

**TAGGED ELECTRICAL NOTES:**

- DENTAL TRACK LIGHT - PROVIDE J-BOX ABOVE CEILING ON 2x12 SUPPORT BEAM FOR POWER TO TRACK LIGHT. LIGHT SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. CONTROL INTEGRAL TO TRACK LIGHT FIXTURE.
- DENTAL CEILING LIGHT - PROVIDE J-BOX ABOVE CEILING, ON CEILING PLATE, FOR POWER TO TRACK LIGHT. CEILING PLATE TO BE FLUSH WITH THE DROP CEILING. LIGHT SUPPLIED AND INSTALLED BY HENRY SCHEIN DENTAL. CONTROL INTEGRAL TO DENTAL LIGHT FIXTURE.

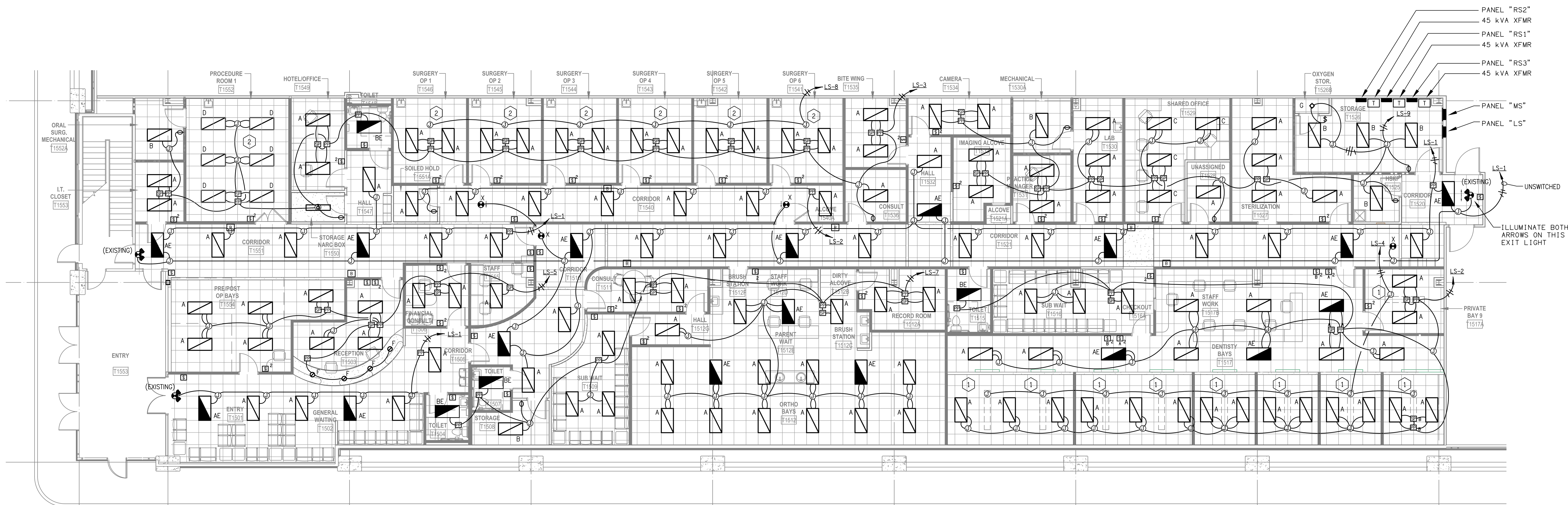
**LIGHTING CONTROL SYSTEM DEVICE LEGEND:**

- Ⓜ POWER/RELAY PACK FOR NLIGHT LIGHTING CONTROL SYSTEM PROVIDING SYSTEM POWER AND SWITCHING CONTROL OF LIGHTING LOADS WITHIN A LIGHTING CONTROL ZONE
  - Ⓜ SECONDARY RELAY PACK FOR NLIGHT LIGHTING CONTROL SYSTEM PROVIDING A SECONDARY POINT OF SWITCHING CONTROL OF LIGHTING LOADS WITHIN A LIGHTING CONTROL ZONE
  - Ⓜ SINGLE GANG ON/OFF LOW VOLTAGE WALLPOD FOR LOCAL ON/OFF CONTROL OF A LIGHTING ZONE (CONNECT TO nLIGHT CONTROL SYSTEM WITH CAT-5 CABLE)
  - Ⓜ 2-CHANNEL ON/OFF LOW VOLTAGE WALLPOD FOR LOCAL ON/OFF CONTROL OF 2 CHANNELS WITHIN A LIGHTING ZONE (CONNECT TO nLIGHT CONTROL SYSTEM WITH CAT-5 CABLE)
  - Ⓜ BRIDGE MODULE INTERCONNECTING THE nLIGHT CONTROL ZONES WITH A CAT 5e BACKBONE. THE NUMBER IDENTIFIES THE BRIDGE MODULE FOR nLIGHT ZONE CONNECTIONS
  - Ⓜ RECESSED, LINE VOLTAGE, WALL SWITCH OCCUPANCY SENSOR WITH PASSIVE INFRARED DETECTION (NOT CONNECTED TO nLIGHT SYSTEM)
  - Ⓜ RECESSED, LINE VOLTAGE, WALL SWITCH OCCUPANCY SENSOR WITH PASSIVE INFRARED DETECTION WIRED IN A 3-WAY OPERATING CONFIGURATION (NOT CONNECTED TO nLIGHT SYSTEM)
- CAT 5 CABLE FOR COMMUNICATION BETWEEN LIGHTING CONTROL DEVICES  
 — 277V POWER WIRING

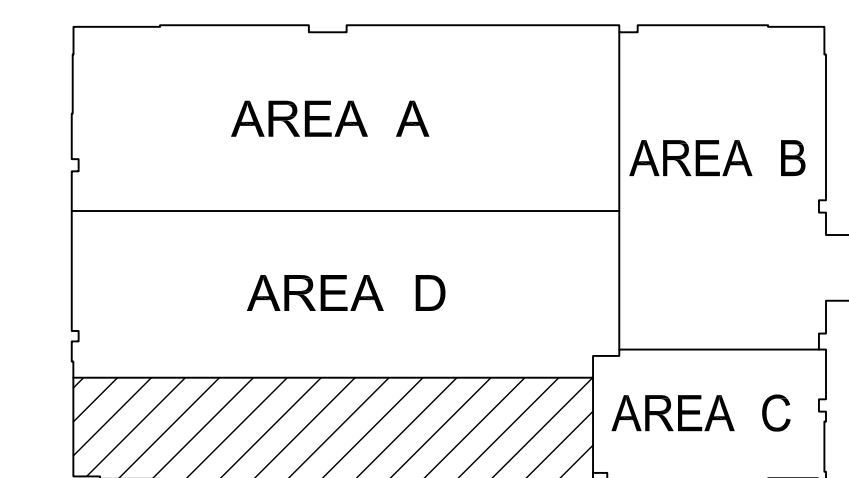
**FIXTURE SCHEDULE - DENTAL SUITE LIGHTING**

QUANTITY	TYPE	MANUFACTURER	CATALOG #	LAMP			DESCRIPTION
				NO	TYPE	VOLT	
A	COLUMBIA	EPC24-2320-SH-ESDU-F028835	2	F2818/SPX35/ECO	WVOLT	2'x4', 2-LAMP, RECESSED, VOLUMETRIC TROFFER W/ STEP-DIMMING, PROGRAMMED START, ELECTRONIC BALLAST	
AE	COLUMBIA	EPC24-2320-SH-ESDU-F028835-EL141	2	F2818/SPX35/ECO	WVOLT	SAME AS "A", EXCEPT WITH AN EMERGENCY BATTERY PACK	
B	COLUMBIA	JT824-3320-FSA12-3EDSDE-F028835	3	F2818/SPX35/ECO	WVOLT	2'x4', 3-LAMP, RECESSED, TROFFER W/ PROGRAMMED START BALLAST AND PRISMATIC LENS	
BE	COLUMBIA	JT824-3320-FSA12-3EDSDE-F028835-EL141	3	F2818/SPX35/ECO	WVOLT	SAME AS "B", EXCEPT WITH AN EMERGENCY BATTERY PACK	
C	PINNACLE	AD24A-3TB-G1-UNV-2C-W-PRS	3	F2818/SPX35/ECO	WVOLT	2'x4', 3-LAMP, RECESSED, VOLUMETRIC TROFFER W/ (2) PROGRAMMED START, HIGH EFFICIENCY, ELECTRONIC BALLASTS (NORMAL B.F.) FOR INBOARD/OUTBOARD SWITCHING	
D	COLUMBIA	CRC24-332F-FAA12125-(2)EPU	3	F2818/SPX35/ECO	WVOLT	2'x4', 3-LAMP, RECESSED, CLEAN ROOM TROFFER W/ (2) PROGRAMMED START, HIGH EFFICIENCY, ELECTRONIC BALLASTS (NORMAL B.F.)	
F	PRESCOLITE	LGLED277 - 6LCE0535K8		LED 3500K	277	6", RECESSED, LED DOWNLIGHT WITH CLEAR DIFFUSE OPEN REFLECTOR, PROVIDING 1500 LUMENS AT 3500K	
G	LITHONIA	FML-7-840		LED 4000K	120	ROUND, LOW PROFILE, SEMI-FLUSH MOUNTED, LED FIXTURE WITH MATTE WHITE ACRYLIC DIFFUSER AND WHITE ALUMINUM HOUSING, PROVIDING 650 LUMENS AT 4000K	
X	COMPASS	CCESRE		LED	120/277	L.E.D., DIE-CAST ALUMINUM, EXIT LIGHT W/ SINGLE FACE, RED LETTERING AND A NICKEL CADMIUM BATTERY FOR EMERGENCY EGRESS	
EM	DUALITE	CU2		LED	120/277	EMERGENCY LIGHTING UNIT WITH (2) LED LAMP HEADS AND BATTERY PACK (90 MIN BACKUP CAPABILITY)	

NOTES: 1) ALL FLUORESCENT FIXTURES SHALL HAVE PROGRAMMED START ELECTRONIC BALLASTS (WITH LESS THAN 10% THD) UNLESS NOTED OTHERWISE  
 2) ALL EMERGENCY AND EXIT FIXTURES ARE TO MEET N.F.P.A. 101 LIFE SAFETY REQUIREMENTS  
 3) THE LIGHTING FIXTURE SPECIFICATIONS ABOVE ARE REPRESENTATIVE OF THE BASIS OF DESIGN. ACTUAL FIXTURES FURNISHED AND INSTALLED SHALL BE AS NOTED ABOVE OR EQUAL.  
 4) VERIFY NECESSARY MOUNTING TRIMS WITH ARCHITECTURAL REFLECTED CEILING PLAN FOR EXACT CEILING TYPES.



**1 ELECTRICAL LIGHTING PLAN - DENTAL SUITE**  
 E1.1 SCALE: 1/8" = 1'-0"



**KEY PLAN**

RECORD DRAWINGS  
 10-21-15



INTERPHASE ELECTRICAL SPECIALTIES, INC.  
 8009  
 899.932.3091

DATE	DESCRIPTION
10/21/15	RECORD DRAWING
9/11/15	REVISION 9
7/26/15	REVISION 8
6/25/15	REVISION 7
3/18/15	FLOOR REVISION
3/18/15	CONSTRUCTION
2/25/15	FOR DOCUMENTS
1/24/14	OWNER REVIEW
10/20/14	FRIGING
10/14/14	FOR OWNER REVIEW
10/09/14	OWNER REVIEW MITG



**Bristol Group**  
 ENGINEERING | CONSTRUCTION  
 UK HEALTHCARE  
 TURFLAND CLINIC  
 LEXINGTON, KENTUCKY  
**DENTAL SUITE - LIGHTING PLAN**

JOB NUMBER: 14-350  
 SHEET NUMBER: E1.1

**GENERAL ELECTRICAL NOTES:**

- A. ALL ELECTRICAL BRANCH CONDUCTORS ARE TO BE COPPER.
- B. COORDINATE FINAL LOCATIONS OF PLUMBING AND HVAC EQUIPMENT WITH MECHANICAL DRAWINGS.
- C. PRIOR TO RELEASE OF ANY STARTERS AND/OR DISCONNECTS, THE ELECTRICAL CONTRACTOR IS TO VERIFY EXACT MOTOR LOADS AND COORDINATE STARTER SIZES, THERMAL OVERLOADS AND OVERCURRENT PROTECTION WITH THE APPROVED MECHANICAL SHOP DRAWINGS.
- D. ALL CONDUIT INSTALLED ABOVE GROUND SHALL BE EMT WITH SET-SCREW OR COMPRESSION FITTINGS. NO DIE CAST FITTINGS ARE ALLOWED.
- E. ALL CONDUIT BELOW GRADE SHALL BE SCH40 PVC (SCH80 PVC UNDER ROADWAYS). PROVIDE EXPANSION COUPLINGS EVERY 100' OF CONDUIT RUN.
- F. EACH CONDUIT PENETRATION OF A FIRE SEPARATION WALL SHALL HAVE A MINIMUM OF 1" CLEARANCE AROUND THE CONDUIT WITH FIRESTOPPING TO MAINTAIN THE INTEGRITY AND RATING OF THE FIREWALL.
- G. A RECEPTACLE WITH A SLASH THROUGH IT DESIGNATES THAT THE OUTLET BOX IS TO BE INSTALLED ABOVE A COUNTERTOP (I.E. 6" ABOVE THE COUNTERTOP OR 2" ABOVE THE BACKSPASH).
- H. FOR ALL COMMUNICATION OUTLETS SHOWN (DATA AND/OR VOICE), PROVIDE A 4 1/16" x 4 1/16" x 2 1/8" OUTLET BOX (STEEL CITY PART #72171-1 AND A SINGLE GANG PLASTER RING 72-C-13 FOR CATEGORY 6 CABLE TERMINATION) WITH A 1" CONDUIT STUBBED UP ABOVE AN ACCESSIBLE CEILING WITH A CAT 6 CABLE PULLED TO EACH BOX FROM I.T. ROOM. SEE LV SYSTEM PLANS TO DETERMINE THE NUMBER OF CAT 6 CABLES REQUIRED FOR EACH BOX LOCATION.

**ELECTRICAL TAGGED NOTES:**

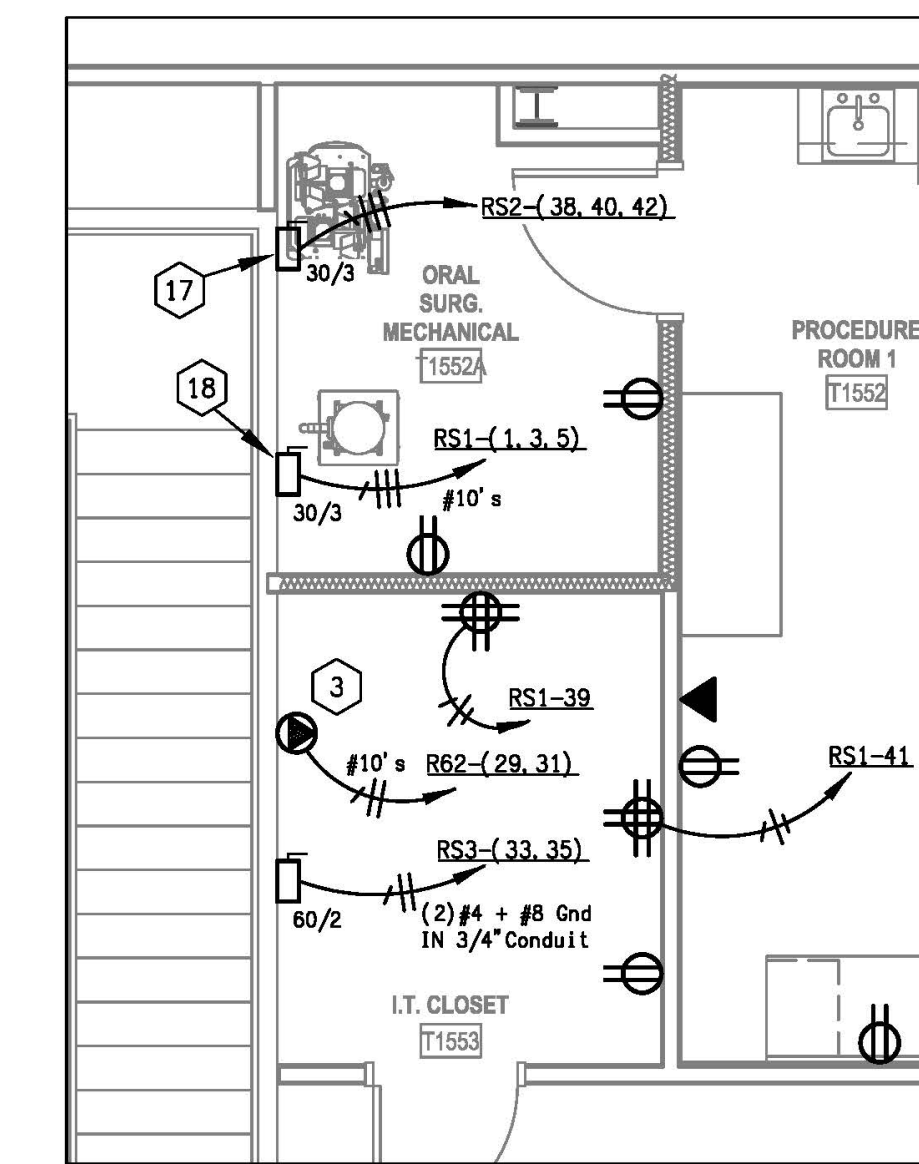
1. DENTAL CHAIR RECEPTACLE - PROVIDE A 2-GANG, STAMPED STEEL, FULLY ADJUSTABLE, FLOOR BOX. PROVIDE A 120V, 20A DUPLEX POWER OUTLET IN ONE COMPARTMENT AND ROUTE A 2" CONDUIT (SEE NOTE #23) INTO THE OTHER COMPARTMENT. FLOOR BOX TO BE HUBBELL #8F855 OR APPROVED EQUAL.
2. DENTAL CHAIR RECEPTACLE - PROVIDE A FLOOR MOUNTED, 120V, 20A DUPLEX POWER OUTLET IN A TOMSTONE-STYLE, ABOVE GRADE, BOX. FOR DENTAL CHAIR POWER. DENTAL CHAIR RATED 115V, 3A.
3. NEMA L6-30P TWIST LOCK RECEPTACLE FOR 5 KVA UPS.
4. WALL MOUNTED INTRAORAL X-RAY UNIT (120V, 8.2A) - PROVIDE 2-GANG, RECESSED, J-BOX FOR POWER TO UNIT; MOUNT J-BOX AT 41" A.F.F.
5. PANORAMIC AND/OR CEPHALOMETRIC X-RAY/CONE BEAM UNIT - PROVIDE A 208V, SINGLE PHASE, 3-WIRE, GROUND, 20A CIRCUIT TO THIS UNIT; COORDINATE WITH MANUFACTURER'S INSTALLATION REQUIREMENTS FOR FINAL POWER CONNECTIONS/REQUIREMENTS.
6. X-RAY REMOTE EXPOSURE BUTTON - PROVIDE A FLUSH MOUNTED, SINGLE-GANG JUNCTION BOX AT +60" A.F.F. AND 3/4" CONDUIT WITH PULL WIRE BETWEEN EXPOSURE BUTTON AND MASTER CONTROL/UNIT.
7. ORTHO CART UTILITY CENTER - PROVIDE A 120V, 20A, QUAD RECEPTACLE IN A RECESSED (IN-SLAB) UTILITY BOX.
8. FTC CABINET UTILITY CENTER - PROVIDE A 120V, 20A, QUAD RECEPTACLE IN THE LEFT BASE CUTOUT OR THE WALL (BEHIND THE REAR CABINET IN THE DENTISTRY BAYS). IN ADDITION, PROVIDE A 2" SCH40 PVC PIPE CHASE, WITH PULL-STRING, IN SUB-FLOOR BENEATH UTILITY BOX. 6" MIN RADIUS FOR ALL BENDS. STUB UP FLUSH WITH SUB-FLOOR. MARK LOCATION OF PIPE AT FINISH.
9. DENTAL CHAIR UTILITY CENTER - PROVIDE A 120V, 20A, QUAD RECEPTACLE IN THIS (ABOVE GRADE) UTILITY CENTER. IN ADDITION, PROVIDE A 2" SCH40 PVC PIPE CHASE, WITH PULL-STRING, IN SUB-FLOOR BENEATH UTILITY BOX. 6" MIN RADIUS FOR ALL BENDS. STUB UP FLUSH WITH SUB-FLOOR. MARK LOCATION OF PIPE AT FINISH.
10. CEILING MOUNTED MONITOR - PROVIDE (2) SINGLE-GANG BOXES ABOVE CEILING AT EACH MONITOR LOCATION. ONE BOX IS TO BE USED FOR 120V POWER AND THE OTHER BOX IS TO BE USED FOR VIDEO CABLE CONNECTIONS. COORDINATE EXACT LOCATION PER OWNER AND HENRY SCHEIN EQUIPMENT SPECIALIST.
11. WALL MOUNTED MONITOR - PROVIDE A SINGLE-GANG BOX (FOR VIDEO CABLE CONNECTIONS) AND A 120V, 20A DUPLEX RECEPTACLE AT 60" A.F.F. AT MONITOR LOCATION. COORDINATE EXACT LOCATION PER OWNER AND HENRY SCHEIN EQUIPMENT SPECIALIST.
12. STACKED STERILIZERS - PROVIDE (2) SINGLE, 115V, 15A POWER RECEPTACLES, EACH WITH DEDICATED CIRCUITS, TO SERVE THESE STERILIZERS. MOUNT ONE OUTLET AT 37" A.F.F. AND THE OTHER OUTLET AT 51" A.F.F.
13. HANDPIECE MAINTENANCE SYSTEM "KAVO QUATTROCORE" (1800W EACH) - PROVIDE A GFI RATED, 120V, 20A DUPLEX POWER RECEPTACLE MOUNTED AT +44" A.F.F. FOR THESE UNITS.
14. MODEL TRIMMER - PROVIDE A 120V, 20A GFI, DUPLEX POWER RECEPTACLE AT +44" A.F.F. (ABOVE COUNTERTOP)
15. ULTRASONIC CLEANER - PROVIDE A 120V, 20A GFI-RATED, DUPLEX POWER RECEPTACLE, MOUNTED ABOVE COUNTERTOP FOR POWER TO THIS DEVICE.
16. INSTRUMENT WASHER (HYDRIM) - PROVIDE A 208V, SINGLE PHASE, 15A POWER CIRCUIT TO THIS EQUIPMENT.
17. DENTAL AIR COMPRESSOR - PROVIDE A 230V, 20A CIRCUIT TO A GENERAL DUTY, FUSIBLE DISCONNECT RATED FOR 30A AT 240V (MAX.) WITH A 3-POLE CONFIGURATION.
18. VACUUM PUMP(S) - FOR EACH PUMP, PROVIDE A 230V, 30A CIRCUIT TO A GENERAL DUTY, FUSIBLE DISCONNECT RATED FOR 30A AT 240V (MAX.) WITH A 3-POLE CONFIGURATION.
19. WATER SOLENOID VALVE - PROVIDE A 120V, 20A DUPLEX POWER OUTLET AND A SINGLE-GANG BOX WITH A 1/2" CONDUIT STUBBED UP 3" ABOVE THE CEILING FOR LV WIRING BETWEEN VALVE AND REMOTE PANEL. MOUNT THESE BOXES AT 80" A.F.F.
20. N2O-O2 SYSTEM MANIFOLD - PROVIDE A 120V, 20A DUPLEX RECEPTACLE WITHIN 4'-0" OF THE MANIFOLD FOR SYSTEM POWER.
21. N2O-O2 SYSTEM ALARM - PROVIDE A 2-GANG JUNCTION BOX WITH MUD RING (PROVIDED BY MANUFACTURER), MOUNT AT 44" A.F.F. TO MIDDLE OF J-BOX. RUN 1" CONDUIT FROM BOX TO 3" ABOVE CEILING. E.C. TO INSTALL MANUFACTURER PROVIDED LV CABLE BETWEEN ALARM PANEL AND NITROUS OXIDE MANIFOLD. COIL 6-8" OF CABLE WITHIN BOX FOR FINAL CONNECTIONS.
22. REMOTE AIR/WATER/VACUUM CONTROL PANEL - E.C. TO WIRE 18/3 LV CABLES BETWEEN PANEL LOCATION AND EACH AIR/WATER/VACUUM COMPONENT. MOUNT RECESSED JUNCTION BOX AT +60" A.F.F. FOR CABLE TERMINATION. CONTROL PANEL PROVIDED BY DENTAL EQUIPMENT PROVIDER.
- 23.
24. UTILIZE MEDICAL GRADE "MC" CABLE FOR CIRCUITRY IN THESE PATIENT CARE ROOMS AND AREAS.

**Floor Boxes**  
Recessed 2-Gang Concrete Floor Boxes

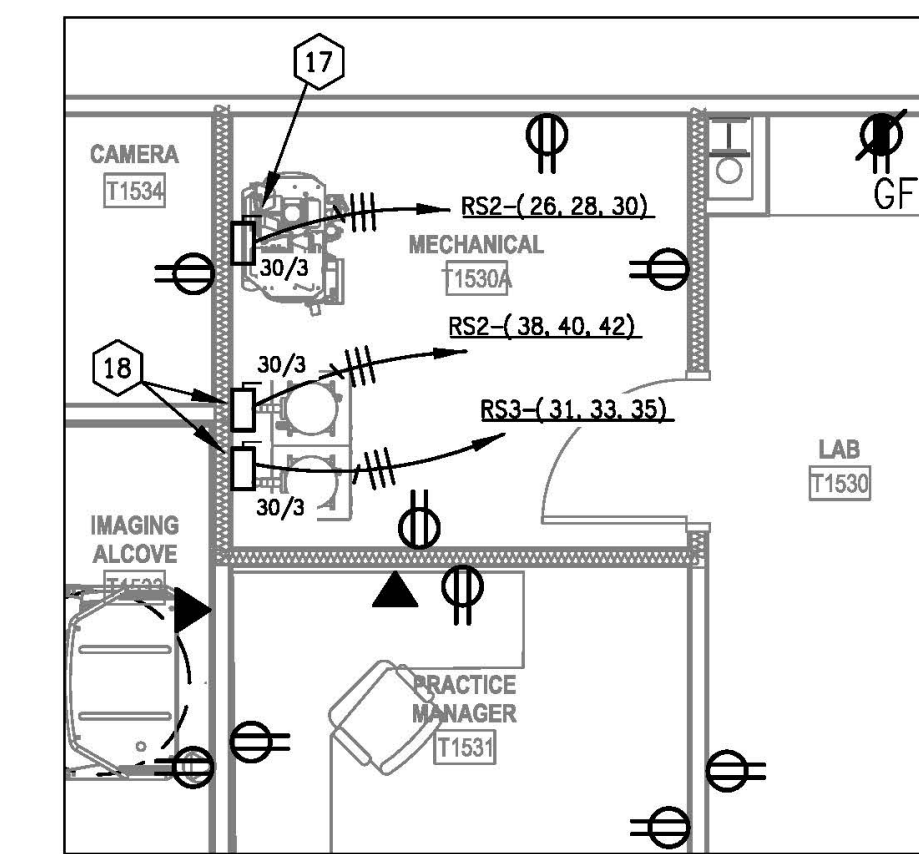
Dimensions Inches (mm)	Stamped Steel
Site	2-Gang
Min. Depth of Floor	3.00" (76.2)
Adjustability	Before pour
Cable Inch (mm) Capacity	22.4 cu. in. (921 cm <sup>3</sup> )
Per Channel	2.88" (73.8)
Dimensions - A	12.25" (309.8)
Dimensions - B	6.52" (165.2)
Dimensions - C	6.52" (165.2)
Threaded Access Hole	
Knockouts	Slide (2) 1/4" Ends (1) 1" Center Area (1) Concentric 1/4" (8x2) 8/32"
Concrete Cover Included	
Cleanout Plug Included	
Face Plates Included	(1) 38F855 and (1) 38F87P

Notes: 1. File Number 231950  
2. Call File Number 141818

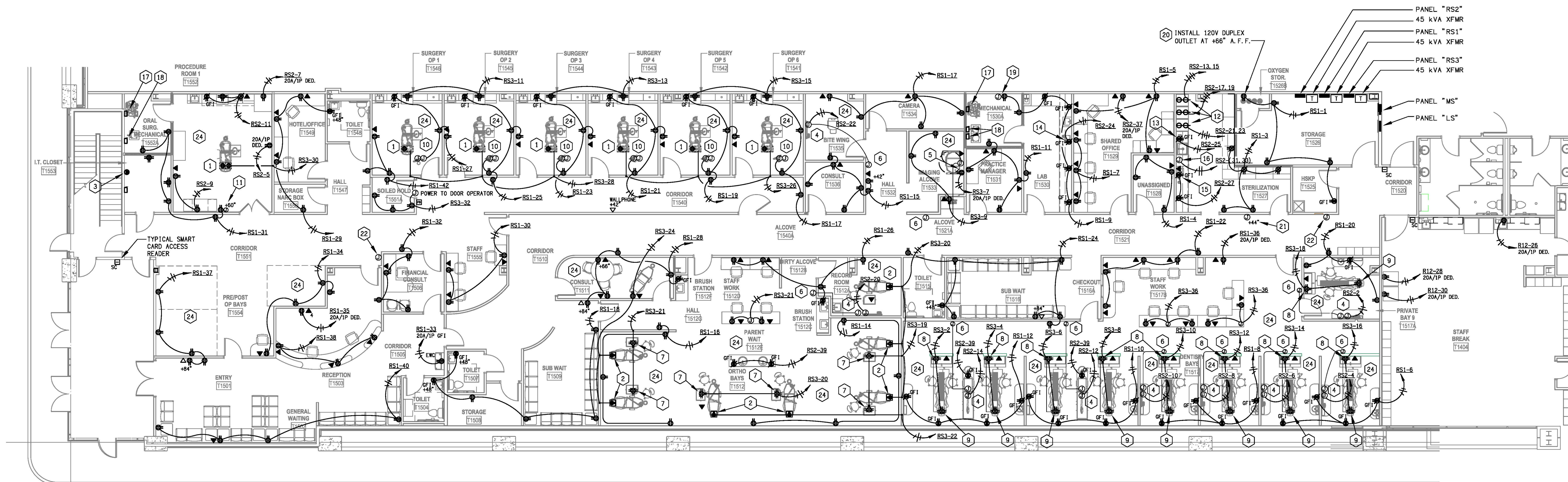
**2 FLOOR BOX SPECIFICATIONS**  
E2.1 NOT TO SCALE



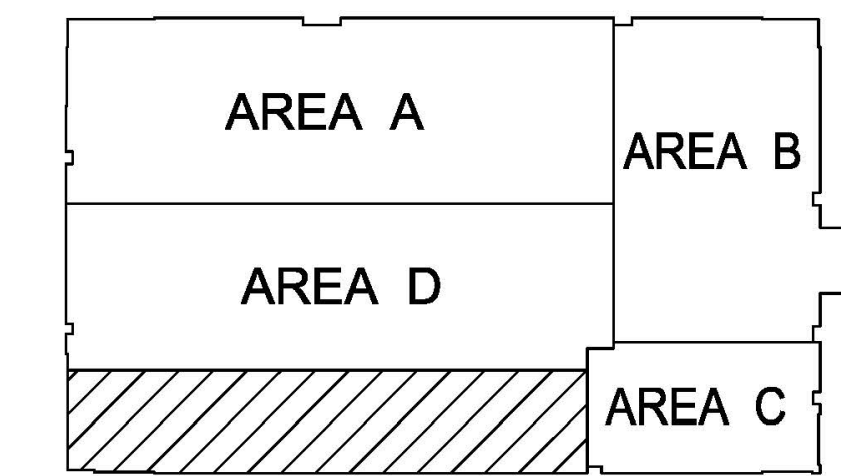
**3 ENLARGED MECH RM / I.T. CLOSET - POWER**  
E2.1 NOT TO SCALE



**4 ENLARGED MECH RM - POWER**  
E2.1 NOT TO SCALE



**1 ELECTRICAL GENERAL POWER PLAN - DENTAL SUITE**  
E2.1 SCALE: 1/8" = 1'-0"



KEY PLAN

RECORD DRAWINGS  
10-21-15



10/21/15 RECORD DRAWING  
6/02/15 REVISION 1  
5/27/15 REVISION 6  
5/27/15 REVISION 5  
4/30/15 REVISION 4  
3/18/15 CONSTRUCTION  
3/09/15 SEE DOCUMENTS  
2/25/15 BOX DOCUMENTS  
1/24/14 OWNER REVIEW  
10/20/14 PRELIM  
10/14/14 OWNER REVIEW  
10/09/14 OWNER REVIEW MTG  
DATE DESCRIPTION



UK HEALTHCARE  
TURFLAND CLINIC  
LEXINGTON, KENTUCKY  
**DENTAL SUITE - POWER PLAN**

JOB NUMBER SHEET NUMBER  
14-360 E2.1

**LOW VOLTAGE SYSTEMS DEVICE LEGEND**

- SECURITY ACCESS SYSTEM CLOSED CIRCUIT TV CAMERA
- SECURITY ACCESS SYSTEM DOOR BUZZER
- SECURITY ACCESS SYSTEM CARD SWIPE; SC DENOTES SMART CARD
- SECURITY ACCESS SYSTEM CLOSED CIRCUIT TV MONITOR
- SECURITY ACCESS SYSTEM DOOR LATCH RELEASE
- WIRELESS ACCESS POINT - 4 11/16" x 4 11/16" x 2 1/8" OUTLET BOX (STEEL CITY PART #72171-1 AND A SINGLE GANG PLASTER RING 72-C-13 FOR CATEGORY 6 CABLE TERMINATION) WITH A CAT 6 CABLE TERMINATED IN DEVICE JACK AT BOX LOCATION.
- DATA/TELECOM OUTLET BOX - 4 11/16" x 4 11/16" x 2 1/8" OUTLET BOX (STEEL CITY PART #72171-1 AND A SINGLE GANG PLASTER RING 72-C-13 FOR CATEGORY 6 CABLE TERMINATION) WITH A 1" CONDUIT STUBBED UP ABOVE AN ACCESSIBLE CEILING WITH TWO (2) CAT 6 CABLES PULLED TO EACH BOX FROM I. T. ROOM.
- DATA/TELECOM OUTLET BOX - 4 11/16" x 4 11/16" x 2 1/8" OUTLET BOX (STEEL CITY PART #72171-1 AND A SINGLE GANG PLASTER RING 72-C-13 FOR CATEGORY 6 CABLE TERMINATION) WITH ONE (1) CAT 6 CABLE PULLED TO EACH BOX FROM I. T. ROOM.

**FIRE ALARM SYSTEM DEVICE LEGEND**

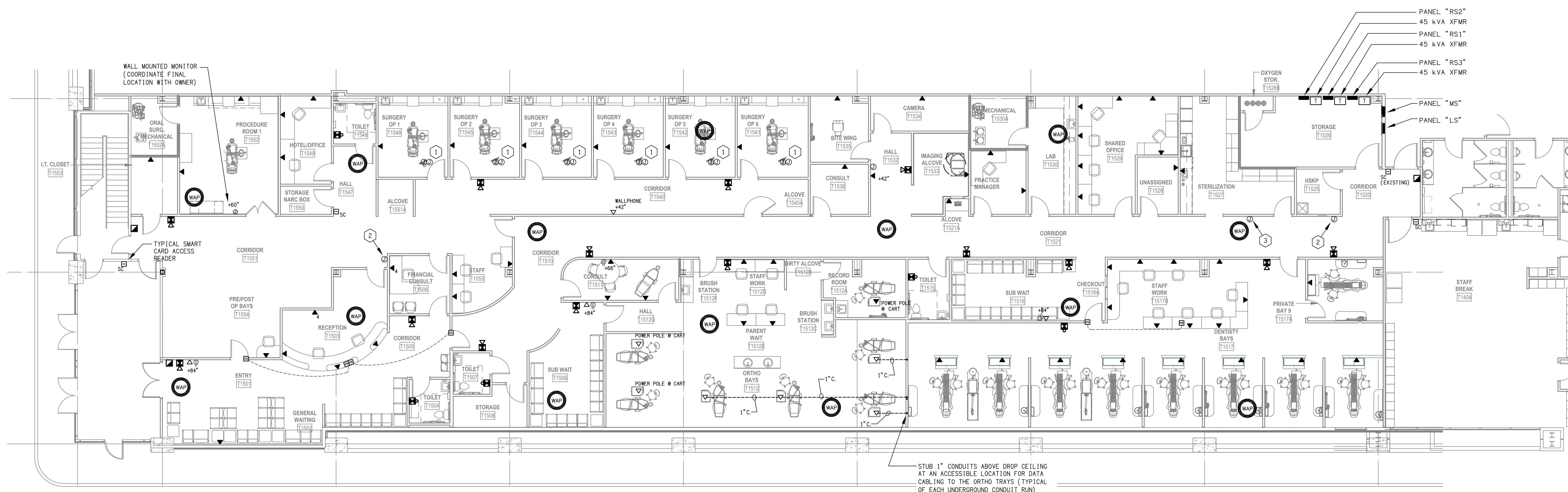
- FIRE ALARM SYSTEM AUDIBLE SPEAKER/STROBE NOTIFICATION APPLIANCE
- FIRE ALARM SYSTEM VISUAL ONLY STROBE NOTIFICATION APPLIANCE
- FIRE ALARM SYSTEM MANUAL PULL STATION
- DUCT MOUNTED, PHOTOELECTRIC, ADDRESSABLE SMOKE DETECTOR
- CEILING MOUNTED, PHOTOELECTRIC, ADDRESSABLE SMOKE DETECTOR
- FIRE SUPPRESSION SYSTEM TAMPER SWITCH
- FIRE SUPPRESSION SYSTEM FLOW SWITCH
- FIRE ALARM REMOTE ANNUNCIATOR
- FIRE ALARM SYSTEM CONTROL PANEL

**FIRE ALARM SYSTEM GENERAL NOTES:**

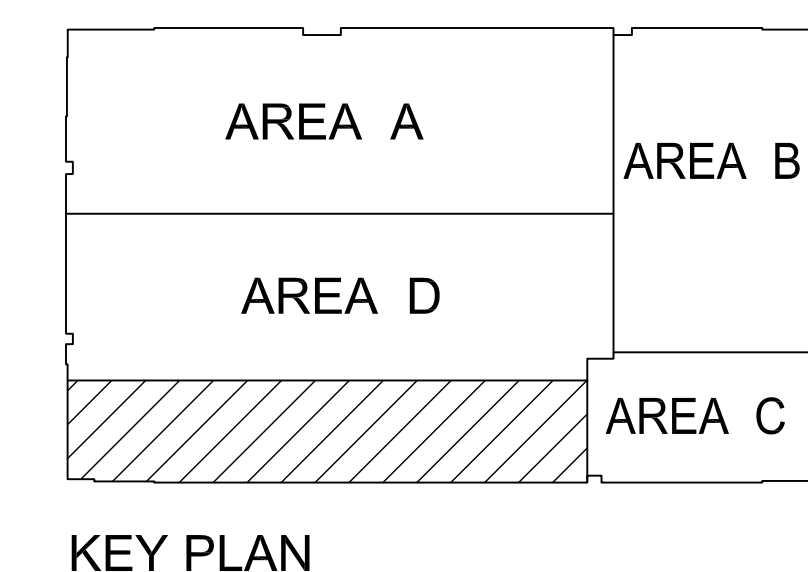
1. MOUNT ALL VISUAL UNITS AT 80" TO 92" A. F. F.
2. MOUNT ALL MANUAL PULL STATIONS WITHIN 5' OF DOORWAYS AND BETWEEN 42" AND 48" TO CENTER OF DEVICE ABOVE FINISHED FLOOR. MEASUREMENT TO BE VERTICAL.
3. ALL WIRING SHALL BE IN ACCORDANCE WITH NFPA 70 (NATIONAL ELECTRIC CODE) ARTICLE 760 AND WITH NFPA 72.
4. IF A REMOTE DIALER IS USED WITH THIS ALARM SYSTEM THE CONTRACTOR SHALL PULL IN THE NECESSARY CABLE FROM THE FIRE ALARM PANEL, TO THE DIALER, TO THE PHONE ROOM OR BOARD, AS DIRECTED BY NEWTECH SYSTEMS.
5. CONTRACTOR SHALL CHECK ALL RUNS OF CABLE FOR SHORTS OR GROUND, FOR OPEN WIRING AND SHALL INSTALL AND CHECK FOR ALL RESISTORS TO BE IN PLACE.
6. 120 VOLT POWER FOR THE FIRE ALARM PANEL SHALL BE IN A SEPARATE CONDUIT AND SHALL BE A DEDICATED BRANCH CIRCUIT PER NFPA 72 1-S. 2. 8. 2
7. CONTRACTOR SHALL PROTECT SMOKE DETECTORS FROM THE ENTRANCE OF DUST OR DIRT.
8. PER NFPA, DETECTORS SHOULD NOT BE LOCATED IN A DIRECT AIR-FLOW AND NO CLOSER THAN 3 FT. (900MM) FROM AN AIR SUPPLY DIFFUSER OR RETURN OPENING.
9. PER NFPA 1999 4.4.3.2.2, VISIBLE APPLIANCES SHALL BE NO MORE THAN 15 FT. FROM THE END OF THE CORRIDOR WITH A SEPARATION NO GREATER THAN 100 FT. BETWEEN APPLIANCES. ANY INTERRUPTION OF THE CONCENTRATED VIEWING PATH SUCH AS FIRE DOORS OR ELEVATION CHANGE, THE AREA SHALL BE CONSIDERED AS A SEPARATE CORRIDOR.
10. THE DUCT SMOKE DETECTORS SHALL BE LOCATED IN THE RETURN SIDE PER THE 2000 INTERNATIONAL MECHANICAL CODE.
11. PER NFPA, ELEVATOR CONTROL MODULES MUST BE WITHIN 36" OF THE ELEVATOR CONTROLLER.
12. WHEN APPLICABLE, MONITORING TO BE PROVIDED BY EMERGENCY 24 HOUR, UL LISTED MONITORING SERVICE.
13. CEILING MOUNT SMOKE DETECTORS INSTALLED FOR DOOR RELEASE SERVICE SHALL BE LOCATED WITHIN 5 FT ON EITHER SIDE OF THE DOORWAY.

**LOW VOLTAGE SYSTEMS TAGGED NOTES:**

1. CEILING MOUNTED MONITOR - PROVIDE (2) SINGLE-GANG BOXES ABOVE CEILING AT EACH MONITOR LOCATION. ONE BOX IS TO BE USED FOR 120V POWER AND THE OTHER BOX IS TO BE USED FOR VIDEO CABLE CONNECTIONS.
2. REMOTE AIR/WATER/VACUUM CONTROL PANEL - E. C. TO WIRE 18/3 LV CABLES BETWEEN PANEL LOCATION AND EACH AIR/WATER/VACUUM COMPONENT. MOUNT RECESSED JUNCTION BOX AT +60" A. F. F. FOR CABLE TERMINATION. CONTROL PANEL PROVIDED BY DENTAL EQUIPMENT PROVIDER.
3. N2O-O2 SYSTEM ALARM - PROVIDE A 2-GANG JUNCTION BOX WITH MUD RING (PROVIDED BY MANUFACTURER). MOUNT AT 44" A. F. F. TO MIDDLE OF J-BOX. RUN 1" CONDUIT FROM BOX TO 3" ABOVE CEILING. E. C. TO INSTALL MANUFACTURER PROVIDED LV CABLE BETWEEN ALARM PANEL AND NITROUS OXIDE MANIFOLD. COIL 6-8" OF CABLE WITHIN BOX FOR FINAL CONNECTIONS.



**1 LOW VOLTAGE SYSTEMS PLAN - DENTAL SUITE**  
E3.1 SCALE: 1/8" = 1'-0"



RECORD DRAWINGS  
10-21-15

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DATE	DESCRIPTION
10/21/15	RECORD DRAWING
9/11/15	REVISION 9
5/06/15	REVISION 5
4/20/15	REVISION 4
3/18/15	CONSTRUCTION
2/25/15	BOX DOCUMENTS
12/17/14	REVISION 3
11/24/14	OWNER REVIEW
10/20/14	PRICING

PANELBOARD MS (Existing)		PHASE	3	MOUNTING	Recessed	LOCATION	Dental Suite Storage
WIRE		WIRE	4	A	AIC 25K	MAIN BREAKER	M.L.O.
VOLTAGE		GROUND	1	1	MAIN 400A	Sub Fed from MSB (150' dist)	
CKT #	Cond	WIRE / Cond	LOAD SERVED	POLE VA	LOAD PER PHASE VA	LOAD SERVED	Wire / Cond
1	15/0	---	---	1	0	---	2011 2
2	---	---	---	1	0	---	2011 4
3	---	---	---	1	0	---	2011 6
4	---	---	---	1	0	---	2011 8
5	---	---	---	1	0	---	2011 10
6	---	---	---	1	0	---	2011 12
7	15/0	---	---	1	0	---	2011 14
8	---	---	---	1	0	---	2011 16
9	---	---	---	1	0	---	2011 18
10	---	---	---	1	0	---	2011 20
11	---	---	---	1	0	---	2011 22
12	---	---	---	1	0	---	2011 24
13	15/0 #12.34"	---	HP-1076 (4 TON)	13	2603	4011	#12.34" 15/0 14
14	---	---	---	13	2603	4011	15/0 16
15	---	---	---	13	2603	4011	15/0 18
16	---	---	---	13	2603	4011	15/0 20
17	---	---	---	13	2603	4011	15/0 22
18	---	---	---	13	2603	4011	15/0 24
19	15/0 #12.34"	---	HP-1077 (2 TON)	19	1408	4011	#12.34" 15/0 26
20	---	---	---	19	1408	4011	15/0 28
21	---	---	---	19	1408	4011	15/0 30
22	---	---	---	19	1408	4011	15/0 32
23	---	---	---	19	1408	4011	15/0 34
24	---	---	---	19	1408	4011	15/0 36
25	7/0 #12.34"	45 KVA XFMR FOR PANEL RS2	25	17080	28943	11705	45 KVA XFMR FOR PANEL RS1 #1.1" 7/0 26
26	---	---	---	25	17080	28943	11705 28
27	---	---	---	25	17080	28943	11705 30
28	---	---	---	25	17080	28943	11705 32
29	---	---	---	25	17080	28943	11705 34
30	---	---	---	25	17080	28943	11705 36
31	15/0 #12.34"	---	HP-1079 (2 TON)	31	1408	22442	4011 42
32	---	---	---	31	1408	22442	14798 40
33	---	---	---	31	1408	22442	14798 42
34	---	---	---	31	1408	22442	14798 44
35	---	---	---	31	1408	22442	14798 46
36	---	---	---	31	1408	22442	14798 48
37	15/0 #12.34"	---	HP-1080 (4 TON)	37	2603	4404	#12.34" 2011 38
38	---	---	---	37	2603	4404	#12.34" 2011 40
39	---	---	---	37	2603	4404	#12.34" 2011 42
40	---	---	---	37	2603	4404	#12.34" 2011 44
41	---	---	---	37	2603	4404	#12.34" 2011 46
42	---	---	---	37	2603	4404	#12.34" 2011 48
Sub-feed Loads:		16652	13887	12004	* ROUTE THIS CIRCUIT THROUGH LIGHTING CONTACTOR		
TOTAL CONNECTED LOAD:		214,730	WATTS	250	** ROUTE THIS CIRCUIT THROUGH HVAC TIME CLOCK		
			Amps		*** GFI RATED CIRCUIT BREAKER		

PANELBOARD LS (Existing)		PHASE	3	MOUNTING	Recessed	LOCATION	Dental Suite Storage
WIRE		WIRE	4	A	AIC 25K	MAIN BREAKER	M.L.O.
VOLTAGE		GROUND	1	1	MAIN 400A	Sub Fed from Panel MS	
CKT #	Cond	WIRE / Cond	LOAD SERVED	POLE VA	LOAD PER PHASE VA	LOAD SERVED	Wire / Cond
1	2011	#12.34"	LTG: Dental Suite	1	1804	4447	2843 2
2	2011	#12.34"	LTG: Dental Suite	3	2269	2899	600 4
3	2011	#12.34"	LTG: Dental Suite	7	2304	2924	600 6
4	2011	#12.34"	LTG: Dental Suite	7	1945	2745	800 8
5	2011	#12.34"	LTG: Dental Suite	9	878	1878	1000 10
6	2011	#12.34"	LTG: Dental Suite	9	878	1878	1000 12
7	2011	#12.34"	SPARE ONLY	13	0	0	14
8	2011	#12.34"	SPACE ONLY	15	0	0	16
9	2011	#12.34"	SPACE ONLY	17	0	0	18
10	2011	#12.34"	SPACE ONLY	19	0	0	20
11	2011	#12.34"	SPACE ONLY	21	0	0	22
12	2011	#12.34"	SPACE ONLY	23	0	0	24
13	2011	#12.34"	SPACE ONLY	25	0	0	26
14	2011	#12.34"	SPACE ONLY	27	0	0	28
15	2011	#12.34"	SPACE ONLY	29	0	0	30
16	2011	#12.34"	SPACE ONLY	31	0	0	32
17	2011	#12.34"	SPACE ONLY	33	0	0	34
18	2011	#12.34"	SPACE ONLY	35	0	0	36
19	2011	#12.34"	SPACE ONLY	37	8860	9080	8860 38
20	2011	#12.34"	SPACE ONLY	39	9080	9080	9080 40
21	2011	#12.34"	SPACE ONLY	41	9080	9080	9080 42
TOTAL CONNECTED LOAD:		41,913	WATTS	50	* ROUTE THIS CIRCUIT THROUGH LIGHTING CONTACTOR		
			Amps		** ROUTE THIS CIRCUIT THROUGH HVAC TIME CLOCK		
					*** GFI RATED CIRCUIT BREAKER		

PANELBOARD RS1 (Existing)		PHASE	3	MOUNTING	Recessed	LOCATION	Dental Suite Storage
WIRE		WIRE	4	A	AIC 10K	MAIN BREAKER	150A/3P
VOLTAGE		GROUND	1	1	MAIN 225A	Feed from Transformer T8	
CKT #	Cond	WIRE / Cond	LOAD SERVED	POLE VA	LOAD PER PHASE VA	LOAD SERVED	Wire / Cond
1	2011	#12.34"	RCPTS: Storage T1526	1	900	2315	1415 2
2	2011	#12.34"	RCPTS: Sterilization T1527	3	900	1620	1415 4
3	2011	#12.34"	RCPTS: Shared Office T1529	5	720	1440	1415 6
4	2011	#12.34"	RCPTS: Shared Office T1529	7	540	1080	1415 8
5	2011	#12.34"	RCPTS: Lab T1530	9	900	1620	1415 10
6	2011	#12.34"	RCPTS: Practice Mgr T1531	11	900	1620	1415 12
7	2011	#12.34"	RCPTS: Camera / Bite Wing	13	900	1620	1415 14
8	2011	#12.34"	RCPTS: Consult / Bite Wing	15	1080	1800	1415 16
9	2011	#12.34"	RCPTS: Surgery Op 6	17	720	1440	1415 18
10	2011	#12.34"	RCPTS: Surgery Op 5	19	1150	1870	1415 20
11	2011	#12.34"	RCPTS: Surgery Op 4	21	970	1970	1415 22
12	2011	#12.34"	RCPTS: Surgery Op 3	23	970	2230	1415 24
13	2011	#12.34"	RCPTS: Surgery Op 2	25	1150	1260	1415 26
14	2011	#12.34"	RCPTS: Surgery Op 1	27	1300	2230	1415 28
15	2011	#12.34"	RCPTS: Hotel/Office T1548	29	900	1440	1415 30
16	2011	#12.34"	RCPTS: Procedure Rm / Mech	31	720	1620	1415 32
17	2011	#12.34"	RCPTS: EVIC	33	600	1520	1415 34
18	2011	#12.34"	Ded. RCPT: Reception Copy	35	1200	1620	1415 36
19	2011	#12.34"	Ded. RCPT: Staff Work Copier	37	1200	1740	1415 38
20	2011	#12.34"	QUAD. I.T. Room	39	360	900	1415 40
21	2011	#12.34"	QUAD. I.T. Room	41	360	1080	1415 42
TOTAL CONNECTED LOAD:		34,895	WATTS	87	* ROUTE THIS CIRCUIT THROUGH LIGHTING CONTACTOR		
			Amps		** ROUTE THIS CIRCUIT THROUGH HVAC TIME CLOCK		
					*** GFI RATED CIRCUIT BREAKER		

PANELBOARD RS2		PHASE	3	MOUNTING	Recessed	LOCATION	Dental Suite Storage
WIRE		WIRE	4	A	AIC 10K	MAIN BREAKER	150A/3P
VOLTAGE		GROUND	1	1	MAIN 225A	Feed from Transformer T8	
CKT #	Cond	WIRE / Cond	LOAD SERVED	POLE VA	LOAD PER PHASE VA	LOAD SERVED	Wire / Cond
1	2011	#12.34"	SPARE	1	984	984	2
2	2011	#12.34"	SPARE	3	984	984	4
3	2011	#12.34"	SPARE	5	1200	2184	6
4	2011	#12.34"	Ded. RCPT: Procedure Rm 1	7	360	1344	8
5	2011	#12.34"	RCPTS: Procedure Rm 1	9	360	1344	10
6	2011	#12.34"	RCPTS: Procedure Rm 1	11	1200	2184	12
7	2011	#12.34"	Ventilator - Proc. Rm 1	13	1425	2409	14
8	2011	#12.34"	Sterilizer: Sterilization T1527	15	1425	2409	16
9	2011	#12.34"	Sterilizer: Sterilization T1527	17	1400	1400	18
10	2011	#12.34"	Sterilizer: Sterilization T1527	19	1425	2409	20
11	2011	#12.34"	Sterilizer: Sterilization T1527	21	1400	3284	22
12	2011	#12.34"	Sterilizer: Sterilization T1527	23	1425	2285	24
13	2011	#12.34"	Kiss Quilts/Care: Ster. T1527	25	1800	3241	26
14	2011	#12.34"	Countertop RCPTS: Ster. T1527	27	1800	3241	28
15	2011	#12.34"	SPARE	29	1441	1441	30
16	2011	#12.34"	Instrument Washer	31	1560	3001	32
17	2011	#12.34"	SPARE	33	1560	3001	34
18	2011	#12.34"	SPARE	35	1441	1441	36
19	2011	#12.34"	Ded. RCPT: Shared Office Copier	37	1200	2500	38
20	2011	#12.34"	RCPTS: General Waiting T1502	39	720	3220	40
21	2011	#12.34"	SPARE	41	2600	2500	42
TOTAL CONNECTED LOAD:		46,102	WATTS	128	* ROUTE THIS CIRCUIT THROUGH LIGHTING CONTACTOR		
			Amps		** ROUTE THIS CIRCUIT THROUGH HVAC TIME CLOCK		
					*** GFI RATED CIRCUIT BREAKER		

PANELBOARD RS3		PHASE	3	MOUNTING	Recessed	LOCATION	Dental Suite Storage
WIRE		WIRE	4	A	AIC 10K	MAIN BREAKER	150A/3P
VOLTAGE		GROUND	1	1	MAIN 225A	Feed from Transformer T8	
CKT #	Cond	WIRE / Cond	LOAD SERVED	POLE VA	LOAD PER PHASE VA	LOAD SERVED	Wire / Cond
1	2011	#12.34"	QUAD RCPT: Ortho Cart	1	720	1440	2
2	2011	#12.34"	QUAD RCPT: Ortho Cart	3	720	1440	4
3	2011	#12.34"	QUAD RCPT: Ortho Cart	5	720	1440	6
4	2011	#12.34"	Cephalometric X-Ray Unit	7	1800	2520	8
5	2011	#12.34"	RCPTS: Imaging Alone	9	720	1440	10
6	2011	#12.34"	QUAD RCPT: Surg Op 5-6	11	720	1440	12
7	2011	#12.34"	QUAD RCPT: Surg Op 3-4	13	720	1440	14
8	2011	#12.34"	QUAD RCPT: Surg Op 1-2	15	720	1440	16
9	2011	#12.34"	System Furniture Power Pole	17	720	1440	18
10	2011	#12.34"	System Furniture Power Pole	19	720	2220	20
11	2011	#12.34"	System Furniture Power Pole	21	720	1720	22
12	2011	#12.34"	UPS	23	5824	7324	24
13	2011	#12.34"	SPARE	25	5824	6824	26
14	2011	#12.34"	SPARE	27	5824	1500	28
15	2011	#12.34"	SPARE	29	500	500	30
16	2011	#12.34"	Air Compressor - Mech T1530a	31	1800	2340	32
17	2011	#12.34"	RCPTS: Solder Head T1				