

PROJECT NO. J101395, J101396, J101397

UTILITY SERVICE EXTENSION TO

AIRCRAFT PARTS STORAGE - FTW336A

FORT WAINWRIGHT, ALASKA

SHEET NO.	SHEET NAME
COVER	COVER SHEET
G-01	SITE PLAN
X-01	SYMBOLS, ABBREVIATIONS & GENERAL NOTES
X-02	SYMBOLS, ABBREVIATIONS & GENERAL NOTES
X-03	SYMBOLS, ABBREVIATIONS & GENERAL NOTES
M-01	EXISTING VAULT H6-3-3 LOWER LEVEL PLAN
M-02	EXISTING VAULT H6-3-3 UPPER LEVEL PLAN
M-03	EXISTING VAULT H6-3-3 ADJACENT TO BLDG 2080
M-04	NEW VAULT G6-9-3
M-05	DIRECT BURIED PIPING PLAN
M-06	SCHEMATICS & DETAILS
E-01	EXISTING VAULT H6-3-3 & UTILIDOR
E-02	EXISTING VAULT H6-3-3 & UTILIDOR
E-03	EXISTING VAULT H6-3-3 & UTILIDOR
E-04	NEW VAULT G6-9-3
E-05	DIRECT BURIED CONDUIT PLAN
E-06	PP-G693 (PANELBOARD SCHEDULE)
E-07	UTILIDOR SERVICE CONNECTION DETAILS
E-08	DUCT BANK DETAIL
PC-01	EXISTING VAULT H6-3-3 & NEW VAULT G6-9-3
PC-02	EXISTING VAULT H6-3-3 & NEW VAULT G6-9-3
PC-03	EXISTING VAULT H6-3-3 & NEW VAULT G6-9-3
PC-04	NEW VAULT G6-9-3
PC-05	DIRECT BURIED DUCT PLAN
PC-06	BUILDING METER INTERFACE DETAIL
PC-07	MISCELLANEOUS UTILITY MONITORING DETAILS



Prepared For

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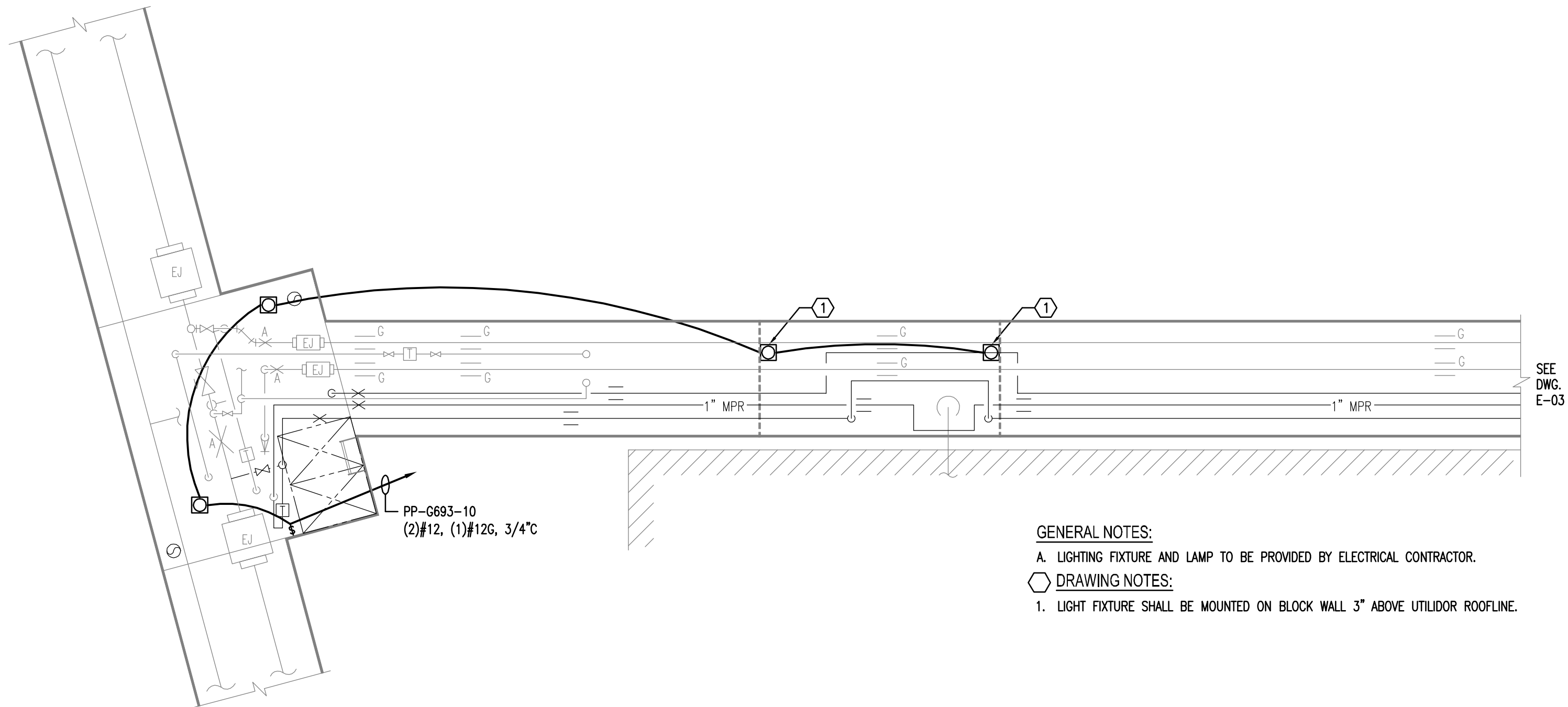
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SEE
DWG.
E-03

GENERAL NOTES:

A. LIGHTING FIXTURE AND LAMP TO BE PROVIDED BY ELECTRICAL CONTRACTOR.

DRAWING NOTES:

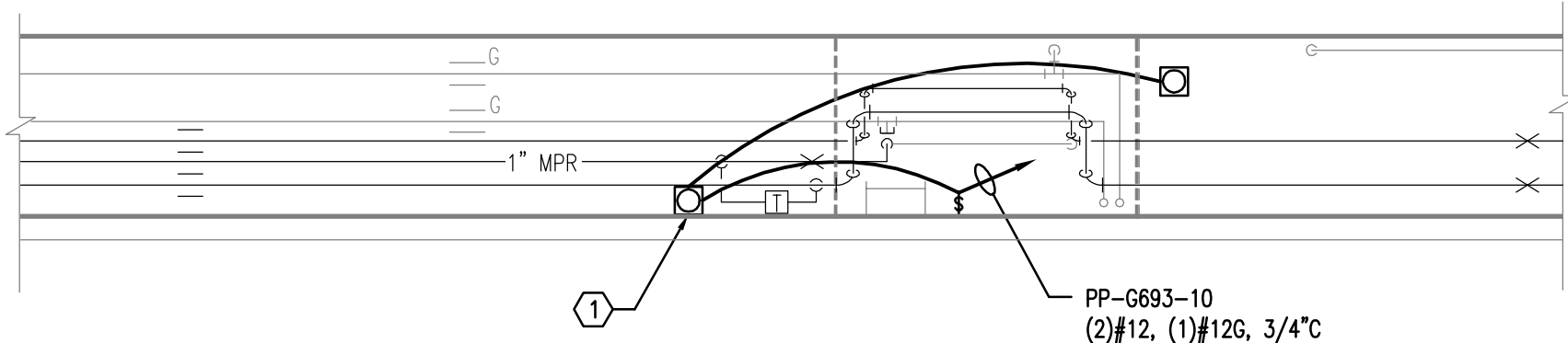
1. LIGHT FIXTURE SHALL BE MOUNTED ON BLOCK WALL 3" ABOVE UTILIDOR ROOFLINE.

UPPER LEVEL PLAN
SCALE: 1/4"=1'-0"



REV. NO.	DATE	DESCRIPTION			Date:	19 FEB 2010	UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE EXISTING VAULT H6-3-3 & UTILIDOR FORT WAINWRIGHT, AK. DU PROJECT NO. J101395, J101396, J101397	Drawing No. E-02
	04/09/10	ISSUED FOR CONSTRUCTION			Scale:	1/4"=1'-0"		
					Designed By:	JRS		
					Drawn By:	RHW		
					Checked By:	EAE		
			FOSDICK & HILMER CONSULTING ENGINEERS 309 VINE STREET, SUITE 50 TELEPHONE (513)241-5640		DOYON UTILITIES Jimmy Huntington Building 714 Fourth Avenue, Suite 20 Fairbanks, Alaska 99701 Telephone (907) 455-1500 Fax (907) 455-6788			

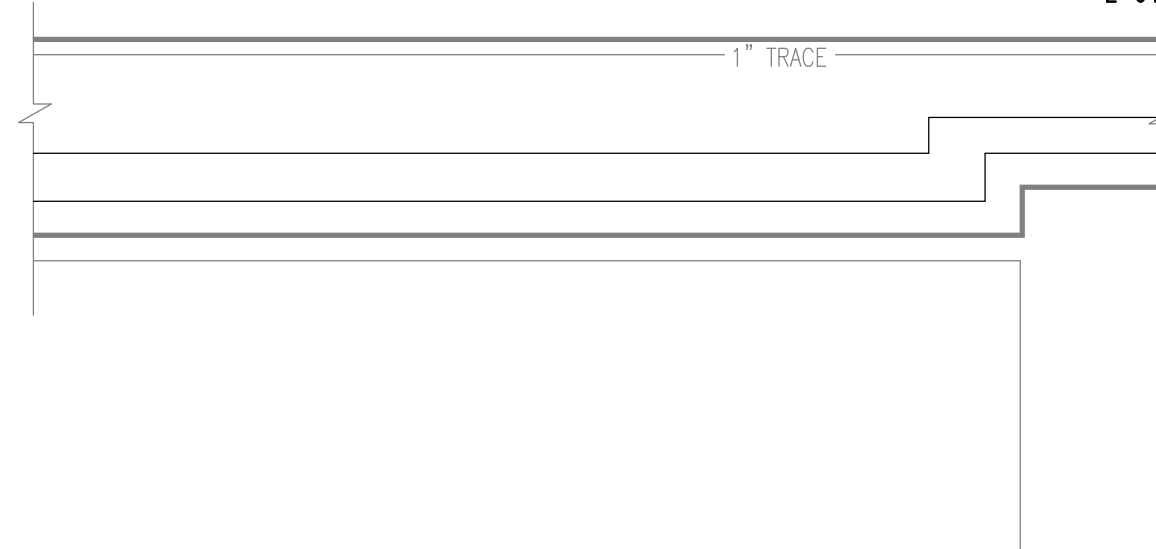
SEE
DWG.
E-02



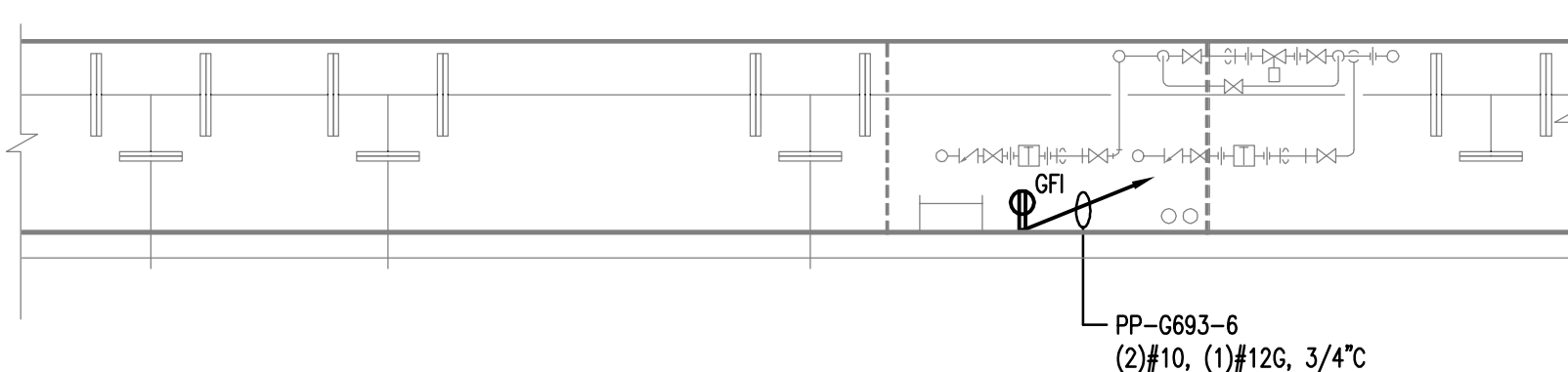
UPPER LEVEL PLAN
SCALE: 1/4"=1'-0"



SEE
DWG.
E-04



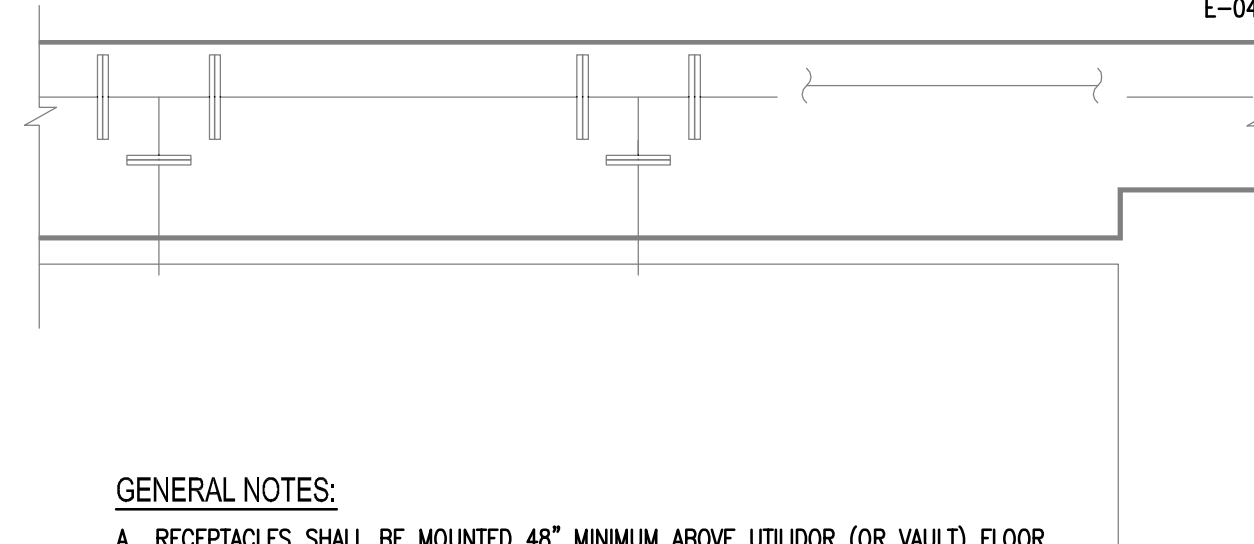
SEE
DWG.
E-01



LOWER LEVEL PLAN
SCALE: 1/4"=1'-0"



SEE
DWG.
E-04




GENERAL NOTES:

A. RECEPTACLES SHALL BE MOUNTED 48" MINIMUM ABOVE UTILIDOR (OR VAULT) FLOOR.

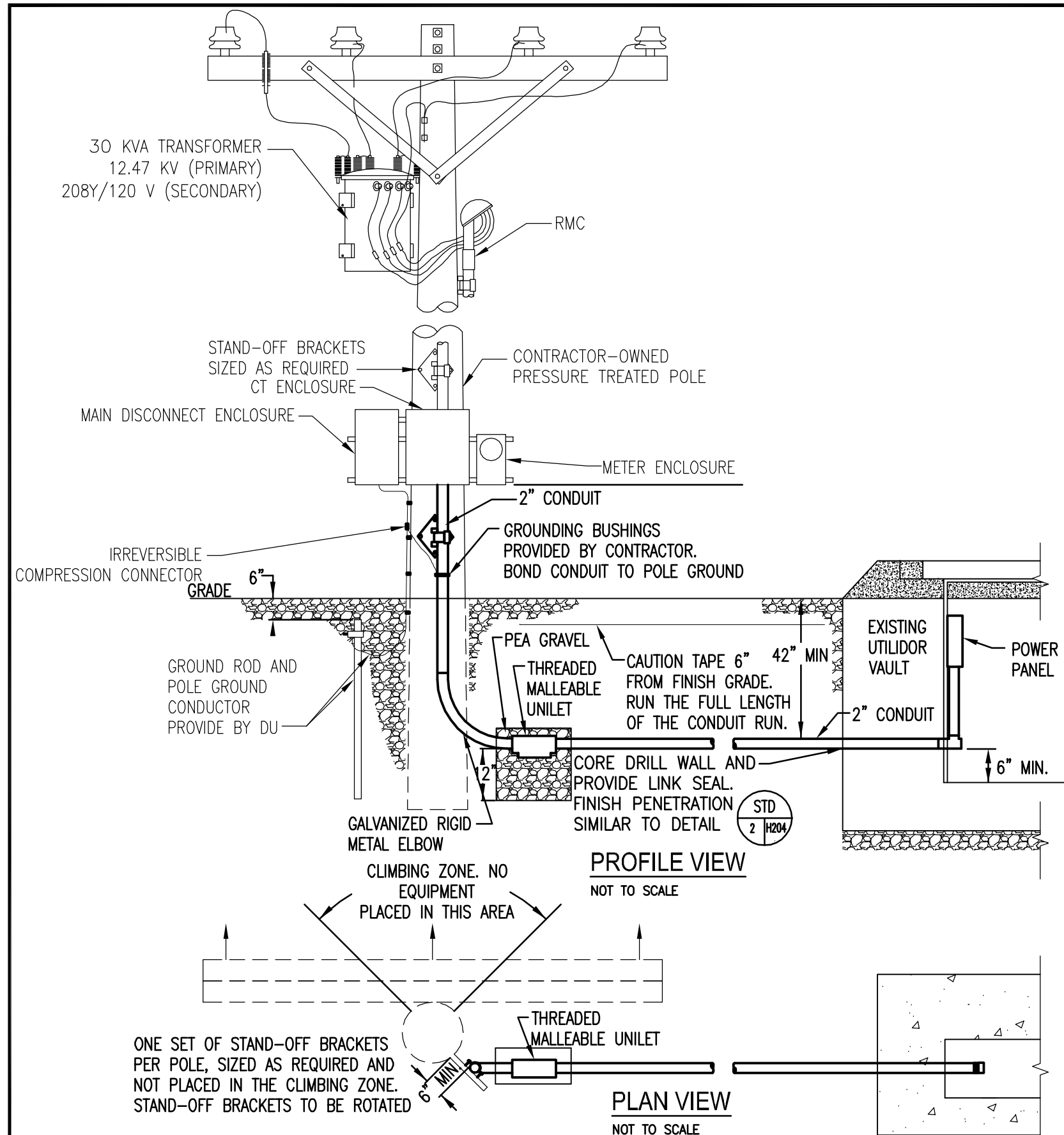
DRAWING NOTES:

1. LIGHT FIXTURE SHALL BE MOUNTED ON UTILIDOR WALL 6" BELOW MPS PIPING.

REV. NO.	DATE	DESCRIPTION	<div>FOSDICK & HILMER CONSULTING ENGINEERS 309 VINE STREET, SUITE 50 TELEPHONE (513)241-5640</div> <div>CINCINNATI, OHIO 45202 WWW.FHENG.COM</div>	<div>DUYON UTILITIES LLC</div> <div>Jimmy Huntington Building 714 Fourth Avenue, Suite 20 Fairbanks, Alaska 99701 Telephone (907) 455-1500 Fax (907) 455-6788</div>	Date: 19 FEB 2010	<div>UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE EXISTING VAULT H6-3-3 & UTILIDOR</div> <div>FORT WAINWRIGHT, AK. DU PROJECT NO. J101395, J101396, J101397</div>	Drawing No. E-03
	04/09/10	ISSUED FOR CONSTRUCTION			Scale: 1/4"=1'-0"		
					Designed By: JRS		
					Drawn By: RHW		
					Checked By: EAE		

E-04

PANELBOARD SCHEDULE								PP-G693				
DEMAND LOAD								PANELBOARD DESIGNATION				
*	LOAD SUMMARY	CL	DF	A	B	C	TOTAL					
L	Lighting	1.5	1		1.5		1.5	VOLTAGE	208Y/120V			
R	Convenience Recept	1.8	1	0.9		0.9	1.8	PHASING	3PH., 4W.			
H	Heating							SYSTEM	NORMAL			
C	Cooling							BUS SIZE	125A			
A	HVAC							MAINS	125A ML; 100A backfed			
P	Process	0.6	1		0.6		0.6	FEEDER NO				
O	Other Continuous	4.5	1	1.5	1.5	1.5	4.5	FEEDER SIZE	(4)#1, (1)#1G			
N	Other Noncontinuous							FEEDER PROT				
	Total	8.4		2.4	3.6	2.4	8.4	FEEDER LENGTH				
	Min. Feeder Ampacity	37.5	Square D QO320L125G Load Center in Hoffman A24H2006SS6LP3PT enclosure					FEEDER V. DROP				
								FAULT CURRENT	65 kAIC			
								ENCLOSURE	NEMA 4X			
								MOUNTING/FEED	SURFACE/TOP			
	DESCRIPTION	*	CB	KVA	A	B	C	KVA	CB	DESCRIPTION	*	
1	Main Breaker		100A-3P		0.9			0.9	20A-1P	Convenience Receptacles (North)	R 2	
3						0.6		0.6	20A-1P	CP-G693 (Control Panel)	P 4	
5						0.9	0.9	20A-1P	Convenience Receptacles (South)	R 6		
7	P-G693-DCW (Recirculation Pump, 5 HP)	O	35A-3P	1.5	1.5				20A-1P	(spare)		8
9		O		1.5		3		1.5	20A-1P	Utilidor Lighting	L	10
11		O		1.5			1.5			(space)		12
13	(space)									(space)		14
15	(space)									(space)		16
17	(space)									(space)		18
19	(space)									(space)		20
SUB-FEED PANEL(S) KVA												
Total Connected Load					2.4	3.6	2.4					



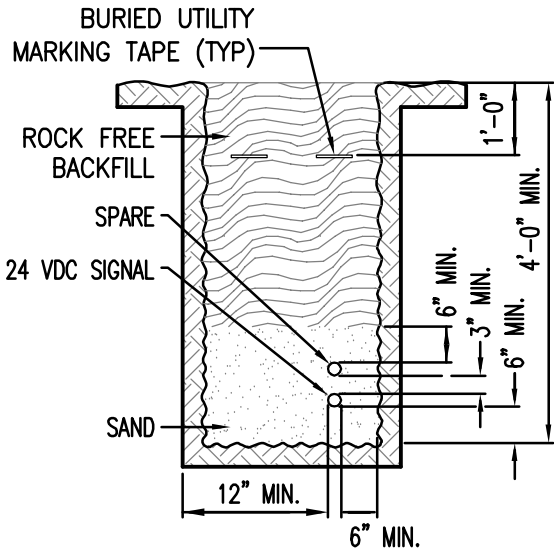
GENERAL DETAIL NOTES:

- A. RISER CONDUIT DETAIL APPLICABLE TO SINGLE-PHASE POWER INSTALLATIONS.
- B. ITEMS IN BOLD ARE TO BE FURNISHED AND INSTALLED BY CONTRACTOR.
- C. USE ADDITIONAL COUPLINGS AND NIPPLES AS REQUIRED FOR 42" CONDUIT DEPTH AND POSITIONING.
- D. CREATE A 12" DEEP GRAVEL SUMP AT UNILET CONNECTION. (USE PEA GRAVEL AFTER WRAPPING CONNECTION WITH TYPAR) PLACE UNILET AT LOWEST POINT IN CONDUIT RUN. AT DU'S DISCRETION. UNILET MAY BE OMITTED IF HDPE CONDUIT IS USED AND CONDUIT RUN DRAINS TOWARDS UTILIDOR VAULT. IF ANY CONDUIT ENTERS VAULT FROM THE SIDE, THEN THE BOTTOM OUTSIDE EDGE OF THE CONDUIT SHALL BE A MINIMUM OF 6" ABOVE THE VAULT FLOOR. THIS INSTALLATION SHALL BE INSPECTED BY DU BEFORE BACKFILLING.
- E. LEAVE COVER OFF UNILET TO ALLOW MOISTURE TO DRAIN FROM CONDUIT INTO SURROUNDING PEA GRAVEL.
- F. SLOPE ALL UNDERGROUND CONDUITS 1/4" PER FOOT MINIMUM TOWARDS UNILET.
- G. ALL SWEEPS, ELBOWS ABOVE OR BELOW GRADE, AND CONDUIT ABOVE GRADE SHALL BE GALVANIZED RIGID METAL CONDUIT. PVC CONDUIT SHALL NOT BE ACCEPTED IN PRIMARY RUNS.
- H. INSTALL FIRST SECTION OF CONDUIT ON POLE FOR INSPECTION. CONDUITS WHICH ARE NOT PLUMB SHALL NOT BE ACCEPTED.
- I. CONTRACTOR SHALL PROVIDE A TENTED AND HEATED AREA FOR PULLING AND TERMINATING CABLES FOR UNDERGROUND INSTALLATIONS AFTER SEPTEMBER 15TH.
- J. FOR CONNECTIONS TO EXISTING SERVICE LINES, CONTRACTOR SHALL DRESS CABLES, GROUP, JOIN WITH COMPRESSION FITTINGS, AND INSULATE.
- K. USE OF SPLIT BOLTS IS NOT ALLOWED.
- L. CONTRACTOR SHALL PROVIDE AND MAINTAIN A MINIMUM 4' WIDE CLEARANCE BETWEEN THE SERVICE ENTRANCE AND THE DU POLE.
- M. CONDUCTOR INSULATION SHALL BE TYPE XHHW OR RHW.
- N. SERVICE EQUIPMENT WITH MAIN DISCONNECT, CT AND METER ENCLOSURE ON UNISTRUT SHALL MEET ALL REQUIREMENTS PER: "TYPICAL METERED SERVICE" & "GROUNDING DETAIL" ELECTRICAL SERVICE LINE STANDARDS, PP. 19-21, DOYON UTILITIES, INC., MARCH 2008.

REV. NO.	DATE	DESCRIPTION	FOSDICK & HILMER CONSULTING ENGINEERS	DOYON UTILITIES	Date:	23 FEB 2010	UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE	Drawing No.
	04/09/10	ISSUED FOR CONSTRUCTION	309 VINE STREET, SUITE 50 TELEPHONE (513)241-5640	714 Fourth Avenue, Suite 20 Fairbanks, Alaska 99701 Telephone (907) 455-1500 Fax (907) 455-6788	Scale:	NTS	UTILIDOR SERVICE CONNECTION DETAILS	E-07
					Designed By:	LBG	FORT WAINWRIGHT, AK.	
					Drawn By:	EMS	DU PROJECT NO. J101395, J101396, J101397	
					Checked By:	NEM		

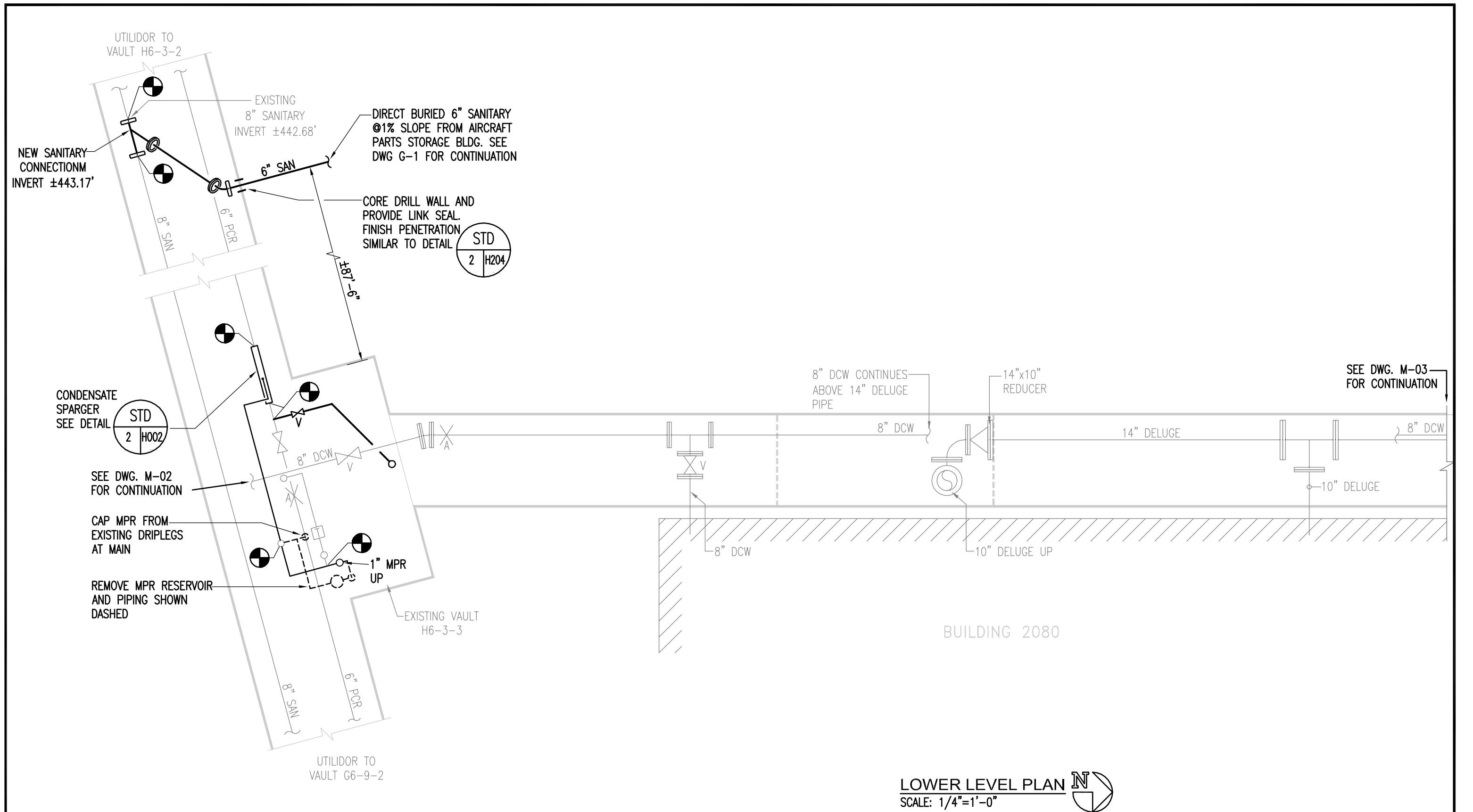
GENERAL DETAIL NOTES:


- A. BACKFILL MATERIAL ABOVE THE CONDUIT BEDDING MATERIAL SHALL BE NATIVE MATERIAL IF IT COMPLIES WITH ALASKA DOT SECTION 204 – 2.01, TYPE C.
- B. BACKFILL COMPACTION SHALL COMPLY WITH ALASKA DOT SECTION 301 – 3.03. MOISTURE/DENSITY RELATIONS OF SOILS SHALL BE CALCULATED IN ACCORDANCE WITH AASHTO T 99 OR T 180.
- C. PROVIDE (2) 2" SCHEDULE 40 HDPE CONDUITS.
- D. PROVIDE SPACERS AT A MINIMUM OF EVERY 8'-0".

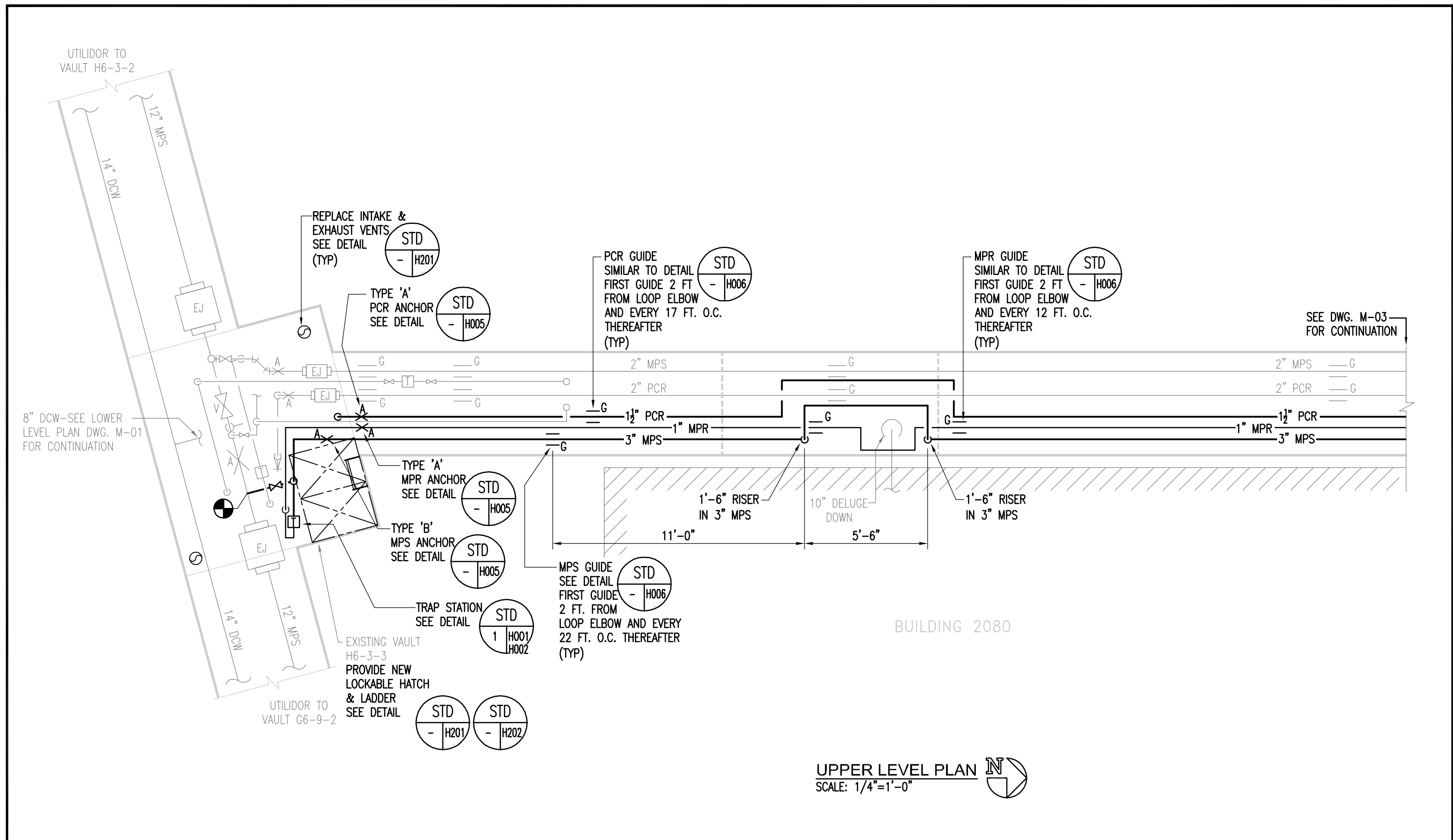



DETAIL 1 DUCT BANK
N.T.S.
E-04
E-05

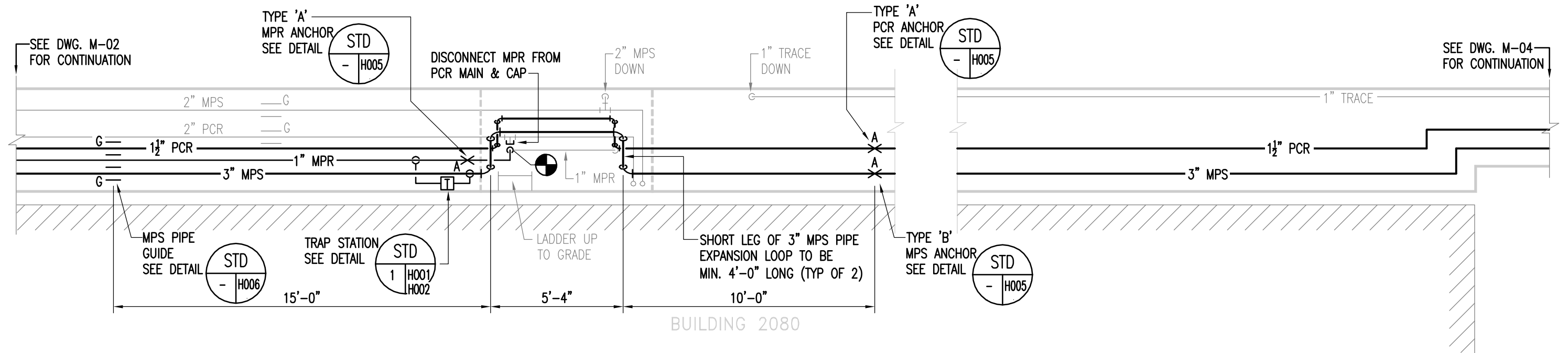
REV. NO.	DATE	DESCRIPTION	<div>FOSDICK & HILMER CONSULTING ENGINEERS 309 VINE STREET, SUITE 50 TELEPHONE (513)241-5640</div> <div>CINCINNATI, OHIO 45202 WWW.FHENG.COM</div>	<div>DOYON UTILITIES</div> <div>Jimmy Huntington Building 714 Fourth Avenue, Suite 20 Fairbanks, Alaska 99701 Telephone (907) 455-1500 Fax (907) 455-6788</div>	Date: 23 FEB 2010	UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE DUCT BANK DETAIL FORT WAINWRIGHT, AK. DU PROJECT NO. J101395, J101396, J101397	Drawing No. E-08
	04/09/10	ISSUED FOR CONSTRUCTION			Scale: NTS		
					Designed By: LBG		
					Drawn By: EMS		
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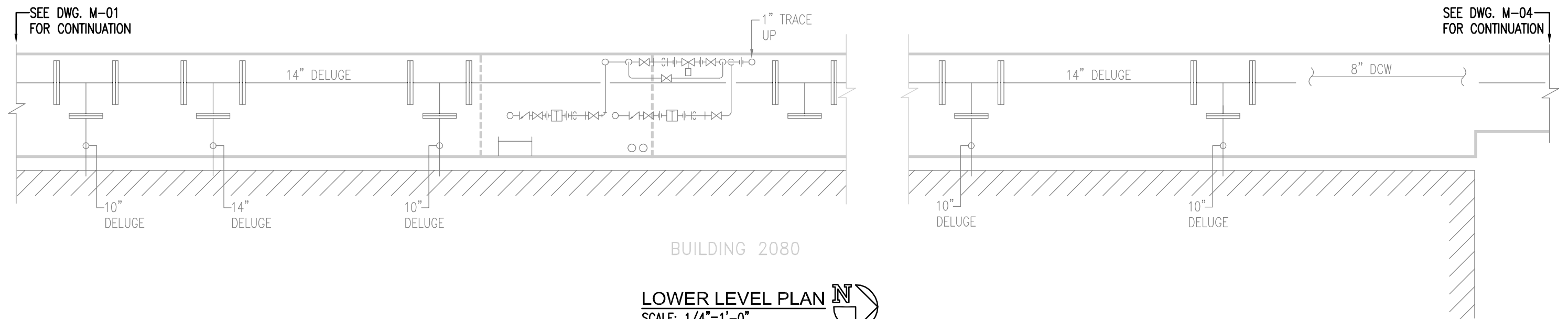
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	04/09/10	ISSUED FOR CONSTRUCTION				714 Fourth Avenue, Suite 20	Scale: 1/4"=1'-0"		
						Fairbanks, Alaska 99701	Designed By: JRS		
						Telephone (907) 455-1500	Drawn By: JRS		
						Fax (907) 455-6788	Checked By: EAE		




REV. NO.	DATE	DESCRIPTION	FOSDICK & HILMER CONSULTING ENGINEERS 309 VINE STREET, SUITE 50 TELEPHONE (513)241-5640 CINCINNATI, OHIO 45202 WWW.FHENG.COM			Jimmy Huntington Building 714 Fourth Avenue, Suite 20 Fairbanks, Alaska 99701 Telephone (907) 455-1500 Fax (907) 455-6788		Date: 19 FEB 2010 Scale: 1/4"=1'-0" Designed By: JRS Drawn By: JRS Checked By: EAE	UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE EXISTING VAULT H6-3-3 UPPER LEVEL PLAN		Drawing No. M-02
	04/09/10	ISSUED FOR CONSTRUCTION				FORT WAINWRIGHT, AK. DU PROJECT NO. J101395, J101396, J101397					

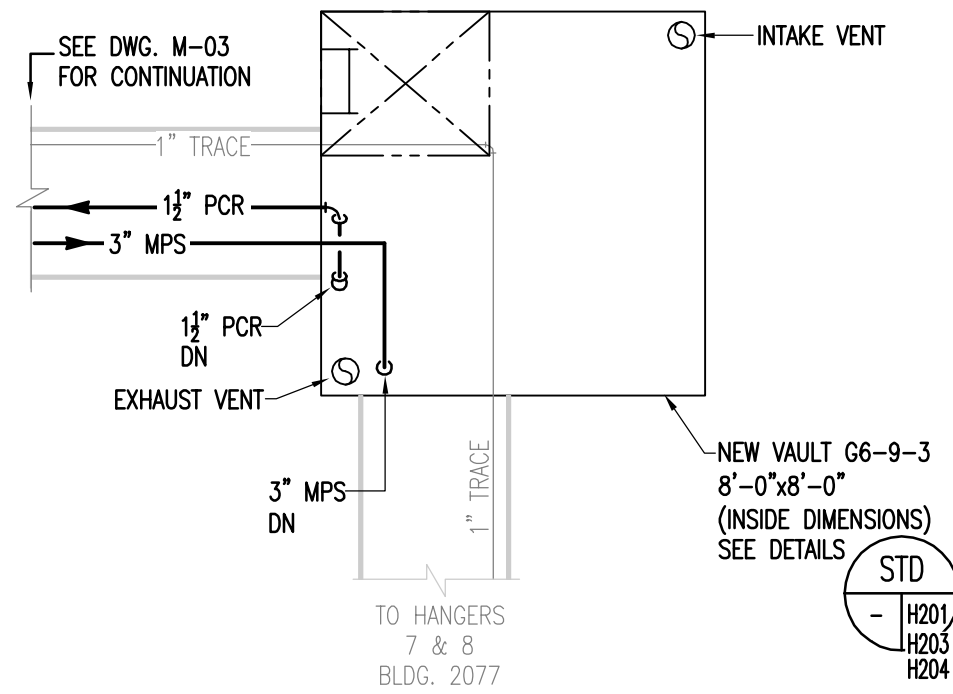


UPPER LEVEL PLAN
SCALE: 1/4"=1'-0"

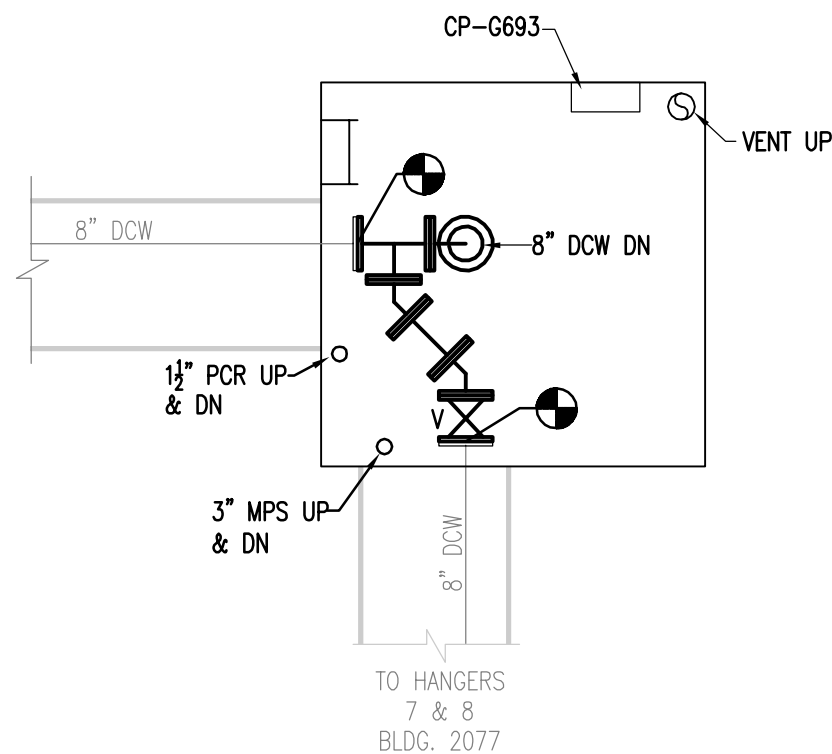


LOWER LEVEL PLAN
SCALE: 1/4"=1'-0"

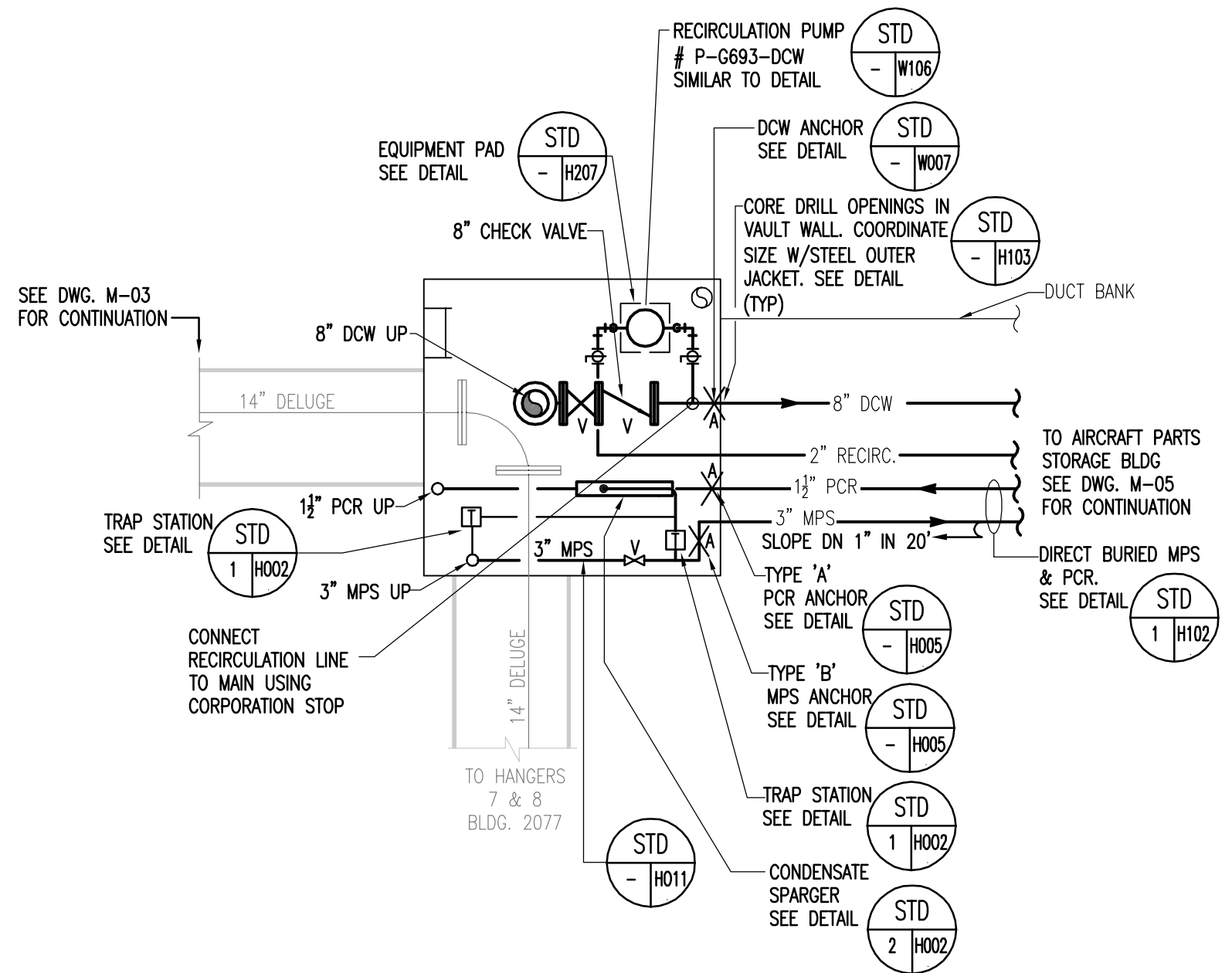
REV. NO.	DATE	DESCRIPTION	FOSDICK & HILMER 309 VINE STREET, SUITE 50 TELEPHONE (513)241-5640	CONSULTING ENGINEERS CINCINNATI, OHIO 45202 WWW.FHENG.COM		Jimmy Huntington Building	Date: 19 FEB 2010	UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE EXISTING VAULT H6-3-3 ADJACENT TO BLDG 2080	Drawing No. M-03	
	04/09/10	ISSUED FOR CONSTRUCTION				714 Fourth Avenue, Suite 20	Scale: 1/4"=1'-0"			
						Fairbanks, Alaska 99701	Designed By: JRS			
						Telephone (907) 455-1500	Drawn By: JRS			
						Fax (907) 455-6788	Checked By: EAE			
								FORT WAINWRIGHT, AK. DU PROJECT NO. J101395, J101396, J101397		



UPPER LEVEL PLAN N
SCALE: 1/4"=1'-0"



MID LEVEL PLAN N
SCALE: 1/4"=1'-0"



LOWER LEVEL PLAN N
SCALE: 1/4"=1'-0"

REV. NO.	DATE	DESCRIPTION
	04/09/10	ISSUED FOR CONSTRUCTION

FOSDICK & HILMER CONSULTING ENGINEERS
309 VINE STREET, SUITE 50 CINCINNATI, OHIO 45202
TELEPHONE (513)241-5640 WWW.FHENG.COM



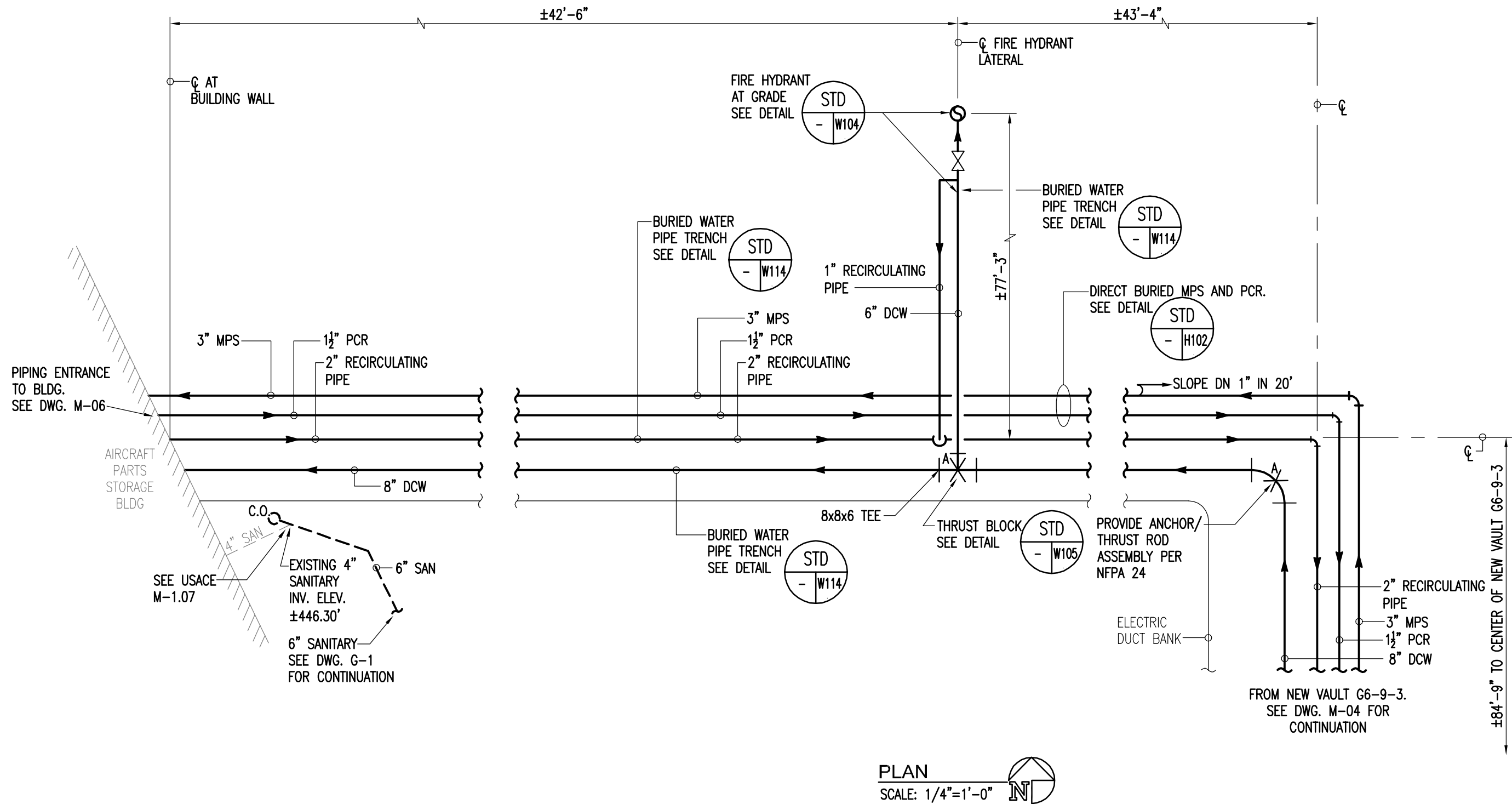
Jimmy Huntington Building
714 Fourth Avenue, Suite 201
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Telephone (907) 455-1500
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Date: 19 FEB 2010
Scale: 1/4"=1'-0"
Designed By: JRS
Drawn By: JRS
Checked By: EAE

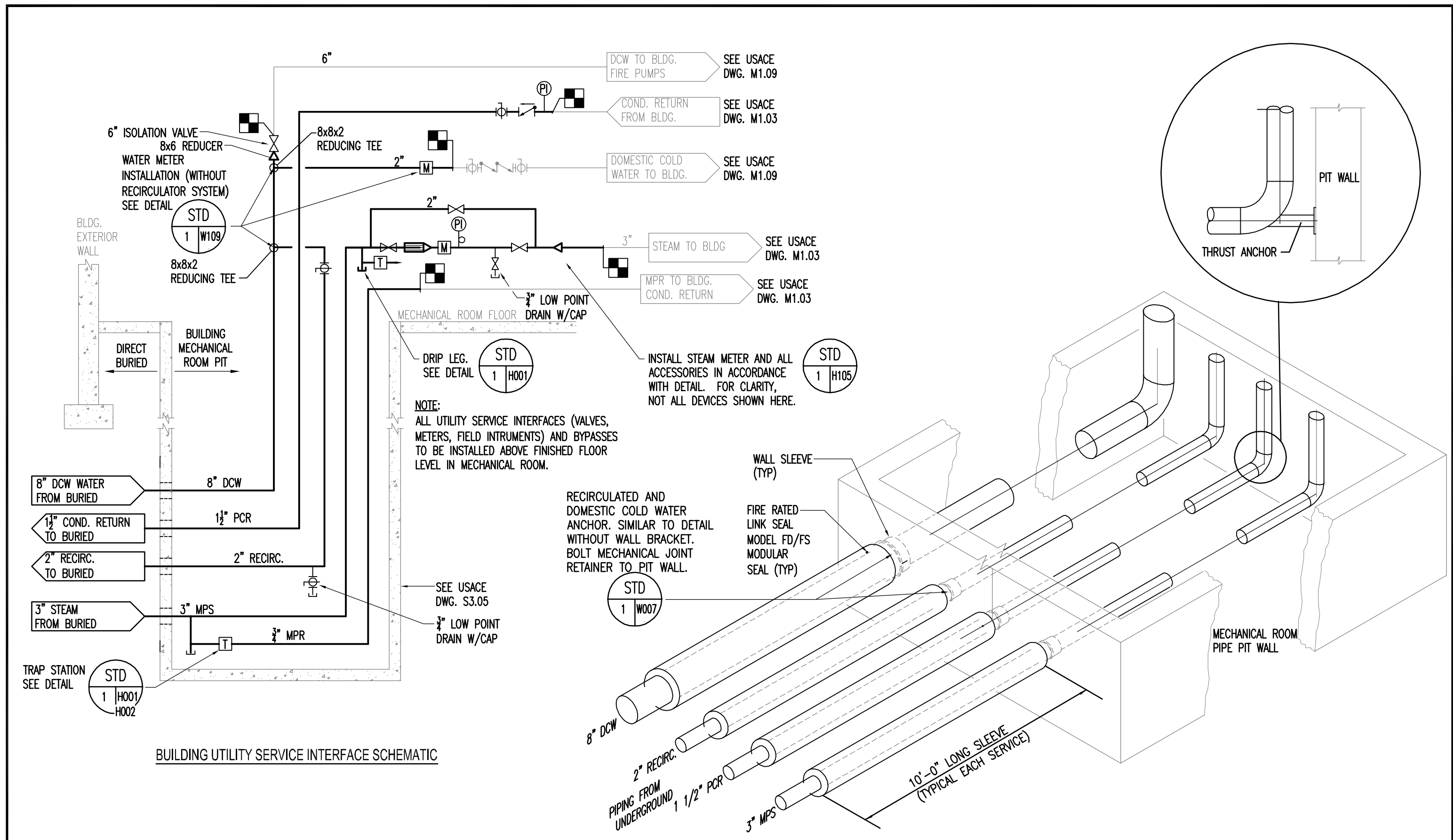
UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
NEW VAULT G6-9-3
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, J101396, J101397


Drawing No.

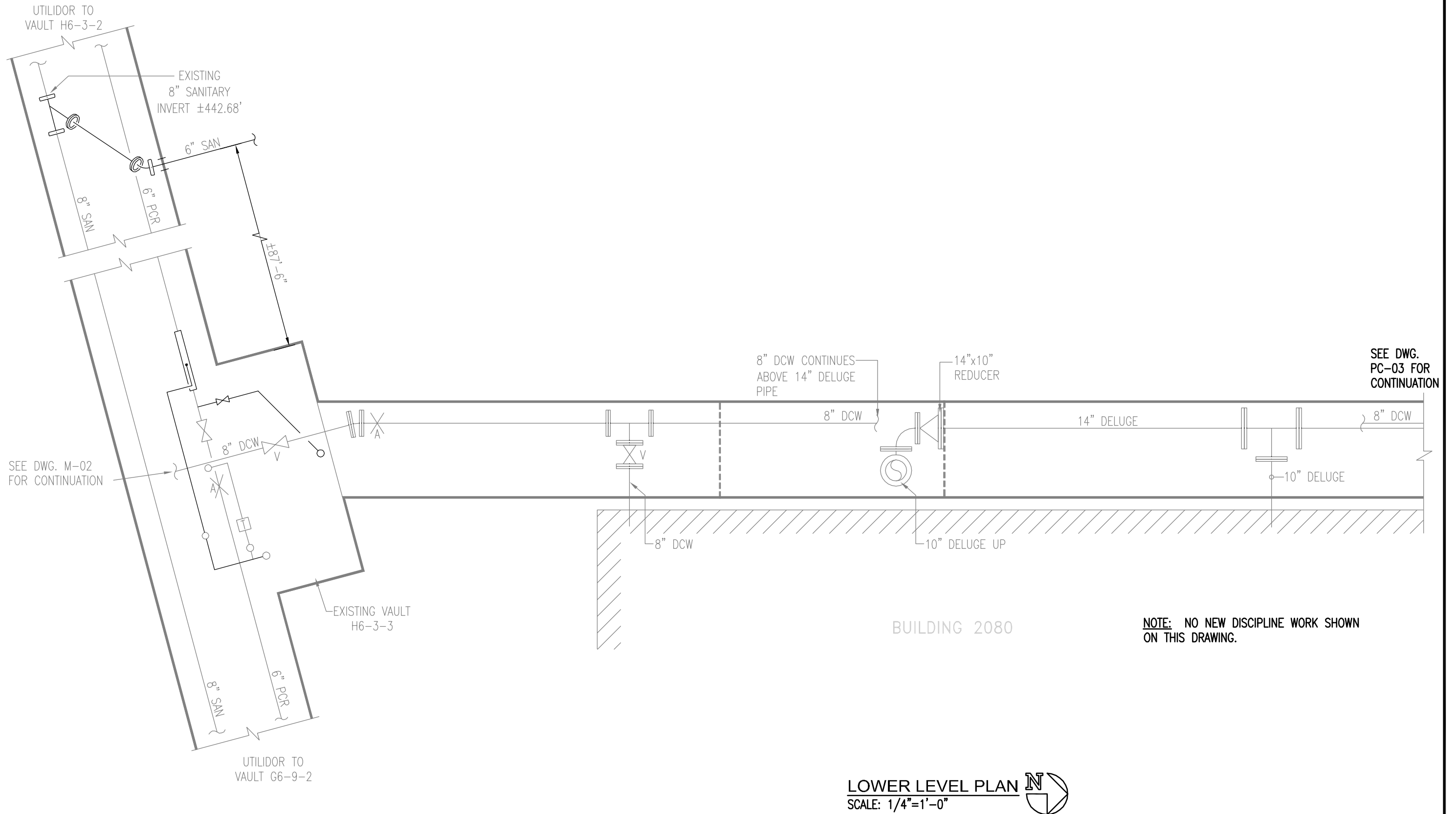
M-04




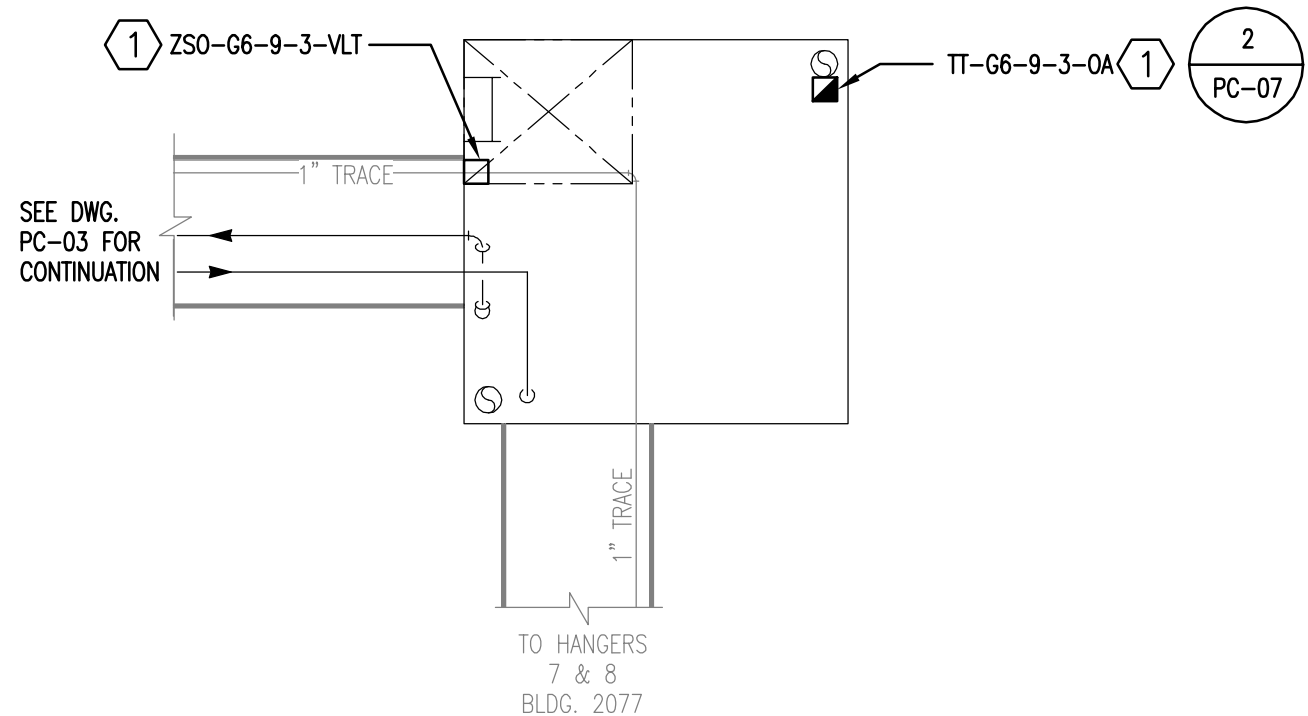
REV. NO.	DATE	DESCRIPTION	<div>FOSDICK & HILMER 309 VINE STREET, SUITE 50 TELEPHONE (513)241-5640</div> <div>CONSULTING ENGINEERS CINCINNATI, OHIO 45202 WWW.FHENG.COM</div>	<div>DOYON UTILITIES</div> <div>Jimmy Huntington Building 714 Fourth Avenue, Suite 20 Fairbanks, Alaska 99701 Telephone (907) 455-1500 Fax (907) 455-6788</div>	Date: 19 FEB 2010	<div>UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE DIRECT BURIED PIPING PLAN</div> <div>FORT WAINWRIGHT, AK. DU PROJECT NO. J101395, J101396, J101397</div>	Drawing No. M-05
	04/09/10	ISSUED FOR CONSTRUCTION			Scale: 1/4"=1'-0"		
					Designed By: JRS		
					Drawn By: JRS		
					Checked By: EAE		



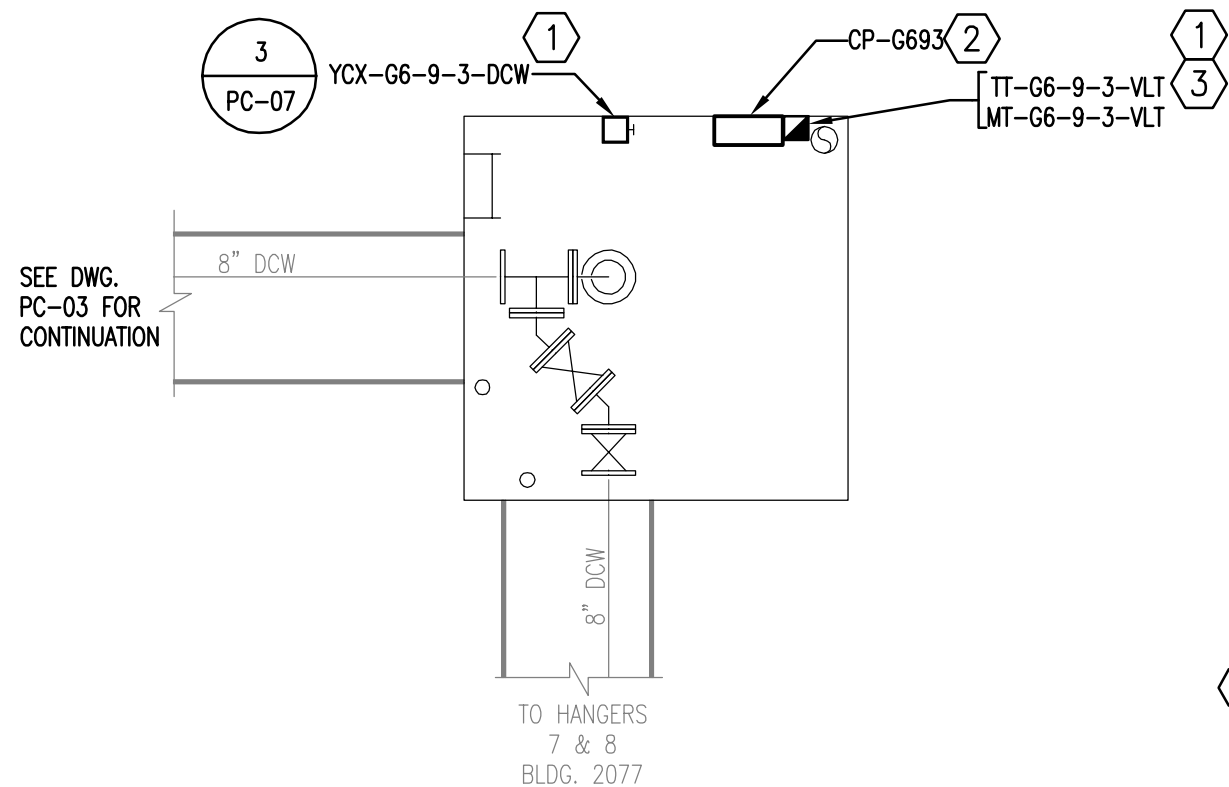
REV. NO.	DATE	DESCRIPTION					Date: 19 FEB 2010	UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE		Drawing No.
	04/09/10	ISSUED FOR CONSTRUCTION	FOSDICK & HILMER CONSULTING ENGINEERS		Jimmy Huntington Building		Scale: NTS	SCHEMATICS & DETAILS		M-06
			309 VINE STREET, SUITE 50		714 Fourth Avenue, Suite 20		Designed By: JRS	FORT WAINWRIGHT, AK.		
			CINCINNATI, OHIO 45202		Fairbanks, Alaska 99701		Drawn By: JRS	DU PROJECT NO. J101395, J101396, J101397		
			TELEPHONE (513)241-5640		www.FHENG.COM		Telephone (907) 455-1500	Checked By: EAE		
							Fax (907) 455-6788			



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	04/09/10	ISSUED FOR CONSTRUCTION	FOSDICK & HILMER	CONSULTING ENGINEERS		Scale: 1/4"=1'-0"		
			309 VINE STREET, SUITE 50	CINCINNATI, OHIO 45202		Designed By: JRS		
			TELEPHONE (513)241-5640	WWW.FHENG.COM		Drawn By: JRS		
						Checked By: EAE		
					Jimmy Huntington Building			
					714 Fourth Avenue, Suite 20			
					Fairbanks, Alaska 99701			
					Telephone (907) 455-1500			
					Fax (907) 455-6788			



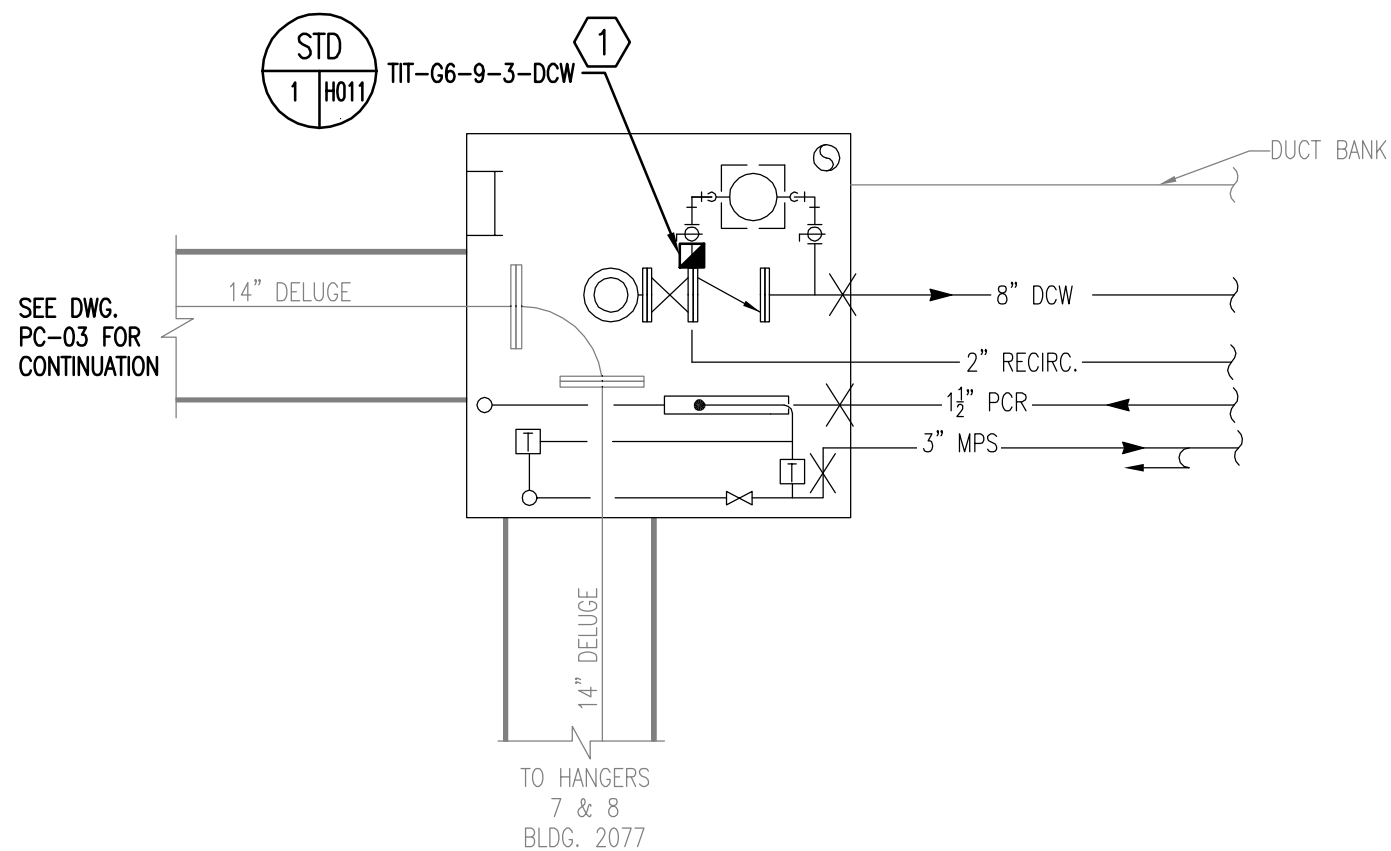
UPPER LEVEL PLAN
SCALE: 1/4"=1'-0"



MID LEVEL PLAN
SCALE: 1/4"=1'-0"

DRAWING NOTES:

1. FIELD DEVICES SHALL BE WIRED TO CP-G693 IN VAULT G6-9-3.
2. CONTROL PANEL SHALL BE WALL-MOUNTED BY ELECTRICAL CONTRACTOR, 36" A.F.F.
3. THIS FIELD DEVICES REQUIRES (3) BELDEN 8760 CABLES.



LOWER LEVEL PLAN
SCALE: 1/4"=1'-0"

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	04/09/10	ISSUED FOR CONSTRUCTION

FOSDICK & HILMER CONSULTING ENGINEERS
309 VINE STREET, SUITE 50
TELEPHONE (513)241-5640

CINCINNATI, OHIO 45202
WWW.FHENG.COM



Jimmy Huntington Building
714 Fourth Avenue, Suite 20
Fairbanks, Alaska 99701
Telephone (907) 455-1500
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Date: 17 FEB 2010
Scale: 1/4"=1'-0"
Designed By: JRS
Drawn By: RHW
Checked By: EAE

UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
NEW VAULT G6-9-3
FORT GREELY, AK.
DU PROJECT NO. J101395, 101396, 101397

Drawing No.
PC-04

1
PC-06

SEE DETAIL FOR
WATER AND STEAM
METER ELECTRICAL
CONNECTIONS.

AIRCRAFT
PARTS
STORAGE
BLDG

3" MPS

1½" PCR

2" RECIRCULATING
PIPE

8" DCW

4" SAN

6" SAN

1" RECIRCULATING
PIPE

6" DCW

3" MPS

1½" PCR

2" RECIRCULATING
PIPE

BURIED WATER
PIPE TRENCH
SEE DETAIL

STD
- W114

ELECTRIC
DUCT BANK

2" RECIRCULATING
PIPE
3" MPS
1½" PCR
8" DCW

FROM NEW VAULT G6-9-3
SEE DWG. PC-04 FOR
CONTINUATION.

PLAN

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



REV. NO.	DATE	DESCRIPTION
	04/09/10	ISSUED FOR CONSTRUCTION

FOSDICK & HILMER CONSULTING ENGINEERS
309 VINE STREET, SUITE 50 CINCINNATI, OHIO 45202
TELEPHONE (513)241-5640 WWW.FHENG.COM

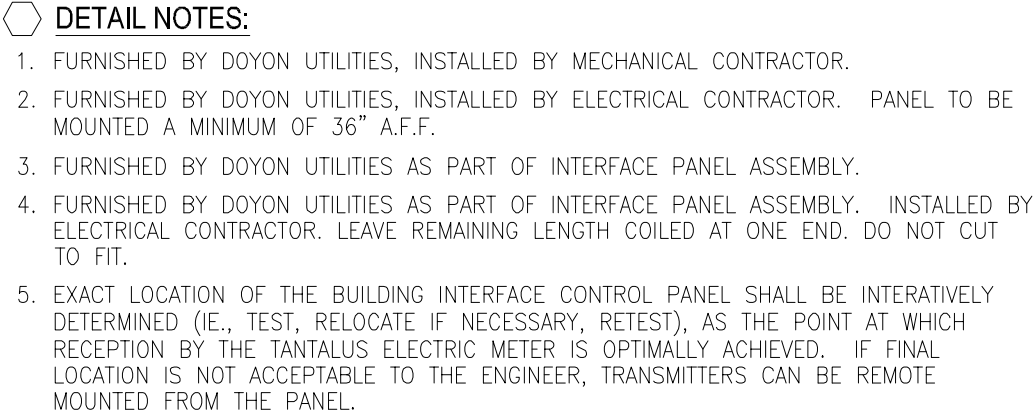


Jimmy Huntington Building
714 Fourth Avenue, Suite 20
Fairbanks, Alaska 99701
Telephone (907) 455-1500
Fax (907) 455-6788


Date: 19 FEB 2010
Scale: 1/4"=1'-0"
Designed By: JRS
Drawn By: RHW
Checked By: EAE

UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE
DIRECT BURIED DUCT PLAN
FORT WAINWRIGHT, AK.
DU PROJECT NO. J101395, 101396, 101397

Drawing No.
PC-05



DETAIL 1 BUILDING METER INTERFACE
N.T.S. PC-05

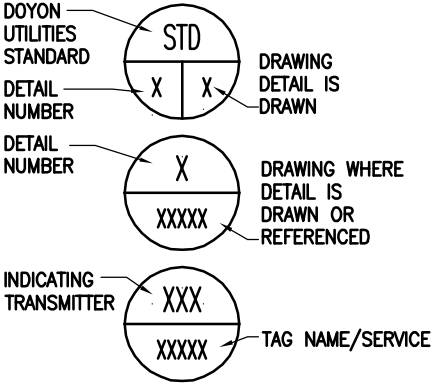
REV. NO.	DATE	DESCRIPTION	FOSDICK & HILMER CONSULTING ENGINEERS 309 VINE STREET, SUITE 50 TELEPHONE (513)241-5640 CINCINNATI, OHIO 45202 WWW.FHENG.COM		Jimmy Huntington Building 714 Fourth Avenue, Suite 20 Fairbanks, Alaska 99701 Telephone (907) 455-1500 Fax (907) 455-6788	Date: 04/09/10 Scale: NTS Designed By: J.T. Drawn By: G.N. Checked By: J.T.	UTILITY SERVICE EXTENSION TO AIRCRAFT PARTS STORAGE BUILDING METER INTERFACE DETAIL FORT WAINWRIGHT, AK. DU PROJECT NO. J101395, 101396, 101397	Drawing No. PC-06
	04/09/10	ISSUED FOR CONSTRUCTION						

ABBREVIATIONS:

A	ANCHOR
ACM	ASBESTOS CONTAINING MATERIAL
C	RIGID STEEL CONDUIT
CMP	CORRUGATED METAL PIPE
CP	CONTROL PANEL
CV	CONTROL VALVE
DCW	DOMESTIC COLD WATER
DIP	DUCTILE IRON PIPE
DIP@50%	DUCTILE IRON PIPE WITH SLOPE
DLG	DELUGE
DU	DOYON UTILITIES
(E)GRD	EXISTING GRADE
EJ	EXPANSION JOINT
FH	FIRE HYDRANT
FM	FORCED MAIN
G	GROUND
GCO	GRADE CLEAN OUT
GFI	GROUND FAULT INTERRUPTER
H5-1-1S	SANITARY MANHOLE NO.
H5-1-1F	EXISTING FIRE HYDRANT NO.
H5-1-1H	NEW FIRE HYDRANT NO.
H5-1-1	VAULT NO.
HPR	HIGH PRESSURE CONDENSATE RETURN
HPS	HIGH PRESSURE STEAM
INV	INVERT
LPR	LOW PRESSURE CONDENSATE RETURN
LPS	LOW PRESSURE STEAM
MH	ACCESS VAULT
MPR	MEDIUM PRESSURE CONDENSATE RETURN
MPS	MEDIUM PRESSURE STEAM
(N)GRD	NEW GRADE
NRS	NON-RISING STEM VALVE
PCR	PUMPED CONDENSATE RETURN
PP	POWER PANEL
RECIR	RECIRCULATION OF DCW MAINS
SAN	GRAVITY SEWER
TOL	TOP OF LID
UG	NO DIRECT VAULT ACCESS

V	VALVE
VAC	VOLTS – ALTERNATING CURRENT
VDC	VOLTS – DIRECT CURRENT
VLT	VAULT

STANDARD SYMBOLS:



SYMBOLS:

	POINT OF REMOVAL (DEMOLITION)
	POINT OF CONNECTION (NEW WORK)
	NEW WORK (PER DISCIPLINE)
	NEW WORK (OF OTHER DISCIPLINES)
	EXISTING TO REMAIN (BY OTHERS)
	UNDERGROUND UTILITIES (AS NOTED ON DRAWINGS)
	ACCESS HATCH
	VENTILATION STACK
	BOLLARD
	POINT OF DEMARCATION
	THRUST BLOCK
	HYDRANT
	STEAM TRAP ASSEMBLY
	GATE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	GLOBE VALVE
	REDUCTION
	METER (FLOW)
	ANCHOR
	EXPANSION JOINT
	ELECTRIC CONTROL VALVE
	PUMP
	PIPE GUIDE
	HOMERUN CONDUIT WITH PANELBOARD AND CIRCUIT SHOWN
	120 VAC DUPLEX RECEPTACLE
	120 VAC DUPLEX GROUND FAULT INTERRUPTION RECEPTACLE
	LIGHT SWITCH
	LED LIGHT WITH JUNCTION BOX
	JUNCTION BOX

SYMBOLS:

	DISCRETE DEVICE WITH (2) #14 UNLESS OTHERWISE NOTED. DISCRETE DEVICE (THHN)
	DISCRETE DEVICE WITH (1) BELDEN 8461 UNLESS OTHERWISE NOTED. DISCRETE DEVICE (CABLE)
	ANALOG DEVICE WITH (1) BELDEN 8760 UNLESS OTHERWISE NOTED. 2-WIRE ANALOG DEVICE
	ANALOG DEVICE WITH (1) VENDOR CABLE UNLESS OTHERWISE NOTED. VENDOR SENSOR
	DISCRETE DEVICE WITH (1) BELDEN 8791 UNLESS OTHERWISE NOTED. LIMIT SWITCHES (2)
	DISCRETE DEVICE WITH (4) #12 AND (1)-#12 GND. UNLESS OTHERWISE NOTED. ELECTRIC 2-POSITION VALVES

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	04/09/10	ISSUED FOR CONSTRUCTION			Scale: NTS		
					Designed By: DLW		
					Drawn By: CDH		
					Checked By: NEM		

INSTRUMENT TAGNAME MATRIX					
	FIRST-LETTER		SUCCEEDING-LETTERS		
	BASE	MODIFIER	PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS	---	ALARM	---	---
C	---	---	---	CONTROL	CLOSED
D	---	DIFFERENTIAL	---	---	---
E	VOLTAGE	---	ELEMENT	---	---
F	FLOW	RATIO	---	---	---
G	---	---	GLASS	---	---
H	HAND	---	---	---	HIGH
I	CURRENT	---	INDICATE	---	---
J	POWER	---	---	---	---
K	TIME	RATE OF CHANGE	---	---	---
L	LEVEL	---	LIGHT	---	LOW
M	HUMIDITY	MOMENTARY	---	---	MIDDLE
O	---	---	ORIFICE	---	OPEN
P	PRESSURE	---	---	---	---
Q	QUANTITY	TOTALIZE	---	---	---
S	SPEED , FREQUENCY	---	---	SWITCH	---
T	TEMPERATURE	---	---	TRANSMITTER	---
V	VIBRATION	---	---	VALVE	---
Y	EVENT, STATE	---	---	---	---
Z	POSITION	---	---	---	---

GENERAL INSTALLATION NOTES (M SERIES DRAWINGS):


- A. ABATE ALL ACM AS REQUIRED TO ACCOMPLISH THE WORK SHOWN IN THE CONTRACT DOCUMENTS.
- B. PROVIDE ALL EARTHWORK, EXCAVATION, BACKFILL, AND RESTORATION OF SURFACE CONDITIONS AS REQUIRED TO ACCOMPLISH THE WORK SHOWN IN THE CONTRACT DOCUMENTS.
- C. CONTRACTOR SHALL ASSUME THAT ALL EXISTING UTILIDOR LIDS ARE REMOVABLE UNLESS OTHERWISE NOTED ON DRAWINGS.
- D. PROVIDE UTILIDOR INSULATION AS DESCRIBED IN SPECIFICATIONS FOR UTILIDORS EXPOSED AS PART OF THIS CONTRACT.
- E. AN ATTEMPT HAS BEEN MADE FOR DU TO FURNISH ALL MAJOR PIPING AND EQUIPMENT ASSOCIATED WITH NEW WORK. IN THE EVENT THAT ALL REQUIRED MATERIALS HAVE NOT BEEN FURNISHED, CONTRACTOR SHALL PROVIDE ALL REMAINING MATERIALS. SEE LIST OF DU FURNISHED MATERIALS IN THE CONTRACT DOCUMENTS.
- F. SUBMIT FOR REVIEW BY ENGINEER, STRUCTURAL DESIGN FOR ALL NEW VAULTS AS SHOWN ON DRAWINGS. DESIGN SHALL BE OF SIZE SHOWN ON DRAWINGS AND SHALL CONFORM TO ALL STATE AND LOCAL CODES. FINAL APPROVED DESIGN SHALL BEAR STAMP OF A PROFESSIONAL ENGINEER REGISTERED IN STATE OF ALASKA.
- G. INSTALL ALL DU FURNISHED MATERIALS AS DESCRIBED IN CONTRACT DOCUMENTS. REFER TO PC-SERIES DRAWINGS FOR FIELD DEVICE INSTALLATION LOCATIONS.
- H. PROVIDE ALL SUPPORTS, ANCHORS, GUIDES, AND INSULATION ASSOCIATED WITH ALL PIPING INSTALLED ON THIS PROJECT.
- I. REPLACE ALL EXISTING VAULT ACCESS HATCHES WITH DU FURNISHED ACCESS HATCH AND RAISE FINAL ELEVATION A MINIMUM OF 12 INCHES ABOVE FLOOD PLANE.
- J. REPLACE ALL EXISTING VAULT LADDERS THAT DO NOT MEET CURRENT OSHA STANDARDS. MODIFY EXISTING LADDERS AS NECESSARY TO COORDINATE WITH ACCESS HATCHES AND ALL PIPING.
- K. REPLACE ALL EXISTING VAULT VENTS AND BOLLARDS.

GENERAL INSTALLATION NOTES (E SERIES DRAWINGS):

- A. PROVIDE ALL EARTHWORK, EXCAVATION, BACKFILL, AND RESTORATION OF SURFACE CONDITIONS AS REQUIRED TO ACCOMPLISH THE WORK SHOWN IN THE CONTRACT DOCUMENTS.
- B. PROVIDE CONNECTIONS FROM POLE MOUNTED METERS TO POWER PANELBOARDS AS SHOWN ON DRAWINGS. DU WILL PROVIDE PRIMARY POLE-MOUNTED TRANSFORMERS, SECONDARY SERVICE FEEDS, AND METERING.
- C. PROVIDE POWER PANELBOARDS, LOAD PANELBOARDS AND SERVICE DISCONNECTS AS SHOWN ON DRAWINGS.
- D. INSTALL DU FURNISHED PANELS AS SHOWN ON DRAWINGS.
- E. PROVIDE EACH ACCESS VAULT WITH SWITCHED LED LIGHTING AND CONVENIENCE RECEPTACLES. RECEPTACLES SHALL BE MOUNTED A MINIMUM OF 48" FROM VAULT FLOORS UNLESS INDICATED OTHERWISE.
- F. PROVIDE 120 VAC POWER TO EACH ACCESS VAULT FROM PANELBOARDS TO LIGHTING, RECEPTACLES, CONTROL PANELS, AND SUMP PUMPS AS SHOWN ON DRAWINGS. ALL CONDUIT AND WIRING SHALL BE INSTALLED AT AN ELEVATION NO LESS THAN 18" FROM TOP OF WALL OF VAULT.

GENERAL INSTALLATION NOTES (PC SERIES DRAWINGS):

- A. PROCESS CONTROLS DRAWINGS REFERENCE WORK TO BE DONE BY BOTH THE CONTRACTORS.
- B. ALL INSTRUMENTS, FIELD DEVICES AND CONTROL PANELS WILL BE FURNISHED BY THE OWNER, UNLESS OTHERWISE SPECIFIED.
- C. PROVIDE CABLING AND CONDUIT FOR PROCESS CONTROLS INSTRUMENTATION IN UTILIDORS PER SYMBOL LEGEND. MINIMUM CONDUIT SIZE: 3/4". CONDUIT FILL SHALL NOT EXCEED 50%. LOW VOLTAGE CONTROLS CABLING SHALL BE RUN IN SEPARATE CONDUIT FROM 120VAC.
- D. SEE CONTROL PANEL REFERENCE DRAWINGS FOR WIRING TERMINATIONS.

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						DU PROJECT NO. J101395, J101396, J101397	