

LEGEND
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RED





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HVAC SYMBOLS		PIPING S	YMBOLS
SOUARE DUCT SIZE TAG (MIDTH - HI	LEIGHT)		
	,	CHWR-CHWR-CHWR-CHWR-CHWR-CHWR-CHWR-CHWR-	
	nı)	CHWS	CHILLED WATER SUPPLY
ROUND DUCT SIZE TAG (DIAMETER)		CWR	CONDENSER WATER RETURN
EXISTING DUCT TAG		CWS	CONDENSER WATER SUPPLY
DUCT BEING DEMOLISHED		GWR	GEOTHERMAL WATER RETURN
SUPPLY AIR - LOW PRESSURE			GEOTHERMAL WATER SUPPLY
SUPPLY AIR - MEDIUM PRESSURE		HWS	HEATING WATER SUPPLY
CONDITIONED OUTSIDE AIR		NG	NATURAL GAS
OUTSIDE AIR		PGPG	PROPANE GAS REFRIGERANT-I IQUID
RETURNAIR		REF-S	REFRIGERANT-SUCTION
		REF-HG	REFRIGERANT-HOT GAS
		STM	
EXHAUST AIR		CWV	COMBINATION WASTE & VENT
RELIEF AIR		CA	COMPRESSED AIR
GREASE EXHAUST AIR		DCW	DOMESTIC COLD WATER
SMOKE EXHAUST AIR			SOFT COLD WATER
EXHAUST GAS FLUF		–	REVERSE OSMOSIS WATER
		DHW	HOT WATER
		——————————————————————————————————————	HOT WATER 140°
RECTANGULAR SUPPLY/OUTSIDE AIF	R DUCT RISE	—	HOT WATER RECIRCULATION
ROUND SUPPLY/OUTSIDE AIR DUCT I	RISE	GV	GREASE VENT
RECTANGULAR RETURN/TRANSFER	AIR DUCT RISE	GW	GREASE WASTE
ROUND RETURN/TRANSFER AIR DUC	CT RISE		INDIRECT WASTE
	R DUCT RISE	OW	OIL WASTE
		PD	PUMP DISCHARGE
REGISTERS & DIFFUSERS SYMBOLS AND TAC	GS		SANITARY VENT SANITARY SEWER
	<u></u>	SHWR	SOLAR HOT WATER RETURN
		SHWS	SOLAR HOT WATER SUPPLY
THROW PATTI	ERN		
MAX NC RATIN	NG		
12"x10" 12"x10" <u>RG15 500</u> 6"x6" / 24x24			
SD9 400		PIPE DROP 4	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		l,CAP	4" DEGREE TEE
SQUARE EXHAUST GRILLE	RECTANGULAR RETURN GRILLE		
		PIPE ACCESS	SORY TAGS
48 <mark>(x2 1/2" 48"x2 1)</mark> 2" LINEAR DIFFUSI	<u>ER TAG</u>		
LSD1 200 1 / 4' - 0" / 9"/5" ACTIVE SLOT L	.OTS / ENGTH (PLENUM LENGTH)	-2" BALANCING	2" 3-WAY CNTRL
8' - 0"AFF	NTER OF FACE)		
6' - 0"SECTION TOTAL	_ TRACK LENGTH		PRESSURE REDUCING VALVE
	LSD1 200		3/8" SOLENOID REFRIGERANT SOLENOID VALVE
MECHANICAL EQUIPMENT TAGS	14-01313	2" TMV 3-WAY MIXING VALVE	2" BUTTERFLY BUTTERFLY VALVE
XX	RTU-XX		
	T 590 lb	<u>DRAIN TAGS</u>	
		DRAIN SIZE	
10' - 0" 4.0 ton		FLOOR DRAIN =- 4" FD-1P - "P" - INDICATI	$ES \qquad 4" DD-29 \rightarrow  DECK DRAIN$
	ROOFTOP UNIT G	PRIMER CON	NECTION
CAPACIT	Y RTU-XX	4" FD-13	4" RD-12 DRAIN
(R)VAV-XX FUEL INPUT GAS PIPE FLOW-	115000 Btu/h	8 WFU - FIXTURE UNI	TS 4" RD-15 - OF DRAIN
		ROOF AR SERVED	EA 6" RD-1 COMBINATION
	MBOI	PLUMBING FIXTUR	<u>E TAGS</u>
	UIPMENT ID	TYPE (SEE SCHEDULE)	► L-1
	URE & HUMIDITY SENSOR	FIXTURE	
	URE SENSOR	WATER CLOSET WC-1A	WC-1 1 WFU
	AT		
	VITCH	4" WCO	
SENSUR			

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#### MECHANICAL SHEET INDEX

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<u>NOTE \*</u> N ON THIS SHEET MAY OR MAY NOT BE USED IN DF DRAWINGS.

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## FIRE PROTECTION GENERAL NOTES

- 1. NO FIRE PROTECTION LINE SHALL BE DESIGNED OR INSTALLED PRIOR TO CLOSE COORDINATION WITH ALL OTHER DISCIPLINES. DUCTWORK, MECHANICAL PIPING AND PLUMBING TAKE SPACE PRECEDENCE OVER FIRE PROTECTION REMOVAL AND REINSTALLATION AT THE FIRE PROTECTION CONTRACTORS EXPENSE.
- 2. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING SURROUNDING AREA.
- 3. COORDINATE EXACT LOCATION OF PIPING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND PLUMBING

PIPING, AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS.

- 4. FIRE SUPPRESSION CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND/OR REROUTE ANY AND ALL FIRE PROTECTION PIPING, VALVING, SUPPORTS OR SYSTEMS, OTHERWISE WITHIN THE FIRE SUPPRESSION DISCIPLINE REGARDLESS OF WHO INSTALLED THEM OR WHEN THEY WERE INSTALLED, IN ORDER TO ACCOMMODATE MECHANICAL, PLUMBING, ELECTRICAL OR OTHER SYSTEMS. COORDINATE WORK WITH MECHANICAL, ELECTRICAL, PLUMBING OR OTHER CONTRACTORS UNTIL SUBSTANTIAL COMPLETION OF PROJECT.
- 5. PROVIDE ALTERATIONS TO THE EXISTING FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE NEW FLOOR PLAN AND NEW CEILING TYPES. REUSE EXISTING SYSTEM EQUIPMENT WHERE APPLICABLE. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS PER REQUIREMENTS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- 6. THE BUILDINGS COMPLETE OPERATIONAL FIRE PROTECTION SYSTEMS SHALL REMAIN IN PLACE. THIS CONTRACTOR SHALL REPAIR ANY DAMAGE TO THIS SYSTEM CREATED BY THE REMOVAL OF ANY OTHER MECHANICAL SYSTEMS OR COMPONENTS.
- 7. THIS CONTRACTOR SHALL COORDINATE PHASING OF SPRINKLER WORK WITH THE GENERAL CONTRACTOR PRIOR TO STARTING WORK.
- 8. PROVIDE A COMPLETE WET TYPE FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE FLOOR PLAN AND CEILING TYPES INCLUDING MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- 9. THE SPRINKLER SYSTEM SHALL BE DESIGNED BASED UPON ACTUAL WATER FLOW TEST DATA OBTAINED AT OR NEAR THE JOB SITE.
- 10. REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION REGARDING SPRINKLER HEAD LOCATION AND PIPE, UNLESS NOTED OTHERWISE.
- 11. DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.
- 12. ALL SPRINKLER SYSTEM PIPING SHALL BE CONCEALED ABOVE THE SUSPENDED CEILING SYSTEM, UNLESS NOTED OTHERWISE. WRITTEN AUTHORIZATION SHALL BE OBTAINED FROM THE ARCHITECT PRIOR TO EXPOSING ANY PIPING IN ANY ROOM WHICH HAS A SUSPENDED CEILING.
- 13. THIS CONTRACTOR SHALL PROVIDE ALL ADDITIONAL SPRINKLER HEADS AS REQUIRED TO ENSURE AN APPROVED FIRE PROTECTION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
- 14. AUXILIARY DRAINS SHALL BE EXPOSED WITH 1" DRAIN VALVES. WHEN 5 OR MORE GALLONS ARE TRAPPED, THIS CONTRACTOR SHALL PROVIDE FIXED PIPING TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE DRAIN. WHEN LESS THAN 5 GALLONS ARE TRAPPED, A HOSE BIB SHALL BE PROVIDED AT THE DRAIN VALVE.
- 15. AUXILIARY DRAINS SHALL NOT BE LOCATED ABOVE PLASTER OR GYPSUM BOARD CEILING SYSTEMS. ONLY BY A SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER WILL A VARIANCE BE PROVIDED. 16. SHOW ALL ROOM NUMBERS ON SHOP DRAWING PLANS.
- 17. ROUTE SPRINKLER PIPING SUCH THAT IT DOES NOT RUN ABOVE ELECTRICAL PANELS, SWITCHGEAR, OR SIMILAR EQUIPMENT. SPRINKLER MAINS SHALL NOT RUN THROUGH ELECTRICAL OR COMMUNICATION ROOMS. SPRINKLER HEADS IN THESE ROOMS SHALL BE SERVED BY A DEDICATED BRANCH LINE FOR EACH ROOM. BRANCH LINE TO ENTER ROOM ABOVE DOOR.
- 18. THIS DRAWING INDICATES APPROXIMATE EXISTING PIPING LOCATIONS. THIS CONTRACTOR SHALL DETERMINE THE ACTUAL PIPE SIZING REQUIRED AND COORDINATE WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS.

## WITH LOCAL CODES.

- VALVES ARE LOCATED.
- REQUIREMENTS.
- 10. CONTRACTOR TO VERIFY CONNECTION SIDE OF ADA FIXTURES AND ADJUST ACCORDINGLY. INSTALL

- FOR ACCESSIBILITY.
- RECOMMENDATION.
- NECESSARY.

- THE LAVATORY.

- THE FOLLOWING.

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#### PLUMBING GENERAL NOTES

1. UNLESS OTHERWISE NOTED, SLOPE PIPE AS FOLLOWS: WASTE BRANCHES: 1/4" PER FOOT; WASTE MAINS: 1/4" PER FOOT; ROOF DRAIN/ROOF DRAIN OVERFLOW: 1/8" PER FOOT. VERIFY ALL SLOPING

2. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING AREAS ON FLOORS BELOW.

3. PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OTHER TRADES.

4. ALL PIPING IN PLUMBING CHASES SHALL BE ARRANGED TO ALLOW MAINTENANCE ACCESS.

5. NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S, AND MCC'S. 6. COORDINATE FAN ROOM FLOOR DRAIN AND FLOOR SINK LOCATIONS WITH COOLING COIL.

EVAPORATIVE SECTION, AND HEATING COIL LOCATIONS. 7. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE

8. PIPING AND ROUTING SHOWN, INCLUDING ALL BELOW FLOOR DECK PIPING IS APPROXIMATE. IT IS UP TO THE CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND SIZE OF ALL PIPING.

9. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING HEIGHTS, DIMENSIONS AND OTHER

FLUSH VALVES HANDLES ON WIDE SIDE OF ALL FIXTURES.

11. LOCATE ALL VENTS MINIMUM 25' AWAY FROM AIR INTAKES. 12. INSTALL ALL DOMESTIC WATER LINES BELOW DUCTWORK.

13. INSTALL A 24" X 24" ACCESS DOOR BELOW ALL ISOLATION VALVES, BALANCING VALVES AND WATER HAMMER ARRESTORS WHERE MOUNTED ABOVE HARD CEILINGS.

14. MOUNT ALL ISOLATION VALVES, CONTROL VALVES, BALANCING VALVES, ETC. NEAR CEILING HEIGHT

15. INSTALL ALL EQUIPMENT WITH SUFFICIENT CLEARANCE FOR MAINTENANCE PER MANUFACTURERS

16. COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL AND PROVIDE SLEEVES AS

17. COORDINATE THE LOCATION OF THE FLOOR DRAIN, SHOWER DRAIN, OR FLOOR SINK WITH ARCHITECTURAL AND STRUCTURAL, TYPICAL.

18. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES OF WASTE, VENT AND DOMESTIC WATER TO/FROM SINGLE FIXTURE.

19. HOSE BIBBS SHOWN AT LAVATORIES ARE TO BE MOUNTED AT AN ACCESSIBLE LOCATION UNDER 20. LOCATE CIRCUIT SETTERS, VALVES, WATER HAMMER ARRESTORS, ETC. IN ACCESSIBLE LOCATIONS.

PROVIDE 24" X 24" ACCESS PANEL WHERE ITEM IS LOCATED ABOVE A HARD CEILING. PROVIDE APPROPRIATELY SIZED ACCESS DOORS TO ANY OF THESE ITEMS INSTALLED IN A WALL. COORDINATE ACCESS DOOR SIZE, LOCATION, AND STYLE WITH ARCHITECT.

21. FIELD VERIFY LOCATION AND INVERTS OF SITE UTILITIES PRIOR TO INSTALLATION. 22. FIELD VERIFY ALL NEW WATER, WASTE AND VENT PIPING CONNECTIONS AND PROVIDE NEW

CONNECTIONS AS REQUIRED FOR PROPERLY OPERATING SYSTEMS. 23. WASTE AND VENT PIPING BELOW FLOOR AND THROUGH FLOOR TO BE 2" MINIMUM.

24. INSTALL CLEANOUTS IN DRAIN PIPING AS INDICATED, AND WHERE NOT INDICATED, ACCORDING TO

A. SIZE SAME AS DRAINAGE PIPING UP TO 4" NPS. USE 4" NPS FOR LARGER. DRAINAGE PIPING

UNLESS LARGER CLEANOUT IS INDICATED. B. LOCATE AT MINIMUM INTERVALS OF 50 FT FOR PIPING 4" NPS AND SMALLER AND 100 FT FOR

LARGER PIPING.

C. LOCATE AT THE BASE OF EACH VERTICAL STACK.

### MECHANICAL GENERAL NOTES

- 1. COORDINATE EXACT PLACEMENT OF DIFFUSERS, GRILLES AND REGISTERS WITH ARCHITECTURAL REFLECTED CEILING PLAN, TYPICAL.
- 2. SEE DETAIL FOR DIFFUSER CONNECTIONS TO DUCTWORK, TYPICAL.
- BRANCH DUCTWORK SHALL BE SIZED TO MATCH THE NECK INLET SIZE OF THE DIFFUSERS.
- REGISTER OR GRILLE IT SERVES UNLESS NOTED OTHERWISE, TYPICAL. 4. COORDINATE EXACT MOUNTING LOCATION OF ALL THERMOSTATS WITH LATEST REVISION OF
- ARCHITECTURAL ELEVATION AND FURNISHINGS PLANS, TYPICAL.
- THE MECHANICAL CONTRACTOR SHALL PROVIDE FIRE, SMOKE OR COMBINATION FIRE/SMOKE DAMPERS AT ALL LOCATIONS SHOWN ON THE CONTRACT DOCUMENTS AND AS REQUIRED TO MEET THE INTEGRITY OF ALL SMOKE AND FIRE PARTITIONS. THE CONTRACTOR SHALL REFER TO THE LATEST ARCHITECTURAL LIFE SAFETY PLANS FOR ALL FIRE AND SMOKE PARTITION LOCATIONS. DAMPERS ARE TO BE PROVIDED WITH SHUTOFF/TEST SWITCH AT EACH LOCATION.
- PROVIDE AND INSTALL TURNING VANES IN ALL SQUARE LOW PRESSURE DUCTWORK AT ELBOWS OR TEES, TYPICAL.
- 7. INSTALL ALL TERMINAL BOXES IN EASILY ACCESSIBLE AND SERVICEABLE LOCATIONS, MEETING ALL MANUFACTURERS REQUIRED CLEARANCES ON EACH SIDE, SEE DETAILS, TYPICAL.
- 8. DUCTWORK SIZES SHOWN ARE INSIDE CLEAR DIMENSIONS. REFER TO MECHANICAL SPECIFICATIONS FOR EXTENT OF DUCT INSULATION AND LINER AND ADJUST SHEET METAL DIMENSION.
- 9. PROVIDE AND INSTALL REMOTE DAMPER OPERATORS FOR ALL DAMPERS INSTALLED ABOVE INACCESSIBLE CEILING, SEE MECHANICAL SPECIFICATIONS FOR EQUIPMENT REQUIREMENTS, TYPICAL
- 10. PROVIDE AND INSTALL HIGH EFFICIENCY TAKE-OFF FITTINGS AND BALANCING DAMPER AT ALL BRANCH CONNECTIONS TO LOW PRESSURE DUCTWORK. PROVIDE BALANCING DAMPERS AT EACH BRANCH TAKE OFF TO SERVE DIFFUSER OR GRILLE AS WELL AS WHERE INDICATED.
- 11. PROVIDE AND INSTALL HIGH EFFICIENCY OR CONICAL TAKE-OFFS AT ALL BRANCH CONNECTIONS TO MEDIUM PRESSURE DUCTWORK.
- 12. WHERE DUCTWORK CROSSES, SUPPLY DUCTWORK IS USUALLY BELOW RETURN AND EXHAUST DUCT. RETURN DUCTWORK IS USUALLY BELOW EXHAUST DUCTS.
- 13. AT LOCATIONS WHERE DIFFUSERS OR GRILLES ARE UNDER DUCTWORK, CONTRACTOR TO FABRICATE TRANSITION BOOT FROM FLEX CONNECTION TO DIFFUSER OR GRILLE WITH BALANCING DAMPER. TYPICAL.
- 14. THE MECHANICAL CONTRACTOR SHALL PROVIDE CEILING MOUNTED ACCESS DOORS FOR ALL FIRE, SMOKE AND COMBINATION FIRE/SMOKE DAMPERS INSTALLED ABOVE INACCESSIBLE CEILING. FIELD VERIFY EXACT INSTALLATION LOCATIONS PRIOR TO COMMENCING WORK AND COORDINATE INSTALLATIONS WITH LATEST ARCHITECTURAL REFLECTED CEILING PLANS.
- 15. ALL VAV BOXES TO HAVE REHEAT COILS, EXCEPT AS NOTED. PROVIDE EQUIPMENT TAG TO MATCH SCHEDULE. PROVIDE A MINIMUM OF TWO DUCT DIAMETERS OF STRAIGHT ROUND DUCT TO INLET OF VAV BOX. BOX SHALL BE HARD CONNECTED (CONICAL) TO MEDIUM PRESSURE DUCT, TYPICAL.
- 16. PROVIDE ACCESS DOORS TO ACCESS VAV BOX CONTROLS ABOVE HARD CEILINGS. PROVIDE MINIMUM 24" X 24".
- 17. FLEX DUCT IS REQUIRED FOR ALL DIFFUSERS AND GRILLES INSTALLED IN LAY-IN CEILINGS. FOR DIFFUSERS AND GRILLES IN HARD LID CEILINGS, THE DUCTWORK SHALL BE EXTENDED ALL THE WAY TO THE DIFFUSER AND SHALL BE CONNECTED WITH A HARD CONNECTION OR A FLEX DUCT CONNECTION WITH A MUD RING AND LAY-IN DIFFUSER AS SHOWN ON PLANS.
- 18. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THE CONTRACT DOCUMENTS.
- 19. PROVIDE ACCESS TO ALL TEMPERATURE CONTROLS ABOVE CEILING. LOCATE IN ACCESSIBLE LOCATION. WHERE THERE ARE HARD CEILINGS THE CONTRACTOR SHALL PROVIDE 24" X 24" ACCESS DOOR.
- 20. SUPPLY AND RETURN PIPING TO COILS ARE THE SAME SIZE.
- 21. CONTRACTOR SHALL LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 5'-0" AFF, A MINIMUM OF 8" FROM LIGHT SWITCH, UNLESS OTHERWISE NOTED ON THE ARCHITECT'S ELEVATIONS. COORDINATE EXACT LOCATIONS WITH ARCHITECT.
- 22. REFER TO MECHANICAL PIPING OR ZONING DRAWINGS FOR THERMOSTAT AND TEMPERATURE SENSOR LOCATIONS.
- 23. CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES. CONDENSATE PIPINE SHALL BE TYPE "L" COPPER UNLESS OTHERWISE NOTED IN THE SPECIFICATIONS.
- 24. PROVIDE A 4" HOUSEKEEPING PAD FOR EACH PIECE OF MECHANICAL EQUPMENT THAT IS FLOOR MOUNTED. COORDINATE SIZES WITH MECHANICAL EQUIPMENT SELECTED.
- 25. ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G.
- 26. THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.

UNLESS NOTED OTHERWISE ON THE PLANS OR IN THE SPECIFICATIONS.

MECHANICAL PIPING GENERAL NOTES

- 1. PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE PIPING SYSTEMS AS INDICATED ON THE DRAWINGS, AS SPECIFIED AND
- AS REQUIRED BY CODE. UNLESS OTHERWISE NOTED: ALL MECHANICAL PIPING IS OVERHEAD TO RUN ABOVE DUCTWORK AND
- TIGHT TO UNDERSIDE OF STRUCTURE. INSTALL PIPING SO THAT ALL VALVES, STRAINERS, UNIONS, TRAPS, FLANGES, AND OTHER
- APPURTENANCES REQUIRING ACCESS ARE ACCESSIBLE.
- 4. ALL VALVES SHALL BE INSTALLED SO THAT VALVES REMAINS IN SERVICE WHEN EQUIPMENT OR PIPING ON EQUIPMENT SIDE OF VALVE IS REMOVED.
- 5. PROVIDE AIR VENT AT HIGH POINT OF EACH DROP IN THE HEATING AND CHILLED WATER PIPING SYSTEM.
- 6. ALL VALVES SHALL BE ADJUSTED FOR SMOOTH AND EASY OPERATION AND TAGGED.

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- 7. PROVIDE ISOLATION VALVES AT EACH EXIST/ENTRANCE INTO SHAFT WHETHER OR NOT SHOWN.
- 8. COORDINATE LOCATION OF THERMOSTAT WITH ARCHITECTURAL FURNISHING PLANS. MOUNT THERMOSTAT AT HEIGHT AS SPECIFIED ON ARCHITECTURAL PLANS OR SPECIFICATIONS.

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#### **PROJECT GENERAL NOTES**

1. THE PROJECT GENERAL NOTES APPLY TO ALL DISCIPLINES.

2. REMOVE ALL UNUSED PIPING. DUCTWORK. EQUIPMENT. AND ACCESSORIES.

3. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS WITHIN THE TENANT SPACE AND WITHIN CLOSE PROXIMITY TO THE TENANT SPACE. THE CONTRACTOR WILL FIELD VERIFY AS MUCH AS IS REASONABLE BEFORE THE FINAL BID. AFTER THE FINAL BID THE CONTRACTOR WILL NOTIFY THE OWNER, ARCHITECT, AND MECHANICAL DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF EXISTING CONDITIONS THAT MAY AFFECT THE DESIGN.

4. THE MECHANICAL CONTRACTOR SHALL PERFORM SERVICE AND REPAIR ON THE EXISTING EQUIPMENT AND ITS ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE THE FILTERS AND BELTS, INSPECT, REPAIR, OR REPLACE THE ECONOMIZERS, DRIVERS AND FAN BEARINGS, MOTORS, CONTROL COMPONENTS. VALVES. AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND PROPER OPERATING SYSTEM. THIS CONTRACTOR SHALL ALSO VISIT THE SITE, PRIOR TO FINAL BIDDING, AND VERIFY ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONENTS AS NEEDED TO BRING THE UNITS TO FULL COMPLIANCE OF THE LANDLORD'S CRITERIA AND LOCAL AUTHORITY HAVING JURISDICTION.

5. WHERE FLOOR DRAINS OCCUR WITH THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.

COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, EQUIPMENT, CEILINGS, ARCHITECTURAL COMPONENTS, AND ANYTHING ELSE PERTAINING TO THE PROJECT TO PREVENT CONFLICTS.

7. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AND THOSE OF OTHER DISCIPLINES, INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, CIVIL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT.

#### 8. FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATION BUILDING CODE, INTERNATIONAL MECHANICAL CODE, AND INTERNATIONAL

9. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.

10. ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.

11. COORDINATE INSTALLATION OF DUCTWORK, PIPING AND MECHANICAL EQUIPMENT WITH NEC CLEARANCES INCLUDING THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT, NO PIPING OR DUCTWORK TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S AND MCC'S. PROVIDE PANS IF REQUIRED UNDER PIPING.

12. FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR CAULKING AND SEALING ALL PENETRATIONS IN FIRE AND SMOKE RATED PARTITIONS TO MAINTAIN RATINGS. REFER TO SPECIFICATION.

13. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.

14. TRANSITION PIPING AND DUCTWORK SIZES TO MATCH THE SIZE OF EQUIPMENT CONNECTION. 15. REFER TO PLUMBING SERIES DRAWINGS FOR GAS PIPING.

16. ALL PIPE AND DUCT SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.

17. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.

18. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF WORKMANSHIP CONSISTENT WITH THE

19. MECHANICAL CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT IS PROVIDED AND INSTALLED WITH CLEARANCES PER MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL MAINTAIN PROPER SERVICE SPACE FOR COIL PULLS, BAS DEVICES, MAINTENANCE ACCESS, ETC.

20. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS. 21. LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD, INCLUDING, BUT NOT LIMITED TO, OFFSETS AND TRANSITIONS. NEW DUCTWORK, PIPING AND EQUIPMENT SHALL BE COORDINATED WITH STRUCTURE, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUIT.

PLUMBING, MECHANICAL AND FIRE PROTECTION PIPING, MEDICAL GASES, ALL OTHER TRADES AND ALL OTHER EXISTING CONDITIONS TO AVOID INTERFERENCE IN THE FIELD. 22. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THE

CONTRACT DOCUMENTS. 23. IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS, IMMEDIATELY STOP

24. DETAILS REFERENCE ALL SHEETS.

WITH ARCHITECT.

25. INSTALL ALL PIPING AND DUCTWORK WITHOUT FORCING OR SPRINGING.

26. ROUTE DOMESTIC WATER, FIRE PROTECTION, SANITARY WASTE, ROOF DRAIN, CAMPUS CHILLED OR HOT WATER, AND ANY OTHER UTILITY SERVICES TO SITE UTILITIES 5'-0" FROM BUILDING UNLESS NOTED OTHERWISE. REFER TO CIVIL PLANS.

27. LOCATE VALVING, ACCESSORIES, AND EQUIPMENT IN ACCESSIBLE LOCATIONS. WHERE LOCATED ABOVE HARD CEILING PROVIDE AN ACCESS DOOR IN CEILING. MINIMUM ACCESS DOOR SIZE OF 24" X 24". COORDINATE EXACT LOCATION AND STYLE WITH ARCHITECT. EQUIPMENT SHALL BE LOCATED IN THE CEILING CAVITY SO IT CAN BE SAFELY SERVICED FROM SOMEONE STAND ON A LADDER PLACED BELOW THE CEILING ACCESS.

28. WHERE VALVING, ACCESSORIES, OR EQUIPMENT IS LOCATED IN A WALL, PROVIDE AN APPROPRIATELY SIZED ACCESS DOOR. COORDINATE ACCESS DOOR SIZE, LOCATION, AND STYLE

29. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.

<u>\* NOTE \*</u> ALL OF THE GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET













## **KEYNOTES**

- CONNECT NEW DUCTWORK TO EXIS INSTALL OFFSETS AS NECESSARY TO EXISTING ELEMENTS.
- GRILLES TO BE SET TO 50 CFM. CONTROL PANEL FOR NEW VAV BOXE

<text></text>	JRCA ARCHITECTS ARCHITECTS ARCHITECTS ST7 South 200 East SLC, Utah 84111 O: (801) 533-2100 GallowayUS.com Jrcadesign.com VBFA Disource VBFA Di	
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![](_page_6_Figure_0.jpeg)

![](_page_6_Picture_1.jpeg)

![](_page_7_Figure_0.jpeg)

![](_page_7_Picture_1.jpeg)

![](_page_8_Figure_0.jpeg)

![](_page_8_Figure_2.jpeg)

![](_page_8_Figure_3.jpeg)

5 ROUND DUCT ELBOWS DETAIL M501 12" = 1'-0"

![](_page_8_Figure_6.jpeg)

![](_page_8_Picture_7.jpeg)

![](_page_9_Picture_0.jpeg)

	VAV BOX SCHEDULE																
ID	Manufacturer	Inlet Size	Cooling Airflow	Heating Airflow	Min Airflow	Entering Air Temperature	Leaving Air Temperature	S.P. Loss at Max CFM	Flow Rate	Entering Water Temperature	Leaving Water Temperature	Working Fluid	Head Loss Feet	Min. Number of Rows/Fins Per Inch	Valve Type	Branch Pipe Diameter	Notes
03-01	TITUS -ESV-3	10"	760 CFM	660 CFM	230 CFM	55.0 °F	100.6 °F	0.25	2.0 GPM	180.0 °F	152.2 °F	WATER	0.47	2/10	3 Way Valve	3/4"	1-5
03-01	TITUS -ESV-3	10"	760 CFM	660 CFM	230 CFM	55.0 °F	100.6 °F	0.25	2.0 GPM	180.0 °F	152.2 °F	WATER	0.47	2/10	3 Way Valve	3/4"	1-5
03-03	TITUS -ESV-3	14"	1725 CFM	1320 CFM	450 CFM	55.0 °F	97.9 °F	0.3075	3.0 GPM	180.0 °F	145.2 °F	WATER	0.95	2/10	2 Way Valve	3/4"	1-5
03-04	TITUS -ESV-3	10"	750 CFM	660 CFM	230 CFM	55.0 °F	100.6 °F	0.245	2.0 GPM	180.0 °F	152.2 °F	WATER	0.47	2/10	2 Way Valve	3/4"	1-5
03-05	TITUS -ESV-3	8"	450 CFM	420 CFM	145 CFM	55.0 °F	101.5 °F	0.195	1.5 GPM	180.0 °F	156.0 °F	WATER	0.4775	2/10	2 Way Valve	3/4"	1-5
03-06	TITUS -ESV-3	8"	450 CFM	420 CFM	145 CFM	55.0 °F	101.5 °F	0.195	1.5 GPM	180.0 °F	156.0 °F	WATER	0.4775	2/10	2 Way Valve	3/4"	1-5
03-07	TITUS -ESV-3	8"	450 CFM	420 CFM	145 CFM	55.0 °F	101.5 °F	0.195	1.5 GPM	180.0 °F	156.0 °F	WATER	0.4775	2/10	2 Way Valve	3/4"	1-5
03-08	TITUS -ESV-3	10"	960 CFM	660 CFM	230 CFM	55.0 °F	100.6 °F	0.372	2.0 GPM	180.0 °F	152.2 °F	WATER	0.47	2/10	2 Way Valve	3/4"	1-5
03-09	TITUS -ESV-3	6"	270 CFM	240 CFM	80 CFM	55.0 °F	108.1 °F	0.058	1.0 GPM	180.0 °F	156.5 °F	WATER	0.12	2/10	2 Way Valve	3/4"	1-5

1. MAXIMUM DISCHARGE NC AT BOX DIFFENTIAL PRESSURE BASED ON ARI STANDARD 880-89 2. COIL HEATING CAPACITY BASED ON HEATING MAIXIMUM AIR FLOW (60% OF MAXIMUM COOLING CFM).

3. MINIMUM CFM IS LOWEST CONTROLLABLE CFM SETTING (BASED ON 400 FPM INLET VELOCITY). 4. MAXIMUM STATIC PRSSURE DROP PERMISSABLE ACROSS BOX AND COIL AT MAXIMUM COOLING CFM.

5. PRESSURE INDEPENDENT TYPE BOX.

# DIFFUSERS, REGISTERS, AND GRILLES

Diffuser Callout	Manufacturer	Model	Max NC	Description
CD-1	PRICE	SPD	25	SQUARE PLAQUE FACE CEILING DIFFUSERS: REMOVABLE FACE, FRAME SHALL BE FOR LAY-IN MOUNTING OR SURFACE MOUNT AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES SHALL BE 24"X24" OF REQUIRED TO FIT CEILING TILE SPACE AVAILABLE. HARD LID CEILING TO BE 24"X24" OR 12"X12" AS REQUIRED TO FIT CEILING SPACE AVAILABLE WITH LAY-IN PLASTER FRAME. FINISH AS SELECTED
RG-1	PRICE	PDDR		PERFORATED GRILLE: FRAME SHALL BE FOR LAY-IN MOUNTING OR SURFACE MOUNT AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES SHALL BE 24"X24" OR 24"X12" TO FIT CEILING SPACE AVAILABL CEILING TO BE 24"X24" OR 12"X12" AS REQUIRED TO FIT CEILING SPACE AVAILABLE. PROVIDE ROUND/RECTANGULAR NECK SIZE AS INDICATED ON DRAWINGS. FINISH AS SELECTED BY ARCHITECT.

	PLUMBING FIXTURE SCHEDULE							
ID	FIXTURE	CW (IN)	HW (IN)	W (IN)	V (IN)	DESCRIPTION	NOTES	
S-1	EXAM SINK	1/2	1/2	2	2	COUNTER MOUNTED, STAINLESS STEEL, SENSOR FAUCET	SINK: ELKAY LRAD191865 19" X 18" X 6-1/2" DEEP BOWL, 18-GAUGE, TYPE 304 STAINLESS STEEL, COUNTER MOUNTED SINK WITH SINGLE HOLE DRILLING, CHICAGO 116.953.AB.1 ELECTRONIC FAUCET WITH GN2FCJKABCP RIGID/SWING CONVERTIBLE GOOSE NECK WITH 1.6 GPM FC LAMINAR FLOW CONTROL IN SPOUT AND PLAIN E SPOUT RING; FLEXIBLE STAINLESS STEEL SUPPLIES WITH LOOSE KEY ANGLE STOPS; JUST J-35 STAINLESS STEEL CUP STRAINER AND CAST BRASS P-TRAP WITH CLEAN-OUT PLUG.	
S-2	LAVATORY	1/2	1/2	1 1/2	1 1/2	WALL HUNG, VITREOUS CHINA, SENSOR FAUCET	LAVATORY: KOHLER K2030, GREENWICH, 20" X 18", VITREOUS CHINA, WALL MOUNTED LAVATORY WITH FRONT OVERFLOW. PROVIDE CHICAGO 116.953.AB.1 ELECTRONIC FAUCET WITH GN2FCJKABCP RIGID/SWING CONVERTIBLE GOOSE NECK WITH 1.6 GPM FC LAMINAR FLOW CONTROL IN SPOUT AND PLAIN END SPOUT RING; PROVIDE CHICAGO 131-FMAB THERMOSTATIC MIXING VALVE; SLOAN EFT-470-A CHECK VALVES ON HOT AND COLD LINES; FLEXIBLE STAINLESS STEEL SUPPLIE WITH WITH LOOSE KEY ANGLE STOPS. CHICAGO 327-XCP OPEN-GRID STRAINER AND CAST BRASS P-TRAP WITH CLEAN OUT PLUG. SMITH 0700-Z CONCEALED ARM CHAIR CARRIER WITH FOOT SUPPORT. PROVIDE ADA COMPLIANT UNDER COUNTER PIPING WRAP BY TRUE-BRO, COLOR TO BE WHITE.	
WO-1	WATER OUTLET	1/2	-	-	_	FLUSH MOUNTED IN WALL, WATER SUPPLY, DRAIN	WATER OUTLET BOX: WATER-TITE 82148 WASHING MACHINE OUTLET BOX WITH QUARTER TURN BALL VALVE WITH WATER ARRESTOR FOR USE WITH ICE AND SODA MACHINE. INSTALL ONLY COLD WATER BALL VALVE. NOTCH COUNTERTOP BACK-SPLASH AND INSTALL OUTLET BOX FLUSH WITH COUNTERTOP.	
FS-1	FLOOR SINK	_	_	2	1 1/2	FLOOR SINK	FLOOR SINK: SMITH FIGURE 3100Y CAST IRON FLANGED RECEPTOR WITH ACID RESISTANT INTERIOR COATING, NICKEL BRONZE RIM AND SECURED 1/2 GRATE AND ALUMINUM DOME BOTTOM STRAINER.	

3

2

SURFACE MOUNT AS REQUIRED BY CEILING TYPE. LAY-IN FRAMES SHALL BE 24"X24" OR 12"X12" AS TO FIT CEILING SPACE AVAILABLE WITH LAY-IN PLASTER FRAME. FINISH AS SELECTED BY ARCHITECT. IG TYPE. LAY-IN FRAMES SHALL BE 24"X24" OR 24"X12" TO FIT CEILING SPACE AVAILABLE. HARD LID

![](_page_9_Picture_11.jpeg)

![](_page_10_Figure_0.jpeg)

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IBING AND PIPING SYMBOLS	PLUMBING GENERAL NOTES	PROJECT GENERAL NOTES
	<ul> <li>A ALL WORK DONE SHALL BE PREFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING AREAS ON FLOORS BELOW.</li> <li>B PLUMBING DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT PIPE ROUTING AND COORDINATE WITH ALL OT USE TRADECOME.</li> </ul>	1. THE PROJECT GENERAL NOTES APPLY TO ALL DISCIPLINES.
	C NO PIPING TO RUN OVER ELECTRICAL PANELS, VFD'S OR MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT	2. REMOVE ALL UNUSED PIPING, DUCTWORK, EQUIPMENT, AND ACCESSORIES.
	<ul> <li>OF PANELS, VED'S, AND MCC'S.</li> <li>D CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCTION ON ALL CEILING TILES WHERE VALVES ARE LOCATED.</li> <li>E PIPING AND ROUTING SHOWN, INCLUDING ALL BELOW FLOOR DECK PIPING, IS APPROXIMATE. IT IS UP TO THE CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND SIZE OF ALL PIPING.</li> <li>F REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE MOUNTING EHIGHTS, DIMENSIONS, AND OTHER REQUIREMENTS.</li> <li>G CONTRACTOR TO FERIFY CONNECTION SIDE OF ADA FIXTURES AND ADJUST ACCORDINGLY. INSTALL FLUSH VALVES</li> </ul>	3. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING ALL EXISTING CONDITIONS FOR PLUMBING AND MECHANICAL SYSTEMS WITHIN THE TENANT SPACE AND WITH CLOSE PROXIMITY TO THE TENANT SPACE. THE CONTRACTOR WILL FIELD VERIFY AS MUCH AS REASONABLE BEFORE THE FINAL BID. AFTER THE FINAL BID THE CONTRACTOR WILL NOTIFY TH OWNER, ARCHITECT, AND MECHANICAL DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF EXISTING CONDITIONS THAT MAY AFFECT THE DESIGN.
	<ul> <li>HANDLES ON WIDE SIDE OF ALL FIXTURES.</li> <li>HINSTALL ALL DOMESTIC WATER LINES BELOW DUCTWORK.</li> <li>INSTALL A 24"X24" ACCESS DOOR BELOW ALL ISOLATION VALVES, BALANCING VALVES AND WATER HAMMER ARRESTORS WHERE MOUNTED ABOVE HARD LID CEILINGS.</li> <li>MOUNT ALL ISOLATION VALVES, CONTROL VALVES, BALANCING VALVES, ETC. NEAR CEILING HEIGHT FOR ACCESSIBILITY.</li> <li>K COORDINATE EXACT LOCATION OF PLUMBING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING, CABLE TRAY, DUCTWORK, MECHANICAL PIPING, MEDICAL GASES, FIRE PROTECTION AND OTHER TRADES, TYPICAL.</li> <li>L COORDINATE THE LOCATION OF THE FLOOR DRAIN, SHOWER DRAIN, OR FLOOR SINK WITH ARCHITECTURAL AND STRUCTURAL, TYPICAL.</li> </ul>	<ol> <li>THE MECHANICAL CONTRACTOR SHALL PERFORM SERVICE AND REPAIR ON THE EXISTING EQUIPMENT AND ITS ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE THE FILTERS AN BELTS, INSPECT, REPAIR, OR REPLACE THE ECONOMIZERS, DRIVERS AND FAN BEARINGS, MOT CONTROL COMPONENTS, VALVES, AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND PROPER OPERATING SYSTEM. THIS CONTRACTOR SHALL ALSO VISIT THE SITE, PRIOR TO FINAL BIDDING, AND VERIFY ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONE AS NEEDED TO BRING THE UNITS TO FULL COMPLIANCE OF THE LANDLORD'S CRITERIA AND LO AUTHORITY HAVING JURISDICTION.</li> <li>WHERE FLOOR DRAINS OCCUR WITH THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK</li> </ol>
	<ul> <li>ACCESS DOORS SHALL BE PROVIDED TO ALL WATER HAMMER ARRESTORS IN WALLS OR ABOVE CEILINGS.</li> <li>N SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZES OF WASTE, VENT AND DOMESTIC WATER TO/FROM SINGLE FIXTURE.</li> <li>O LOCATATE CIRCUIT SETTERS, VALVES, WATER HAMMER ARRESTORS, ETC. IN ACCESSIBLE LOCTAIONS. PROVIDE 24"X24"</li> </ul>	<ul> <li>UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.</li> <li>COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTU EQUIPMENT, CEILINGS, ARCHITECTURAL COMPONENTS, AND ANYTHING ELSE PERTAINING TO T PROJECT TO PREVENT CONFLICTS.</li> </ul>
DOMESTIC COLD WATER	<ul> <li>ACCESS PANEL WHERE ITEM IS LOCATED ABOVE A HARD CEILIING.</li> <li>P ALL PIPE AND DUCT SIZES SHALL REMAIN THE SAME SIZE AS SHOWN IN THE DIRECTION OF FLOW, UNTIL SHOWN OTHERWISE.</li> <li>Q INSTALL CLEANOUTS IN DRAIN PIPING AS INDICATED, AND WHERE NOT INDICATED, ACCORDING TO THE FOLLOWING: A) SIZE SAME AS DRAINAGE PIPING UP TO 4" NPS LISE 4" NPS FOR LARGER DRAINAGE PIPING UNLESS LARGER</li> </ul>	<ol> <li>THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AND THOSE OF OTHER DISCIPLINES, INCLUDING, BUT NO LIMITED TO ARCHITECTURAL, CIVIL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTE</li> </ol>
	<ul> <li>A) SIZE SAME AS DRAINAGE FIFTING OF TO 4 THPS. USE 4 THPS FOR LARGER DRAINAGE FIFTING UNLESS LARGER CLEANOUT IS INDICATED.</li> <li>B) LOCATE AT MINIMUM INTERVALS OF 50 FT FOR PIPING 4" NPS AND SMALLER AND 100 FT FOR LARGER PIPING.</li> <li>C) LOCATE AT THE BASE OF EACH VERTICAL STACK.</li> <li>R COORDINATE ALL FLOOR PENETRATIONS WITH STRUCTURAL AND PROVIDE SLEEVES AS NECESARRY.</li> </ul>	<ol> <li>INVOLVED ON THIS PROJECT.</li> <li>FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIN TO THE INTERNATION BUILDING CODE. INTERNATIONAL MECHANICAL CODE, AND INTERNATION</li> </ol>
——DHW——— HOT WATER		PLUMBING CODE. 9. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
DHW-R HOT WATER RECIRCULATION		<ol> <li>ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.</li> <li>COORDINATE INSTALLATION OF DUCTWORK, PIPING AND MECHANICAL EQUIPMENT WITH NEC CLEARANCES INCLUDING THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHE ELECTRICAL FOLIDMENT, NO RIPING OR DUCTWORK TO RUN OVER ELECTRICAL PANELS, VERSION</li> </ol>
 		MCC'S. PROTECT EQUIPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S AND MCC'S. PROVIDE PANS IF REQUIRED UNDER PIPING. 12. FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. THE MECHANICA
		CONTRACTOR SHALL BE RESPONSIBLE FOR CAULKING AND SEALING ALL PENETRATIONS IN FIF AND SMOKE RATED PARTITIONS TO MAINTAIN RATINGS. REFER TO SPECIFICATION. 13. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FL
– – – SANITARY VENT		WALLS, AND ROOF.
SANITARY WASTE		<ol> <li>14. TRANSITION FIFING AND DUCT WORK SIZES TO MATCH THE SIZE OF EQUIPMENT CONNECTION.</li> <li>15. REFER TO PLUMBING SERIES DRAWINGS FOR GAS PIPING.</li> </ol>
		16. ALL PIPE AND DUCT SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL
		17. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, R
		<ol> <li>INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.</li> </ol>
		19. MECHANICAL CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT IS PROVIDED AND INSTALLE WITH CLEARANCES PER MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL MA PROPER SERVICE SPACE FOR COIL PULLS, BAS DEVICES, MAINTENANCE ACCESS, ETC.
		20. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILIN
		21. LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD, INCLUDING, BUT NOT LIM TO, OFFSETS AND TRANSITIONS. NEW DUCTWORK, PIPING AND EQUIPMENT SHALL BE COORDII WITH STRUCTURE, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUIT, PLUMBING, MECHANICAL AND FIRE PROTECTION PIPING, MEDICAL GASES, ALL OTHER TRADES ALL OTHER EXISTING CONDITIONS TO AVOID INTERFERENCE IN THE FIELD.
		22. THE CONTRACTOR SHALL INFORM THE DESIGNER OF ANY PROPOSED DEVIATIONS FROM THE CONTRACT DOCUMENTS.
TEE 4" PLUG REDUCING 45 DEGREE TEE 45 DEGREE TEE		23. IF CONTRACTOR ENCOUNTERS MATERIAL WHICH MAY CONTAIN ASBESTOS, IMMEDIATELY STO WORK IN THIS AREA AND NOTIFY THE OWNER.
		24. DETAILS REFERENCE ALL SHEETS.
		<ol> <li>25. INSTALL ALL PIPING AND DUCT WORK WITHOUT FORCING OR SPRINGING.</li> <li>26. ROUTE DOMESTIC WATER, FIRE PROTECTION, SANITARY WASTE, ROOF DRAIN, CAMPUS CHILLE HOT WATER, AND ANY OTHER UTUITY SERVICES TO SITE UTUITIES FOR RUN DUNC UNITS</li> </ol>
	VE DI	<ul> <li>ADD WATER, AND ANY OTHER OTILITY SERVICES TO SITE UTILITIES 5-0 FROM BUILDING UNLES NOTED OTHERWISE. REFER TO CIVIL PLANS.</li> <li>27. LOCATE VALVING, ACCESSORIES, AND EQUIPMENT IN ACCESSIBLE LOCATIONS. WHERE LOCAT ADD/FLUDD OFFLUND DED//JEF AN ACCESSO DOOD IN AFFLUND. MINIMUM ACCESSIBLE DOOD 0175 OF</li> </ul>
VALVE VALVE VALVE VALVE PRESSURE REDUCING VAL SOLENOID	/E	24". COORDINATE EXACT LOCATION AND STYLE WITH ARCHITECT. EQUIPMENT SHALL BE LOCA THE CEILING CAVITY SO IT CAN BE SAFELY SERVICED FROM SOMEONE STAND ON A LADDER PI BELOW THE CEILING ACCESS.
ALVE REFRIGERANT SOLENOID V /ALVE BUTTERFLY VALVE	ALVE	28. WHERE VALVING, ACCESSORIES, OR EQUIPMENT IS LOCATED IN A WALL, PROVIDE AN APPROPRIATELY SIZED ACCESS DOOR. COORDINATE ACCESS DOOR SIZE, LOCATION, AND STY WITH ARCHITECT.
DRAIN TAGS		29. CONTRACTOR TO PROVIDE VALVE IDENTIFICATION AND LOCATION ON ALL CEILING TILES WHEF VALVES ARE LOCATED.
DRAIN SIZE		
- TYPE (SEE SCHEDULE) - 4" AD-6 AREA D	RAIN	
PRIMER CONNECTION       4" DD-29	RAIN NTROL N	
FIXTURE UNITS     4" RD-15     ROOF D       ROOF AREA     6" RD-1     COMBINA	RAIN ITION	<u>* NOTE *</u> ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THF

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## PROJECT GENERAL NOTES

IMBING AND MECHANICAL SYSTEMS WITHIN THE TENANT SPACE AND WITHIN THE TENANT SPACE. THE CONTRACTOR WILL FIELD VERIFY AS MUCH AS IS E THE FINAL BID. AFTER THE FINAL BID THE CONTRACTOR WILL NOTIFY THE AND MECHANICAL DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF S THAT MAY AFFECT THE DESIGN.

NTRACTOR SHALL PERFORM SERVICE AND REPAIR ON THE EXISTING ACCESSORIES AS FOLLOWS: CLEAN ALL COILS, REPLACE THE FILTERS AND AIR, OR REPLACE THE ECONOMIZERS, DRIVERS AND FAN BEARINGS, MOTORS, NTS, VALVES, AND ANY OTHER ITEM NECESSARY FOR A COMPLETE AND SYSTEM. THIS CONTRACTOR SHALL ALSO VISIT THE SITE. PRIOR TO FINAL ALL EXISTING SITE CONDITIONS. PROVIDE ALL MATERIAL AND COMPONENTS THE UNITS TO FULL COMPLIANCE OF THE LANDLORD'S CRITERIA AND LOCAL URISDICTION.

ATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, , ARCHITECTURAL COMPONENTS, AND ANYTHING ELSE PERTAINING TO THE IT CONFLICTS.

L BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED NULDING CODE, INTERNATIONAL MECHANICAL CODE, AND INTERNATIONAL

EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF. ATION OF DUCTWORK, PIPING AND MECHANICAL EQUIPMENT WITH NEC DING THE SPACE ABOVE ELECTRICAL PANELS, TRANSFORMERS AND OTHER ENT. NO PIPING OR DUCTWORK TO RUN OVER ELECTRICAL PANELS, VFD'S OR IPMENT WITH A 42" DEEP ZONE IN FRONT OF PANELS, VFD'S AND MCC'S.

ND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS,

MENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER LES, AND SPECIFICATIONS. ENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN

ACTOR SHALL ENSURE THAT ALL EQUIPMENT IS PROVIDED AND INSTALLED ER MANUFACTURERS RECOMMENDATIONS. THE CONTRACTOR SHALL MAINTAIN ACE FOR COIL PULLS, BAS DEVICES, MAINTENANCE ACCESS, ETC.

PING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

G, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE UBJECT TO MINOR ADJUSTMENTS IN THE FIELD, INCLUDING, BUT NOT LIMITED ANSITIONS. NEW DUCTWORK, PIPING AND EQUIPMENT SHALL BE COORDINATED GHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUIT, CAL AND FIRE PROTECTION PIPING, MEDICAL GASES, ALL OTHER TRADES AND CONDITIONS TO AVOID INTERFERENCE IN THE FIELD.

ATER, FIRE PROTECTION, SANITARY WASTE, ROOF DRAIN, CAMPUS CHILLED OR OTHER UTILITY SERVICES TO SITE UTILITIES 5'-0" FROM BUILDING UNLESS REFER TO CIVIL PLANS.

ESSORIES, AND EQUIPMENT IN ACCESSIBLE LOCATIONS. WHERE LOCATED PROVIDE AN ACCESS DOOR IN CEILING. MINIMUM ACCESS DOOR SIZE OF 24" X CT LOCATION AND STYLE WITH ARCHITECT. EQUIPMENT SHALL BE LOCATED IN SO IT CAN BE SAFELY SERVICED FROM SOMEONE STAND ON A LADDER PLACED ACCESS.

ESSORIES, OR EQUIPMENT IS LOCATED IN A WALL, PROVIDE AN D ACCESS DOOR. COORDINATE ACCESS DOOR SIZE, LOCATION, AND STYLE

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PLUMBING SHEET INDEX

P100 PLUMBING TITLE SHEET P102 LEVEL 2 PLUMBING PLAN P103 LEVEL 3 PLUMBING PLAN

![](_page_10_Picture_31.jpeg)

![](_page_11_Figure_0.jpeg)

![](_page_11_Picture_1.jpeg)

![](_page_12_Picture_0.jpeg)

![](_page_12_Picture_2.jpeg)

![](_page_13_Figure_0.jpeg)

### 1. NO FIRE PROTECTION LINE SHALL BE DESIGNED OR INSTALLED PRIOR TO CLOSE COORDINATION WITH ALL OTHER DISCIPLINES. DUCTWORK, MECHANICAL PIPING AND PLUMBING TAKE SPACE PRECEDENCE OVER FIRE PROTECTION REMOVAL AND REINSTALLATION AT THE FIRE PROTECTION CONTRACTORS EXPENSE. ALL WORK DONE SHALL BE PERFORMED WITH WATER CONTROL IN MIND. CONTAINMENT OF WATER IS NECESSARY TO PREVENT WATER FROM DAMAGING SURROUNDING AREA. COORDINATE EXACT LOCATION OF PIPING WITH STRUCTURAL MEMBERS, LIGHTS, REFLECTED CEILING PLANS, CABLE TRAY, ELECTRICAL CONDUITS, DUCTWORK, MECHANICAL AND PLUMBING PIPING, AND ALL OTHER TRADES AND ALL EXISTING CONDITIONS.

FIRE SUPPRESSION CONTRACTOR SHALL BE RESPONSIBLE TO REMOVE AND/OR REROUTE ANY AND ALL FIRE PROTECTION PIPING, VALVING, SUPPORTS OR SYSTEMS, OTHERWISE WITHIN THE FIRE SUPPRESSION DISCIPLINE REGARDLESS OF WHO INSTALLED THEM OR WHEN THEY WERE INSTALLED, IN ORDER TO ACCOMMODATE MECHANICAL, PLUMBING, ELECTRICAL OR OTHER SYSTEMS. COORDINATE WORK WITH MECHANICAL, ELECTRICAL, PLUMBING OR OTHER CONTRACTORS UNTIL SUBSTANTIAL COMPLETION OF PROJECT.

FIRE PROTECTION GENERAL NOTES

- PROVIDE ALTERATIONS TO THE EXISTING FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE NEW FLOOR PLAN AND NEW CEILING TYPES. REUSE EXISTING SYSTEM EQUIPMENT WHERE APPLICABLE. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS PER REQUIREMENTS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- THE BUILDINGS COMPLETE OPERATIONAL FIRE PROTECTION SYSTEMS SHALL REMAIN IN PLACE. THIS CONTRACTOR SHALL REPAIR ANY DAMAGE TO THIS SYSTEM CREATED BY THE REMOVAL OF ANY OTHER MECHANICAL SYSTEMS OR COMPONENTS.
- THIS CONTRACTOR SHALL COORDINATE PHASING OF SPRINKLER WORK WITH THE GENERAL CONTRACTOR PRIOR TO STARTING WORK.
- PROVIDE A COMPLETE WET TYPE FIRE PROTECTION SYSTEM AS REQUIRED TO ACCOMMODATE THE FLOOR PLAN AND CEILING TYPES INCLUDING MAINS, BRANCHES, HEADS, VALVES, AND ACCESSORIES AS REQUIRED. THE SYSTEM SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS OF THE STATE BUILDING CODE, LOCAL FIRE DEPARTMENT, AND ALL FEDERAL, STATE, AND LOCAL AUTHORITIES, NFPA, AND FACTORY MUTUAL.
- THE SPRINKLER SYSTEM SHALL BE DESIGNED BASED UPON ACTUAL WATER FLOW TEST DATA OBTAINED AT OR NEAR THE JOB SITE.
- . REFER TO REFLECTED CEILING PLANS FOR ADDITIONAL INFORMATION REGARDING SPRINKLER HEAD LOCATION AND PIPE, UNLESS NOTED OTHERWISE.
- DIVISION 21 CONTRACTOR SHALL COORDINATE WITH THE ELECTRICAL CONTRACTOR FOR PROPER INSTALLATION OF THE FIRE PROTECTION SYSTEMS ALARM DEVICES INVOLVED WITH FIRE SPRINKLER SYSTEM.
- ALL SPRINKLER SYSTEM PIPING SHALL BE CONCEALED ABOVE THE SUSPENDED CEILING SYSTEM, UNLESS NOTED OTHERWISE. WRITTEN AUTHORIZATION SHALL BE OBTAINED FROM THE ARCHITECT PRIOR TO EXPOSING ANY PIPING IN ANY ROOM WHICH HAS A SUSPENDED CEILING.
- . THIS CONTRACTOR SHALL PROVIDE ALL ADDITIONAL SPRINKLER HEADS AS REQUIRED TO ENSURE AN APPROVED FIRE PROTECTION SYSTEM AT NO ADDITIONAL COST TO THE OWNER.
- 4. AUXILIARY DRAINS SHALL BE EXPOSED WITH 1" DRAIN VALVES. WHEN 5 OR MORE GALLONS ARE TRAPPED, THIS CONTRACTOR SHALL PROVIDE FIXED PIPING TO AN ADEQUATELY SIZED RECEPTOR WHICH IS CAPABLE OF ACCEPTING THE FULL FLOW OF THE DRAIN. WHEN LESS THAN 5 GALLONS ARE TRAPPED, A HOSE BIB SHALL BE PROVIDED AT THE DRAIN VALVE.
- 15. AUXILIARY DRAINS SHALL NOT BE LOCATED ABOVE PLASTER OR GYPSUM BOARD CEILING SYSTEMS. ONLY BY A SPECIFIC WRITTEN INSTRUCTION FROM THE ENGINEER WILL A VARIANCE BE PROVIDED. 16. SHOW ALL ROOM NUMBERS ON SHOP DRAWING PLANS.
- 7. ROUTE SPRINKLER PIPING SUCH THAT IT DOES NOT RUN ABOVE ELECTRICAL PANELS, SWITCHGEAR, OR SIMILAR EQUIPMENT, SPRINKLER MAINS SHALL NOT RUN THROUGH ELECTRICAL OR COMMUNICATION ROOMS. SPRINKLER HEADS IN THESE ROOMS SHALL BE SERVED BY A DEDICATED BRANCH LINE FOR EACH ROOM. BRANCH LINE TO ENTER ROOM ABOVE DOOR.
- 18. THIS DRAWING INDICATES APPROXIMATE EXISTING PIPING LOCATIONS. THIS CONTRACTOR SHALL DETERMINE THE ACTUAL PIPE SIZING REQUIRED AND COORDINATE WORK WITH ALL OTHER TRADES TO AVOID CONFLICTS.

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1

## AUTOMATIC SPRINKLER SYSTEM DESIGN CRITERIA

SYMBOL	OCCUPANCY HAZARD CLASSIFICATION	DESIGN DENSITY (GPM/SF)	DESIGN AREA
R	RESIDENTIAL (DWELLING) OCCUPANCY	0.05	400 SF
LH	LIGHT HAZARD OCCUPANCY	0.10	1500 SF
OH1	ORDINARY HAZARD, GROUP 1 OCCUPANCY	0.15	1500 SF

1

4

## MECHANICAL SHEET INDEX

F001 FIRE PROTECTION TITLE SHEET F103 LEVEL 3 FIRE PROTECTION PLAN

![](_page_13_Picture_21.jpeg)

![](_page_14_Picture_0.jpeg)

![](_page_14_Picture_1.jpeg)

	5		4		3
	SYMBOLS LEGEND		SYMBOLS LEGEND		SYMBOLS LEGEND
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
REFERENC	CE AND LINE SYMBOLS	WIRING DE	EVICES	ELECTRIC	AL POWER AND DISTRIBUTION
A5	DETAIL INDICATOR: A5 INDICATES DETAIL NUMBER, E-501	₿	RECEPTACLE, DUPLEX: NEMA 5-20R.	225/3	
E-501	INDICATES DRAWING SHEET WHERE DETAIL IS SHOWN.	₿ A	RECEPTACLE, DUPLEX, ABOVE COUNTER: NEMA 5-20R.		PANELBOARD WITH MAIN LUGS ONLY AND SURGE PROTECTION WITH CIRCUIT BREAKER (ONE-LINE DIAGRAM).
		₿c	RECEPTACLE, DUPLEX, CEILING: NEMA 5-20R.	25/3	
$\left(\begin{array}{c} A5\\ E-201\end{array}\right)$	ELEVATION OR SECTION INDICATOR, EXTERIOR: A5 INDICATES ELEVATION OR SECTION NUMBER, E-201 INDICATES DRAWING SHEET WHERE ELEVATION OR SECTION IS SHOWN.		RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, DRINKING FOUNTAIN: CONCEAL WATER COOLER	225/3 "1H" 225/3	
			MECHANICAL/PLUMBING SHOP DRAWINGS FOR INSTALLATION REQUIREMENTS.		PANELBOARD WITH SUB FEED LUGS (ONE-LINE DIAGRAW).
ROOM NAME	ROOM IDENTIFIER WITH ROOM NAME AND NUMBER.		RECEPTACLE, DUPLEX, HOSPITAL GRADE: NEMA 5-20R.	)225/3 "1H" "1H"	PANELBOARD WITH CIRCUIT BREAKER AND SUB FEED LUGS
	KEYNOTE INDICATOR.	Ŏ	RECEPTACLE, DUPLEX ON EMERGENCY POWER: NEMA 5-20R.		(ONE-LINE DIAGRAM).
1	REVISION INDICATOR.	⊢	RECEPTACLE, DUPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.		
CU-1	EQUIPMENT INDICATOR.	₿	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.		CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
	BREAK, STRAIGHT: TO BREAK PARTS OF DRAWING		RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.		
$\sim$	BREAK, ROUND		RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT		
MATCH LINE SEE XX/X-XXX	MATCH LINE INDICATOR: CENTER, EXTRA WIDE LINE.	•	NERROPTER, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.		CT CABINET PER UTILITY'S REQUIREMENTS (ONE-LINE DIAGRAM).
	NEW LINE: MEDIUM LINE.	₩P	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, WEATHERPROOF: NEMA 5-20R.		
	HIDDEN FEATURES LINE: HIDDEN, THIN LINE		RECEPTACLE, DUPLEX, RECESSED: NEMA 5-20R.		
	EXISTING TO REMAIN LINE: THIN LINE.		RECEPTACLE, QUADRAPLEX: NEMA 5-20R.		TRANSFER SWITCH (ONE-LINE DIAGRAM).
	DEMOLITION LINE: DASHED, MEDIUM LINE	•	RECEPTACLE, QUADRAPLEX ON EMERGENCY POWER: NEMA 5-20R.		
	PROPERTY LINE: DASHED, WIDE LINE.	#	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE: NEMA 5-20R.		DIGITAL MULTIMETER (ONE-LINE DIAGRAM).
	CONTRACT LIMIT LINE: DASHDOT, WIDE LINE.	_	RECEPTACLE, QUADRAPLEX, HOSPITAL GRADE ON EMERGENCY POWER: NEMA 5-20R.		EARTH GROUND (ONE-LINE DIAGRAM).
WIRING MI	ETHODS		RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER: NEMA 5-20R.	• <u></u>	SERVICE ENTRANCE SURGE PROTECTION (ONE-LINE DIAGRAM).
	WIRING.	Ø	RECEPTACLE, SPECIAL PURPOSE. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.	EPO	PUSH BUTTON, REMOTE EMERGENCY STOP.
	SINGLE BRANCH CIRCUIT HOME RUN TO PANELBOARD WITH		RECEPTACLE, SPECIAL PURPOSE ON EMERGENCY POWER. PROVIDE RECEPTACLE TO MATCH EQUIPMENT PLUG.	G	GENERATOR, POWER (ONE-LINE DIAGRAM).
A-1	NOTATION IDENTIFY PANEL AND CIRCUIT NUMBER.		MULTI-OUTLET ASSEMBLY: NEMA 5-20R.	K	KIRK-KEY MECHANICAL INTERLOCK (ONE-LINE DIAGRAM)
			FLUSH FLOOR BOX. "#" SHOWN ON DRAWINGS. REFER TO	(M)	METER.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF ARROWS INDICATES NUMBER OF CIRCUITS. LETTER AND	FB#	SPECIFICATIONS FOR CONFIGURATION AND DEVICES.	BBF	BROAD BAND FILTER (ONE-LINE DIAGRAM).
A-1,3,5	NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS.		POWER POLE. "#" SHOWN ON DRAWINGS. REFER TO WIRING	VFC VFD	VARIABLE FREQUENCY MOTOR CONTROLLER (ONE-LINE
		PP#	DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.		DISCONNECT SWITCH, FUSED.
	BRANCH CIRCUIT HOME RUN TO PANELBOARD: NUMBER OF		ELUSH FIRE RATED POKE THRU. "#" SHOWN ON DRAWINGS		DISCONNECT SWITCH, UNFUSED.
A-1,3,5	NUMBER NOTATIONS IDENTIFY PANEL AND CIRCUIT NUMBERS. NUMBER IN BOX REFERS TO THE CONDUCTOR AND CONDUIT	PT#	REFER TO WIRING DEVICE SCHEDULE IN THE ELECTRICAL SPECIFICATIONS FOR CONFIGURATION AND DEVICES.		STARTER COMBINATION WITH DISCONNECT SWITCH
	SCHEDULE.	h	SWITCH, DIMMER,		STARTER OF MOTOR CONTROLLER
	LOW VOLTAGE WIRING: DIVIDE, MEDIUM LINE,	Ψ X \$	SWITCH SINGLE POLE ("x" INDICATES FIXTURES CONTROLLED)		
	CONDUIT STUB. DIMENSION RECORD DRAWINGS AND MARK.	× X \$2	SWITCH, DOUBLE POLE ("x" INDICATES FIXTURES CONTROLLED).		PUSHBUTTONS, MOTOR CONTROL
1	CONDUCTOR & CONDUIT ("CC") SCHEDULE INDICATOR. REFER	×			
	TO ONE-LINE DIAGRAM.	\$3 X	SWITCH, THREE-WAT (X INDICATES FIXTURES CONTROLLED).		PANELBOARD CABINET, FLUGH MOUNTED.
		\$4	SWITCH, WEATHERPROOF		PANELBOARD CABINET, SURFACE MOUNTED, 1 SECTION.
					PANELBOARD CABINET, SURFACE MOUNTED, 2 SECTION.
C	JUNCTION BOX, CEILING. JUNCTION BOX, SYSTEMS FURNITURE COMMUNICATION	Фт	RECEPTACLE, DUPLEX, TAMPER RESISTANT: NEMA 5-20R.	DP#	DISTRIBUTION PANEL OR SWITCHBOARD.
Sc		•	INTERRUPTER, HOSPITAL GRADE: NEMA 5-20R.		
	JUNCTION BOX, SYSTEMS FURNITURE POWER CONNECTION.		RECEPTACLE, QUADRAPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER, HOSPITAL GRADE ON EMERGENCY POWER:		SWITCH TOGGLE MOTOR STARTER WITH OVERLOAD
		L.t.	NEMA 3-20R.	\$ST	PROTECTION.
•	SCHEDULE FOR REQUIREMENTS.		RECEPTACLE, SINGLE PLEX, WITH USB OUTLET		TRANSFORMER (SEE ONE-LINE FOR SIZE)
	ADDITIONAL INFORMATION.	т	RECEPTACLE, DULEX, RECESSED, NEMA 5-20R, AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY BASED		RELAY CONTACT, NORMALLY OPEN (ONE-LINE DIAGRAM).
ELECTRIC	AL POWER AND DISTRIBUTION		CONTROLS (REFER TO PLANS FOR CONTROL METHOD)		SPECIALIZED TRANSFER SWITCH (ONE-LINE DIAGRAM).
	DISCONNECT, NONFUSED (ONE-LINE DIAGRAM).	<b>₩</b>	RECEPTACLE, QUADRAPLEX, RECESSED, NEMA 5-20R, AUTOMATICALLY CONTROLLED THROUGH TIME OR OCCUPANCY		
	CIRCUIT BREAKER, MOLDED CASE (ONE-LINE DIAGRAM).		BASED CONTROLS (REFER TO PLANS FOR CONTROL METHOD)		
		NURSE CA			CIRCUIT BREAKER, DRAW OUT (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER, MOLDED CASE WITH SHUNT TRIP	0	JUNCTION BOX.		
¥			CORRIDOR LIGHT.	GESM	MODULE (ONE-LINE DIAGRAM).
	CIRCUIT BREAKER, MOTOR CIRCUIT PROTECTION	B	BATHROOM PULL CORD STATION.	ESM	(ONE-LINE DIAGRAM).
			DUTY STATION.	PRM	PHASE ROTATION MONITOR (ONE-LINE DIAGRAM).
, #AF	CIRCUIT BREAKER, ADJUSTABLE TRIP. "225AF" REPRESENTS THE RATING AND "150AT" REPRESENTS THE TRIP SETTING.	Ē	EMERGENCY ASSISTANCE CALL STATION.	LIGHTING	1
	(ONE-LINE DIAGRAM).	Есв	EMERGENCY ASSISTANCE CODE BLUE CALL STATION.	(W-3)	FIXTURE IDENTIFICATION: (W-3) INDICATES FIXTURE TYPE AS
	CIRCUIT BREAKER, SOLID STATE (ONE-LINE DIAGRAM).		PATIENT STATION.		
		S	STAFF STATION.	(W-3)	FIXTURE IDENTIFICATION, EMERGENCY WITH BATTERY PACK, CONNECTED TO GENERATOR AS INDICATED: (W-3) INDICATES
	CIRCUIT BREAKER, SOLID STATE WITH GROUND FAULT	NCM	TOUCH SCREEN NURSE CALL MASTER STATION.		FIXTURE TYPE AS SCHEDULED.
	PROTECTION (ONE-LINE DIAGRAM).	ZLC	ZONE LIGHT CONTROLLER.	1	EGRESS DIRECTION ARROW (EXIT SIGNS).
$\sim$	MOTOR.	CU	NURSE CALL AREA CONTROL UNIT & POWER SUPPLIES.	$\odot$	EXIT SIGN: SINGLE FACE; CEILING MOUNTED
	TRANSFORMER (ONE-LINE DIAGRAM).	CCTV		$\underline{\Diamond} \underline{\Diamond}$	EXIT SIGN: SINGLE FACE; WALL MOUNTED
			CCTV CAMERA/ENCLOSURE WITH LENS, TYPICAL. SEE SCHEDULE.	${\color{black} \bullet}$	EXIT SIGN: DOUBLE FACE; CEILING MOUNTED
"1DPHA"	DISTRIBUTION PANEL BOARD, MOTOR CONTROL CENTER	PTZ D	CCTV CAMERA WITH PAN, TILT AND ZOOM.	<u>•</u>	EXIT SIGN: DOUBLE FACE; WALL MOUNTED
	PLUG-IN BUSWAY, MEDIUM VOLTAGE SWITCHBOARD (ONE-LINE DIAGRAM).	360°	PANNING CAMERA TRANSVERSE ANGLE.	LIGHTING	CONTROL
				*	OCCUPANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
				P	PHOTOCELL.
"1H"	PANELBOARD (ONE-LINE DIAGRAM).			*	VACANCY SENSOR, DUAL TECHNOLOGY, OMNI-DIRECTIONAL, CEILING.
				a,b ବ୍ୟ	LOW VOLTAGE DIGITAL LIGHTING CONTROL SWITCH: LETTER "a,b" INDICATES ZONING WHERE SHOWN (REFER TO PLANS,
225/3					SCHEDULES, AND DETAILS FOR EXACT BUTTON CONFIGURATION AND PROGRAMMING REQUIREMENTS)
"1H"	PANELBOARD WITH MAIN LUGS ONLY. BUS SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).			RC	DIGITAL LIGHTING ROOM CONTROLLER
				DC	DIGITAL LIGHTING DIMMING CONTROLLER
•)225/3					
"1H"	PANELBOARD WITH MAIN CIRCUIT BREAKER. SIZE AND PHASE AS SHOWN (ONE-LINE DIAGRAM).				
)225/3 "1H"	PANELBOARD WITH MAIN AND SUB FEED CIRCUIT BREAKED				
	(ONE-LINE DIAGRAM).				
60/3					

1	2
	SYMBOLS LEGE
SYMBOL	DESCRIPTION
	M
FAA	FIRE ALARM ANNUNCIATOR PANEL.
FACP	FIRE ALARM CONTROL PANEL, SEMI-RECES
С	AUTOMATIC DOOR CLOSERS: DOOR CLOSI FURNISHED WITH DOOR HARDWARE AND C BY FIRE ALARM INSTALLER.
СМ	CONTROL MODULE.
ММ	MONITOR MODULE.
F	FIRE ALARM MANUAL PULL STATION.
R	SHUT DOWN RELAY: INSTALL RELAY IN CO OF EQUIPMENT TO BE CONTROLLED IN THE FIRE.
5	MAGNETIC DOOR HOLDER.
(2)	DETECTOR, SMOKE.
( <b>2</b> ) <sub>E</sub>	DETECTOR, SMOKE, ELEVATOR RECALL DE
	DETECTOR, SMOKE, DUCT WITH HOUSING
	SMOKE DAMPER. 120V POWER FROM ELEC
@ FSD	COMBINATION FIRE/SMOKE DAMPER. 120V FROM ELECTRICAL SYSTEM.
	DETECTOR, HEAT.
(co)	DETECTOR, CARBON MONOXIDE.
<u> </u>	STROBE, WALL MOUNTED.
75	STROBE, WALL MOUNTED. SUBSCRIPT IND CANDELA RATING.
$\boxtimes \Box$	ALARM, HORN/STROBE, WALL MOUNTED, O
⊠< 75	ALARM, HORN/STROBE, WALL MOUNTED, O SUBSCRIPT INDICATES CANDELA RATING.
⊠<]⊂	ALARM, CHIME/STROBE, WALL MOUNTED, C
⊠⊲G	ALARM, HORN/STROBE WITH GUARD, WALL ONE ASSEMBLY.
$\mathbf{M} \bigcup \mathbf{M}$	ALARM, MINI HORN/STROBE, WALL MOUNTE
X	SPEAKER, WALL MOUNTED, EVACUATION, C
75	SPEAKER, WALL MOUNTED, EVACUATION, C STROBE. SUBSCRIPT INDICATES CANDELL/
▷⊗⊲ 75	ALARM, HORN/STROBE, ONE ASSEMBLY, CE SUBSCRIPT INDICATES CANDELA RATING.
75	SPEAKER/STROBE, CEILING MOUNTED. SU CANDELA RATING.
8 75	ALARM, STROBE, CEILING MOUNTED. SUBS
SECURITY	
#1	CARD ACCESS DOOR TYPE #1 OR AS NOTE SCHEDULE.
	CARD READER.
	KEYPAD/CARD READER COMBINATION.
● <sub>ER</sub>	EXIT REQUEST.
	REMOTE DOOR RELEASE BUTTON.
(£)	SENSOR, GLASS BREAK.
	INTERCOM STATION.
(P)	PANIC DURESS SWITCH.
	ULTRASONIC MOTION DETECTOR.
	ANNUNCIATOR PANEL.
DA	DISTRIBUTION AMPLIFIER (ONE-LINE DIAGR
SPL	SPLITTER (ONE-LINE DIAGRAM).
	TV OUTLET.

4

EGEND	
I	
MI-RECESSED.	
OR CLOSERS SHALL BE	
RE AND CONNECTED	
DN.	
AY IN CONTROL CIRCUIT ED IN THE EVENT OF A	
ECALL DESIGNATION.	
OUSING AND SAMPLING TUBE.	
ROM ELECTRICAL SYSTEM	
ER. 120V POWER	
CRIPT INDICATES	
UNTED, ONE ASSEMBLY.	
UNTED, ONE ASSEMBLY. RATING.	
DUNTED, ONE ASSEMBLY.	
RD, WALL MOUNTED,	
L MOUNTED, ONE ASSEMBLY.	
UATION, COMBINATION STROBE.	
CANDELLA RATING. EMBLY, CEILING MOUNTED.	
RATING. NTED. SUBSCRIPT INDICATES	
ED. SUBSCRIPT	
AS NOTED. SEE	
TION.	
J	
NE DIAGRAM).	
·	

ABBREVIATIONS							
	NOTE: ALL ABBREVIAT	IONS MAY	NOT BE USED.				
1P	SINGLE POLE	k\/					
1PH	SINGLE-PHASE	kVA	KILOVOLT AMPERE				
1WAY	ONE-WAY	kVAR	KILOVOLT AMPERE R				
2/C	TWO-CONDUCTOR	kW	KILOWATT				
2WAY	TWO-WAY	kWh	KILOWATT HOUR				
3/C	THREE-CONDUCTOR	LED	LIGHT EMITTING DIO				
		LEMC					
4001	OUTLET	LFNC	LIQUID TIGHT FLEXIB				
4PDT	FOUR-POLE DOUBLE THROW		NONMETALLIC COND				
4PST	FOUR-POLE SINGLE THROW		LOW PRESSURE SOL				
4W 4W		LKA I TG					
400A1 A	ABOVE COUNTER	LV	LOW VOLTAGE				
AC	ARMORED CABLE	MATV	MASTER ANTENNA T				
ADA	AMERICANS WITH DISABILITIES		SYSTEM				
		MC	METAL CLAD				
AFF	ABOVE FINISHED FLOOR	MCA	MINIMUM CIRCUIT AN				
AFG	ABOVE FINISHED GRADE	MCB	MAIN CIRCUIT BREAK				
AIC	AMPERE INTERRUPTING	MCC	MOTOR CONTROL CE				
		MCP	MOTOR CIRCUIT PRO				
		MG	MAIN DISTRIBUTION				
ANN	ANNUNCIATOR	MH	MANHOLE				
AP	ACCESS POINT (WIRELESS	MIN	MINIMUM				
. –	DATA)	MLO	MAIN LUGS ONLY				
AR		MOCP	MAXIMUM OVERCUR				
ASC		MTS	MANUAL TRANSFER				
7110	SWITCH	NA	NOT APPLICABLE				
AV	AUDIO VISUAL	NC	NORMALLY CLOSED				
AWG	AMERICAN WIRE GAGE	NEC	NATIONAL ELECTRIC				
вв XFMR	BUCK-BOOST TRANSFORMER	NEMA	NATIONAL ELECTRIC				
BFF	BELOW FINISHED FLOOR		ASSOCIATION				
BFG	BELOW FINISHED GRADE	NFC	NATIONAL FIRE COD				
C	CEILING MOUNTED	NFPA	NATIONAL FIRE PRO				
CAIV	COMMUNITY ANTENNA TELEVISION	NIC	NOT IN CONTRACT				
СВ	CIRCUIT BREAKER	NL	NIGHT LIGHT				
CCBA	CUSTOM COLOR AS SELECTED	NO	NORMALLY OPEN				
0071	BY ARCHITECT	NTS	NOT TO SCALE				
			ON CENTER				
CF/CI	CONTRACTOR FORMISHED						
CF/OI	CONTRACTOR FURNISHED/		CONTRACTOR INSTA				
	OWNER INSTALLED	OF/OI	OWNER FURNISHED/				
CFBA	BY ARCHITECT						
CKT	CIRCUIT		OVERHEAD (COILING				
CM	CONSTRUCTION MANAGER	OL	OVERLOAD				
CND		PB	PUSHBUTTON				
COR	CONTRACTING OFFICER'S	PF	POWER FACTOR				
OOK	REPRESENTATIVE	PH	PHASE				
CP	CONTROL PANEL	PINL	POTENTIAL TRANSFO				
CT		PTZ	PAN/TILT/ZOOM				
		QTY	QUANTITY				
dBA	UNIT OF SOUND LEVEL	R	REMOVE				
DPDT	DOUBLE POLE, DOUBLE	RCP					
	THROW	RNC	RIGID NONMETAL CONDO				
		RPM	<b>REVOLUTIONS PER N</b>				
EM	EMERGENCY	RR	REMOVE AND RELOC				
EMT	ELECTRICAL METALLIC TUBING	S/S	START/STOP				
ENT	ELECTRIC NONMETALLIC	SCA SCBA					
EPO		JODA	SELECTED BY ARCHI				
FQUIP	FOUIPMENT	SF	SQUARE FOOT (FEET				
EX	EXISTING	SFBA	STANDARD FINISH AS				
F	FURNITURE MOUNTED	SPD	SURGE PROTECTIVE				
FA	FIRE ALARM	SPDT	SINGLE POLE, DOUB				
		SPEC	SPECIFICATION				
FMC	FLEXIBLE METAL CONDUIT	SPST	SINGLE POLE, SINGL				
FOB	FREIGHT ON BOARD	ST	SINGLE THROW				
FVNR	FULL VOLTAGE	SWGR	SWITCHGEAR				
E\/P	NUN-KEVERSING	TL	TWIST LOCK				
GEN	GENERATOR	TP	TELEPHONE POLE				
GFCI	GROUND FAULT INTERRUPTER	TP	TWISTED PAIR				
GFP	GROUND FAULT PROTECTION	TTB	TELEPHONE TERMIN				
GND	GROUND	1 V T\/99					
HD		1000	SUPPRESSER				
HID HOA	HIGH INTENSITY DISCHARGE	TYP	TYPICAL				
HP	HORSE POWER	UF	UNDERFLOOR				
HPF	HIGH POWER FACTOR						
HPS	HIGH PRESSURE SODIUM	053	SUPPLY				
HV	HIGH VOLTAGE	V	VOLTS				
ΠL		1//					

kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWh	KILOWATT HOUR
LED	LIGHT EMITTING DIODE
LFMC	LIQUID TIGHT FLEXIBLE METAL
	CONDUIT
LFNC	LIQUID TIGHT FLEXIBLE
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION
	SYSTEM
MAX	MAXIMUM
MC	METAL CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTION
MDP	MAIN DISTRIBUTION PANEL
MG	MOTOR GENERATOR
MH	MANHOLE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT
	PROTECTION
MTS	MANUAL TRANSFER SWITCH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL
NFPA	NATIONAL FIRE PROTECTION
NL	
NU	
	NUT TO SCALE
01701	CONTRACTOR INSTALLED
OF/OI	OWNER FURNISHED/ OWNER
 01/01	
01701	INSTALLED
OFP	INSTALLED OBTAIN FROM PLANS
OFP OH DR	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR
OFP OH DR OL	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD
OFP OH DR OL PB	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON
OFP OH DR OL PB PF	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR
OFP OH DR OL PB PF PH	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE
OFP OH DR OL PB PF PH PNL	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER
OFP OH DR OL PB PF PH PNL PT PT7	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TIL T/ZOOM
OFP OH DR OL PB PF PH PNL PT PTZ OTY	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM OLIANTITY
OFP OH DR OL PB PF PH PNL PT PTZ QTY R	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RNC RPM RR S/S	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RNC RPM RR S/S SCA	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID METAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RPM RNC RPM RR S/S SCA SCBA	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCA SCBA	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID MONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RNC RPM RR S/S SCA SCBA SF	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET)
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RNC RNC RNC RPM RR S/S SCA SCBA SFBA	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID METAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RPM RR S/S SCA SCBA SFBA	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID METAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF SFBA SFBA	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SFBA SFBA SFBA	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RNC RNC RNC RPM RR S/S SCA SCBA SFBA SFBA SFD SPDT SPEC	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF SFBA SFBA SFDT SPEC SPST	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW
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OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF SFBA SFBA SFBA SFD SPDT SPEC SPST ST SWBD	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SINGLE POLE, SINGLE THROW SWITCHBOARD
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SFBA SFBA SFBA SFBA SFBA SFBA SFBA SF	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SINGLE THROW SWITCHBOARD SWITCHBOARD
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SFBA SFBA SFBA SFBA SFD SPDT SPEC SPST ST SWBD SWGR TL	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SINGLE POLE, SINGLE THROW SWITCHBOARD SWITCHBOARD SWITCHGEAR TWIST LOCK
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF SFBA SFBA SFBA SFBA SFD SPDT SPEC SPST ST SWBD SWGR TL TP	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE THROW SWITCHBOARD SWITCHBOARD SWITCHGEAR TWIST LOCK
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF SFBA SFBA SFBA SFBA SFDT SFBA SFDT SPDT SPEC SPST ST SWBD SWGR TL TP	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE POLE TWISTED PAIR
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SFBA SFBA SFBA SFBA SFBA SFBA SFBA SF	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PANTILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE THROW SWITCHBOARD SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE POLE TWISTED PAIR TELEPHONE TERMINAL BOARD
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SFBA SFBA SFBA SFBA SFBA SFBA SFDT SPDT SPEC SPST ST SWBD SWGR TL TP TP TP	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL BOARD
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF SFBA SFBA SFBA SFBA SFD SPDT SPEC SPST ST SWBD SWGR TL TP TP TTB TV TVSS	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE THROW SWITCHBOARD SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL BOARD TELEVISION TRANSIENT VOLTAGE SURGE
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF SFBA SFBA SFBA SFBA SFBA SFBA SFD SPDT SPEC SPST ST SWBD SWGR TL TP TP TP TB TV TVSS TYP	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PANTILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE POLE TWISTED PAIR TELEPHONE TERMINAL BOARD TELEVISION TRANSIENT VOLTAGE SURGE SUPPRESSER TYPICAI
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SFBA SFBA SFBA SFBA SFBA SFBA SFBA SF	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PANTILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE POLE, SINGLE THROW SWITCHBOARD SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL BOARD
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF SFBA SFBA SFBA SFBA SFDT SPEC SPST ST SWBD SWGR TL TP TP TTB TV TVSS TYP UF UGND	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE POLE, SINGLE THROW SWITCHBOARD SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL BOARD
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF SFBA SFBA SFBA SFBA SFBA SFBA SFDT SPEC SPST ST SWBD SWGR TL TP TP TB TV TVSS TYP UF UGND UPS	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL BOARD TELEVISION
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF BA SFBA SFBA SFBA SFBA SFBA SFBA S	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE POLE, SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL BOARD TELEVISION TRANSIENT VOLTAGE SURGE SUPPRESSER TYPICAL UNDERFLOOR UNDERFLOOR UNINTERRUPTIBLE POWER SUPPLY
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF BA SFBA SFBA SFBA SFBA SFBA SFBA S	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PANTILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE POLE, SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE POLE TWISTED PAIR TELEPHONE TERMINAL BOARD TELEVISION TRANSIENT VOLTAGE SURGE SUPPRESSER TYPICAL UNDERFLOOR UNDERGROUND UNINTERRUPTIBLE POWER SUPPLY
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SFBA SFBA SFBA SFBA SFBA SFBA SFBA SF	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE POLE, SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE TERMINAL BOARD TELEPHONE TERMINAL BOARD TELEVISION TRANSIENT VOLTAGE SURGE SUPPRESSER TYPICAL UNDERFLOOR UNDERGROUND UNINTERRUPTIBLE POWER SUPPLY VOLTS VOLTS
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF SFBA SFBA SFBA SFBA SFDT SFBA SFDT SPEC SPST ST SWBD SWGR TL TP TP TB TV TVSS TYP UF UGND UPS V VA VFC/VF	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PAN/TILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE POLE, SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE POLE TWISTED PAIR TELEPHONE TERMINAL BOARD TELEVISION TRANSIENT VOLTAGE SURGE SUPPRESSER TYPICAL UNDERFLOOR UNDERGROUND UNINTERRUPTIBLE POWER SUPPLY VOLTS VOLT AMPERE VARIABLE FREQUENCY MOTOR
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF BA SFBA SFBA SFBA SFBA SFBA SFBA S	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PANTILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE POLE, SINGLE THROW SWITCHBOARD SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE TERMINAL BOARD TELEVISION TRANSIENT VOLTAGE SURGE SUPPRESSER TYPICAL UNDERFLOOR UNDERGROUND UNINTERRUPTIBLE POWER SUPPLY VOLTS VOLT AMPERE VARIABLE FREQUENCY MOTOR CONTROLLER
OFP OH DR OL PB PF PH PNL PT PTZ QTY R RCP RMC RNC RPM RR S/S SCA SCBA SF BA SFBA SFBA SFBA SFBA SFBA SFBA S	INSTALLED OBTAIN FROM PLANS OVERHEAD (COILING) DOOR OVERLOAD PUSHBUTTON POWER FACTOR PHASE PANEL POTENTIAL TRANSFORMER PANEL POTENTIAL TRANSFORMER PANTILT/ZOOM QUANTITY REMOVE REFLECTED CEILING PLAN RIGID METAL CONDUIT RIGID NONMETAL CONDUIT REVOLUTIONS PER MINUTE REMOVE AND RELOCATE START/STOP SHORT CIRCUIT AMPS STANDARD COLOR AS SELECTED BY ARCHITECT SQUARE FOOT (FEET) STANDARD FINISH AS SELECTED BY ARCHITECT SURGE PROTECTIVE DEVICE SINGLE POLE, DOUBLE THROW SPECIFICATION SINGLE THROW SWITCHBOARD SWITCHGEAR TWIST LOCK TELEPHONE POLE TWISTED PAIR TELEPHONE TERMINAL BOARD TELEVISION TRANSIENT VOLTAGE SURGE SUPPRESSER TYPICAL UNDERGROUND UNINTERRUPTIBLE POWER SUPPLY VOLTS VOLT AMPERE VARIABLE FREQUENCY MOTOR CONTROLLER

#### WP WEATHERPROOF XFMR TRANSFORMER

## DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INPUT/ OUTPUT

CONDUIT

INFRARED

J-BOX JUNCTION BOX

ISOLATED GROUND

INTERMEDIATE METAL

INSULATED/ ISOLATED

I/O

IG IMC

IN/IS

IR

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED. DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED",

"SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES. APPROVED: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND

REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS. FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY,

INSTALLATION, AND SIMILAR OPERATIONS." INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

TECHNOLOGY SYSTEMS: THE TERM "TECHNOLOGY SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC ...

# GENERAL ELECTRICAL NOTES

- CLARIFICATION METHODS: AT THE TIME OF BIDDING, BIDDERS SHALL FAMILIARIZE THEMSELVES WITH THE DRAWINGS AND SPECIFICATIONS. ANY QUESTIONS, MISUNDERSTANDINGS, CONFLICTS, DELETIONS, DISCONTINUED PRODUCTS, CATALOG NUMBER DISCREPANCIES, DISCREPANCIES BETWEEN THE EQUIPMENT SUPPLIED AND THE INTENT OR FUNCTION OF THE EQUIPMENT, ETC, SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER IN WRITING FOR CLARIFICATION PRIOR TO ISSUANCE OF THE FINAL ADDENDUM AND BIDDING OF THE PROJECT. WHERE DISCREPANCIES OR MULTIPLE INTERPRETATIONS OCCUR, THE MOST STRINGENT (WHICH IS GENERALLY RECOGNIZED AS THE MOST COSTLY) THAT MEETS THE INTENT OF THE DOCUMENTS SHALL BE ENFORCED.
- OWNER FURNISHED ITEMS: THE OWNER WILL FURNISH MATERIAL AND EQUIPMENT AS INDICATED IN THE CONTRACT DOCUMENTS TO BE INCORPORATED INTO THE WORK. THESE ITEMS ARE ASSIGNED TO THE INSTALLER AND COSTS FOR RECEIVING, HANDLING, STORAGE, IF REQUIRED, AND INSTALLATION ARE INCLUDED IN THE CONTRACT SUM.
- A. THE INSTALLER'S RESPONSIBILITIES ARE THE SAME AS IF THE INSTALLER FURNISHED THE MATERIALS OR EQUIPMENT.
- B. THE OWNER WILL ARRANGE AND PAY FOR DELIVERY OF OWNER FURNISHED ITEMS FREIGHT ON BOARD JOB SITE AND THE INSTALLER WILL INSPECT DELIVERIES FOR DAMAGE. IF OWNER FURNISHED ITEMS ARE DAMAGED, DEFECTIVE OR MISSING, DOCUMENT DAMAGED ITEMS WITH THE TRANSPORT COMPANY AND THE OWNER WILL ARRANGE FOR REPLACEMENT. THE OWNER WILL ALSO ARRANGE FOR MANUFACTURER'S FIELD SERVICES, AND THE DELIVERY OF MANUFACTURER'S WARRANTIES AND BONDS TO THE INSTALLER.
- C. THE INSTALLER IS RESPONSIBLE FOR DESIGNATING THE DELIVERY DATES OF OWNER FURNISHED ITEMS AND FOR RECEIVING, UNLOADING AND HANDLING OWNER FURNISHED ITEMS AT THE SITE. THE INSTALLER IS RESPONSIBLE FOR PROTECTING OWNER FURNISHED ITEMS FROM DAMAGE, INCLUDING DAMAGE FROM EXPOSURE TO THE ELEMENTS, AND TO REPAIR OR REPLACE ITEMS DAMAGED AS A RESULT OF HIS OPERATIONS.
- EXPOSED STRUCTURE AREAS (EXCLUDING MECHANICAL, ELECTRICAL, AND COMMUNICATION SPACES): INSTALL RACEWAYS BETWEEN DECK AND STRUCTURE WHEREVER POSSIBLE IN EXPOSED STRUCTURE CEILING AREAS. ROUTE RACEWAYS IN CONCEALED AREAS WHEREVER POSSIBLE. REFER ALL CONDITIONS WHERE RACEWAYS MUST BE INSTALLED WHICH CANNOT COMPLY WITH THESE REQUIREMENTS TO THE ARCHITECT.
- SUBMITTALS: PROVIDE ORIGINAL ELECTRONIC PDF FORMAT, BOUND, BOOKMARKED (EACH SECTION AND PRODUCT), AND HIGHLIGHTED. JOB NAME AND SUBCONTRACTOR SHALL BE ON THE FRONT COVER. PREPARE INDEX OF EQUIPMENT SUBMITTED IN EACH TAB.
- REFLECTED CEILING PLANS: COORDINATE THE LOCATION OF LIGHT FIXTURES WITH THE ARCHITECTURAL REFLECTED CEILING PLANS. REFER ALL DISCREPANCIES TO THE ARCHITECT AND ENGINEER.
- ALL WORK SHALL BE DONE ACCORDING TO THE CURRENT NATIONAL ELECTRIC CODE (NEC), IBC, NFPA, AND IFC. COMPLIANCE AND FINAL APPROVAL IS SUBJECT TO THE ON SITE FIELD INSPECTION OF THE AHJ.

## ELECTRICAL SHEET INDEX FE001 SHEET INDEX. ABBREVIATIONS, AND GENERAL NOTES

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EY101	LEVEL 1 AUXILIARY PLAN

EY601 AUXILIARY RISER DIAGRAMS FA101 LEVEL 1 FIRE ALARM PLAN

![](_page_15_Figure_29.jpeg)

CLINIC/HOSPITAL - EQUIPMENT/CABLE LIST				
THE ITEMS DESIGN OF	INDICATED BELOW SHALL NOT BE CONSTRUED AS A "BILL OF MATERIALS". THIS LIST IDENTIFIES ITEMS THE CABLING INSTALLATION. WHERE THE ITEMS INDICATED ARE ONE PORTION OF AN ASSEMBLY, THE	OF SIGNIFICANCE USED DURING THE ENTIRE ASSEMBLY SHALL BE PROVIDED		
UNLESS SP	ECIFIED OTHERWISE. PROVIDE ALL MISCELLANEOUS HARDWARE AND SUPPORTS WHICH MAY NOT BE L	ISTED HERE, FOR A COMPLETE RIOR TO BID. IF CATALOG NUMBERS		
DO NOT MA	TCH DESCRIPTIONS, THE DESCRIPTIONS TAKE PRECEDENCE. PROVIDE COMPLETE SUBMITTAL FOR AP	PROVAL PRIOR TO PURCHASING ANY		
SYMBOL	ITEM DESCRIPTION	ACCEPTABLE TYPES		
	STATION CABLE, DATA - CATEGORY 6A F/UTP RISER, BLUE, DATA STATION CABLE, DATA - CATEGORY 6A F/UTP RISER, YELLOW, WIRELESS DATA	SIEMON 9A6R4-A5-06-R1A SIEMON 9A6R4-A5-05-R1A		
	STATION CABLE, DATA - CATEGORY 6A F/UTP RISER, ORANGE, CLINICAL ENGINEERING STATION CABLE, DATA - CATEGORY 5E RISER, ORANGE, NURSE CALL	SIEMON 9A6R4-A5-09-R1A SIEMON 9CR4-E2-09-RXA		
	STATION CABLE, DATA - CATEGORY 5E RISER, GREEN, VENDOR NETWORK	SIEMON 9C5R4-E2-07-R1A		
	25 PAIR CATEGORY 3 OSP CABLE, BLACK, PE-89, 22AWG 25 PAIR CATEGORY 3 OSP CABLE, BLACK, PE-89, 22AWG	GENERAL CABLE 7525637 GENERAL CABLE 7525629		
	50 PAIR CATEGORY 3 RISER CABLE, GRAY 25 PAIR CATEGORY 3 RISER CABLE, GRAY	GENERAL CABLE 2133161.99 OR EQUAL GENERAL CABLE 2133033.99 OR EQUAL		
EPP1	BUILDING ENTRANCE PROTECTION, 50 PAIR, 110 STYLE TERMINATION	CIRCA 1880ECA1-50		
	BUILDING ENTRANCE PROTECTION MODULE, 5-PIN, 300 V DC	CIRCA 3B1S-300		
	FORESEER CABLE, 2 PAIR FIBER OPTIC CABLE, MULTIMODE, OM3, 12 STRAND, ARMORED, RISER CABLE, AQUA	BELDEN 88723 CORNING FIBER NOTES		
	FIBER OPTIC CABLE, SINGLEMODE, 4 STRAND, 2 COND., 14 AWG, INDOOR/ OUTDOOR CABLE, BLACK FIBER OPTIC CABLE, SINGLEMODE, 6 STRAND, ARMORED, INDOOR/ OUTDOOR CABLE, BLACK	CORNING 004ZDF-21X01M20 SIEMON 9BG8R006D-E201A		
	FIBER OPTIC CABLE, SINGLEMODE, 12 STRAND, ARMORED, RISER CABLE, YELLOW	SIEMON 9BC8R012L-E205A		
	eABF FIBER OPTIC CABLE, SINGLEMODE, 24 STRAND, OSP, BLACK, MICRODUCT APPLICATION	CORNING 024ZM4-T3F22A20		
	FIBER OPTIC CABLE, SINGLEMODE, 144 STRAND, ARMORED, RISER CABLE, YELLOW VOICE OUTLET, SINGLE GANG FACEPLATE, WHITE W/ WALL HUNG PHONE	SIEMON 9BC8R144G-E205A SIEMON MX-WP-Z6AS-SS		
F	MOUNTING STUDS, ONE POSITION W/ CATEGORY 6A INSERT	VIKING ELECTRONICS E-1600-30A		
$\overline{\nabla}$	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06		
$\bigtriangledown$	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION CATEGORY 6A JACK - DATA, BLUE	SIEMON 10GMX-FPS04-02 SIEMON Z6A-S06		
	BLANK INSERT, WHITE DATA OUTLET, SINGLE GANG FACEPLATE. WHITE. 4 POSITION	SIEMON MX-BL-02 SIEMON 10GMX-FPS04-02		
	CATEGORY 6A JACK - DATA, BLUE	SIEMON Z6A-S06		
F ▼	CATEGORY 6A JACK - DATA, BLUE	SIEWON Z6A-S06		
	BLANK MODULE, BLACK DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON MX-BL-01 SIEMON 10GMX-FPS04-02		
▼	CATEGORY 6A JACK - DATA, BLUE BLANK INSERT. WHITE	SIEMON Z6A-S06 SIEMON MX-BL-02		
4	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 10GMX-FPS04-02		
	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 26A-S06 SIEMON 10GMX-FPS04-02		
	CATEGORY 6A JACK - DATA, ORANGE BLANK INSERT, WHITE	SIEMON Z6A-S09 SIEMON MX-BL-02		
M	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION	SIEMON 10GMX-FPS04-02		
V	BLANK INSERT, WHITE	SIEMON X2A-309 SIEMON MX-BL-02		
M	DATA OUTLET, SINGLE GANG FACEPLATE, WHITE, 4 POSITION CATEGORY 6A JACK - DATA, ORANGE	SIEMON 10GMX-FPS04-02 SIEMON Z6A-S09		
	BLANK INSERT, WHITE DATA OUTLET, SUBFACE MOUNT BOX, WHITE, 2 POSITION	SIEMON MX-BL-02 SIEMON MX-SM72-02		
Ac	CATEGORY 6A JACK - DATA, BLUE	SIEMON X6A-S06		
	CATEGORY 6A JACK - DATA, BLUE	SIEMON MX-SMZ1-02 SIEMON Z6A-S06		
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 2 POSITION CATEGORY 6A JACK - DATA, YELLOW	SIEMON MX-SMZ2-02 SIEMON Z6A-S05		
	DATA OUTLET, WHITE, 1 POSITION	SIEMON MX-SMZ1-02		
	DATA OUTLET, SURFACE MOUNT BOX, WHITE, 1 POSITION	SIEMON X20A-303 SIEMON MX-SMZ1-02		
	CATEGORY 6A JACK - DATA, BLUE DATA OUTLET, SURFACE MOUNT BOX, WHITE, 2 POSITION	SIEMON Z6A-S06 SIEMON MX-SMZ2-02		
F	FIBER INSERT, DUPLEX LC, SINGLEMODE DUPLEX PHOENIX POWER CONNECTOR	SIEMON MX-F1-LCU-02C CORNING 1LAN-D600-SPK-WH		
	MEDIA CONVERTER, UNMANAGED, HARDENED, POE+ INJECTOR/CONVERTER	TRANSITION NETWORKS SI-IES-111D-LRT		
SPP1	48 PORT, 1RU ANGLE PATCH PANEL WITH OUTLETS	SIEMON Z6AS-PA-48		
SPP2	48 PORT, 2RU ANGLE PATCH PANEL, 110 STYLE 48 PORT, 1RU FLAT PATCH PANEL WITH OUTLETS	SIEMON HD5-48A SIEMON Z6AS-PNL-U48K		
SPP3 RPP2	24 PORT, 1RU FLAT PATCH PANEL WITH OUTLETS 24 PORT 1RU FLAT PATCH PANEL 110 STYLE	SIEMON Z6AS-PNL-U24K SIEMON HD5-24		
CEPP1	48 PORT, 1RU ANGLED PATCH PANEL WITH OUTLETS	SIEMON Z6AS-PA-48		
PPP	48 PORT, 2RU ANGLED PATCH PANEL WITH OUTLETS 24 PORT, 1RU ANGLED PATCH PANEL, 110 STYLE	SIEMON HD5-48A SIEMON HD5-24A		
	FIBER PATCH PANEL, EXPANDED UNIT FOR FIBER SPLICE TRAY CAPACITY, 3RU SIX POSITION, 12 STRAND, FIBER SPLICE MODULE, LC	SIEMON RIC3-E-48-01 SIEMON FSM2-12-LCSM-01		
FPP1	FIBER SPLICE TRAY BLANK ADAPTER PLATE BLACK	SIEMON TRAY-3 SIEMON RIC-F-BLNK-01		
	FIBER PATCH PANEL, WALL MOUNT	SIEMON SWIC3G-CC-01		
	BLANK ADAPTER PLATE, BLACK	SIEMON RIC-F-LCU12-01C SIEMON RIC-F-BLNK-01		
HWM1	ST CONNECTOR, SIMPLEX, MULTIMODE, OM3 HORIZONTAL WIRE MANAGERS, 4RU	SIEMON FC1-SA-MM-B80 PANDUIT NCMHAEF4		
HWM2 VWM	HORIZONTAL WIRE MANAGERS, FRONT ONLY, 2RU, BLACK VERTICAL WIRE MANAGERS, 10" WIDTH, DOUBLE SIDED, BLACK, 8'	PANDUIT NCNHAEF2 CHATSWORTH 40096-715		
PSU	POWER SUPPLY UNIT, 12 PORT, 1RU	CORNING PSU6-1U		
	EQUIPMENT RACK 19" x 8', 52 RU, BLACK	CHATSWORTH 55053-715		
	DATA CENTER CABINETS 23.6" x 47.3" x 7', 45RU x 600mm x 1200mm, BLACK, WITH 2 SIDES	DCE E4562121122001S		
	DATA CENTER CABINET, 45RU x 600mm x 1200mm, BLACK, WITH 1 SIDE	DCE E4562122122001S		
	DATA CENTER CABINETS 27.6" x 47.3" x 7', 45RU x 700mm x 1200mm, BLACK, WITH 2 SIDES	DCE E4572121122001S		
	DATA CENTER CABINET, 45RU x 700mm x 1200mm, BLACK, WITH 1 SIDE DATA CENTER CABINET, 45RU x 700mm x 1200mm, BLACK	DCE E4572122122001S DCE E4572120122001S		
	CABLE RUNWAY - 24", BLACK WITH ALL REQUIRED MOUNTING ACCESSORIES CABLE RUNWAY - 18", BLACK WITH ALL REQUIRED MOUNTING ACCESSORIES	CHATSWORTH 10250-724 CHATSWORTH 10250-718		
		CHATSWORTH 11301-701		
		CHATSWORTH 11309-701		
	3" CHANNEL RACK TO RUNWAY, BLACK TRIANGLE BRACKETS, BLACK	CHATSWORTH 12408-724 CHATSWORTH 11746-724		
	END CLOSING KIT, CABLE RUNWAY, BLACK WALL ANGLE SUPPORT KIT, CABLE RUNWAY, BLACK	CHATSWORTH 11700-724 CHATSWORTH 11421-724		
	CABLE RUNWAY BADILIS DROD	CHATSWORTH 10506-706		
	FIBER GUTTER, 4" X 4" BLACK WITH ALL REQUIRED MOUNTING ACCESSORIES	PANDUIT FR4X4BLL6		
	COUPLER KIT, YELLOW 4" DOWN SPOUT, YELLOW	PANDUIT FRBC4X4LYL PANDUIT FRVT4X4YL		
	90 DEGREE ELBOW, YELLOW	PANDUIT FRRA4X4LYL PANDUIT FR6ALB		
		PANDUIT FRLB		
_J_J_J_	PLYWOOD BACKBOARD, 4' X 8', GRADE AC, FIRE TREATED & PAINTED			
L	TELECOMMUNICATIONS MAIN GROUNDING BUS BAR TELECOMMUNICATIONS GROUNDING BUS BAR	-		

NOTE: ALL RACKS, LADDER, PATCH PANELS AND ACCESSORIES SHALL BE BLACK IN COLOR.

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# CLINIC/HOSPITAL -GENERAL PROJECT NOTES

- UNLESS OTHERWISE NOTED, INSTALL ALL CABLE INSIDE RACEWAY SYSTEMS. WHERE RACEWAY SYSTEMS HAVE NOT BEEN PROVIDED OR SPECIFIED, INSTALL CABLE THROUGH THE SPECIFIED "CADDY" CLIPS AT THE MINIMUM INTERVALS IDENTIFIED IN THE SPECIFICATIONS. SUPPORT "CADDY" CLIPS DIRECTLY FROM THE BUILDING STRUCTURE, NOT FROM OTHER BUILDING SYSTEM SUPPORT WIRES OR CABLE.
- 2. PROVIDE PLENUM RATED CABLE IN ALL AIR PLENUMS. IF A PLENUM RATED CABLE IS NOT SPECIFIED, PROVIDE THE PLENUM RATED EQUIVALENT TO THE SPECIFIED CABLE.
- 3. LABEL ALL CABLE INSTALLED UNDER THIS CONTRACT REGARDLESS OF LENGTH.
- 4. THE EQUIPMENT LABELING IDENTIFIED ON DETAILS IN THESE DRAWINGS ARE EXAMPLES ONLY OF THE ACTUAL LABELING WHICH IS REQUIRED AS PART OF THIS CONTRACT. PRIOR TO FABRICATION, SUBMIT THE NOMENCLATURE FOR ALL LABELS TO THE OWNER FOR REVIEW. THIS REQUIREMENT INCLUDES BUT IS NOT LIMITED TO ALL CABLE LABELING, AND ALL EQUIPMENT LABELING.
- 5. IF OUTLET IS TERMINATED IN CEILING SPACE, LABEL THE T-BAR GRID WITH THE OUTLET NUMBER FOR EASY LOCATION AND IDENTIFICATION.
- GROUND ALL EQUIPMENT RACKS INSTALLED UNDER THIS CONTRACT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
   FOR EVERY CABLE PULL SPECIFIED, COIL 15' OF EXCESS CABLE AT THE
- STATION END FOR FUTURE USE. NEATLY COIL 15' ABOVE THE CEILING OR BELOW FLOOR WHERE APPLICABLE.
- 8. PROVIDE THE QUANTITY OF PATCH PANELS REQUIRED +20% FOR THE TOTAL DATA OUTLETS SHOWN ON FLOOR PLANS FOR THE PARTICULAR LEVEL.
- RACK SPACE ALLOCATION SHOULD BE FOLLOWED PER DRAWINGS. IF YOU HAVE A SYSTEM THAT HAS NOT RACK ALLOCATION PLEASE CALL BOE SAUSEDO AT 801-707-3805.
- 10. COORDINATE WITH ALL SUBS TO ENSURE THAT ALL CABLES ARE PROTECTED FROM ANY DIRECT PAINT, OR INCIDENTAL OVERSPRAY.

## ABBREVIATIONS

NOTE: ALL ABBREVIATIONS MAY NOT BE USED.

A CAT E EA ER FPP GIG HWM NIC OE PNM PR PS RPP SPP TDR TYP	AUGMENTED CATEGORY ENHANCED EACH EQUIPMENT ROOM FIBER PATCH PANEL GIGA HERTZ HORIZONTAL WIRE MANAGEMENT NOT IN CONTRACT OWNER ELECTRONICS PLENUM PAIR POWER SUPPLY RISER PATCH PANEL STATION PATCH PANEL TELECOMMUNICATIONS ROOM TYPICAL
TYP	TYPICAL
VWM	VERTICAL WIRE MANANGEMENT

# DEFINITIONS

NOTE: ALL DEFINITIONS MAY NOT BE USED.

INDICATED: THE TERM "INDICATED" REFERS TO GRAPHIC REPRESENTATIONS, NOTES, OR SCHEDULES ON THE DRAWINGS, OTHER PARAGRAPHS OR SCHEDULES IN THE SPECIFICATIONS, AND SIMILAR REQUIREMENTS IN THE CONTRACT DOCUMENTS. WHERE TERMS SUCH AS "SHOWN", "NOTED", "SCHEDULED", AND "SPECIFIED" ARE USED, IT IS TO HELP THE READER LOCATE THE REFERENCE, NO LIMITATION ON LOCATION IS INTENDED.

DIRECTED: TERMS SUCH AS "DIRECTED", "REQUESTED", AUTHORIZED", "SELECTED", "APPROVED", "REQUIRED", AND "PERMITTED" MEAN "DIRECTED BY THE ENGINEER", "REQUESTED BY THE ENGINEER", AND SIMILAR PHRASES.

APPROVE: THE TERM "APPROVED", WHERE USED IN CONJUNCTION WITH THE ENGINEER'S ACTION ON THE CONTRACTOR'S SUBMITTALS, APPLICATIONS, AND REQUESTS, IS LIMITED TO THE ENGINEER'S DUTIES AND RESPONSIBILITIES AS STATED IN GENERAL AND SUPPLEMENTARY CONDITIONS.

FURNISH: THE TERM "FURNISH" IS USED TO MEAN "SUPPLY AND DELIVER TO THE PROJECT SITE, READY FOR UNLOADING, UNPACKING, ASSEMBLY, INSTALLATION, AND SIMILAR OPERATIONS."

INSTALL: THE TERM "INSTALL" IS USED TO DESCRIBE OPERATIONS AT PROJECT SITE INCLUDING THE ACTUAL "UNLOADING, UNPACKING, ASSEMBLY, ERECTION, PLACING, ANCHORING, APPLYING, WORKING TO DIMENSION, FINISHING, CURING, PROTECTING, CLEANING, AND SIMILAR OPERATIONS."

PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY FOR THE INTENDED USE."

INSTALLER: AN "INSTALLER" IS THE CONTRACTOR OR AN ENTITY ENGAGED BY THE CONTRACTOR, EITHER AS AN EMPLOYEE, SUBCONTRACTOR, OR SUB-SUBCONTRACTOR, FOR PERFORMANCE OF A PARTICULAR CONSTRUCTION ACTIVITY, INCLUDING INSTALLATION, ERECTION, APPLICATION, AND SIMILAR OPERATIONS. INSTALLERS ARE REQUIRED TO BE EXPERIENCED IN THE OPERATIONS THEY ARE ENGAGED TO PERFORM.

ELECTRONIC SYSTEMS: THE TERM "ELECTRONIC SYSTEMS" IS USED TO DESCRIBE ALL LOW VOLTAGE SYSTEMS GENERALLY REFERRED TO AS "SPECIAL SYSTEMS". THESE SYSTEMS INCLUDE BUT ARE NOT NECESSARILY LIMITED TO ALL SYSTEMS WHICH UTILIZE VOLTAGES OF LESS THAN 71 VOLTS SUCH AS SOUND SYSTEMS, VIDEO SYSTEMS, TV SYSTEMS, SECURITY SYSTEMS, VOICE AND DATA CABLING SYSTEMS, ETC...

![](_page_16_Picture_28.jpeg)

![](_page_17_Figure_0.jpeg)

![](_page_17_Picture_6.jpeg)

-RACEWAY .5" THROUGH 1"

![](_page_18_Figure_0.jpeg)

SHADED AREAS TO BE ORANGE ALL OTHER TO BE WHITE BACKGROUND
(TYP) DISTANCES IN INCHES
COORDINATE VOLTAGE VALUES WITH ONE-LINE
MATCH NAME OF EQUIPMENT WITH NAMES ON ONE-LIN
PROVIDE ADDRESS WHERE SKM ANALYIS IS PERFORM
PROVIDE JOB NUMBER "#######", DATE OF ANALYSIS
AND ENGINEER WHO PERFORIVED STUDT
*PROVIDE ARC FLASH LABEL FOR ALL ELECTRICAL EQUIPMENT PER SPECIFICATIONS AND REQUIRED BY NEC
* E /

A3 TYPICAL SWITCH, RECEPTACLE AND PANELBOARD LABELING LOCATION DETAIL

\_\_CIRCUIT NUMBER LABEL TYPICAL RECEPTACLE LABEL TYPICAL LABELING FOR PANELBOARDS LOCATION IN NON-PUBLIC LOCATIONS

![](_page_19_Figure_4.jpeg)

# C3 TYPICAL PANELBOARD/SWITCHBOARD LABEL

- NUMBER OF WIRES, AND AIC RATING OF DEVICE. (5) THIRD LINE: LETTERING IS TO BE 3/8" HIGH, CENTERED, AND FORMATTED AS SHOWN. PROVIDE "FED FROM-" AND REPLACE MDP1 WITH THE DEVICES NAME THAT FEEDS THE PANELBOARD.
- LINE DIAGRAM. SECOND LINE: LETTERING IS TO BE 3/8" HIGH, CENTERED, AND FORMATTED AS SHOWN. THE FOLLOWING SHALL BE PROVIDED, VOLTAGE, PHASE,
- (3) FIRST LINE: LETTERING IS TO BE 3/8" HIGH, CENTERED, AND FORMATTED AS SHOWN. REPLACE THE LETTER/NUMBER WITH THOSE FOUND ON THE ONE-
- (2) LABEL IS TO BE MOUNTED USING DOUBLE SIDED ADHESIVE TAPE COVERING THE BACK OF THE LABEL.
- DISCONNECT/STARTER. LABEL IS TO BE 3" X REQUIRED LENGTH X 1/16" LAMINATED 2-PLY PLASTIC LAMACOID. LETTERS SHALL BE FORMED BY ENGRAVING OUTER WHITE PLY, EXPOSING BLACK PLY BENEATH.

![](_page_19_Figure_11.jpeg)

![](_page_19_Picture_12.jpeg)

![](_page_19_Figure_13.jpeg)

TYPICAL LABELING FOR SWITCHBOARDS

![](_page_19_Picture_16.jpeg)