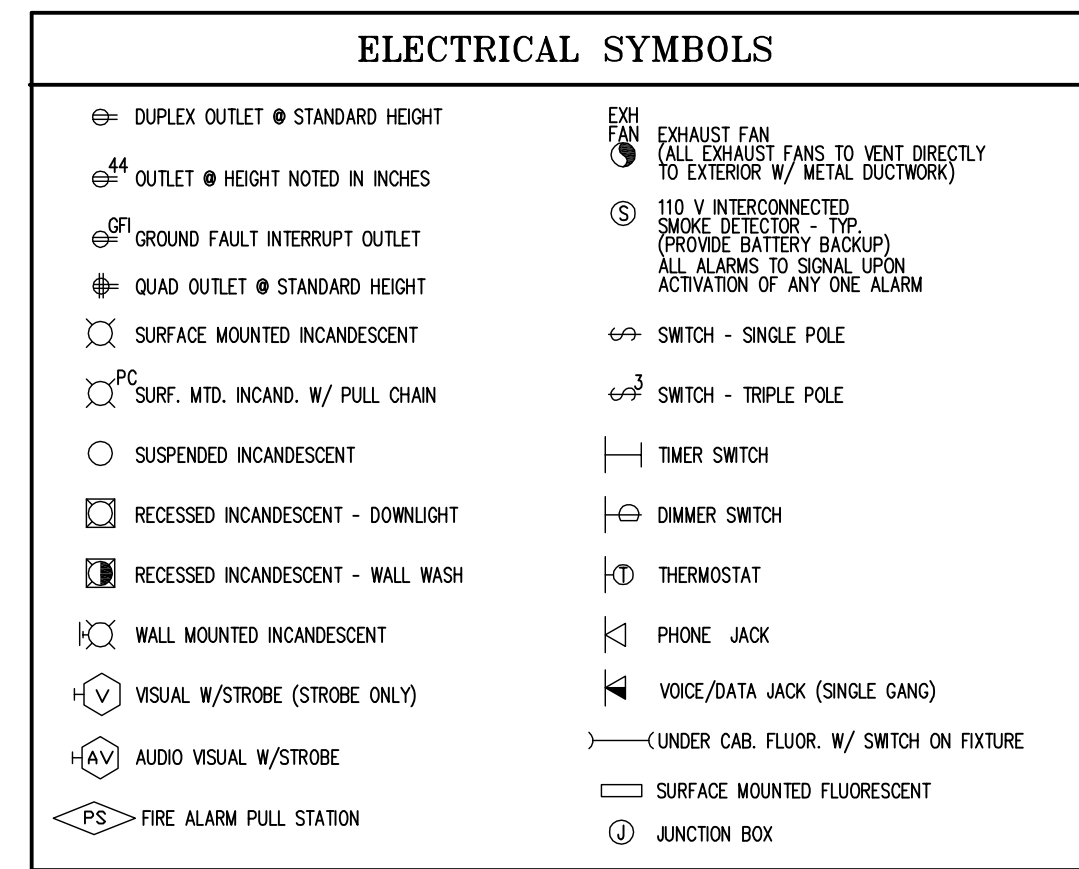


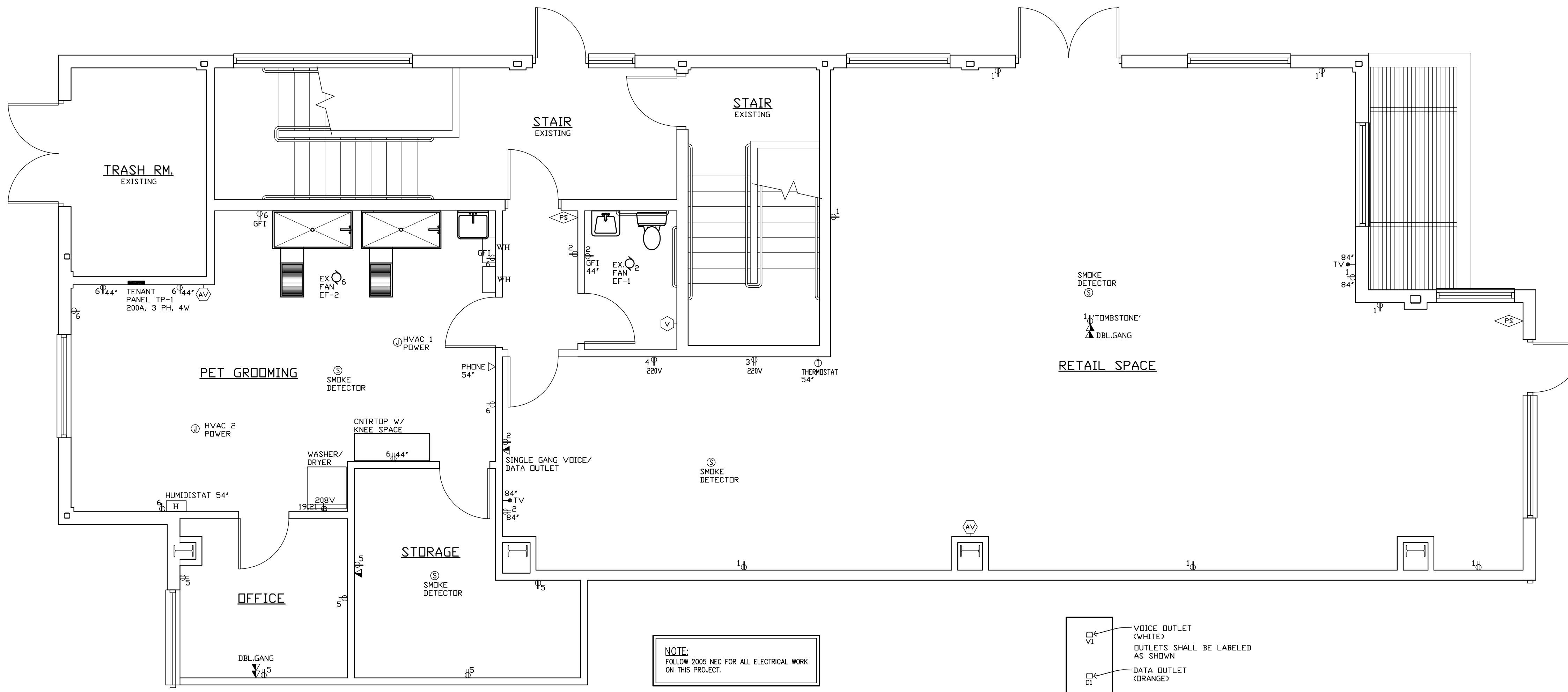
ELECTRICAL NOTES:

- ALL WORK SHALL CONFORM TO ALL APPLICABLE CODES.
- ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL ELECTRICAL CONSTRUCTION MATERIALS SHOWN OR REASONABLY IMPLIED ON THE DRAWINGS TO COMPLETE THE INSTALLATION IN A SATISFACTORY AND USABLE MANNER.
- ALL MATERIALS SHALL BE NEW AND U.L. LISTED UNLESS INDICATED OTHERWISE ON THE PLANS AND OF A QUALITY SPECIFIED AND APPROVED BY THE ARCHITECT/ENGINEER.
- ALL WORK SHALL BE PERFORMED IN A MANNER TO COMPLY WITH THE REQUIREMENTS OF THE FIRE PREVENTION BUREAU AND ANY LOCAL OR STATE BODIES HAVING JURISDICTION.
- ELECTRICAL CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND PAY ALL PERMIT INSPECTION FEES FOR HIS WORK.
- ELECTRICAL CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING AS REQUIRED AND SHALL REMOVE HIS DEBRIS FROM THE SITE.
- EQUIPMENT MANUFACTURERS ARE NOTED ON THE DRAWINGS. ANY SUBSTITUTIONS SHALL BE APPROVED BY THE ARCHITECT/ENGINEER.
- REFER TO ELECTRICAL DRAWINGS FOR SYMBOLS AND ADDITIONAL NOTES.
- ELECTRICAL OUTLETS ARE SHOWN ON ARCHITECTURAL DRAWINGS FOR GENERAL LOCATION ONLY.
- ALL WALL MOUNTED TELEPHONE AND ELECTRICAL OUTLETS SHALL BE MOUNTED 1'-3" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE.
- MOUNT ALL SWITCHES AND THERMOSTATS 4'-0" A.F.F. TO CENTERLINE UNLESS NOTED OTHERWISE. GANG ALL SWITCHES INCLUDING FAN AND MOTOR SWITCHES AT ONE LOCATION UNLESS NOTED OTHERWISE.
- THE ELECTRICAL CONTRACTOR SHALL VERIFY SPECIAL EQUIPMENT REQUIREMENTS WITH THE MANUFACTURER PRIOR TO INSTALLATION.
- WALL ELECTRICAL AND/OR TELEPHONE BOXES ON OPPOSITE FACES OF THE SAME PARTITION SHALL BE STAGGERED A MINIMUM OF 0'-6" APART ON CENTER AND ALL OUTLET BOXES SHALL BE CALKED WITH ACACUSTICAL SEALANT.
- FOR ADJACENT COMBINATIONS OF ALL OUTLETS, MOUNTING LOCATIONS TO BE 0'-6" ON CENTER UNLESS NOTED OTHERWISE.
- ALL CONDUITS AND WIRING FOR WALL MOUNTED OUTLETS TO BE PLACED IN THE PARTITION CAVITY AND ATTACHED TO THE CEILING UNLESS NOTED OTHERWISE.
- ALL OUTLETS SHALL ALIGN, BE LEVEL AND SQUARE.
- THE ELECTRICAL CONTRACTOR TO VERIFY PRIOR TO FINISHING THAT PARTITION OUTLET OPENINGS WILL BE COMPLETELY HIDDEN BY A STANDARD COVER PLATE.
- THE ELECTRICAL CONTRACTOR TO VERIFY THAT EXISTING ELECTRICAL PANEL AND POWER ARE ADEQUATE FOR THE DESIGNED USE.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL REQUIRED DOCUMENTATION BEYOND THE INFORMATION INDICATED ON THE ARCHITECTS DRAWINGS.
- REFER TO OTHER CONSTRUCTION DOCUMENTS FOR ADDITIONAL NOTES, SYMBOLS AND SCHEDULES.
- ALL NEW CEILINGS ARE TO BE CONSIDERED AS INDICATED IN ACCORDANCE WITH STANDARDS ESTABLISHED BY THE 'CEILINGS AND INTERIOR SYSTEMS CONSTRUCTION ASSOCIATION'.
- ALL LUMINAIRES SHALL BE U.L. APPROVED.
- THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL EXIT LIGHTING AS REQUIRED BY APPLICABLE CODES UPON APPROVAL OF LOCATION AND STYLE BY LOCAL GOVERNING AUTHORITIES.
- A CONVENIENCE OUTLET SHALL BE INSTALLED ON THE ROOF WITHIN 75' OF ALL ROOFTOP EQUIPMENT.
- ALL EMERGENCY CIRCUITS SHALL BE DEDICATED AND PROVIDED WITH LOCK-OUT DEVICES.
- ALL EXIT DISCHARGES SHALL BE ILLUMINATED BY EMERGENCY LIGHTING.
- ALL ELECTRICAL WIRING SHALL BE INSTALLED IN 3/4" SIZE ELECTRICAL METALLIC TUBING (EMT) (NEC SECTION 348)
- THE ELECTRICAL CONTRACTOR SHALL SPECIFICALLY NOTE THAT THE ELECTRICAL DRAWINGS ARE INTENDED TO INDICATE ONLY THE EXTENT DIAGRAMATICALLY, AND THE GENERAL LOCATION AND CHARACTER OF THE WORK INCLUDED. WORK INTENDED BUT HAVING MINOR DETAILS OBVIOUSLY OMITTED OR NOT SHOWN SHALL BE FURNISHED AND INSTALLED COMPLETE TO PERFORM THE FUNCTIONS INTENDED. THE CIRCUIT NUMBERS SHOWN IN THE DRAWINGS ARE FOR IDENTIFICATION ONLY. THE BALANCING OF THE LOADS ON THE PANELS SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. ALL ELECTRICAL EQUIPMENT AND CONTROLS NOTED BY OTHERS THROUGHOUT THE ELECTRICAL PLANS WILL BE FURNISHED BY ANOTHER DIVISION OF THIS CONTRACT BUT SHALL BE INSTALLED BY THE ELECTRICAL CONTRACTOR.
- ALL POWER AND LIGHTING WIRE SHALL BE A MINIMUM 12 GAUGE COPPER OR AS OTHERWISE INDICATED ON THE DRAWINGS.
- ELECTRICAL CONTRACTOR SHALL COORDINATE LIGHT FIXTURE DETAILS WITH CEILING TYPE. FOR EXACT LOCATION OF FIXTURES IN ACACUSTICAL TILE CEILINGS. REFER TO THE ARCHITECTURAL CEILING PLANS. THE FINAL FINISHES FOR REFLECTORS AND TRIM OF LIGHT FIXTURES SHALL BE APPROVED BY THE ARCHITECT.
- ALL CONDUIT, RACEWAY AND ELECTRICAL APPARATUS SHALL BE INSTALLED AS NEATLY AS POSSIBLE AND IN SUCH A MANNER AS TO AFFORD MINIMUM INTERFERENCE WITH OTHER TRADES.
- ALL CONDUIT SHALL BE SUPPORTED IN COMPLIANCE WITH CODE REQUIREMENTS.
- ALL CONDUIT ABOVE CEILINGS SHALL BE RIGIDLY SUPPORTED BY SUITABLE HANGERS, INDEPENDENT OF THE CEILING AND CEILING SUPPORTS SYSTEMS.
- NO FLEXIBLE ELECTRICAL METALLIC CONDUIT (GREENFIELD) SMALLER THAN 1/2 INCH SHALL BE USED UNLESS SPECIAL PERMISSION IS GIVEN BY THE OWNER.
- THE IMPACT OF MULTIPLE CONDUCTORS IN ONE CONDUIT SHALL BE RATED PER CODE. REFER TO N.E.C.
- ALL LIGHT SWITCHES AND RECEPTACLES SHALL BE RATED FOR 20 AMPS.
- TO ASSURE EFFECTIVE GROUNDING, ALL CONDUIT, EQUIPMENT AND METAL ENCLOSURES SHALL HAVE A CONTINUOUS PATH TO GROUND WITH SUFFICIENTLY LOW IMPEDANCE TO LIMIT THE POTENTIAL ABOVE GROUND, AND TO FACILITATE THE OPERATION OF THE OVER CURRENT DEVICES IN THE CIRCUITS.
- CIRCUIT NUMBERS ARE INDICATED FOR CLARITY AND QUANTITY ONLY. THEY DO NOT REPRESENT ACTUAL CIRCUIT NUMBERS IN THE PANEL.
- COORDINATE EXACT LOCATIONS AND MOUNTING HEIGHTS OF ALL LIGHT FIXTURES, WALL SWITCHES, OUTLETS AND OTHER DEVICES WITH THE ARCHITECTURAL DRAWINGS.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH ALL OTHER TRADES.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR HEIGHT ABOVE FINISHED FLOOR OR COUNTER AT EACH LOCATION. ALL OUTLETS SHALL BE MOUNTED HORIZONTALLY UND.
- PROVIDE #12 AWG WIRING FOR ALL 20 AMP CIRCUITS LESS THAN 100 FEET IN LENGTH AND #10 AWG WIRING FOR 20 AMP CIRCUITS LONGER THAN 100 FEET IN LENGTH.
- THE MAXIMUM NUMBER OF CURRENT CARRYING CONDUCTORS IN ANY CONDUIT SHALL BE NINE (9). NOTE THAT NEUTRAL CONDUIT WHERE USED, IS CONSIDERED TO BE A CURRENT CARRYING CONDUCTOR.
- ALL RECEPTACLE BRANCH CIRCUITS SHALL HAVE AN EQUIPMENT GROUND CONDUCTOR AND WHEN (2) OR MORE CIRCUITS ARE RUN IN THE SAME HOME RUN, INCREASE THE NEUTRAL CONDUCTOR BY ONE WIRE SIZE. I.E. 3#12(PHASE), 1#20(GE. GROUND), 1#10(NEUTRAL) CONDUCTORS.
- PROVIDE SEPARATE NEUTRALS FOR ALL EMERGENCY LIGHTING AND EXIT SIGN CIRCUITS.
- PROVIDE GFI RECEPTACLES WHERE LOCATED WITHIN 6'-0" OF SINKS.
- ELECTRICAL CONTRACTOR SHALL VERIFY PLUG CONNECTION CONFIGURATION BEFORE PURCHASING RECEPTACLES FOR ALL EQUIPMENT.
- OUTLET BOXES SHALL BE GALVANIZED STEEL, 4" X 2" DEEP. PROVIDE BLANK COVERS, PLASTER RINGS AND DEVICE COVER PLATES AS REQUIRED.
- SWITCHES AND RECEPTACLES SHALL BE U.L. LISTED, SPECIFICATION GRADE, HEAVY DUTY TYPE. COLOR SHALL BE IVORY UNLD.
 - DUPLEX RECEPTACLE: NEMA 5-20 GROUNDING TYPE. HUBBELL #5326 OR APPROVED EQUAL.
 - SINGLE POLE WALL SWITCHES: HUBBELL #1220 SERIES OR APPROVED EQUAL.
 - COVERLETS: .04 INCH THICK, TYPE 302 SATIN FINISHED STAINLESS STEEL.
- A MAXIMUM OF FIVE (5) DUPLEX RECEPTACLES, NEMA 5-20R SHALL BE ALLOWED PER BRANCH CIRCUIT (NOTE ONE FOUR-FLX COUNTS AS TWO DUPLEXES) UNLD. OTHER TYPES OF RECEPTACLES SHALL HAVE INDIVIDUAL BRANCH CIRCUITS UNLD.
- ALL MOTOR CONNECTIONS ARE NOT SHOWN OR SPECIFIED. ELECTRICAL CONTRACTOR SHALL EXAMINE ALL ARCHITECTURAL AND MECHANICAL CONTRACT DOCUMENTS FOR ADDITIONAL ELECTRICAL WORK. PROVIDE ALL WIRING, OVERCURRENT DEVICES, CONDUITS AND ALL FINAL CONNECTIONS.
- BRANCH CIRCUIT WIRING FOR 120 VOLT, 20 AMP CIRCUITS WIRE TO 120/208V SYSTEMS SHALL BE AS FOLLOWS UNLD.
 - GENERAL RECEPTACLES AND INCANDESCENT LIGHTING LOADS:
 - UP TO 100 FEET IN LENGTH 3-#12, 1-#10N, 1-#12G - 3/4" C.
 - OVER 100 FEET IN LENGTH 3-#10, 1-#10N, 1-#10G - 3/4" C.
 - FLUORESCENT AND H.L.D. LIGHTING LOADS:
 - UP TO 100 FEET IN LENGTH 3-#12, 1-#10N, 1-#12G - 3/4" C
 - OVER 100 FEET IN LENGTH 3-#10, 1-#10N, 1-#10G - 3/4" C.
- PANELBOARD BOXES SHALL BE CODE GAUGE, GALVANIZED SHEET STEEL WITH 4" MINIMUM SIDE GUTTERS AND 5" MINIMUM END GUTTERS AND SHALL NOT EXCEED 78 INCHES ABOVE FINISHED FLOOR.
- EACH BRANCH CIRCUIT SHALL BE DISCRETELY NUMBERED. PANEL BOARD WIRING SHALL BE TAGGED AT EACH BREAKER WITH THE PROPER CIRCUIT NUMBER. WRAP AROUND TAPE WILL BE ACCEPTABLE.



PANEL: TENANT PANEL (TP-1)		VOLTAGE: 120/208V, 3 PHASE, 4 WIRE		AMPERAGE: 200A M.C.B. RECESSED MOUNTING			
DESCRIPTION:	A	B	C	A	B	C	DESCRIPTION:
OUTLETS	V			1	20	1	20
OUTLETS	V			1	20	3	4
OUTLETS		V		1	20	5	6
OUTLETS			V	1	20	7	8
LIGHTS	286			1	20	7	8
LIGHTS		400		1	20	9	10
LIGHTS			360	1	20	11	12
EMERG. LIGHTS	130			1	20	13	14
WASHER		131		1	20	15	16
WATER HEATERS			198	1	20	17	18
DRYER	3120			1	20	19	20
DRYER		3120		1	20	21	22
MAINT. OUTLET			V	1	20	23	24
SPACE				27	28	20	1
SPACE				27	28	20	1
SPACE				29	30		
SPACE				31	32	30	3
SPACE				33	34		
SPACE				35	36	20	1
SPACE				37	38		
SPACE				39	40		
SPACE				41	42		
SUBTOTALS:	3536	3651	558				
TOTAL A	12766						
TOTAL B	12893						
TOTAL C	9522						
TOTAL LOAD:	35183						
TOTAL AMPERAGE = (TOTAL LOAD) / (208*1.73*9) = 108.64							

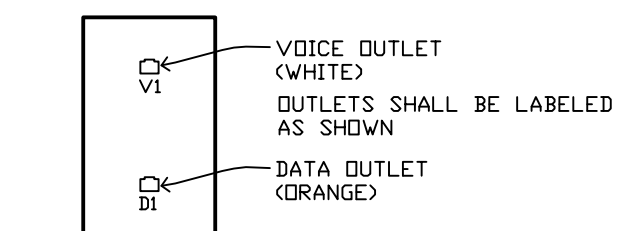
- NOTE:
- ALL EXTERIOR LIGHTING TO BE FED THROUGH PHOTOCELL.
 - COMPRESSORS FOR HVAC 1 & 2 WILL BE MOUNTED ON THE ROOF. RUN 3 PHASE POWER TO THEM PLUS CONTROL WIRING. PROVIDE POWER DISCONNECTS AT COMPRESSORS.
 - BOOSTER FANS ARE REQUIRED FOR BOTH EXHAUST FANS, DRYER VENT AND WATER HEATER VENTS. PROVIDE POWER ON ROOF FOR THEM FROM SAME CIRCUITS IN ROOMS.
 - PROVIDE A POWER OUTLET ON ROOF FOR SERVICING MECHANICAL EQUIPMENT. CKT. 23



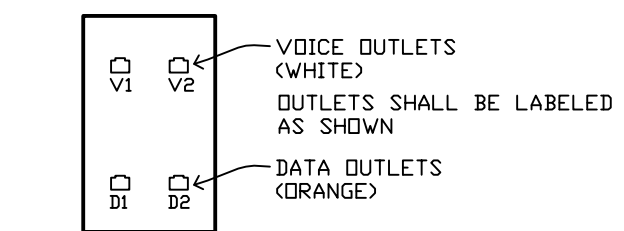
POWER PLAN
SCALE: 1/4" = 1'-0"

NOTE:
FOLLOW 2005 NEC FOR ALL ELECTRICAL WORK ON THIS PROJECT.

FIRESTOPPING NOTE:
CONTRACTORS SHALL PROVIDE FIRESTOPPING AT ALL PENETRATIONS THROUGH FLOORS. PROVIDE MN. 17 THERMAPERF SMOKE SEAL CAULK TOP & BOTTOM OF PENETRATION ALL AROUND. COMPLETELY FILL VOID WITH THERMAPERF SAFING INSULATION.



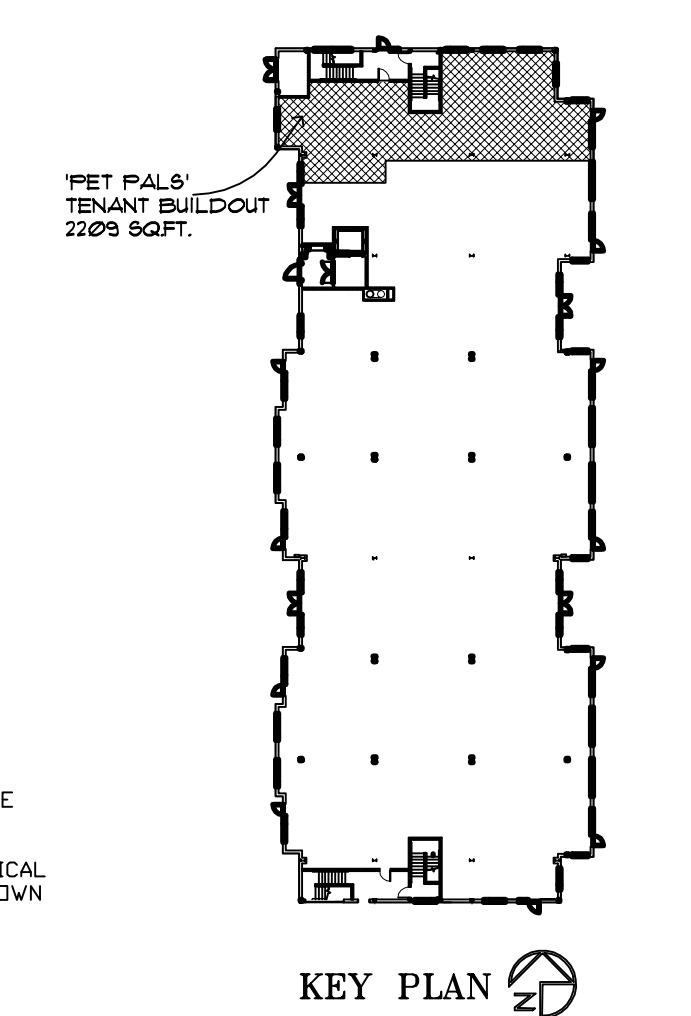
SINGLE GANG VOICE/DATA OUTLET



DOUBLE GANG VOICE/DATA OUTLET

- NOTES:
- COMPRESSORS FOR HVAC 1 & 2 LOCATED ON ROOF. PROVIDE POWER, CONTROL WIRING, DISCONNECTS AND MAINTENANCE OUTLETS PER CODE.
 - PROVIDE BOOSTER FANS FOR BOTH EXHAUST FANS, WATER HEATER VENTS AND DRYER VENT. PROVIDE POWER AND CONTROL WIRING FROM SAME CIRCUIT FOR EQUIPMENT IN ROOMS.

- NOTES:
- VOICE/DATA OUTLETS TO BE LABELED AS SHOWN.
 - TELEPHONE AND DATA SYSTEMS BY OTHERS. ELECTRICAL CONTRACTOR SHALL FURNISH AND RUN 3/4" (75") EMPTY EMT TO EACH VOICE/DATA OUTLET. TERMINATE CONDUITS ABOVE CEILING. PROVIDE TWO PULL STRINGS.



Tim O'Malley, Architects
Architecture & Planning
432 South 14th Street
St. Charles, IL 60174
Ph: 630-762-1062

Pet Pals Tenant Buildout
Dodson Place Building 8, Geneva, Illinois

Revisions

Plotted: APRIL 6, 2010
Issue Date: MARCH 16, 2010
Drawn: JKDD
Job No:

JKS & Associates
MECHANICAL ENGINEERS
3S094 Deepath Road
Batavia, Illinois 60510
Ph: 630-879-2957

Sheet No:
E1
of