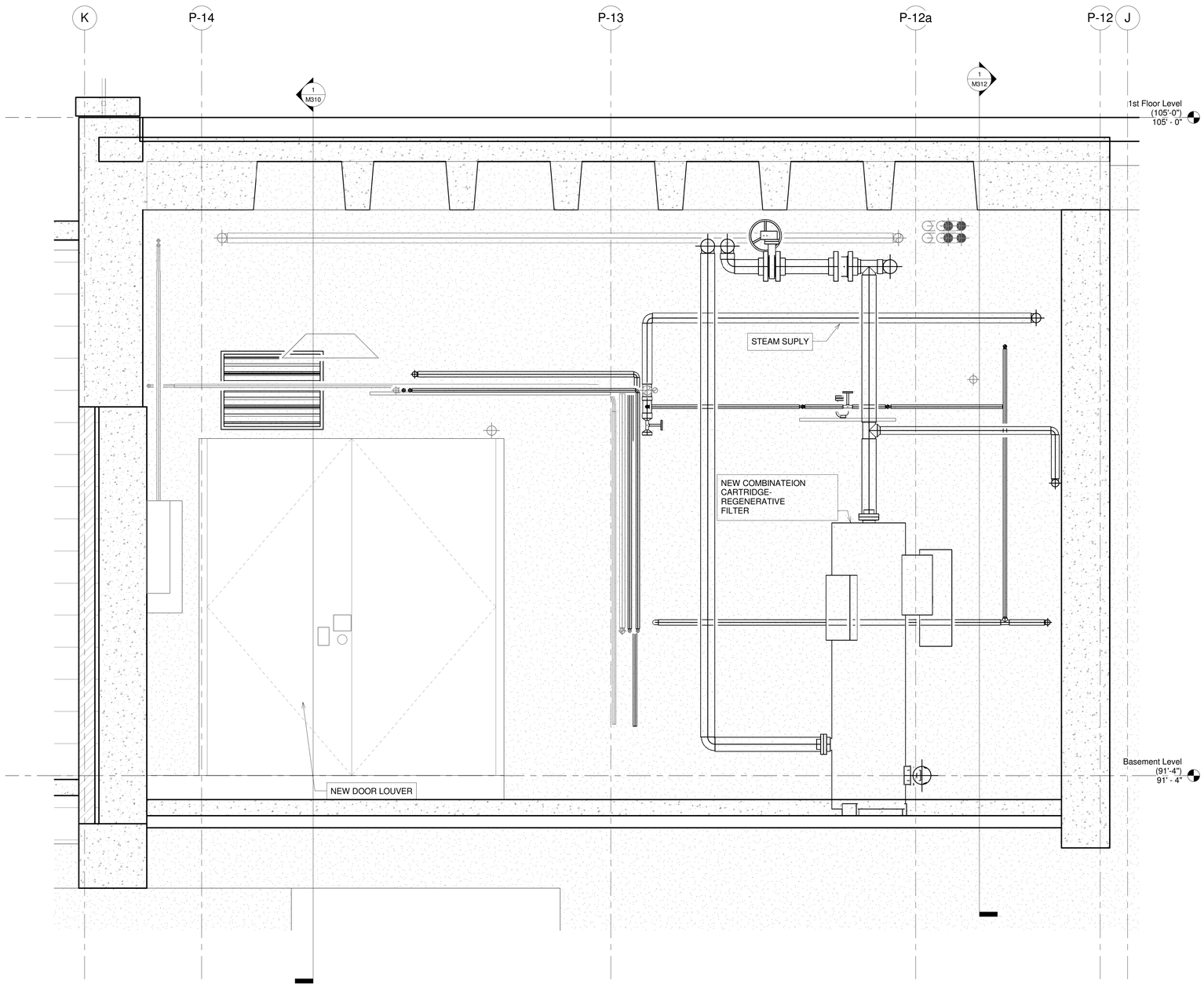

1 Mechanical Room SP101-1 West Elevation
1" = 1'-0"

FINAL SUBMITTAL
APPROVED FOR CONSTRUCTION

Revisions:	Date

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CERT # 4270

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Engineer-of-Record: CALEB FREEMAN
FL. PE No.: 74604

ARCHITECT/ENGINEERS:

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CERT. OF AUTH: FL #26693
EXPIRES: 02/28/2015
AKEA PROJECT NO: 053-13

Drawing Title: MECHANICAL ROOM WEST ELEVATION

Approved: Project Director

Project Title: RENOVATIONS TO THE POOL
MALCOM RANDALL VAMC

Location: GAINESVILLE, FLORIDA

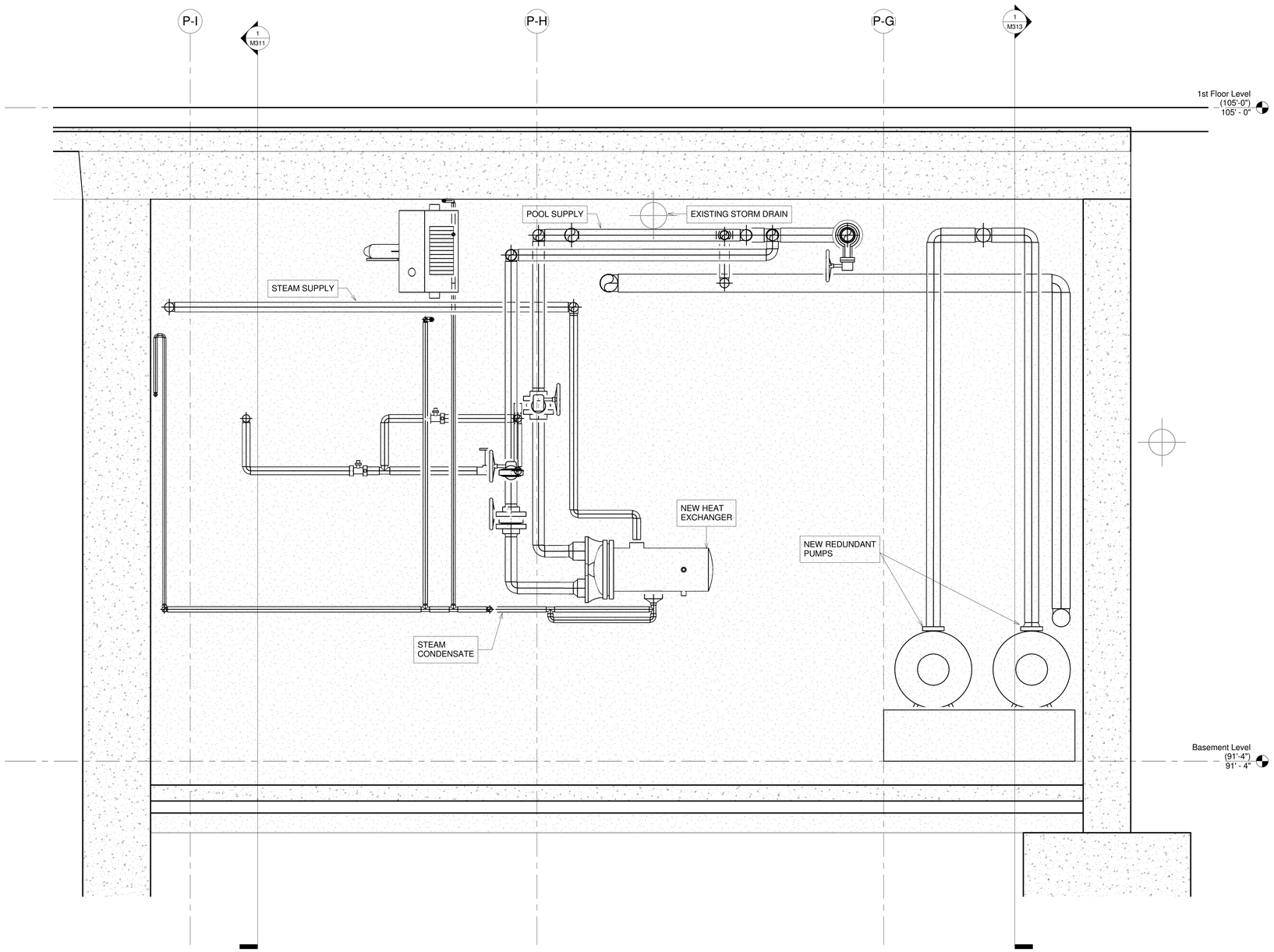
Date: JULY 23, 2014
Checked: MT
Drawn: CF

Project Number: VA-13-C-0130
Building Number: 1
Drawing Number: M311
Page 21 of 29

Office of
Construction
and Facilities
Management

Department of
Veterans Affairs

VA FORM 08-6231



1 Mechanical Room SP101-1 North Elevation
1" = 1'-0"

FINAL SUBMITTAL
APPROVED FOR CONSTRUCTION

Revisions: | Date

CONSULTANTS:

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CERT. OF AUTH: FL #26693
EXPIRES: 02/28/2015
AKEA PROJECT NO: 053-13

Drawing Title: MECHANICAL ROOM NORTH ELEVATION
Approved: Project Director
Project Title: RENOVATIONS TO THE POOL
MALCOM RANDALL VAMC
Location: GAINESVILLE, FLORIDA
Date: JULY 23, 2014
Checked: MT
Drawn: CF
Project Number: VA-13-C-0130
Building Number: 1
Drawing Number: M312

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and Facilities
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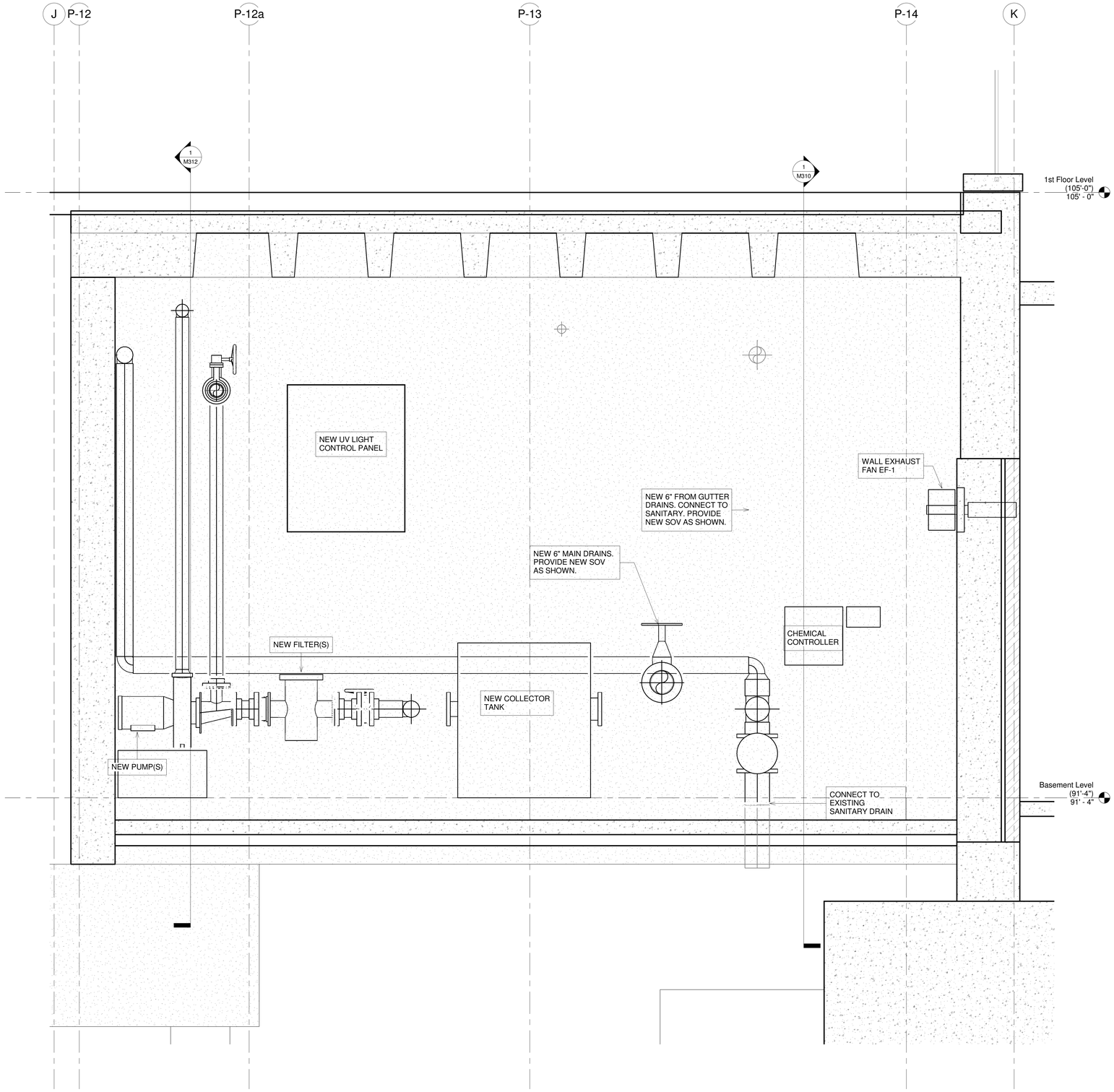

1 Mechanical Room SP101-1 East Elevation
1" = 1'-0"

FINAL SUBMITTAL
APPROVED FOR CONSTRUCTION

Revisions:	Date

CONSULTANTS:

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EXPIRES: 02/28/2015
AKEA PROJECT NO: 053-13

Drawing Title: MECHANICAL ROOM EAST ELEVATION

Approved: Project Director

Project Title: RENOVATIONS TO THE POOL
MALCOM RANDALL VAMC

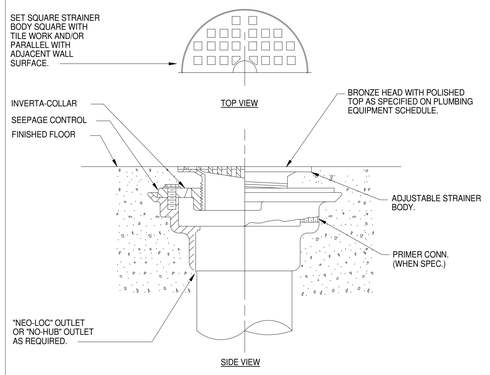
Location: GAINESVILLE, FLORIDA

Date: JULY 23, 2014
Checked: MT
Drawn: CF

Project Number: VA-13-C-0130
Building Number: 1
Drawing Number: M313

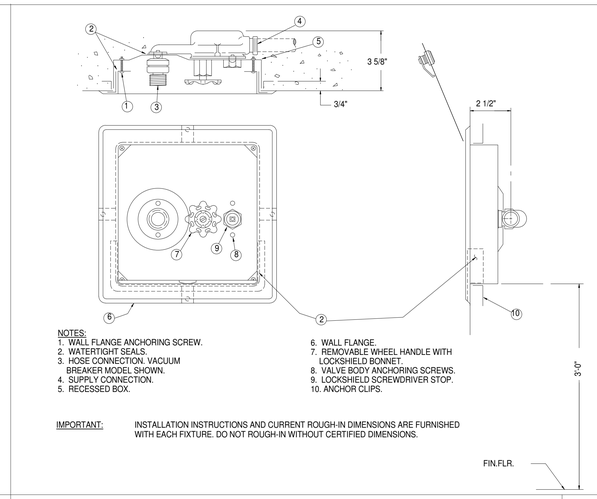
Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231



FLOOR DRAIN 'A' DETAIL (FD-1 + FD-2)
NOT TO SCALE

1

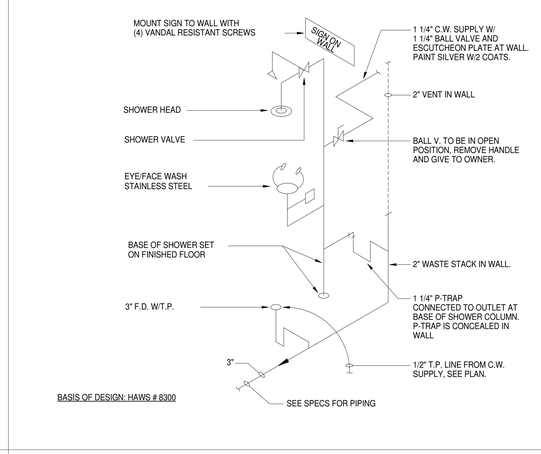


NOTES:
1. WALL FLANGE ANCHORING SCREW.
2. WATERTIGHT SEALS.
3. HOSE CONNECTION. VACUUM BREAKER MODEL SHOWN.
4. SUPPLY CONNECTION.
5. RECESSED BOX.
6. WALL FLANGE.
7. REMOVABLE WHEEL HANDLE WITH LOCKSHIELD BONNET.
8. VALVE BODY ANCHORING SCREWS.
9. LOCKSHIELD SCREWDRIVER STOP.
10. ANCHOR CLIPS.

IMPORTANT: INSTALLATION INSTRUCTIONS AND CURRENT ROUGH-IN DIMENSIONS ARE FURNISHED WITH EACH FIXTURE. DO NOT ROUGH-IN WITHOUT CERTIFIED DIMENSIONS.

WALL HYDRANT DETAIL
NOT TO SCALE

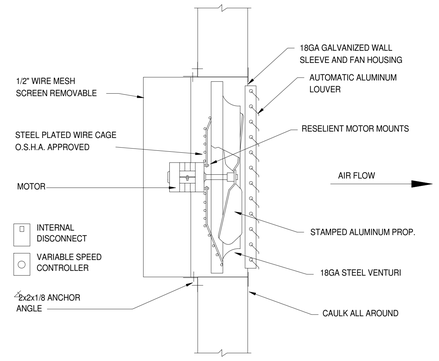
2



BASIS OF DESIGN: HAWS # 8300

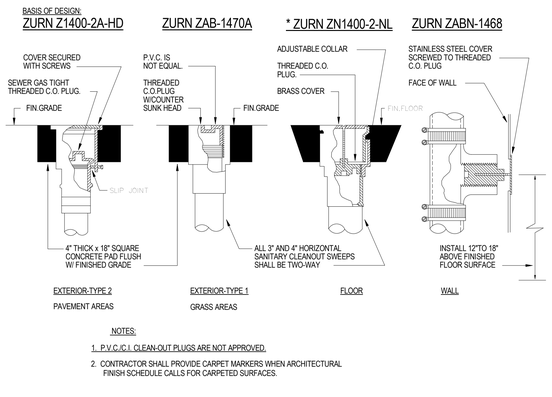
EMERGENCY SHOWER EYE/FACE WASH DETAIL
NOT TO SCALE

3



WALL MOUNTED POWER VENTILATOR DETAIL
NOT TO SCALE

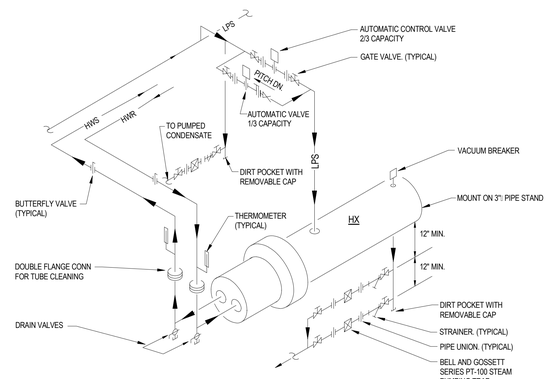
4



NOTES:
1. P.V.C./C.I. CLEAN-OUT PLUGS ARE NOT APPROVED.
2. CONTRACTOR SHALL PROVIDE CARPET MARKERS WHEN ARCHITECTURAL FINISH SCHEDULE CALLS FOR CARPETED SURFACES.

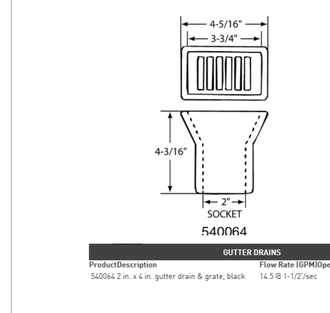
TYPICAL CLEAN-OUT DETAIL
NOT TO SCALE

5



SHELL AND TUBE HEAT EXCHANGER DETAIL
NOT TO SCALE

6

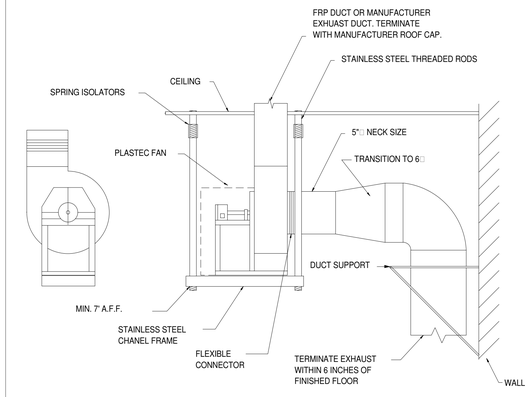


GUTTER DRAINS		
ProductDescription	Flow Rate (GPM)Open Area (Sq In)	
540064 2 in. x 4 in. gutter drain & grate, black	14.5 @ 1-1/2'/sec	3.09

BASIS OF DESIGN: PENTAIR 540064

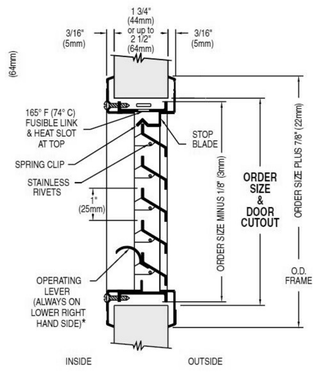
GUTTER DRAIN FIXTURE DETAILS
NOT TO SCALE

7



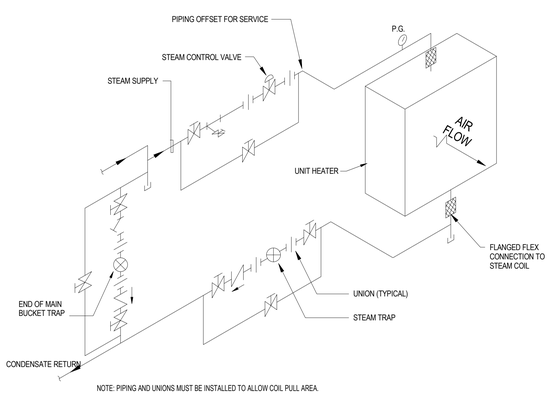
CEILING HUNG FRP FAN
NOT TO SCALE

8



DOOR LOUVER INSTALLATION DETAIL
NOT TO SCALE

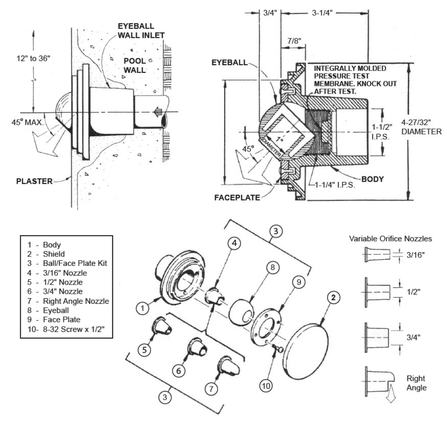
9



NOTE: PIPING AND UNIONS MUST BE INSTALLED TO ALLOW COIL PULL AREA.

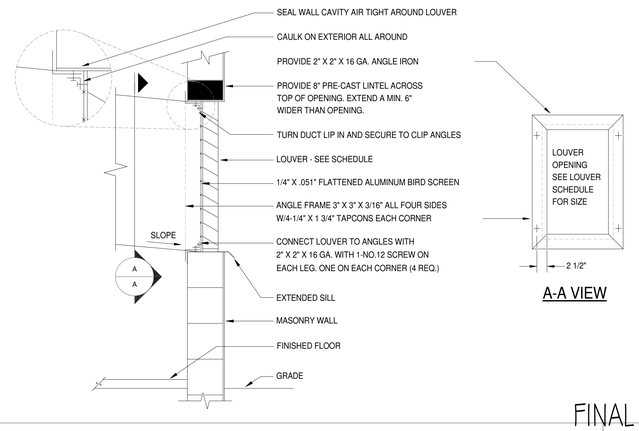
STEAM UNIT HEATER COIL PIPING DETAIL
NOT TO SCALE

10



VARIABLE ORIFICE EYEBALL JET DETAIL
NOT TO SCALE

11



A-A VIEW

WALL LOUVER INSTALLATION DETAIL
NOT TO SCALE

12

FINAL SUBMITTAL
APPROVED FOR CONSTRUCTION

Revisions:	Date

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CERT. OF AUTH: FL #26693
EXPIRES: 02/28/2015
AKEA PROJECT NO: 053-13

Drawing Title: Mechanical Details

Approved: Project Director

Project Title: RENOVATIONS TO THE POOL MALCOM RANDALL VAMC

Location: GAINESVILLE, FLORIDA

Date: JULY 23, 2014 | Checked: MT | Drawn: CF

Project Number: VA-13-C-0130

Building Number: 1

Drawing Number: M501

Page 24 of 29

Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231

Heat Exchanger Schedule

Mark	Manuf.	Model	Service	Shell Side (Steam) Capacity (MBH)	Steam # (lb/h)	Surface Area (Sqft)	Steam Presspsig)	Tube Side (Water) EWT (°F)	LWT (°F)	Flowrate (GPM)	Fouling Factor	WPD (in. WC)	Number of Passes	Dimensions LxD Ø	Remarks
HE-1	Bell and Gossett	DSU102-2	Pool Heat	450	484	27	30	60	66.7	134	0.01068	8.58	2	30 1/8x10 3/4	1-3
HE-2	Bell and Gossett	DSU102-2	Pool Heat	450	484	27	30	60	66.7	134	0.01068	8.58	2	30 1/8x10 3/4	1-3

Remarks:

1. Provide double wall heat exchanger with carbon steel shell
2. Provide HE-1 designed for 125 PSIG working pressure
3. Provide shell construction for minimum 150 PSI ASME pressure vessel

Exhaust Fan Schedule

Mark	Manufacturer	Model	Dimensions (LxWxH, In.)	Weight (Lbs)	Opening (Inches)	Service	Fan Data Type	CFM	S.P.	RPM	H.P.	Drive	Volt/Ph/Hz.	Control	Remarks
EF-1	Plastec	Plastec-15	14x18x20	37	5	Acid Storage	Utility	100	0.5	1725	1/3	Direct	115/1/60	Emergency Switch	5-7
EF-2	Plastec	Plastec-15	14x18x20	37	5	Chlorine Storage	Utility	100	0.5	1725	1/3	Direct	115/1/60	Emergency Switch	5-7
EF-3	Greenheck	SE1-12-432-G	18x18x11	20	13x13	Pool Eqt. Exh	Utility	400	0.25	1350	1/12	Direct	115/1/60	Emergency Switch	2, 3

Remarks:

1. Provide factory exhaust grille
2. Provide integral disconnect switch.
3. Provide integral variable speed control switch.
4. Provide fan speed controller
5. Provide top horizontal fan discharge
6. Provide explosion resistant motor
7. Provide factory exhaust kit and roof cap

Notes:

1. See specifications for additional material and installation requirements.
2. See control sequences for control requirements.

POOL A - LAP POOL MECHANICAL EQUIPMENT

ID TAG	DESCRIPTION	QTY.	BASIS OF DESIGN
P1A	FILTRATION PUMP	2	STA-RITE, EQ SERIES, MODEL EQK-500, 138 GPM AT 80' TDH, 5 HP, 208 VOLT, 3 PHASE, 60HZ, 3450 RPM, ODP MOTOR, END SUCTION, SELF PRIMING, CLOSE COUPLED, CORROSION RESISTANT INTERNALS, GLASS REINFORCED THERMOPLASTIC BODY, PROVIDE WITH 6 x 4 CONCENTRIC REDUCER.
S1A	STRAINER	2	NEPTUNE BENSON, INC., 4 X 4 STRAIGHT DESIGN BASKET STRAINER, STAINLESS STEEL BODY, TRANSPARENT ACRYLIC LID, STAINLESS STEEL BASKET, PROVIDE WITH EXTRA STAINLESS STEEL BASKET
F1A	FILTER	1	NEPTUNE BENSON, INC., REGENERATIVE MEDIA FILTER, MODEL SP-18-48-176, 137 SQUARE FEET OF FILTER AREA,1.00 GPM/S.F. OF FILTER AREA, PROVIDE WITH PERLITE MEDIA OR APPROVED EQUAL.
H1A	HEAT EXCHANGERS	2	SEE MECHANICAL DRAWINGS FOR UNIT SIZE
C1A	CHEMICAL CONTROLLER	1	BECSYS3, CONTINUOUS MONITORING AND CONTROL, 2.0 TO 12.0 pH RANGE, 0.0 TO 6.0 ppm CHLORINE RANGE, 1 TO 1000 mV ORP RANGE, PROVIDE WITH WSRAK SAMPLE STREAM ASSEMBLY, DATA LOGGING AND COMPUTER INTERFACE.
CT1A	SALT STORAGE		BY OWNER
AP1A	ACID FEEDER	1	STENNER, SERIES 85, #85M1, 0.3 TO 5.0 GALLONS PER DAY OUTPUT, 120 VOLTS, USE MURIATIC ACID FOR pH CONTROL. PROVIDE WITH WEIGHTED FOOT STRAINER.
CT2A	ACID STORAGE	2	15 GALLON CARBOYS SUPPLIED BY OWNERS CHEMICAL SUPPLIER
AF1A	AUTOFILL	1	B.W. CONTROLS, #5200-LFI-N4 RELAY, #6012-KF3-RC ELECTRODE HOLDER, #6013-SS-X-C ELECTRODES, (1) ASCO 8221 SERIES, 1 1/2", SLOW CLOSING BRASS BODY, BUNA "N" SEALS AND DISCS, NORMALLY CLOSED, WATERTIGHT ENCLOSURE.
FM1A	FLOW METER	1	SIGNET 2551 MAG METER, INSERTION STYLE MAGNETIC FLOW SENSOR, MODEL #3-2551-P, -11, PROVIDE WITH FIELD MOUNT FLOW TRANSIMITTER/MODEL#3-9550-1), AND UNIVERSAL MOUNTING KIT(MODEL #3-8050). PROVIDE WITH - " DIAMETER PVC SADDLE INSERTION FITTING. FLOWMETER SHALL BE WALL MOUNTED. DESCRIPTION, DESIGN FLOW, PIPE SIZE MAIN, 134 GPM, 3"
FP1	FLOW METER POWER SUPPLY	1	SIGNET 7300 POWER SUPPLY, MODEL#7300-7524, 115 VAC/24VDC, 300 mA POWER SUPPLY. POWER SUPPLIES TO BE FURNISHED WITH NEMA 4X ENCLOSURE.
UV1A	UV SYSTEM	1	ETS, U.V. CHAMBER MODEL ECP 113-5-SP, 3" CONNECTIONS, 208 V SUPPLY FROM MANUFACTURE, 60 Hz, 3 PHASE, 1.3 kW, PROVIDE WITH CONTROL PANEL/SPA
PT	PRE-FABRICATED COLLECTOR TANK	1	AQUATEK FIBERGLASS 36" X 36" X 42" WATER TIGHT COLLECTION TANK, MODEL #AT125WT, PROVIDE WITH 6" INLET FLANGE, 4" SUCTION FLANGE AT 24" CENTERLINE HEIGHT
SP1A	SALT GENERATION POWER SUPPLY	1	CHLOR-KING, MINI 5.0, 110v, 5.3 AMPS.
SP2A	SALT GENERATON ELECTRODE	1	CHLOR-KING, MINI 5.0, ELECTRODE STACK.
AC1A	AIR COMPRESSOR	1	NEPTUNE BENSON, INC., DEFENDER COMPRESSOR AND WATER SEPARATOR, 2HP, 3 PHASE, 460V, WITH INTEGRAL STARTER, 135 PSI MAXIMUM PRESSURE, 30 GALLON TANK, CAST IRON TWIN CYLINDER COMPRESSOR PUMP, PART #12213. WATER SEPARATOR MODEL AMG350, 1/2" PORT SIZE.

FORCED-FLOW STEAM HEATER SCHEDULE

Mark	Manuf.	Model	Service	Fan Data CFM	ESP in. WC	Fan RPM	Fan HP	Voltage/ Phase	Steam Side Entering Air Temp	Steam Side Sq Ft EDR	Steam Side Capacity (MBH)	Connection Size (NPT)	Steam # (lb/h)	Steam Press (psig)	Dimensions LxWxH	Weight (lbs)	Remarks
FF-1	Modine	HS-47	Pool Mech	450	0.125	1200	1/12	460/3	50	158	40,000	1 1/4"	40	5	17x18x21	36	1-3

Remarks:

1. Provide adjustible air-deflector blades
2. Provide OSHA fan guard
3. Provide explosion proof motor
4. Provide chemical resistant baked phenolic epoxy coating
5. Provide new explosion proof wall thermostat
5. Provide Solid State Speed Controller

Louver Schedule

Mark	Manuf.	Model	Dimensions (WxH, inches)	Service	Airflow CFM	Min. Free Area (ft.)	Face Vel. FPM	Remarks
OAL-1	Anemostat	FLDL-UL-SG1	24x18	Pool Equip	600	1.2	500	1-4
OAL-2	Anemostat	FLDL-UL-SG1	12x12	Acid Storage	100	0.31	323	1-4
OAL-3	Anemostat	FLDL-UL-SG1	12x12	Chlorine Stor	100	0.31	323	1-4

Notes:

1. Provide Permatector chemical and UV resistant finish or approved equal.
2. Provide bird screen.
3. Provide frame mounting.
4. Provide Florida Product Approval number for high velocity wind zones

Remarks:

1. Contractor shall field verify mounting substrate prior to ordering. Provide frame type to match substrate type.

POOL CONTROL POINTS LIST

Contractor shall provide new stand alone control panel model PXCM-32 or approved equal. Contractor shall be responsible for providing wiring, cabling, programming, and all components necessary to connect controls and sensors listed below to the existing campus-wide control system, including full graphic display

Point Description	Type BI	AI	BO	AO	Notes and Operation Functions
Swimming Pool Supply Water Temperature		X			Monitor and maintain value
Swimming Pool Supply Water Temperature Setpoint					Operator adjustable setpoint for pool temperature
Swimming Pool Steam Solenoid Valve On/Off			X		On/Off control for steam to HE-1 and HE-2
HE-1 Swimming Pool Modulating Valve				X	Electronic, modulating (1/3 & 2/3 valves); control steam to HE-1 to maintain pool water temp.
HE-2 Swimming Pool Modulating Valve				X	Electronic, modulating (1/3 & 2/3 valves); control steam to HE-2 to maintain pool water temp.
HE-1 Steam Supply Pressure		X			Monitor only; alarm on high or low
HE-1 Steam Return Pressure		X			Monitor only; alarm on high or low
HE-2 Steam Supply Pressure		X			Monitor only; alarm on high or low
HE-2 Steam Return Pressure		X			Monitor only; alarm on high or low
Acid Storage Exhaust Fan EF-1 Status	X				Status of Acid Storage Exhaust Fan EF-1 (on or off); alarm if off
Acid Storage Exhaust Fan EF-1 On/Off			X		On/Off control for Acid Storage Exhaust Fan EF-1
Chlorine Storage Exhaust Fan EF-2 Status	X				Status of Chlorine Storage ExhaustFan EF-2 (on or off); alarm if off
Acid Storage Exhaust Fan EF-2 On/Off			X		On/Off control for Acid Storage Exhaust Fan EF-2
General Exhaust Fan EF-3 Status	X				Status of General Exhaust Fan EF-3 (on or off); alarm if off
General Exhaust Fan EF-2 On/Off			X		On/Off control for General Exhaust Fan EF-2
Pump P-1 Status	X				Status of pump (on or off)
Pump P-1 On/Off			X		On/Off control for Pump P-1
Pump P-2 Status	X				Status of pump (on or off)
Pump P-2 On/Off			X		On/Off control for Pump P-2
Room Temperature Sensor		X			Space temperature of pool equipment room
Room Temperature Setpoint					Operator adjustable (lower limit for room temperature)
FF-1 Steam Heater Status	X				Status of heater (on or off); alarm on failure
Steam Heater FF-1 On/Off			X		On/Off control for Steam Heater FF-1
FF-1 Steam Heater Valve				X	Electronic, modulating valve; control steam to FF-1 (0-100%) to maintain room temp. setpoint
FF-1 Steam Heater Steam Supply Pressure		X			Monitor only; alarm on high and low
FF-1 Steam Heater Steam Return Pressure		X			Monitor only; alarm on high and low
Pool Water Level Setpoint					Operator adjustable setpoint for water level based on pressure
Autofill Pressure Sensor		X			Pool water low level sensor; open make up water valve if low limit reached
Autofill Valve			X		On/off control to make up water valve; open on low limit, close on setpoint
Filter Status	X				Status of filter (OK or Trouble); equipment control panel contact output
Chemical Feed System Status	X				Status of feed system (OK or Trouble); equipment control panel contact output
Air Compressor Status	X				Status of air compressor (OK or Trouble); equipment control panel contact output
UV Light System Status	X				Status of UV Light system (OK or Trouble); equipment control panel contact output

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Revisions: | Date

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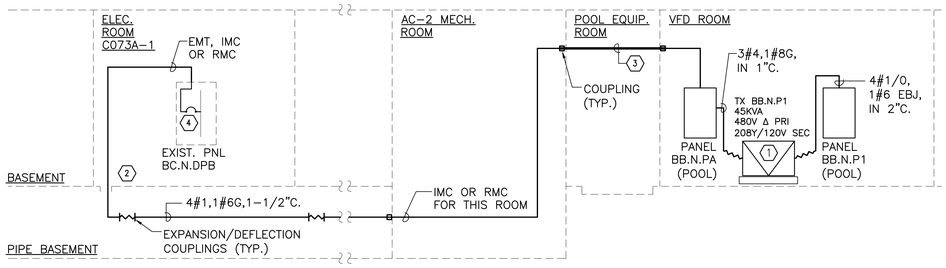
FAX: (352) 474-6324
CERT. OF AUTH: FL #26693
EXPIRES: 02/28/2015
AKEA PROJECT NO: 053-13

Drawing Title: Mechanical Schedules
Approved: Project Director
Project Title: RENOVATIONS TO THE POOL MALCOM RANDALL VAMC
Location: GAINESVILLE, FLORIDA
Date: JULY 23, 2014
Checked: MT
Drawn: CF
Project Number: VA-13-C-0130
Building Number: 1
Drawing Number: M601

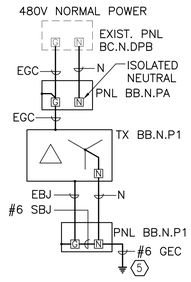
Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231



D1 NEW WORK - POWER RISER DIAGRAM

SCALE: N.T.S.



GROUNDING DIAGRAM ABBREVIATIONS

EBJ	EQUIPMENT BONDING JUMPER
EGC	EQUIPMENT GROUNDING CONDUCTOR
G	GROUND
GEC	GROUNDING ELECTRODE CONDUCTOR
N	NEUTRAL
SBJ	SYSTEM BONDING JUMPER

D2 GROUNDING DIAGRAM

SCALE: N.T.S.

NAMEPLATES FOR NORMAL BRANCH EQUIPMENT SHALL BE LAMINATED BLACK PHENOLIC RESIN WITH SOLID WHITE CORE WITH ENGRAVED LETTERING MINIMUM OF ¼ INCH HEIGHT. (RED WITH WHITE CORE FOR ESSENTIAL).

ENGRAVE THE FOLLOWING INFORMATION ON EACH EQUIPMENT IDENTIFICATION NAMEPLATE, SIMILAR TO THAT SHOWN IN THE EXAMPLES, EXCEPT APPROPRIATE FOR THE SPECIFIC EQUIPMENT BEING IDENTIFIED:

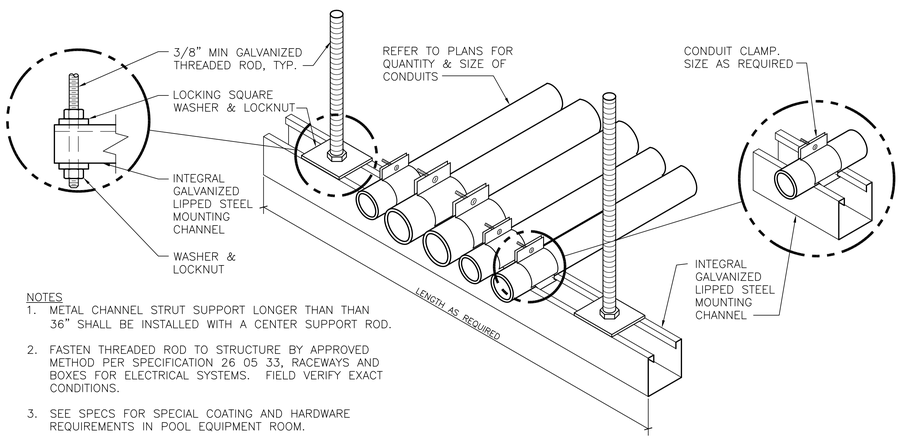
1. IN THE FIRST LINE, INDICATE THE EQUIPMENT TYPE AND NAME (FOLLOWED BY THE ESSENTIAL BRANCH, IF APPLICABLE).
2. IN THE SECOND LINE, INDICATE THE EQUIPMENT VOLTAGE, PHASE, AND NUMBER OF WIRES.
3. IN THE SUBSEQUENT LINES, INDICATE THE WORDS "SERVED FROM" FOLLOWED BY THE NAME AND LOCATION OF THE SOURCE EQUIPMENT.

PANEL BB.N.P1 (NORMAL)
208Y/120 VOLTS, 3–PHASE, 4–WIRE
SERVED FROM
BC.N.DPB (RM. C073A–1)
VIA TX BB.N.P1 (RM. SP101A–1)

PUMP P–1
480 VOLTS, 3–PHASE, 3–WIRE
SERVED FROM
BB.N.PA (RM. C073A–1)
CKT. 2,4,6

D3 EQUIPMENT NAMEPLATE DETAIL

SCALE: N.T.S.



NOTES
1. METAL CHANNEL STRUT SUPPORT LONGER THAN THAN 36" SHALL BE INSTALLED WITH A CENTER SUPPORT ROD.
2. FASTEN THREADED ROD TO STRUCTURE BY APPROVED METHOD PER SPECIFICATION 26 05 33, RACEWAYS AND BOXES FOR ELECTRICAL SYSTEMS. FIELD VERIFY EXACT CONDITIONS.
3. SEE SPECS FOR SPECIAL COATING AND HARDWARE REQUIREMENTS IN POOL EQUIPMENT ROOM.

D4 CONDUIT TRAPEZE MOUNTING DETAIL

SCALE: N.T.S.

GENERAL ELECTRICAL NOTES (APPLICABLE TO ALL ELECTRICAL SHEETS):

A. SEE SHEET G002 AND SPECIFICATIONS FOR ADDITIONAL NOTES.

B. ALL WORK SHALL COMPLY WITH NEC, NFPA, AND ALL APPLICABLE FEDERAL CODES.

C. ALL RECEPTACLES SHALL HAVE THE NEMA 5–20R CONFIGURATION, UNO. EACH RECEPTACLE SHALL BE CAPABLE OF ACCEPTING 15A AND 20A PLUGS.

D. ALL BRANCH CIRCUITS SHALL BE RUN WITH DEDICATED NEUTRALS: NO SHARED NEUTRALS.

E. UPDATE PANEL SCHEDULES FOR ALL PANELBOARDS THAT ARE AFFECTED BY THIS PROJECT, INDICATE ANY NEW CIRCUITS WITH ROOM NUMBERS AND LOAD TYPE.

F. ALL CONDUITS SHALL BE CLEAN AND FREE OF DEBRIS PRIOR TO INSTALLING NEW CONDUCTORS. EXISTING CONDUITS SHALL NOT BE RE–USED, U.N.O.

G. CONDUCTORS FROM DIFFERENT VOLTAGE SYSTEMS (FOR EXAMPLE: 120V AND 277V) OR FROM DIFFERENT POWER BRANCHES (FOR EXAMPLE: EQUIPMENT BRANCH AND NORMAL BRANCH) SHALL NOT BE INSTALLED IN THE SAME RACEWAY, WIREWAY, PULLBOXES, OR ENCLOSURES, U.N.O.

H. IN ACCORDANCE WITH NEC 300.7, PROVIDE DUCT SEAL MATERIAL TO PREVENT THE CIRCULATION OF WARM AIR TO A COOLER SECTION OF RACEWAY IN APPLICABLE RACEWAY SECTIONS (FOR EXAMPLE: RACEWAY BETWEEN INTERIOR AND EXTERIOR LOCATIONS, RACEWAY BETWEEN AIR–CONDITIONED AND NON–AIR–CONDITIONED SPACES).

I. WORK SHALL BE PLANNED SUCH THAT THERE IS NOT ANY CLIMBING OR STANDING ON ELECTRICAL EQUIPMENT.

J. ANY WORK ABOVE OR AT THE TOP OF EQUIPMENT SHALL BE PERFORMED IN MANNER THAT PREVENTS DEBRIS AND DROPPED PARTS FROM ENTERING THE EQUIPMENT.

K. TO CONSERVE USEABLE WALL SPACE, JUNCTION AND PULL BOXES MOUNTED ON THE WALL SHALL BE MOUNTED AT A HEIGHT NO LESS THAN 8' AFF,

L. KNOWN BUILDING EXPANSION JOINTS ARE SHOWN ON THE FLOOR PLANS. CONTRACTOR SHALL FIELD–VERIFY LOCATIONS OF ADDITIONAL EXPANSION JOINTS FOR THE RACEWAY ROUTING CHOSEN. PROVISIONS IN ACCORDANCE WITH THE SPECIFICATIONS SHALL BE MADE FOR ALL RACEWAY CROSSING EXPANSION JOINTS (WHETHER THE RACEWAY OR JOINTS ARE DEPICTED ON THE PLANS OR NOT).

M. PROVIDE LABELS FOR ALL NEW EQUIPMENT IN ACCORDANCE WITH SPECIFICATIONS. SEE THIS SHEET FOR A TYPICAL DETAIL.

N. RACEWAY ROUTING DEPICTED ON PLANS IS PROPOSED ROUTING; ALTERNATE ROUTES MAY BE USED BY CONTRACTOR, U.N.O. (PENDING APPROVAL BY COR AND ENGINEER). PULL BOXES ARE NOT SHOWN BUT SHALL BE PROVIDED AS REQUIRED.

O. PROVIDE NEW BREAKERS IN EXIST. PANELS AS NOTED. NEW BREAKERS SHALL MATCH EXIST. PANEL BRAND AND STYLE. BREAKERS SHALL ALSO INDIVIDUALLY MEET OR EXCEED THE EXIST. PANEL SHORT CIRCUIT RATING.

P. CONDUIT FITTINGS FOR FEEDERS SHALL BE PAINTED PER COLOR CODE PROVIDED IN SPECS.

LIGHTING FIXTURE SCHEDULE

FIXTURE SYMBOL	NUMBER AND TYPE OF LAMPS	VOLTAGE	MOUNTING	BASIS OF DESIGN
A	46W LED 3500K	120	SURFACE MTD. TO VERTICAL SIDE OF BEAM (IN WALKWAY) OR TO UNDERSIDE OF BEAM (OVER POOL DECK)	BEGHELLI #ILLUMINA BS100LED–4–HT–50W–WT35–120–277V GASKETED 4' LED FIXTURE, UV–STABILIZED POLYCARBONATE HOUSING AND LENS, NON–METALLIC LATCHES, IP66 RATED, 80 CRI MIN.
B	46W LED 3500K	120	SUSPENDED FROM ABOVE (IN POOL EQUIP. ROOM)	SAME AS TYPE 'A', EXCEPT PROVIDE CORROSION–RESISTANT HARDWARE FOR SUSPENSION.
EM	(2) 8W HALOGEN PAR36	120	WALL–MTD. ABOVE DOOR	BEGHELLI #RBO–U–12–42–2LR–8W–AT–NC NEMA 4X FIBERGLASS HOUSING, 12V LAMPS, NiCD BATTERY, AUTO TEST FEATURE.
X1	LED EXIT (2)7W LED EM	120	SURFACE MOUNTED	BEGHELLI #FTZ–C–12V–42W–LR–1–U–LED7W–WW

NOTE: LIGHTING FIXTURES SHALL BE THE MODELS SHOWN ABOVE OR EQUAL.

EQUIPMENT SCHEDULE

MARK	DESCRIPTION	CIRCUIT	BKR	FEEDER	VOLTS/ø	DISCONNECT	STARTER(S)	FLA
P–1	POOL PUMP #1 (5HP)	BB.N.PA– SEE PNL SCHED.	15	3#10, #10G IN 3/4"C.	480/3	COMB. STARTER/DISC./OVERLOAD, NF FVNR, NEMA SIZE 0, NEMA 4X ENCL. (6)		7.6
P–2	POOL PUMP #2 (5HP)	BB.N.PA– SEE PNL SCHED.	15	3#10, #10G IN 3/4"C.	480/3	COMB. STARTER/DISC./OVERLOAD, NF FVNR, NEMA SIZE 0, NEMA 4X ENCL. (6)		7.6
COMP–1	AIR COMPRESSOR (2HP)	BB.N.PA– SEE PNL SCHED.	15	3#10, #10G IN 3/4"C.	480/3	30A, 600V, 3P, HD, NF DISC. SW, NEMA 1 ENCL.	INCLUDED WITH EQUIP.	3.4
EF–1	EXHAUST FAN #1 (1/3HP)	BB.N.P1– SEE PNL SCHED.	20	2#12, #12G IN 3/4"C.	120/1	MANUAL TOGGLE SW. WITH PILOT LIGHT & OVERLOAD, NEMA 4X ENCL.		7.2
EF–2	EXHAUST FAN #2 (1/3HP)	BB.N.P1– SEE PNL SCHED.	20	2#12, #12G IN 3/4"C.	120/1	MANUAL TOGGLE SW. WITH PILOT LIGHT & OVERLOAD, NEMA 4X ENCL.		7.2
EF–3	EXHAUST FAN #3 (1/12HP)	BB.N.P1– SEE PNL SCHED.	20	2#12, #12G IN 3/4"C.	120/1	MANUAL TOGGLE SW. WITH PILOT LIGHT & OVERLOAD, NEMA 4X ENCL.		3
AF–1	ACID FEEDER POWER SUPPLY	BB.N.P1– SEE PNL SCHED.	20	2#12, #12G IN 3/4"C.	120/1	DEDICATED GFI RECEPTACLE	N/A	1
FM–1	FLOW METER POWER SUPPLY	BB.N.P1– SEE PNL SCHED.	20	2#12, #12G IN 3/4"C.	120/1	DEDICATED GFI RECEPTACLE	N/A	0.3
CC–1	CHEMICAL CONTROLLER	BB.N.P1– SEE PNL SCHED.	20	2#12, #12G IN 3/4"C.	120/1	DEDICATED GFI RECEPTACLE	N/A	1
UV–1	UV SYSTEM CONTROLLER	BB.N.P1– SEE PNL SCHED.	20	3#12, #12G IN 3/4"C.	208/3	30A, 240V, 3P, HD, NF DISC. SW, NEMA 4X ENCL.	INCLUDED WITH CONTROL PNL	4
SG–1	SALT GENERATION POWER SUPPLY	BB.N.P1– SEE PNL SCHED.	20	2#12, #12G IN 3/4"C.	120/1	DEDICATED GFI RECEPTACLE	N/A	5.3
FF–1	UNIT HEATER FAN (STEAM)	BB.N.P1– SEE PNL SCHED.	20	2#12, #12G IN 3/4"C.	120/1	MANUAL TOGGLE SW. WITH PILOT LIGHT & OVERLOAD, NEMA 4X ENCL.	INCLUDED WITH EQUIP.	3

NOTE: CONDUCTOR, RACEWAY, BKR, AND DISC. SW. SIZES INDICATED IN SCHEDULE ABOVE, ARE BASIS OF DESIGN VALUES. EXACT. ELECTRICAL EQUIPMENT SIZES AND RATINGS SHALL BE PROVIDED, BASED ON THE APPROVED HVAC SHOP DRAWINGS AND THE HVAC EQUIPMENT MANUFACTURER'S NAMEPLATE M.O.C.P. (MAXIMUM OVERCURRENT PROTECTION) VALUE.

ABBREVIATIONS

A	AMPERE
AFF	ABOVE FINISHED FLOOR
BKR	BREAKER
BLDG	BUILDING
CKT	CIRCUIT
COORD	COORDINATE
COR	CONTRACTING OFFICER'S REPRESENTATIVE
CTRL	CONTROL
DISC	DISCONNECT
ENCL	ENCLOSURE
EXIST	EXISTING
FLUOR	FLUORESCENT
FVNR	FULL VOLTAGE NON REVERSING
GFI	GROUND FAULT INTERRUPT
HD	HEAVY DUTY
HOA	HAND OFF AUTO
JB	JUNCTION BOX
KA	KILO–AMPERES
KAIC	KILO–AMPERES INTERRUPTING CURRENT
KVA	KILO–VOLT–AMPERE
KW	KILO–WATT
LED	LIGHT EMITTING DIODE
LS	LIFE SAFETY
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
MTD	MOUNTED
NEC	NATIONAL ELECTRICAL CODE
NF	NON–FUSED
NTS	NOT TO SCALE
OH	OVERHEAD
P	POLE
PH	PHASE
PNL	PANEL
PRI	PRIMARY
SEC	SECONDARY
SW	SWITCH
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
V	VOLT
VAC	VOLTS ALTERNATING CURRENT
W	WIRE OR WATT
WP	WEATHERPROOF

SYMBOLS

- 4' LONG FIXTURE, SEE SCHEDULE
- SINGLE FACE EXIT SIGN, SEE SCHEDULE FOR EM LIGHT FEATURE
- EMERGENCY LIGHT
- S TOGGLE SWITCH
- S_3 TOGGLE SWITCH, 3–WAY
- S_F MANUAL MOTOR STARTER (FAN)
- ELECTRIC MOTOR
- CIRCUIT BREAKER LSIG (LONG, SHORT, INSTANTANEOUS, GF TRIP)
- DUPLEX RECEPTACLE
- QUADPLEX RECEPTACLE
- J JUNCTION BOX
- ELECTRICAL PANEL
- DISCONNECT SWITCH
- MOTOR STARTER
- CONDUIT CONCEALED IN WALL OR CLG.
- CONDUIT UNDER FLOOR
- HOMERUN TO PNL

SHEET NOTES

A. DASHED ITEMS SHOWN ON THIS SHEET ARE EXISTING.

SHEET KEYNOTES

1. INSTALL TRANSFORMER ON FLOOR. PROVIDE HOUSEKEEPING PAD.
2. FEEDER CONDUIT SHALL PENETRATE FLOOR WITHIN 1' OF THE SOUTHWEST CORNER OF ROOM C073A–1. (CONTRACTOR MAY PROPOSE ALTERNATE ROUTE TO PIPE BASEMENT VIA ROOM C073–1).
3. CONDUIT AND FITTINGS WITHIN POOL EQUIPMENT ROOM SHALL BE PVC–COATED RIGID GALVANIZED STEEL. PROVIDE APPROVED TRANSITION COUPLINGS AT CONDUIT ENTRY AND EXIT LOCATIONS.
4. PROVIDE NEW 3–POLE 125A–TRIP THERMAL MAGNETIC BREAKER IN EXIST. NORMAL POWER PNL BC.N.DPB (SQ. D I–LINE, 480Y/277V, 3PH 4W BUS, 800A MLO, 65KAIC).
5. BOND GEC TO NEAREST EXISTING GROUNDING ELECTRODE PER NEC.
6. PROVIDE STARTER WITH H–O–A SWITCH AND CONNECT "AUTO" FUNCTION TO B.A.S. ALSO, PROVIDE STARTER WITH AUXILIARY CONTACT TO PROVIDE MOTOR RUN STATUS TO THE B.A.S. CONNECT TO NEW CONTROL PANEL IN VFD ROOM.

FINAL DESIGN SUBMITTAL
APPROVED FOR CONSTRUCTION

Revisions:	Date

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EXPIRES: 02/28/2015
AKEA PROJECT NO: 053–13

Drawing Title	ABBREVIATIONS, SYMBOLS, NOTES, SCHEDULES, RISER AND DETAILS
Approved: Project Director	
Project Title	RENOVATIONS TO THE POOL MALCOM RANDALL VAMC
Location	GAINESVILLE, FLORIDA
Date	JULY 23, 2014
Checked	CJF
Drawn	CJF
Project Number	573-13-105
Building Number	1
Drawing Number	E100
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Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08–6231

Branch Panel: BB.N.P1

Location: VFD Room SP101A-1
Supply From: BB.N.PA VIA TX BB.N.P1
Mounting: SURFACE
Enclosure: NEMA TYPE 1

Volts: 120/208 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 10KAIC
Main: 150A
Bus Size: 150 A

Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	POOL EQUIP RM LIGHTING	20 A	1	281 VA	480 VA		3	20 A	UV-1	2
3	POOL EQUIP RM RECEPTACLES	20 A	1		720 VA	480 VA	--	--	--	4
5	FM-1	20 A	1			36 VA	480 VA	--	--	--	6
7	EF-1	20 A	1	864 VA	0 VA			1	20 A	SPARE	8
9	EF-2	20 A	1		864 VA	0 VA		1	20 A	SPARE	10
11	EF-3	20 A	1			360 VA	0 VA	1	20 A	SPARE	12
13	CC-1	20 A	1	120 VA	0 VA			1	20 A	SPARE	14
15	SG-1	20 A	1		636 VA	0 VA		1	20 A	SPARE	16
17	AF-1	20 A	1			120 VA	0 VA	1	20 A	SPARE	18
19	FF-1	20 A	1	360 VA	0 VA			1	20 A	SPARE	20
21	SPARE	20 A	1		0 VA	0 VA		1	20 A	SPARE	22
23	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	24
25	SPARE	20 A	1	0 VA	0 VA			1	20 A	SPARE	26
27	SPARE	20 A	1		0 VA	0 VA		1	20 A	SPARE	28
29	SPARE	20 A	1			0 VA	0 VA	1	20 A	SPARE	30
31	SPACE	--	--	0 VA	0 VA			--	--	SPACE	32
33	SPACE	--	--		0 VA	0 VA		--	--	SPACE	34
35	SPACE	--	--			0 VA	0 VA	--	--	SPACE	36
37	SPACE	--	--	0 VA	0 VA			--	--	SPACE	38
39	SPACE	--	--		0 VA	0 VA		--	--	SPACE	40
41	SPACE	--	--			0 VA	0 VA	--	--	SPACE	42
		Total Load:		2105 VA	2700 VA	996 VA				
		Total Amps:		19 A	24 A	8 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	184 VA	100.00%	184 VA		
Lighting - Dwelling Unit	100 VA	100.00%	100 VA	**Total Conn. Load:**	5805 VA
Motor	2448 VA	100.00%	2448 VA	**Total Est. Demand:**	5805 VA
Other	0 VA	0.00%	0 VA	**Total Conn.:**	16 A
Power	1441 VA	100.00%	1441 VA	**Total Est. Demand:**	16 A
Receptacle	1632 VA	100.00%	1632 VA		

Notes:

Branch Panel: BB.N.PA

Location: VFD ROOM SP101A-1
Supply From: BC.N.DPB
Mounting: SURFACE
Enclosure: NEMA TYPE 1

Volts: 480/277 Wye
Phases: 3
Wires: 4

A.I.C. Rating: 14KAIC
Main: MLO
Bus Size: 125 A

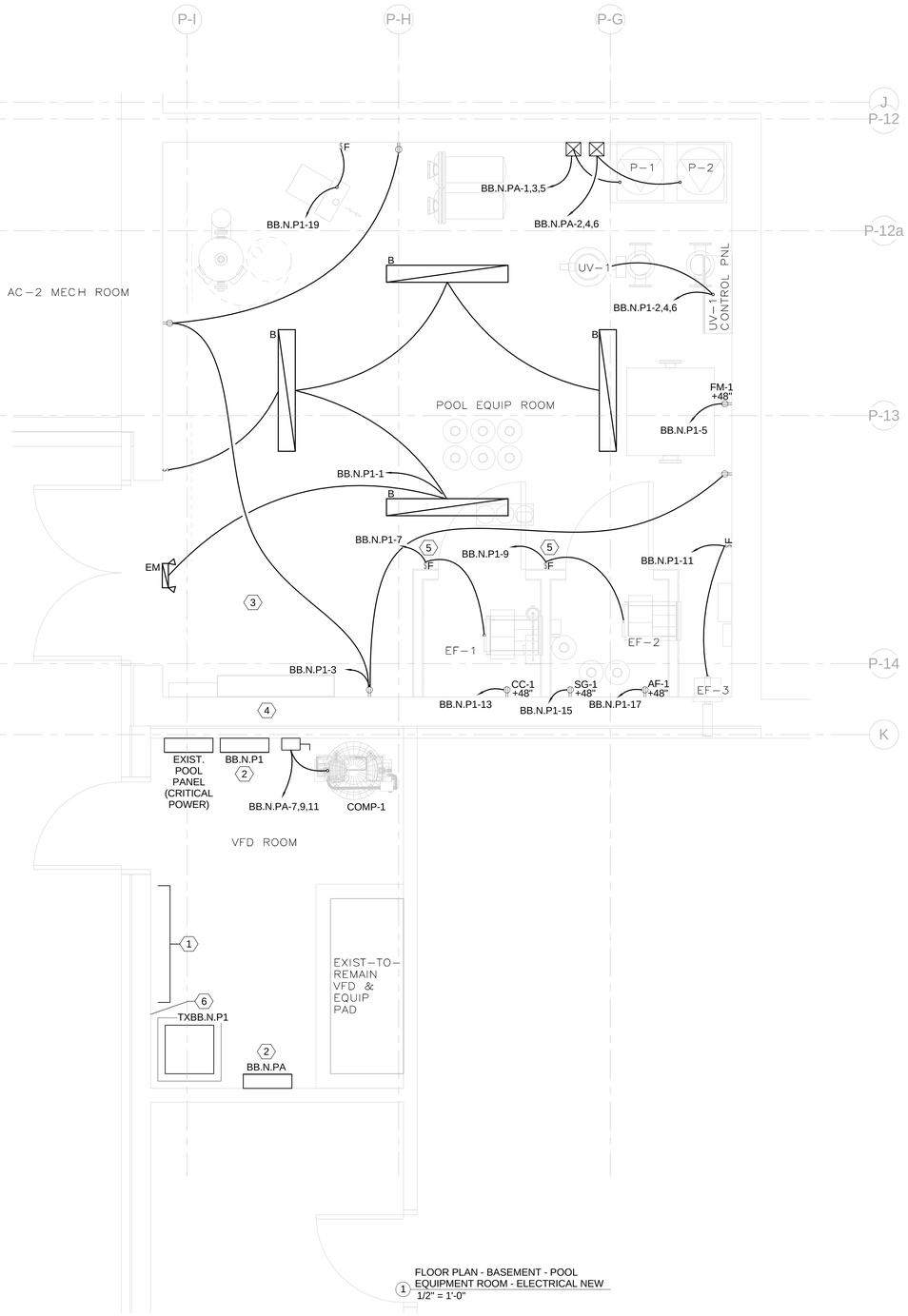
Notes:

CKT	Circuit Description	Trip	Poles	A	B	C	Poles	Trip	Circuit Description	CKT
1	P-1	15 A	3	2005...	2005...		3	15 A	P-2	2
3	--	--	--		2005...	2005...	--	--	--	4
5	--	--	--			2005...	2005...	--	--	--	6
7	COMP-1	15 A	3	2880...	2104...		3	70 A	TX BB.N.P1	8
9	--	--	--		0 VA	2700...	--	--	--	10
11	--	--	--			0 VA	996 VA	--	--	--	12
13	SPARE	15 A	3	0 VA	0 VA			3	15 A	SPARE	14
15	--	--	--		0 VA	0 VA		--	--	--	16
17	--	--	--			0 VA	0 VA	--	--	--	18
19	SPACE	--	--	0 VA	0 VA			1	20 A	SPARE	20
21	SPACE	--	--		0 VA	0 VA		1	20 A	SPARE	22
23	SPACE	--	--			0 VA	0 VA	1	20 A	SPARE	24
25	SPACE	--	--	0 VA	0 VA			--	--	SPACE	26
27	SPACE	--	--		0 VA	0 VA		--	--	SPACE	28
29	SPACE	--	--			0 VA	0 VA	--	--	SPACE	30
31	SPACE	--	--	0 VA	0 VA			--	--	SPACE	32
33	SPACE	--	--		0 VA	0 VA		--	--	SPACE	34
35	SPACE	--	--			0 VA	0 VA	--	--	SPACE	36
37	SPACE	--	--	0 VA	0 VA			--	--	SPACE	38
39	SPACE	--	--		0 VA	0 VA		--	--	SPACE	40
41	SPACE	--	--			0 VA	0 VA	--	--	SPACE	42
		Total Load:		8994 VA	6711 VA	5007 VA				
		Total Amps:		33 A	25 A	18 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Lighting	184 VA	100.00%	184 VA		
Lighting - Dwelling Unit	100 VA	100.00%	100 VA	**Total Conn. Load:**	20717 VA
Motor	2448 VA	100.00%	2448 VA	**Total Est. Demand:**	20717 VA
Other	12032 VA	100.00%	12032 VA	**Total Conn.:**	25 A
Power	4321 VA	100.00%	4321 VA	**Total Est. Demand:**	25 A
Receptacle	1632 VA	100.00%	1632 VA		

Notes:



1 FLOOR PLAN - BASEMENT - POOL EQUIPMENT ROOM - ELECTRICAL NEW
1/2" = 1'-0"

SHEET NOTES

A. POOL EQUIPMENT ROOM SHALL BE CONSIDERED A CORROSIVE ENVIRONMENT. PROVIDE RACEWAY AND BOXES WITH PROTECTION AS NOTED IN SPECS.

B. COORDINATE ELECTRICAL EQUIPMENT LOCATIONS WITH APPROVED EQUIPMENT SHOP DRAWINGS AND LAYOUTS.

SHEET KEYNOTES

1. WALL SPACE DEDICATED FOR CONTROLS. COORD. LOCATION WITH EXIST. CONTROL ITEMS. CONTROL POINTS FROM POOL EQUIPMENT SHALL BE BROUGHT TO NEW CONTROL PANEL ON THIS WALL.
2. PROVIDE NEW PANEL IN VFD ROOM. PROVIDE NEW CIRCUIT FOR CONTROLS AS REQUIRED.
3. DEMO EXISTING LIGHTING, WIRING DEVICES, EXPOSED CONDUIT, DISCONNECT SWITCHES, JUNCTION BOXES AND MOTOR STARTERS FEEDING EQUIPMENT LOCATED IN THE POOL EQUIPMENT ROOM. CONDUIT AND CONDUCTORS SHALL BE REMOVED BACK TO THEIR SOURCE. PATCH UNUSED WALL OPENINGS UNCOVERED BY ELECTRICAL DEMOLITION.
4. THE EXISTING WALL BETWEEN THE VFD ROOM AND THE POOL EQUIPMENT ROOM CONSISTS OF CONCRETE BLOCK AND BRICK & MORTAR. THIS PROJECT REQUIRES MULTIPLE PENETRATIONS THROUGH THIS WALL.
5. PROVIDE LABEL FOR EF SWITCHES, COORDINATE LABEL REQUIREMENTS WITH MECHANICAL.
6. REMOVE EXISTING UNCONNECTED VFD - MTD. TO WEST WALL.

FINAL DESIGN SUBMITTAL
APPROVED FOR CONSTRUCTION

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AKEA Project No. 053-13

Drawing Title: ELECTRICAL PLANS & SCHEDULE
Approved: Project Director
Project Title: RENOVATIONS TO THE POOL MALCOM RANDALL VAMC
Location: Gainesville, Florida
Date: JULY 23, 2014
Checked: CJF
Drawn: KLS
Project Number: 573-13-105
Building Number: 1
Drawing Number: E200
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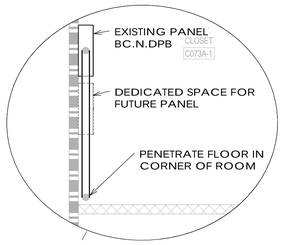
Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231



1 BASEMENT LEVEL - PROPOSED APPROXIMATE CONDUIT ROUTING
3/32" = 1'-0"

SHEET NOTES

A. DASHED LINE REPRESENTS CONDUIT ROUTED IN PIPE BASEMENT BELOW BASEMENT FLOOR

B. SOLID LINE REPRESENTS CONDUIT ROUTED EXPOSED

C. CONTRACTOR SHALL PROVIDE PULL BOXES AS REQUIRED TO ACCOMPLISH PULL AND PER NEC.

D. PROPOSED ROUTE SHOWN IS APPROXIMATE. CONTRACTOR SHALL FIELD VERIFY EXACT ROUTE. CONTRACTOR MAY PROPOSE ALTERNATE ROUTE; SUBMIT TO VA FOR APPROVAL.

E. REFER TO RISER AND SPECS FOR CONDUIT TYPES.

FINAL DESIGN SUBMITTAL
APPROVED FOR CONSTRUCTION

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AKEA Project No. 053-13

Drawing Title: PROPOSED CONDUIT ROUTING

Approved: Project Director

Project Title: RENOVATIONS TO THE POOL
MALCOM RANDALL VAMC

Location: Gainesville, Florida

Date: JULY 23, 2014 | Checked: CJF | Drawn: KLS

Project Number: 573-13-105

Building Number: 1

Drawing Number: E201
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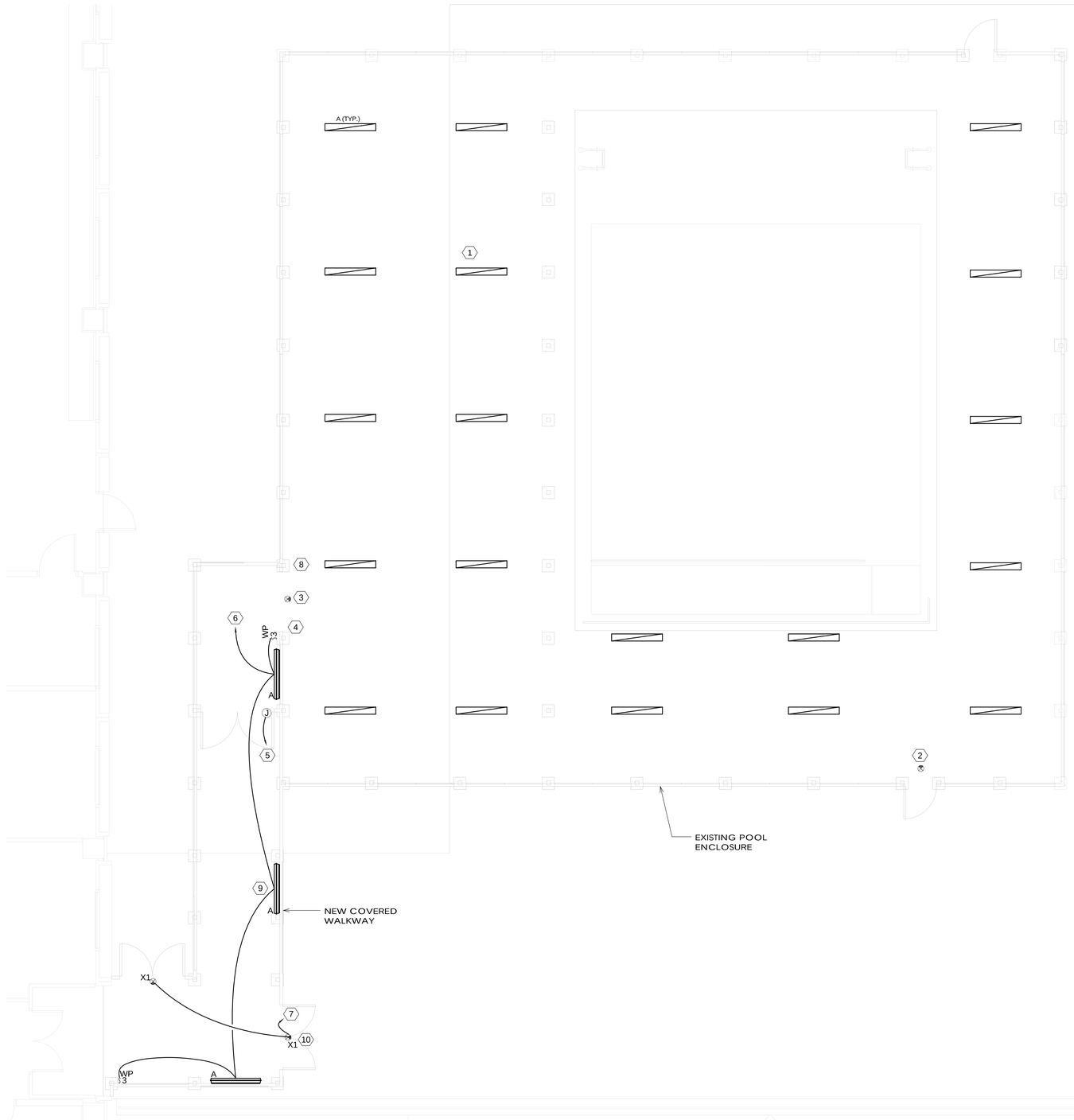
Office of Construction and Facilities Management

Department of Veterans Affairs

VA FORM 08-6231



1 ELECTRICAL PLAN - POOL ENCLOSURE & WALKWAY
1/4" = 1'-0"

SHEET KEYNOTES

1. DEMOLISH EXIST. 4' FLUOR. VAPOR-PROOF 2-LAMP FIXTURES. REPLACE WITH NEW LED FIXTURES. DESIGN INTENT IS FOR THE CONTRACTOR TO PROVIDE NEW FIXTURE IN SAME LOCATIONS AS EXISTING. REPLACE DAMAGED LIGHTING CONDUIT AND CONDUCTORS AS REQUIRED. (TYPICAL OF 19 FIXTURES IN POOL ENCLOSURE)
2. EXIST. EXIT/EM. LIGHT FIXTURE TO REMAIN.
3. EXIST. EXIT/EM. LIGHT FIXTURE TO REMAIN - RELOCATE AS NECESSARY FOR OPENING.
4. PROVIDE NEW WP TOGGLE SWITCH AT NEW OPENING LOCATION. PROVIDE NEW CONDUIT AND CONDUCTORS TO FIXTURE. DEMOLISH EXIST. SWITCH AND ATTACHED CONDUIT.
5. PROVIDE POWER CONNECTION TO AUTOMATIC DOOR OPERATOR. CONNECT TO EXISTING CIRCUIT. ALSO PROVIDE CONNECTION TO MOTION CONTROLLER AND PUSH BUTTON, SEE A300.
6. CONNECT TO EXISTING POOL LIGHTING CIRCUIT.
7. CONNECT TO AN UNSWITCHED LEG OF THE EXISTING POOL LIGHTING CIRCUIT.
8. DISCONNECT EXIST. DOOR OPERATOR AND REUSE EXISTING CIRCUIT FOR NEW DOOR.
9. MOUNT WALKWAY FIXTURE TO VERTICAL SIDE OF BEAMS. DO NOT PENETRATE WALKWAY ROOF. (TYP 1 of 3 FIXTURES)
10. MOUNT EXIT SIGN TO EXTERIOR SIDE ABOVE DOOR.

FINAL DESIGN SUBMITTAL
APPROVED FOR CONSTRUCTION

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Drawing Title: ELECTRICAL PLAN - POOL ENCLOSURE & WALKWAY

Approved: Project Director

Project Title: RENOVATIONS TO THE POOL MALCOM RANDALL VAMC

Location: Gainesville, Florida

Date: JULY 23, 2014 | Checked: CJF | Drawn: JG

Project Number: 573-13-105

Building Number: 1

Drawing Number: E202
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Office of Construction and Facilities Management
Department of Veterans Affairs

VA FORM 08-6231