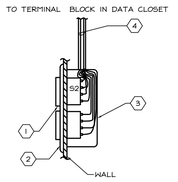
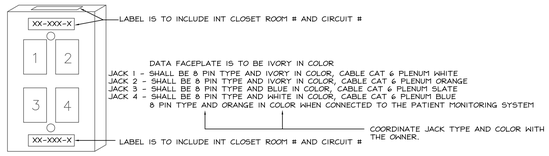


CABLE PREPARATION MATERIAL LIST

1. DATA OUTLETS (2); VOICE OUTLETS (2)
2. IVORY MODULAR FACEPLATE.
3. OUTLET BOX STANDARD SINGLE GANG.
4. CATEGORY 6 PLENUM CABLE. (4 PER OUTLET LOCATION)



TYPICAL DATA OUTLET CONFIGURATION
SCALE: NONE

GENERAL NOTES:

1. ALL TELECOMMUNICATIONS/DATA/PHONE OUTLETS CONSIST OF JUNCTION BOXES.
2. ALL CABLING SHALL EXTEND FROM WALL OUTLET TO BE TERMINATED ON PUNCHDOWN TERMINAL BLOCKS IN COMMUNICATIONS CLOSET. EACH CABLE MUST BE LABELED APPROPRIATELY TO MATCH OUTLET IN RESPECTIVE ROOM.
3. ELECTRICAL CONTRACTOR SHALL EXTEND CABLE TO MAIN COMMUNICATIONS CLOSET CEILING. COMMUNICATIONS CONTRACTOR SHALL EXTEND AND TERMINATE IN THE COMMUNICATIONS CLOSET.
4. ALL WORK ASSOCIATED WITH THE TELECOMMUNICATIONS/ DATA/PHONE SYSTEM INCLUDING THE FINAL TERMINATIONS SHALL BE INCLUDED UNDER THE ELECTRICAL PORTION OF THIS PROJECT.
5. MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS AND FEEDERS PASSING THROUGH RENOVATED AREAS AND SERVICING UNDISTURBED AREAS.
6. CAT 6 DATA RUNS TO BE LESS THAN 300 FEET IN TOTAL LENGTH.
7. CAT 6 CABLING SHALL BE PLENUM RATED.
8. CAT 6 CABLING SHALL BE FISHED THROUGH WALLS TO TELECOMMUNICATIONS OUTLETS.
9. PROVIDE J-HOOK SUPPORTS FOR CABLING ABOVE CEILINGS.

1 Data System Detail
EL303 / No Scale

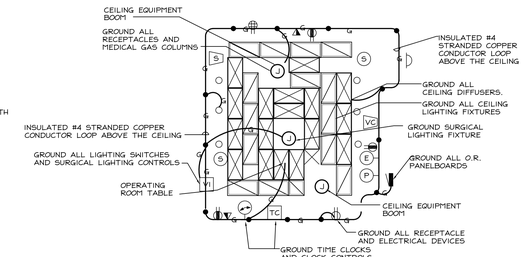
LEED REQUIREMENTS:

1. EXTERIOR LIGHT FIXTURES MUST HAVE A CUT-OFF AT 90 DEGREES ABOVE THE GROUND PLANE.
2. PROVIDE AUTOMATIC SHADING DEVICES ON EXTERIOR WINDOWS WITH DIRECT LINE OF SITE TO NON-EMERGENCY LIGHTING FIXTURES OR PROVIDE OCCUPANCY SENSORS/LIGHTING CONTROL TO REDUCE THE INPUT POWER BY 50% TO ALL NON-EMERGENCY LIGHTING FIXTURES.
3. REDUCE THE AMOUNT OF ENERGY USED FROM LIGHTING BY 48% POSSIBLE USE OF LED LIGHT FIXTURES TO IMPROVE ENERGY USAGE.
4. INCORPORATE THE USE OF PHOTOVOLTAIC SYSTEMS AS RENEWABLE ENERGY.
5. PROVIDE LONG LASTING REDUCED MERCURY FLUORESCENT LAMPS.
6. PROVIDE OCCUPANCY SENSORS IN ALL MULTI-OCCUPANT SPACES.
7. PROVIDE INDIVIDUAL LIGHTING CONTROLS IN ALL AREAS FOR INDIVIDUAL TASKS, I.E. TASK LIGHTING AND/OR MULTIPLE SWITCHES.
8. PROVIDE INDIVIDUAL LIGHTING CONTROLS THAT ARE ACCESSIBLE FOR PATIENTS AT THE PATIENT BEDS.
9. PROVIDE DAY-LIGHTING CONTROLS FOR ALL LIGHT FIXTURES IN VIEW OF DAYLIGHT.

GROUNDING NOTES:

1. CONNECT AN INSULATED CONTINUOUS COPPER CONDUCTOR (MINIMUM #10 AWG) BETWEEN THE EQUIPMENT GROUNDING TERMINAL BUSES OF NORMAL AND NORMAL/EMERGENCY PANELBOARDS SERVING THE SAME INDIVIDUAL PATIENT CARE VICINITY.
2. CONNECT AN INSULATED CONTINUOUS COPPER CONDUCTOR (MINIMUM #10 AWG) BETWEEN THE EQUIPMENT GROUNDING TERMINAL BUSES OF NORMAL/EMERGENCY PANELBOARDS SERVED BY SEPARATE TRANSFER SWITCHES SERVING THE SAME INDIVIDUAL PATIENT CARE VICINITY.

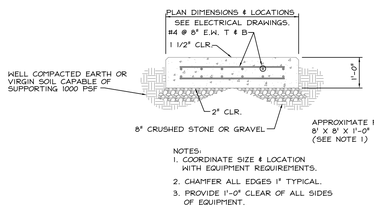
3 Grounding Notes
EL303 / No Scale



EQUIPOTENTIAL GROUNDING PLAN NOTES:
(Typical for all operating rooms)

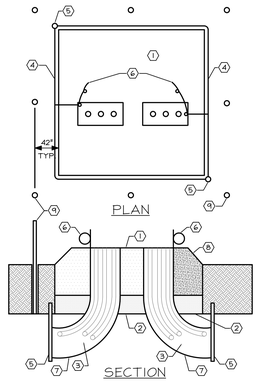
1. PROVIDE A #4 STRANDED COPPER CONDUCTOR FROM THE CEILING GROUND LOOP TO EACH RECEPTACLE, TO EACH OPERATING ROOM PANELBOARD AND TO EACH PATIENT GROUND POINT.
2. PROVIDE AN INSULATED #10 STRANDED COPPER CONDUCTOR FROM THE PATIENT GROUND POINT TO THE ADJACENT RECEPTACLES AND MEDICAL GAS OUTLETS.
3. PROVIDE AN INSULATED #10 STRANDED COPPER CONDUCTOR FROM THE CEILING GROUND LOOP TO ALL EXPOSED CONDUCTIVE SURFACES IN THE PATIENT VICINITY INCLUDING: O.R. TRACK LIGHTS, I.V. TRACKS, STEEL CASEWORK, MISCELLANEOUS CONDUITS, INTERCOMS, LIGHT SWITCHES, EXPOSED MEDICAL GAS OUTLETS, O.R. TABLE, X-RAY FILM ILLUMINATORS, CLOCKS, ETC.
4. PROVIDE AN INSULATED #6 STRANDED COPPER CONDUCTOR FROM THE CEILING GROUND LOOP TO ALL MECHANICAL EQUIPMENT, PIPING, DUCTWORK, CEILING SYSTEM.

2 Typical Operating Room Equipotential Grounding Plan
EL303 / No Scale



NOTES:
1. COORDINATE SIZE & LOCATION WITH EQUIPMENT REQUIREMENTS.
2. CHAMFER ALL EDGES 1" TYPICAL.
3. PROVIDE 1'-0" CLEAR OF ALL SIDES OF EQUIPMENT.

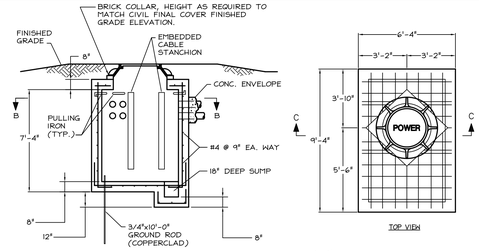
6 Equipment Pad (Exterior)
EL303 / No Scale



NOTES:

1. CONCRETE PAD BY E.C. SIZE, THICKNESS AND OPENINGS AS RECOMMENDED BY SUPPLIER OF TRANSFORMER. 1'-2" DIA. REINF. 12" CC BOTH WAYS. (*MINIMUM REQUIRMENT IS 12" THICK AND 6" BEYOND EQUIPMENT FOOTPRINT IN ALL DIRECTIONS.)
2. 8" PEA GRAVEL UNDER CONCRETE PAD.
3. SEE PLANS AND SCHEDULES FOR NUMBER AND SIZE OF CONDUIT. ELBOWS TO BE LONG SWEEP RADIUS. (*MIN. 5 TIMES CONDUIT DIAMETER.)
4. GROUND GRID, #1/0 BARE COPPER UNLESS OTHERWISE SHOWN.
5. 3/4"x10' GROUND RODS UNLESS OTHERWISE SHOWN.
6. 5' #1/0 BARE COPPER GROUNDING PIGTAIL.
7. CONCRETE DUCT ENCASEMENT.
8. EXPOSED CONCRETE SURFACES TO HAVE RUBBED FINISH AND 3/4" CHAMFERED CORNERS.
9. PROTECTIVE BUMPERS WHERE SPECIFIED. CONSISTING OF EIGHT (8) 4" DIA. RIGID GALVANIZED STEEL PIPES FILLED WITH CONCRETE. SET IN 8" DIA. HOLE FILLED WITH TAMPED CONCRETE.

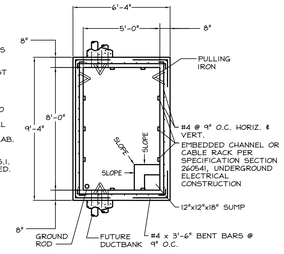
8 Transformer Pad Detail
EL303 / No Scale



STRUCTURAL NOTES

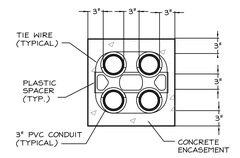
1. ALL REINFORCEMENT BARS FOR MANHOLES SHALL BE #4 PLACED AT 9" O.C.
2. TOP SLAB REINFORCEMENT SHALL CONSIST OF BOTTOM BARS PLACED AS SHOWN. SHORT SPAN BARS SHALL BE ON THE BOTTOM LAYER.
3. BEND AND PLACE ALL REINFORCEMENT SO THAT IT SHALL BE 2" CLEAR OF ALL EXTERIOR SURFACES, 1 1/2" CLEAR OF ALL INTERIOR AND FLOOR SURFACES AND 1" CLEAR OF BOTTOM SURFACES OF TOP SLAB.
4. STRUCTURES SHALL BE OF REINFORCED CONCRETE. CONCRETE SHALL BE 3000 P.S.I. AT 28 DAYS UNLESS OTHERWISE SPECIFIED.

SECTION "C-C"



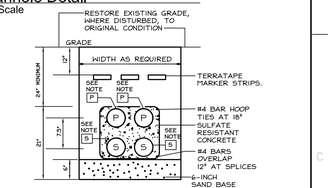
SECTION "B-B"

7 Manhole Detail
EL303 / No Scale



DUCT BANK NOTES:

1. CONCRETE STRENGTH SHALL BE 3000 P.S.I. @ 28 DAYS.
2. MINIMUM COVER OVER TOP OF CONCRETE SHALL BE 36".
3. ALL TIE WIRES SHALL BE NON-FERROUS.

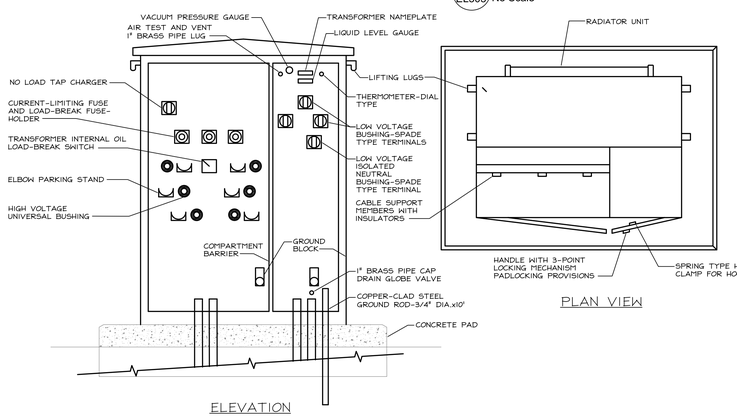


P 4-INCH PVC RIGID SCHEDULE 40 CONDUIT FOR POWER WIRING. MATCH EXISTING

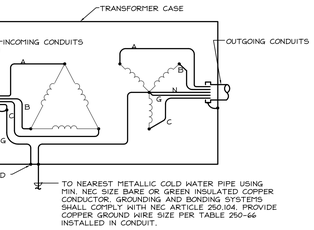
S 4-INCH PVC RIGID SCHEDULE 40 SPARE CONDUIT.

NOTES:
1. CONCRETE SHALL BE SULFATE-RESISTANT

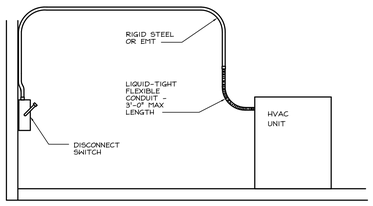
5 Duct Bank Detail
EL303 / No Scale



9 Transformer Detail
EL303 / No Scale



4 Transformer Grounding Detail
EL303 / No Scale



10 HVAC Equipment Connection Detail
EL303 / No Scale

PANEL "OR-1"

LOCATION OR-1 | MTG FLUSH | MAIN 60A | BUS 100A | VOLTS 120/208 | PHASE 3
4 | WIRE CONNECTION #3 | FEEDER CONDUIT 1-1/4 | CONDUCTORS ENTER CABINET AT TOP

MISC	LIGHTS	REC	DESCRIPTION	KW A	KW B	KW C	BREAKER AMP	BREAKER POLE	CKT. NO.	CKT. NO.	BREAKER AMP	BREAKER POLE	KW A	KW B	KW C	DESCRIPTION	MISC	LIGHTS	REC
		X	GENERAL LIGHTING	1.77			20	1	1	2	20	1	.54			GENERAL RECEPTACLE			X
		X	DOWNLIGHTING		.35		20	1	3	4	20	1		.54		GENERAL RECEPTACLE			X
		X	SURGICAL LIGHT			.50	20	1	5	6	20	1			.54	GENERAL RECEPTACLE			X
		X	PACS MONITOR	.18			20	1	7	8	20	1	.36			CEILING MONITOR	X		
			SPARE				20	1	9	10	20	1		.36		O.R. BOOM			X
			SPARE				20	1	11	12	20	1			.36	O.R. BOOM			X
			SPARE				20	1	13	14	20	1	.36			O.R. BOOM			X
			SPARE				20	1	15	16	20	1		.36		O.R. BOOM			X
			SPARE				20	1	17	18	20	1			.36	O.R. BOOM			X
			SPARE				20	1	19	20	20	1	.54			O.R. BOOM			X
			SPARE				20	1	21	22	20	1				O.R. BOOM			X
			SPARE				20	1	23	24	20	1				O.R. BOOM			X
			TOTALS	1.95	.35	.50							1.80	1.26	1.26	TOTALS			

WATTAGE: 1.95 .35 .50
BUS A 1.80 | BUS B 1.26 | BUS C 1.26
SUB TOTALS 3.75 1.61 1.76 7.12 19.78 7.12 19.78

A 3.75
B 1.61
C 1.76 — 3PH CONNECTED TOTAL AMPS 19.78

10 KW PLUS 50% OF REMAINING KW AS PER NEC: C 4.50 4.50 POWER; 2.62 2.62 LIGHTING
3PH DIVERSIFIED TOTAL AMPS 19.78

PANEL "OR-2"

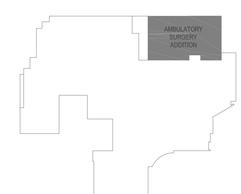
LOCATION OR-2 | MTG FLUSH | MAIN 60A | BUS 100A | VOLTS 120/208 | PHASE 3
4 | WIRE CONNECTION #3 | FEEDER CONDUIT 1-1/4 | CONDUCTORS ENTER CABINET AT TOP

MISC	LIGHTS	REC	DESCRIPTION	KW A	KW B	KW C	BREAKER AMP	BREAKER POLE	CKT. NO.	CKT. NO.	BREAKER AMP	BREAKER POLE	KW A	KW B	KW C	DESCRIPTION	MISC	LIGHTS	REC
		X	GENERAL LIGHTING	1.76			20	1	1	2	20	1	.54			GENERAL RECEPTACLE			X
		X	DOWNLIGHTING		.35		20	1	3	4	20	1		.54		GENERAL RECEPTACLE			X
		X	SURGICAL LIGHT			.50	20	1	5	6	20	1			.54	GENERAL RECEPTACLE			X
		X	PACS MONITOR	.18			20	1	7	8	20	1	.36			CEILING MONITOR	X		
			SPARE				20	1	9	10	20	1		.36		O.R. BOOM			X
			SPARE				20	1	11	12	20	1			.36	O.R. BOOM			X
			SPARE				20	1	13	14	20	1	.36			O.R. BOOM			X
			SPARE				20	1	15	16	20	1		.36		O.R. BOOM			X
			SPARE				20	1	17	18	20	1			.36	O.R. BOOM			X
			SPARE				20	1	19	20	20	1	.54			O.R. BOOM			X
			SPARE				20	1	21	22	20	1				O.R. BOOM			X
			SPARE				20	1	23	24	20	1				O.R. BOOM			X
			TOTALS	1.94	.35	.50							1.80	1.26	1.08	TOTALS			

WATTAGE: 1.94 .35 .50
BUS A 1.80 | BUS B 1.26 | BUS C 1.08
SUB TOTALS 3.74 1.61 1.58 7.12 19.78 7.12 19.78

A 3.74
B 1.61
C 1.58 — 3PH CONNECTED TOTAL AMPS 19.78

10 KW PLUS 50% OF REMAINING KW AS PER NEC: C 4.50 4.50 POWER; 2.61 2.61 LIGHTING
3PH DIVERSIFIED TOTAL AMPS 19.78



Key Plan
TRUE NORTH
BUILDING NORTH

FINAL DRAWING SUBMISSION (100%)
FULLY SPRINKLERED

Revisions:	Date
Electrical/Data Changes	01/07/15

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Approved: Project Director

Project Title: AMBULATORY SURGERY ADDITION REDESIGN
Location: VAMC 135 EAST 38th STREET, ERIE PENNSYLVANIA, 16504
Date: 12 MAR 2013 | Checked: CEM | Drawn: BMM

Project Number: 562-311
Building Number:
Drawing Number: EL303
Dwg. 86 of 86

Office of Construction and Facilities Management
Department of Veterans Affairs

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