ELEC WATER COOLER	0.5	1	0.5
EWC-2	ELEC WATER COOLER	0.5	1	0.5
1	SALON SINK	1.0	31	31.0
TOTAL W	ASTE FIXTURE UNITS			61
REQUIREI PROVIDEI) pipe size) pipe size	4" 4"		

WA ⁻	FER PIPE SIZ	E CALO	CULATI	ONS
MARK	DESCRIPTION	FU'S	# FIXT	SUBTOT
P-1	WATER CLOSET-HC	2.2	3	6.6
P-2	LAVATORY	0.7	3	2.1
P-3	DBL SINK	1.4	1	1.4
P-4	WASHER BOX	3.0	4	12.4
P-5	REFRIGERATOR BOX	0.25	1	0.25
EWC-1	ELEC WATER COOLER	0.25	1	0.25
EWC-2	ELEC WATER COOLER	0.25	1	0.25
1	SALON SINK	0.7	31	21.7
TOTAL W	ATER FIXTURE UNITS			44.95
REQUIREI PROVIDEI) PIPE SIZE) PIPE SIZE	1 1/4" 1 1/4"		

EQUIPMENT AS NEW	WORK.
SS	SANITARY SEWER OR WASTE PIPE
SV	SANITARY VENT PIPING
	DOMESTIC HOT WATER PIPING (HW)
	DOMESTIC COLD WATER PIPING (CW)
HWR	DOMESTIC HOT WATER RETURN
D	WATER HEATER PAN DRAIN PIPING
\bigcirc	PUMP
€	FLOOR DRAIN (FD)
\odot	CLEAN OUT (FLOOR TYPE) (COFF)
	CLEAN OUT (WALL TYPE) (WCO)
0	PIPING TURN UP
	PIPING TURN DOWN
<u>]</u>	BOX IN WALL
\longrightarrow	GATE VALVE (GV)
2	CONTINUATION
#	NEW WORK NOTE
$\langle \mathbf{I} \rangle$	GENERAL NOTE
	Equipment number — provided by others. Final connections by plumbing contractor.
P-#	PLUMBING FIXTURE NUMBER – PLUMBING CONTRACTOR TO PROVIDE AND INSTALL.
AFF	ABOVE FINISH FLOOR
AFG	ABOVE FINISH GRADE
BTUH	BRITISH THERMAL UNITS PER HOUR
DIA	DIAMETER
EXIST	EXISTING TO REMAIN
FIXT	FIXTURE
FU	FIXTURE UNIT
GAL	GALLON(S)
GPH	GALLON PER HOUR
GPM	GALLON PER MINUTE
IN	INCH(ES)
IND	INDIRECT WASTE
LAV	LAVATORY
MAX	MAXIMUM
MIN	MINIMUM
OC	ON CENTER
PSI	POUND PER SQUARE INCH
TEMP	TEMPERATURE
TMV	THERMOSTATIC MIXING VALVE
TYP	TYPICAL
VTR	VENT THROUGH ROOF
WC	WATER CLOSET
WH	WATER HEATER
1	HOUR FIRE RATED BARRIER











FIRE WALL LEGEND

1 HOUR FIRE RATED BARRIER

WORK NOTES

- 1 PROVIDE CLEANOUT. PROVIDE SANITARY SEWER PIPING AS INDICATED.
- 2 PROVIDE SANITARY SEWER AND SANITARY VENT PIPING FOR OWNER PROVIDED SALON SINK AS INDICATED. PROVIDE ALL REQUIRED MATERIALS FOR A COMPLETE AND OPERABLE SYSTEM. COORDINATE REQUIREMENTS WITH EQUIPMENT SUPPLIER.
- 3 PROVIDE SINK. PROVIDE SANITARY SEWER AND SANITARY VENT PIPING AS INDICATED.
- 4 PROVIDE WASHER BOX. PROVIDE SANITARY SEWER AND SANITARY VENT PIPING AS INDICATED.
- 5 PROVIDE LAVATORY. PROVIDE SANITARY SEWER AND SANITARY VENT PIPING AS INDICATED.
- 6 PROVIDE WATER CLOSET. PROVIDE SANITARY SEWER AND SANITARY VENT PIPING AS INDICATED.
- 7 PROVIDE ELECTRIC WATER COOLER. PROVIDE SANITARY SEWER AND VENT PIPING AS INDICATED. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR.
- 8 PROVIDE SANITARY SEWER AND VENT PIPING BACK TO POINT(S) INDICATED.

	WAKE FOREST, NC
	OWNER: JMJ Commercial Co 10713 Staghound Tro
	Zebulon, NC
	ISSUED / REVIEW:
	ISSUED / CONSTRUCTION:
	REVISIONS
	USE ONLY FOR THE TITLED PROJECT - ALL RIGHTS RESERVED
	PLUMBING SECON FLOOR PLAN - WAS
GRAPHIC SCALE	P2 0
1/8" = 1'-0"	
	OF SHEETS

DeVon Tolson Architecture 4008 Barret Drive Suite 203 Raleigh, NC 27609 Phone 919-788-0003 Fax 919-788-1119 deman@mindspring.com ASSOCIATES, INC. Professional Engineering Services 135 Hanbury Road West Suite D Chesapeake, Virginia 23322 Phone: 757-410-0682 Fax: 757-410-1537 Email: hdm@hdm.hrcoxmail.com HDMA# 16022 07/01/16 HERITAGE SALON FIT-UP 3117 RODGERS ROAD VC Contractors Trail 160001 JAO RTT OND VASTE



- 1 PROVIDE COLD WATER PIPING ROUTED FROM SHUT OFF VALVE (LOCATED ON RISER ON FIRST FLOOR) TO ABOVE SECOND FLOOR CEILING AS INDICATED.
- 2 PROVIDE HOT AND COLD WATER PIPING FOR SALON SINK PROVIDED BY OWNER AS INDICATED. ROUTE PIPING ABOVE FIRST FLOOR CEILING. PROVIDE ALL REQUIRED MATERIALS FOR A COMPLETE AND OPERABLE SYSTEM. COORDINATE REQUIREMENTS WITH EQUIPMENT SUPPLIER.
- 3 PROVIDE HOT AND COLD WATER PIPING TO SINK AS INDICATED. ROUTE PIPING ABOVE SECOND FLOOR CEILING.
- 4 PROVIDE HOT AND COLD WATER PIPING TO WASHER BOX AS INDICATED. ROUTE PIPING ABOVE SECOND FLOOR CEILING.
- 5 PROVIDE HOT AND COLD WATER PIPING TO LAVATORY AS INDICATED. ROUTE PIPING ABOVE SECOND FLOOR CEILING.
- 6 PROVIDE COLD WATER PIPING TO WATER CLOSET AS INDICATED. ROUTE PIPING ABOVE SECOND FLOOR
- CEILING.
- 7 PROVIDE COLD WATER PIPING TO ELECTRIC WATER COOLER AS INDICATED. ROUTE PIPING ABOVE SECOND FLOOR CEILING.
- 8 PROVIDE REFRIGERATOR BOX. PROVIDE COLD WATER PIPING TO REFRIGERATOR BOX AS INDICATED. ROUTE PIPING ABOVE SECOND FLOOR CEILING.
- 9 PROVIDE GAS WATER HEATER, DRAIN PAN AND ASSOCIATED PIPING COMPLETE. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR. COORDINATE GAS REQUIREMENTS WITH MECHANICAL CONTRACTOR. ROUTE PIPING ABOVE FIRST FLOOR CEILING.
- 10 PROVIDE RECIRCULATION PUMP AND ASSOCIATED PIPING COMPLETE. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL CONTRACTOR. ROUTE PIPING ABOVE FIRST FLOOR CEILING.
- 11 PROVIDE SHUT OFF VALVES ABOVE SECOND FLOOR CEILING AS INDICATED. PROVIDE COLD AND HOT WATER PIPES DOWN IN WALL TO ABOVE FIRST FLOOR CEILING. CONNECT TO SALON SINK AS INDICATED.
- 12 PROVIDE COLD AND/OR HOT WATER SHUT OFF VALVE ABOVE SECOND FLOOR CEILING AS INDICATED.

GENERAL NOTES

FIRE WALL LEGEND

1 HOUR FIRE RATED BARRIER

1 All cold and hot water lines are 3/4" unless noted otherwise.

ALL COLD AND HOT WATER LINES ARE ROUTED TO ABOVE CEILING ON SECOND FLOOR. EXCEPT PIPE DOWN STREAM OF WORK NOTE 11 WHICH TURN DOWN IN WALL TO BELOW SECOND FLOOR CEILING AND RUN TO THE DEVICES INDICATED ABOVE THE CEILING OF FIRST FLOOR.

<u>GRAPH</u>		SCAL	E		
1/8" = 1'-	4' 0"	0	4'	8'	1



MECHANICAL SPECIFICATIONS

- 1. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO DESCRIBE THE INSTALLATION OF A COMPLETE, FULLY ADJUSTED AND OPERATIONAL SYSTEM.
- 2. THE CONTRACTOR SHALL PROVIDE ALL SUPERVISION, LABOR, MATERIAL EQUIPMENT, MACHINERY AND
- ANY AND ALL OTHER ITEMS NECESSARY TO COMPLETE THE SYSTEMS. 3. ALL WORK UNDER THIS SECTION SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH STATE BUILDING CODES. IN THE EVENT THE LOCAL AUTHORITY HAVING JURISDICTION DETERMINES THERE IS A CODE VIOLATION ASSOCIATED WITH THE CONSTRUCTION DOCUMENTS AND REQUIRES ADDITIONAL WORK. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE VIOLATION. IF THE CONTRACTOR DOES NOT CONTACT THE ENGINEER, ALL EXPENSES ASSOCIATED WITH THE VIOLATION WILL BE THE CONTRACTOR'S RESPONSIBILITY.
- 4. ALL CONTRACTORS SHALL OBTAIN ALL NECESSARY APPROVAL, OBTAIN ALL PERMITS AND PAY FEES REQUIRED FOR THE INSTALLATION OF THEIR WORK.
- 5. THE DRAWINGS ARE DIAGRAMMATIC ONLY. THE CONTRACTOR MAY NEED TO MAKE FIELD ADJUSTMENTS TO ACCOMMODATE ACTUAL FIELD CONDITIONS.
- 6. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR THE GENERAL CONSTRUCTION OF THE BUILDING, FOR FLOORS AND CEILING HEIGHTS, FOR LOCATIONS OF WALLS, PARTITIONS, BEAMS, ETC.
- 7. MANUFACTURER'S LISTS ARE TO ESTABLISH A STANDARD OF QUALITY AND NOT INTENDED TO LIMIT THE SELECTION TO THESE MANUFACTURERS.
- 8. CONTRACTOR SHALL VERIFY ALL LISTED MODEL NUMBERS WITH MANUFACTURERS TO ENSURE PROPER APPLICATION OF EQUIPMENT.
- 9. EQUIPMENT AND MATERIALS SHALL BE HANDLED, STORED AND PROTECTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. 10. THE MECHANICAL CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING HIS BID SO AS TO BE
- THOROUGHLY FAMILIAR WITH THE JOB CONDITIONS AND/OR PECULIARITIES. NO EXTRA PAYMENT WILL BE ALLOWED FOR ANYTHING WHICH COULD HAVE BEEN ANTICIPATED FROM A VISIT TO THE SITE. 11. THE CONTRACTOR SHALL PERFORM ANY AND ALL TRENCHING, EXCAVATION AND BACKFILLING REQUIRED
- FOR THE INSTALLATION OF HIS WORK. 12. THE MECHANICAL CONTRACTOR SHALL FURNISH ALL NECESSARY SCAFFOLDING, STAGING, RIGGING AND
- HOISTING REQUIRED FOR THE COMPLETION OF HIS WORK.
- 13. ALL WORK SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND OTHER TRADES INVOLVED IN THE CONSTRUCTION PROJECT. ALL WORK SHALL BE CAREFULLY LAID OUT IN ADVANCE TO COORDINATE ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL FEATURES OF CONSTRUCTION.
- 14. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS. 15. FURNISH AND INSTALL ALL POWER WIRING FROM HVAC EQUIPMENT TO SERVICE DISCONNECT SWITCHES AND/OR STARTERS. SERVICE DISCONNECT SWITCHES AND STARTER SHALL BE FURNISHED AND INSTALLED UNDER DIVISION 16: ELECTRICAL.
- 16. VERIFY THE CORRECT POWER SUPPLY HAS BEEN PROVIDED AT LOAD SIDE OF SERVICE DISCONNECT SWITCH BEFORE OPERATING EQUIPMENT.
- 17. MECHANICAL CONTRACTOR SHALL PROVIDE THE FOLLOWING SUBMITTALS TO THE ENGINEER ON ALL MAJOR EQUIPMENT: PRODUCT SELECTION, SHOP DRAWINGS, WARRANTY AND OPERATION & MAINTENANCE MANUALS.
- 18. DUCTWORK SHALL BE ASTM A525 OR ASTM A527 GALVANIZED STEEL SHEETLOCK-FORMING QUALITY, HAVING A COATING OF G-60. DUCTWORK SHALL BE FABRICATED, INSTALLED AND SUPPORTED IN ACCORDANCE WITH THE ASHRAE GUIDE AND SMACNA. ALL DUCTWORK SHALL BE SEALED WITH NON-HARDENING, WATER RESISTANT, FIRE RESISTIVE HEAVY MASTIC.
- 19. INSULATED FLEXIBLE DUCTS: SHALL BE UL 181, CLASS 1, 2-PLY VINYL FILM SUPPORTED BY HELICALLY WOUND, SPRING-STEEL WIRE; FIBROUS-GLASS INSULATION MINIMUM R-6 VALUE; ALUMINIZED VAPOR BARRIER FILM. PRESSURE RATING: 10 INCH WG (2500 PA) POSITIVE AND 1.0 INCH WG (250 PA) NEGATIVE. MAXIMUM AIR VELOCITY: 4000 FPM (20.3 M/S). TEMPERATURE RANGE: MINUS 10 TO PLUS 160 DEGREES F (MINUS 23 TO PLUS 71 DEGREES C). MAXIMUM LENGTH SHALL BE 14 FEET. FLEXIBLE DUCT CLAMPS: STAINLESS-STEEL B AND WITH CADMIUM-PLATED HEX SCREW TO TIGHTEN BAND WITH A WORM-GEAR ACTION, IN SIZES 3 THROUGH 18 INCHES (75 TO 450 MM) TO SUIT DUCT SIZE.
- 20. DUCT INSULATION SHALL BE A MINIMUM OF R-5 WHEN LOCATED INSIDE THE BUILDING ENVELOPE AND R-8 WHEN LOCATED OUTSIDE THE BUILDING ENVELOPE, FIBERGLASS BLANKET TYPE WITH ALL-PURPOSE FACTORY APPLIED, LAMINATED GLASS FIBER REINFORCED, FLAME RETARDANT KRAFT PAPER AND ALUMINUM FOIL JACKET. ALL JOINTS SHALL BE SEALED WITH WATER-BASED, FIRE RESISTIVE VAPOR BARRIER COMPOUND. DUCT DIMENSIONS INDICATED ARE NET INSIDE DIMENSIONS.
- 21. EQUIPMENT DRAINS SHALL BE COPPER TUBING: ASTM B88, TYPE L. HARD DRAWN, FITTINGS: ANSI/ASME B16.23, CAST BRASS, OR ANSI/ASME B16.29, WROUGHT COPPER, JOINTS: ANSI/ASTM B32, SOLDER, GRADE 95TA. INSTALL WITH A 2% SLOPE MINIMUM.
- 22. INSTALL HANGERS, SUPPORTS, CLAMPS AND ATTACHMENTS AS REQUIRED TO PROPERLY SUPPORT PIPING FROM BUILDING STRUCTURE. PIPE HANGERS SHALL BE CARBON STEEL, ADJUSTABLE, CLEVIS. STEEL HANGER RODS SHALL BE THREADED BOTH ENDS OR CONTINUOUS THREADED.
- 23. GAS PIPING SHALL BE ASTM A53, SCHEDULE 40 BLACK. FITTINGS SHALL BE ANSI/ASME B16.3, MALLEABLE IRON. JOINTS SHALL BE SCREWED. GAS COCK SHALL BE ASME B16.33, 150 PSI WOG, BRONZE BODY, BRONZE TAPERED PLUG, SQUARE HEAD WITH THREADED ENDS. INSPECT, TEST AND PURGE ACCORDING TO NFPA 54 AND NORTH CAROLINA STATE GAS CODE.
- 24. REFRIGERANT PIPING AND CONDENSATE DRAINS SHALL BE INSULATED WITH 1 INCH FLEXIBLE ELASTOMERIC CELLULAR TYPE INSULATION WITH EXPANDED CLOSED-CELL STRUCTURE WITH SMOOTH SKIN ON BOTH SIDES. MATERIALS SHALL CONFORM TO ASTM C 534, TYPE I. THERMAL CONDUCTIVITY SHALL BE 0.30 AVERAGE MAXIMUM AT 75 DEGREES F. FLEXIBLE ELASTOMERIC CELLULAR INSULATION ADHESIVE SHALL BE SOLVENT-BASED, CONTACT ADHESIVE RECOMMENDED BY INSULATION MANUFACTURER.
- 25. IDENTIFY PIPING, CONCEALED OR EXPOSED, WITH PLASTIC TAPE PIPE MARKERS. TAGS MAY BE USED ON SMALL DIAMETER PIPING. IDENTIFY SERVICE, FLOW DIRECTION AND PRESSURE. INSTALL IN CLEAR VIEW AND ALIGN WITH AXIS OF PIPING. LOCATE IDENTIFICATION NOT TO EXCEED 20 FEET ON STRAIGHT RUNS INCLUDING RISERS AND DROPS, ADJACENT TO EACH VALVE AND "T", AT EACH SIDE OF PENETRATION OF STRUCTURE OR ENCLOSURE AND AT EACH OBSTRUCTION.
- 26. CEILING SUPPLY DIFFUSERS SHALL BE SQUARE LOUVERED FACE, EXTRUDED ALUMINUM, MULTI-CORE TYPE DIFFUSER TO DISCHARGE AIR IN FOUR WAY PATTERN WITH BAKED ENAMEL OFF-WHITE FINISH. PROVIDE INVERTED T-BAR TYPE FRAME. IN PLASTER OR GYPBOARD CEILINGS. PROVIDE SURFACE MOUNTED FRAME. PROVIDE OPPOSED BLADE DAMPER WITH DAMPER ADJUSTABLE FROM DIFFUSER FACE.
- 27. CEILING RETURN GRILLE SHALL BE 1 X 1 X 1/2 INCH EGG CRATE WITH FILTER. GRILLE SHALL BE FABRICATED FROM ALUMINUM WITH BAKED ENAMEL OFF-WHITE FINISH. PROVIDE INTEGRAL, GANG-OPERATED OPPOSED BLADE DAMPERS WITH REMOVABLE KEY OPERATOR, OPERABLE FROM FACE. PROVIDE INVERTED T-BAR TYPE FRAME. IN PLASTER OR GYPBOARD CEILINGS, PROVIDE SURFACE MOUNTED FRAME.
- 28. VOLUME CONTROL DAMPER SHALL BE FABRICATED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS. PROVIDE DAMPERS AT EACH SUPPLY, RETURN AND EXHAUST SYSTEMS WHERE BRANCHES ARE TAKEN FROM LARGER DUCTS AS REQUIRED FOR AIR BALANCING.
- 29. ROOF HOODS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS. HOODS SHALL BE FABRICATED OF ALUMINUM, MINIMUM 16 GAGE AND 18 GAGE HOOD; SUITABLY REINFORCED, WITH REMOVABLE HOOD, BIRDSCREEN WITH 1/2 INCH SQUARE MESH AND FACTORY PRIME COAT BAKED ENAMEL FINISH. MOUNT UNIT ON MINIMUM 12 INCH HIGH CURB BASE WITH INSULATION BETWEEN DUCT AND CURB. MAKE HOOD OUTLET AREA MINIMUM OF TWICE THROAT AREA.
- 30. CEILING EXHAUST FAN (QUIET TYPE) SHALL BE A CENTRIFUGAL-TYPE BLOWER, V-BELT OR DIRECT DRIVE AND PERMANENTLY LUBRICATED MOTOR WITH A GALVANIZED STEEL HOUSING, FACTORY WIRED, NON-FUSIBLE DISCONNECT SWITCH, GRAVITY BACKDRAFT DAMPER AND MOLDED WHITE PLASTIC OR ALUMINUM GRILLE. AIR DELIVERY SHALL BE NO LESS THAN 75 (100) [150] CFM AND SOUND LEVEL NO GREATER THAN < 0.3 (0.7) [1.4] SONES. AIR AND SOUND RATINGS SHALL BE CERTIFIED BY HVI.
- 31. CEILING EXHAUST FANS SHALL BE A CENTRIFUGAL FAN, V-BELT OR DIRECT DRIVE WITH GALVANIZED STEEL HOUSING, FACTORY WIRED, NON-FUSIBLE DISCONNECT SWITCH, GRAVITY BACKDRAFT DAMPER AND MOLDED WHITE PLASTIC OR ALUMINUM GRILLE.
- 32. PROVIDE FLEXIBLE CONNECTIONS IMMEDIATELY ADJACENT TO EQUIPMENT IN DUCTS ASSOCIATED WITH FANS AND MOTORIZED EQUIPMENT.

- 33. FURNACES SHALL BE LOW PRESSURE SINGLE ZONE BLOW THROUGH HORIZONTAL OR VERTICAL TYPE AS INDICATED. UNIT SHALL BE SELF CONTAINED, PACKAGED, FACTORY ASSEMBLED, PREWIRED UNIT CONSISTING OF CABINET SUPPLY AIR FAN, PRIMARY HEAT EXCHANGER, SECONDARY HEAT EXCHANGER, INDUCED COMBUSTION SYSTEM, CONTROLS, AIR FILTER, REFRIGERANT COOLING COIL AND OUTDOOR PACKAGE CONTAINING COMPRESSOR, CONDENSER COIL AND CONDENSER FAN. EACH FURNACE SHALL HAVE PHYSICAL DIMENSIONS SUITABLE TO FIT SPACE ALLOTTED TO THE UNIT AND SHALL HAVE THE CAPACITY INDICATED. FURNACE SHALL HAVE PUBLISHED RATINGS BASED ON TEST PERFORMED IN ACCORDANCE WITH AGA AND ARI 210 AND 270. PROVIDE EXTENDED WARRANTY ON HEAT EXCHANGER THE ENERGY EFFICIENCY RATIO (EER) SHALL BE A MINIMUM EER OF 12 WHEN RATED IN ACCORDANCE WITH ARI 210. THE AFUE SHALL BE A MINIMUM AFUE OF 90%. BOTH INDOOR AND OUTDOOR UNIT SHALL BE BY THE SAME MANUFACTURER. INDOOR AIR HANDLER CABINET SHALL BE BAKED ENAMEL FINISH AND INTERNALLY INSULATED. FAN SHALL BE MULTISPEED FORWARD CURVED AND DYNAMICALLY AND STATICALLY BALANCED AT THE FACTORY. FAN AND MOTOR BEARINGS SHALL BE PERMANENTLY LUBRICATED TYPE. COIL SHALL BE PROVIDED WITH PRESSURE TYPE BRASS DISTRIBUTORS AND SOLDER CONNECTIONS. THE CONDENSING UNIT SHALL BE FACTORY ASSEMBLED AND TESTED. UNIT SHALL PROVIDE LIQUID LIFT AS REQUIRED TO SUIT INSTALLATION. UNITS SHALL BE CERTIFIED PER ARI 240 AND 270. COIL SHALL BE ALUMINUM PLATE FINS, MECHANICALLY BONDED TO 1/2 INCH ALUMINUM TUBES. COIL SHALL BE CIRCUITED FOR SUBCOOLING. UNIT SHALL BE FURNISHED WITH DIRECT DRIVEN, PROPELLER TYPE FANS ARRANGED FOR VERTICAL DISCHARGE. CONDENSER FAN MOTORS SHALL BE INVERTER DUTY, CLASS B MOTOR INSULATION, BUILT IN CURRENT AND THERMAL OVERLOAD PROTECTION AND SHALL BE OF THE PERMANENTLY LUBRICATED TYPE, RESILIENTLY MOUNTED. FAN SHALL HAVE A SAFETY GUARD. CONTROLS SHALL BE FACTORY WIRED AND LOCATED IN A SEPARATE ENCLOSURE. SAFETY DEVICES SHALL CONSIST OF HIGH AND LOW PRESSURE STATS AND COMPRESSOR OVERLOAD DEVICES. UNIT WIRING SHALL INCORPORATE A TIME DELAY RELAY TO PREVENT SHORT CYCLING OF THE COMPRESSOR. CASING SHALL MAKE UNIT FULLY WEATHERPROOF FOR OUTDOOR INSTALLATION. CASING SHALL BE OF GALVANIZED STEEL, ZINC PHOSPHATIZED AND FINISHED WITH BAKED ENAMEL. OPENINGS SHALL BE PROVIDED FOR POWER AND R-410A REFRIGERANT CONNECTIONS. PANEL SHALL BE REMOVABLE TO PROVIDE ACCESS FOR SERVICING. REFRIGERANT PIPING SHALL BE SIZED BY THE MANUFACTURER. PROVIDE A FILTER RACK AND 1 INCH REPLACEABLE THROWAWAY FILTER. FILTER RACK SIZE SHALL BE AS REQUIRED BY MANUFACTURE. THE UNIT SHALL BE CONTROLLED BY A WALL MOUNTED 7 DAY PROGRAMMABLE THERMOSTAT. INDOOR UNIT SHALL HAVE A
- DETECTION OF SMOKE. 34. TEST, ADJUST AND BALANCE THE AIR SYSTEM TO PROVIDE THE DESIGN QUANTITIES. PERFORM TESTING AND BALANCING PROCEDURES ON EACH SYSTEM IDENTIFIED, IN ACCORDANCE WITH THE DETAILED PROCEDURES OUTLINED BY ASHRAE, SMACNA, AABC OR NEBB, PROVIDE A WRITTEN BALANCE REPORT TO THE OWNER. THE REPORT SHALL INCLUDE ALL AIR FLOWS AND SUPPLY AIR TEMPERATURE, RETURN AIR TEMPERATURE AND OUTSIDE AIR TEMPERATURE.

OUTDOOR AIR CALCULATION SCHEDULE									
ROOM TYPE	NET SQUARE FOOTAGE (SQ FT)	EST MAX OCCUPANCY (PEOPLE/1,000 SQ FT)	NUMBER OF PEOPLE	OUTSIDE AIR F (CFM/ PERSON)	PER MECH CODE	MIN OA REQUIRED (CFM)	TOTAL OA REQUIRED (CFM)		
BEAUTY SALON	4,834	25	62	20	0.12	580	1820		
CORRIDOR	1,549	-	-	-	0.06	93	93		
STORAGE	35	_	-	_	0.12	4	4		
AIN OUTDOOR AIR REQUIRED 677									

TOTAL OUTSIDE AIR REQUIRED

TOTAL OUTSIDE AIR PROVIDED

	0	UTDOOR AIR S	SUMMARY		
EQUIPMENT	SA (CFM)	RA (CFM)	MAX OA (CFM)	MIN OA (CFM)	EA (CFM)
FU-1	1,400	1,120	280	150	-
FU-2	1,225	980	245	125	-
FU-3	1,750	1,400	350	150	-
FU-4	1,225	980	245	125	-
FU-5	1,750	1,400	350	150	-
TOILET EXHAUST FANS	-	-	-	-	150
SALON EXHAUST FANS	-	-	-	-	3,445
TOTALS:	7,350	5,880	1,470	700	3,595

NOTE: 1. TOILET AND SALON EXHAUST FANS ARE INTERMITTENT USE FANS.



	AIR DISTRIBUTION SCHEDULE									
MARK	SERVICE	MAX AIR FLOW (CFM)	GRILLE SIZE (IN)	RUN OUT (IN)	REMARKS/NOTES					
A	SUPPLY AIR	100	6 x 6	6 Ø	CEILING DIFFUSER					
В	SUPPLY AIR	200	9 x 9	8 Ø	CEILING DIFFUSER					
С	SUPPLY AIR	300	12 x 12	10 ø	CEILING DIFFUSER					
D	SUPPLY AIR	400	12 x 12	12 ø	CEILING DIFFUSER					
RA	RETURN AIR	100	6 x 6	6 Ø	FILTERED CEILING RETURN					
RB	RETURN AIR	200	8 x 8	8 Ø	FILTERED CEILING RETURN					
RC	RETURN AIR	300	10 x 10	10 ø	FILTERED CEILING RETURN					
RD	RETURN AIR	400	12 x 12	10 ø	FILTERED CEILING RETURN					

GENERAL COORDINATION NOTES (APPLY TO WORKING NOTES, ALL SHEETS)

(1) COORDINATE EXACT LOCATION AND REQUIREMENTS PRIOR TO BEGINNING ANY WORK.

1,917 3,595

DESIGN CONDITIONS								
	IND DES	oor Sign	OUTI	DOOR SIGN	INDOOR DESIGN	OUTDOOR DESIGN		
SPACE	SUM	MER	SUM	IMER	WINTER	WINTER		
SFACE	DB WB (*F) (*F)		DB (*F)	WB (*F)	DB (*F)	DB (*F)		
BEAUTY SALON	75	62.5	97	78	70	17		

MECHANICAL SYSTEMS, SE	RVICE SYSTEMS AND EQUIPMENT METHOD OF COMPLIANCE:
Prescriptive >	K Energy Cost Budget
Thermal Zone	3
Exterior design conditions winter dry bulb: summer dry bulb:	16 Deg. F. 97 Deg. F.
Interior design conditions winter dry bulb: summer dry bulb: relative humidity:	70 Deg. F. 75 Deg. F. 50%
Building heating load	172,500 BTU/Hr
Building cooling load	25.5 Tons
Mechanical Spacing Conditi Unitary description of heating efficien cooling efficien heat output of cooling output	oning System unit: SPLIT SYSTEM FUncy: 3 C.O.P. Incy: 13 SEER funit: 382,500 BTU/Hr of unit: 26 Tons
boiler total boiler ou	NA tput. if oversized, state reason.

total chiller capacity. If oversized, state reason. List equipment efficiencies

Equipment schedules with motors (mechanical systems)

motor horsepower: number of phases minimum efficiency motor type # of poles

DESIGNER STATEMENT: 1 To the best of my knowledge and belief, the design of this building complies with the mechanieph systems, service systems and equipment requirements of the North Carging System and Complex Volume X-Energy. NAME: Richard T. Thorne, Jr

TITLE: President

LEGEND		
	LEGEND NOTES:	
	1. ALL DARK AND SOLID SYMBOLS INDICATE DEVICES AND EQUIPMENT AS NEW WORK.	
12 x 12	RECTANGULAR DUCT, INSIDE CLEAR DIMENSIONS (HORIZONTAL X VERTICAL) INDICATED	
6ø	ROUND SINGLE LINE DUCT, DIAMETER INDICATED (SEE AIR DISTRIBUTION SCHEDULE FOR DUCT SIZE).	
\square	CEILING MOUNTED SUPPLY AIR DIFFUSER (CFM AS INDICATED)	
	CEILING MOUNTED RETURN AIR GRILLE	
A 100	GRILLE, REGISTER OR DIFFUSER MARK	
—] 	BALANCING DAMPER	
	NEW WORK NOTE DESIGNATION	
	GENERAL NOTE THERMOSTAT W/ UNIT DESIGNATION MOUNT 48" AFF MAX	
	ROOF INTAKE HOOD	
	CEILING EXHAUST FAN	
	ROOF EXHAUST	
	FLUE	
SD	SMOKE DETECTOR	
H⊳	GAS COCK	
I I	UNION	
D	- CONDENSATE DRAIN PIPING	
G PS /PI	- NATURAL GAS PIPING	
— K5/KL—	- REFRIGERANT LIQUID PIPING	
`-<	TRANSITION	
AFF	ABOVE FINISHED FLOOR	
AFG	ABOVE FINISHED GRADE	
BTUH	BRITISH THERMAL UNIT BRITISH THERMAL UNIT PER HOUR	
CFM	CUBIC FEET PER MINUTE	
CU IN	CUBIC FEET CUBIC INCHES	
dB		
DB	DRY BULB TEMPERATURE	
ΕΑ ΓΑΤ	EXHAUST AIR ENTERING AIR TEMPERATURE	
ESP	EXTERNAL STATIC PRESSURE	
EWT •F	ENTERING WATER TEMPERATURE	
FLA	FULL LOAD AMPS	
FPM FT	FEET PER MINUTE FOOT OR FEET	
HG HT OR H	HEAT GAIN	
HOR	HORIZONTAL	
HP HZ	HORSE POWER FREQUENCY	
IN	INCH(-ES)	
kw LAT	LEAVING AIR TEMPERATURE	
LB(S)	POUND(S)	
MAX	MAXIMUM	
MBH MCA	THOUSAND BRITISH THERMAL UNITS PER HOUR MINIMUM CIRCUIT AMPACITY	
MIN		
OA	OUTDOOR AIR	
PD DRESS	PRESSURE DROP	
PSI	POUND PER INCH	
RA RPM	RETURN AIR REVOLUTIONS PER MINITE	
SA	SUPPLY AIR	
SH SHC	SENSIBLE HEAT SENSIBLE HEAT CAPACITY	
SHG	SENSIBLE HEAT GAIN	
୨୯ SP	SWUARE STATIC PRESSURE	
	TOTAL CAPACITY TONS OF REFRICERATION	П
VEL	VELOCITY	
VOL WR	VOLUME WET BUI B	
WC	WATER COLUMN	
WI	WEIGHT	
	1 HOUR FIRE RATED BARRIER	

EM FURNACE

NA NA

NA

NA

NA



				SP	PLIT	SYST	EM GAS	FURNAC	E EQUI	PMENT S	SCHE	DULE								
	FURNACE																			
	SA	04		ESD	P0	WER	GAS H	EATING	C00	LING			POWER	1		м	IN ENER	GY		REMARKS
MARK	(CFM)	(CFM)	(HP)	(IN H20)	VOLTS	PHASE	TC INPUT		TC	SHC	VOLTS	PHASE	FLA	МСА	MOCP		RATING		WEIGHT	
							(мвн)	(мвн)	(мвн)	(мвн)						SEER	EER	HEAT	(LBS)	
FU-1/CU-1	1,400	280	1/3	0.5	120	1	75.0	67.5	41.5	29.7	208	1	26	32	50	13				
FU-2/CU-2	1,225	245	1/3	0.5	120	1	75.0	67.5	36.5	26.8	208	1	21	26	45	13				
FU-3/CU-3	1,750	350	1/2	0.5	120	1	100.0	90.0	52.8	39.4	208	1	31	38	60	13				
FU-4/CU-4	1,225	245	1/2	0.5	120	1	75.0	67.5	36.5	26.8	208	1	21	26	45	13				
FU-5/CU-5	1,750	350	1/3	0.5	120	1	100.0	90.0	52.8	39.4	208	1	31	38	60	13				

COOLING: INDOOR COIL ENTERING AIR: 80° DB/ 67° WB OUTDOOR AIR: 95° DB

HEATING: INDOOR COIL ENTERING AIR: 70* OUTDOOR AIR: 17°F DB

GAS REGULATOR SCHEDULE INLET PRESSURE OUTLET PRESSURE REMARKS CAPACITY MARK (BTUH) (PSI) (PSI) R-1 75,000 VENT LIMITER 0.5 2 R-2 VENT LIMITER 75,000 0.5 2 R-3 100,000 VENT LIMITER 2 0.5 75,000 R-4 VENT LIMITER 0.5 2 R-5 100,000 VENT LIMITER 2 0.5 R-6 VENT LIMITER 199,900 2 0.5

	GAS CONNE	CTION S	SCHEDULE	
MARK	DESCRIPTION	QUANTITY	APPLIANCE INPUT (BTUH)	TOTAL INPUT (BTUH)
FU-1	FURNACE UNIT	1	75,000	75,000
FU-2	FURNACE UNIT	1	75,000	75,000
FU-3	FURNACE UNIT	1	100,000	100,000
FU-4	FURNACE UNIT	1	75,000	75,000
FU-5	FURNACE UNIT	1	100,000	100,000
WH-1	WATER HEATER	1	199,900	199,900
TOTAL INPL	JT (BTUH)			624,900

GAS PIPE SIZE IS BASED ON SECTION 402.4(3) OF THE FUEL GAS CODE WITH MAXIMUM DEVELOPED PIPE LENGTH OF 250'-0" NATURAL GAS PRESSURE OF 2.0 PSIG. DELIVERY PRESSURE SHALL BE (0.5 PSIG).

* ESP IS FOR DUCTWORK ONLY

FAN SCHEDULE								
			ECD		F	OWER		
MARK	TYPE	(CFM)	(IN H20)	(RPM)	MAX HP	VOLTS	PHASE	REMARKS
EF-202	CEILING EXHAUSTER	75	0.25	1,050	1/8	115	1	TOILET EXHAUST FAN
EF-204	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-205	CEILING EXHAUSTER	80	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-206	CEILING EXHAUSTER	125	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-207	CEILING EXHAUSTER	150	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-208	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-210	CEILING EXHAUSTER	80	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-211	CEILING EXHAUSTER	125	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-212	CEILING EXHAUSTER	125	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-213	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-214	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-215	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-216	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-217	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-218	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-219	CEILING EXHAUSTER	125	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-220	CEILING EXHAUSTER	125	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-221	CEILING EXHAUSTER	80	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-222	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-223	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-225	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-226	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-227	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-228	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-229	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-231	CEILING EXHAUSTER	100	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-232	CEILING EXHAUSTER	150	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-233	CEILING EXHAUSTER	125	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-234	CEILING EXHAUSTER	80	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-235	CEILING EXHAUSTER	150	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-237	CEILING EXHAUSTER	75	0.25	1,050	1/8	115	1	TOILET EXHAUST FAN
EF-238	CEILING EXHAUSTER	75	0.25	1,050	1/8	115	1	TOILET EXHAUST FAN
EF-239	CEILING EXHAUSTER	125	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN
EF-240	CEILING EXHAUSTER	150	0.25	1,050	1/8	115	1	SALON ROOM EXHAUST FAN

NOTES: THE ESP NOTED IS FOR DUCTWORK, LOUVER OR ROOF HOOD ONLY. ADD ALL INTERNAL ACCESSORIES (SUCH AS: BACKDRAFT DAMPERS & SOUND ATTENUATORS) TO THE STATIC PRESSURE OF THE FAN.

· · · · · · · · · · · · · · · · · · ·			
			ROOF
MARK	SERVICE	MAX AIR FLOW (CFM)	PD (IN H20)
RH-1	INTAKE	1,500	0.10
RH-2	INTAKE	1,500	0.10
RH-3	EXHAUST	2,100	0.10
RH-4	EXHAUST	2,100	0.10

HOOD SCHEDULE THROAT SIZE THROAT AREA HOOD SIZE REMARKS (IN) (SQ FT) (IN) 30 x 30 | 15 LBS, FU-4, FU-5 16 x 16 1.77 16 x 16 1.77 30 x 30 15 LBS, FU-1, FU-2, FU-3 36 x 36 22 LBS 20 x 20 2.77 36 x 36 22 LBS 20 x 20 2.77

Do\/on Tolson
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ASSOCIATES, INC. Professional Engineering Services ASSOCIATES, CARDON CARDON CARDON CONTRACTOR OF CO
SEAL MARKER STILL
HDMA# 16022 07/01/16
HERITAGE SALON FIT-UP
3117 RODGERS ROAD
WAKE FOREST, NC
OWNER:JMJ Commercial Contractors 10713 Staghound Trail
PROJECT NUMBER:160001DRAWN BY:JAOISSUED / REVIEW:RTT
ISSUED / CONSTRUCTION:
REVISIONS
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MECHANICAL SCHEDULES
M1.1
OF SHEETS











SUSPEND FROM STRUCTURE WITH (4) 1/4" ALL THREADED STEEL RODS PROVIDE VIBRATION ISOLATION ON EACH END.

GRILLE -





- 1 PROVIDE SUPPLY AIR DIFFUSER AS SCHEDULED. PROVIDE RUN-OUT DUCT, BALANCING DAMPER, HANGERS AND SUPPORT AND CONNECT TO MAIN SUPPLY DUCT. BALANCE AIR QUANTITY AS INDICATED.
- 2 PROVIDE SUPPLY AIR DUCTWORK WITH HANGERS, SUPPORTS AND ALL REQUIRED MATERIALS TO ROUTE AS INDICATED.
- 3 PROVIDE RETURN AIR GRILLE AS SCHEDULED. PROVIDE RUN-OUT DUCT, BALANCING DAMPER, HANGERS AND SUPPORT AND CONNECT TO MAIN RETURN DUCT. BALANCE AIR QUANTITY AS INDICATED.
- 4 PROVIDE RETURN AIR DUCTWORK WITH HANGERS, SUPPORTS AND ALL REQUIRED MATERIALS TO ROUTE AS INDICATED.
- 5 INSTALL DUCT SMOKE DETECTOR PROVIDED BY FIRE ALARM CONTRACTOR.
- 6 PROVIDE OUTSIDE AIR INTAKE ROOF HOOD WITH MAIN DUCT ON ROOF CURB PER MANUFACTURER'S RECOMMENDATIONS. SEAL ROOF PENETRATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. MAINTAIN A MINIMUM OF 10'-0" DISTANCE AWAY FROM EXHAUST AND VENT TERMINATIONS. SEE OUTSIDE AIR INTAKE DETAIL.
- 7 PROVIDE 100 OUTSIDE AIR INTAKE DUCTWORK WITH BALANCING DAMPER, HANGERS AND SUPPORTS AND CONNECT TO MAIN OUTSIDE AIR DUCT.
- 8 PROVIDE SPLIT SYSTEM GAS FURNACE UNIT AS SCHEDULED. PROVIDE FULL SIZE OPEN PLENUM CONCENTRIC FLUE VENT, HANGERS AND SUPPORTS. MOUNT ABOVE CEILING. SEE GAS FURNACE MOUNTING DETAIL.
- 9 PROVIDE THERMOSTAT FOR GAS FURNACE UNIT WITH WIRING AS INDICATED.
- 10 PROVIDE CONDENSING UNIT AS SCHEDULED. PROVIDE 4" THICK CONCRETE EQUIPMENT PAD 6" LARGER THAN EQUIPMENT. COORDINATE ELECTRICAL CONNECTION WITH ELECTRICAL CONTRACTOR.

NOTE:					
* CONTRACTOR PRIOR TO FABR	SHALL FIELD RICATING ANY	DUCTWO	ALL RK.	DUCTWORK	





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HERITAGE SALON FIT-UP
3117 RODGERS ROAD WAKE FOREST, NC
OWNER: JMJ Commercial Contractors 10713 Staghound Trail Zebulon, NC PROJECT NUMBER: 160001 DRAWN BY: JAO ISSUED / REVIEW: RTT ISSUED / CONSTRUCTION: REVISIONS
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LOOR PLAN - DUCTWORK



MECHANICAL SECOND FLOOR PLAN – EXHAUST DUCTWORK SCALE: 1/8" = 1'-0"

- 1 PROVIDE 4" RIGID DRYER DUCT CONCEALED UP IN WALL TO ROOF DRYER VENT. SEE DRYER VENT HOOKUP DETAIL AND ROOF DRYER VENT DETAIL. COORDINATE ROOF PENETRATION WITH GENERAL CONTRACTOR. ROOF SHALL BE PENETRATED IN ACCORDANCE WITH ROOF MANUFACTURES REQUIREMENTS. MAINTAIN A MINIMUM OF 10'-0" DISTANCE AWAY FROM OUTSIDE AIR INTAKES.
- 2 PROVIDE CEILING EXHAUST FAN AS SCHEDULED. PROVIDE EXHAUST DUCT, HANGERS AND SUPPORT AND CONNECT TO EXHAUST ROOF HOOD. EXHAUST FAN SHALL BE SWITCHED INDEPENDENTLY. COORDINATE SWITCHING AND POWER WITH ELECTRICAL CONTRACTOR. SEE CEILING FAN DETAIL.
- 3 PROVIDE CEILING EXHAUST FAN AS SCHEDULED. PROVIDE EXHAUST DUCT, HANGERS AND SUPPORT AND CONNECT TO EXHAUST ROOF HOOD. EXHAUST FAN SHALL BE SWITCHED WITH LIGHTS. COORDINATE SWITCHING AND POWER WITH ELECTRICAL CONTRACTOR. SEE CEILING FAN DETAIL.
- 4 PROVIDE EXHAUST AIR DUCTWORK WITH HANGERS, SUPPORTS AND ALL REQUIRED MATERIALS TO ROUTE AS INDICATED.
- 5 PROVIDE EXHAUST AIR ROOF HOOD ON ROOF CURB PER MANUFACTURER'S RECOMMENDATIONS. SEAL ROOF PENETRATION IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. MAINTAIN A MINIMUM OF 10'-0" DISTANCE AWAY FROM OUTSIDE AIR INTAKES. SEE EXHAUST AIR DETAIL.

NOTE:	
* CONTRACTOR SHALL FIELD LAYOUT ALL DUCTWO PRIOR TO FABRICATING ANY DUCTWORK.	ORK





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HERITAGE SALON FIT-UP	
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	4'	0	4'	8	16'
/8" = 1' - (יי 🔳				



ELECTRICAL SPECIFICATIONS

- 1. THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS IS TO DESCRIBE THE INSTALLATION OF A COMPLETE, 37. PROVIDE PLAQUE ON SERVICE INDICATING MAXIMUM AVAILABLE FAULT CURRENT AND INCLUDE DATE FULLY ADJUSTED AND OPERATIONAL SYSTEM.
- 2. THE CONTRACTOR SHALL PROVIDE ALL SUPERVISION, LABOR, MATERIAL, EQUIPMENT, MACHINERY AND ANY
- AND ALL OTHER ITEMS NECESSARY TO COMPLETE THE SYSTEM.
- 3. ALL WORK UNDER THIS SECTION SHALL BE ACCOMPLISHED IN STRICT ACCORDANCE WITH STATE BUILDING CODES AND THE NATIONAL ELECTRICAL CODE. ALL DEVICES SHALL BE LOCATED IN ACCORDANCE WITH ANSI A117.1 FOR ADA REQUIREMENTS WHERE APPLICABLE. IN THE EVENT THE LOCAL AUTHORITY HAVING JURISDICTION DETERMINES THERE IS A CODE VIOLATION ASSOCIATED WITH THE CONSTRUCTION DOCUMENTS AND REQUIRES ADDITIONAL WORK, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE VIOLATION. IF THE CONTRACTOR DOES NOT CONTACT THE ENGINEER, ALL EXPENSES ASSOCIATED WITH THE VIOLATION WILL BE THE CONTRACTOR'S RESPONSIBILITY.
- 4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY APPROVAL, OBTAIN ALL PERMITS AND PAY ALL FEES REQUIRED FOR THE INSTALLATION OF THEIR WORK.
- 5. THE DRAWINGS ARE DIAGRAMMATIC ONLY. THE CONTRACTOR MAY NEED TO MAKE FIELD ADJUSTMENTS TO ACCOMMODATE ACTUAL FIELD CONDITIONS. 6. THE CONTRACTOR SHALL REFER TO THE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR THE GENERAL
- CONSTRUCTION OF THE BUILDING, FOR FLOORS AND CEILING HEIGHTS, FOR LOCATIONS OF WALLS, PARTITIONS, BEAMS, ETC.
- 7. MANUFACTURER'S LIST ARE TO ESTABLISH A STANDARD OF QUALITY AND NOT INTENDED TO LIMIT THE SELECTION TO THESE MANUFACTURERS.
- 8. CONTRACTOR SHALL VERIFY ALL LISTED MODEL NUMBERS WITH MANUFACTURERS TO INSURE PROPER APPLICATION OF EQUIPMENT.
- 9. EQUIPMENT AND MATERIALS SHALL BE HANDLED, STORED AND PROTECTED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 10. THE CONTRACTOR SHALL PERFORM ANY AND ALL TRENCHING, EXCAVATION AND BACKFILLING REQUIRED FOR THE INSTALLATION OF HIS WORK. 11. THE CONTRACTOR SHALL FURNISH ALL NECESSARY SCAFFOLDING, STAGING, RIGGING AND HOISTING REQUIRED
- FOR THE COMPLETION OF HIS WORK. 12. ALL WORK SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR AND OTHER TRADES INVOLVED IN THE CONSTRUCTION PROJECT. ALL WORK SHALL BE CAREFULLY LAID OUT IN ADVANCE TO COORDINATE
- ARCHITECTURAL, STRUCTURAL, MECHANICAL, PLUMBING AND ELECTRICAL FEATURES OF CONSTRUCTION. 13. THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE BEFORE SUBMITTING HIS BID SO AS TO BE THOROUGHLY FAMILIAR WITH THE JOB CONDITIONS AND/OR PECULIARITIES. NO EXTRA PAYMENT WILL BE
- ALLOWED FOR ANYTHING WHICH COULD HAVE BEEN ANTICIPATED FROM A VISIT TO THE SITE.
- 14. EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. 15. PROVIDE GROUNDING FOR SERVICE, ALL CONDUITS, MOTOR FRAMES, METAL CASINGS, RECEPTACLES, SYSTEM NEUTRAL. ETC. AND AS REQUIRED BY NEC AS MINIMUM. RESISTANCE TO GROUND SHALL NOT EXCEED 25 OHMS. CONTRACTOR SHALL SUBMIT GROUNDING TEST REPORT.
- 16. A GREEN INSULATED COPPER GROUND WIRE, SIZED PER NEC, SHALL BE INSTALLED IN ALL CONDUIT. 17. ALL FIXTURES SHOWN ON THE FIXTURE SCHEDULE SHALL BE FURNISHED AND INSTALLED, COMPLETE WITH ALL MOUNTING ACCESSORIES, LAMPS AND TUBES. FIXTURES SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURE AT A MINIMUM OF TWO OPPOSITE POINTS. ACRYLIC LENSES SHALL BE A MINIMUM THICKNESS OF 1/8 INCHES.
- 18. ALL WIRING SHALL BE RUN IN CONDUIT. FOR UNDER FLOOR INSTALLATIONS, CONDUIT SHALL BE RUN BELOW, NOT IN, THE SLAB. THE MINIMUM INDOOR CONDUIT SIZE SHALL BE 3/4 INCH. THE MINIMUM OUTDOOR UNDERGROUND CONDUIT SIZE SHALL BE 1 INCH. FEEDER CONDUITS EXTERIOR TO THE BUILDING FOUNDATION WALL BELOW GRADE SHALL BE SIZED AS SHOWN ON THE DRAWING. OUTDOOR EXPOSED CONDUIT SHALL BE RIGID CONDUIT. UNDERGROUND CONDUIT SHALL BE RIGID METALLIC CONDUIT OR NONMETALLIC RIGID CONDUIT WHERE NOTED. CONNECTION TO EQUIPMENT SHALL BE LIQUIDTIGHT FLEXIBLE METAL CONDUIT. OUTDOOR BOXES AND ENCLOSURES SHALL BE NEMA TYPE 3R. INDOOR CONDUIT SHALL BE ELECTRICAL METALLIC TUBING OR TYPE AC, MC CABLE MAY BE USED FOR BRANCH CIRCUITS WHERE ALLOWED BY NEC AND NOT SUBJECT TO PHYSICAL DAMAGE, MOISTURE OR DAMPNESS. CONNECTION TO EQUIPMENT SHALL BE FLEXIBLE METAL CONDUIT EXCEPT IN WET OR DAMP LOCATIONS USE LIQUIDTIGHT FLEXIBLE METAL CONDUIT. INDOOR BOXES AND ENCLOSURES SHALL BE NEMA TYPE 1, EXCEPT IN DAMP OR WET LOCATIONS USE NEMA TYPE 3R. WHERE NONMETALLIC CONDUIT IS USED BELOW THE SLAB PROVIDE RIGID CONDUIT TO TURN UP INTO THE BUILDING SPACE OR AT ALL EXTERIOR WALLS. POLES OR EQUIPMENT. USE RACEWAY FITTINGS COMPATIBLE WITH RACEWAY AND SUITABLE FOR USE AND LOCATION. RUN CONCEALED RACEWAYS WITH A MINIMUM OF BENDS IN THE SHORTEST PRACTICAL DISTANCE CONSIDERING THE TYPE OF BUILDING CONSTRUCTION AND OBSTRUCTIONS. RACEWAYS SHALL RUN PARALLEL TO OR AT RIGHT ANGLES TO NEARBY SURFACES OR STRUCTURAL MEMBERS AND FOLLOW THE SURFACE CONTOURS AS MUCH AS PRACTICAL. PROVIDE GROUNDING CONNECTIONS FOR RACEWAY, BOXES AND COMPONENTS AS INDICATED AND INSTRUCTED BY MANUFACTURER. TIGHTEN CONNECTIONS AND TERMINALS, INCLUDING SCREWS AND BOLTS, ACCORDING TO EQUIPMENT MANUFACTURER'S PUBLISHED TORQUE-TIGHTENING VALUES FOR EQUIPMENT CONNECTORS. WHERE MANUFACTURER'S TORQUING REQUIREMENTS ARE NOT INDICATED, TIGHTEN CONNECTORS AND TERMINALS ACCORDING TO TIGHTENING TORQUES SPECIFIED IN UL STANDARD 486A. ALL UNDERGROUND RACEWAYS SHALL BE IDENTIFIED BY "UNDERGROUND LINE MARKING TAPE" LOCATED DIRECTLY ABOVE THE RACEWAY AT 6 INCH BELOW FINISHED GRADE. TAPE SHALL BE PERMANENT, BRIGHT-COLORED, CONTINUOUS, MAGNETIC STRIP, PRINTED, PLASTIC TAPE COMPOUNDED FOR DIRECT BURIAL NOT LESS THAN 6 INCHES WIDE AND 4 MILS THICK. PRINTED LEGEND SHALL BE INDICATIVE OF THE SERVICE IT IS MARKING. CONDUITS EXPOSED TO DIFFERENT TEMPERATURES SHALL BE SEALED AS REQUIRED BY NEC ARTICLE 300.7A.
- 19. COLOR FOR DEVICES SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR.
- 20. RECEPTACLES SHALL COMPLY WITH UL STANDARD 498, "ELECTRICAL ATTACHMENT PLUGS AND RECEPTACLES," HEAVY-DUTY GRADE 20 AMP RATED EXCEPT AS OTHERWISE INDICATED.
- 21. GROUND-FAULT CIRCUIT INTERRUPTER (GFCI) RECEPTACLES SHALL COMPLY WITH UL STANDARD 943.
- "GROUND FAULT CIRCUIT INTERRUPTERS," WITH INTEGRAL NEMA 5-20R DUPLEX RECEPTACLE. 22. SINGLE POLE AND THREE/FOUR-WAY TOGGLE TYPE SNAP SWITCHES SHALL BE 20 AMP 120/277 VAC,
- RATED, QUIET-TYPE AC SWITCHES. NRTL LISTED AND LABELED AS COMPLYING WITH UL STANDARD 20 "GENERAL USE SNAP SWITCHES," AND WITH FEDERAL SPECIFICATION W-S-896. 23. WALL PLATES: SINGLE AND COMBINATION TYPES SHALL BE 302 STAINLESS STEEL THAT MATE AND MATCH
- WITH CORRESPONDING WIRING DEVICES.
- 24. CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC AS FOLLOWS: PHASE 208/120 VOLTS

PHASE	208/120 VOLT
Α	BLACK
В	RED
С	BLUE
NEUTRAL	WHITE
GROUND	GREEN

- 25. ELECTRICAL EQUIPMENT SHALL BE IDENTIFIED WITH LABELS OF ENGRAVED PLASTIC-LAMINATE ON EACH MAJOR UNIT OF ELECTRICAL EQUIPMENT IN THE BUILDING, INCLUDING CENTRAL OR MASTER UNIT OF EACH ELECTRICAL SYSTEM.
- 26. PANELBOARDS/LOADCENTERS SHALL BE OF THE TYPE WITH RATING AND FEATURES AS INDICATED ON THE SCHEDULES. ENCLOSURES SHALL BE NEMA TYPE 1, FLUSH OR SURFACE MOUNTED AS INDICATED. CABINET SHALL BE CODE GAUGE, GALVANIZED STEEL. FRONTS SHALL BE SHEET STEEL WITH GRAY LACQUER FINISH WITH HINGED LOCKING DOOR. GROUND AND NEUTRAL BUS SHALL BE 100% RATED. BUS SHALL BE HARD DRAWN COPPER OF 98% CONDUCTIVITY. MAIN AND NEUTRAL LUGS SHALL BE BOLT-ON TYPE. EQUIPMENT GROUND BUS SHALL BE ADEQUATE FOR FEEDER AND BRANCH-CIRCUIT EQUIPMENT GROUND CONDUCTORS. BONDED TO BOX. DIRECTORY FRAME SHALL BE METAL, MOUNTED INSIDE EACH PANEL DOOR. AT THE COMPLETION OF THIS INSTALLATION, TYPE CIRCUIT DESIGNATIONS ON THE DIRECTORY CARD AND LEAVE IN THE CARD HOLDER PROVIDED INSIDE CABINET DOORS. TANDEM CIRCUIT BREAKERS SHALL NOT BE USED. MULTIPOLE BREAKERS SHALL HAVE COMMON TRIP. THE MINIMUM INTERRUPTING RATING FOR CIRCUIT BREAKERS RATED AT 120/208 VOLTS SHALL BE 22,000 AMPS RMS SYMMETRICAL. FOR FLUSH MOUNTED PANELS PROVIDE A MINIMUM OF (4) 1 INCH CONDUITS STUBBED TO THE CEILING SPACE FOR FUTURE USE.
- 27. ENCLOSED NONFUSIBLE DISCONNECT SWITCH SHALL BE NEMA KS 1, TYPE HD, HANDLE LOCKABLE WITH 2 PADLOCKS. ENCLOSED FUSIBLE DISCONNECT SWITCH, NEMA KS 3, TYPE HD, CLIPS TO ACCOMMODATE SPECIFIED FUSES, ENCLOSURE CONSISTENT WITH ENVIRONMENT WHERE LOCATED, HANDLE LOCKABLE WITH 2 PADLOCKS AND INTERLOCKED WITH COVER IN CLOSED POSITION. ALL SWITCHES SHALL BE "HEAVY DUTY" RATED FOR THE VOLTAGE REQUIRED.
- 28. MAKE ALL NECESSARY TESTS TO INSURE THAT THE ENTIRE INSTALLATION IS FREE FROM IMPROPER GROUNDS AND FROM SHORTED AND/OR OPEN CIRCUITS. VOLTAGE, CURRENT AND ROTATION TESTS SHALL BE MADE BEFORE ANY MOTORS ARE PLACED IN OPERATION. ALL LOADS MUST BE BALANCED ACROSS PHASES. CHECK TO SEE THAT ALL LIGHTS WORK AND ARE CONTROLLED BY SWITCHES INDICATED ON DRAWINGS OR BREAKERS SO INDICATED ON PANEL SCHEDULE.
- 29. MARK ALL DEVICES AS TO WHICH PANEL AND CIRCUIT THEY ARE CONNECTED.
- 30. ELECTRICAL SERVICE IS EXISTING 208Y/120V THREE PHASE, 4 WIRE.
- 31. ALL CONDUCTORS SHALL BE COPPER. ALL WIRING FOR EQUIPMENT SHALL BE ONE OF THE FOLLOWING TYPES THW, THHW, THWN WITH A RATING OF AT LEAST 75 DEGREES C. 32. BACK TO BACK DEVICES LOCATED IN RATED WALLS SHALL BE SEPARATED BY A DISTANCE OF AT LEAST 24
- INCH HORIZONTALLY. 33. FINAL LOCATIONS OF ALL EXIT AND EMERGENCY LIGHTS SHALL BE VERIFIED WITH THE BUILDING INSPECTOR
- PRIOR TO INSTALLATION. 34. BRANCH CIRCUITS SHALL NOT EXCEED 80% OF OVERCURRENT PROTECTION. DEVICES SHALL BE RELOCATED
- TO ANOTHER CIRCUIT IF FOUND TO BE IN EXCESS OF 80%.
- 35. ALL RECEPTACLES LOCATED WITHIN SIX FEET FROM THE EDGE OF A SINK SHALL BE GFCI TYPE. 36. ALL LIGHT FIXTURES SHALL BE PROVIDED WITH INTERNAL DISCONNECTING MEANS: THOMAS BETTS STA-KON SERIES OR ENGINEER APPROVED EQUAL.

COMPATIBLE WITH LABEL AND WITH SUBSTRATE.



MAX. PIPE OR CONDUIT	ANNULAR SPACE	F RATING (HOUR)
DIAM (IN)	(IN)	
1	0 - 3/16	1 OR 2
1	1/4 - 1/2	3 OR 4
4	0 – 1/4	1 OR 2
6	1/4 - 1/2	3 OR 4
12	3/16 – 3/8	1 OR 2
+WHEN COPPE	r PIPE is Used, t RA	TING IS 0 HOURS.
3M (O_TYPES CP_25 S/	I CP_25 N/S CP

	AVAILABLE	FA	ULT
0	DATE	OF	CAL



NEC ARTICLE 110.24 PLACARD DETAIL WORK NOTES

- 1 PROVIDE PLAQUE INDICATING AVAILABLE FAULT CURRENT AT PANEL A IS 11,665 AIC.
- 2 PROVIDE PLAQUE INDICATING AVAILABLE FAULT CURRENT AT PANEL B IS 11,665 AIC.
- 3 CONTRACTOR TO VERIFY AVAILABLE FAULT PRIOR TO ENERGIZE SERVICE DISCONNECT.

Prescriptive X Performance	Energy Cost Budget	
Provide a standard riser diagram which i Provide a standard panel schedule descri	indicates designated points for check metering. iption which identifies different end use loads.	NA NA
Lighting schedule: lamp type required in fixture number of lamps in fixture ballast type used in the fixture number of ballast in fixture total wattage per fixture total interior wattage specified vs of All exterior light fixtures shall be p	SEE DRAWINGS SEE DRAWINGS SEE DRAWINGS SEE DRAWINGS SEE DRAWINGS SEE DRAWINGS allowed: Specified: 5,622 watts, Allowed: 10,039 provided with a minimum source efficacy of 45 lu	9 watts umens/w
Equipment schedules with motors (not us motor horsepower: number of phases minimum efficiency motor type # of poles	sed for mechanical systems) NA NA NA NA NA NA	
DESIGNER STATEMENT: 1 To the best of my knowledge and belief,	the design of this building complies with the ele	ectrical

NAME: Richard T. Thorne, Jr., 4 TITLE: President

I ECEND

	<u>'</u>	
1. ALL DARK	AND SOLID SYMBOLS INDICATE DEVICES AND	
EQUIPME 2. ALL LIGH	NT AS NEW WORK. T AND SOLID SYMBOLS INDICATE DEVICES AND	
EQUIPME	NT THAT ARE EXISTING TO REMAIN.	
TYPE WI	TH REFERENCE TO FIXTURE SCHEDULE.	
4. MOUNTING UNLESS	J HEIGHTS GIVEN BELOW SHALL BE FOLLOWED NOTED ON THE FLOOR PLANS, SCHEDULES OR	
HEIGHTS	ARE TO CENTER OF THE DEVICE.	
5. "NL" NEX SWITCHEI	(T TO ANY FIXTURE INDICATES FIXTURE IS NOT D.	
• 0	CEILING MOUNTED LIGHTING FIXTURE. SEE LIGHT FIXTURE SCHEDULE.	
\otimes	EXIT LIGHT, ARROW INDICATES DIRECTION, TWO ARROWS INDICATE DOUBLE FACE. CONNECT AHEAD OF SWITCH.	
S	SINGLE POLE SWITCH, 20A, 48" AFF.	
So	SINGLE POLE OCCUPANCY SENSING SWITCH, 20A, 48" AFF.	
SM	MOTOR RATED SWITCH WITH OVERLOADS.	
Φ	DUPLEX CONVENIENCE RECEPTACLE, 20A, 125 VOLTS, 3 WIRE GROUNDING TYPE, 4" SQUARE BOX WITH SINGLE GANG RING AND COVER UNLESS NOTED OTHERWISE, 18" AFF EXCEPT AS NOTED.	
₩ ₽	DUPLEX CONVENIENCE RECEPTACLE WITH GROUND—FAULT CIRCUIT—INTERRUPTER PROTECTION, 20A, 125 VOLT, 3 WIRE GROUNDING TYPE, 4" SQUARE BOX WITH SINGLE GANG RING AND COVER, 18" AFF EXCEPT AS NOTED.	
Ē	EQUIPMENT CONNECTION	
0	CEILING MOUNTED OCCUPANCY SENSOR, EQUAL TO LEVITON MODEL #OSC10-MOW WITH 001-OSP-0D0 120/230/277 VOLT POWER PACK, EXCEPT AS NOTED.	
\bullet	POINT OF CONNECTION	
Æ	REVISION DESIGNATION	
#	NEW WORK NOTE DESIGNATION	
(# >	GENERAL NOTE	
	BRANCH CIRCUIT CONDUIT RUN CONCEALED IN WALL OR ABOVE CEILING. WIRE SIZE #12 UNLESS NOTED OTHERWISE.	
L-1	INDICATES CIRCUIT HOMERUN TO PANEL. LETTER & NUMBERS INDICATE PANEL DESIGNATION & CIRCUIT BREAKER NUMBER.	
20AF	DISCONNECT SWITCH FUSIBLE OR NON-FUSIBLE, 600V, 3 POLE SWITCH & FUSE (IF ANY) AS NOTED. PANELBOARD, 120/208, VOLTS, SEE SCHEDULE	
	FIRE RATED BARRIER	
A OR AMP	AMPERE(S)	
AFF AIC	ABOVE FINISHED FLOOR AMPERE INTERRUPTING CAPACITY	
AFG	ABOVE FINISHED GRADE	
3KR	BREAKER	
с Скт	CONDUIT CIRCUIT	
F FLA	DEGREES FAHRENHEIT FULL LOAD AMPS	
G GECI	GROUND GROUND-FAULT CIRCUIT INTERRUPTER	
HP N	HORSE POWER	
	THOUSAND AMPERE INTERRUPTING CAPACITY	
(VA	THOUSAND CIRCULAR MILES THOUSAND VOLT AMPERES	
<w _ED</w 	LIGHT EMITTING DIODE	
LTS MAX	LIGHTS MAXIMUM	
MCA MCB	MINIMUM CIRCUIT AMPACITY MAIN CIRCUIT BREAKER	
MIN		
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)	
NEMA NO	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION NUMBER	
NRTL ø	NATIONALLY RECOGNIZED TESTING LABORATORIES ELECTRICAL PHASE	
P	POLE	
REC	RECEPTACLE	
SQ V	SQUARE VOLT(S)	
W Y	WATT(S) OR WIRE WYE	



			PAN	FTR	UAł	KD	ŻA	SC	HEL	JULŁ			
		400	DA MLO	, 120,	/208 \	V, 3	PHASE	Ξ, 4 \	VIRE	22 kaic	MINIMUM	SURFAC	e mount
	L	DAD(AMPS	S)	BKR	CKT	PH	HASE	СКТ	BKR	L	OAD(AMPS	6)	
LUAD SERVED	Α	B	C	TRIP	NO	A	ВC	NO	TRIP	A	В	С	LUAD SERVED
LTS CORRIDOR, RESTROOMS	13			20	1		+-1	2	50	26			CU-1
LTS 204-208, 231-235, 239, 240		13		20	3	\vdash	╅╌┼┚	4	2P		26		2#8, 1#10G, 3/4"C
LTS 222-229			9	20	5	\vdash	++1	6	45			21	CU-2
LTS 210-221	13			20	7	┣╱┿╴	┼┼┦	8	2P	21			2#8, 1#10G, 3/4"C
SIGN		10		20	9	\vdash	+	10	60		31		CU-3
SIGN			10	20	11	\mathbb{M}	┼┿┚	12	2P			31	2#8, 1#10G, 3/4"C
SPARE				20	13	┝┥	++1	1 4	45	21			CU-4
SPARE				20	15	\mathbb{M}	┥╌┤┚	16	2P		21		2#8, 1#10G, 3/4"C
SPARE				20	17	\vdash	++1	└ 18	60			31	CU-5
SPACE					19	┣╱┿╴	┼┼┦	20	2P	31			2#8, 1#10G, 3/4"C
SPACE					21	\vdash	┢┼╱	22					SPACE
SPACE					23	\vdash	┼╆╯	24					SPACE
SPACE					25	\vdash	++	26					SPACE
SPACE					27	\vdash	┿┼╯	28					SPACE
SPACE					29	\vdash	┼┿╯	30					SPACE
PANEL 2B	77			150	31	┠┲┢─	++	32					SPACE
		88		3P	33	₩–	╆┼╱	34					SPACE
			85		35	\mathbb{M}	┼╆╯	36					SPACE
PANEL 2C	74			150	37	┠┲┢─	+-1	38	150	63			PANEL 2D
		60		3P	39	₩–	↓ - 1	40	3P		50		
			53		41	arphi	┼┿┚	42				57	
TOTAL	177	171	157							162	128	140	TOTAL
			TOTAL	CONN	ECTED	AMP	PS A:	338	B: 299	9 C:2	297		

		LOAD
REC	216	
REC	217	
REC	218	
REC	218	, 219
REC	219	
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REC	220	, 221
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REC	223	
REC	228	
REC	223	, 229
REC	229	
FU-	1	
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FU-	3	
SPAF	RE	
		Т

PANELBOARD 2C SCHEDULE													
		22	5A MLO	, 120,	/208 \	V, 3	PHASE,	4 V	VIRE	22 KAIC	MINIMUM	FLUS	SH MOUNT
SERVED	L(DAD(AMP B	s) c	BKR TRIP	CKT NO	PH A	IASE B C	CKT NO	BKR TRIP	L(DAD(AMPS B	S) C	LOAD SERVED
	3			20	1		$\vdash \uparrow$	2	20	3			REC 231
		3		20	3	\vdash	┢┼╲	4	20		3		REC 232
			3	20	5	\vdash	╞╋╲	6	20			3	REC 233
	6			20	7	┝┿	$\vdash \uparrow \uparrow$	8	20	6			REC 232, 233
		3		20	9	\vdash	┢┼╲	10	20		6		REC 231, 234
			3	20	11	\vdash	┼╆╲	12	20			3	REC 234
	6			20	13	┢┑┿	$\vdash \uparrow \uparrow$	14	20	3			REC 235
		3		20	15	\vdash	┥┤╲	16	20		6		EF-216, 217
			3	20	17	\vdash	┼╆╲	18	20			6	EF-218, 219
	6			20	19	┢╱┿╴	$\vdash \uparrow \uparrow$	20	20	6			EF-220, 221
		3		20	21	\vdash	┢┼╲	22	20		6		EF-222, 223
			3	20	23	\vdash	┼╆╲	24	20			6	EF-228, 229
	6			20	25	┝┥┥	$\vdash \uparrow \uparrow$	26	20	6			EF-231, 232
		3		20	27	\vdash	┢┼╲	28	20		6		EF-233, 234
			7	20	29	\vdash	╞╋╲	30	20			8	REC HOODED DRYER
	7			20	31	┝┥┥	$\vdash \uparrow \uparrow$	32	20	8			REC HOODED DRYER
		10		20	33	\vdash	┢┼╲	34	20		8		REC HOODED DRYER
				20	35	\vdash	┼╆╲	36	20			8	REC HOODED DRYER
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				20	41	\vdash	++	42	20				SPARE
TAL	34	25	19							40	35	34	TOTAL
			TOTAL	CONN	ECTED	AMP	S A: 7	4	B: 60	C:5	53		

PANELE 225 A MLO, 12 LOAD(AMPS) BKR LOAD SERVED REC 237, 238 REC 235, 239 6 6 REC 239 3 2 REC 240 3 REC 240, 204 REC 204 6 3 EF-204, 240 EF-235, 239 6 6 REC 202 * REC EWC 3 3 10 REC OUTDOOR WH-1, RCP-1 2 6 20 SPARE SPARE SPARE SPACE SPACE SPACE SPACE SPACE SPACE TOTAL 25 20 17 TOTAL CON * PROVIDE GFCI BREAKER.

PANEL 225 A MLO, 12 LOAD(AMPS) BKI LOAD SERVED REC 210 3 REC 211 3 REC 211, 212 6 24 REC 212 REC 213 3 3 REC 210, 213 6 2 REC 214 3 REC 214, 225 REC 215 6 3 3 REC 215, 216 REC VENDING 6 5 REC HOODED DRYER 82 REC HOODED DRYER 8 REC 207 3 REC 208 3 2 REC 207, 208 6 REC 205 3 REC 206 3 3 REC 205, 206 6 SPARE SPARE 35 23 29 TOTAL

* PROVIDE GFCI BREAKER.

LIGHTING RECEPTA HVAC EQUIPME SIGN TOTAL (I * *** **** **** ****

B	BOARD 2B SCHEDULE										
20,	/208 '	V, 3 P	PHASE,	4 V	VIRE	22 KAIC	MINIMUM	SURFACE	e mount		
R	CKT	PHA	SE	CKT	BKR	L	DAD(AMPS	S)			
IP	NO	AB	С	NO	TRIP	A	B	C	LUAD SERVED		
)	1		\rightarrow	2	20	5			WASHER		
)	3	┝╌┼╺╁	\rightarrow	4	20		5		WASHER		
)	5	$\rightarrow \rightarrow$	\rightarrow	6	20			5	WASHER		
)	7	┣╍┿┥┥	\rightarrow	8	20	5			WASHER		
)	9	┣╱┼╌┥	- ↑	10	30		21		DRYER		
)	11	$\rightarrow \rightarrow$	- † ^	12	2P			21	3#10, 1#10G, 3/4"C		
)	13	┣╱┿╾┤	↑	14	30	21			DRYER		
)	15	┣╱┼╌┥	_ _ _^	16	2P		21		3#10, 1#10G, 3/4"C		
)	17	$\rightarrow \rightarrow$	-+1	18	30			21	DRYER		
)	19	┣╱┿╾┼	- ^	20	2P	21			3#10, 1#10G, 3/4"C		
)	21	┣╱┼╌┥	- ↑	22	30		21		DRYER		
)	23	$\rightarrow \rightarrow$	- † ^	24	2P			21	3#10, 1#10G, 3/4"C		
)	25	┣╱┿╾┼	\rightarrow	26					SPACE		
)	27	┢╌┼╌┨	\rightarrow	28					SPACE		
)	29	$] \land \vdash \downarrow$	\rightarrow	30					SPACE		
	31	┢╱┿╾┤	\rightarrow	32					SPACE		
	33	┢╌┼╌┥	\rightarrow	34					SPACE		
	35	\vdash	+	36					SPACE		
	37	┢╱┿╾┼	\rightarrow	38					SPACE		
	39	┢╌┼╼┤	\rightarrow	40					SPACE		
	41	\vdash	\rightarrow	42					SPACE		
						52	68	68	TOTAL		
NN	ECTED	AMPS	A: 7	7	B: 88	C:8	5				

	PANELBOARD 2D SCHEDULE										
25	A MLO	, 120,	/208	V, 3	PHASE,	4 V	VIRE	22 kaic	MINIMUM	FLU	SH MOUNT
PS)	С	BKR TRIP	CKT NO	PH A	IASE B C	CKT NO	BKR TRIP	A L	OAD(AMPS	S) C	LOAD SERVED
		20	1		$\vdash \uparrow$	2	20	3			REC 224
		20	3	\mathbb{H}	╉┼╱	4	20		3		REC 224
	6	20	5	\mathbb{H}	┼╆╲	6	20			3	REC 224
		20	7	\vdash	++	8	20	3			REC 225
		20	9	\vdash	┢┼╲	10	20		6		REC 226, EF-225
	6	20	11	\vdash	┼╋╲	12	20			3	REC 226
		20	13	┣┥┥	++	14	20	3			REC 227
		20	15	\vdash	┥┼╲	16	20		6		REC 227, 228
	3	20	17	\mathbb{P}^{+}	┼╋╲	18	20			6	EF-210, 211
		20	19	┢┥	++	20	20	6			EF-212, 213
		20	21	\mathbb{P}^{+}	╉┼╱	22	20		6		EF-214, 215
	8	20	23	\vdash	┼╋╲	24	20			6	EF-207, 208
		20	25	┢┥┥	++	26	20	6			EF-205, 206
		20	27	\vdash	┥┼╲	28	20		6		EF-226, 227
	3	20	29	\vdash	┼╋╲	- 30	20			10	FU-4
		20	31	h	++	32	20	7			FU-5
		20	33	\vdash	┥┼╲	34	20				SPARE
	3	20	35	\vdash	┼╋╲	36	20				SPARE
		20	37		++	38	20				SPARE
		20	39	\vdash	╋┼╲	40	20				SPARE
		20	41	\vdash	+ +	42	20				SPARE
	29							28	27	28	TOTAL
	TOTAL	CONN	ECTED	AMP	S A: 6	3	B: 50	C:5	57		

LOAD SUMMARY								
LOAD	CONN LOAD (KVA)	DEMAND FACTOR		DEMAND LOAD (KVA)				
G *	22.3	125% ****		27.9				
ACLES	25.1	FIRST 10 KVA AT 100% REMAINDER OVER 10 KVA AT 50% *	k*	17.6				
***	42.8	100%		42.8				
ENT	28.0	100%		28.0				
	2.4	100%		2.4				
(KVA)	121			119				
BASED ON NEC	TABLE 220.12.		AMPS:	330				
BASED ON NEC THIS IS FLA PLU CONTINUOUS LO BASED ON NEC BASED ON NEC	TABLE 220.44. JS 25% OF LAF AD PER NEC. TABLE 220.56 660.6(A),(B)	RGEST MOTOR LOAD.	VOLTAG	E: 120/208 V E SIZE: 400 AMP				

* (7,427 SQFT X 3 VA/SQFT = 22,281 VA)

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Heritage Salon Fit-up
3117 RODGERS ROAD WAKE FOREST, NC
10713 Staghound Trail
Zepuion, NCPROJECT NUMBER:160001
DRAWN BY: JAO ISSUED / REVIEW: RTT
ISSUED / CONSTRUCTION:
REVISIONS
THIS DOCUMENT IS THE PROPERTY OF DEVON TOLSON ARCHITECTURE, INC
ELECTRICAL SCHEDULES
E1.1
OF SHEETS

				LIGHT	FIXTURE	E SCHE	EDUL	E		
			LAMPS		WATTS		BALLAST		DECODIDION	
TIPE	MANUFACTURER	CATALOG NO	NO	TYPE	VOLIAGE	FIXTURE	NO	TYPE	MOUNTING	DESCRIPTION
A	LITHONIA	2TL72LFWAEZ1LP840	-	LED	120	67	-	-	RECESSED	2'x4' LENS LED
В	LITHONIA	2TL48LFWAEZ1LP840	-	LED	120	40	-	-	RECESSED	2'x4' LENS LED
X1	LITHONIA	LQMSW3R120/277ELN	-	LED	120	3	-	-	UNIVERSAL	LED EXIT SIGN
X2	LITHONIA	ELM2LEDHOSD	-	LED	120	1.4	-	-	WALL	LED EMERGENCY LIGH
NOTES	5:									





- 5 PROVIDE ILLUMINATED EXIT SIGN. CONNECT TO CIRCUIT INDICATED AHEAD OF LOCAL SWITCH.
- 6 PROVIDE ELECTRICAL CONNECTION TO EXHAUST FAN WITH DISCONNECTING MEANS AS SHOWN. CONNECT TO CIRCUIT INDICATED. EXHAUST FAN SHALL BE SWITCHED WITH LIGHT.

	U J	UALI			
	4'	0	4'	8'	
1/8" = 1'-0'	"				





ELECTRICAL ENLARGED SECOND FLOOR PLAN – POWER SCALE: 1/4" = 1'-0"



- 1 PROVIDE RECEPTACLE WITH DEVICE BOX, CONDUIT AND WIRING AS SHOWN. CONNECT TO CIRCUIT INDICATED.
- 2 PROVIDE GFCI RECEPTACLE WITH DEVICE BOX, CONDUIT AND WIRING AS SHOWN. CONNECT TO CIRCUIT INDICATED. LOCATE RECEPTACLE SO GFCI TRIP INDICATOR IS READILY VISIBLE AND ACCESSIBLE.
- 3 PROVIDE ELECTRICAL CONNECTION TO WATER HEATER AND RECIRCULATING PUMP WITH DISCONNECTING MEANS AS SHOWN. CONNECT TO CIRCUIT INDICATED.
- 4 PROVIDE ELECTRICAL CONNECTION TO HVAC UNIT WITH DISCONNECTING MEANS AS SHOWN. CONNECT TO CIRCUIT INDICATED.
- 5 PROVIDE ELECTRICAL CONNECTION TO EXHAUST FAN. CONNECT TO CIRCUIT INDICATED.
- 6 PROVIDE WALL MOUNTED OCCUPANCY SENSOR WITH DEVICE BOX, CONDUIT AND WIRING AS SHOWN. CONNECT TO EXHAUST FAN INDICATED.
- 7 PROVIDE GFCI BREAKER. SEE PANEL SCHEDULE.
- 8 PROVIDE 4" X 4" X 2" JUNCTION BOX FOR SIGN ABOVE ACCESSIBLE CEILING. CONNECT TO CIRCUIT INDICATED. COORDINATE EXACT LOCATION AND REQUIREMENTS PRIOR TO BEGINNING ANY WORK.

GENERAL NOTES

(1) SEE ELECTRICAL ENLARGED SECOND FLOOR PLAN - POWER FOR WORK THIS AREA.

FIRE	WALL

LEGEND

1 HOUR FIRE RATED BARRIER





