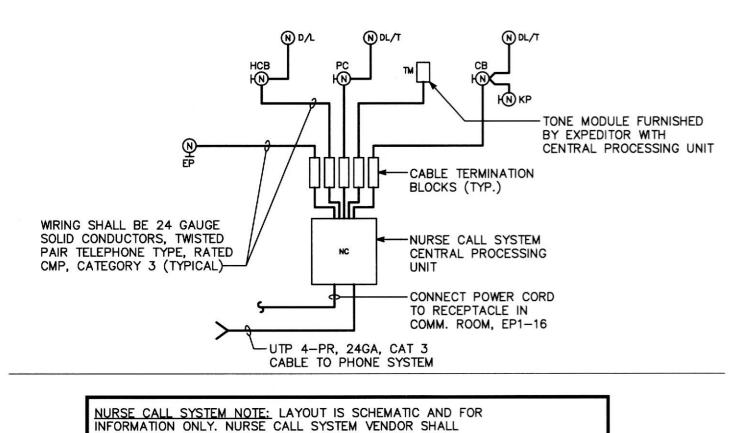
	NURSE CALL SYSTEM					
TYPE	LOCATION	DESCRIPTION	CATOLOG #			
нсв			EXPEDITOR NCCB SERIES			
PC №			EXPEDITOR NCPC SERIES			
св <b>№</b>	PROCEDURE ROOM SINGLE GANG BACK BACK BOX 48" AFF	EMERGENCY CALL ('CODE BLUE'), WALL MOUNTED CALL BUTTON WITH HINGED 'ELBOW PLATE' TO FACILITATE EMERGENCY ACTIVATION. PUSH ONCE TO INTITIATE CALL, PUSH SECOND TIME TO CANCEL (ALL OFF). PROVIDE WALL MOUNTED INDICATION LIGHT/ TONE DEVICE ABOVE DOOR IDENTIFYING TYPE OF CALL, LOCATED TO MAXIMIZE STAFF VISIBLITY/ NOTIFICATION.	EXPEDITOR P-1C SERIES			
	NURSE WORK/ SITE MANAGER/ NURSE CONSULTANT/ STAFF LOUNGE BACK BOX FURNISHED BY EXPEDITOR INSTALLED BY ELEC. CONTRACTOR 48" AFF		EXPEDITOR P-6C SERIES			
₩	BUSINESS BACK BOX FURNISHED BY EXPEDITOR INSTALLED BY ELECT. CONTRACTOR BY AFF  ZONE ANNUNCIATOR PANEL WITH TONE: SHOWS WHICH ROOMS ARE OCCUPIED, STAFF LOCATION, WHICH PATIENTS ARE NEXT, WHERE ASSISTANCE IS NEEDED OR WHERE A SPECIAL PROCEDURE IS REQUIRED.		EXPEDITOR P-6C SERIES			
ĸ₽ ₩	PROCEDURE ROOM TWO GANG BACK BOX 12" AFF BELOW 'CB' DEVICE	KICK PLATE	EXPEDITOR KP-1 SERIES			
DL ©	PATIENT PREP/ PATIENT RECOVERY SINGLE GANG BOX IN CEILING	CEILING MOUNTED DOME LIGHT LOCATED IMMEDIATLY OUTSIDE OF CUBICLE CURTAIN. ACTIVATED BY REMOVAL OF PULL CHORD.	EXPEDITOR DOME			
DL/T	PATIENT TOILET/ PATIENT DRESSING/ PROCEDURE ROOM SINGLE GANG BOX ABOVE DOOR  DOME LIGHT WITH TONE LOCATED ABOVE DOOR. ACTIVATED BY PULL CHORD OR CALL BUTTON.		EXPEDITOR DOME			
	COMPUTER ROOM	CENTRAL PROCESSING UNIT (CPU); CONTROLS ALL LIGHT PANEL FUNCTIONS. REQUIRES (1) SINGLE LINE (RJ-11C) TELEPHONE JACK AND (1) DEDICATED POWER OUTLET.	EXPEDITOR			

20 AMPERE CIRCUITS						
120 VOLT		277 VOLT		MINIMUM		
WIRE LENGTH	WIRE SIZE	WIRE LENGTH	WIRE SIZE	CONDUIT SIZE		
0'-60'	#12	0'-130'	#12	3/4"		
60'-100'	#10	130'-210'	#10	3/4		
100'-150'	#8	210'-340'	#8	3/4"		
150'-240'	#6	340'540'	#6	3/4"		
OVER 240'	#4	OVER 540'	#4	1"		

**VOLTAGE DROP SCHEDULE** 

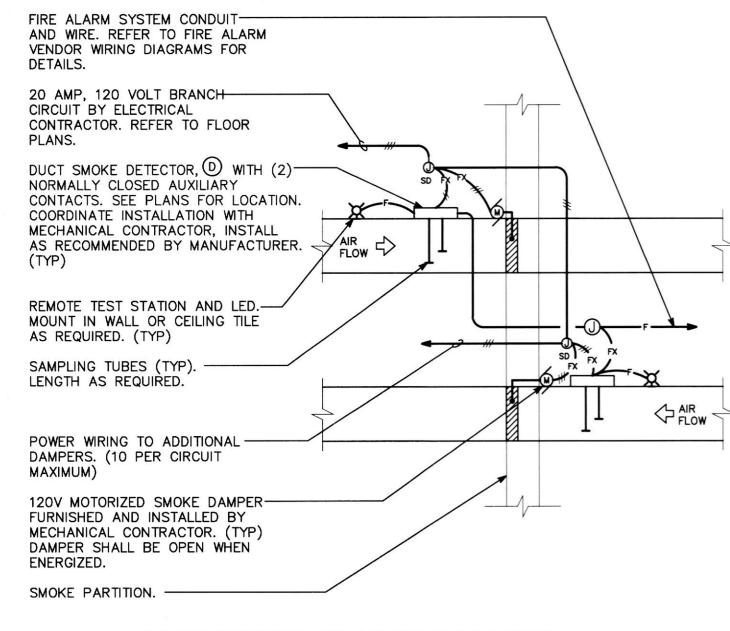
- 1. CIRCUIT LENGTH AS GIVEN SHALL BE THE WIRE LENGTH BETWEEN THE FIRST AND LAST OUTLET ON THE CIRCUIT. HOMERUN LENGTH GIVEN SHALL
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT ROUTING OF WIRING AND CONDUITS AND SHALL BE RESPONSIBLE FOR SIZING ALL BRANCH CIRCUIT WIRING TO LIMIT VOLTAGE DROP TO 3%. CONTRACTOR SHALL SIZE CONDUIT TO ACCOMMODATE WIRING PER NEC. 20 AMPERE CIRCUITS SHALL BE SIZED AS SHOWN IN SCHEDULE ABOVE.
- CONDUCTORS.



## NURSE CALL SYSTEM SCHEMATIC NO SCALE

PREPARE COMPLETE SYSTEM SHOP DRAWINGS AND SUBMIT TO

ARCHITECT FOR APPROVAL PRIOR TO ROUGH-IN.

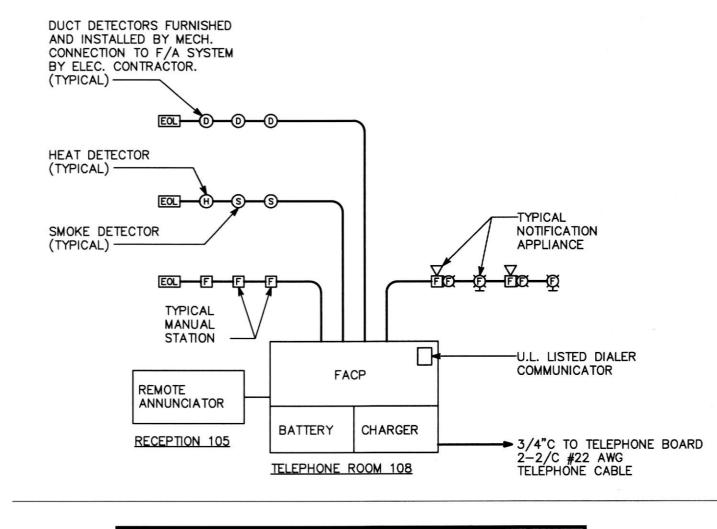


# MOTORIZED SMOKE DAMPER WIRING DIAGRAM

**NO SCALE** 

JUNCTION BOX INDICATED FOR DUCT SMOKE DETECTOR POWER SHALL INCLUDE ADDRESSABLE MONITOR MODULE FOR EACH DUCT MOUNTED SMOKE DETECTOR. MONITOR MODULES TO BE PROGRAMMED IN THE FIRE ALARM SYSTEM TO OPEN OR CLOSE THE ASSOCIATED FIRE / SMOKE DAMPER BASED ON A SIGNAL FROM THE TEMPERATURE CONTROL SYSTEM INDICATING THE ASSOCIATED EQUIPMENT IS IN OPERATION. SIGNAL FROM THE TEMPERATURE CONTROL SYSTEM SHALL BE THROUGH A MONITOR MODULE PROVIDE BY THE FIRE ALARM CONTRACTOR. FIRE ALARM CONTRACTOR TO PROVIDE A MONITOR MODULE AT EACH AIR HANDLING UNIT SHOWN OR AS REQUIRED. AT STARTUP OF EQUIPMENT, ALL ASSOCIATED FIRE/ SMOKE DAMPERS ARE TO BE OPEN; AT SHUT DOWN OF EQUIPMENT ALL ASSOCIATED FIRE/ SMOKE DAMPERS ARE TO BE CLOSED. FINAL LOCATION OF MONITOR MODULES TO BE COORDINATED WITH THE TEMPERATURE CONTROLS CONTRACTOR.

2. FIRE ALARM CONTRACTOR TO PROVIDE ADDITIONAL RELAY MODULES AND WIRE TO THE EQUIPMENT SAFETY CIRCUIT FOR EACH AIR HANDLING UNIT AND EXHAUST FAN. IF A DUCT SMOKE DETECTOR IN THE SYSTEM HAS ALARMED THE RELAY MODULE SHALL SHUT DOWN THE ASSOCIATED EQUIPMENT THROUGH INTERRUPTION OF THE EQUIPMENT SAFETY CIRCUIT. FIRE ALARM CONTRACTOR TO PROGRAM DUCT SMOKE DETECTORS INTO THE SYSTEM TO ALERT THE APPROPRIATE EQUIPMENT SHUTDOWN RELAY MODULE. COORDINATE FINAL LOCATION OF RELAY MODULES WITH THE TEMPERATURE CONTROLS CONTRACTOR.



### FIRE ALARM SYSTEM NOTE: LAYOUT AND ZONING IS SCHEMATIC FOR BIDDING ONLY. FIRE ALARM SYSTEM VENDOR SHALL PREPARE COMPLETE SYSTEM SHOP DRAWINGS AND SUBMIT TO LOCAL FIRE MARSHAL FOR APPROVAL PRIOR TO ROUGH-IN. ZONING SHALL BE PROVIDED AS DIRECTED BY FIRE MARSHAL.

FIRE ALARM RISER DIAGRAM

SYSTEM OPERATION

NO SCALE

- 1. UPON ACTIVATION OF ANY PULL STATION, AUTOMATIC DETECTION DEVICE OR SPRINKLER FLOW SWITCH (IF APPLICABLE) THE SYSTEM SHALL:
  - ANNUNCIATE THE ALARMED DEVICE TYPE AND ZONE LOCATION AT THE FIRE ALARM CONTROL PANEL,
  - ACTIVATE THE AUDIBLE ALARM EVACUATION SIGNAL THROUGHOUT THE PROPERTY AND,
  - ACTIVATE THE VISUAL ALARM INDICATING APPLIANCES THROUGHOUT THE PROPERTY.
- 2. UPON DETECTION OF PRODUCTS OF COMBUSTION, EACH DUCT SMOKE DETECTOR SHALL SHUT DOWN ALL AIR HANDLING UNITS.
- 3. ACTIVATION OF A SUPERVISORY CIRCUIT SHALL ANNUNCIATE A TROUBLE CONDITION AT THE CONTROL PANEL.
- 4. FIRE ALARM SYSTEM WILL BE MONITORED BY A UL LISTED CENTRAL RECEIVING STATION.

FIRE ALARM NOTES

- SYSTEM SHALL BE CLASS "B" OR AS REQUIRED BY LOCAL AUTHORITIES. F.A.C.P. – GAMEWELL, FIRE LITE, OR APPROVED EQUAL.
- SPACE FOR 24 ZONES WITH FUTURE SPACE FOR 8 ZONES. NFPA 71.72 A.B.C.D POWER LIMITED APPLICATIONS FOR NEC 760 AND FED. REGISTER VOL. 56 3144 JULY 28, 1991
- FM APPROVED AND U.L. LISTED. CHARGER AND BATTERY PACK FOR MIN. 60 HOURS STND-BY SERVICE ON EMERGENCY POWER.
- SYSTEM SHALL BE AS ACCEPTED BY NATIONAL AND LOCAL CODES AND AUTHORITIES AND SHALL COMPLY WITH ADA REQUIREMENTS.
- SYSTEM SHALL HAVE AN ALARM VERIFICATION MODE TO WAIT 60 SECONDS BEFORE RE-TESTING FOR ALARM.
- SYSTEM SHALL BE INSTALLED PER NFPA 72.
- PROVIDE ALLOWANCE FOR SMOKE DETECTORS MOUNTED ABOVE AND BELOW THE CEILING SHOULD THEY BE REQUIRED BY THE AUTHORITY HAVING JURISDICTION AND THE STATE FIRE MARSHALL
- FIRE ALARM SYSTEM TO BE COMPATIBLE WITH ANY REQUISITE BASE BUILDING SYSTEMS ALREADY INSTALLED.

### ELECTRICAL SYMBOLS LIST

20 AMPERE CIRCUITS					CVAADOL	
VOLT		277 VOLT		MINIMUM	SYMBOL  O O HOH	DESCRIPT FIXTURE-FLUORESCENT-CEILI
	WIRE SIZE	WIRE LENGTH	WIRE SIZE	CONDUIT SIZE		DENOTES FIXTURE ON NIGHT L
	#12	0'-130'	#12	3/4"	0 01	FIXTURE-INCANDESCENT/FLUO CEILING, WALL BRACKET
	#10	130'-210'	#10	3/4	т.	
	#8	210'-340'	#8	3/4"	<b>₩</b>	FIXTURE - HID - WALL BRACE
	#6	340'-540'	#6	3/4"	<b>*</b> 4	FIXTURE-INCANDESCENT-FLOO
						CAT LIGHT OFFICE MALE MET

BE THE WIRE LENGTH BETWEEN THE FIRST OUTLET AND THE PANELBOARD.

3. WIRING AND CONDUIT SIZES INDICATED IN PANEL SCHEDULES ARE MINIMUM ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT WIRING AND CONDUIT SIZES. CONTRACTOR SHALL PROVIDE SPLICE BLOCKS AND REDUCING PINS AS REQUIRED TO TERMINATE WIRING AND MAKE FINAL CONNECTIONS.

4. BRANCH CIRCUITS IN PANELBOARDS WITH 200% RATED NEUTRAL BUS AND ALL DIMMER RACK CIRCUITS SHALL HAVE DEDICATED NEUTRAL

ING, WALL, STRIP LIGHT CIRCUIT JORESCENT-

ODLIGHT/EMERGENCY LIGHT EMERGENCY BATTERY UNIT, WALL MOUNTED SWITCH-SINGLE POLE, THREEWAY, SUBSCRIPT DENOTES OUTLET CONTROLLED M.H. 4'-0"

SWITCH-PILOT LIGHT, DIMMER M.H. 4'-0" SWITCH-MOTOR RATED RECEPTACLE-20A-125 VOLTS-DUPLEX, DOUBLE

DUPLEX M.H. 1'-6" RECEPTACLE-DUPLEX-COUNTER HEIGHT-20A-125 VOLT SPECIAL RECEPTACLE AS NOTED

JUNCTION BOX OUTLET-TELEPHONE - WALL WITH RING AND STRING TO

CEILING SPACE M.H. 1'-6" UNLESS OTHERWISE NOTED. OUTLET - VOICE/DATA WALL WITH RING AND STRING TO CEILING SPACE M.H. 1'-6"

OUTLET - VOICE/DATA WALL WITH RING AND STRING TO CEILING SPACE M.H. ABOVE COUNTER

PANELBOARD 120/208 VOLTS

DISCONNECT SWITCH-UNFUSED, FUSED CONTROL DEVICE BY EQUIPMENT CONTRACTOR

TELEPHONE TERMINAL BACKBOARD

MOTOR-SINGLE PHASE, THREE PHASE, HORSEPOWER HEATING ELEMENT-CAPACITY AS NOTED

FIRE ALARM-PULL STATION M.H. 4'-0" FIRE ALARM - AUDIBLE SIGNAL AND VISUAL FLASHER (CANDELA RATING SHOWN).

FIRE ALARM-VISUAL FLASHER (CANDELA RATING SHOWN) FIRE ALARM-SMOKE DETECTOR

FIRE ALARM-DUCT SMOKE DETECTOR-RETURN DUCT, SUPPLY DUCT

SMOKE DAMPER FIRE ALARM - DUCT SMOKE DETECTOR DRY TYPE TRANSFORMER

ANNUNCIATOR PANEL OR TERMINAL PANEL-AS NOTED GROUND CONNECTION BRANCH CIRCUIT-IN CEILING OR WALLS

2#12+G UNLESS BRANCH CIRCUIT-IN OR UNDER FLOOR NOTED OTHERWISE BRANCH CIRCUIT-EXPOSED ON CEILING HOMERUN TO PANEL-LETTER AND NO. INDICATES

CIRCUIT NUMBER. NO. OF CROSSLINES INDICATES NO. OF CONDUCTORS WHEN MORE THAN 2+G.

OUTLET - CABLE TELEVISION WALL WITH RING AND STRING TO CEILING SPACE TIMECLOCK

# ABBREVIATIONS LIST:

INTERCOM STATION

AFF	-	ABOVE FINISHED FLOOR	мн	-	MOUNTING HEIGHT
C, CDT	_	CONDUIT	MOD	-	MOTOR OPERATED D
СН	_	COUNTER HEIGHT	MTD	-	MOUNTED
DWG	-	DRAWING	RTU	_	ROOF TOP UNIT
EDH	-	ELECTRIC DUCT HEATER	TC	_	TIME CLOCK
EWH	-	ELECTRIC WALL HEATER	WH	_	WATER HEATER
F	-	FAN	W/	_	WITH
GRD	-	GROUND	WP	_	WEATHERPROOF
GFI	-	GROUND FAULT INTERRUPTER	XR	_	EXISTING TO REM
Н	-	HUMIDIFIER	RX	_	REMOVE EXISTING
HP	_	HORSEPOWER	KΛ	_	KEMOVE EXISTING

HUH - HORIZONTAL UNIT HEATER

MINIMUM CIRCUIT AMPS

MAXIMUM OVERCURRENT

PROTECTIVE DEVICE

# GENERAL ELECTRICAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2008 NATIONAL ELECTRICAL CODE AND ALL LOCAL COUNTY CODES AND AMENDMENTS. WIRING METHODS SHALL BE IN ACCORDANCE WITH THE N.E.C., LOCAL CODES AND STANDARDS. THE CONTRACTOR SHALL OBTAIN AND PAY ALL FEES AND PERMITS REQUIRED FOR THE CONSTRUCTION OF THE PROJECT.

2. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE INSTALLATION OF THE ELECTRICAL SERVICE WITH THE LOCAL POWER COMPANY; NEW AND/OR UPGRADED.

3. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. SCALE DIMENSIONS SHALL NOT BE USED. IN AS MUCH AS THE DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DUE TO THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL OFFSETS, FITTINGS AND ACCESSORIES, AS MAY BE REQUIRED. THE CONTRACTOR SHALL CAREFULLY INVESTIGATE THE SITE, STRUCTURAL, AND FINISH CONDITIONS AFFECTING HIS WORK AND SHALL ARRANGE SUCH WORK ACCORDINGLY, FURNISHING SUCH FITTING AND ACCESSORIES AS MAY BE REQUIRED TO MEET SUCH CONDITIONS, AT NO ADDITIONAL COST TO THE OWNER. THE RIGHT TO MAKE ANY REASONABLE CHANGE IN LOCATION OF APPARATUS, EQUIPMENT, OUTLETS OR ROUTING OF CONDUIT AND WIRING, UP TO THE TIME OF ROUGHING-IN IS RESERVED BY THE ENGINEER WITHOUT INVOLVING ANY ADDITIONAL EXPENSE TO

4. UNLESS OTHERWISE NOTED, CONNECT EXIT LIGHTS, EMERGENCY BATTERY UNITS AND NIGHT LIGHTS (NL.) TO UNSWITCHED PORTION OF NORMAL LIGHTING CIRCUIT SERVING RESPECTIVE AREA.

5. ALL WIRING SHALL BE COPPER, #12 AWG MINIMUM, TYPE THW OR THHN INSULATION, INSTALLED IN CONDUIT (1/2 MINIMUM). NO ROMEX OR BX CABLE PERMITTED. MC CABLE MAY BE USED, WHERE PERMITTED BY CODE, FOR WORK ABOVE CEILINGS AND CONCEALED IN WALLS.

6. THE CORRECT NUMBER OF WIRES MAY NOT BE INDICATED FOR ALL CIRCUITS. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL WIRES NECESSARY FOR THE PROPER FUNCTION OF THE SYSTEM WHETHER INDICATED ON DRAWING OR NOT.

7. ALL D.C. WIRING SHALL BE #10 AWG MINIMUM.

8. THE WIRE SIZE INDICATED IN THE HOMERUN SHALL BE USED THROUGHOUT THE CIRCUIT.

9. ALL EMPTY CONDUIT RUNS IN EXCESS OF 10 FT. SHALL BE PROVIDED WITH A PULL WIRE OR FISH

10. ELECTRICAL CONTRACTOR TO INCLUDE GROUND WIRE IN ALL RACEWAYS. SIZE RACEWAYS AS NECESSARY

TO COMPLY WITH NEC. 11. ALL RECEPTACLES LOCATED WITHIN A 6 FEET OF A SINK SHALL BE GFI TYPE.

12. GROUND, PHASE AND NEUTRAL CONDUCTORS SHALL BE PIG-TAILED IN OUTLET BOXES OR MULTI-OUTLET ASSEMBLY FOR EACH RECEPTACLE SO THAT GROUND AND ELECTRICAL SERVICE WILL NOT BE DISTURBED TO OTHER RECEPTACLES ON THE SAME MULTI-WIRE CIRCUIT IF RECEPTACLE IS REMOVED. THE GROUNDING TERMINALS OF ALL RECEPTACLES SHALL BE GROUNDED BY AN INSULATED COPPER CONDUCTOR IN ACCORDANCE WITH TABLE 250.122 N.E.C.

13. ELECTRICAL DESIGN HAS BEEN BASED ON THE INSTALLATION OF 75°C. CONDUCTORS CONNECTED TO TERMINAL LUGS AND EQUIPMENT U.L. LISTED FOR A MINIMUM 75°C. CONDUCTORS TERMINATED ON EQUIPMENT WITH A LOWER RATING (60°C) OR NO RATING SHOWN SHALL HAVE CONDUCTOR SIZE INCREASED TO CONFORM TO N.E.C. TABLE 310-16 AND U.L. NO. 489 REQUIREMENTS.

14. SWITCHBOARDS, PANELBOARDS, DISCONNECT SWITCHES, TRANSFORMERS AND CONTACTORS ARE TO BE "LISTED AND IDENTIFIED AS RATED FOR A MINIMUM OF 75°C CONDUCTOR TERMINATION.

15. REFER TO VOLTAGE DROP SCHEDULE: FOR CONDUCTORS SIZED PER NEC ON DRAWINGS, INCREASE SIZE BY NUMBER OF STANDARD COPPER SIZES SHOWN IN TABLE TO COMPENSATE FOR VOLTAGE DROP. AND INCREASE CONDUIT AND GROUNDING CONDUCTOR SIZES ACCORDINGLY AS PER NEC. CONTACT ENGINEER OF RECORD FOR ASSISTANCE IF CIRCUIT LENGTH FROM SOURCE TO LOAD EXCEEDS MAXIMUMS SHOWN.

16. THE CONTRACTOR SHALL TEST AND BALANCE THE LOADING ON ALL PANELBOARDS AS CLOSELY AS POSSIBLE TO THE SATISFACTION OF THE ENGINEER.

17. PROVIDE TYPED CIRCUIT DIRECTORIES FOR ALL PANELBOARDS TO INDICATE TYPE OF LOAD SERVED AND AREA SERVED (E.G. RECEPTACLES-OFFICE 201.). 18. ELECTRICAL EQUIPMENT REQUIRING ACCESS SUCH AS JUNCTION BOXES OR CONNECTIONS TO EQUIPMENT

REROUTE ANY EXISTING CONDUIT AND JUNCTION BOXES ABOVE INACCESSIBLE CEILINGS/WALLS WHICH CANNOT BE RELOCATED SHALL BE ABANDONED WITH ALL WIRING REMOVED. 19. ALL RECEPTACLES AND JUNCTION BOXES WITH BRANCH CIRCUITING SHALL BE LABELED WITH PANEL

SHALL NOT BE INSTALLED ABOVE INACCESSIBLE CEILINGS OR BEHIND WALLS. CONTRACTOR SHALL

DESIGNATION AND CIRCUIT NUMBER. CLEARLY LABEL ON FACE OF COVERPLATE OR PLACE TAG BEHIND

20. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHTING FIXTURES AND GRID COORDINATION. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE TYPE OF CEILING SYSTEM WITH HE GENERAL CONTRACTOR OR CEILING CONTRACTOR TO INSURE THAT ALL CEILING RECESSED LIGHTING FIXTURES ARE COMPATIBLE WITH THE CEILING SYSTEM BEING INSTALLED. LIGHTING FIXTURES SHOULD NOT BE ORDERED UNTIL TYPE OF CEILING HAS BEEN VERIFIED.

ELECTRICAL CONTRACTOR SHALL VERIFY ALL DOOR SWINGS WITH THE ARCHITECTURAL PLANS PRIOR TO INSTALLING LIGHT SWITCH BOXES. LIGHT SWITCHES SHALL BE LOCATED ON LOCK SIDE OF THE DOOR UNLESS PHYSICALLY IMPOSSIBLE TO INSTALL IN THIS LOCATION. VERIFY EXACT LOCATION WITH ARCHITECT PRIOR TO INSTALLATION IN THIS EVENT.

22. ELECTRICAL CONTRACTOR TO VERIFY EXACT PLACEMENT OF ALL DEVICES SHOWN ON THE ELECTRICAL CONSTRUCTION DOCUMENTS WITH ARCHITECTURAL, MECHANICAL, AND PLUMBING DRAWINGS PRIOR TO FINAL PLACEMENT. THE DRAWINGS INDICATE SIZE AND GENERAL LOCATION OF WORK. THE EXACT LOCATION AND ELEVATION OF ALL LIGHTING FIXTURES, RECEPTACLES, TELEPHONE/DATA OUTLETS, ETC., SHALL BE DETERMINED FROM ARCHITECTS DRAWINGS UNLESS NOTED OTHERWISE.

23. REFER TO ARCHITECTURAL PLANS FOR EXACT DIMENSIONS OF THE BUILDING. REFER TO MECHANICAL OR

PLUMBING PLANS FOR EXACT LOCATION OF THEIR EQUIPMENT. ELECTRICAL CONTRACTOR BEFORE INSTALLING ANY WORK SHALL MAKE SURE IT DOES NOT INTERFERE WITH CLEARANCES AS SHOWN ON THE ARCHITECTURAL DRAWINGS OR OTHER TRADE DRAWINGS. 24. ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT REQUIREMENTS WITH ALL TRADES BEFORE

INSTALLING CONDUIT OR CONDUCTORS FROM POWER SOURCE TO EQUIPMENT TERMINATION. 25. FLUORESCENT FIXTURES MOUNTED ON SUSPENDED CEILINGS SHALL BE SUPPORTED FROM THE FLOOR CONSTRUCTION ABOVE BY MEANS OF A MINIMUM OF FOUR SEPARATE GALVANIZED CHAINS OR WIRES PER FIXTURE, PROVIDE ONE AT EACH CORNER OF THE FIXTURE. EACH CHAIN SHALL BE CAPABLE OF SUPPORTING 100 LBS AND EACH WIRE SHALL BE A MINIMUM OF 12 AWG MILD STEEL. INCANDESCENT, FLUORESCENT OR HID DOWN LIGHT FIXTURES ON SUSPENDED CEILINGS SHALL BE SUPPORTED USING ONE

CHAIN OR WIRE AS DESCRIBED ABOVE. 26. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE. A. LIGHT SWITCH SHALL BE 20A 120-277V.

DUPLEX RECEPTACLES SHALL BE 20A, 125V, 2P, 3W, NEMA 5-20R, UNLESS NOTED OTHERWISE ON THE DRAWINGS. C. DEVICE AND COVER PLATE FURNISHES FOR NEW DEVICES SHALL MATCH BASE BUILDING DEVICE FINISHES UNLESS OTHERWISE NOTED.

D. MOUNTING HEIGHTS OF NEW DEVICES SHALL MATCH BASE BUILDING DEVICE MOUNTING HEIGHT DEVICE AND COVER PLATE FINISHES FOR EMERGENCY CIRCUITS SHALL BE RED. . DEVICE AND COVER PLATE FINISHES FOR ISOLATED GROUND CIRCUITS SHALL BE ORANGE.

27. ALL DEVICES SHALL BE MOUNTED TO COMPLY WITH AMERICAN DISABILITIES ACT. 28. HEIGHTS OF OUTLETS FROM FINISHED FLOOR TO CENTERLINE OF OUTLET:

RECEPTACLES AND DATA OUTLETS: 1'-6" (UNLESS NOTE OTHERWISE) WALL SWITCHES FIRE ALARM PULL STATIONS 80" AFF OR 6" BELOW CEILING FIRE ALARM HORN/STROBE LIGHTS

(WHICHEVER IS LOWER) EXCEPTIONS: CODED VIOLATION, AS NOTED OR DIRECTED.

29. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER SIZING OF ALL MOTOR OVERLOAD DEVICES IN STARTERS BASED ON ACTUAL NAMEPLATE RATING ON THE MOTORS BEING INSTALLED.

30. CONTRACTOR SHALL NOTE U.L. LABEL/NAMEPLATE ON MECHANICAL EQUIPMENT, OR SHOULD LOCAL INSPECTOR CALL FOR THE OVERLOAD PROTECTIVE DEVICE TO BE FUSED, THE ELECTRICAL CONTRACTOR SHALL PROVIDE A FUSED DISCONNECT SWITCH WITH PROPER SIZE FUSES AT THE SWITCH LOCATION AS INDICATED ON THE DRAWINGS.

31. ELECTRICAL BOXES IN FIRE RATED PARTITIONS SHALL NOT EXCEED 16 SQUARE INCHES IN AREA (IF 4 x4 ). SHALL BE MADE OF STEEL, AND SHALL BE SUCH THAT THE CUMULATIVE AREA OF BOX "CUTOUTS" IN THE FIREWALL DOES NOT EXCEED 100 SQUARE INCHES PER 100 SQUARE FEET OF WALL AREA. ELECTRICAL BOXES ON OPPOSITE SIDES OF THE SAME FIREWALL SHALL BE SEPARATED BY A HORIZONTAL AND VERTICAL DISTANCE OF NOT LESS THAT 24 INCHES. THE ELECTRICAL CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS, AS NECESSARY, TO ELECTRICAL BOX LOCATIONS TO ENSURE COMPLIANCE WITH THIS REQUIREMENT SINCE BOX LOCATIONS ARE TYPICALLY NOT DIMENSIONED ON THE DRAWINGS. CONSULT ARCHITECT IF CLARIFICATION IS REQUIRED.

32. ALL PENETRATIONS THRU FIRE RATED WALL ASSEMBLIES SHALL BE PROTECTED WITH AN APPROVED FIRESTOP SYSTEM OR IN ACCORDANCE WITH IBC SECTION 712.3.1 WHERE APPLICABLE.

33. SEAL ALL CONDUIT PENETRATIONS THROUGH RATED WALLS AND FLOORS TO MAINTAIN FIRE INTEGRITY. REFER TO ARCHITECTURAL DRAWINGS FOR FIRE RATED WALL OR FLOOR LOCATIONS.

34. ELECTRICAL CONTRACTOR SHALL USE CONDULET SEALING FITTINGS WITH APPROVED SEALING COMPOUND ON ALL CONDUITS PASSING FROM INTERIOR TO EXTERIOR OF A BUILDING AND WHERE DIFFERING SPACE

# 35. AFTER FINAL INSTALLATION, ELECTRICAL CONTRACTOR WILL BE RESPONSIBLE FOR FILLING ALL VOIDS

DESIGNATED PATIENT CARE AREAS.

AROUND CONDUIT PENETRATIONS AND OTHER CORE DRILLS/OPENINGS IN SLAB WITH FIRE SAFE REMOVABLE MASTIC; FILL SHALL EQUAL FIRE RATING OF THE FLOOR. 36. ELECTRICAL CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMISSION OF BID. HE SHALL NOTE EXISTING CONDITIONS, FAMILIARIZE HIMSELF WITH THE LAYOUT OF EXISTING, LIGHTING, POWER SYSTEMS, AND FIRE ALARM IN ORDER TO THOROUGHLY UNDERSTAND THE SCOPE OF THE MODIFICATIONS TO THE PRESENT JOB AND THE EFFECT OF THOSE MODIFICATIONS. SHOULD CONTRACT DOCUMENTS' SCOPE OF WORK

DIFFER FROM FIELD CONDITIONS THAT CAUSE AN UPSET IN BID, IT SHALL BE REPORTED TO THE

EFFECT THE CONTRACTOR'S SCOPE OF WORK. MINOR DEVIATIONS REQUIRED FOR ACCOMPLISHING THE

ENGINEER OF RECORD SO REVISED BID DOCUMENTS OR ADDENDUM(S) CAN BE ISSUED. NEGLECT TO VISIT PROPOSED SITE SHALL BE THE ELECTRICAL CONTRACTOR'S SOLE RESPONSIBILITY. 37. ENGINEER OF RECORD SHALL NOT BE RESPONSIBLE FOR THE VERIFICATION OF EXISTING CONDITIONS THAT ARE NOT READILY VISIBLE. THIS INCLUDES BUT IS NOT LIMITED TO: EQUIPMENT, PIPING, DEVICES OR ITEMS THAT ARE LOCATED BELOW GRADE. WITHIN PARTITIONS, ENCLOSED IN CHASES OR ABOVE INACCESSIBLE CEILINGS. ALLOWANCES ARE TO BE INCLUDED FOR UNFORESEEN CONDITIONS THAT MAY

INTENT OF THIS DESIGN ARE TO BE INCLUDED IN THAT ALLOWANCE. 38. PROVIDE "HOSPITAL" GRADE RECEPTACLES IN ALL "PATIENT CARE" AREAS AS DEFINED PER NEC ARTICLE 517. THIS SHALL INCLUDE EXISTING RECEPTACLES NOTED TO REMAIN THAT ARE LOCATED WITHIN NEW

39. PRIOR TO ROUGH IN, ELECTRICAL CONTRACTOR SHALL VERIFY WITH MEDICAL EQUIPMENT VENDOR ALL ELECTRICAL REQUIREMENTS, DEVICES, WIRE AND CONDUIT SIZES, AND LOCATIONS FOR MEDICAL EQUIPMENT BEING INSTALLED. SEE MEDICAL EQUIPMENT VENDOR'S SPECIFICATIONS, SCHEMATICS AND DRAWINGS FOR EXACT ELECTRICAL REQUIREMENTS AND COORDINATION.

40. CONTRACTOR SHALL INSTALL "HCF" CABLE IN ALL PATIENT CARE AREAS, METAL CLAD (MC), ROMEX AND AC CABLE ARE NOT PERMITTED IN PATIENT CARE AREAS PER NEC ARTICLE 517. COORDINATE PATIENT CARE AREAS WITH OWNER. ALL WIRING IN ALL PATIENT CARE AREAS (EXISTING OR NEW) SHALL COMPLY WITH N.E.C. ARTICLE 517.13 (A) & (B).

41. GROUNDING SYSTEM IN PATIENT CARE AREAS SHALL BE TESTED IN ACCORDANCE WITH NEC AND NFPA 99 4.3.3. SUBMIT FINAL REPORT TO OWNER UPON PROJECT COMPLETION.

42. FIRE ALARM SYSTEM: CONTRACTOR SHALL FURNISH AND INSTALL A COMPLETE AND OPERABLE FIRE ALARM SYSTEM, MATCHING EXISTING SYSTEM, INCLUDING ALL REQUIRED FIRE ALARM EQUIPMENT, DEVICES, MIRING AND CONDUIT. DEVICES INDICATED ON THE PLAN ARE INTENDED ONLY AS A GUIDE. PROVIDE ALL EQUIPMENT, DEVICES AND WIRING AS REQUIRED FOR A COMPLETE AND FUNCTIONAL SYSTEM WHICH MEETS HE REQUIREMENTS OF THE FIRE PROTECTION CODE OF THE LOCAL AUTHORITY HAVING JURISDICTION COORDINATE WITH CERTIFIED FIRE ALARM CONTRACTOR FOR TYPE AND LOCATION OF DEVICES AND FOR CONNECTION TO EXISTING SYSTEM. CONNECT FIRE ALARM SYSTEM TO ALL NECESSARY BUILDING FIRE SAFETY FUNCTIONS. SUBMIT SIGNED AND SEALED FIRE ALARM SYSTEM DESIGN DOCUMENTS AND SHOP DRAWINGS FOR APPROVAL. ALL COSTS ASSOCIATED WITH THE FIRE ALARM SYSTEM MODIFICATIONS AND ADDITIONS ARE TO BE INCLUDED IN THE CONTRACTOR'S BID PRICE.

43. PROVIDE DUCT SMOKE DETECTORS IN ALL AIR HANDLING UNITS RATED 2000 CFM AND GREATER. COORDINATE REQUIREMENTS WITH MECHANICAL CONTRACTOR. CONNECT TO BUILDING FIRE ALARM SYSTEM OR DUCT DETECTOR MONITORING PANEL.

44. FIRE ALARM SYSTEM SHALL BE INSTALLED PER NFPA 72.

45. FIRE ALARM SYSTEM EQUIPMENT IS SHOWN ON THE PLAN, HOWEVER, CONDUIT AND WIRING IS NOT SHOWN. WIRING VARIES BETWEEN MANUFACTURERS, THE WIRING AND CONDUIT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. CONDUIT AND WIRING SHALL BE SUBMITTED WITH FIRE ALARM SUBMITTAL FOR APPROVAL PRIOR TO INSTALLATION.

46. ELECTRICAL CONTRACTOR SHALL SUBMIT FIRE ALARM SHOP DRAWINGS FOR REVIEW TO THE

ARCHITECT/ENGINEER. IN ADDITION THREE COMPLETE SETS OF CONTRACT DRAWINGS SHALL BE PROVIDED

FOR THE REVIEW AND APPROVAL FROM THE LOCAL FIRE PROTECTION DIVISION HAVING JURISDICTION, AN APPROVED SET OF THE SUBMITTED DOCUMENTS SHALL BE AT THE JOB SITE FOR THE USE OF THE FIRE PROTECTION DIVISION DURING THEIR INSPECTION.

47. REFER TO FIRE ALARM VENDOR DRAWINGS FOR FINAL APPROVED FIRE ALARM SYSTEM LAYOUT AND

48. UNLESS OTHERWISE SPECIFIED, TELEPHONE AND DATA OUTLETS SHALL HAVE A 3/4" CONDUIT WITH PULL STRING FROM JUNCTION-BOX TO CEILING SPACE FOR EACH GANG. PLASTIC BUSHINGS SHALL BE PROVIDED AT THE END OF THE CONDUIT LOCATED WITHIN CEILING SPACE.

49. TENANT WILL PROVIDE UNDER SEPARATE CONTRACT (UNLESS OTHERWISE NOTED HERE WITHIN CONTRACT DOCUMENTS) WITH OTHERS, EQUIPMENT AND CABLING FOR TELEPHONE DATA, INTERCOM AND SECURITY

50. ELECTRICAL CONTRACTOR SHALL COORDINATE ANY POWER REQUIREMENTS WITH SECURITY SYSTEM VENDOR PRIOR TO WALL CLOSING. POWER FOR LOW VOLTAGE TRANSFORMERS FOR CARD ACCESS MAY BE

51. UPON COMPLETION OF THE ELECTRICAL INSTALLATION. THE CONTRACTOR SHALL DELIVER TO THE OWNER ONE (1) SET OF PRINTS OF ELECTRICAL CONTRACT DRAWINGS WHICH SHALL BE LEGIBLY MARKED IN RED PENCIL TO SHOW ALL ADDITIONS, CHANGES AND DEPARTURES OF THE INSTALLATION AS COMPARED WITH THE ORIGINAL DESIGN. THEY SHALL BE SUITABLE FOR USE IN PREPARATION OF RECORD DRAWINGS.

## **DEMOLITION NOTES:**

EXTENDED FROM NEAREST RECEPTACLE BRANCH CIRCUIT.

D1. ALL ACCESSIBLE ITEMS OF ELECTRICAL EQUIPMENT CONDUITS, WIRING, LIGHTS, RECEPTACLES, ETC. AFFECTED BY THE RENOVATION WORK AND NOT REQUIRED IN THE COMPLETED WORK SHALL BE CAREFULLY REMOVED. DAMAGED WALLS, FLOORS, CEILINGS, ETC. SHALL BE PATCHED AND FINISHED TO MATCH THE EXISTING ADJACENT SURFACES. REMOVED ITEMS SHALL BE PROPERLY DISPOSED OF OFF SITE AND NOT REUSED EXCEPT AS NOTED. TURN OVER ALL EXISTING EQUIPMENT DESIRED BY BUILDING OWNER.

D2. WHEREVER EXISTING ELECTRICAL WORK IS INDICATED TO BE REMOVED, THE FOLLOWING NOTES SHALL APPLY:

1. ALL EXISTING WIRING SHALL BE REMOVED BACK TO ITS SOURCE.

2. ALL EXISTING CONDUIT WHICH IS EXPOSED, OR WHICH BECOMES EXPOSED AT ANY TIME DURING CONSTRUCTION SHALL BE REMOVED IN ITS ENTIRETY. CONDUIT STUBS THROUGH THE FLOOR SHALL BE CUT OFF FLUSH WITH THE FLOOR SLAB, FILLED WITH CONCRETE, AND MADE READY TO ACCEPT NEW FLOOR FINISHES WHERE APPLICABLE

3. WHERE EXISTING CONDUIT STUBS THROUGH THE ROOF ARE NO LONGER REQUIRED, AND OCCUR IN AREAS WHERE THE EXISTING ROOF IS TO REMAIN, THE CONDUIT SHALL BE CUT OFF 6" ABOVE AND BELOW THE ROOF, FILLED WITH EXPANDABLE FOAM SEALANT (DOW CORNING SILICONE RTV OR APPROVED EQUAL). THE CONDUIT SHALL THEN BE CAPPED ABOVE THE ROOF AND MADE COMPLETELY WATERTIGHT.

WHEREVER EXISTING FLUSH MOUNTED BOXES WILL REMAIN EXPOSED, FURNISH AND INSTALL BLANK COVERPLATES ON THE EXISTING OUTLET

ALL EXISTING TELEPHONE WIRING AND EQUIPMENT SHALL BE DISCONNECTED AND REMOVED. COORDINATE DEMOLITION WITH TELEPHONE COMPANY.

D3. RECONNECT CIRCUITS AS REQUIRED TO MAINTAIN CONTINUITY TO EXISTING DEVICES AND EQUIPMENT NOTED TO REMAIN AS WELL AS

ADJACENT AREAS WHICH ARE NOT IN CONTRACT.

OTHERWISE DIRECTED BY THE RESIDENT ENGINEER

D4. REMOVE ALL ABANDONED POWER BRANCH CIRCUIT CABLES/CONDUITS AND TELEPHONE/DATA CABLES ABOVE CEILING OR IN WALLS THAT ARE NOT USED. EXISTING CONDUIT FOUND TO BE REUSABLE MAY BE USED. ALL OTHER MATERIAL SHALL BE REMOVED FROM THE JOB SITE UNLESS

SYMBOLS LIST, NOTES, SCHEDULES AND SCHEMATICS

DRAWING NO.

SHEET

REVISIONS

DESCRIPTION

1/4"=1'-0" 4'

EV#| DATE

DATE DRAWN BY 4/19/13 DJC JOB NUMBER CHECKED BY 11206 SMM

OF

SDI# 2013-01H