WIRE TO LOCAL ADDRESSABLE FIRE CM ALARM LOOP	1.
PROVIDE POWER VIA LOCAL 120VAC UNSWITCHED RCPT CIRCUIT NOTES: PROVIDE SINGLE TOGGLE SWITCH LOCATION INDICATED ON FL PLANS. (TYPICAL)	
1. NEUTRAL WIRING NOT SHOWN.	
2. NOT USED.	
3. WIRE FIRE ALARM CONTROL MODULE AND N.O. RELAY CONTACTS IN STARTER SUCH THAT EACH SIGNAL WIL	CC LS
 PROGRAM FIRE ALARM CONTROL RELAY TO TURN OFF OF ALARM OUTPUT OF KITCHEN EXHAUST HOOD 'ANSI ALARM. ACTIVATION OF THIS RELAY WILL TURN OFF TH THROUGH 120VAC COIL ON RELAY. 	= SH JL' HE
5. LABEL ALL SWITCHES WITH ASSOCIATED FAN NAME U	SIN

KITCHEN FAN CONTROL DETAIL





ELECTRICAL ABBREVIATIONS	ELECTRICAL SYMBOLS	
PERE ERNATING CURRENT	SYMBOL	DESCRIPTION
CFAULT CIRCUIT INTERRUPTER CONDITIONING UNIT		SURFACE MOUNTED PANELBOARD
VE FINISHED GRADE HANDLING UNIT PS INTERRUPTING CURRENT		RECESSED PANELBOARD
MINUM OMATIC TRANSFER SWITCH ERICAL WIRE GAUGE	L L	JUNCTION BOX
INDUIT SLE TELEVISION	€=	DUPLEX WALL MOUNTED RECEPTACLE, 18" AFF UNLESS OTHERWISE NOTED
CUIT MPRESSOR	H) EPO	EMERGENCY POWER OFF PUSH BUTTON
NDENSATE PUMP RRENT TRANSFORMER NDENSING UNIT OR COPPER BINET UNIT HEATER /ER	UC	UTILITY CONTROLLER FOR GAS AND ELECTRIC SHUTOFF TO GAS FIRED EQUIPMENT UNDER RANGE HOOD. REFER TO KITCHEN GAS AND ELECTRIC SHUTOFF DETAIL WITH NATURAL GAS DETECTION FOR MORE INFORMATION.
GREE METER VN AWING	NG	WALL MOUNTED NATURAL GAS DETECTOR. REFER TO KITCHEN GAS AND ELECTRIC SHUTOFF DETAIL WITH NATURAL GAS DETECTION FOR MORE INFORMATION.
STING TO REMAIN IAUST FAN	MM	FIRE ALARM MONITOR MODULE
	СМ	FIRE ALARM CONTROL MODULE
RGENCY CTRIC METALLIC TUBING	CO	CARBON MONOXIDE DETECTOR

POLE PRIMARY ELECTRIC SERVCE POWER FACTOR PHASE PANE POLYVINYL CHLORIDE CONDUIT EXISTING TO BE REMOVED

NEW LOCATION OF RELOCATED DEVICE

FAHRENHEIT

FIRE ALARM

FOOT CANDLE

FAN COIL UNIT

HORSE POWER

ISOLATED GROUND

KILOVOLT AMPERE

MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER MOLDED CASE CIRCUIT BREAKER

METAL HALIDE OR MANHOLE

NATIONAL ELECTRIC CODE

NEW TO REPLACE EXISTING

GROUND

HOUR

HERTZ

INCHES JUNCTION BOX

KILOWATT

MAXIMUM MAKE-UP AIR UNIT

MINIMUM

MAIN LUGS ONLY

NOT APPLICABLE

NOT IN CONTRACT

NOT TO SCALE

FIRE ALARM CONTROL PANEL

FOOD SERVICE CONTRACTOR

HIGH PRESSURE SODIUM

THOUSAND CIRCULAR MILS

GROUND FAULT CIRCUIT INTERRUPTER

REFRIGERATOR RIGID GALVANIZED STEEL CONDUIT EXISTING TO BE RELOCATED ROOM EXISTING TO BE REMOVED AND REPLACED WITH NEW (EXISTING

BACKBOXES, CONDUIT AND WIRING TO REMAIN) EXISTING TO BE RELOCATED IN SAME LOCATION ON NEW SURFACE ROOFTOP UNIT FCONDARY FLECT ICAL SERVICI SPECIFICATION

NEW DEVICE INSTALLED IN SAME LOCATION AS EXISTING REMOVED DEVICE

SWITCHBOARD SURGE PROTECTION DEVICE TELECOMMUNICATIONS/TELEPHONE TELEVISION

TRANSFORMER TYPICAL UNIT HEATER

UNLESS OTHERWISE NOTED **VOLTS** VOLT AMPERE VOLTS ALTERNATING CURRENT VERIFY IN FIELD

WATT OR WIRE WASHER WIRE GUARD

WEATHERPROOF





SHEET NO.

6/16/2023





SWAMPSCOTT **SENIOR CENTER -**RANGE HOOD







ELECTRICAL KEY NOTES					
(E1)	EXISTING TO REMAIN RECEPTACLE POWERED VIA DEDICATED CIRCUIT SHALL BE RE-UTILIZED FOR GAS-FIRED RANGE. PROVIDE 20A/1P COMBINATION GFCI AND SHUNT TRIP BREAKER PER KITCHEN GAS AND ELECTRIC SHUTDOFF DETAIL. RE-ALIGN EXISTING CIRCUIT BREAKERS IN PANELBOARD AS REQUIRED TO ACCOMMODATE NEW SHUNT-TRIP BREAKER.				
E2	PROVIDE (2) 480V, 3-PHASE, 20A CIRCUITS FROM PANELBOARD "LP1E" FOR NEW ELECTRIC RANGE USING 3#12, #12G, 3/4"C EACH. PROVIDE (2) 20A/3P SHUNT TRIP CIRCUIT BREAKERS WITHIN PANEL "LP1E". MAKE THE FOLLOWING MODIFICATIONS WITHIN PANELBOARD "LP1E" TO ACCOMMODATE THE (2) NEW 20A/3P CIRCUIT BREAKERS:				
	 (3) EXISTING 15A/1P SPARES (CIRCUITS 17, 19, 21) SHALL BE REMOVED TO MAKE SPACE FOR (1) NEW 20A/3P SHUNT TRIP CIRCUIT BREAKER. (1) EXISTING 15A/1P SPARE (CIRCUIT 20) SHALL BE REMOVED. (1) EXISTING 80A/3P BREAKER (CIRCUIT 22, 24, 26) SHALL BE RELOCATED UP ONE POSITION TO CIRCUIT 20, TO MAKE SPACE FOR (1) NEW 20A/3P SHUNT TRIP CIRCUIT BREAKER, TO BE INSTALLED IN POSITION 26, 28, 30. 				
	PROVIDE 30A/3P DISCONNECT SWITCH AT ELECTRIC RANGE FOR EACH POWER FEED.				
E3	PROVIDE 120V, 20A CIRCUIT FOR NEW RANGE HOOD FIRE SUPPRESSION SYSTEM USING 2#12, #12G, 3/4"C. UTILIZE EXISTING 20A/1P CIRCUIT IN PANELBOARD "RP1E" TO PROVIDE DEDICATED CIRCUIT TO EXHAUST HOOD. PROVIDE MOTOR RATED SINGLE POLE TOGGLE SWITCH ADJACENT TO UNIT AS A MEANS OF DISCONNECT. PROVIDE WIRING FROM UNIT TO FIRE ALARM PANEL PER MANUFACTURER REQUIREMENTS AND KITCHEN FAN CONTROL/SHUNT-TRIP DETAILS.				
E4	PROVIDE 120V, 25A CIRCUIT FOR NEW KITCHEN EXHAUST FAN USING 2#10, #10G, 3/4"C. PROVIDE NEW 25A/1P CIRCUIT BREAKER IN PANELBOARD "RP1E". PROVIDE NEW 30A, NEMA 3R RATED MOTOR DISCONNECT SWITCH MOUNTED ADJACENT TO UNIT AS A MEANS OF DISCONNECT. PROVIDE INTERCONNECTION WIRING BETWEEN FAN AND HOOD FIRE PROTECTION SYSTEM FOR FAN SHUTOFF PER MANUFACTURER REQUIREMENTS AND KITCHEN FAN CONTROL/SHUNT-TRIP DETAILS.				
E5	EXISTING TO REMAIN 208V/120V, 3PH PANELBOARD "RP1E".				
E6	 IN ADDITION TO WORK INDICATED ON THE FLOOR PLANS, THE ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE FOLLOWING INTERWIRING FOR THE INDICATED KITCHEN SYSTEMS. COORDINATE INTERCONNECTIONS WITH KITCHEN EQUIPMENT CONTRACTOR PRIOR TO ROUGH-IN. HOOD CONTROL SYSTEM (HCS) LOCATED AT RANGE HOOD EC SHALL PROVIDE <u>120V/1PH</u> MAIN POWER FEED TO HCS CONTROL PANEL USING 2#12, # 12G, 3/4"C AND 20A/1P BREAKER FROM PANEL "RP1E". PROVIDE MANUAL DISCONNECT. PROVIDE <u>120V/1PH</u> POWER TO KITCHEN EXHAUST FAN AS INDICATED ON PLANS. FAN SHALL BE WIRED FROM ELECTRICAL PANEL TO MOTOR STARTER AT FAN ON ROOF. EC SHALL PROVIDE <u>2#12AWG</u> CONTROL WIRING FROM FIRE SUPPRESSION CABINET MICRO- SWITCH TO THE HCS CONTROL PANEL (SEPARATE FROM POWER WIRING) EC SHALL PROVIDE VIRING FROM THE HCS CONTROL PANEL TO THE EPO PUSHBUTTON LOOP IN KITCHEN PER ELECTRICAL SHUTOFF DETAIL. EC SHALL PROVIDE <u>2#12+#12G</u> IN 3/4"C. FROM HCS CONTROL PANEL TO ALL LIGHT FIXTURES IN HOOD. LIGHT FIXTURES SHALL BE FURNISHED BY KEC AND INSTALLED BY EC. EC SHALL PROVIDE <u>2#12AWG</u> CONTROL WIRING FROM HCS CONTROL PANEL TO TEMPERATURE SENSOR LOCATED WITHIN THE HOOD. COORDINATE LOCATION WITH MANUFACTURER PRIOR TO ROUGH-IN. 				
E7	PROVIDE DEDICATED 20A/1P CIRCUIT TO HOOD CONTROL SYSTEM (HCS) FROM PANELBOARD "RP1E" USING 2#12, #12G, 3/4"C. PROVIDE 20A/1P BREAKER. COORDINATE EXACT LOCATION OF DCV WITH OWNER PRIOR TO ROUGH-IN. PROVIDE MOTOR RATED SINGLE POLE TOGGLE SWITCH ADJACENT TO UNIT AS A MEANS OF DISCONNECT. PROVIDE FIRE ALARM CONNECTIONS PER MANUFACTURER REQUIREMENTS.				
E8	REMOVE EXISTING ELECTRICAL CONNECTION FROM EXISTING EXHAUST FAN IN THIS LOCATION. REFER TO MECHANICAL PLANS FOR EXACT LOCATION OF EQUIPMENT.				
E9	EXISTING TO REMAIN 480V/277V, 3PH PANELBOARD "LP1E". RE-ALIGN CIRCUIT BREAKERS IN PANELBOARD AS REQUIRED TO INSTALL NEW SHUNT TRIP BREAKERS.				



1 Electrical New Work Level 1 1/8" = 1'-0"



2 Electrical New Work Roof 1/8" = 1'-0"





	N 26 04 00 - GENERAL CONDITIONS FOR ELECTRICAL TRADES		
DE	SCRIPTION		
1.	THIS PROJECT COMPRISES ALTERATIONS AND RENOVATIONS TO THE EXISTING BUILDING. THE EXISTING BUILDING IS CURRENTLY OCCUPIED AND THE PROJECT WILL PROCEED IN A MANNER WHICH WILL MINIMIZE ANY INCONVENIENCE TO THE BUILDING OCCUPANTS.		
2.	SCOPE OF WORK CONSISTS OF INSTALLATION OF MATERIALS TO BE FURNISHED UNDER THE CONTRACT DOCUMENTS AND WITHOUT LIMITING GENERALITY THEREOF CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT, HOISTING, PLANT, TRANSPORTATION, RIGGING, STAGING, APPURTENANCES, AND SERVICES NECESSARY AND/OR INCIDENTAL TO PROPERLY COMPLETE ALL WORK AS SHOWN ON THE DRAWINGS AND AS DESCRIBED HEREIN.	I.	1.
DEI	FINITIONS:		1
1. 2.	FURNISH: THE TERM "FURNISH" MEANS TO "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."		
3.	PROVIDE: THE TERM "PROVIDE" MEANS "TO FURNISH AND INSTALL, COMPLETE AND READY		
4. 5.	REMOVE: THE TERM REMOVE MEANS TO DISCONNECTFROM ITS PRESENT POSITION; REMOVE FROM THE PREMISES AND TO DISPOSE OF IN A LEGAL MANNER." SUBSTITUTIONS: "SUBSTITUTIONS" ARE REQUESTS FOR CHANGES IN PRODUCTS, MATERIALS		2
	THE CONTRACTOR AFTER AWARD OF THE CONTRACTOR AFTER AWARD OF		2.
EQ	UIPMENT EQUIVALENTS AND SUBSTITUTIONS:		З.
1.	CERTAIN MANUFACTURERS OF MATERIAL, APPARATUS OR APPLIANCES ARE INDICATED IN THE DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT. THESE ITEMS HAVE BEEN USED AS THE BASIS OF DESIGN, AND AS A CONVENIENCE IN FIXING THE MINIMUM STANDARD OF WORKMANSHIP, FINISH AND DESIGN THAT IS REQUIRED. IF THE CONTRACTORS USES AN "APPROVED EQUAL" ALTERNATIVE TO THE BASIS OF DESIGN, AND IF THE FEATURES OF THAT ALTERNATIVE HAVE AN IMPACT ON OTHER COMPONENTS OF THE PROJECT. THE	J.	4. AS-B
	CONTRACTOR SHALL INCLUDE THE NECESSARY ADJUSTMENTS IN THOSE COMPONENTS, WHETHER FOR ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, FIRE PROTECTION, OR ANY OTHER ELEMENTS, PLUS ANY ADJUSTMENTS FOR DIFFERENCE IN DEPEOPMANCE		1.
2.	EQUIPMENT, MATERIAL OR DEVICES SUBMITTED FOR REVIEW AS AN "EQUIVALENT" SHALL		
	A. THE EQUIVALENT SHALL HAVE THE SAME CONSTRUCTION FEATURES SUCH AS, BUT NOT		2.
	a. MATERIAL THICKNESS, GAUGE, WEIGHT, DENSITY, ETC.		3. 4
	c. FINISH, UNDERCOATING, CORROSION PROTECTION B. THE EQUIVALENT SHALL PERFORM WITH THE SAME OR BETTER OPERATING EFFICIENCY.		
	C. THE EQUIVALENT SHALL BE LOCALLY REPRESENTED BY THE MANUFACTURER FOR SERVICE, PARTS AND TECHNICAL INFORMATION.	L.	WAR
	D. THE EQUIVALENT SHALL BEAR THE SAME LABELS OF PERFORMANCE CERTIFICATION AS IS APPLICABLE TO THE SPECIFIED ITEM, SUCH AS UL OR NEMA LABELS OR DLC QUALIFICATIONS.		1.
DR	AWINGS:	•	MICC
1.	PROVIDE ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO COMPLETE THE WORK	А.	1
	DOCUMENTS ARE DIAGRAMMATIC ONLY AND THAT FINAL PLACEMENT OF EQUIPMENT OR DEVICES IN THE FIELD MAY NOT DIRECTLY CORRESPOND TO THAT WHICH IS SHOWN ON THE		2
	DRAWINGS. IF A CONFLICT IN POSITIONING OCCURS THE CONTRACTOR IS TO NOTIFY THE ENGINEER IMMEDIATELY TO ASCERTAIN WHAT THE INTENT WAS BY THE DESIGN		3.
2.	PROFESSIONAL. WHERE VARIANCES OCCUR BETWEEN THE DRAWINGS AND SPECIFICATIONS OR WITHIN EITHER OF THE DOCUMENTS, THE ITEM OR ARRANGEMENT OF BETTER QUALITY, HIGHER RATING, OR HIGHER VALUE SHALL BE INCLUDED IN THE CONTRACT PRICE. THE OWNER AND		
	ENGINEER SHALL DECIDE ON THE ITEM AND THE MANNER IN WHICH THE WORK SHALL BE INSTALLED.		4.
SU		В.	ELEC 1.
1.	PRIOR TO SUBMITTING BID, VISIT STIE AND IDENTIFY EXISTING CONDITIONS AND DIFFICULTIES THAT WILL AFFECT WORK TO BE PERFORMED. NO COMPENSATION WILL BE CRANTED FOR ADDITIONAL WORK CAUSED BY UNFAMILIABLE WITH STEE CONDITIONS THAT		
	ARE VISIBLE OR READILY IDENTIFIED BY EXPERIENCED OBSERVERS. INCLUDE IN THE BID ALL		2.
2. 3.	DO NOT SCALE DRAWINGS. SCALE INDICATED ON DRAWINGS IS FOR ESTABLISHING REFERENCE POINTS ONLY. ACTUAL FIELD CONDITIONS SHALL GOVERN ALL DIMENSIONS. PRIOR TO ORDERING ANY MATERIALS AND EQUIPMENT, THOROUGHLY REVIEW THE SITE CONDITIONS TO DETERMINE IE ADECUATE CLEADANCES AND ACCESS IS ALL OWED TO		3.
	INSTALL THE COMPONENTS. ORDER EQUIPMENT BROKEN DOWN AS NECESSARY TO		
	ALTERATIONS TO THE STRUCTURE OF THE BUILDING AS NECESSARY TO RIG THE EQUIPMENT		4
4.	ARRANGE INSTALLATION TO PROVIDE ACCESS TO EQUIPMENT FOR EASY MAINTENANCE AND REPAIR.		5.
CO RE(DES AND STANDARDS: ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE MOST CENTLY ADOPTED EDITIONS OF THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL RISDICTIONAL REVISIONS:		
1.	STATE BUILDING CODE INCLUDING ALL SUPPLEMENTS.	<u>SE</u>	CTION
2. 3. 4. 5	STATE FIRE SAFETY CODE INCLUDING ALL SUPPLEMENTS. STATE FIRE PREVENTION CODE INCLUDING ALL SUPPLEMENTS. THE INTERNATIONAL BUILDING CODE THE INTERNATIONAL EXISTING BUILDING CODE	A.	COO A.
6. 7.	THE INTERNATIONAL FIRE CODE THE INTERNATIONAL MECHANICAL CODE		В.
8. 9.	THE INTERNATIONAL PLUMBING CODE THE INTERNATIONAL ENERGY CONSERVATION CODE	В.	PRO OTH
10. 11.	NFPA 1: FIRE CODE NFPA 70: NATIONAL ELECTRICAL CODE	C. D.	CON MINII
12. 13.	NFPA 72: NATIONAL FIRE ALARM AND SIGNALING CODE NECA 1: STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION		A.
14. pr:		F	B.
r⊏! 1.	THE CONTRACTOR SHALL GIVE ALL NECESSARY NOTICES OBTAIN ALL PERMITS' AND PAY	⊂.	EXCI 2. AN

COSTS, FILE ALL NECESSARY DRAWINGS, PREPARE ALL DOCUMENTS AND OBTAIN ALL NECESSARY APPROVALS OF ALL GOVERNMENTAL AND STATE DEPARTMENTS HAVING JURISDICTION, OBTAIN ALL REQUIRED CERTIFICATES OF INSPECTION FOR HIS WORK, AND DELIVER A COPY TO THE OWNER AND ENGINEER BEFORE REQUEST FOR ACCEPTANCE AND FINAL PAYMENT FOR THE WORK. PROVIDE SHOP DRAWINGS FOR ALL DEVICES SPECIFIED UNDER EQUIPMENT SPECIFICATIONS FOR ALL SYSTEMS INCLUDING FIRE ALARM, RECEPTACLE, ETC., OR WHERE CALLED FOR ELSEWHERE IN THE SPECIFICATIONS, OR WHERE SCHEDULED ON THE DRAWINGS, OR WHERE CALLED OUT ON THE DRAWINGS. SHOP DRAWINGS SHALL INCLUDE MANUFACTURERS' NAMES, CATALOG NUMBERS, CUTS, DIAGRAMS, DIMENSIONS IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED, COMPLIANCE WITH SPECIFIED STANDARDS, NOTATION OF COORDINATION REQUIREMENTS, NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT AND OTHER SUCH DESCRIPTIVE DATA AS MAY BE

REQUIRED TO IDENTIFY AND ACCEPT THE EQUIPMENT. A COMPLETE LIST IN EACH CATEGORY (EXAMPLE: ALL FIXTURES) OF ALL SHOP DRAWINGS, CATALOG CUTS, MATERIAL LISTS. ETC., SHALL BE SUBMITTED TO THE ENGINEER AT ONE TIME. NO CONSIDERATION WILL BE GIVEN TO A PARTIAL SHOP DRAWING SUBMITTAL 2. SHOP DRAWINGS SHALL INCLUDE EQUIPMENT SUBMITTALS, FABRICATION AND INSTALLATION DRAWINGS, SETTING DIAGRAMS, SCHEDULES, PATTERNS, TEMPLATES AND SIMILAR DRAWINGS. INCLUDE THE FOLLOWING INFORMATION: A. DIMENSIONS WIRING DIAGRAMS AND RISER DIAGRAMS CALCULATIONS IDENTIFICATION OF PRODUCTS AND MATERIALS INCLUDED. COMPLIANCE WITH SPECIFIED STANDARDS AND PERFORMANCE DATA AS INDICATED. NOTATION OF COORDINATION REQUIREMENTS

G. NOTATION OF DIMENSIONS ESTABLISHED BY FIELD MEASUREMENT. . DO NOT USE SHOP DRAWINGS WITHOUT AN APPROPRIATE FINAL STAMP INDICATING ACTION TAKEN IN CONNECTION WITH CONSTRUCTION DO NOT ORDER ANY MATERIALS OR EQUIPMENT PRIOR TO RECEIVING FINAL APPROVED SHOP DRAWINGS. J. SHOP DRAWINGS SHALL BE IN PDF/OCR FORMAT. PHOTOCOPIES ARE NOT ACCEPTABLE. ORDINATION DRAWINGS:

PREPARE COORDINATION DRAWINGS AT A SCALE TO MATCH THE CONTRACT DOCUMENT FLOOR PLANS' DETAILING MAJOR FLEMENTS, COMPONENTS, AND SYSTEMS OF FLECTRICAL EQUIPMENT AND MATERIALS IN RELATIONSHIP WITH OTHER SYSTEMS. INSTALLATIONS. AND BUILDING COMPONENTS. INDICATE LOCATIONS WHERE SPACE IS LIMITED FOR INSTALLATION AND ACCESS AND WHERE SEQUENCING AND COORDINATION OF INSTALLATIONS ARE OF IMPORTANCE TO THE EFFICIENT FLOW OF THE WORK, INCLUDING (BUT NOT NECESSARILY LIMITED TO) THE FOLLOWING: A. INDICATE THE PROPOSED LOCATIONS OF LIGHT FIXTURES, PANELBOARDS, CONDUITS,

CABINETS, ETC. CLEARANCES FOR INSTALLING AND MAINTAINING INSULATION. CLEARANCES FOR SERVICING AND MAINTAINING EQUIPMENT. INCLUDING NEC REQUIREMENTS AND SPACE FOR EQUIPMENT DISASSEMBLY REQUIRED FOR PERIODIC MAINTENANCE. EQUIPMENT CONNECTIONS AND SUPPORT DETAILS. EXTERIOR WALL AND FOUNDATION PENETRATIONS.

FIRE-RATED WALL AND FLOOR PENETRATIONS. G. SIZES AND LOCATIONS OF REQUIRED CONCRETE PADS AND BASES.

INDICATE SCHEDULING, SEQUENCING, MOVEMENT, AND POSITIONING OF LARGE EQUIPMENT INTO THE BUILDING DURING CONSTRUCTION. PREPARE FLOOR PLANS, ELEVATIONS, AND DETAILS TO INDICATE PENETRATIONS IN FLOORS. WALLS, AND CEILINGS AND THEIR RELATIONSHIP TO OTHER PENETRATIONS AND INSTALLATIONS PREPARE REFLECTED CEILING PLANS TO COORDINATE AND INTEGRATE INSTALLATIONS, AIR OUTLETS AND INLETS, LIGHT FIXTURES, COMMUNICATION SYSTEMS COMPONENTS,

SPRINKLERS, AND OTHER CEILING-MOUNTED ITEMS. BUILT DRAWINGS: PREPARE AS-BUILT DRAWINGS TO A SCALE TO MATCH THE CONTRACT DOCUMENT FLOOR PLANS; DETAILING THE ACTUAL INSTALLATION OF MAJOR ELEMENTS, COMPONENTS, AND SYSTEMS OF MECHANICAL EQUIPMENT AND MATERIALS. WHERE SHOP DRAWINGS ARE USED, RECORD A CROSS-REFERENCE AT THE CORRESPONDING LOCATION ON THE AS-BUILT DRAWINGS. GIVE PARTICULAR ATTENTION TO CONCEALED ELEMENTS THAT WOULD BE DIFFICULT TO MEASURE AND RECORD AT A LATER DATE MARK NEW INFORMATION THAT IS IMPORTANT TO THE OWNER, BUT WAS NOT SHOWN ON CONTRACT DRAWINGS OR SHOP DRAWINGS NOTE RELATED CHANGE ORDER NUMBERS WHERE APPLICABLE.

FINAL RECORD DOCUMENTS SHALL BE PREPARED IN THE LATEST AUTOCAD VERSION AND DIGITAL MEDIA FOR ALL DRAWINGS AND A CLEAN SET OF REPRODUCIBLE PAPER COPIES SHALL BE TURNED OVER TO THE OWNER AT THE COMPLETION OF THE WORK. RANTIES

ALL EQUIPMENT PROVIDED IN THIS PROJECT SHALL CARRY A MANUFACTURER'S WARRANTY FOR NO LESS THAN ONE (1) YEAR FROM DATE OF BENEFICIAL USE - UNLESS NOTED OTHERWISE IN THE CONTRACT DOCUMENTS. CELLANEOUS REQUIREMENTS:

THE CONTRACTOR SHALL COORDINATE ALL INTERRUPTIONS OF SERVICES AND LIMITATIONS OF ACCESS WITH THE OWNER NO LESS THAN (5) DAYS PRIOR TO THE INTERRUPTION OBTAIN IN OWNER'S NAME WRITTEN EQUIPMENT AND MATERIAL WARRANTIES OFFERED IN MANUFACTURER'S PUBLISHED PRODUCT DATA WITHOUT EXCLUSION OR LIMITATION. GUARANTEE WORK OF THESE CONTRACT DOCUMENTS IN WRITING FOR NOT LESS THAN ONE 1) YEAR FROM DATE OF BENEFICIAL USE. REPAIR OR REPLACE DEFECTIVE MATERIALS, EQUIPMENT, WORKMANSHIP AND INSTALLATION THAT DEVELOP WITHIN THIS PERIOD. PROMPT AND TO OWNER'S SATISFACTION AND CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRSAND REPLACEMENTS UNDER GUARANTEE WITHIN CONTRACT PRICE SUBMIT TO THE OWNER AN OFFICIAL CERTIFICATE OF INSURANCE FOR THEIR RECORDS.

CTRICAL ACCEPTANCE TESTING TESTING SHALL BE PERFOMRED ON ELECTRICAL EQUIPMENT AND SYSTEMS TO ASSURE THE EQUIPMENT AND SYSTEMS ARE OPERATIONAL AND WITHIN APPLICABLE STANDARDS AND MANUFACTURING TOLERANCES. TESTING SHOULD VERIFY THAT EQUIPMENT AND SYSTEMS ARE INSTALLED IN ACCORDANCE WITH DESIGN SPECIFICATIONS. ALL TESTING SHALL OCCUR AT THE BUILDING SITE

QUALIFIED TECHNICIANS WHO ARE TRAINED AND REGULARLY EMPLOYED FOR TESTING SERVICES SHALL DO ALL THE TESTING. THE TESTING ORGANIZATION SHALL CONFORM TO THE GENERAL GUIDELINES OF SECTION 5 OF THE LATEST NETA ACCEPTANCE TESING SPECIFICATIONS. THIS INCLUDES THE FOLLOWING: A. SAFETY AND PRECAUTIONS SUITABILITY OF TEST EQUIPMENT

TEST INSTRUMENT CALIBRATION. TEST REPORTS NOTIFY THE ARCHITECT, ENGINEER AND OWNER AT LEAST SEVEN (7) DAYS IN ADVANCE OF ANY TESTING. INSPECTION AND TESTING OF ALL APPLICABLE ELECTRICAL EQUIPMENT LISTED BELOW SHALL BE DONE IN ACCORDANCE WITH THE LATEST VERSION OF NETA AT CABLES.

LOW VOLTAGE CIRCUIT BREAKERS. EMERGENCY LIGHTING AND CONTROLS. 26 05 19 - ELECTRICAL POWER CONDUCTORS AND CABLES

RDINATION: COORDINATE SIZES OF RACEWAYS, BOXES, AND EQUIPMENT ENCLOSURES INSTALLED UNDER OTHER SECTIONS WITH THE ACTUAL CONDUCTORS TO BE INSTALLED. INCLUDING ADJUSTMENTS FOR CONDUCTOR SIZES INCREASED FOR VOLTAGE DROP. COORDINATE WITH FLECTRICAL FOUIPMENT INSTALLED UNDER OTHER SECTIONS TO PROVIDE TERMINATIONS SUITABLE FOR USE WITH THE CONDUCTORS TO BE INSTALLED. VIDE SINGLE CONDUCTOR BUILDING WIRE INSTALLED IN SUITABLE RACEWAY UNLESS ERWISE INDICATED, PERMITTED OR REQUIRED.

DUCTOR SIZES AND AMPACITIES SHOWN ARE BASED ON COPPER. MUM CONDUCTOR SIZES: BRANCH CIRCUITS: 12 AWG a. 20A, 120V CIRCUITS LONGER THAN 150 FEET - #10 AWG MINIMUM AND SIZED FOR VOI TAGE DROP CONTROL CIRCUITS: 14 AWG DUCTORS NO. 10 AWG AND SMALLER DIAMETER SHALL BE SOLID ANNEALED COPPER,

EPT THAT CONDUCTORS FOR REMOTE CONTROL, ALARM, AND SIGNAL CIRCUITS, CLASSES 1 ND 3, SHALL BE STRANDED UNLESS SPECIFICALLY INDICATED OTHERWISE. CONDUCTORS NO. 8 AWG AND LARGER DIAMETER SHALL BE STRANDED ANNEALED COPPER. UNLESS SPECIFIED OR INDICATED OTHERWISE OR REQUIRED BY NFPA 70, POWER AND LIGHTING WIRES SHALL BE 600-VOLT, TYPE THWN/THHN OR THWN/THWN-2 ANNEALED COPPER, CONTROL AND SIGNAL CIRCUITS SHALL BE TYPE TW, THW, OR TF ANNEALED COPPER. UNDERGROUND CONDUCTORS SHALL BE TYPE XHHW-2. H. MAKE ALL SPLICES IN ACCESSIBLE LOCATIONS. MAKE SPLICES IN CONDUCTORS NO. 10 AWG AND SMALLER DIAMETER WITH INSULATED, SPRING WIRE CONNECTORS WITH PLASTIC CAPS. MAKE SPLICES IN CONDUCTORS NO. 8 AWG AND LARGER DIAMETER WITH SOLDERLESS PRESSURE

CONNECTORS WITH INSULATING COVERS. MAKE SPLICES IN CONDUCTORS NO. 6 AND LARGER WITH PRESSURE CONNECTYORS OR SPLIT BOLT CONNECTORS MAKE WIRE TERMINATIONS USING CRIMPED TERMINALS FOR CONDUCTORS NO. 10 AND SMALLER. MAKE WIRE TERMINATIONS FOR CONDUCTORS NO. 8 AND LARGER USING MECHANICAL OR PRESSURE CONNECTORS. PROVIDE SUITABLE REDUCERS WHERE OVERSIZED CONDUCTORS ARE LARGER THAN THE EQUIPMENT TERMINATION. PHASE CONDUCTORS SHALL BE IDENTIFIED BY COLOR CODING. THE COLOR OF THE INSULATION ON PHASES A, B, AND C RESPECTIVELY (FOR THREE PHASE) OR PHASES A AND B RESPECTIVELY

(FOR SINGLE PHASE) OF DIFFERENT VOLTAGE SYSTEMS SHALL BE AS FOLLOWS: 120/208 VOLT, THREE PHASE: BLACK, RED, AND BLUE. UNLESS OTHERWISE INDICATED, THE WIRING METHOD SHALL CONSIST OF THE INSTALLATION OF INSULATED CONDUCTORS INSTALLED IN ELECTRICAL METALLIC AND/OR WIREMOLD RACEWAY. METALLIC-ARMORED TYPE MC CABLES, WHERE ALLOWED, SHALL SHALL INCLUDE 600V INSULATION RATING, TYPE THHN/THWN-2 COPPER CONDUCTORS, DEDICATED NEUTRAL CONDUCTOR AND STEEL INTERLOCKING ARMOR. USES PERMITTED: A. WHERE CONCEALED IN HOLLOW STUD WALLS, ABOVE ACCESSIBLE CEILINGS, AND UNDER RAISED FLOOR FOR BRANCH CICUITS UP TO 20A.

B. EXCEPTION: PROVIDE SINGLE CONDUCTOR BUILDING WIRING IN RACEWAY FOR CIRCUIT HOMERUN FROM FIRST DEVICE IN SPACE TO PANELBOARD. M. PROVIDE INSULATED, GREEN EQUIPMENT GROUNDING CONDUCTOR IN FEEDER AND BRANCH CIRCUITS. INSTALLED IN CONDUIT OR RACEWAYS, INCLUDING LIGHTING CIRCUITS. GROUNDING CONDUCTOR SHALL BE SEPARATE FROM ELECTRICAL SYSTEM NEUTRAL CONDUCTOR. SECTION 26 05 26 - GROUNDING AND BONDING

A. GROUNDING SHALL BE COMPLETED IN ACCORDANCE WITH NFPA 70. GROUND EXPOSED, NON-CURRENT-CARRYING METALLIC PARTS OF ELECTRICAL EQUIPMENT, METALLIC RACEWAY SYSTEMS, GROUNDING CONDUCTOR IN METALLIC AND NONMETALLIC RACEWAYS, AND NEUTRAL CONDUCTOR OF WIRING SYSTEMS. WHERE GROUND FAULT PROTECTION IS EMPLOYED, ENSURE THAT CONNECTION OF GROUND AND NEUTRAL DOES NOT INTERFERE WITH CORRECT **OPERATION OF FAULT PROTECTION.** B. EXISTING WORK: WHERE EXISTING GROUNDING AND BONDING SYSTEM COMPONENTS ARE

INDICATED TO BE REUSED, THEY MAY BE REUSED ONLY WHERE THEY ARE FREE FROM CORROSION, INTEGRITY AND CONTINUITY ARE VERIFIED, AND WHERE ACCEPTABLE TO THE AUTHORITY HAVING JURISDICTION.

C. WHERE CONDUCTOR SIZE IS NOT INDICATED, SIZE TO COMPLY WITH NFPA 70. USE INSULATED COPPER CONDUCTORS UNLESS OTHERWISE INDICATED. USE BARE COPPER CONDUCTORS WHERE INSTALLED UNDERGROUND OR ENCASED IN CONCRETE. E. USE LISTED MECHANICAL CONNECTORS, COMPRESSION CONNECTORS OR EXOTHERMIC WELDED CONNECTIONS FOR ACCESSIBLE CONNECTIONS. USE EXOTHERMIC WELDED CONNECTIONS FOR

UNDERGROUND, CONCEALED OR OTHERWISE INACCESSIBLE CONNECTIONS.

F. GRONDING ELECTRODE SYSTEM: PROVIDE CONNECTION TO REQUIRED AND SUPPLEMENTAL GROUNDING FLECTRODES INDICATED TO FORM GROUNDING FLECTRODE SYSTEM, PROVIDE

CONTINUOUS GROUNDING ELECTRODE CONDUCTORS WITHOUT SPLICE OR JOINT. INSTALL GROUNDING FLECTRODE CONDUCTORS IN RACEWAY WHERE EXPOSED OR SUBJECT TO PHYSICAL DAMAGE. BOND GRONDING ELECTRODE CONDUCTOR TO METALIC RACEWAY AT EACH END WITH BONDING JUMPER.

SECTION 26 05 29 - HANGERS AND SUPPORTS A. PROVIDE ALL REQUIRED HANGERS, SUPPORTS, ANCHORS, FASTENERS, FITTINGS, ACCESORIES

AND HARDWARE NECESSARY FOR THE COMPLETE INSTALLATION OF THE FLECTRICAL WORK HANGERS AND SUPPORTS SHALL MEET ASTM STANARDS FOR COATINGS. NECA 1 STANDARDS FOR WORKMANSHIP, NFPA 70, AND UL 5B FOR STRUT-TYPE CHANNEL RACEWAY AND FITTINGS. WHERE SUPPORT AND ATTACHMENT COMPONENT TYPES AND SIZES ARE NOT INIDCATED, SELECT IN ACCORDANCE WITH MANUFACTURER'S APLICATION CRITERIA AS REQUIRED FOR THE LOAD TO BE SUPPORTED. STEEL COMPONENTS: USE CORROSION RESISTANT MATERIALS SUITABLE FOR THE ENVIRONMENT WHERE INSTALLED. USE ZINC-PLATED STEEL FOR INDOOR DRY LOCATIONS. USE GALVANIZED STEEL, STAINLESS STEEL, FIBERGLASS OR APPROVED EQUIVALENT FOR OUTDOOR,

DAMP AND WET LOCATION INSTALLATIONS. CONDUIT AND CABLE SUPPORTS: CONDUIT STRAPS: ONE-HOLE OR TWO-HOLE, ZINC PLATED.

CONDUIT CLAMPS: BOLTED TYPE. OUTLET BOX SUPPORTS: HANGERS AND BRACKETS SUITABLE FOR BOXES TO BE SUPPORTED. METAL CHANNEL (STRUT) FRAMING SYSTEMS: FACTORY FABRICATED CONTINUOUS SLOTTED METAL CHANNEL AND ASSOCIATED FITTINGS, ACCESSORIES, AND HARDWARE FOR FIELD-ASSEMBLY OF SUPPORTS. ALL LOCATIONS: USE 12 GA. GALVANIZED STEEL HANGER RODS¹ CONTINUOUS THREADING, ZINC-PLATED STEEL

USE OF POWER-ACTUATED FASTENERS REQUIRES APPROVAL OF ARCHITECT AND STRUCTURAL ENGINEEER.

UNLESS SPECIFICALLY INDICATED, DO NOT SUPPORT ANY ELECTRICAL COMPONENT FROM THE ROOF DECK K. PLASTIC AND LEAD ANCHORS ARE NOT PERMITTED.

SECTION 26 05 33 - RACEWAY AND BOXES

FITTINGS:

NSULATION.

RESISTAN

INSTRUCTIONS.

A. PROVIDE A COMPLETE WIRING SYSTEM OF RACEWAYS AND BOXES LOCATED AS INDICATED ON DRAWINGS AND AT LOCATIONS AS REQUIRED FOR SPLICES, TAPS, WIRE PULLLING, EQUIPMENT ONNECTIONS AND COMPLIANCE WITH REGULATORY REQUIREMENTS. LOCATIONS INDICATED ON DRAWINGS ARE APPROXIMATE UNLESS DIMENSIONED. STANDARDS: MATERIALS SHALL COMPLY WITH ANSI C80, NEMA AND UL REQUIREMENTS AS APPI ICABI E FOR TYPE AND MATERIAI MINIMUM CONDUIT SIZE, UNLESS OTHERWISE NOTED: INTERIOR - 3/4", EXTERIOR EXPOSED 3/4".

EXTERIOR UNDERGROUND - 1" D. CONDUIT APPLICATIONS: CONCEALED IN MASONRY WALLS: USE EMT WITH FLUSH MOUNTED MASONRY BOXES. CONCEALED IN HOLLOW STUD WALLS: USE EMT CONDUIT OR MC CABLE (WHERE ALLOWED). PROVIDE FLUSH SHEET-METAL BOXES. INTERIOR DAMP OR WET LOCATIONS: USE RIGID METAL CONDUIT, INTERMEDIATE METAL CONDUIT OR SCHEDULE 40 PVC CONDUIT. PROVIDE CAST METAL OR NONMETALLIC OUTLET, JUNCTION AND PULL BOXES.

EXPOSED, INTERIOR DRY LOCATIONS: USE EMT CONDUIT. EXPOSED FINISHED LOCATIONS: PROVIDE SURFACE METAL RACEWAY AND FITTINGS. UNLESS SPECIFIED ON DRAWINGS, REQUIRES DESIGN TEAM APPROVAL. COORDINATE ALL VERTICAL RUNS OF SURFACE RACEWAY WITH ARCHITECT PRIOR TO INSTALLATION. CONNECTIONS TO LUMINAIRES ABOVE ACCESSIBLE CEILINGS: USE FLEXIBLE METAL CONDUIT, MAXIMUM LENGTH OF 6 FEET

G. CONNECTIONS TO VIBRATING EQUIPMENT: DRY LOCATIONS - USE FLEXIBLE METAL CONDUIT OR MC CABLE; DAMP, WET OR CORROSIVE LOCATIONS - USE LIQUIDTIGHT FLEXIBLE METAL CONDUIT; MAXIMUM LENGTH 6 FEET. A. EMT - COMPLY WITH NEMA FB 1 AND UL 514B. STEEL WITH COMPRESSION FITTINGS IN DAMP

OR WET LOCATIONS, SET SCREW TYPE ELSEWHERE RIGID METAL CONDUIT - COMPLY WITH ANSI C80.1 AND UL 6. THREADED STEEL OR MALLEABLE IRON. USE FITTING LISTED AND LABELED AS COMPLYING WITH UL 514B IN HAZARDOUS LOCATIONS. FLEXIBLE METAL CONDUIT - COMPLY WITH NEMA FB 1 AND UL 514B. USE STEEL FITTINGS. LIQUIDTIGHT FLEXIBLE METAL CONDUIT - COMPLY WITH NEMA FB 1 AND UL 514B. USE STEEL FITTINGS

SURFACE METAL RACEWAY - PROVIDE FITTINGS FROM SAME MANUFACTUERER AS SURFACE RACEWAY. INCLUDE ALL REQUIRED ELBOWS, COUPLINGS MOUNTING CLIPS, COVERS, END FITTINGS AND DEVICE MOUNTING BRACKETS. BOXES: WHERE A BOX SIZE IS NOT INDICATED, SIZE TO COMPLY WITH NFPA 70, BUT NOT LESS THAN APPLICABLE MINIMUM SIZE SPECIFIED.

USE SHEET METAL STEEL BOXES IN DRY LOCATIONS B. USE CAST IRON OR CAST ALUMINUM BOXES WITH THREADED HUBS WHERE EXPOSED RIGID METAL CONDUIT IS USED. USE NONMETALLIC BOXES WHERE EXPOSED RIGID PVC CONUIT IS USED. USE SUITABLE CONCRETE TYPE BOXES WHERE FLUSH-MOUNTED IN CONCRETE.

USE SUITABLE MASONRY TYPE BOXES WHERE FLUSH-MOUNTED IN MASONRY WALLS. USE RAISED COVERS SUITABLE FOR TYPE OF WALL CONSTRUCTION AND DEVICE CONFIGURATION WHERE REQUIRED. G. USE MULTI-GANG BOXES OF SINGLE-PIECE CONSTRUCTION, DO NOT USE FIELD CONNECTED GANGABLE BOXES H. MINIMUM BOX SIZE, UNLESS OTHERWISE INDICATED: WIRING DEVICE - 4 INCH SQUARE BY 1-1/2" DEEP: COMMUNICATIONS SYSTEM OUTLET 4 INCH SQUARE BY 2-1/8" DEEP. G. CABINETS AND ENCLOSURES: COMPLY WITH NEMA 250, UL 50 AND UL 50E OR UL 508A. USE NEMA TYPE 1. PAINTED STEEL FOR INDOOR CLEAN, DRY LOCAT

USE NEMA TYPE 3R, PAINTED STEEL FOR OUTDOOR AND WET LOCATIONS. PROVIDE SCREW COVER ENCLOSURES FOR PULL AND JUNCTION BOXES. PROVIDE LOCKABLE. HINGE COVER TYPE FOR EQUIPMENT ENCLOSURES I. MECHANICAL SLEEVE SEALS: MODULAR MECHANICAL TYPE, WITH INTERLOCKING RUBBER LINKS

SHAPED TO CONTINUOUSLY FOILL ANULAR SPACE BETWEEN OBJECTS AND SLEEVE, CONNECTED WITH BOLTS AND PRESSURE PLATES TO PROVIDE A WATERTIGHT SEAL AND ELECTRICAL REMOVE EXPOSED ABANDONED RACEWAY, INCLUDING ABANDONED RACEWAY ABOVE

ACCESSIBLE CEILING FINISHES. CUT RACEWAY FLUSH WITH WALLS AND FLOORS, PATCH SURFACES TO MATCH ADJACENT SURFACES DISCONNECT AND REMOVE ABANDONED OUTLETS AND DEVICES.

INSTALL BLANK PLATES ON ABANDONED, EMPTY BOXES. EXTEND EXISTING RACEWAY AND BOX INSTALLATION USING MATERIALS AND METHODS COMPATIBLE WITH EXISTING ELECTRICAL INSTALLATION OR AS SPECIFIED. SECTION 26 05 53 - IDENTIFICATION FOR ELECTRICAL SYSTEMS

A EXISTING WORK: UNLESS SPECIFICALLY EXCLUDED, IDENTIFY EXISTING FLEMENTS TO REMAIN THAT ARE NOT ALREADY IDENTIFIED IN ACCORDANCE WITH THE SPECIFIED REQUIREMENTS. B. SERVICE EQUIPMENT: USE IDENTIFICATION NAMEPLATE TO IDENTIFY EACH SERVICE DISCONNECTING MEANS.

USE IDENTIFICATION NAMEPLATES TO IDENTIFY EACH PIECE OF ELECRICAL DISTRIBUTION AND CONTROL EQUIPMENT AND ASSOCIATED SECTIONS, COMPARTMENTS AND COMPONENTS. IDENTIFY: NAME, AMPERE RATING, LOADS SERVED (DISCONECT SWITCHES, ENCLOSED CONTROLLERS, AND TRANSFORMERS ONLY), VOLTAGE AND PHASE, AND POWER SOURCE/CIRCUIT NUMBER. INCLUDE LOCATION OF SOURCE/LOAD SERVED IF NOT WITHIN SIGHT

OF EQUIPMENT PROVIDE LAMINATED ACRYLIC OR NON-CONDUCTIVE PHENOLIC WITH BEVELED EDGES. NAMEPLATES FOR EACH EQUIPMENT ENCLOSURE, RELAY, SWITCH, AND DEVICE. NAMEPLATES SHALL BE, 1/8" THICK, WHITE WITH BLACK CENTER CORE, MATTE FINISH SURFACE, BEVELED EDGES, SQUARE CORNERS. ACCURATELY ALIGN LETTERING AND ENGRAVE INTO THE CORE. MINIMUM SIZE OF NAMEPLATES SHALL BE 1" BY 2-1/2". LETTERING SHALL BE A MINIMUM OF 1/4' HIGH NORMAL BLOCK STYLE. PROVIDE WIRE AND CABLE MARKERS OR IDENTIFICATION LABELS TO IDENTIFY CIRCUIT NUMBER

AT EACH SOURCE LOCATION: WITHIN BOXES WHERE MORE THAN ONE CIRCUIT IS PRESENT: WITHIN EQUIPMENT ENCLOSURES WHERE CONDUCTORS ENTER AND EXIT THE ENCLOSURE: AND IN CABLE TRAYS (MAXIMUM 20 FT. INTERVALS). PROVIDE WRAP-AROUND SELF-ADHESIVE VINYL CLOTH, WRAP-AROUND SELF-ADHESIVE VINYL SELF-LAMINATING, HEAT-SHRINK SLEEVE, PLASTIC ELEEVE, PLASTIC CLIP-ON, OR VINYL SPLIT SLEEVE TYPE MARKERS SUITABLE FOR THE ONDUCTOR OR CABLE TO BE IDENTIFIED.

PROVIDE VOLTAGE MARKERS TO IDENTIFY HIGHEST VOLTAGE PRESENT FOR ACCESSIBLE CONDUITS (MAXIMUM 20 FT. INTERVALS). . PROVIDE PRE-LABELED, SNAP AROUND PIPE MARKERS ON ALL CONDUITS. MARKERS SHALL COMPLY WITH ANSI A 13.1-1988 STANDARDS AND INDICATED VOLTAGE. H. WARNING LABELS: USE FACTORY PRE-PRINTED OR MACHINE-RPINTED SELF-ADHESIVE POLYESTER OR SELF-ADHESIVE VINYL LABELS; UV, CHEMICAL, WATER, HEAT AND ABRASION

CLEAN SURFACES TO RECIEVE ADHESIVE PRODUCTS ACCORDING TO MANUFACTURERS INSTALL IDENTIFICATION PRODUCTS TO BE PLAINLY VISIBLE FOR EXAMINATION, ADJUSTMENT, SERVICING AND MAINTENANCE.

K. INSTALL IDENTIFICATION PRODUCTS CENTERED, LEVEL AND PARALLEL WITH LINES OF ITEM BEING IDENTIFIED

SECTION 26 27 26 - WIRING DEVICES

- RECEPTACLES. A. SELF-GROUNDING COMPLYING WITH NEMA WD 1 AND NEMA WD 6 AND LISTED COMPLYING WITH UL 498. SINGLE AND DUPLEX RECEPTACLES SHALL BE RATED 20 AMPERES, 125 VOLTS, TWO-POLE, THREE-WIRE, GROUNDING TYPE WITH POLARIZED PARALLEL SLOTS
- COLOR OF BODIES SHALL BE SELECTED BY THE ARCHITECT. RECEPTACLE SHALL BE SIDE-WIRED OR BACK-WIRED WITH TWO SCREWS PER TERMINAL. THE THIRD GROUNDING POLE SHALL BE CONNECTED TO THE METAL MOUNTING YOKE E. RECEPTACLES WITH GROUND FAULT CIRCUIT INTERRUPTERS SHALL HAVE THE CURRENT RATING AS INDICATED, AND SHALL BE UL 943, CLASS A TYPE UNLESS OTHERWISE SHOWN.
- F. GROUND FAULT CIRCUIT PROTECTION SHALL BE PROVIDED AS REQUIRED BY NFPA 70 OR AS INDICATED ON THE DRAWINGS. G. USB CHARGING DEVICES: PROVIDE DEVICES LISTED PER UL 1310 WITH TWO-PORT
- CHARGING CAPACITY OF 2.1 A. MINIMUM OR 4.2 A MINIMUM FOR FOUR-PORT DEVICES. H. LOCKING DEVICES: REFER TO DRAWINGS FOR NEMA LOCKING CONFIGURATIONS. MOUNT RECEPTACLES AND DATA OUTLETS 18" ABOVE FINISHED FLOOR, AND OTHER DEVICES AS INDICATED. MEASURE MOUNTING HEIGHTS OF WIRING DEVICES AND OUTLETS TO TOP OF DEVICE OR OUTLET. LINE VOLTAGE WALL SWITCHES:
- A. AC ONLY, QUIET OPERATING GENERAL USE SNAP SWITCHES WITH SILVER ALLOY CONTACTS COMPLYING WITH NEMA WD 1 AND NEMA WD 6 AND UL 20, TYPE AS INDICATED ON B. INDUSTRIAL SPECIFICATION GRADE, 20A, 120/277 V WITH STANDARD TOGGLE TYPE SWITCH ACTUATOR AND MAINTAINED CONTACTS. SINGLE POLE SINGLE THROW, THREE-WAY, OR
- FOUR-WAY AS INDICATED ON DRAWINGS COLOR OF BODIES SHALL BE SELECTED BY THE ARCHITECT. SWITCH SHALL BE SIDE-WIRED OR BACK-WIRED WITH BINDING CLAMP, WITH SEPARATE GROUND SREW TERMINAL. E. LOCKING (KEYED) TYPE SWITCHES SHALL INCLUDE LEVER TYPE THREE POSITION SWITCH
- ACTUATOR WITH OFF POSITION IN CENTER. C. DEVICE PLATES A. DEVICE PLATES SHALL BE ONE-PIECE TYPE AND SHALL BE PROVIDED FOR RECEPTACLES, OUTLETS SWITCHES AND FITTINGS PLATES ON UNFINISHED WALLS AND ON FITTINGS SHALL BE GALVANIZED SHEET STEEL.
- FINISH SELECTION BY ARCHITECT PLATES SHALL BE INSTALLED WITH ALL FOUR EDGES IN CONTINUOUS CONTACT WITH FINISHED WALL SURFACES WITHOUT THE USE OF MATS OR SIMILAR DEVICES. PLASTER FILLINGS WILL NOT BE PERMITTED.
- E. PLATES INSTALLED IN WET LOCATIONS SHALL BE GASKETED AND PROVIDED WITH A HINGED, GASKETED COVER, UNLESS OTHERWISE SPECIFIED

