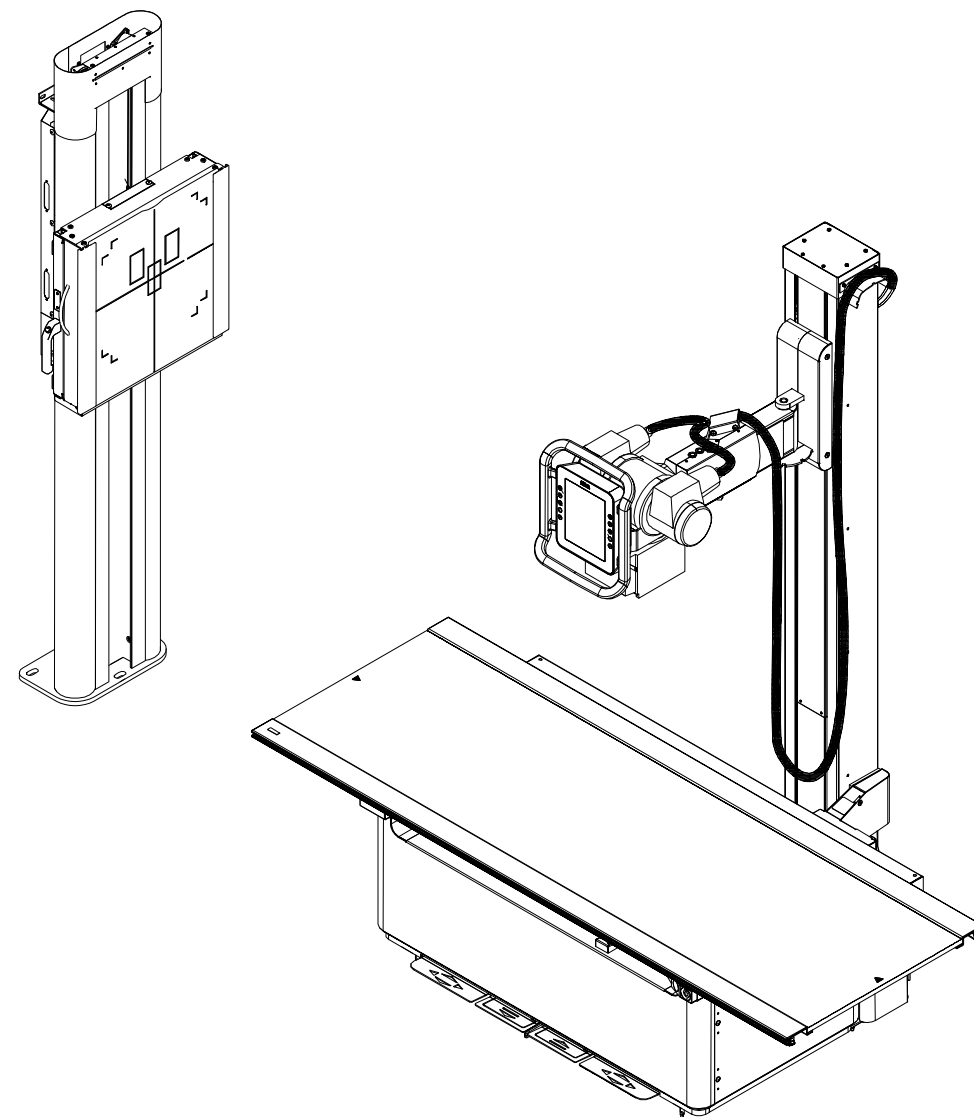




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PLANNING BY

FACILITY

EQUIPMENT

DRAWN BY:

SCALE:

DAVE HENRY

1/4"=1'-0"

DATE:

01/12/2017

FILE NAME:

DR400FINALV4

SHEET:

A-1



GAMMA TECH, INC.

129 Wild Berry Lane
Hampstead, NC 28443
mail@gammatech.net

TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

DR 400
DIGITAL HIGH FREQUENCY
RADIOGRAPHIC SYSTEM SUITE

SHEET LEGEND	
SHEET NUMBER	SHEET DESCRIPTION
A1	COVER SHEET.
A2	SHEET LEGEND, RECEIPT OF DRAWINGS, REVISIONS HISTORY, RECOMMENDED VENDORS, ELECTRONIC TRANSFER AGREEMENT.
A3	GENERAL NOTES, ARCHITECTURAL NOTES AND SUPPORT NOTES, SUPPLEMENTAL NOTES.
A4	PROPOSED ROOM LAYOUT.
B1	PROPOSED EQUIPMENT LAYOUT.
D1	EQUIPMENT DETAILS. *PENDING
D2	EQUIPMENT DETAILS. *PENDING
E1	ELECTRICAL LAYOUT PLAN VIEW, TERMINAL SCHEDULE, ELECTRICAL TAG DESCRIPTIONS.
E2	ELECTRICAL BLOCK DIAGRAM, INCOMING WIRE SIZE NOTES, CONDUIT & WIRING SCHEDULE.
E3	ELECTRICAL ELEVATIONS.
E4	CONDUIT LINE DIAGRAM.
E5	TYPICAL TROUGH ELEVATION, JUNCTION BOX COVERPLATES DETAIL, WALL DUCT PART LIST.
E6	DOOR SWITCH / WARNING LIGHT DETAIL AND NOTES.
E7	ELECTRICAL NOTES.

REVISION HISTORY				
SHEET NUMBER	REV	REVISION DESCRIPTION	REP	DATE
	1			
	2			
	3			

RECEIPT OF FINAL DRAWINGS

THIS SIGNATURE REPRESENTS RECEIPT OF THIS SET OF FINAL PLANS. IT IS UNDERSTOOD THAT ANY DEVIATION FROM THESE DRAWINGS, DETAILS, AND SPECIFICATIONS, MAY ENCROACH UPON THE EQUIPMENT OPERATION, SERVICEABILITY, OR SAFETY GUIDELINES. ALSO, I AM AWARE THAT ANY CHANGES MADE AFTER THIS DATE COULD RESULT IN ADDITIONAL EXPENSES BEING INCURRED.

NAME: _____ DATE: _____

ELECTRONIC FILE TRANSFER AGREEMENT

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All sheets included shall be considered a complete set of specification plans and may not be separated for any purpose. Any information contained in this set shall NOT be applied to other projects.

TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

DRAWN BY:
DAVE HENRY
DATE:
01/12/2017
FILE NAME:
DR400FINALV4

SCALE:
NONE
SHEET:

A-2

ARCHITECTURAL NOTES

1. GAMMA TECH'S SET OF DRAWINGS ARE FOR THE PURPOSE OF A LAYOUT PLAN ONLY - NOT FOR CONSTRUCTION. THE EQUIPMENT REPRESENTATIVES OR THEIR DESIGNER ARE NOT RESPONSIBLE OR LIABLE FOR ANY ERRORS OR OMISSIONS.

GAMMA TECH'S DRAWINGS ARE FOR THE BENEFIT OF PURCHASER'S ARCHITECT OF CHOICE OR PROJECT MANAGER WHO SHALL ENSURE THAT ALL CONSTRUCTION COMPLIES WITH BUILDING CODES AND REGULATIONS THAT HAVE JURISDICTION. THOSE MAKING USE OF OR RELYING ON THIS MATERIAL ASSUMES ALL RISKS AND LIABILITY ARISING FROM SUCH USE OR RELIANCE.

GAMMA TECH'S DRAWINGS ARE INTENDED TO PROVIDE THE CONSTRUCTION PARTICIPANTS WITH SPECIFICATION AND CONCEPTUAL INFORMATION ONLY. EVERY EFFORT HAS BEEN MADE TO CONFORM DETAILS TO THE ACTUAL EQUIPMENT EXPECTED TO BE INSTALLED. THE DESIGN TEAM SHALL EXTRAPOLATE PERTINENT INFORMATION FROM THIS LAYOUT AND INCORPORATE INTO A WORKING SET OF CONSTRUCTION DRAWINGS OBSERVING ALL PREVAILING CODES.

GAMMA TECH'S FLOOR PLAN WAS SCALED FROM PRINTS DRAWN BY OTHERS. ALL CONSTRUCTION PARTICIPANTS SHALL VERIFY AND ADJUST DIMENSIONS. CRITICAL DIMENSIONAL RELATIONSHIPS HAVE BEEN SUPPLIED. IT IS THE RESPONSIBILITY OF ALL CONSTRUCTION PARTICIPANTS TO ADHERE TO THESE DISTANCES. ALL DIMENSIONS ARE FROM FINISHED SURFACES UNLESS OTHERWISE NOTED. ARCHITECT SHALL VERIFY THAT ALL DOOR AND PASSAGEWAY SIZES ARE ADEQUATE FOR TRANSPORTING EQUIPMENT FROM EXTERIOR OF BUILDING INTO RESPECTIVE ROOMS. RECOMMEND COVERING OR REMOVING THRESHOLDS.

2. ALL SUPPLY DIFFUSERS SHALL NOT CAUSE DIRECT AIR CURRENTS ON PATIENTS OR OPERATORS. RECOMMEND 2' x 4' LAY-IN CEILING PANELS OF MATERIAL ACCEPTABLE TO CUSTOMER AND APPROVED BY PREVAILING CODES. LIGHTING FIXTURES, VENTS, ETC. TO BE FLUSH WITH FINISHED CEILING.

3. ARCHITECT AND ENGINEERS SHALL USE EXISTING ELECTRICAL AND STRUCTURAL ITEMS WHEN FEASIBLE.

4. ALL WORK, EXCEPT INSTALLATION OF DIAGNOSTIC IMAGING EQUIPMENT, IS TO BE DONE BY THOSE OTHER THAN THE EQUIPMENT REPRESENTATIVES.

5. SOME CONVENIENCES MAY BE REQUIRED BY CODE OR DESIRED BY CUSTOMER IN EACH RESPECTIVE ROOM (i.e., STORAGE, CABINETS, SINKS AND COUNTERS, ETC.) PROJECT MANAGER SHALL CONSULT WITH FACILITY REGARDING DESIRED CONVENIENCES.

6. THE SUPPLY VOLTAGE MUST REMAIN RELATIVELY STABLE. ELECTRICAL POWER FOR X-RAY EQUIPMENT REQUIRES VERY LARGE CURRENTS FOR EXTREMELY SHORT TIMES. REFER TO ELECTRICAL NOTES. GROUNDING MUST CONFORM TO THE CURRENT CODE REQUIREMENTS.

7. VIEWING WINDOW TO BE 1/16" LEAD EQUIVALENT. RECOMMEND LARGE VIEWING WINDOWS TO BE TILTED 7° TO HELP ELIMINATE GLARE. IF TILTED 7° VIEWING WINDOW IS ACRYLIC, PROVIDE A SINGLE SHEET OF PLATE GLASS ON BOTH SIDES TO HELP PREVENT SCRATCHING.

8. NO ATTENTION HAS BEEN GIVEN TO SPECIFIC PLUMBING OR HVAC CONSIDERATIONS AFFECTED BY THE SCOPE OF THIS WORK. MECHANICAL ENGINEERING DRAWINGS TO BE DONE BY OTHERS.

ELECTRICAL AND MECHANICAL DESIGNERS SHALL BE REQUIRED TO REVIEW THESE DRAWINGS TO HELP THEM GAIN AN UNDERSTANDING OF THE CONCEPT OF THIS WORK AND TO HELP MINIMIZE CONFLICTING CONSTRUCTION EFFORTS. ELECTRICAL ENGINEERING DRAWINGS TO BE DONE BY OTHERS.

NO ATTENTION HAS BEEN GIVEN TO SPECIFIC BUILDING STRUCTURAL INTEGRITY. A PROFESSIONAL STRUCTURAL ENGINEER SHALL INSPECT FIELD CONDITIONS TO ENSURE THAT THE FACILITY SUPPORT STRUCTURE (e.g. WALLS, FLOORS, CEILINGS) CAN PROVIDE ADEQUATE SUPPORT FOR THE DIAGNOSTIC IMAGING EQUIPMENT DESCRIBED IN THE 'EQUIPMENT SCHEDULE'. STRUCTURAL ENGINEERING DRAWINGS TO BE DONE BY OTHERS.

NO ATTENTION HAS BEEN GIVEN TO SPECIFIC SEISMIC ANCHORAGE CONSIDERATIONS AFFECTED BY THE SCOPE OF THIS WORK. ALL EXPENSES ASSOCIATED WITH SEISMIC TESTING AND COMPLIANCE SHALL BE THE RESPONSIBILITY OF THE FACILITY (END USER) OR THEIR RESPECTIVE CONTRACTORS OF CHOICE. IT IS STRONGLY RECOMMENDED THAT THE CUSTOMER CONSULTS WITH A PROFESSIONAL STRUCTURAL ENGINEER FAMILIAR WITH ALL PREVAILING SEISMIC REQUIREMENTS. SEISMIC ENGINEERING DRAWINGS TO BE DONE BY OTHERS.

9. THE EQUIPMENT REPRESENTATIVES MUST APPROVE DEVIATION FROM THESE PLANS IN WRITING PRIOR TO ANY CHANGES.

GENERAL NOTES

AT THEIR EXPENSE, THE CUSTOMER AND/OR THE CONTRACTOR WILL BE EXPECTED TO PROVIDE THE FOLLOWING (IF REQUIRED) PRIOR TO X-RAY EQUIPMENT DELIVERY AND INSTALLATION:

1. ANY ROOM REMODELING AND CONSTRUCTION - FLOOR CEILING AND WALLS MUST BE FINISHED BEFORE EQUIPMENT INSTALLATION CAN BEGIN.

2. INSTALLATION OF PROPER SPECIFIED POWER.

3. INSTALLATION OF LOAD CENTERS, BRANCH PANELS, CIRCUIT BREAKERS, JUNCTION BOXES, CONDUIT AND CABLE TRAYS AS SPECIFIED.

4. INTERCONNECTING WIRE AND CABLE AS SPECIFIED.

5. INSTALLATION OF WALL AND CEILING SUPPORT AND SUSPENSION FRAME WORK AS SPECIFIED.

6. FOR THE MOST PART CONVENIENCE OUTLETS ARE TO BE SPECIFIED BY OTHERS. OUTLETS REQUIRED BY EQUIPMENT WILL BE SPECIFIED. FOR EASE IN EQUIPMENT SERVICE, A MINIMUM NUMBER OF OUTLETS WILL BE DEPICTED.

7. ANY CEILING MOUNTED LIGHT FIXTURES, DIFFUSERS, VENTS, SMOKE/FIRE DETECTORS, SPRINKLER HEADS, HALON NOZZLES, ETC. SHALL NOT EXTEND MORE THAN 1/2" BELOW THE FINISHED CEILING.

8. ANY PLUMBING REQUIREMENTS.

9. INSTALLATION OF OPTIONAL WARNING LIGHT AND/OR DOOR INTERLOCK SWITCH AT ENTRANCE DOORS OF X-RAY ROOM TO BE COORDINATED WITH FACILITY, EQUIPMENT INSTALLERS, AND DESIGN TEAM.

10. ANY AIR CONDITIONING REQUIREMENTS. (HVAC - HEATING, VENTILATION, AIR CONDITIONING AND HUMIDIFICATION)

11. ALL ANCILLARY AND ACCESSORY ITEMS.

12. RADIATION PROTECTION REQUIREMENTS: THESE MUST BE SPECIFIED BY A QUALIFIED RADIATION PHYSICIST.

13. SHIELDING TESTING (LEAD OR EQUIVALENT): AFTER X-RAY EQUIPMENT HAS BEEN INSTALLED AND PLACED IN OPERATING CONDITION, THE SHIELDING SHALL BE TESTED, AT THE OWNER'S EXPENSE, BY A CERTIFIED HEALTH PHYSICIST.

14. THE DECISION OF ACCEPTABILITY BY A HEALTH PHYSICIST SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THEREFORE, THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS OR REPLACEMENT OF ALL DEFECTIVE WORK (INCLUDING WORK SUBSEQUENTLY AFFECTED) AND ADDITIONAL TESTS REQUIRED TO MEET THE SATISFACTION OF THE HEALTH PHYSICIST.

15. LIABILITY: THE EQUIPMENT REPRESENTATIVES OR THEIR PLANNER ASSUME NO RESPONSIBILITY FOR ANY CONSTRUCTION COSTS, WHETHER OR NOT RELATED TO THE INSTALLATION OF X-RAY EQUIPMENT OR SITE PLANNING DOCUMENTS. NO WORK MAY BE PERFORMED OR MATERIALS FURNISHED AT THEIR EXPENSE UNLESS AUTHORIZED BY A SIGNED, FORMAL PURCHASE ORDER. ADDITIONALLY, A SITE INSPECTION SHALL BE CONDUCTED BY THE EQUIPMENT REPRESENTATIVES TO CONFIRM THE SITE'S READINESS PRIOR TO X-RAY EQUIPMENT DELIVERY. THIS INSPECTION SHALL BE PERFORMED WHEN NOTIFIED OF THE CONSTRUCTION'S COMPLETION.

SUPPORT NOTES

(CONTRACTOR FURNISHED - CONTRACTOR INSTALLED)

THE EQUIPMENT REPRESENTATIVE OR THEIR DESIGNER IS IN NO WAY RESPONSIBLE FOR THE SUPPORT STRUCTURE FOR ANY OVERHEAD CEILING MOUNTED EQUIPMENT / DEVICES OR WALL MOUNTED EQUIPMENT / DEVICES. THIS IS THE RESPONSIBILITY OF THE CONSTRUCTION PARTICIPANTS.

SUPPORTS:

1. ALL UNITS THAT ARE WALL MOUNTED OR CEILING SUSPENDED ARE TO BE PROVIDED WITH SUPPORTS STRUCTURES WHERE NECESSARY.

2. ALL SUPPORTS STRUCTURES ARE TO BE PROVIDED BY THE FACILITY OR THEIR CONTRACTOR.

3. WALL SUPPORTS ARE TO BE HIDDEN WITHIN WALLS WHENEVER POSSIBLE.

4. WALL SUPPORTS MAY NOT BE REQUIRED IF WALL MATERIAL IS ADEQUATE FOR THE LOADS GIVEN (i.e.,BLOCK). CONSULTATION WITH A STRUCTURAL ENGINEER IS STRONGLY RECOMMENDED.

5. ALL SURFACE MOUNTED SUPPORTS ARE TO BE PAINTED THE SAME COLOR AS THE ADJACENT SURFACE OR CONSULT WITH FACILITY REGARDING ACCENT COLORS.

SUPPLEMENTAL NOTES

ALL ITEMS LISTED BELOW ARE TO BE PROVIDED/DESIGNED BY THE ARCHITECT. THE ARCHITECT SHALL CONSULT WITH THE CUSTOMER FOR ANY ADDITIONAL INFORMATION.

1. ALL DIAGNOSTIC ROOMS INCLUDING X-RAY, MAMMO, R/F ETC... SHALL HAVE CANNED LIGHT FIXTURES AS WELL AS FLORESCENT LIGHT FIXTURES. THE CANNED LIGHT FIXTURES ARE TO BE DISTRIBUTED AROUND THE ROOM. THE CANNED LIGHT FIXTURES SHOULD BE PROVIDED WITH DIMMER CONTROLS. THE DIMMER CONTROLS SHOULD BE LOCATED NEAR THE ROOM ENTRANCES AND IN THE CONTROL AREAS.

2. IT IS RECOMMENDED THAT ALL DIAGNOSTIC ROOMS SHOULD HAVE TILE OR VINYL FLOORING.

3. THE FLOOR IN THE X-RAY AND DARKROOM MUST BE ESSENTIALLY LEVEL.TOLERANCE IS 1/8" OVER A 10'-0" SPAN.

4. TYPICALLY THE MINIMUM RECOMMENDED FINISHED CEILING HEIGHT IS 8'-4" A.F.F. UNLESS STATED OTHERWISE IN THIS DRAWING SET.

TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

DRAWN BY:
DAVE HENRY
DATE:
01/12/2017
FILE NAME:
DR400FINALV4

SCALE:
NONE
SHEET:
A-3

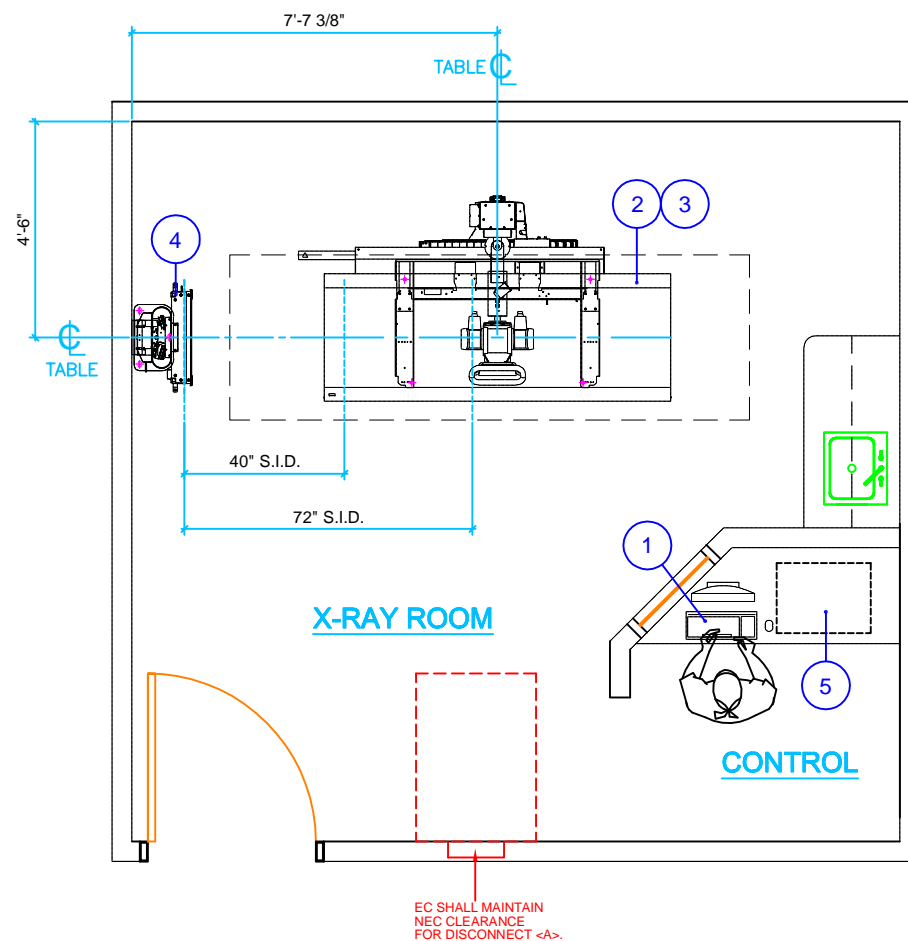


(CONTRACTOR FURNISHED - CONTRACTOR INSTALLED)

1	CONSTRUCT CONTROL BOOTH PARTITION FROM FLOOR TO CEILING WHERE SHOWN. PROVIDE ONE LEADED WINDOW AND FRAME. LOCATE WINDOW CENTER LINE 5'-0" A.F.F. CONSULT WITH A CERTIFIED RADIOLOGICAL PHYSICIST REGARDING SHIELDING REQUIREMENTS. CONSULT CUSTOMER FOR WINDOW SIZE. WORKING DRAWINGS BY ARCHITECT.
2	PROVIDE ONE 2" T x 16" H x 24" W WOOD SUPPORT BOARD HIDDEN IN WALL WHERE SHOWN. LOCATE BOARD CENTER LINE 84" A.F.F. BOARD SHALL SUPPORT 300 POUNDS PULL FORCE. REFER TO SUPPORT NOTES. PAINT BOARD THE SAME COLOR AS FINISHED WALL.
3	PROVIDE A 40" HIGH STANDING COUNTER WITH ONE 3" DIA. CABLE ACCESS HOLE THROUGH COUNTER WHERE SHOWN. BRACE COUNTER TO SUPPORT 300 POUNDS STATIC LOAD, COUNTER WILL BE USED TO SUPPORT DR SYSTEM. AREA UNDER COUNTER MUST REMAIN CLEAR FOR TRIPLET BOX. WORKING DRAWINGS BY ARCHITECT.
4	THE FLOOR IN THE X-RAY ROOM MUST BE LEVEL TO WITHIN $\pm 1/8"$ OVER A 10'-0" SPAN. THE MINIMUM RECOMMENDED FINISHED CEILING HEIGHT IS 8'-4" A.F.F.
5	PROVIDE WALL AND FLOOR PROTECTION FOR INSTALLATION AND DELIVERY OF X-RAY EQUIPMENT. THE EQUIPMENT VENDOR IS NOT RESPONSIBLE FOR DAMAGES. CONSULT WITH EQUIPMENT VENDOR FOR FURTHER INFORMATION.
6	X-RAY TABLE BASE AND WALL STAND ANCHOR HOLE LOCATION. REFER TO DETAIL SHEET <D2> FOR FURTHER INFORMATION. THE FLOOR MUST SUPPORT THE TABLE WEIGHT AND MAXIMUM PATIENT WEIGHT.
7	PROVIDE SMALL SHELF ON CONTROL BOOTH WALL TO SUPPORT THE SCU. SHELF TO BE LOCATED UNDER JUNCTION BOX <F>. CONSULT WITH EQUIPMENT INSTALLER FOR EXACT SIZE AND LOCATION.

TYPICAL ROOM LAYOUT (NOT SITE SPECIFIC)

DRAWN BY: DAVE HENRY	SCALE: 1/4"=1'-0"
DATE: 01/12/2017	SHEET: A-4
FILE NAME: DR400FINALV4	



FINAL EQUIPMENT LAYOUT PLAN

EQUIPMENT SCHEDULE				
EQUIPMENT IDENTIFICATION NUMBER				
		BTU / HOUR	WEIGHT (LBS.)	
		DESCRIPTION	DIMENSIONS (IN.)	
			W	H
1	1130	AGFA DR 400 GENERATOR CONTROL AND DR WORKSTATION PC MONITOR, KEYBOARD AND MOUSE	TYPICAL	
2		AGFA DR 400 SHF GENERATOR CABINET (LOCATED IN TABLE BASE)	INTEGRATED INSIDE TABLE	
3		*AGFA DR 400 ELEVATING 4-WAY FLOAT TOP INTEGRATED TABLE TUBESTAND LEFT HAND LOAD VERSION SHOWN	86.60	47.44
4		AGFA DR 400 STANDARD VERTICAL BUCKY STAND	31.46	9.37
5	1500	AGFA DR 400 TRIPLET BOX CONTAINS PC, UPS AND DR SYSTEM COMPONENTS	23.50	17.50
*AGFA DR 400 ELEVATING 4-WAY FLOAT TOP INTEGRATED TABLE TUBESTAND RIGHT HAND LOAD VERSION AVAILABLE.				

ENVIRONMENT - X-RAY

Ambient Operation Temperature: 50° to 95° (F)
Humidity: 30% to 90% non condensing
Above specification apply to all areas where the Radiographic equipment is to be located.
(Control area, Procedure room and Equipment room if required.)

TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

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DAVE HENRY
DATE:
01/12/2017
FILE NAME:
DR400FINALV4
SCALE:
1/4"=1'-0"
SHEET:
B-1

TERMINAL SCHEDULE

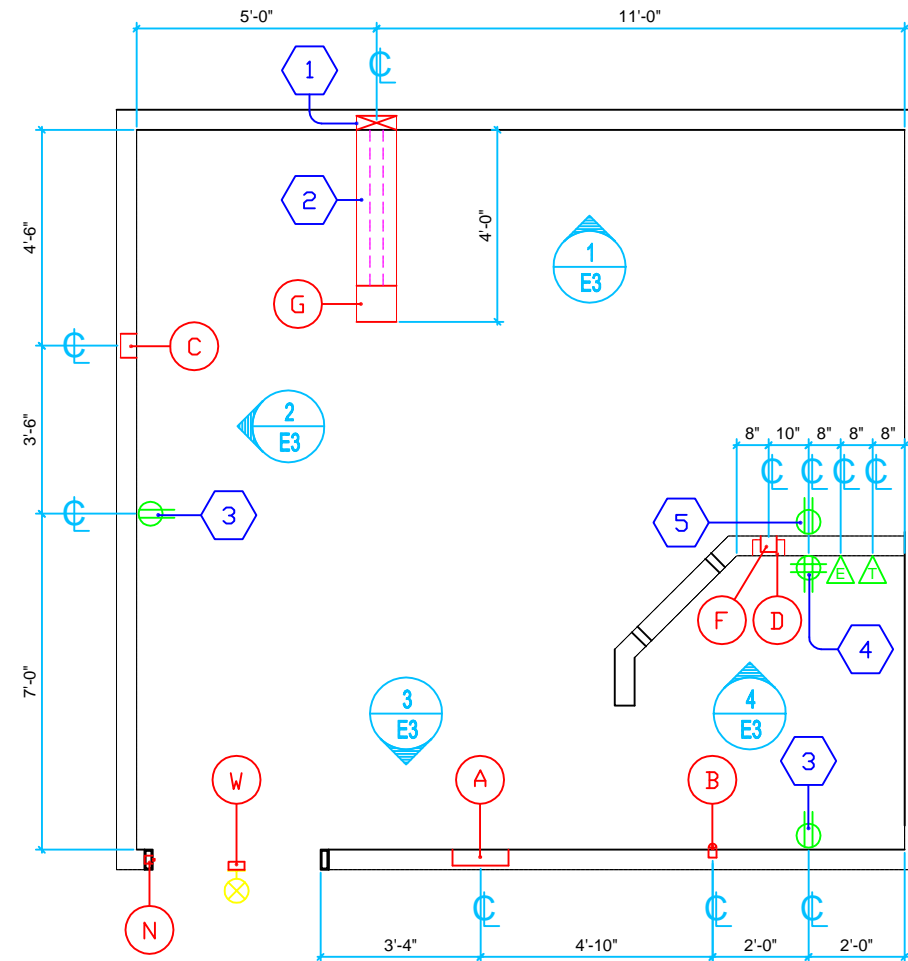
(CONTRACTOR FURNISHED - CONTRACTOR INSTALLED)

ITEM	DESCRIPTION
A	FACILITY TO DETERMINE SOURCE LOCATION. NEMA 1, XXX VAC, XXX PHASE, FRONT OPERATED, CIRCUIT BREAKER ENCLOSURE WITH GROUND ACCESSORIES. ENCLOSURE SHALL CONTAIN ONE XXAMP, X-POLE THERMOMAGNETIC CIRCUIT BREAKER WITH SHUNT TRIP DEVICE. FLUSH MOUNT IN WALL WHERE SHOWN. LOCATE ENCLOSURE CENTER LINE 5'-6" A.F.F. NOTE: EC SHALL ENSURE THAT LUGS ARE LARGE ENOUGH TO FACILITATE OVERSIZED INCOMING CABLES REQUIRED BY X-RAY EQUIPMENT. REFER TO "INCOMING WIRE SIZE" NOTES.
B	4" x 2" x 2" DEEP SWITCH BOX. FLUSH MOUNT IN WALL WHERE SHOWN. LOCATE BOX CENTER LINE AT 6'-0" A.F.F. EC SHALL PROVIDE ONE NORMALLY OPEN SWITCH WITH RED MUSHROOM HEAD AND AN "EMERGENCY OFF" NAME PLATE.SWITCH WILL BE USED FOR SHUNT TRIP DEVICE LOCATED ON CIRCUIT BREAKER <A>.
C	6" x 6" x 4" DEEP JUNCTION BOX. FLUSH MOUNT IN WALL WHERE SHOWN. LOCATE BOX CENTER LINE 6" A.F.F. PROVIDE A COVER PLATE AS SHOWN IN COVER PLATE DETAILS. CABLE ACCESS FOR THE WALL STAND.
D	8" x 8" x 4" DEEP JUNCTION BOX. FLUSH MOUNT IN WALL WHERE SHOWN. LOCATE BOX CENTER LINE 12" A.F.F. PROVIDE A COVER PLATE AS SHOWN IN COVER PLATE DETAILS. CABLE ACCESS FOR THE CONTROL CONSOLE.
F	4" x 4" x 4" DEEP JUNCTION BOX. FLUSH MOUNT IN WALL WHERE SHOWN. LOCATE BOX ABOVE WINDOW OR CENTER LINE 88" A.F.F. PROVIDE A BLANK OVERSIZE COVER PLATE. CABLE ACCESS FOR THE SCU. NOTE: BOX OPENS OUT INTO X-RAY ROOM NOT INTO CONTROL AREA.
G	PROVIDE A BLANK COVER PLATE ON FLOOR TRENCH. EQUIPMENT INSTALLER TO PROVIDE CABLE ACCESS HOLE AT THE TIME OF EQUIPMENT INSTALLATION. CABLE ACCESS FOR THE TABLE.
N	PROVIDE ONE 1-POLE, SINGLE THROW, MOMENTARY, EXPOSURE INTERLOCK SWITCH IN DOOR FRAME. SWITCH SHALL HAVE NORMALLY OPEN CONTACTS RATED AT 120VAC, 15AMPS. SWITCH SHOULD OPEN CONTACTS WHEN DOOR IS OPEN. (INSTALL ONLY IF REQUIRED BY PREVAILING CODE OR REQUESTED BY CUSTOMER).
W	4" x 4" x 2" JUNCTION BOX FOR THE "X-RAY IN USE" WARNING SIGN. FLUSH MOUNT IN WALL OR CEILING. EXACT LOCATION TO BE DETERMINED BY THE FACILITY. THE X-RAY ON WARNING LAMP CIRCUIT SHALL BE COORDINATED BETWEEN THE FACILITY, THE CONSTRUCTION PARTICIPANTS AND THE EQUIPMENT INSTALLERS. REFER TO WIRING DIAGRAM.

ELECTRICAL TAG DESCRIPTIONS

(CONTRACTOR FURNISHED - CONTRACTOR INSTALLED)

ITEM	DESCRIPTION
1	10" x 3 1/2" DEEP FLUSH MOUNTED VERTICAL RISER. FLUSH MOUNT IN WALL AT FLOOR LEVEL AND TERMINATE ABOVE THE FINISHED CEILING TO ALLOW FOR CONDUIT CONNECTIONS. PROVIDE DIVIDERS FOR LOW AND HIGH VOLTAGE. REFER TO TROUGH NOTES AND TROUGH ELEVATION.
2	10" x 3 1/2" DEEP FLUSH MOUNTED FLOOR TRENCH. FLUSH MOUNT IN FLOOR WHERE SHOWN AND CONNECT TO VERTICAL RISER. PROVIDE 3 COMPARTMENTS FOR LOW AND HIGH VOLTAGE. REFER TO TROUGH NOTES AND TROUGH ELEVATION.
3	EC SHALL FURNISH AND INSTALL ONE FACILITY GRADE, THREE PRONG, 120VAC, 15AMP, DUPLEX RECEPTACLE. FLUSH MOUNT IN WALL WHERE SHOWN AT NORMAL HEIGHT. PROVIDES POWER FOR SERVICE AND HOUSE KEEPING. REQUIRES HOUSE POWER, LOCATION NOT CRITICAL.
4	EC SHALL FURNISH AND INSTALL TWO FACILITY GRADE, THREE PRONG, 120VAC, 20AMP, QUAD RECEPTACLE. FLUSH MOUNT IN WALL WHERE SHOWN 12" A.F.F. PROVIDES POWER FOR THE DR SYSTEM COMPONENTS. DEDICATED OUTLET, POWER CAN BE SUPPLIED FROM <A1>.
5	EC SHALL FURNISH AND INSTALL ONE FACILITY GRADE, THREE PRONG, 120VAC, 15AMP, SINGLE RECEPTACLE. FLUSH MOUNT IN WALL WHERE SHOWN 88" A.F.F. NEXT TO JUNCTION BOX <F>. PROVIDES POWER TO SCU. DEDICATED OUTLET, REQUIRES HOUSE POWER.
T	PROVIDE A SINGLE TELEPHONE LINE WHERE SHOWN FOR CERTAIN SERVICE AND MAINTENANCE ACTIVITIES TO BE PERFORMED FROM A REMOTE LOCATION. THE RJ11 LINE MUST BE A DEDICATED DIRECT IN DIAL (DID) VOICE-GRADE (TELEPHONE LINE WHICH <u>DOES NOT</u> RUN THROUGH ANY FACILITY PBX, SWITCHBOARD OR A SHARED ACCESS LINE. THE TELEPHONE NUMBER MUST BE PROVIDED TO THE TECHNICIAN WHO INSTALLS THE SYSTEM.
E	PROVIDE A 4-PORT ETHERNET CONNECTION WHERE SHOWN. EC SHALL CONSULT WITH END USER REGARDING TYPE OF CONNECTOR (e.g., RJ-45/CAT-5, FIBER OPTICS, BNC/COAX, ETC.). REFER TO DICOM NOTES. PROVIDE ALL HARDWARE NECESSARY INCLUDING COVER PLATES, CONNECTORS AND INTERCONNECTING CABLES. NOTE: ETHERNET CONNECTION SHOULD HAVE INTERNET ACCESS WITH VPN CAPABILITY.



ELECTRICAL LAYOUT PLAN

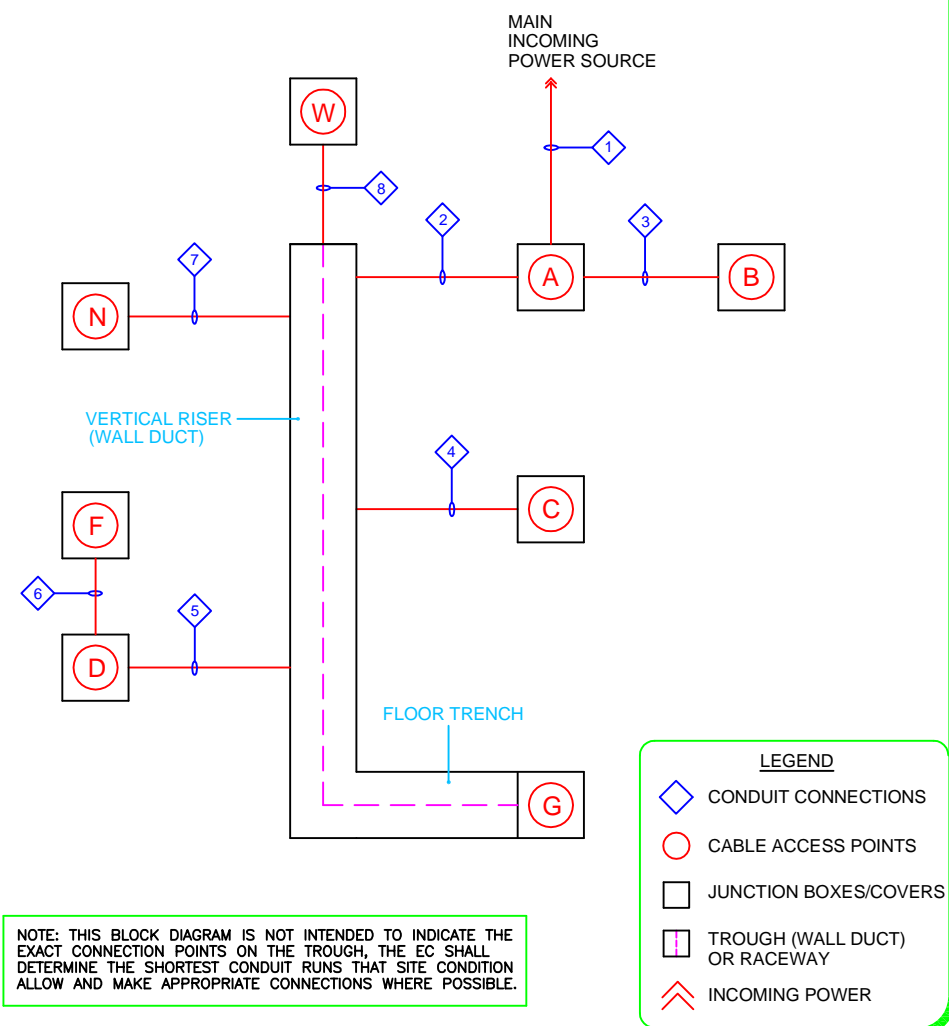
TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

DRAWN BY:
DAVE HENRY
DATE:
01/12/2017
FILE NAME:
DR400FINALV4

SCALE:
1/4"=1'-0"
SHEET:

E-1

ELECTRICAL BLOCK DIAGRAM



CONDUIT & WIRING SCHEDULE

(CONTRACTOR FURNISHED - CONTRACTOR INSTALLED)

RUN #	FROM	TO	SIZE	REMARKS
1	MAIN POWER SOURCE	A	VARIES	CONDUIT SIZE DEPENDS ON INCOMING WIRE SIZE. EC SHALL CALCULATE INCOMING WIRE SIZE BASED OFF OF INFORMATION PROVIDED IN CHART AND LENGTH OF WIRE AS REQUIRED AT SITE.
2	A	VERTICAL RISER	VARIES	WIRE SIZE TO BE DETERMINED BY CALCULATED 50' WIRE LENGTH. EC TO CONNECT AT <A> AND AT GENERATOR ITEM <2> SHEET B1. ENSURE CONNECTION COMPLIES WITH ALL STATE AND LOCAL CODES.
3	B	A	1/2" CONDUIT	2-#14AWG PLUS GROUND. EC SHALL CONNECT TO (A) AND (B). PROVIDE POWER IF NECESSARY FOR SHUNT TRIP SOLENOID.
4	C	VERTICAL RISER	2 1/2" CONDUIT	MAXIMUM CONDUIT LENGTH IS 24'-0". LEAVE PULL STRINGS.
5	D	VERTICAL RISER	2 1/2" CONDUIT	MAXIMUM CONDUIT LENGTH IS 24'-0". LEAVE PULL STRINGS.
6	D	F	1 1/2" CONDUIT	LEAVE PULL STRINGS.
7	N	VERTICAL RISER	1/2" CONDUIT	2-#14AWG PLUS GROUND IF REQUIRED. EC SHALL CONNECT TO (N) AND LEAVE 10'-0" TAILS AT <G>. IDENTIFY WIRES AS DOOR INTERLOCK SWITCH.
8	W	VERTICAL RISER	1/2" CONDUIT	2-#14AWG PLUS GROUND. EC TO CONNECT "X-RAY IN USE" WARNING LIGHT CIRCUIT PER EQUIPMENT SUPPLIER RECOMMENDATIONS AND LEAVE 10'-0" TAILS IN (G). EC SHALL IDENTIFY WIRES AS 'X-RAY WARNING SIGN' 'L', 'N', 'G'.

EC SHALL CALCULATE INCOMING WIRE SIZE FROM BUILDING SOURCE (TRANSFORMER) TO MAIN DISCONNECT <A> WITH VOLTAGE REGULATION OF ±5% AT MAXIMUM LOAD.

GENERATOR KW RATING	HFe 401 40KW	HFe 501 50KW	HFe 601 65KW	HFe 801 80KW
RECOMMENDED LINE VOLTAGE	480VAC/3-PHASE/60Hz VOLTAGE REGULATION UNDER LOAD ±5%.	480VAC/3-PHASE/60Hz VOLTAGE REGULATION UNDER LOAD ±5%.	480VAC/3-PHASE/60Hz VOLTAGE REGULATION UNDER LOAD ±5%.	480VAC/3-PHASE/60Hz VOLTAGE REGULATION UNDER LOAD ±5%.
SUPPLY TRANSFORMER KVA RATING	50KVA	60KVA	82KVA	100KVA
MAXIMUM MOMENTARY CURRENT				
RECOMMENDED MAIN CIRCUIT BREAKER <A>				
MAXIMUM WIRE LINE IMPEDANCE				

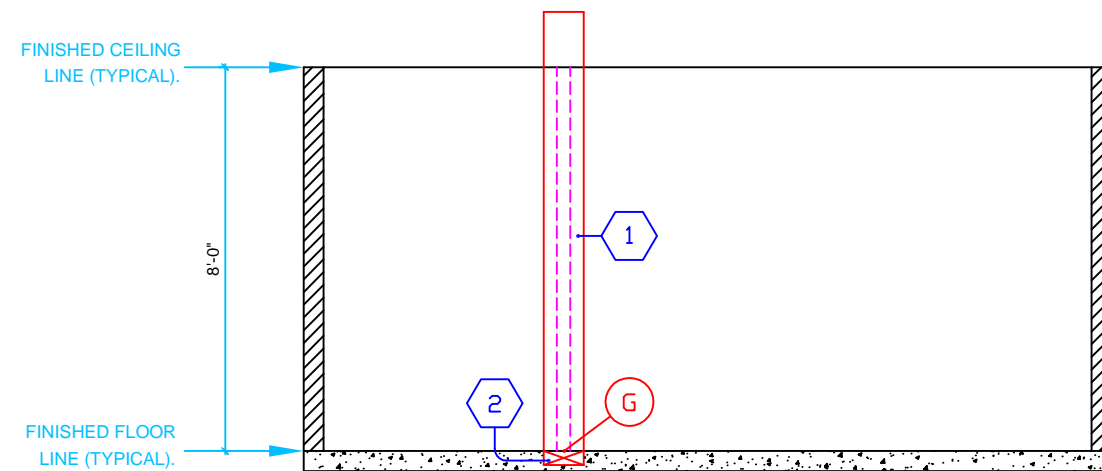
THREE HOT WIRES ONE NEUTRAL AND ONE EARTH GROUND
TRANSFORMER: Y WITH BALANCED NEUTRAL

TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

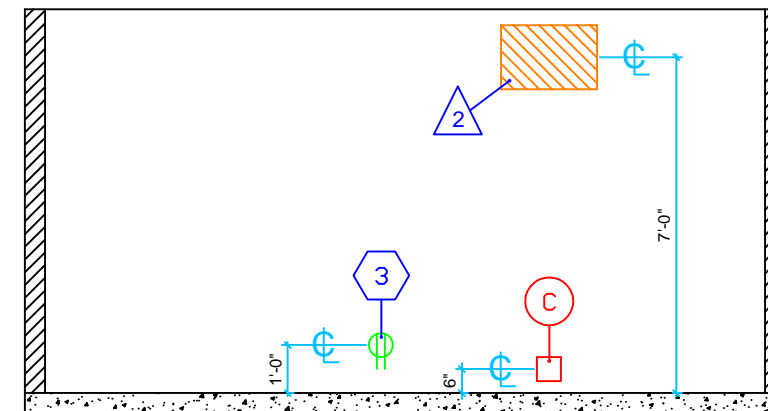
DRAWN BY:
DAVE HENRY
DATE:
01/12/2017
FILE NAME:
DR400FINALV4

SCALE:
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SHEET:

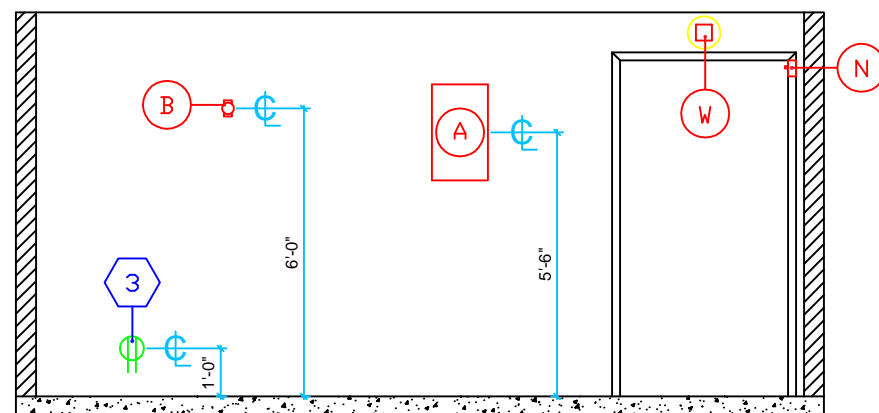
E-2



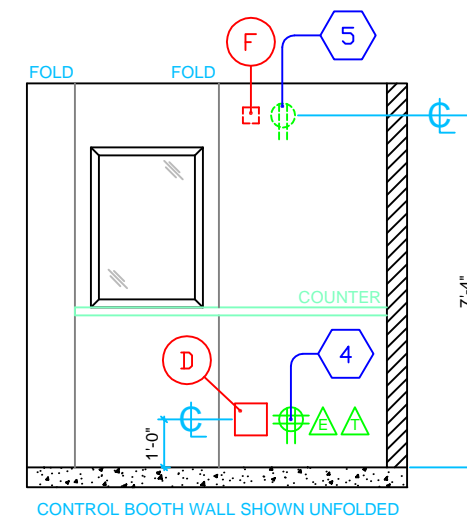
1
E3



2
E3



3
E3



4
E3

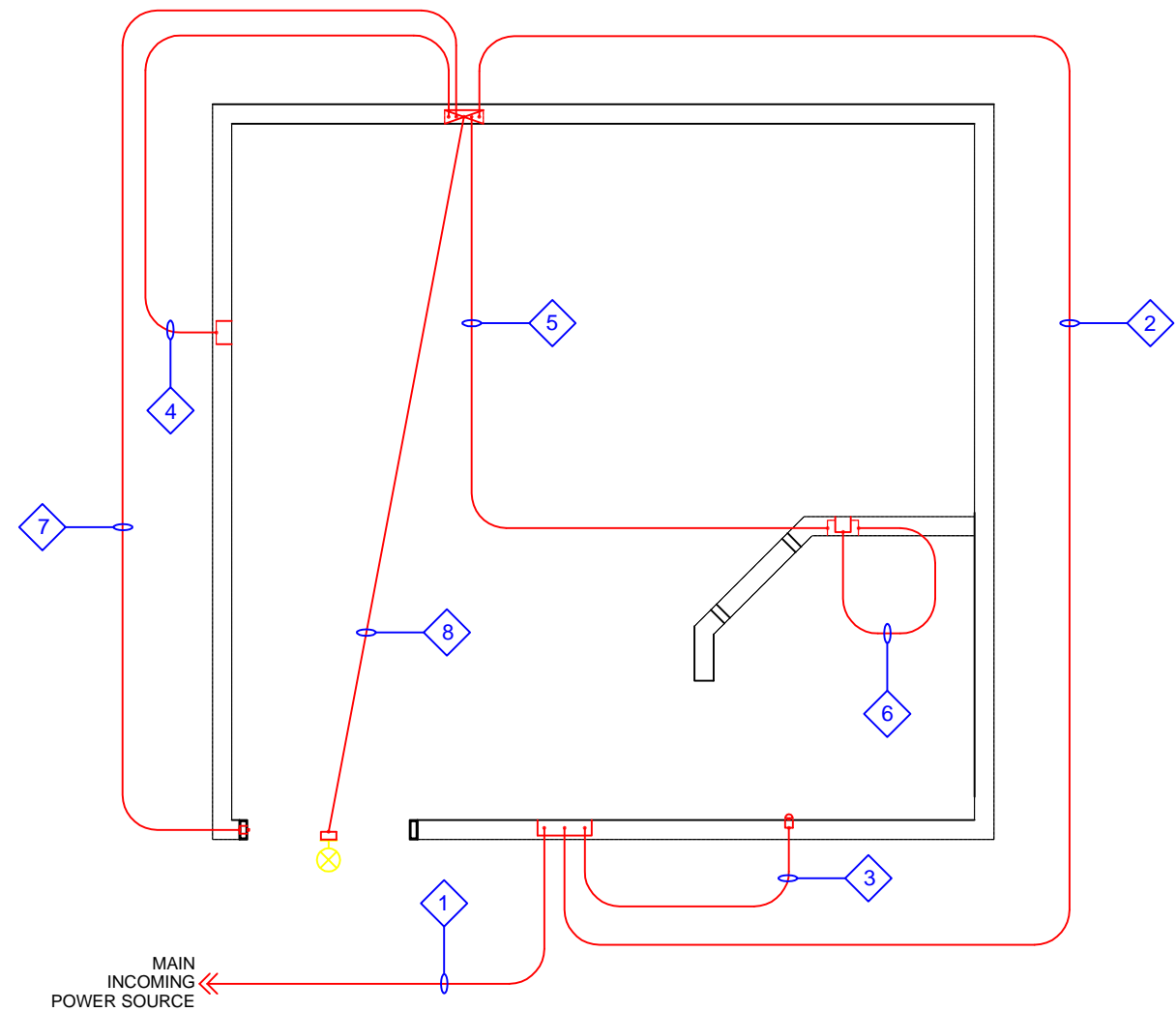
ELECTRICAL ELEVATIONS

TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

DRAWN BY:
DAVE HENRY
DATE:
01/12/2017
FILE NAME:
DR400FINALV4

SCALE:
1/4"=1'-0"
SHEET:

E-3



CONDUIT LINE DIAGRAM

NOTE TO ELECTRICAL CONTRACTOR: THE CONDUIT ROUTING IS SHOWN AS A VISUAL REFERENCE ONLY (NOT TO SCALE). THE EC SHALL ROUTE CONDUITS FROM POINT TO POINT USING THE SHORTEST ROUTE POSSIBLE. NOTE: DO NOT FOLLOW WALL LINE UNLESS IT IS THE SHORTEST ROUTE POSSIBLE.

TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

DRAWN BY: DAVE HENRY	SCALE: NONE
DATE: 01/12/2017	SHEET: E-4
FILE NAME: DR400FINALV4	

WALL DUCT PARTS LIST

PART NUMBER	DESCRIPTION	QTY
PART# ESW103560F	10" X 3 1/2" FLUSH MOUNTED WALL DUCT (5'-0" LENGTHS, INCLUDES COVERS)	2
PART# ESW1035ECF	10" X 3 1/2" END CLOSURES.	1
PART# ESW3560D	5'-0" LONG DIVIDER STRIPS FOR 10" X 3 1/2" DUCT (3 COMPARTMENTS).	4
PART# ESTWA1035	TRENCH TO WALL DUCT ADAPTER	1
PART# EST1035C72	10" X 3 1/2" FLUSH MOUNTED FLOOR TRENCH DUCT, 3-COMPARTMENTS. (6'-0" LENGTHS)	1
PART# EST1035EC	TRENCH DUCT END CAP	2
PART# EST10C12	10" X 3 1/2" FLUSH MOUNTED FLOOR TRENCH 12" LONG SECTIONAL COVER PLATE.	1

NOTE: COUPLERS ARE INCLUDED WITH ALL WALL DUCT STRAIGHTS AND FITTINGS. ADDITIONAL COUPLERS DO NOT HAVE TO BE ORDERED UNLESS CUSTOMER WILL BE MAKING A LARGE NUMBER OF FIELD CUTS.

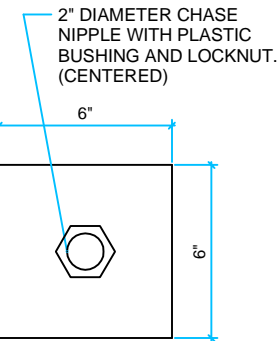
NOTE: ALL TROUGH SHALL BE FLUSH WITH FINISHED SURFACES UNLESS OTHERWISE SPECIFIED AND PROVIDED WITH REMOVABLE, OVERSIZED, COVERS THE FULL LENGTH. COVERS SHALL BE CLEAR FOR REMOVAL AND INSERTION OF PRE TERMINATED CABLES.

NOTE: IF IT IS NECESSARY THAT THE TROUGH BE SURFACE MOUNTED, WHEN NOT INDICATED ON THESE PLANNING DRAWINGS, ALL EQUIPMENT PLACEMENT AND TRAVEL CLEARANCE MUST BE VERIFIED TO PREVENT EQUIPMENT AND TROUGH INTERFERENCE AND POSSIBLE EQUIPMENT DAMAGE. CONTACT GAMMA TECHNOLOGIES, INC. FOR PROPER VERIFICATION OF EQUIPMENT PLACEMENT AND TROUGH CLEARANCES.

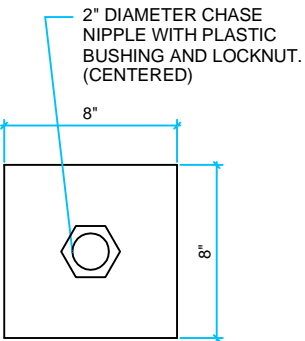
NOTE: ALL PART NUMBERS LISTED ARE FOR FLUSH MOUNTED APPLICATIONS, IF THE FIELD CONDITIONS REQUIRE SURFACE MOUNTED DUCT THEN CONTACT THE ELECTRICAL SUPPLIER FOR APPROPRIATE PART NUMBERS.

NOTE: PROVIDE TWO DIVIDER STRIPS WITHIN TROUGH FOR THE SEPARATION OF HIGH TENSION X-RAY CABLES, POWER AND LOW VOLTAGE CABLES WHERE REQUIRED. PROVIDE APPROPRIATE CROSSOVER TUNNELS BEHIND COVER PLATES AND MULTIPLE CONDUIT CONNECTION POINTS.

NOTE: CONTACT CHRIS NAJDA (440) 835-3500 (ELECTRICAL SALES CO.) FOR FURTHER INFORMATION ON PRICING AND AVAILABILITY. SUFFICIENT LEAD TIME MUST BE GIVEN ON ALL TROUGH ORDERS. A COPY OF THESE PLANS HAVE BEEN FORWARDED TO THE SUPPLIER TO ENSURE ACCURACY OF THE PROJECT REQUIREMENTS. PLEASE HAVE THE DRAWING FILE NAME (BOTTOM RIGHT CORNER OF PLAN).



(C)
COVERPLATE

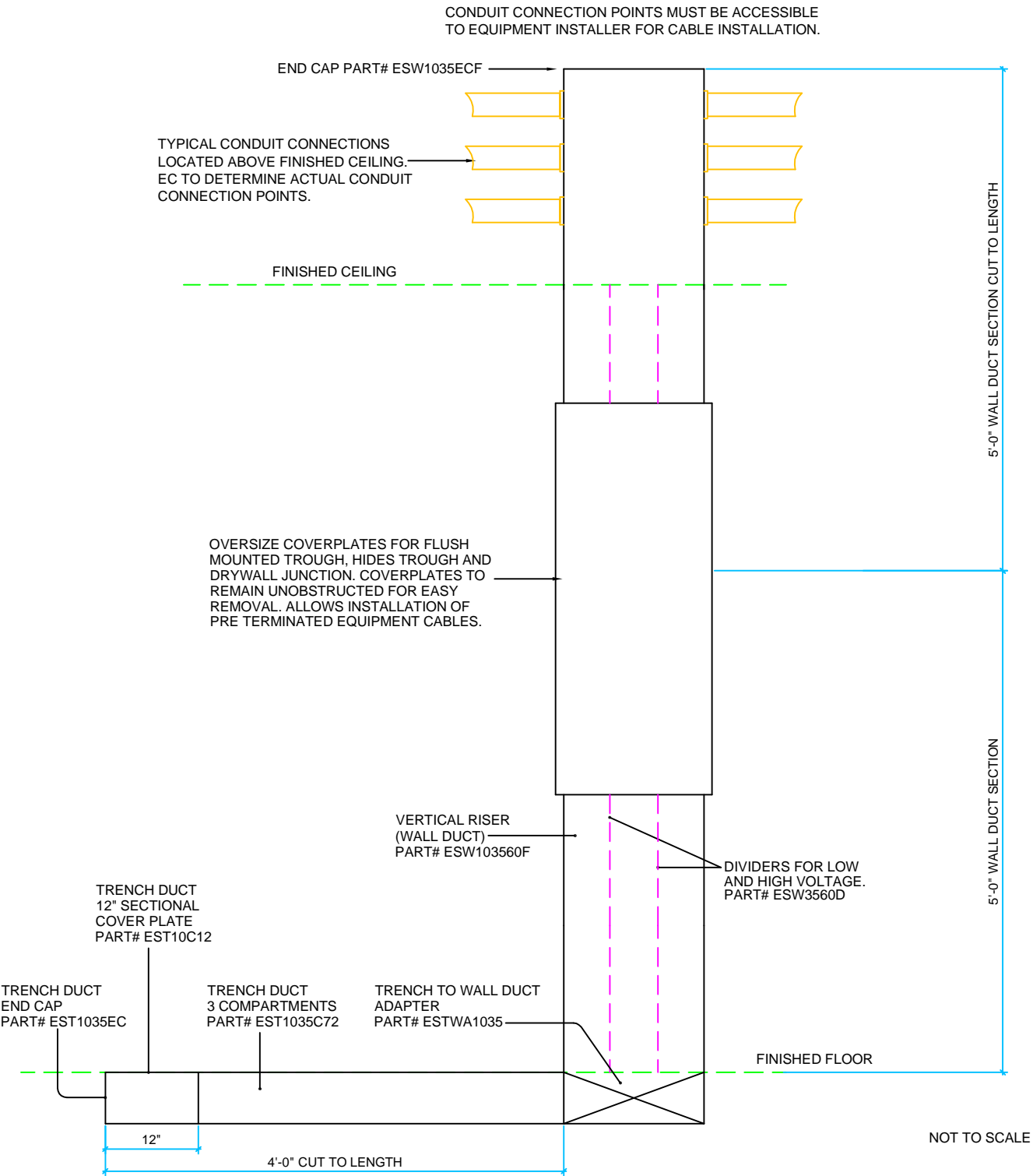


(D)
COVERPLATE

JUNCTION BOX COVERPLATES

TYPICAL TROUGH ELEVATION

NOTE: CONTACT CHRIS NAJDA (440) 835-3500 (ELECTRICAL SALES CO.) FOR FURTHER INFORMATION.



COVERPLATE DETAILS AND TROUGH NOTES

NOTE: COVERPLATES DEPICTED ARE FOR SURFACE MOUNTED DEVICES. ALL FLUSH MOUNTED DEVICES SHALL HAVE OVERSIZED COVERPLATES.

TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

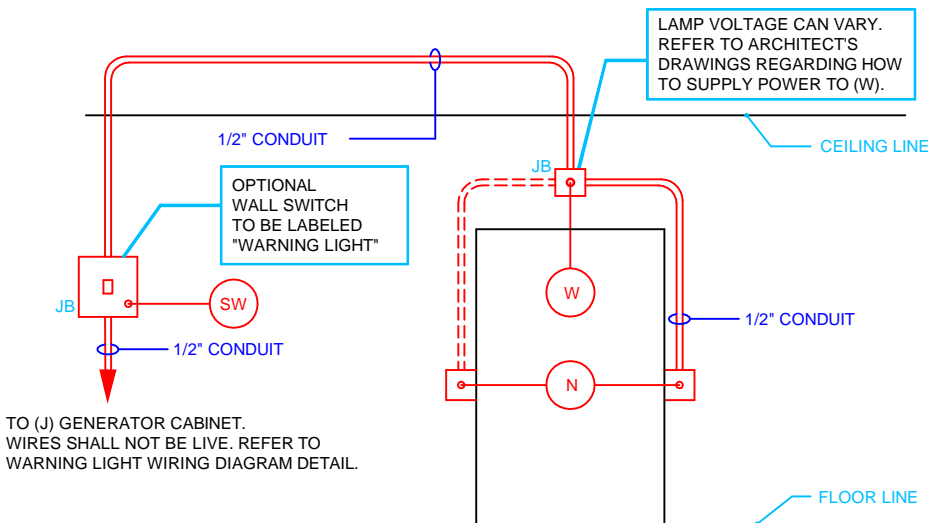
DRAWN BY:
DAVE HENRY
DATE:
01/12/2017
FILE NAME:
DR400FINALV4

SCALE:
NONE
SHEET:

E-5

DOOR SWITCH / WARNING LIGHT DETAIL

(CONTRACTOR FURNISHED - CONTRACTOR INSTALLED)



X-RAY IN USE WARNING SIGN NOTES:
MAXIMUM 20 WATT BULBS RECOMMENDED FOR WARNING LIGHT.
CONTRACTOR SHALL CONSULT WITH FACILITY REGARDING EXACT WORDING, STYLE AND LOCATION.
OPTIONAL X-RAY IN USE WARNING SIGN TO BE INSTALLED ONLY IF REQUIRED BY PREVAILING CODE OR REQUESTED BY CUSTOMER.

DOOR SWITCH NOTES:
OPTIONAL DOOR SWITCH TO BE SQUARE D "CLASS 9007, TYPE A0" OR EQUIVALENT TO BE LOCATED ON HINGE SIDE OF DOOR JAMB.
OPTIONAL DOOR SWITCH TO BE INSTALLED ONLY IF REQUIRED BY PREVAILING CODE OR REQUESTED BY CUSTOMER.
IN CASE OF A DOUBLE JAMB, ONE DOOR SWITCH SHOULD BE LOCATED ON EACH SIDE. SEE TROUGH / RACEWAY LAYOUT FOR DOOR SWITCH / WARNING LIGHT LOCATION IN ROOM.
SEE POINT TO POINT WIRING DESCRIPTION FOR WIRE SIZES TO BE USED IN CONDUITS.
USING 'W' AS A JUNCTION BOX FOR THE DOOR INTERLOCK SWITCH WIRES ELLIMINATES AN ADDITIONAL CONDUIT RUN TO THE SYSTEM CABINET PULL BOX. ALTHOUGH THIS DECREASES CONSTRUCTION COSTS, IT IS NOT REQUIRED.

WARNING SIGN NOTES:
OPTIONAL WALL SWITCH (SW) MAY BE CONTRACTOR INSTALLED AT THE REQUEST OF THE CUSTOMER OR EQUIPMENT SUPPLIER. PURPOSE OF WALL SWITCH IS TO REMOVE ALL VOLTAGES FROM GENERATOR CABINET DURING SERVICE. EC SHALL CONSULT WITH CUSTOMER AND EQUIPMENT SUPPLIER REGARDING WALL SWITCH INSTALLATION, TYPE AND EXACT LOCATION.

THE MAIN CONSIDERATION WHEN LEAVING WIRES IN JUNCTION BOXES IS TO ENSURE THEY ARE NOT LIVE AND THAT THEIR ASSOCIATED SWITCHING MEANS ARE LOCKED OUT (OR EQUIVALENT).

THIS STANDARD SHALL BE APPLIED TO ALL OPEN ENDED WIRE AND CABLE MENTIONED IN THIS DRAWING SET. OBVIOUSLY, GROUND WIRE OR CABLE BEING THE EXCEPTION.

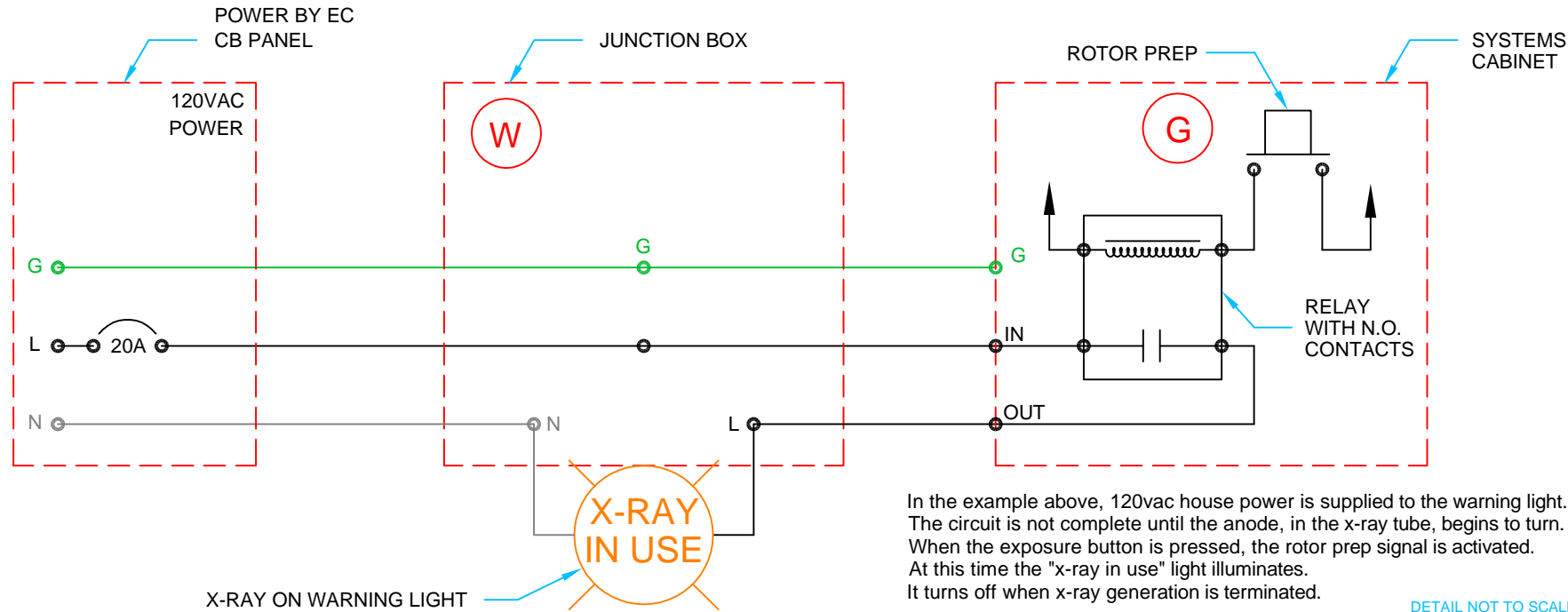
IT IS THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT WIRES ARE NOT ENERGIZED UNTIL THE EQUIPMENT INSTALLERS ARE READY FOR TESTING.

THE ELECTRICAL CONTRACTOR SHALL INFORM THE EQUIPMENT INSTALLER(S) AS TO THE LOCATION AND MEANS OF ACTIVATING ALL SWITCHING DEVICES ASSOCIATED WITH THE OPEN ENDED WIRE AND CABLE MENTIONED IN THIS DRAWING SET.

TYPICAL WARNING LIGHT CIRCUIT

WLD01.0214

A typical 'X-RAY IN USE' warning sign circuit is depicted below.
Due to many variables, the x-ray on warning sign circuit must be coordinated between the equipment supplier, electrical engineer and the facility.
The electrical contractor shall consult with the facility and the equipment supplier prior to installing any x-ray on warning sign.



In the example above, 120vac house power is supplied to the warning light. The circuit is not complete until the anode, in the x-ray tube, begins to turn. When the exposure button is pressed, the rotor prep signal is activated. At this time the "x-ray in use" light illuminates. It turns off when x-ray generation is terminated.

DETAIL NOT TO SCALE

Example "X-RAY IN USE" Warning Sign Circuit Options

Many potential factors influence choice of x-ray on warning sign. E.g. Matching existing; efficiency; aesthetics; price; quality; number of options; etc.

Gamma Tech never knows the exact warning sign type, style, lamp voltage, power source, method or means of control prior to drawing set issuance. For this reason more than one detail may be depicted in this drawing set.

It is our hope and intent to encourage the construction participants and the equipment suppliers / installers to coordinate efforts. For this reason we have listed some potential options and their caveats below. (not to be construed as all inclusive). Important decisions to be shared are numbered. Sample options are listed alphabetically. For your convenience, the majority pick is designated by the word 'typical' in parentheses.

The facility or their designee selects an x-ray on warning sign.

1) Lamp voltage? - usually one of four options.

- a. 120vac (typical)
- b. 120/277vac
- c. 277vac
- d. Low voltage ac
- e. Low voltage dc (battery)

Note: The system installer should be informed of the lamp voltage as soon as possible.

The facility determines at which point in time the warning sign will illuminate.

2) When to illuminate? - Engineer to coordinat with the facility and equipment supplier.

- a. Warning lamp turns on upon rotor prep / turns off upon x-ray termination. (typical)
- b. Warning lamp illuminates / extinguishes when equipment is switched on / off.
- c. Warning lamp illuminates 24/7.

Note: the equipment being installed may or may not be capable of interfacing with a warning light or may have just one option. The equipment supplier shall coordinate with the facility and the construction participants regarding interface options.

X-ray On Warning Sign Circuit Options

The engineer of record shall consult with the facility and equipment supplier to coordinate the x-ray on warning sign circuit combinations. Majority picks marked by an asterisk.

Housing	Lamp	Faces	Surface	Mounting	Wording
a. White *	LED	Single *	Wall *	Surface *	X-RAY IN USE *
b. Black	LED	Double	Ceiling	Flush	X-RAY ON, etc.

c. Aluminum, etc.
Note: Recommend 20 watts or less

Voltage	Panel color	Power source	ON / OFF
a. 120vac *	a. red on white *	Facility panel *	Rotor prep *
b. 277vac	b. white on red	Systems supply	System ON
c. 120/277vac	c. black on white		Always ON
d. 26vac	d. white on black		
e. DC	e. red on black, etc.		

Refer to detail number WLD01.0310 for typical x-ray on warning light circuit.
Refer to detail number WLD02.0696 for typical 120VAC TO 24VAC warning light circuit.

FACILITY:

TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

DRAWN BY:

DAVID HENRY

DATE:

01/12/2017

FILE NAME:

DR400FINALV4

SCALE:

NONE

SHEET:

E-6

IMPORTANT POWER NOTES

(CONTRACTOR FURNISHED - CONTRACTOR INSTALLED)

POWER LINES FOR EQUIPMENT LISTED SHALL BE DEDICATED LINES RUN DIRECTLY FROM NEAREST FACILITY POWER SOURCE. UNDER NO CIRCUMSTANCES SHALL ANY OTHER ELECTRICAL EQUIPMENT BE CONNECTED TO THESE POWER LINES NOW OR IN THE FUTURE.

LINE REQUIREMENTS:

1. TRANSIENTS: NO TRANSIENTS SHALL OCCUR THAT EXCEED 30% OF NOMINAL PEAK LINE VOLTAGE.
- A. TRANSIENTS, FOR DISCUSSION PURPOSES, SHALL BE DEFINED AS IMPULSES FROM 0.5 TO 800 MICROSECONDS.
- B. POWER LINES SHALL BE MEASURED FOR TRANSIENTS WITH THE SYSTEM IN STANDBY. THE ELECTRICAL CONTRACTOR SHALL USE A DRANETZ POWER LINE ANALYZER OR EQUIVALENT.
2. VOLTAGE REGULATION: XXX KVA, XXX PHASE, XXX VAC , 60HZ ±0.5% INCOMING LINE TO MAIN DISCONNECT WITH 5% VOLTAGE REGULATION UNDER INTERMITTENT NO LOAD TO FULL LOAD CONDITIONS REQUIRED.

IF ANY OF THE ABOVE POWER SPECIFICATIONS REGARDING VOLTAGE REGULATION OR TRANSIENTS CANNOT BE MET THE FOLLOWING CORRECTIVE ACTION CAN BE TAKEN.

A. A REGULATION TRANSFORMER OR LINE CONDITIONER DEPENDING ON THE SEVERITY OF THE PROBLEM MAY BE EMPLOYED TO MAINTAIN LINE VOLTAGE WITHIN 5% OF NOMINAL UNDER INTERMITTENT NO LOAD TO FULL LOAD CONDITIONS.

WIRING NOTES

ELECTRICAL CONTRACTOR SHALL FURNISH AND INSTALL ALL CONDUITS, WIRE, WIREWAYS, DISTRIBUTION TRANSFORMERS, JUNCTION BOXES, ENCLOSURES, CIRCUIT BREAKERS, ETC.

ALL WIRES TO BE THHN TYPE, STRANDED COPPER UNLESS OTHERWISE SPECIFIED. THE ELECTRICAL CONTRACTOR SHALL SUPPLY LUG PAIRS OF #8 OR GREATER FOR ALL CABLES LISTED WITHIN THE SCOPE OF THIS WORK.

CONDUIT AND DUCT RUNS ARE SHOWN SCHEMATICALLY. ACTUAL BUILDING CONDITIONS WILL DETERMINE CONDUIT AND DUCT ROUTES. CONDUIT TURNS TO HAVE LARGE SWEEPING BENDS WITH MINIMUM RADIUS AS SPECIFIED IN NEC ART. 346-10. IF LARGE BENDS IN CONDUIT ARE NOT POSSIBLE, USE SERVICE ENTRANCE ELBOW CONNECTORS TO AVOID DAMAGE TO CABLE.

ELECTRICAL CONTRACTOR TO PROVIDE 10'-0" TAILS FOR ALL WIRES UNLESS OTHERWISE SPECIFIED AND IDENTIFY BOTH ENDS OF ALL WIRES. ELECTRICAL CONTRACTOR SHALL MAKE EVERY EFFORT TO ENSURE THAT POINT TO POINT CONDUIT RUNS ARE AS SHORT AS FIELD CONDITIONS ALLOW. NEVER LEAVE 'HOT' WIRES CURLED IN PULL BOXES.

LEAVE PULL WIRE IN EMPTY CONDUITS.

WORK SHALL COMPLY WITH REGULATORY AGENCIES OF JURISDICTION. ALL SUCH AGENCIES SUPERSEDE THESE DRAWINGS AND MUST BE ADHERED TO. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR SCRUTINIZING THESE DRAWINGS AND SHALL MAKE CORRECTIONS ACCORDING TO PREVAILING CODES.

NOTE: CONDUITS MAY BE INCREASED IN SIZE BUT NEVER DECREASED WITHOUT CONSENT FROM THE EQUIPMENT REPRESENTATIVES. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING THE PATIENT GROUNDING NETWORK PER NATIONAL ELECTRIC CODE ARTICLE 517 AND NFPA 70.

ALL CONDUIT SHALL BE RIGID TYPE UNLESS SPECIFIED OTHERWISE IN THIS DRAWING SET. ALL CONDUIT RUNS EXPOSED TO WET ENVIRONMENTS SHALL BE MADE LIQUID TIGHT (e.g. UNDERGROUND, ETC.).

ALL FLUSH MOUNTED ELECTRICAL BOXES AND WIRE TROUGHS SHALL HAVE OVERSIZED COVER PLATES. ALL FLUSH MOUNTED ELECTRICAL BOXES AND WIRE TROUGHS EXPOSED TO A WET ENVIRONMENT SHALL BE MADE LIQUID TIGHT (e.g. IN FLOOR, ETC.).

THE ELECTRICAL CONTRACTOR SHALL INSTALL, PROVIDE POWER TO, AND CONNECT THE FOLLOWING, IF SPECIFIED FOR THIS PROJECT.

DOOR INTERLOCK SWITCH, EMERGENCY OFF SWITCH AND120VAC DUPLEX OUTLETS FOR SERVICE AND HOUSEKEEPING DESCRIBED IN 'GENERAL NOTES' ITEM #6.

THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE FACILITY AND THE EQUIPMENT SUPPLIER / INSTALLERS REGARDING SPECIFIC INSTALLATION DETAILS. REFER TO ASSOCIATED BLOCK DIAGRAMS AND DETAILS.

DICOM, PACS, LANS/WANS, Ethernet, Modems

Networking Notes: Supplying and installing network connections between diagnostic imaging equipment and other node connections shall be the customer's responsibility. Customer must specify, supply and install proper receptacles, AUI transceivers, cabling, repeaters, routers, modems, etc. which are consistent with the site needs and sound network implementation practices. Also included, but not limited to, the customer's responsibility is the purchase and installation of conduits and / or raceways for containment and routing of networking cables, as determined by site conditions or required by prevailing codes.

PATIENT SAFETY GROUNDING CONSIDERATIONS

(CONTRACTOR FURNISHED - CONTRACTOR INSTALLED)

A SPECIAL GROUNDING SYSTEM IS REQUIRED IN ALL DIAGNOSTIC ROOMS BY SOME STATE AND LOCAL CODES. THIS GROUNDING SYSTEM IS REQUIRED IN AREAS WHERE ELECTRICALLY SUSCEPTIBLE PATIENTS MIGHT BE EXAMINED OR TREATED UNDER PRESENT, FUTURE OR EMERGENCY CONDITIONS. CONSULT WITH THE GOVERNING ELECTRICAL CODES AND CONFER WITH APPROPRIATE HEALTHCARE FACILITY PERSONNEL AND CONSULTING ENGINEERS TO DETERMINE THE AREAS REQUIRING THIS GROUNDING SYSTEM. IF SUCH A GROUNDING SYSTEM IS REQUIRED, THE RESPONSIBLE CONSTRUCTION PARTICIPANTS SHALL DESIGN AND INSTALL GROUNDING SYSTEM TO INCLUDE ALL METAL OBJECTS AND FIXTURES PER NEC 517.

NEC ARTICLE 517 CONSIDERATIONS

(CONTRACTOR FURNISHED - CONTRACTOR INSTALLED)

THE PROJECT ENGINEER OF RECORD IS RESPONSIBLE FOR SHOWING COMPLIANCE WITH NEC 517.

- SECTION II - WIRING AND PROTECTION
- FACILITY GRADE RECEPTACLES IN PATIENT CARE AREAS.
 - ISOLATED GROUND (IG) RECEPTACLES, IF APPLICABLE.
 - EQUIPMENT GROUNDING.
 - REDUNDANT GROUND ADHERENCE.

IF APPLICABLE, USE AN INSULATED COPPER EQUIPMENT GROUNDING (BONDING) CONDUCTOR TO GROUND THE GROUNDING TERMINALS OF ALL RECEPTACLES AND ALL NONCURRENT CARRYING CONDUCTIVE SURFACES OF FIXED ELECTRIC EQUIPMENT OPERATING AT OVER 100V, IF THEY ARE LIKELY TO BECOME ENERGIZED AND ARE SUBJECT TO PERSONAL CONTACT.

IF APPLICABLE, INSTALL THE EQUIPMENT GROUNDING (BONDING) CONDUCTOR (SIZED PER TABLE 250.122) IN A METAL RACEWAY SYSTEM OR A CABLE ARMOR OR SHEATH ASSEMBLY, EACH OF WHICH MUST QUALIFY AS AN EFFECTIVE GROUND-FAULT CURRENT PATH PER 250.118 [517.13(A)].

SPECIAL NOTE TO ALL ANCILLARY EQUIPMENT SUPPLIERS:

THE ELECTRICAL SPECIFICATIONS IN THESE PLANS ARE DEDICATED TO THE EQUIPMENT PROVIDED BY THE X-RAY EQUIPMENT DEALER.

ALL ADDITIONAL EQUIPMENT SUPPLIERS SHALL NOT USE ANY ELECTRICAL DEVICES CALLED OUT IN THESE PLANS AS A PART OF THEIR ELECTRICAL REQUIREMENTS OR SCHEMATIC.

ALL ADDITIONAL EQUIPMENT SUPPLIERS SHALL ISSUE A SEPARATE DETAILED SPECIFICATIONS PACKAGE TO THE ARCHITECT OR TO THE CUSTOMER. THE ARCHITECT SHALL EXTRAPOLATE THIS INFORMATION AND INCORPORATE IT INTO THEIR WORKING DRAWINGS.

X-RAY EQUIPMENT DEALER IS NOT RESPONSIBLE FOR FURNISHING INFORMATION ON EQUIPMENT THEY DO NOT PROVIDE.

ADDITIONAL EQUIPMENT DEPICTED IN THESE PLANS HAVE BEEN SHOWN AS A COURTESY TO OUR CUSTOMERS.

TYPICAL ROOM LAYOUT
(NOT SITE SPECIFIC)

DRAWN BY:
DAVE HENRY
DATE:
01/12/2017
FILE NAME:
DR400FINALV4

SCALE:
NONE
SHEET:

E-7