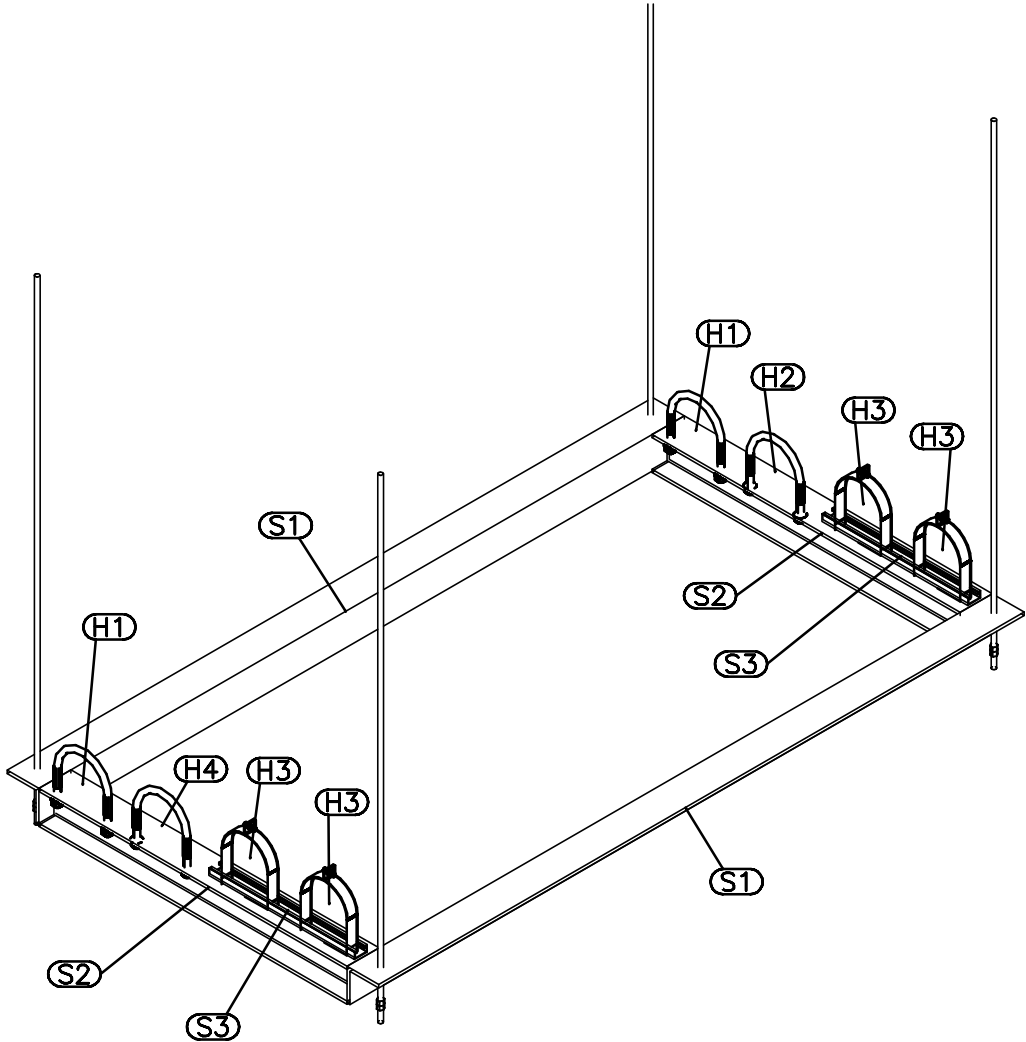
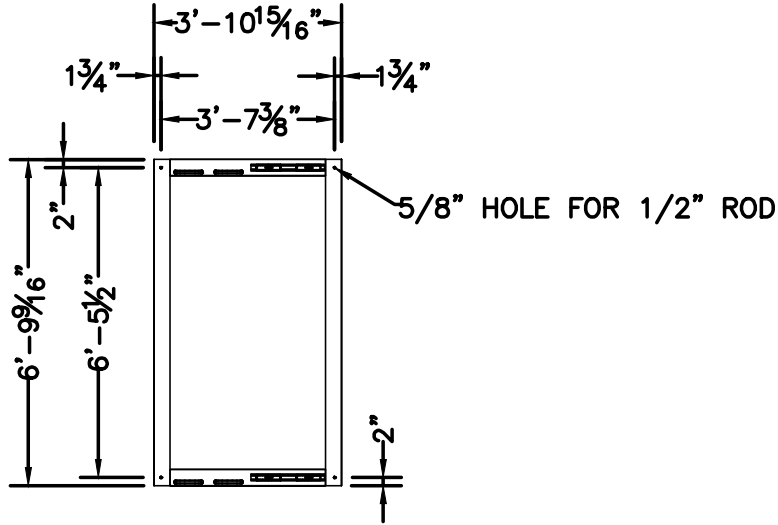
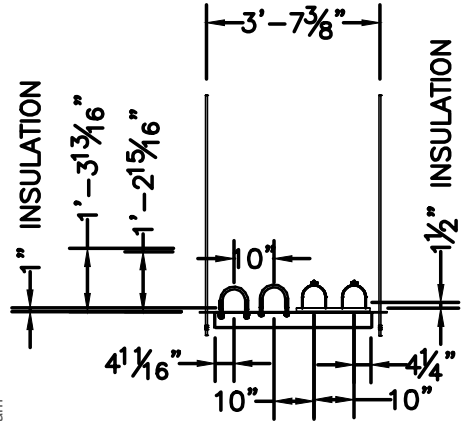


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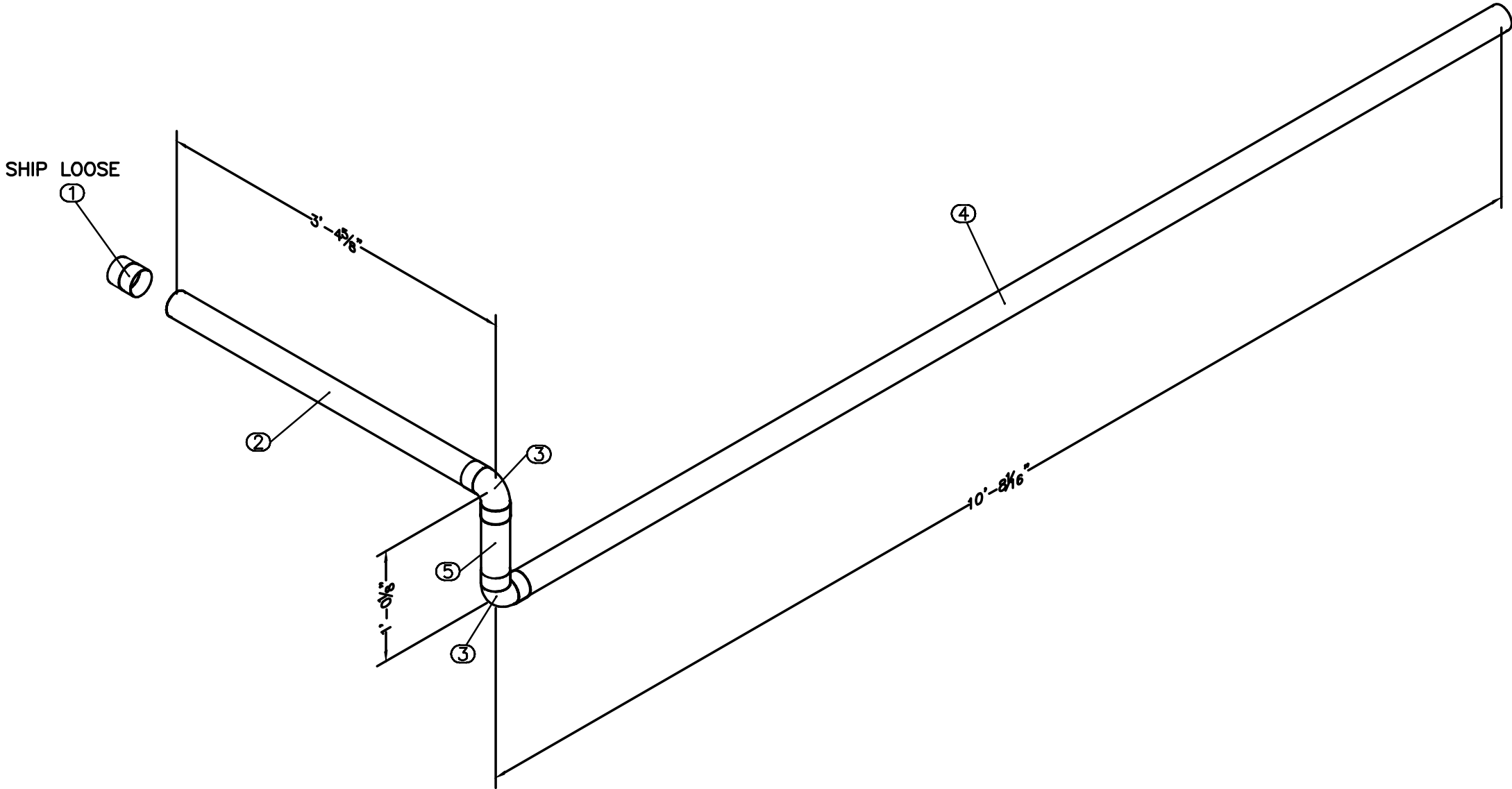
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St. Louis, MO 63132-2303  
314-997-6600 phone  
BIMCAD@murphy-stl.com

DRN JMM		3/11/2021	WUSM RESEARCH BUILDING				QA/QC ACCEPT				FLANGE WEIGHT/ORIENTATION				<input type="checkbox"/>				
CHK			NRB CUP								FITTING ORIENTATION				<input type="checkbox"/>				
APP			PIPE RACKS								BOLTS/CPLG'S/TH'D TIGHT				<input type="checkbox"/>				
JOB NO.		210140									SPOOL IDENTIFICATION				<input type="checkbox"/>				
REF.DWG.			SERVICE NAME				SPEC.				ASME	X-RAY	HYDRO TEST	PWHT	COMMENTS				
			CUP LEVEL 02				NA				NA	NA	NA	NA	MURPHY WPS#				
DRAWING NO./TRACKING NO.			QTY.				SHT/NO		REV										
210140-A-UPL2-1F			1				1 of 2		0				DESCRIPTION				DRN	CHK	APP



BOM-STEEL					
Item No	Order	Description	Qty	Size	Steel
H1	Fig137	Fig.137 U-Bolt (4)-Nut Black	2	5	
H2	Fig137	Fig.137 U-Bolt (4)-Nut Black	1	5	
H3	929262	Klo-Shure Strut Clamp 1-1/2in Insul Cplg - Fiberglass_CTS	4	2-1/2	
H4	Fig137	Fig.137 U-Bolt (4)-Nut Black	1	5	
S1	L4x4x3/8	ASTM A36 CS Equal Angle	2	L4x4x3/8	81 1/8"
S2	W4x13	ASTM A36 CS Wide Flange	2	W4x13	39"
S3	B52 GRN	1FT GREEN 12GA CHANNEL	2	1-5/8x13/16	18 1/2"

DRN JMM		3/11/2021		WUSM RESEARCH BUILDING				QA/QC ACCEPT				FLANGE WEIGHT/ORIENTATION									
CHK				NRB CUP								FITTING ORIENTATION									
APP				PIPE RACKS								BOLTS/CPLG'S/TH'D TIGHT									
JOB NO.		210140										SPOOL IDENTIFICATION									
REF.DWG.				SERVICE NAME				SPEC.				ASME		X-RAY		HYDRO TEST		PWHT		COMMENTS	
				CUP LEVEL 02				NA		NA		NA		NA		NA		MURPHY WPS#			
DRAWING NO./TRACKING NO.				QTY.		SHT/NO		REV		0											
210140-A-UPL2-1F				1		2 of 2		0		REV		DATE		DESCRIPTION				DRN		CHK APP	



Murphy-PFFS-SPOOL-BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
3	2	Wrot 607 90 Deg Ell CxC					2-1/2
2	1	Type K Hard Copper Pipe	Copper Ftg	Copper Ftg	3'-3"	38.994	2-1/2
4	1	Type K Hard Copper Pipe	Copper Ftg	Copper Ftg	10'-6 7/16"	126.426	2-1/2
5	1	Type K Hard Copper Pipe	Copper Ftg	Copper Ftg	8 7/8"	8.875	2-1/2

Murphy-PFFS-Ship Loose BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	1	Wrot 601 No Stop Cplg CxC					2-1/2

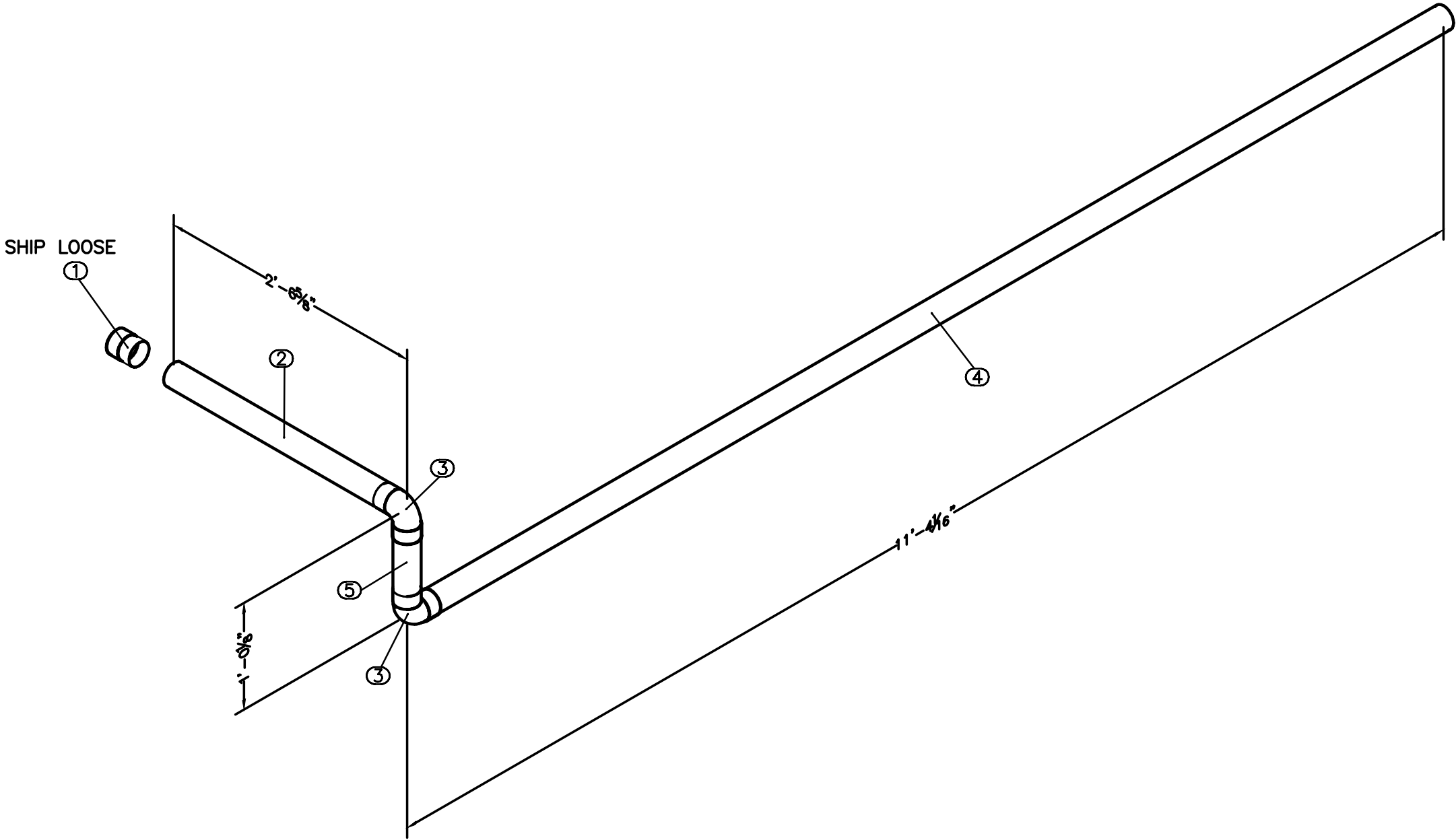
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<input type="checkbox"/> FLANGE WEIGHT/ORIENTATION		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/> FITTING ORIENTATION		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/> BOLTS/CPLGS/TH'D TIGHT		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/> SPOOL IDENTIFICATION		<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
QA/QC ACCEPT		X-RAY		ASME		PWHT	
		NA		NA		NA	
SPEC.		HYDRO TEST		COMMENTS		MURPHY WPS#	
NA		NA		NA		NA	
0		NA		NA		NA	
REV		DATE		DESCRIPTION		DRN	
						CHK	
						APP	

DRN	JMM	3/29/2021	WUSM RESEARCH BUILDING		
CHK			NRB CUP		
APP			PIPE RACKS		
JOB NO.	210140	SERVICE NAME	UPL2-1F-01		
REF.DWG.					
DRAWING NO./TRACKING NO.	210140-A-UPL2-1F-01	QTY.	1	SHT/NO	1 OF 1
		REV	0		



Murphy-PFFS-Ship Loose BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	1	Wrot 601 No Stop Cplg CxC					2-1/2

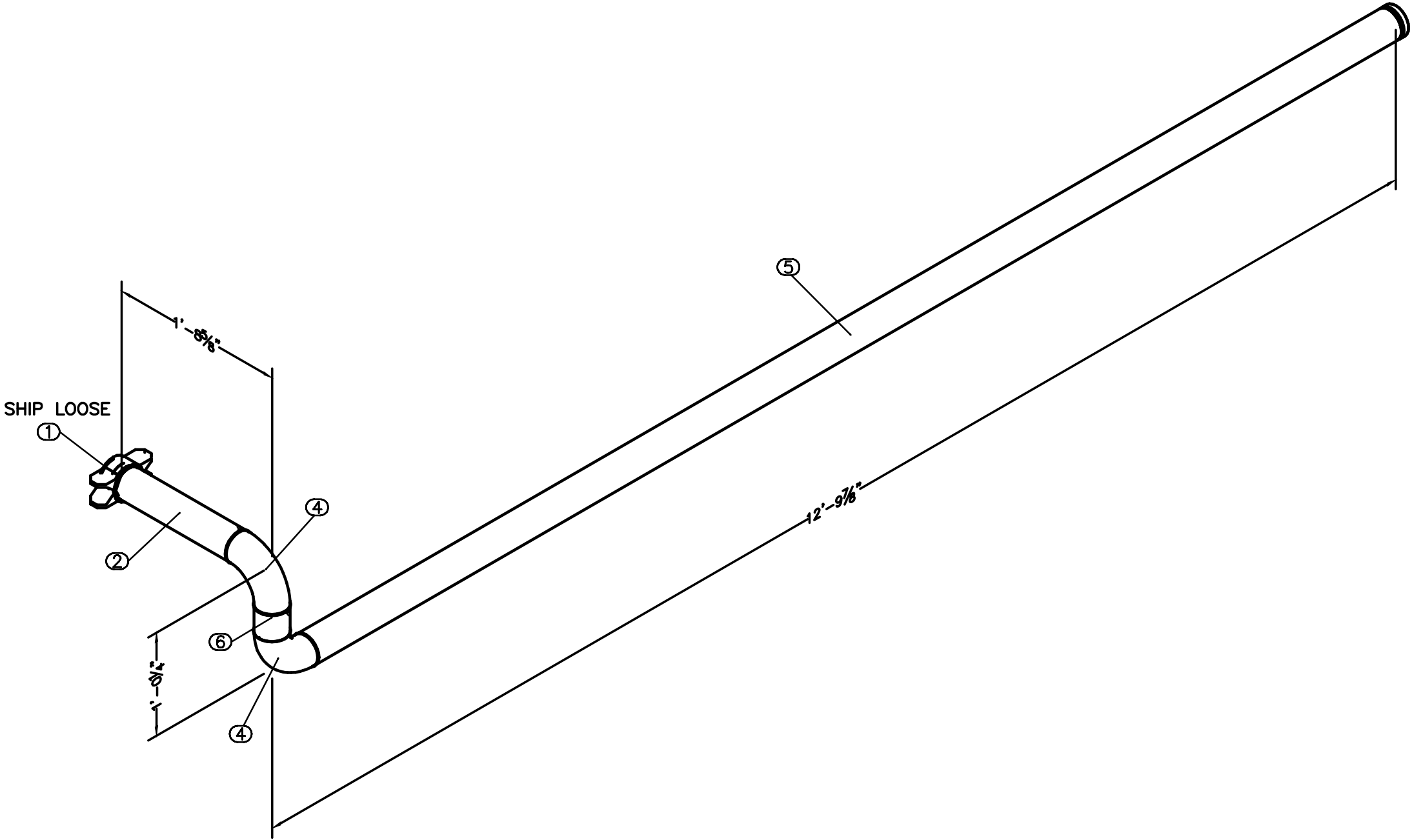
Murphy-PFFS-SPOOL-BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
3	2	Wrot 607 90 Deg Ell CxC					2-1/2
2	1	Type K Hard Copper Pipe	Copper Ftg	Copper Ftg	2'-5"	28.995	2-1/2
4	1	Type K Hard Copper Pipe	Copper Ftg	Copper Ftg	11'-2 7/16"	134.426	2-1/2
5	1	Type K Hard Copper Pipe	Copper Ftg	Copper Ftg	8 7/8"	8.875	2-1/2

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FLANGE WEIGHT/ORIENTATION FITTING ORIENTATION BOLTS/CPLG'S/TH'D TIGHT SPOOL IDENTIFICATION	QA/QC ACCEPT				WUSM RESEARCH BUILDING NRB CUP PIPE RACKS			
	SPEC.	ASME	X-RAY	HYDRO TEST	SERVICE NAME	QTY.	SHT/NO	REV
	NA	NA	NA	NA	UPL2-1F-01	1	1 of 1	0
	0							
REV DATE DESCRIPTION				DRN CHK APP				



Murphy-PFFS-Ship Loose BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	1	Style 107N QuickVic EHP Pnt Rigid Cpl					3

Murphy-PFFS-SPOOL-BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
4	2	Std Wt SA234 WPB CS BW LR 90 Deg Ell					3
5	1	Sch 40 SA-53B CS ERW Pipe GRV	Grooved Pipe End	BEV	12'-5 1/4"	149.277	3
2	1	Sch 40 SA-53B CS ERW Pipe PE	Grooved End	BEV	1'-4"	15.996	3
6	1	Sch 40 SA-53B CS ERW Pipe PE	BEV	BEV	3"	2.983	3

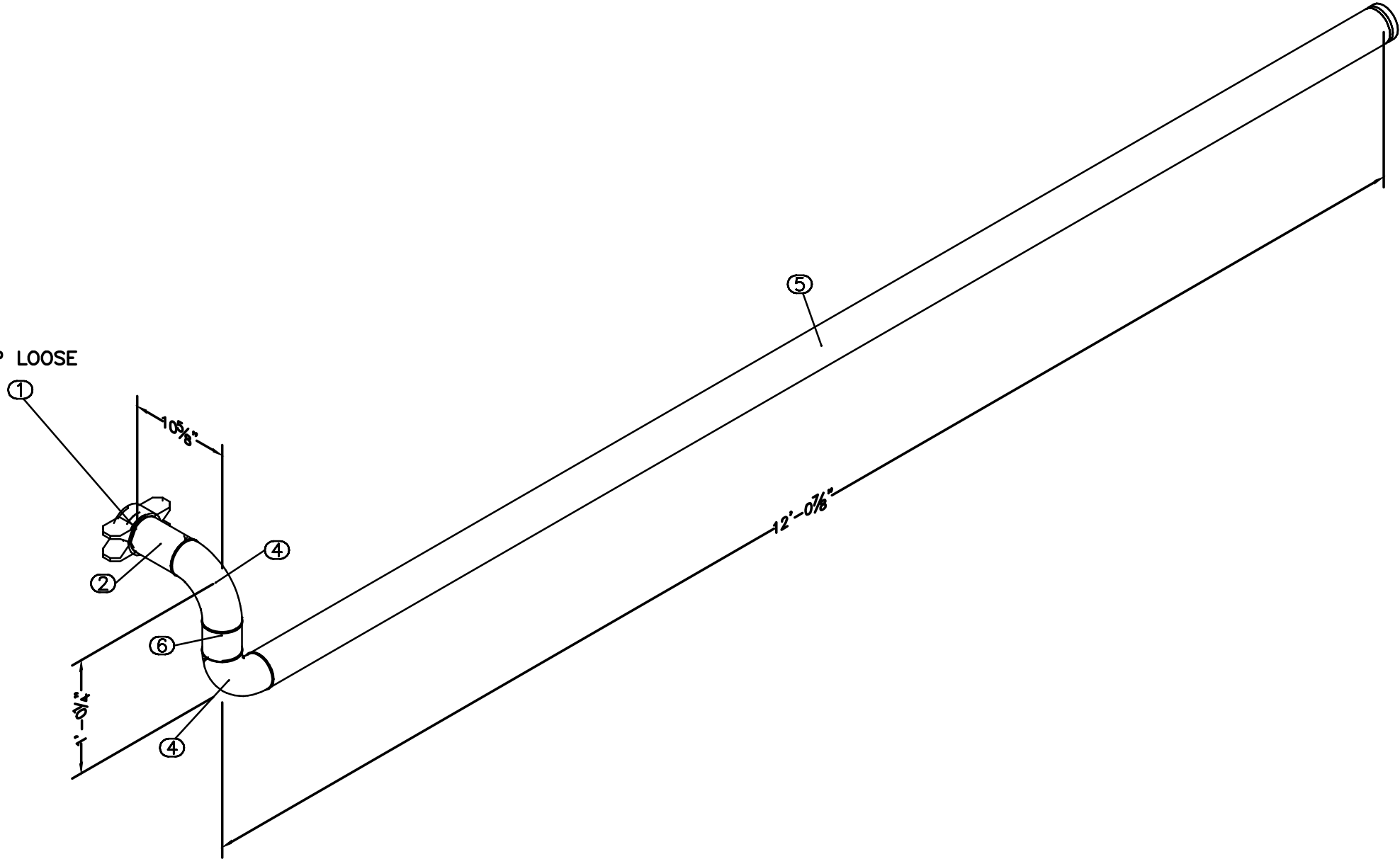
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DRN	JMM	3/29/2021	WUSM RESEARCH BUILDING			QA/QC ACCEPT			<input type="checkbox"/> FLANGE WEIGHT/ORIENTATION							
CHK			NRB CUP						<input type="checkbox"/> FITTING ORIENTATION							
APP			PIPE RACKS						<input type="checkbox"/> BOLTS/CPLG'S/TH'D TIGHT							
JOB NO.	210140		SERVICE NAME						<input type="checkbox"/> SPOOL IDENTIFICATION							
REF.DWG.			UPL2-1F-01													
DRAWING NO./TRACKING NO.	210140-A-UPL2-1F-03		QTY.	1	SHT/NO	1 of 1	REV	0	SPEC.	ASME	X-RAY	HYDRO TEST	PWHT	COMMENTS		
									NA	NA	NA	NA	NA	MURPHY WPS#		
									0							
									REV	DATE	DESCRIPTION			DRN	CHK	APP

SHIP LOOSE



Murphy-PFFS-Ship Loose BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	1	Style 107N QuickVic EHP Pnt Rigid Cpl					3

Murphy-PFFS-SPOOL-BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
4	2	Std Wt SA234 WPB CS BW LR 90 Deg El					3
2	1	Sch 40 SA-53B CS ERW Pipe PE	Grooved End	BEV	6"	5.996	3
6	1	Sch 40 SA-53B CS ERW Pipe PE	BEV	BEV	3"	2.983	3
5	1	Sch 40 SA-53B CS ERW Pipe PE	BEV	Grooved End	11'-8 1/4"	140.277	3

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DRN JMM	3/29/2021	WUSM RESEARCH BUILDING				QA/QC ACCEPT				<input type="checkbox"/> FLANGE WEIGHT/ORIENTATION						
CHK		NRB CUP				<input type="checkbox"/> FITTING ORIENTATION				<input type="checkbox"/> BOLTS/CPLG'S/TH'D TIGHT						
APP		PIPE RACKS								<input type="checkbox"/> SPOOL IDENTIFICATION						
JOB NO.	210140	SERVICE NAME				SPEC.	ASME	X-RAY	HYDRO TEST	PWHT	COMMENTS	REV	DATE	DRN	CHK	APP
REF.DWG.		UPL2-1F-01				NA	NA	NA	NA	NA	MURPHY WPS#	0				
DRAWING NO./TRACKING NO.	210140-A-UPL2-1F-04	QTY.	1	SHT/NO	1 of 1	REV	0									