

GENERAL NOTES

A. ALL FINAL LOCATIONS AND ARRANGEMENTS OF LIGHTING FIXTURES SHALL BE OBTAINED FROM THE ARCHITECTURAL REFLECTED CEILING PLAN.

GENERAL NOTES - DEMOLITION

A. EXISTING EQUIPMENT, SUCH AS LIGHTING FIXTURES, WIRING DEVICES, CONDUITS, ETC., SHOWN ON PLANS TO BE REMOVED COMPLETELY. CUT/CAP CONDUITS AT THE AREA OF WORK PERIMETER AND REMOVE CONDUIT WITHIN THE WORK AREA, DISCONNECT WIRING AT THE OVERCURRENT PROTECTIVE DEVICE AND REMOVE WIRING COMPLETELY FROM THE ABANDONED DEVICES.

B. REMOVE ALL ACCESSIBLE ABANDONED WIRING OF ALL TYPES, OR CAP AND LABEL IN JUNCTION BOX FOR RE-USE, IN COMPLIANCE WITH THE NATIONAL ELECTRIC CODE.

C. MAINTAIN AND RESTORE, IF INTERRUPTED, ALL CONDUITS AND CONDUCTORS PASSING THROUGH RENOVATED AREAS AND SERVICING UNDISTURBED AREAS.

ELECTRICAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
AIC	AMPERE INTERRUPTING CAPACITY
AMP	AMPERE
C	CONDUIT
CLG	CEILING
EW	ELECTRIC WATER COOLER
EX	EXISTING
EXR	EXISTING TO BE REMOVED
FLA	FULL LOAD AMPS
FVNR	FULL VOLTAGE NON-REVERSING
G OR GRD	GROUND OR GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HP	HORSEPOWER
MCB	MAIN CIRCUIT BREAKER
PH	PHASE
REC	RECESSED
TYP	TYPICAL
V	VOLT

ELECTRICAL SYMBOLS - POWER PLAN

	MOTOR, THREE-PHASE
	EARTH GROUND
	JUNCTION BOX
	OUTLET, DATA COMMUNICATION
	120/208V PANELBOARD
	RECEPTACLE, DUPLEX
	RECEPTACLE, DUPLEX WITH GROUND FAULT CIRCUIT INTERRUPTER
	RECEPTACLE, DUPLEX (NUMBER INDICATES MOUNTING HEIGHT, 'C' INDICATES MOUNTED ABOVE COUNTERTOP)
	RECEPTACLE, DUPLEX WITH WEATHERPROOF COVER
	RECEPTACLE, QUADRAPLEX
	DISCONNECT SWITCH, FUSED
	STARTER, COMBINATION WITH DISCONNECT SWITCH

ELECTRICAL SYMBOLS - LIGHTING PLAN

	SWITCH
	BLANK = SINGLE POLE
	3 = THREE-WAY
	2 = DOUBLE POLE
	4 = FOUR-WAY
	K = KEY OPERATED
	LIGHT FIXTURE CEILING MOUNTED
	LIGHT FIXTURE, SURFACE MOUNTED FLUORESCENT, 1'x4' [305x1220mm]. LETTER INDICATES TYPE.
	LIGHT FIXTURE, WALL MOUNTED
	LIGHTING, TWO HEAD EMERGENCY BATTERY POWER
	EXIT SIGN, WALL MOUNTED WITH DIRECTIONAL ARROWS AND FACES AS SHOWN
	EXIT SIGN, CEILING MOUNTED WITH DIRECTIONAL ARROWS AND FACES AS SHOWN

ELECTRICAL SYMBOLS - DEMOLITION

	EX. JUNCTION BOX TO BE REMOVED
	EX. OUTLET, DATA COMMUNICATION TO BE REMOVED
	EX. 120/208V PANELBOARD TO BE REMOVED
	EX. RECEPTACLE, DUPLEX TO BE REMOVED
	EX. SWITCH TO BE REMOVED
	EX. LIGHT FIXTURE CEILING MOUNTED TO BE REMOVED
	EX. LIGHT FIXTURE TO BE REMOVED

NOTES:

- EXISTING PANELBOARD IN BUILDING 417 AND EXISTING FEEDER CONDUCTORS BACK TO DP-HA SHALL BE REMOVED, EXISTING UNDERGROUND CONDUIT SHALL REMAIN. FURNISH AND INSTALL 4#1/0 AND #6GRD IN EXISTING 1 1/2" C. FURNISH AND INSTALL PULL BOX AND EXTEND CONDUIT TO PANEL P417 AS REQUIRED.
- FURNISH AND INSTALL #6 GROUNDING AND BONDING CONDUCTORS TO INCOMING WATER PIPE (WITHIN 5' OF BUILDING ENTRANCE), STRUCTURAL METAL BUILDING FRAME, AND CONCRETE ENCASED ELECTRODE IN ACCORDANCE WITH NEC ARTICLE 250 REQUIREMENTS.
- EXISTING 100A FEEDER TO EXISTING PANELBOARD IN BUILDING 419 SHALL REMAIN AND REUSED TO FEED REPLACEMENT PANEL P419.

LIGHTING FIXTURE SCHEDULE													
SCHEDULE ABBREVIATIONS:													
LAMP TYPES: CFL = COMPACT FLUORESCENT; FL = FLUORESCENT; MHPS = METAL HALIDE PULSE START													
BALLAST: EL = ELECTRONIC; HFF = HIGH POWER FACTOR; V = MULTIPLE VOLTAGE													
ENVIRONMENT: DL = DAMP LOCATION; IN = INDOOR; WL = WET LOCATION													
MOUNTING: CLG. HGT. = CEILING HEIGHT; R = RECESSED; SC = SURFACE WALL; W = WALL													
DESIG	FIXTURE DESCRIPTION	NO.	LAMPS			BALLAST			MOUNTING			REMARKS	
			WATTS	TYPE	MODEL NUMBER	NO.	TYPE	MIN BF	ENVIR.	TYPE	HEIGHT AFF		VOLTS
A	ARCHITECTURAL VANDAL-RESISTANT FIXTURE, 4' NOMINAL LENGTH, MARINE-GRADE ALUMINUM HOUSING, DIE-CAST END CAPS, UV-STABILIZED HIGH-IMPACT EXTRUDED CLEAR ACRYLIC LENS (MINIMUM 0.15" THICKNESS), TAMPER-RESISTANT STAINLESS STEEL FASTENERS, SEMI-CIRCULAR CROSS SECTION, 5.33"W x 3.75"D, ADA COMPLIANT, PAINTED AFTER FABRICATION, MATTE WHITE POLYESTER POWDER COAT FINISH	2	28	FL	F28T5	1	EL	1.00	WL	W	*	MV	* MOUNT AT 7'-0" EXCEPT ABOVE DOOR FRAMES AND LAVATORIES. MOUNT 6" ABOVE TOP OF MIRROR AT LAVATORIES AND 6" ABOVE DOOR FRAME WHERE REQUIRED.
B	ARCHITECTURAL VANDAL-RESISTANT FIXTURE, 2' NOMINAL LENGTH, MARINE-GRADE ALUMINUM HOUSING, DIE-CAST END CAPS, UV-STABILIZED HIGH-IMPACT EXTRUDED CLEAR ACRYLIC LENS (MINIMUM 0.15" THICKNESS), TAMPER-RESISTANT STAINLESS STEEL FASTENERS, SEMI-CIRCULAR CROSS SECTION, 5.33"W x 3.75"D, ADA COMPLIANT, PAINTED AFTER FABRICATION, MATTE WHITE POLYESTER POWDER COAT FINISH	2	14	FL	F14T5	1	EL	1.00	WL	W	*	MV	* MOUNT AT 7'-0" EXCEPT ABOVE DOOR FRAMES. MOUNT 6" ABOVE ABOVE DOOR FRAME WHERE REQUIRED.
C	ENCLOSED AND GASKETED FIXTURE, PENDANT MOUNT, HIGH-IMPACT MOLDED POLYESTER FIBERGLASS HOUSING, FACTORY INSTALLED NEOPRENE GASKETING, 4' NOMINAL LENGTH, ONE-PIECE IMPACT-RESISTANT 15% DR MOLDED ACRYLIC DIFFUSER, BAKED WHITE ENAMEL FINISH, STEM-HUNG	2	28	FL	F28T5	1	EL	1.00	DL	P	*	MV	* MOUNT BOTTOM OF FIXTURE LEVEL WITH BOTTOM OF STRUCTURE, STEM-LENGTH AS REQUIRED
D	ENCLOSED AND GASKETED FIXTURE, SURFACE MOUNT, HIGH-IMPACT MOLDED POLYESTER FIBERGLASS HOUSING, FACTORY INSTALLED NEOPRENE GASKETING, 2' NOMINAL LENGTH, ONE-PIECE IMPACT-RESISTANT 15% DR MOLDED ACRYLIC DIFFUSER, BAKED WHITE ENAMEL FINISH, MOUNT TO UNDERSIDE OF ROOF DECK	2	14	FL	F14T5	1	EL	1.00	DL	SC	DECK	MV	HT
E	SEALED WRAP-AROUND STRIP FIXTURE, 4' NOMINAL LENGTH, ONE-PIECE 20-GAUGE CRS HOUSING WITH WELDED ENDS, WHITE POLYESTER POWDER COAT FINISH, STAINLESS STEEL HARDWARE, UV-STABILIZED 0.125" DR ACRYLIC LENS, LINEAR PRISMATIC LENS INTERIOR, GASKET BETWEEN LENS FRAME AND HOUSING, IP65 RATED, 3" MAXIMUM FIXTURE WIDTH	1	28	FL	F28T5	1	EL	1.00	WL	S	*	MV	* MOUNT TO TOP OF BOTTOM CHORD OF TRUSS TO UPLIGHT ROOF DECK AND CLERESTORY ABOVE

PANELBOARD P417												
RATINGS: 120/208V, 3PH, 4W + G						BUS RATING: 225A						
MOUNTING: SURFACE						MAIN RATING: MCB 125A						
						MIN. SHORT CIRCUIT RATING: 10000 AMPS						
LOAD DESCRIPTION	P	AMP	BKR		LOAD DESCRIPTION	P	AMP	BKR		LOAD DESCRIPTION	P	AMP
			NO.	NO.				NO.	NO.			
VENDING MACHINE	1	20	1	A	2	70	3			DWH-1		
VENDING MACHINE	1	20	3	B	4							
ELECTRIC WATER COOLER	1	20	5	C	6							
RECEPTACLES - MENS	1	20	7	A	8	20	1			LIFT		
RECEPTACLES - MENS	1	20	9	B	10	20	1			417-EF-1		
RECEPTACLES - MENS	1	20	11	C	12	20	1			SPARE		
RECEPTACLES - WOMENS	1	20	13	A	14	20	1			SPARE		
RECEPTACLES - WOMENS	1	20	15	B	16	20	1			SPARE		
RECEPTACLES - WOMENS	1	20	17	C	18	20	1			SPARE		
RECEPTACLE - JANITOR	1	20	19	A	20	20	1			SPARE		
RECEPTACLES - MAINTENANCE	1	20	21	B	22	-	1			PROVISIONAL SPACE		
RECEPTACLES - OFFICE	1	20	23	C	24	-	1			PROVISIONAL SPACE		
EMERGENCY LIGHTING	1	20	25	A	26	-	1			PROVISIONAL SPACE		
LIGHTING	1	20	27	B	28	-	1			PROVISIONAL SPACE		
LIGHTING	1	20	29	C	30	-	1			PROVISIONAL SPACE		
LIGHTING	1	20	31	A	32	-	1			PROVISIONAL SPACE		
LIGHTING	1	20	33	B	34	-	1			PROVISIONAL SPACE		
PROVISIONAL SPACE	1	-	35	C	36	-	1			PROVISIONAL SPACE		
PROVISIONAL SPACE	1	-	37	A	38	-	1			PROVISIONAL SPACE		
PROVISIONAL SPACE	1	-	39	B	40	-	1			PROVISIONAL SPACE		
PROVISIONAL SPACE	1	-	41	C	42	-	1			PROVISIONAL SPACE		

COMMENTS: * MAIN BREAKER SHALL BE SERVICE ENTRANCE RATED
* CIRCUIT BREAKER SHALL BE GFI RATED

PANELBOARD P419												
RATINGS: 120/208V, 3PH, 4W + G						BUS RATING: 100A						
MOUNTING: SURFACE						MAIN RATING: MCB 100A						
						MIN. SHORT CIRCUIT RATING: 10,000 AMPS						
LOAD DESCRIPTION	P	AMP	BKR		LOAD DESCRIPTION	P	AMP	BKR		LOAD DESCRIPTION	P	AMP
			NO.	NO.				NO.	NO.			
LIGHTING	1	20	1	A	2	50	3			PUMP P1		
RECEPTACLES - UPPER	1	20	3	B	4							
RECEPTACLES - UPPER	1	20	5	C	6							
RECEPTACLES - LOWER	1	20	7	A	8	50	3			PUMP P2		
RECEPTACLES - LOWER	1	20	9	B	10							
SUMP PUMP	1	20	11	C	12							
EXTERIOR RECEPT.	1	20	13	A	14	15	1			PUMP CONTROL CIRCUIT		
EXTERIOR RECEPT.	1	20	15	B	16	20	1			EX LOWER HEATER		
CHLORINE PUMP	1	20	17	C	18	20	1			EX UPPER HEATER		
CHEMICAL TREATMENT PANEL	1	20	19	A	20	20	2			EX WINTERIZING PUMP		
SPARE	1	20	21	B	22	-	1			PROVISIONAL SPACE		
SPARE	1	20	23	C	24	-	1			PROVISIONAL SPACE		
SPARE	1	20	25	A	26	-	1			PROVISIONAL SPACE		
SPARE	1	20	27	B	28	-	1			PROVISIONAL SPACE		
SPARE	1	20	29	C	30	-	1			PROVISIONAL SPACE		

COMMENTS: MAIN CIRCUIT BREAKER SHALL BE SERVICE ENTRANCE RATED

SPECIFICATIONS FOR COMMUNICATION CABLE SYSTEM DESIGN

ALL CABLE INSTALLERS MUST BE TRAINED AND CERTIFIED MEETING CERTIFICATION STANDARDS, I.E., EIA, TIA, ANSI, BICSI, TDM, ITU-T, NFPA, NEC AND NCS. NO PERSONS SHALL CONDUCT ANY INSTALLATIONS THAT HAVE NOT MET THESE CERTIFICATION STANDARDS OF TRAINING AND INSTALLATION.

1. CABLE DESCRIPTION FOR STATION CABLES:

- ALL CABLES WILL BE UNSHIELDED TWISTED 4-PAIR, RATED CAT 6.
- DATA CABLE SHEATH SHALL BE "DARK BLUE" IN COLOR.
- VOICE CABLE SHEATH SHALL BE "GRAY" IN COLOR.
- ALL CABLES MUST BE ONE CONTINUOUS RUN BETWEEN WORK STATION AND COMMUNICATIONS CLOSET - NO SPLICES. ALL CABLES WILL BE INSTALLED IN CONDUIT FROM WALL JACK TO EXISTING TELECOMMUNICATIONS ENCLOSURE.

2. TERMINATING COPPER CABLE - IN COMMUNICATION ROOM

- ALL DATA CABLES WILL BE TERMINATED ONTO CAT 6 RATED PATCH PANELS - RJ45
- DATA CABLES WILL BE TERMINATED USING EIA/TIA-568A WIRING CONFIGURATION.
- DATA CABLES WILL BE TERMINATED INTO PATCH PANELS MOUNTED ON A STANDARD 19" DATA RACK
- ALL VOICE CABLES WILL BE TERMINATED INTO CAT 6 RATED PATCH PANELS AND TERMINATED INTO STANDARD 19" DATA RACK.
- ALL CABLES WILL BE NUMERICALLY LABELED AT BOTH ENDS OF TERMINATIONS.

*NOTE: 110 BLOCKS MAY BE USED WHEN ALREADY INSTALLED IN AN EXISTING CLOSET.

3. TERMINATING COPPER CABLE - AT WORK STATION

- ALL DATA CABLES WILL BE TERMINATED ON CAT 6 RATED RJ-45 JACK INSERTS, USING
- EIA/TIA-568A WIRING CONFIGURATION.
- ALL DATA JACK INSERTS WILL BE BLACK IN COLOR.
- ALL VOICE CABLES WILL BE TERMINATED ONTO RJ-11 JACK INSERTS USING STANDARD USOC WIRING CONFIGURATION.
- ALL VOICE JACK INSERTS WILL BE OFFICE WHITE IN COLOR.
- ALL JACK INSERTS WILL BE INSTALLED UNTO FLUSH WALL MOUNTED FACE PLATES. FACE PLATES SHALL BE OFFICE WHITE IN COLOR. EACH FACE PLATE WILL BE A 4-PORT CONFIGURATION.
- EACH WORK STATION WILL BE WIRED WITH 2-DATA CABLES AND 1-VOICE CABLE.
- A COMMUNICATIONS OUTLET WILL INSTALLED EVERY WALL DESIGNATED AS ADMINISTRATIVE FLOOR SPACE.

*NOTE: IN AREAS DESIGNATED FOR SYSTEMS FURNITURE, COMMUNICATIONS CABLING WILL BE INSTALLED INTO THE FURNITURE ONTO FACEPLATES MOUNTED ONTO THE PREFABRICATED CUTOUTS ON SYSTEM FURNITURE BASEBOARDS. CABLES WILL BE PULLED DOWN INSIDE WALLS IN AREAS BEST DETERMINED SUITABLE TO FEED ENTIRE SECTIONS WITH MINIMAL WALL PENETRATIONS OR ENTRY POINTS INTO FURNITURE. CABLES IN MOST OF THESE CASES WILL NEED TO BE PULLED AND SET ASIDE FOR LATER INSTALLATION INTO FURNITURE ONCE FURNITURE HAS BEEN INSTALLED.

4. TERMINATION OF FIBER OPTIC CABLE

- FIBER TERMINATIONS MUST BE IN COMPLIANCE WITH BICSI STANDARDS OF INSTALLATION.
- MUST BE INSTALLED IN BRIGHT COLORED ORANGE INNER-DUCT APPROPRIATE FOR SIZE OF FIBER BEING PULLED
- FIBER MUST BE TERMINATED IN AN ENCLOSED FIBER BOX WITH SERVICE LOOP MOUNTED INTO A 19"
- DATA RACK THAT FOR SERVICE TO NETWORK SWITCH EQUIPMENT (SWITCH PROVIDED BY GOVERNMENT)
- TERMINATIONS MUST BE ST TYPE CONNECTIONS IN FIBER TERMINATION BOX.
- UNLESS OTHERWISE DESIGNATED, FIBER CABLE WILL BE MULTI-MODE 62.5 MICRON. TESTING OF EACH FIBER MUST BE CONDUCTED WITH NO FAILURES -100 PASS FOR ALL FIBERS. TEST RESULTS MUST BE FURNISHED TO GOVERNMENT IN EITHER PAPER OR ELECTRONIC FORMAT.

5. CABLE LABELING (NUMBERS ONLY)

- ALL CABLES WILL BE NUMBERED SEQUENTIALLY AND MECHANICALLY STENCILED WITH BLACK INK - NOT HAND WRITTEN. CABLE NUMBER LABELS WILL BE PLACED AT BOTH ENDS OF EACH CABLE, ON PATCH PANELS, AND WALL MOUNTED FACE PLATES.
- IF CABLE NUMBER ALREADY EXISTS IN COMMUNICATIONS ROOMS, NUMBER LABELING SEQUENCE WILL BE A CONTINUATION OF EXISTING CABLE NUMBERS ALREADY IN PLACE ON DATA PATCH PANELS AND VOICE CABLES.

6. CABLE MANAGEMENT

- ALL CABLES WILL BE HOME RUN FROM EACH WORK-STATION AREA TO THE DESIGNATED COMMUNICATIONS ENCLOSURE.
- ALL CABLES WILL BE INSTALLED IN CONDUIT FOR ENTIRE CABLE RUN.
- ALL WALL PENETRATIONS MADE ABOVE CEILINGS THROUGH FIRE RATED WALLS MUST BE SEALED WITH FIRE RATED MATERIALS. IF EXISTING CONDUITS ARE USED AND FIRE STOPPER MATERIAL IS REMOVED FROM CONDUITS, CONDUITS WILL BE RESEALED WITH RATED MATERIALS ONCE CABLES ARE INSTALLED.

7. SELECTION OF MATERIAL

- ALL MATERIALS SELECTED FOR USE BY INSTALLATION CONTRACTOR MUST BE APPROVED BY VA TELECOMMUNICATIONS PERSONNEL PRIOR TO INSTALLATION.

8. TESTING CABLE

- ALL CABLES INSTALLED MUST BE TESTED AND VERIFIED FOR FULL 100MB TRANSMISSION SPEED AND CONTINUITY TO VERIFY THAT ALL PAIRS ARE FUNCTIONAL TO SUPPORT VOICE AND DATA SYSTEMS. TEST RESULTS MUST BE PRINTED AND PROVIDED TO VA TELECOMMUNICATIONS PERSONNEL PRIOR TO ACCEPTANCE OF THE WORK THAT WAS PERFORMED.

9. ENVIRONMENTAL CONTROLS

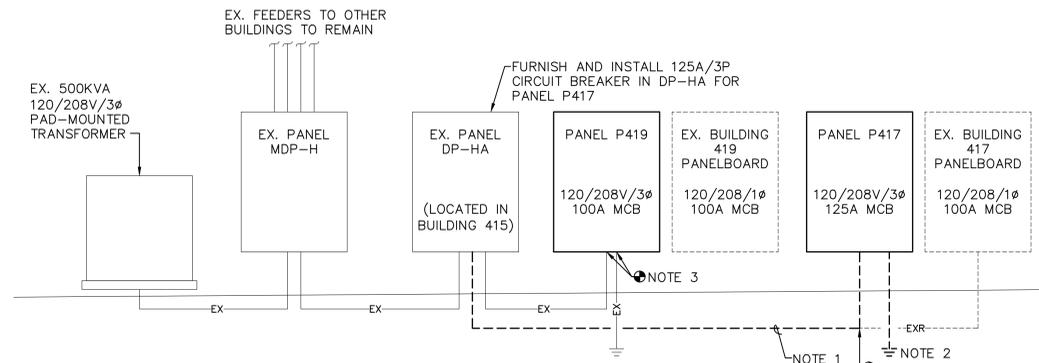
- COMMUNICATIONS ROOMS CONTAINING ELECTRONIC NETWORK EQUIPMENT MUST BE ADEQUATELY CAPABLE TO MAINTAIN AIR FLOW TO COOL EQUIPMENT TO AVOID OVERHEATING. OPTIMUM ROOM TEMPERATURE SHOULDNT EXCEED 78 DEGREES FAHRENHEIT.

10. MAIN TELCO FIBER OPTIC OR COPPER CABLE

- ALL TELCO OR FIBER OR COPPER CABLE MUST BE PULLED INTO THE BUILDING FROM THE NEAREST DISTRIBUTION POINT AS DETERMINED BY CONSTRUCTION SITE DESIGN.
- CAPACITY OF BOTH FIBER OPTIC AND COPPER CABLE PAIRS WILL BE DETERMINED BY THE GOVERNMENT TELECOM REPRESENTATIVE.

11. DEMOLISHING OLD CABLE

- ALL OLD OR UNUSED TELECOMMUNICATIONS DATA AND VOICE CABLE IS TO BE REMOVED FROM THE STATION WALL JACK THROUGH THE CEILING INTO THE TELECOMMUNICATIONS CLOSET AND REMOVED FROM PATCH PANELS AND 110 BLOCKS.



POWER RISER DIAGRAM
NO SCALE

100% CONSTRUCTION DOCUMENTS

CONSULTANTS: Barton Associates Consulting Engineers 221 West Philadelphia Street Philadelphia, PA 19106 Tel: (215) 640-1984 Web: www.ba-ny.com	ARCHITECT/ENGINEERS: SAA Architects 600 North Hartley Street, Suite 150 York, PA 17404 T 717.843.3200 F 717.699.0205 www.saaarchitects.com	Drawing Title BUILDING 417 - DETAILS + SCHEDULES	Project Title RECREATIONAL POOL FACILITY RENOVATIONS BATH HOUSE	Project Number 613-11-140	Office of Construction and Facilities Management
		Approved Project Director	Location VAMC, MARTINSBURG, WV	Building Number 417	
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