



ADDENDUM #2

Date: July 12, 2016

Project: City of Greensboro Police Department
Partial 3rd and 5th Floor Upfits
320 Federal Place, Greensboro, NC 27401
RE-BID (Contract Document)

The following corrections, changes, additions, deletions, revisions, and/or clarifications are hereby made part of the Contract Documents. In case of conflict between Addendum and previously issued documents, this Addendum shall take precedence. The Bidder must acknowledge receipt of this Addendum in the space provided on the Bid Proposal Form. Failure to do so may subject the Bidder to disqualification.

SPECIFICATIONS AND DRAWINGS:

1. Correction to items in Addendum-1:
 - a. List of Attendees - Correction:
Muter Construction, Paul Mark, 252-269-4614, mpaul@muterconstruction.com or Denise Driver, ddriver@muterconstruction.com
 - b. Item-4: Shelves in all Closets and Storage Rooms located within this project area shall receive (5) 16" melamine shelves. Provide adjustable brackets for support at 24" o.c. maximum.
2. Refer to revised Mechanical drawings M201, M202 and M301. Revisions made to the existing Server Room.
3. Refer to revised Electrical drawings E3.2 and E3.3. Revisions made to Server Room and Restrooms' exhaust fans.
4. Aluminum Storefront 08 41 13: Add to acceptable manufacturers, Oldcastle Building Envelope, Series 2000 Flush Glaze). Match size and product data as listed in the specification section above.
5. *Question: Is the total number of fire extinguishers for 3rd and 5th floor combined 40 or 20?*
Answer: Total number in this project: 20 fire extinguishers.
6. *Is any of the ceiling grid to remain on the 3rd and 5th floors?*
Answer: Ceiling grid and tiles are new except the 3rd floor's elevator lobby and main corridor to the existing door next to men's restrooms. Ceiling in these 2 areas must be maintained and protected. Replace if existing grid and tiles are damaged due to new above ceiling ducts or utilities work..
7. Ceiling Clarifications: Since ceilings will be lower than window headers, termination at perimeter windows shall be similar to existing edge detail. Provide new prefinished aluminum trims.
8. *How is the ingress and egress for sub contractors handled up to the 3rd and 5th floors. Are there restricted working hours?*
Answer:

The building freight elevator (and stairs too) may be used to transport personnel and small tools; any large equipment and /or building materials / trash must be loaded and taken out via the window or chute. No building materials or trash will be allowed in the elevators.

The building is occupied 24/7 by Police staff, so the building will be accessible to the contractor 24/7 as well. The General Contractor will be required to have the project superintendent on site the entire time any of his subcontractors are working in the building.

9. *Is the existing HVAC duct work to stay. Is the height of the existing duct work interfering with the new ceiling height and placement of light fixtures?*

Answer:

The Ceiling heights will be adjusted based on the existing ducts' height. Owner may consider replacing some of the existing ducts at a later date.

10. *I got an email from a sign company asking about the number of signs. She noted that the drawings show only signage for the restrooms but the specifications show signage for the fire extinguishers, mechanical room, electrical room and storage. Can you assist?*

Answer: Please refer to Signage Schedule in Specification Section 10 14 00 for type and quantities.

11. *Items #3 and #4 on Page A3.1 and Page A5.1 call for reusing existing doors and light fixtures. Is this for the existing rooms only?*

Answer:

- Please refer to electrical drawings for new light fixtures and for further notes. Existing systems/fixtures that are outside the construction area must be maintained if above-ceiling utility work is required.
- There are few doors that are being demolished and are to be disposed.

Attachments: M201, M202, M301, E3.2 and E3.3

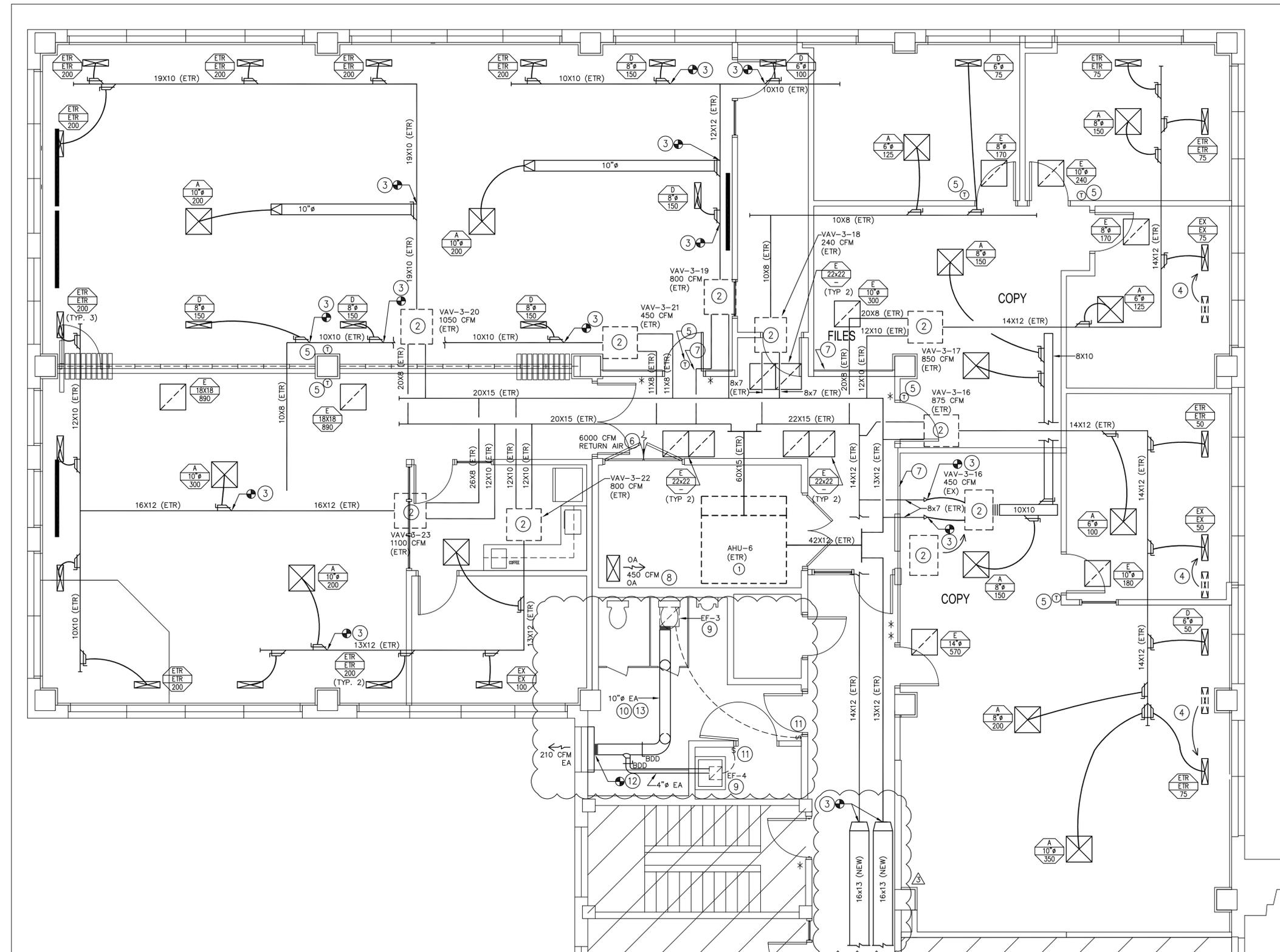
END OF ADDENDUM #2



SHERMIN ATA, ARCHITECT, PLLC
 2007 Yanceyville Street
 Suite 304 - Box 81
 Greensboro, NC 27405-5000
 Phone: (336) 333-5650



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KEY NOTES:

- 1 EXISTING DUAL DECK AIR-HANDLING UNIT TO REMAIN
- 2 EXISTING DUAL DECK VARIABLE AIR VOLUME TO REMAIN. RE-CALIBRATE AND BALANCE THE VAV BOX TO AIRFLOW SHOWN.
- 3 CONNECT NEW DUCT TO EXISTING DUCT
- 4 RELOCATE THE EXISTING AIR-DISTRIBUTION DEVICE AS SHOWN.
- 5 PROVIDE NEW THERMOSTAT TO CONTROL THE EXISTING VAV BOX.
- 6 EXISTING RETURN AIR LOUVERED DOORS TO REMAIN
- 7 PROVIDE MULTIPLE OPENINGS THRU WALL BETWEEN THE CORRIDOR PLENUM AND THE OFFICE PLENUM TO TOTAL TO A MINIMUM 6 FEET LONG BY 2 FEET HIGH OPENING ON THE WALL ABOVE THE CEILING (MINIMUM 12 SQUARE FEET TOTAL FREE AREA).
- 8 BALANCE OUTSIDE AIR SUPPLY TO PROVIDE 340 CFM.
- 9 CEILING MOUNTED EXHAUST FAN. SUPPORT INDEPENDENT OF THE CEILING.
- 10 PROVIDE RIGID EXHAUST DUCT FROM THE EXHAUST FAN TO THE EXISTING WALL EXHAUST PLENUM. AT FAN AND EXISTING PLENUM CONNECTION, PROVIDE TRANSITION, AS REQUIRED, AND CONTRACTOR MAY USE A MAXIMUM OF 24" FLEX DUCT AT CONNECTION.
- 11 FAN SHALL BE CONTROLLED BY THE LIGHT SWITCH SO THAT THE FAN IS ENERGIZED WHENEVER THE LIGHT IS TURNED ON.
- 12 EXISTING WALL MOUNTED EXHAUST PLENUM TO REMAIN.
- 13 PROVIDE DUCT OFFSET TO ACCOMMODATE CHANGE IN CEILING ELEVATION.

GENERAL NOTES:

1. DUCTWORK SHOWN IS DIAGRAMMATIC. IT IS SHOWN TO CLARIFY SIZES AND INTENT, AND MAY NOT NECESSARILY REFLECT ACTUAL MOUNTING OR SIZE. FIELD VERIFY AND COORDINATE WITH THE ENGINEERS.
2. "EX" DELINEATES HVAC COMPONENTS THAT ARE TO BE RE-USED AND/OR RELOCATED.
3. "ETR" DELINEATES HVAC COMPONENTS THAT ARE EXISTING TO REMAIN
4. IF CONTRACTOR SUSPECTS THAT THERE IS ANY ASBESTOS ON COMPONENTS THEY ARE DEMOLISHING OR MODIFYING, INFORM OWNER. OWNER WILL PROVIDE ABATEMENT UNDER SEPARATE CONTRACT.
5. NOTE THAT ALL UNIT DESIGNATIONS ARE PRIMARILY FOR PLAN EQUIPMENT IDENTIFIER. CONSULT OWNER FOR ACTUAL EQUIPMENT DESIGNATION. PROVIDE PLASTIC NAMEPLATE FOR ALL NEW EQUIPMENT. NAMEPLATE SHALL BE BLUE WITH MINIMUM 1/4" WHITE LETTERS.
6. DEMOLISH EXISTING TOILET EXHAUST FAN AND DUCTWORK COMPLETELY. RE-USE EXISTING WALL MOUNTED EXHAUST PLENUM.

GREENSBORO POLICE DEPARTMENT
 320 Federal Place
 GREENSBORO, NC

PROJECT No. -
 DRAWN BY: MCD CHECKED BY: JMP
 DATE: APRIL 11, 2016
 REVISIONS:
 ▲ ALTERNATE 3
 ▲ ADDENDUM 2
 ▲ OWNER CHANGES

SHEET TITLE
 3RD FLOOR HVAC PLAN
 (NORTH)
 SHEET No.
M2.1

3RD FLOOR HVAC PLAN (NORTH) 1/4"=1'-0"

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 info@palma-engineers.com
 P: (336) 294-5501
 F: (336) 294-5502
PALMA ENGINEERS
 PO Box 18822
 Greensboro, NC 27419
 Project No: 080716 Drawn By: MCD Checked By: JMP



SHERMIN ATA, ARCHITECT, PLLC
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 Suite 304 - Box 81
 Greensboro, NC 27405-5000
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SHEET TITLE
 SCHEDULES AND DETAILS
 SHEET No.
M3.1

VAV BOX SCHEDULE										
DESIGNATION	VAV-3-15	VAV-3-16	VAV-3-17	VAV-3-18	VAV-3-19	VAV-3-20	VAV-3-21	VAV-3-22	VAV-3-23	VAV-3-24
SERVICE	OFFICE	OFFICE	OFFICE	OFFICE	OFFICE	MEETING	MEETING	MEETING	MEETING	ELEV LOBBY
BASIS OF DESIGN	ETR	TITUS								
MODEL	ETR	DEDV								
SIZE	ETR	5								
AIRFLOW	450	850	850	240	800	1050	450	800	1100	200
MIN. AIRFLOW, CFM	150	250	250	100	200	300	150	200	350	100
Δ P IN WG (MAX)	ETR	0.02								
REHEAT COIL, MBH	ETR	NONE								
WATER FLOW, GPM	ETR	N/A								
CONNECTION SIZE	ETR	5								
ACCESSORIES	ETR	1,2,3								
REMARKS	ETR	A,B,C,D								

DESIGNATION	VAV-3-25	VAV-3-26	VAV-5-1	VAV-5-2	VAV-5-3	VAV-5-4	VAV-5-5	VAV-5-6	VAV-5-7	VAV-5-8
SERVICE	NEW OFFICE	IT ROOM	OFFICE							
BASIS OF DESIGN	TITUS	TITUS	ETR							
MODEL	DEDV	AESV	ETR							
SIZE	10	5	ETR							
AIRFLOW	1100	300	550	600	420	770	870	600	420	980
MIN. AIRFLOW, CFM	350	100	160	200	150	250	250	200	150	350
Δ P IN WG (MAX)	0.021	0.07	ETR							
REHEAT COIL, MBH	NONE	NONE	ETR							
WATER FLOW, GPM	N/A	N/A	ETR							
CONNECTION SIZE	10	5	ETR							
ACCESSORIES	1,2,3	1,2,3	ETR							
REMARKS	A,B,C,D	A,B,C,D	ETR							

DESIGNATION	VAV-5-9	VAV-5-10	VAV-5-11	VAV-5-12	VAV-5-13	VAV-5-14	VAV-5-15	VAV-5-16	VAV-5-17	VAV-5-18
SERVICE	OFFICE	OFFICE	OFFICE	LOBBY	OFFICE	OFFICE	OFFICE	OFFICE	OFFICE	OFFICE
BASIS OF DESIGN	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR
MODEL	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR
SIZE	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR
AIRFLOW	820	380	720	200	390	1000	350	750	320	200
MIN. AIRFLOW, CFM	250	100	200	100	150	300	100	200	100	100
Δ P IN WG (MAX)	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR
REHEAT COIL, MBH	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR
WATER FLOW, GPM	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR
CONNECTION SIZE	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR
ACCESSORIES	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR
REMARKS	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR

DESIGNATION	VAV-5-19	VAV-5-20	VAV-5-21	VAV-5-22	VAV-5-23	VAV-5-24	VAV-5-25
SERVICE	OFFICE	OFFICE	OFFICE	ABANDON	OFFICE	OFFICE	OFFICE
BASIS OF DESIGN	ETR						
MODEL	ETR						
SIZE	ETR						
AIRFLOW	750	750	340	500	500	230	230
MIN. AIRFLOW, CFM	200	200	100	150	150	100	100
Δ P IN WG (MAX)	ETR						
REHEAT COIL, MBH	ETR						
WATER FLOW, GPM	ETR						
CONNECTION SIZE	ETR						
ACCESSORIES	ETR						
REMARKS	ETR						

ACCESSORIES:
 1. INTEGRAL MOUNTING BRACKET.
 2. TRANSITION (DUCT TO UNIT).
 3. 24 VOLT TRANSFORMER, AS REQUIRED.
 4. CIRCUIT SETTER
 5. TWO WAY VALVE
 6. THREE WAY VALVE

REMARKS:
 A. MINIMUM AIR POSITION IS FOR OCCUPIED SETTING. DURING UNOCCUPIED SETTING, THE DAMPERS WILL BE ALLOWED TO CLOSE.
 B. SUPPORT UNIT INDEPENDENTLY.
 C. PROVIDE MINIMUM 6" LONG FLEX DUCT AT UNIT TO DUCT CONNECTION. NO BEND IN FLEX
 D. ADJUST DUCT SIZE CONNECTION TO ALLOW FOR MANUFACTURES RECOMMENDED VELOCITY AT COIL FACE.

AIR DISTRIBUTION DEVICE SCHEDULE						
DESIGNATION	A	B	C	D	E	F
SERVICE	SUPPLY	SUPPLY	SUPPLY	SUPPLY	RETURN	EXHAUST
BASIS OF DESIGN	TITUS	TITUS	TITUS	TITUS	TITUS	TITUS
MODEL	TDC	TDC	TDC	272RL	PAR	300RL
MAX PRESSURE (IN.WG)	0.115	0.115	0.115	0.115	0.115	0.115
MAX NC LEVEL	25	25	25	25	25	25
TYPE	LAY-IN	LAY-IN	LAY-IN	SURFACE MOUNT	SURFACE MOUNT	SURFACE MOUNT
THROW	4-WAY	2-WAY	3-WAY	22.5"	N/A	N/A
FINISH	WHITE	WHITE	WHITE	MATCH SURFACE	WHITE	MATCH SURFACE
ACCESSORIES	1, 2	1, 2	1, 2	1, 2	1, 2	1, 2
REMARKS	A, B, C, D	A, B, C, D	A, B, C, D	A, B, C, D, F	A, B, E	A, B, E, F

ACCESSORIES:
 1. OPPOSED BLADE DAMPER
 2. RECTANGULAR TO ROUND DIFFUSER NECK TRANSITION (WHENEVER REQUIRED)

REMARKS:
 A. SUPPORT AIR DISTRIBUTION DEVICE INDEPENDENT OF CEILING.
 B. ALL AIR DISTRIBUTION DEVICES SHALL BE INSULATED WITH MINIMUM 2" FIBERGLASS WRAP INSULATION.
 C. AIR DISTRIBUTION DEVICES ON LAY-IN CEILINGS SHALL BE 24x24 LAY-IN TYPE UNLESS OTHERWISE NOTED.
 D. NECK CONNECTIONS FOR SUPPLY DIFFUSERS SHALL ALL BE ROUND CONNECTIONS.
 E. NECK CONNECTIONS FOR RETURN AND EXHAUST GRILLES SHALL BE RECTANGULAR CONNECTIONS.
 F. ALL AIR DISTRIBUTION DEVICES SHALL BE FACTORY PAINTED TO MATCH THE SURFACE THEY ARE TO BE MOUNTED ON & PER ARCHITECT COLOR SELECTION

EXHAUST FAN SCHEDULE		
DESIGNATION	EF-1, 4, & 7	EF-3, 5, 6, & 8
SERVICE	TOILETS	TOILETS
LOCATION	CEILING	CEILING
MANUFACTURER	BROAN	BROAN
MODEL	680	L200
EXHAUST AIRFLOW, CFM	70	210
ESP, IN WG	0.125	0.2
VOLTS/PH/HZ	120/1/60	120/1/60
WATTS	-	-
FLA	2.2	1.8
SONES	4	1.7
ACCESSORIES	SEE BELOW	SEE BELOW
REMARKS	SEE BELOW	SEE BELOW

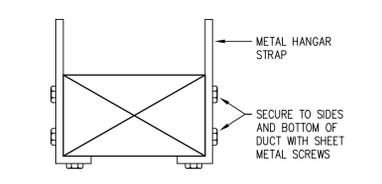
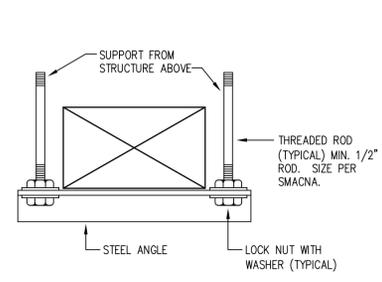
ACCESSORIES:
 1. INTEGRAL MOUNTING BRACKET
 2. NEOPRENE ISOLATOR AT ALL SUPPORT POINTS
 3. LIGHT SWITCH OPERATED
 4. NEMA 1 DISCONNECT

REMARKS:
 A. COORDINATE LOCATION WITH LIGHT FIXTURE MOUNTING. LIGHTING FIXTURE SHALL TAKE PRECEDENCE. ADJUST FAN MOUNTING ACCORDINGLY.

DUCTLESS SPLIT SYSTEM SCHEDULE	
INDOOR UNIT	
DESIGNATION	AHU-1 (EX)
SERVICE	IT ROOM
LOCATION	FLOOR MOUNT
BASIS OF DESIGN	LIEBERT
MODEL	BF042AAAEI
SIZE	067A
SUPPLY AIRFLOW, CFM	2000
ESP, IN WG.	0.15
AUX. ELECTRIC HEAT, KW	N/A
VOLTS/PH/HZ	208/3/60
MCA	TBD
MOP	TBD
OUTDOOR UNIT	
DESIGNATION	ODU-1 (EX; ASSUMED)
LOCATION	ROOF
BASIS OF DESIGN	LIEBERT
MODEL	BU06DE
SIZE	60
NOM. COOLING, MBH	60
NOM. HEATING, MBH	N/A
VOLTS/PH/HZ	208/3/60
MCA	TBD
MOP	TBD

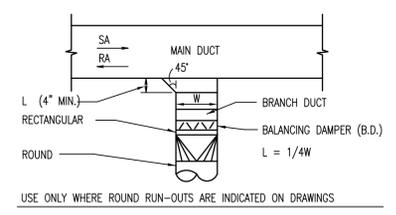
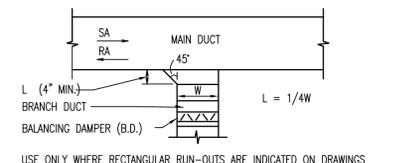
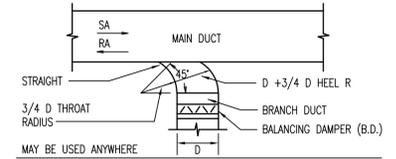
ACCESSORIES:
 1. PROVIDE CONTROLS TRANSFORMER, AS REQUIRED.
 2. PROVIDE WITH NEMA 3R DISCONNECT
 3. WALL MOUNTED PROGRAMMABLE THERMOSTAT

REMARKS:
 A. MOUNT PER MANUFACTURER'S INSTRUCTIONS.
 B. CONTRACTOR SHALL RELOCATE THE EXISTING COMPUTER ROOM SPLIT SYSTEM UNIT AND INSTALL IN THE SERVER ROOM.

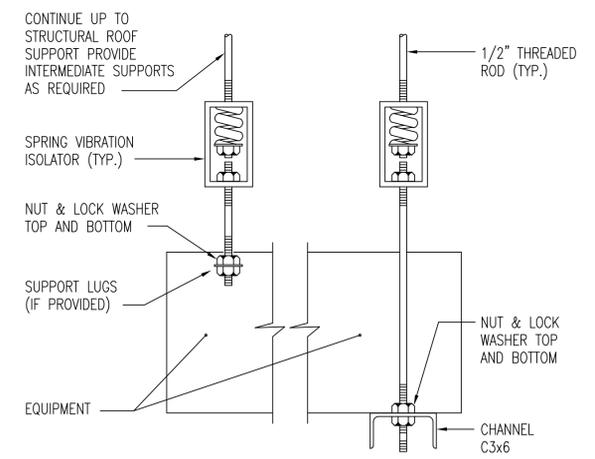


NOTE:
 FOR ANGLE SIZE AND HANGER STRAP GAUGE, SEE SMACNA LOW PRESSURE DUCT CONSTRUCTION STANDARDS.

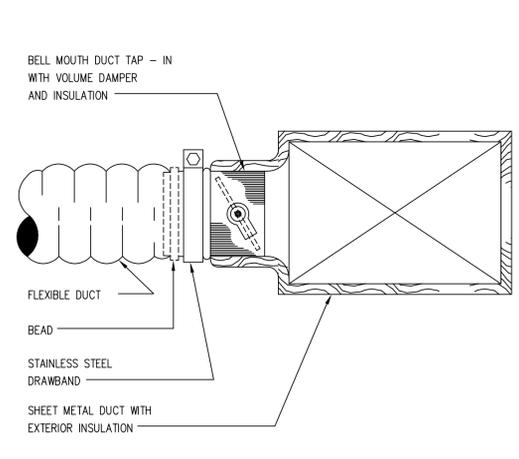
DUCT SUPPORT DETAIL
 NO SCALE



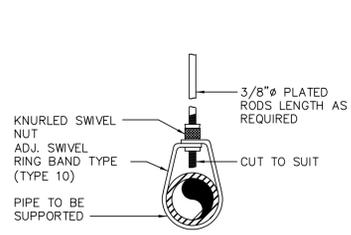
TYPICAL BRANCH CONNECTION
 NO SCALE



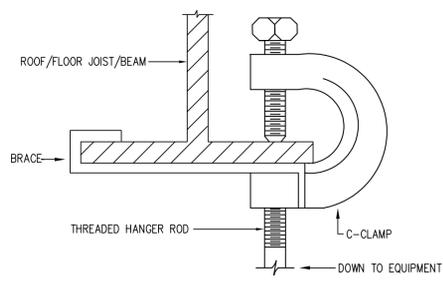
SUSPENDED EQUIPMENT SUPPORT DETAIL
 NO SCALE



FLEXIBLE DUCT INSTALLATION DETAIL
 NO SCALE



PIPE SUPPORT DETAIL
 NO SCALE



C-CLAMP UPPER ATTACHMENT
 NO SCALE

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 info@palma-engineers.com
 P: (336) 294-5501
 F: (336) 294-5502
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REVISIONS:

▲ ALTERNATE 3

▲ ADDENDUM 2

▲ OWNER CHANGES

SHEET TITLE

3RD FLOOR (SOUTH) AND
 SERVER ROOM HVAC PLAN

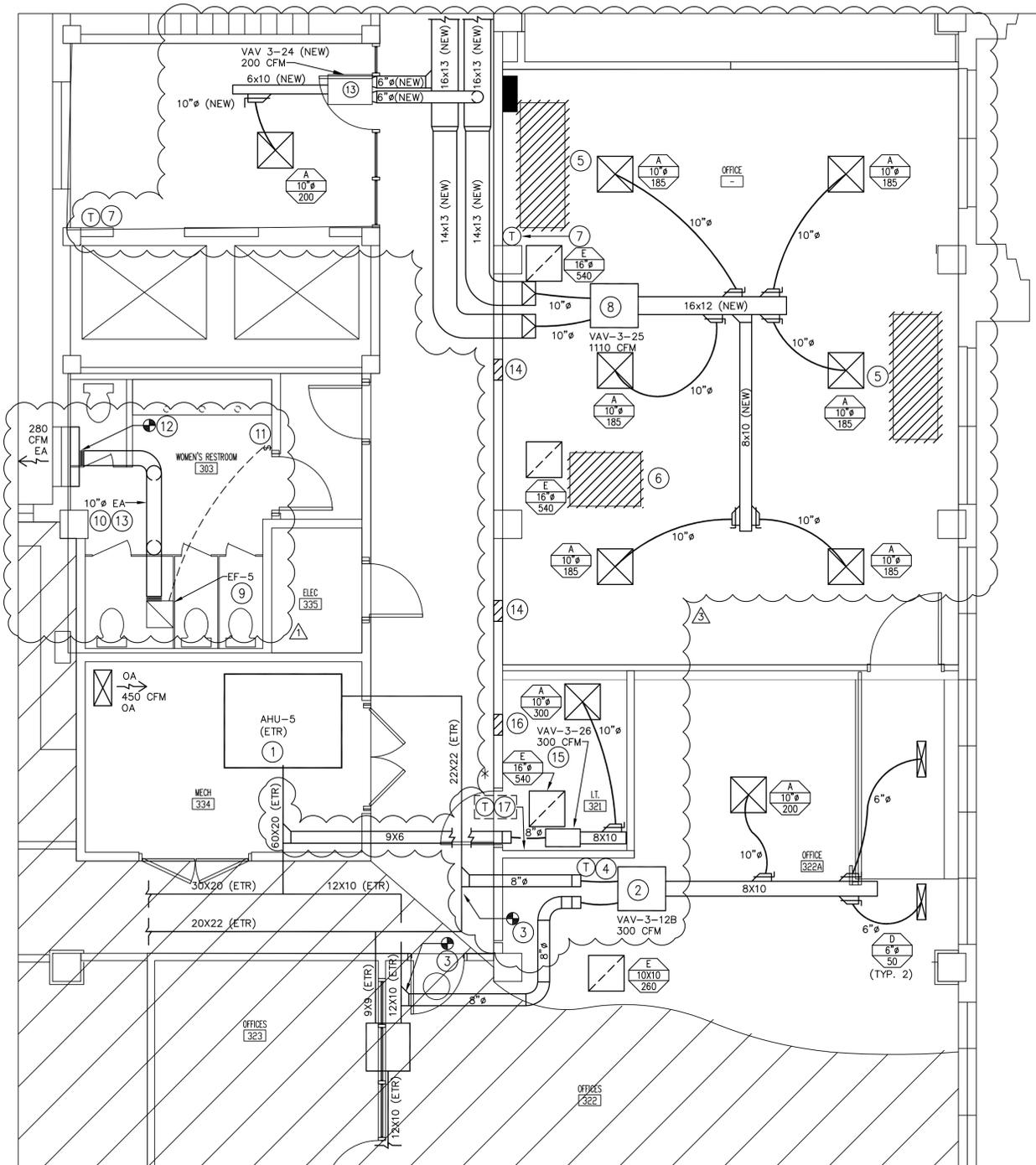
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3RD FLOOR HVAC PLAN (SOUTH)

1/4"=1'-0"

KEY NOTES:

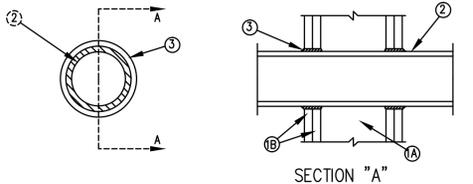
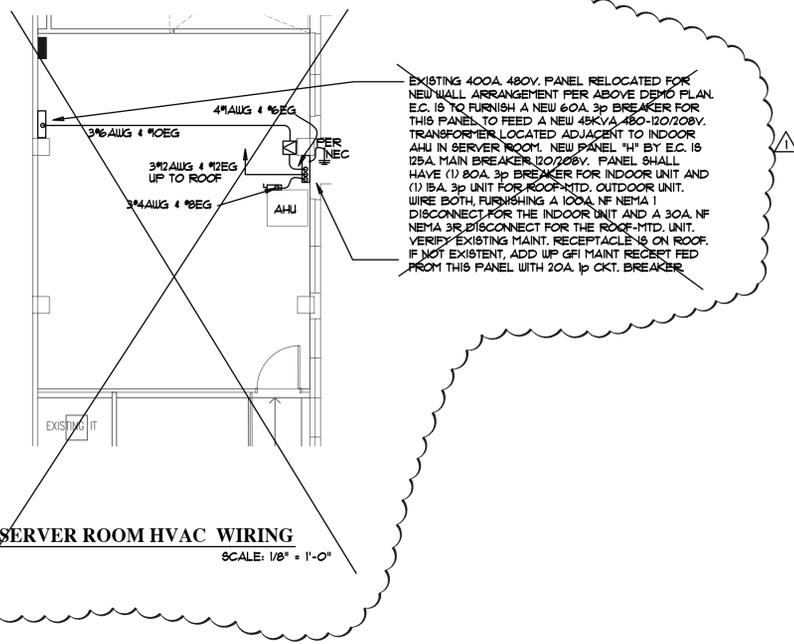
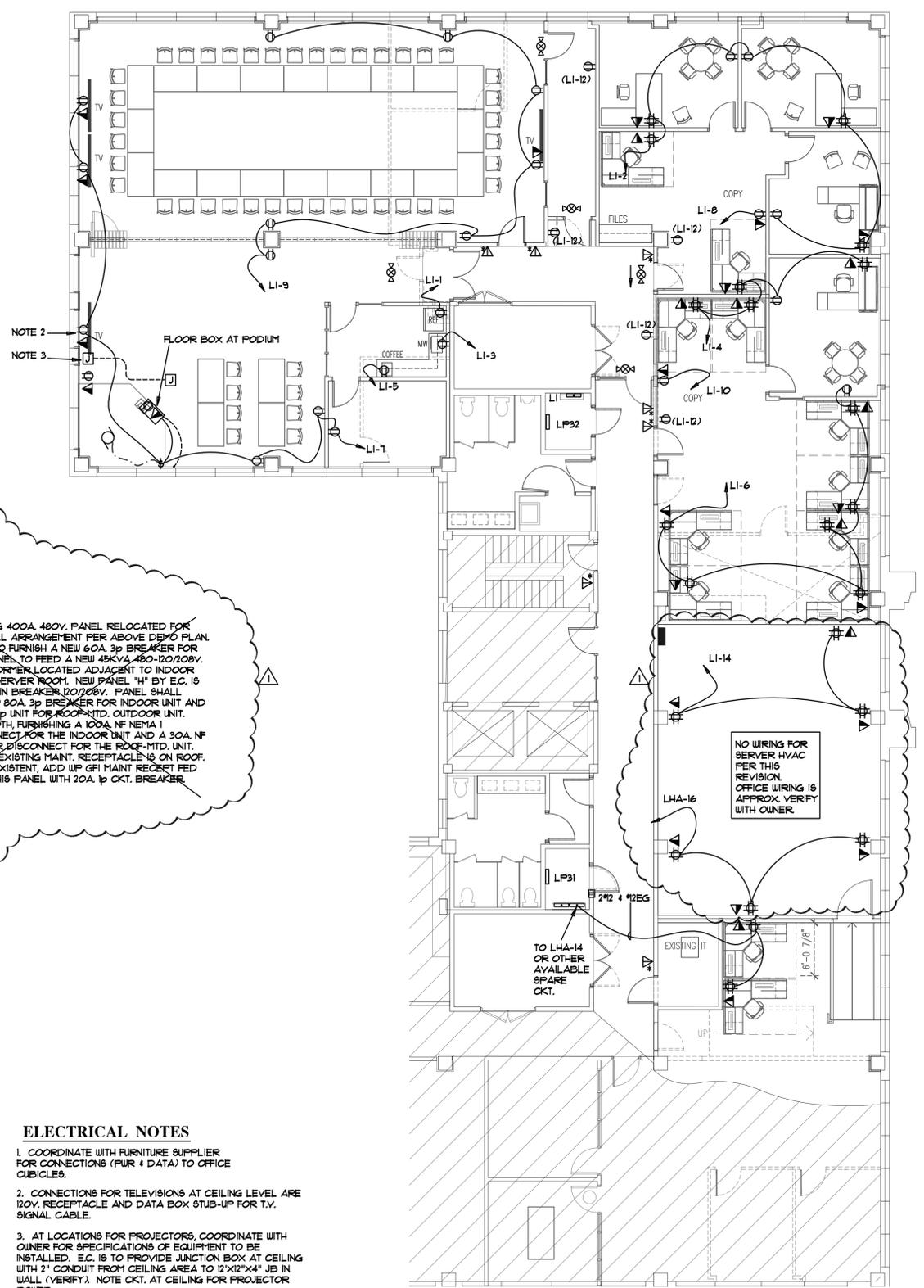
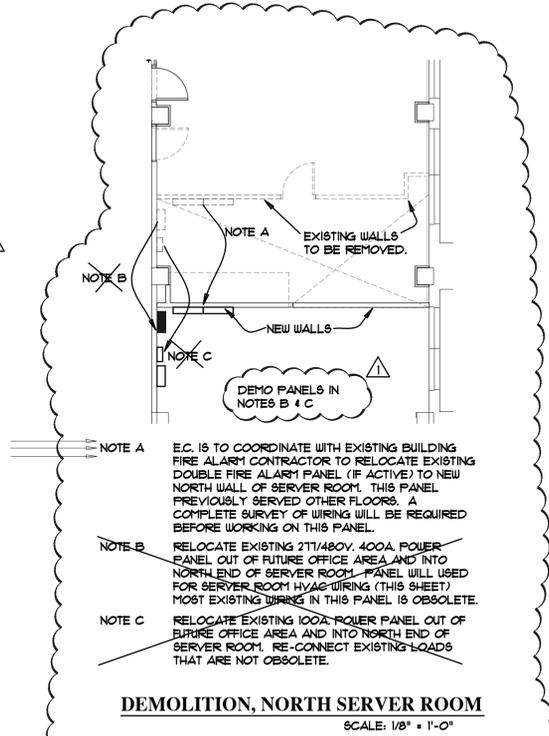
- 1 EXISTING DUAL DECK AIR-HANDLING UNIT TO REMAIN
- 2 EXISTING DUAL DECK VARIABLE AIR VOLUME TO REMAIN. RE-CALIBRATE AND BALANCE THE VAV BOX TO AIRFLOW SHOWN.
- 3 CONNECT NEW DUCT TO EXISTING DUCT
- 4 PROVIDE NEW THERMOSTAT TO CONTROL THE EXISTING VAV BOX.
- 5 DEMOLISH THE EXISTING COMPUTER ROOM SPLIT SYSTEM UNIT COMPLETELY, INCLUDING THE AIR-HANDLING UNIT, CONDENSING UNITS (ON THE ROOF), POWER, AND REFRIGERANT PIPING.
- 6 DEMOLISH THE EXISTING COMPUTER ROOM SPLIT SYSTEM UNIT COMPLETELY (SHOWN DIAGRAMMATICALLY) LOCATED ON THE ROOF.
- 7 PROVIDE NEW TEMPERATURE SENSOR FOR THE NEW VAV BOX. INITIALLY PROGRAM SETPOINT FOR 75F COOLING AND 70F HEATING WITH 5F DEADBAND. ALL SETPOINTS SHALL BE ADJUSTABLE.
- 8 NEW DUAL DUCT VARIABLE AIR VOLUME (VAV) SYSTEM MOUNTED ABOVE THE CEILING.
- 9 CEILING MOUNTED EXHAUST FAN. SUPPORT INDEPENDENT OF THE CEILING.
- 10 PROVIDE RIGID EXHAUST DUCT FROM THE EXHAUST FAN TO THE EXISTING WALL EXHAUST PLENUM. AT FAN AND EXISTING PLENUM CONNECTION, PROVIDE TRANSITION, AS REQUIRED, AND CONTRACTOR MAY USE A MAXIMUM OF 24" FLEX DUCT AT CONNECTION.
- 11 FAN SHALL BE CONTROLLED BY THE LIGHT SWITCH SO THAT THE FAN IS ENERGIZED WHENEVER THE LIGHT IS TURNED ON.
- 12 EXISTING WALL MOUNTED EXHAUST PLENUM TO REMAIN.
- 13 PROVIDE DUCT OFFSET TO ACCOMMODATE CHANGE IN CEILING ELEVATION
- 14 PROVIDE NEW 14x12 SLEEVED WALL OPENING ABOVE THE CEILING FOR RETURN AIR TRANSFER. SLEEVE SHALL BE MINIMUM 24 GAUGE GALVANIZED STEEL
- 15 PROVIDE NEW COOLING ONLY SINGLE DUCT VARIABLE AIR VOLUME BOX
- 16 PROVIDE NEW 10x10 SLEEVED WALL OPENING ABOVE THE CEILING FOR RETURN AIR TRANSFER. SLEEVE SHALL BE MINIMUM 24 GAUGE GALVANIZED STEEL
- 17 PROVIDE NEW TEMPERATURE SENSOR FOR THE NEW VAV BOX. INITIALLY PROGRAM SETPOINT FOR 70F COOLING. SETPOINT SHALL BE ADJUSTABLE.

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4. IF CONTRACTOR SUSPECTS THAT THERE IS ANY ASBESTOS ON COMPONENTS THEY ARE DEMOLISHING OR MODIFYING, INFORM OWNER. OWNER WILL PROVIDE ABATEMENT UNDER SEPARATE CONTRACT.
5. THE NEW SERVER ROOM SPLIT SYSTEM UNIT (AIR-HANDLING UNIT AND CONDENSING UNIT) ARE EXISTING UNITS LOCATED IN ANOTHER BUILDING IN GREENSBORO. THE CONTRACTOR IS TO RELOCATE SAID EXISTING SERVER ROOM SPLIT SYSTEM FROM CURRENT STORAGE SITE TO THE SERVER ROOM. PROVIDE NEW REFRIGERANT PIPING, POWER, AND SUPPORTS. CONTRACTOR SHALL ALSO INCLUDE THE START-UP OF SAID SPLIT SYSTEM UNIT BY FACTORY CERTIFIED TECHNICIAN (LIEBERT).
6. NOTE THAT ALL UNIT DESIGNATIONS ARE PRIMARILY FOR PLAN EQUIPMENT IDENTIFIER. CONSULT OWNER FOR ACTUAL EQUIPMENT DESIGNATION. PROVIDE PLASTIC NAMEPLATE FOR ALL NEW EQUIPMENT. NAMEPLATE SHALL BE BLUE WITH MINIMUM 1/4" WHITE LETTERS.
7. DEMOLISH EXISTING TOILET EXHAUST FAN AND DUCTWORK COMPLETELY. RE-USE EXISTING WALL MOUNTED EXHAUST PLENUM.

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LI	MAKE	NQOD	RATING:	120/208V 3ph 4W			MAIN LUG ONLY OR MAIN BRK:			200A MAIN BREAKER			
				MOUNTING:	SURFACE		EQUIP. GROUND BUS?	X	YES	NO	LOAD SERVED	PER	PHASE
LOAD SERVED	AMPS	PER	PHASE	WIRE SIZE	CKT. NO.	CKT. NO.	CKT. NO.	CKT. NO.	WIRE SIZE	AMPS	PER	PHASE	LOAD SERVED
REFRIG	9			#12	20	1			#12	6			OFFICE RECEIPTS
MICROWAVE		10		#12	20	3			#12	6			OFFICE RECEIPTS
COFFEE			11	#12	20	5			#12	6			OFFICE RECEIPTS
FLAT SCREENS	6			#12	20	7			#12	6			COOPER
FLAT SCREENS	6	6		#12	20	9			#12	6			COOPER
PODIUM SPOTLIGHTS		4		#12	20	11			#12	9			WALL RECEPTS ORG LT. OFFICE AREA
					20	13							
					20	15							
					20	17							
					20	19							
					20	23							
					20	25							
					20	27							
					20	29							
					20	31							
					20	33							
					20	35							
					20	37							
					20	39							
					20	41							
REMARKS	15	16	15	SUB-TOTAL "B"			200A AL	BUS	SUB "A"	21	14	11	
							#3/0 CU	LUGS	SUB "B"	15	16	15	
							YES	S/N	TOTAL	36	30	26	
							T/B	FEED	AMPS				



- WALL ASSEMBLY - THE 1,2,3, OR 4 HOUR FIRE-RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
 - STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX 2 HOUR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOMINAL 2 BY 4 INCH LUMBER SPACED 16" O.C. WITH NOMINAL 2 BY 4 INCH LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-5/8" WIDE BY 1-3/8" DEEP CHANNELS SPACED A MAX OF 24" O.C.
 - WALLBOARD, GYPSUM - NOMINAL 1/2" OR 5/8" THICK, 4" 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 DIAMETER OF OPENING IS 13-1/2".
- PIPE OR CONDUIT - NOMINAL 12" DIAMETER (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOMINAL 6" DIAMETER (OR SMALLER) STEEL CONDUIT, NOMINAL 4" DIAMETER (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR TYPE L (OR HEAVIER) COPPER TUBING OR NOMINAL 1" DIAMETER (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE OR FLEXIBLE STEEL CONDUIT IS USED, MAX F RATING OF FIRESTOP SYSTEM (ITEM 3) IS 2 HOURS. STEEL PIPES OR CONDUITS LARGER THAN NOMINAL 4" DIAMETER 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 OF WALL ASSEMBLY.
- FILL, VOID OR CAVITY MATERIAL* - CAULK-CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4" DIAMETER BEAD OF CAULK APPLIED TO THE 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 IN WHICH IT IS INSTALLED, AS TABULATED BELOW.

MAX PIPE OR CONDUIT DIAM (IN)	ANNULAR SPACE (IN)	F RATING (HOUR)	T RATING (HOUR)
0	3/16	1 OR 2	0+, 1 OR 2
1	1/4 - 1/2	3 OR 4	3 OR 4
4	0 - 1/4	1 OR 2	0
6	1/4 - 1/2	3 OR 4	0
12	3/8 - 3/4	1 OR 2	0

*WHEN COPPER PIPE IS USED, T RATING IS 0 HOURS.
3M CO.-TYPES CP-25 S/L, CP-25 N/S, CP-25 WB, CP-25 WB+.

BEARING THE U.L. CLASSIFICATION MARKING.
U.L. SYSTEM WL1001
(FORMLY SYSTEM NO. 147)
FIRE RATINGS - 1,2,3, AND 4 HOUR (SEE ITEMS 2 & 3)
T RATINGS - 0,1,2,3, AND 4 HOUR (SEE ITEM 3)

FIRE SEAL DETAIL - UNINSULATED
NO SCALE

EMERGENCY LIGHTING FIXTURE SCHEDULE

2 HEAD EMER. LT W/ ADJUSTABLE HEADS	EXITRONIX-LL-90 EXITRONIX-LL90-R	WITH INTEGRAL BATTERY BACKUP AND ALL REQ'D MTG. HARDWARE
UNIVERSAL MTD. EXIT SIGN W/ BATTERY	EXITRONIX-VEXUBPWVWH EXITRONIX-VEXUBPWVWH-R	
COMBO EXIT/EMER. W/ BATTERY. HEADS MTD. ON SIDES	EXITRONIX-VEXUBPWVWH-EL90 EXITRONIX-VEXUBPWVWH-EL90-R	
TWO HEAD OUTDOOR RATED EMG. EGRESS FIXTURE.	EXITRONIX-TRITON LED SERIES W/ INTEGRAL BATTERY BACKUP PWR-ITRL-ACEM-BR-CL	

- ELECTRICAL NOTES**
- COORDINATE WITH FURNITURE SUPPLIER FOR CONNECTIONS (PUR & DATA) TO OFFICE CUBICLES.
 - CONNECTIONS FOR TELEVISIONS AT CEILING LEVEL ARE 120V RECEPTACLE AND DATA BOX STUB-UP FOR T.V. SIGNAL CABLE.
 - AT LOCATIONS FOR PROJECTORS, COORDINATE WITH OWNER FOR SPECIFICATIONS OF EQUIPMENT TO BE INSTALLED. E.C. IS TO PROVIDE JUNCTION BOX AT CEILING WITH 2" CONDUIT FROM CEILING AREA TO 12"X12"X4" JIB IN WALL (VERIFY). NOTE CKT. AT CEILING FOR PROJECTOR POWER.
 - AT LOCATIONS FOR SCREENS, COORDINATE WITH OWNER FOR SPECIFICATIONS OF EQUIPMENT TO BE INSTALLED. E.C. IS TO PROVIDE JUNCTION BOX AT ELEV. TBD FOR POWER AND DATA OF VIDEO SCREENS.

SHERMIN ATA, ARCHITECT, PLLC
1451 S. Elm Eugene Street
Suite 2116 - Box 81
Greensboro, NC 27406
(336) 333-5650, sherminata@bellsouth.net

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DAN CAMPBELL ENGINEERING, P.A.
911 South Chatham St
Greensboro, N.C. 27403
(336) 370-4880
DCENR@BELLSOUTH.NET

GREENSBORO POLICE DEPARTMENT
320 FEDERAL PLACE
GREENSBORO, N.C.

PROJECT No.: 16030
DRAWN BY:
DATE: APRIL 11, 2016
REVISIONS:
1/1/16 I.T. ROOM-OFFICES DOC

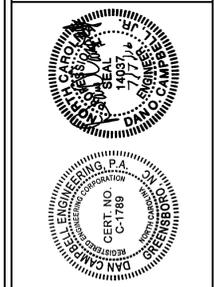
SHEET TITLE **3rd. Flr. PWR. PLAN**
SHEET NO. **E-3.2**
OF 3

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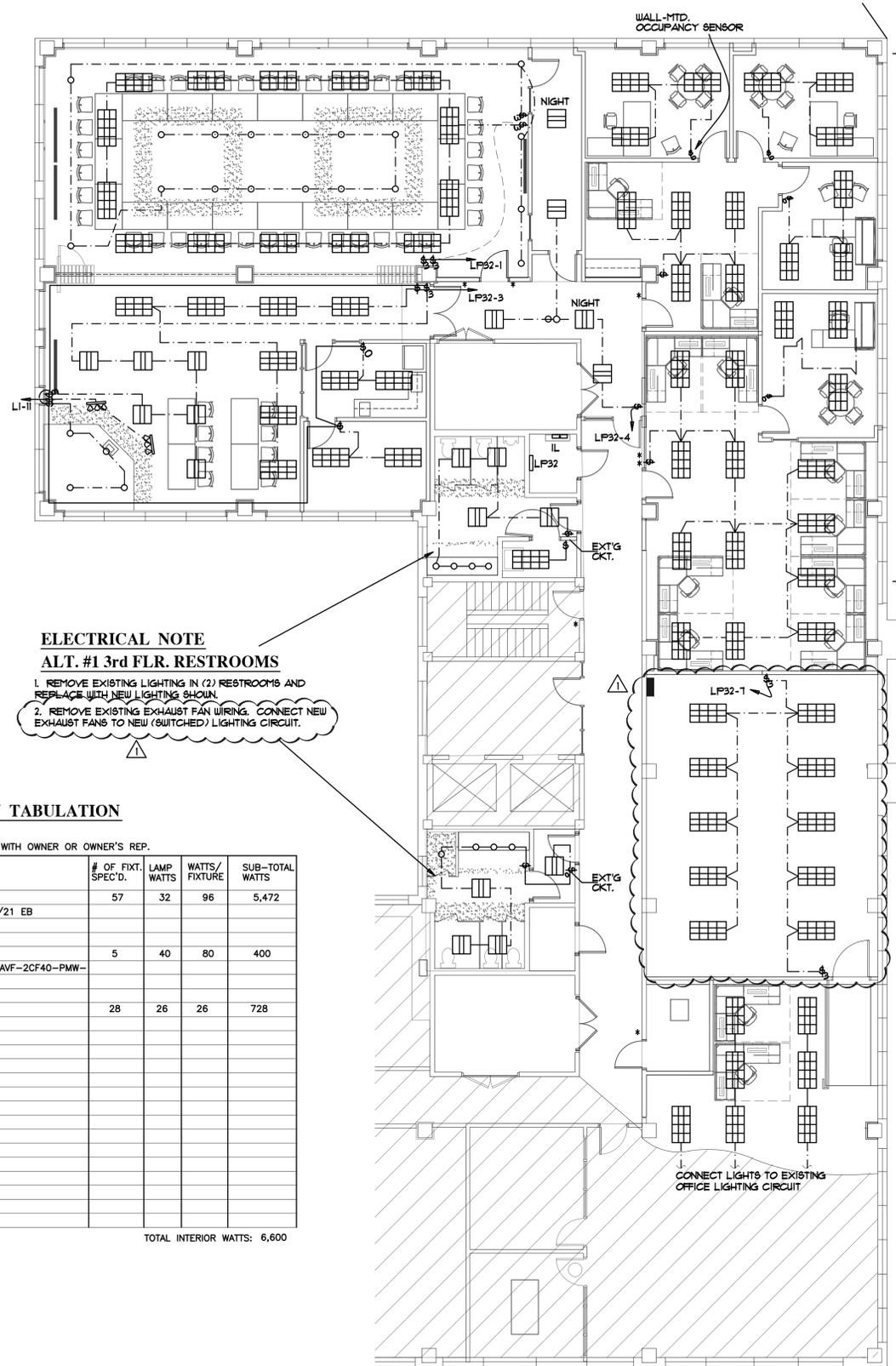


DAN CAMPBELL ENGINEERING, P.A.
 911 South Chatham St
 Greensboro, N.C. 27403
 (336) 370-4880
 DCENR@BELLSTATE.NET

GREENSBORO POLICE DEPARTMENT
 320 FEDERAL PLACE
 GREENSBORO, N.C.

PROJECT No.: 16030
 DRAWN BY:
 DATE: APRIL 11, 2016
 REVISIONS:
 1/1/16 I.T. ROOM-OFFICES DOC
 SHEET TITLE **3rd. Flr. LTG. PLAN**
 SHEET No. **E-3.3**
 OF 3

LOAD SERVED	MAKE			SQ. D			RATING			277/480V 3ph4W			MAN LUG ONLY OR MAIN BRK			250A. MLO											
	TYPE	NF	PHASE	WIRE SIZE	CKT. NO.	SURFACE	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.									
LIGHTS	12.7			#12	20		1					2															
ORIG LT. OFFICE LTS	2			#12	20		3					4															
				#12	20		5					6															
				#12	20		7					8															
				#12	20		9					10															
				#12	20		11					12															
				#12	20		13					14															
				#12	20		15					16															
				#12	20		17					18															
				#12	20		19					20															
				#12	20		21					22															
				#12	20		23					24															
				#12	20		25					26															
				#12	20		27					28															
				#12	20		29					30															
				#12	20		31					32															
				#12	20		33					34															
				#12	20		35					36															
				#12	20		37					38															
				#12	20		39					40															
				#12	20		41					42															
REMARKS	104.4	97.44	99.14	SUB-TOTAL "B"			250A. AL			BUS			SUB "A"			0			7			0					
							#3/0 cu.			LUGS			SUB "B"			104.4			97.44			99.14					
							YES			S/N			TOTAL			AMPS			104.4			104.44			99.14		
							T/B			FEED																	
	NEW PANEL REPLACES EXISTING FEDERAL PACIFIC																		TOTAL ON 175A. FEEDER								



CONNECT OFFICE LIGHTS (SWITCHES AND MOTION SENSORS TO LP32-13.5 (BALANCE AMONG (3) 2TY. CKTS.)

CONNECT LIGHTS TO EXISTING OFFICE LIGHTING CIRCUIT

ELECTRICAL NOTE

1. ALL 3-LAMP 2'x4' PARABOLIC LOUVER FIXTURES ARE TO BE DOUBLE-SWITCHED WITH INNER AND OUTBOARD LIGHTS SWITCHED DIFFERENTLY, EITHER WITH DUAL SNAP SWITCHES OR DUAL-CIRCUIT MOTION SWITCHES, AS DICTATED BY OWNER.

ELECTRICAL NOTE

ALT. #1 3rd FLR. RESTROOMS

1. REMOVE EXISTING LIGHTING IN (2) RESTROOMS AND REPLACE WITH NEW LIGHTING SHOWN.
 2. REMOVE EXISTING EXHAUST FAN WIRING. CONNECT NEW EXHAUST FANS TO NEW (SWITCHED) LIGHTING CIRCUIT.

LIGHTING SCHEDULE & ENERGY TABULATION

FIXTURE COUNT IS FOR ENERGY CALCULATIONS ONLY. CONFIRM FINAL COUNTS WITH OWNER OR OWNER'S REP.

TYPE	FIXTURE SYMBOL	FIXTURE DESCRIPTION	MANUFACTURER	# OF FIXT. SPEC'D.	LAMP WATTS	WATTS/FIXTURE	SUB-TOTAL WATTS
A		3-LAMP 2'x4' GRID-MDT PARABOLIC FL. FIXTURE W/ (3) T8 LAMPS - SWITCH INNER LAMP SEP. FROM OUT-BOARD LIGHTS, WHERE SHOWN.	DAY-BRITE OR EQUAL #2LP3G-S-332-38FL-UNV-1/21 EB	57	32	96	5,472
B		2-LAMP 2'x2' SURF-MDT FLUORESC. FIXTURE W/ (2) T8 LAMPS, INDIRECT/DIRECT LENS. FURNISH MTG HARDWARE FOR MTG. ON GRID CEILING	DAY-BRITE OR EQUAL 'ARIOSO' FLOATING FRAME #2SAVF-2CF40-PMW-UNV-1/2EB	5	40	80	400
C	⊙	6" CAN LIGHT WITH 26W. FLUOR. CFL LAMP AND ALZAC REFLECTOR	GENERIC	28	26	26	728

TOTAL INTERIOR WATTS: 6,600

INTERNATIONAL ENERGY CONSERVATION CODE SECTION 505 - LIGHTING SYSTEMS

PRESCRIPTIVE PERFORMANCE ENERGY COST BUDGET

(LIGHTING - SEE PLAN FOR FIXTURE SPECIFICATIONS)

TABLE 505.5.2 WAS USED TO CALCULATE THE INTERIOR LIGHTING POWER ALLOWANCES:

BUILDING AREA (AFFECTED BY NEW LIGHTING) = 5,208 sq. ft.

ALLOWED WATTS = 1.4 w/ft x 5,208 = 7,291 WATTS (WORKSHOP)

TOTAL ALLOWED WATTS = 7,291 WATTS

WATTS SPECIFIED = 6,600 WATTS

% OF ALLOWED = 6,600 / 7,291 = 90 %

EQUIPMENT SCHEDULES WITH MOTORS (NOT USED FOR MECHANICAL SYSTEMS)

MOTOR HP(S)	NUMBER OF PHASES	MINIMUM EFFICIENCY (%)	MOTOR TYPE	# OF POLES
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

DESIGNER STATEMENT:
 TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE ELECTRICAL SYSTEM AND EQUIPMENT REQUIREMENTS OF THE INTERNATIONAL ENERGY CONSERVATION CODE

SIGNED: PLEASE SEE SEAL

NAME: Dan O. Campbell, Jr.

TITLE: P.E. (Electrical Engineer)

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