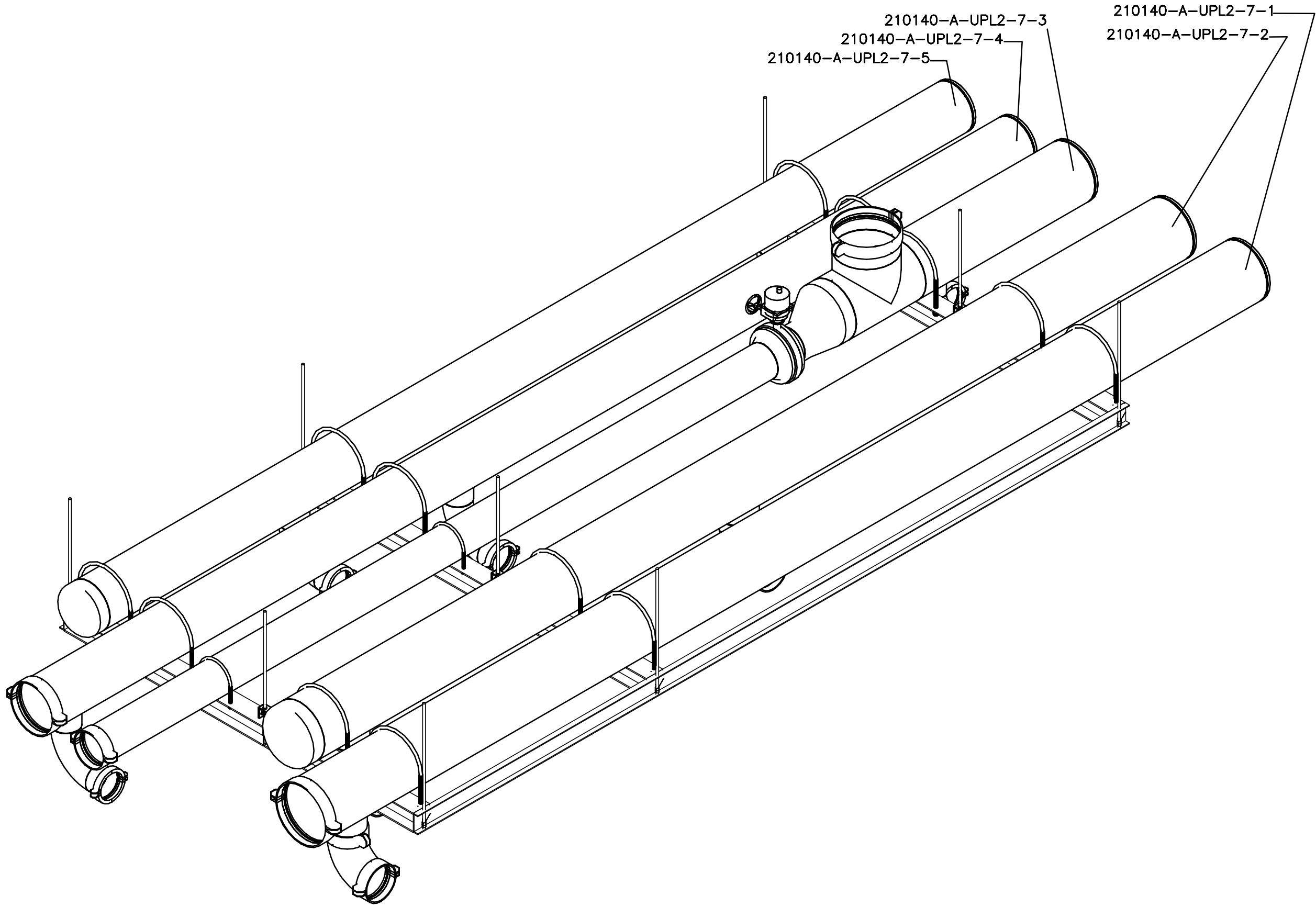


<div>MURPHY</div> <div>SINCE 1907</div> <div>CONSTRUCTORS • ENGINEERS MECHANICAL • INDUSTRIAL</div>			1233 N. Price Rd. St. Louis, MO 63132-2303 314-997-6600 phone BIMCAD@murphy-stl.com											
<div>WUSM RESEARCH BUILDING</div> <div>NRB CUP</div> <div>PIPE RACKS</div>			QA/QC ACCEPT			FLANGE WEIGHT/ORIENTATION				<input type="checkbox"/>				
						FITTING ORIENTATION				<input type="checkbox"/>				
			BOLTS/CPLG'S/TH'D TIGHT				<input type="checkbox"/>							
			SPOOL IDENTIFICATION				<input type="checkbox"/>							
<div>SERVICE NAME</div> <div>CUP LEVEL 02</div>			SPEC.	ASME	X-RAY	HYDRO TEST	PWHT	COMMENTS						
			NA	NA	NA	NA	NA	MURPHY WPS#						
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			REV	DATE	DESCRIPTION				DRN	CHK	APP			
<div>DRAWING NO./TRACKING NO.</div> <div>210140-A-UPL2-7</div>			QTY.	1	SHT/NO	1 of 6	REV	0						

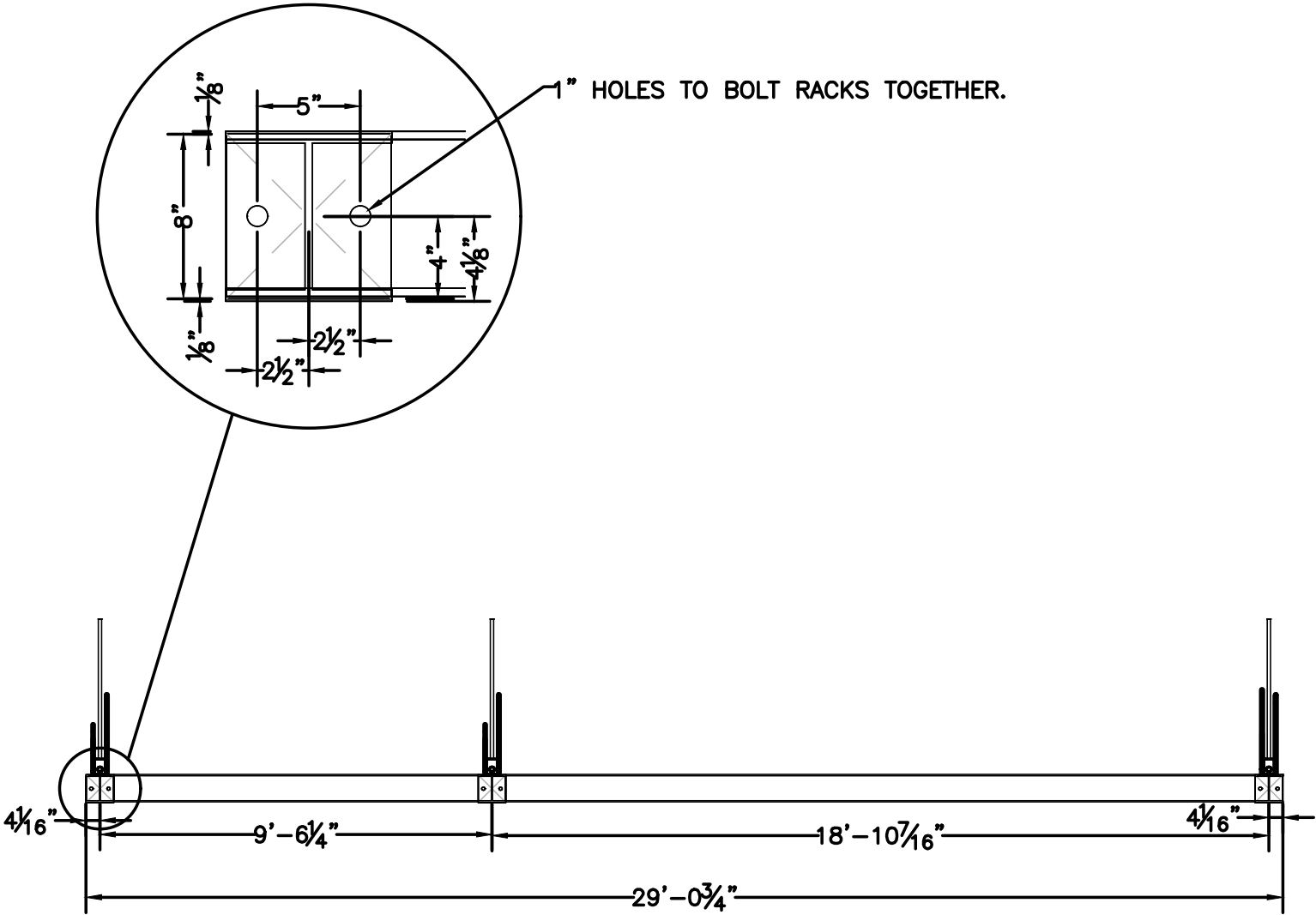
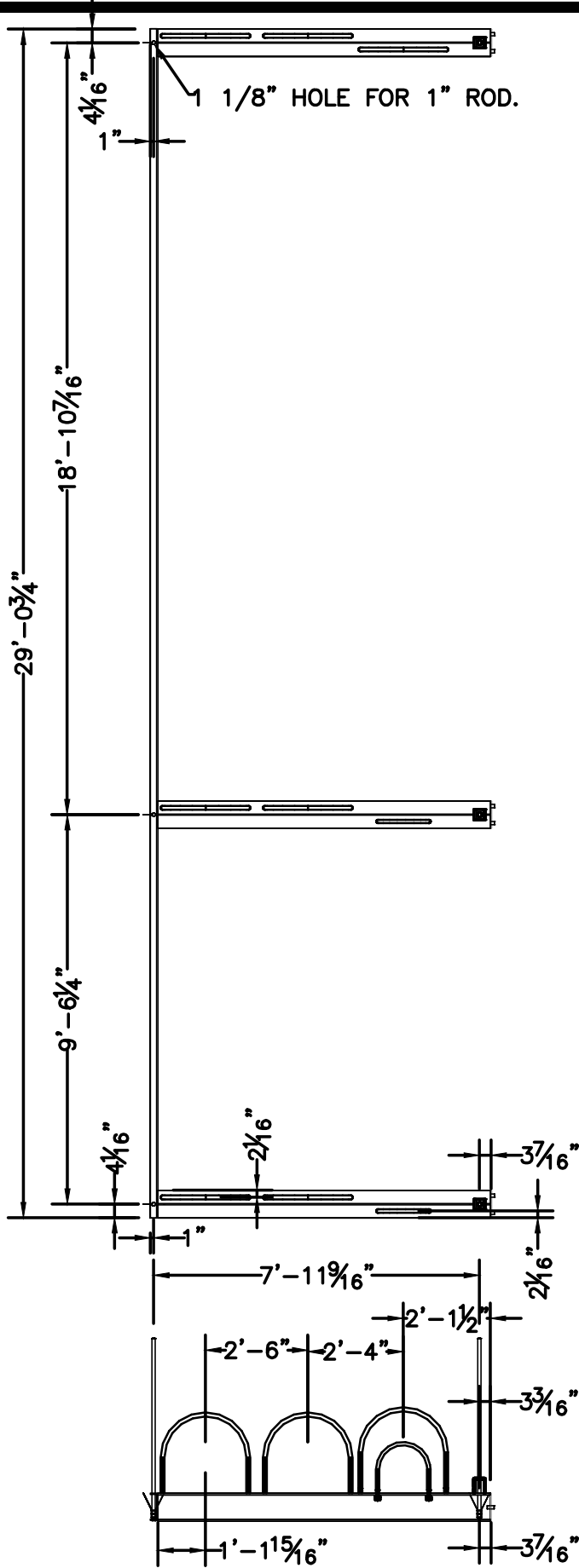


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CHK			NRB CUP					<input type="checkbox"/> FITTING ORIENTATION			
APP			PIPE RACKS					<input type="checkbox"/> BOLTS/CPLG'S/TH'D TIGHT			
JOB NO.		210140	SERVICE NAME					<input type="checkbox"/> SPOOL IDENTIFICATION			
REF.DWG.			CUP LEVEL 02			SPEC.	ASME	X-RAY	HYDRO TEST	PWHT	COMMENTS
DRAWING NO./TRACKING NO.		210140-A-UPL2-7	QTY.	1	SHT/NO	NA	NA	NA	NA	NA	MURPHY WPS#
						0					
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										APP	

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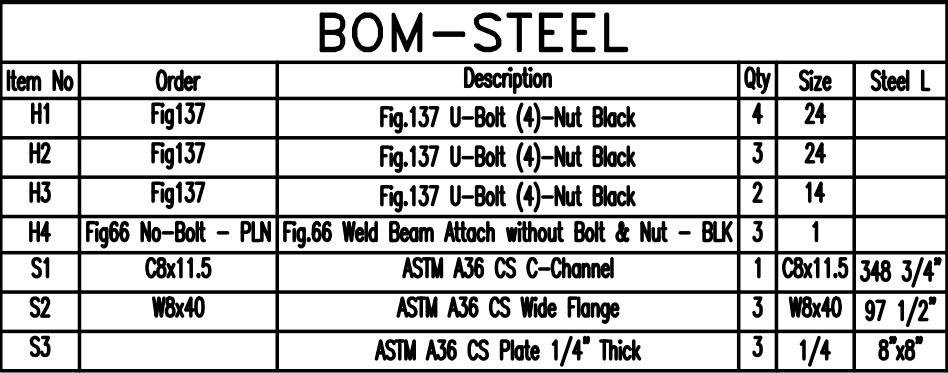
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DRN	JMM	4/19/2021	WUSM RESEARCH BUILDING			QA/QC ACCEPT		FLANGE WEIGHT/ORIENTATION				<input type="checkbox"/>
CHK			NRB CUP					FITTING ORIENTATION				<input type="checkbox"/>
APP			PIPE RACKS					BOLTS/CPLG'S/TH'D TIGHT				<input type="checkbox"/>
JOB NO.	210140		SERVICE NAME					SPOOL IDENTIFICATION				<input type="checkbox"/>
REF.DWG.			CUP LEVEL 02			SPEC.	ASME	X-RAY	HYDRO TEST	PWHT	COMMENTS	
DRAWING NO./TRACKING NO. 210140-A-UPL2-7	QTY.		1	SHT/NO	3 OF 6	NA	NA	NA	NA	NA	MURPHY WPS#	
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												APP

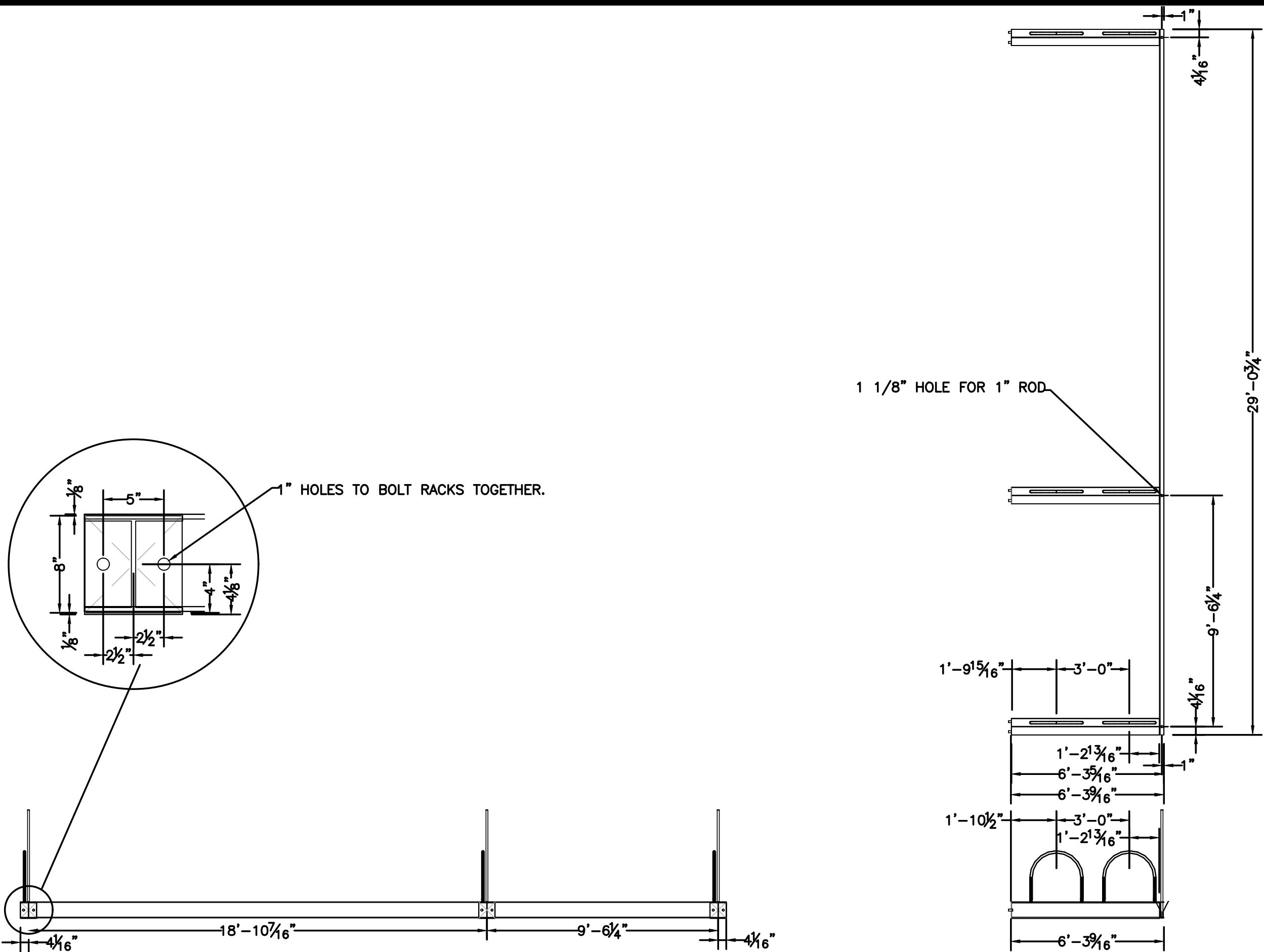
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QA/QC ACCEPT						FLANGE WEIGHT/ORIENTATION				<input type="checkbox"/>
						FITTING ORIENTATION				<input type="checkbox"/>
						BOLTS/CPLG'S/TH'D TIGHT				<input type="checkbox"/>
						SPOOL IDENTIFICATION				<input type="checkbox"/>
SPEC.		ASME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

WUSM RESEARCH BUILDING		NRB CUP PIPE RACKS	
DRN JMM	4/19/2021		
CHK			
APP			
JOB NO.	210140		
SERVICE NAME		CUP LEVEL 02	
REF.DWG.			
DRAWING NO./TRACKING NO.		QTY.	SHT/NO
210140-A-UPL2-7		1	4 of 6
			REV
			0

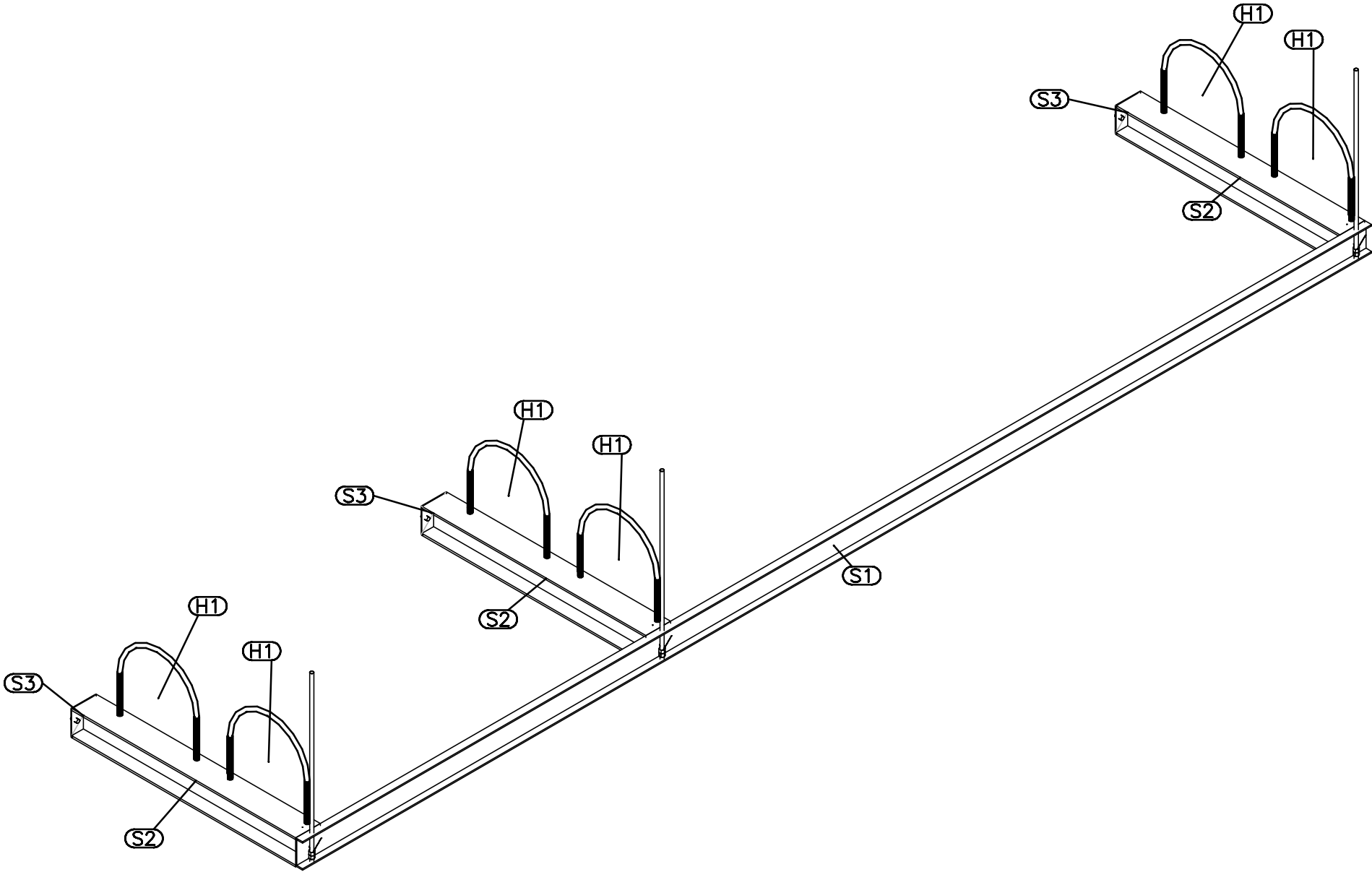


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DRN	JMM	4/19/2021	WUSM RESEARCH BUILDING				QA/QC ACCEPT		FLANGE WEIGHT/ORIENTATION				<input type="checkbox"/>
	CHK		NRB CUP								FITTING ORIENTATION		<input type="checkbox"/>
	APP		PIPE RACKS								BOLTS/CPLG'S/TH'D TIGHT		<input type="checkbox"/>
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REF.DWG.			CUP LEVEL 02				SPEC.	ASME	X-RAY	HYDRO TEST	PWHT	COMMENTS	
DRAWING NO./TRACKING NO.			CUP LEVEL 02				NA	NA	NA	NA	NA	MURPHY WPS#	
210140-A-UPL2-7			QTY.	1	SHT/NO	5 of 6	REV	DATE	DESCRIPTION				DRN
							0						CHK
													APP



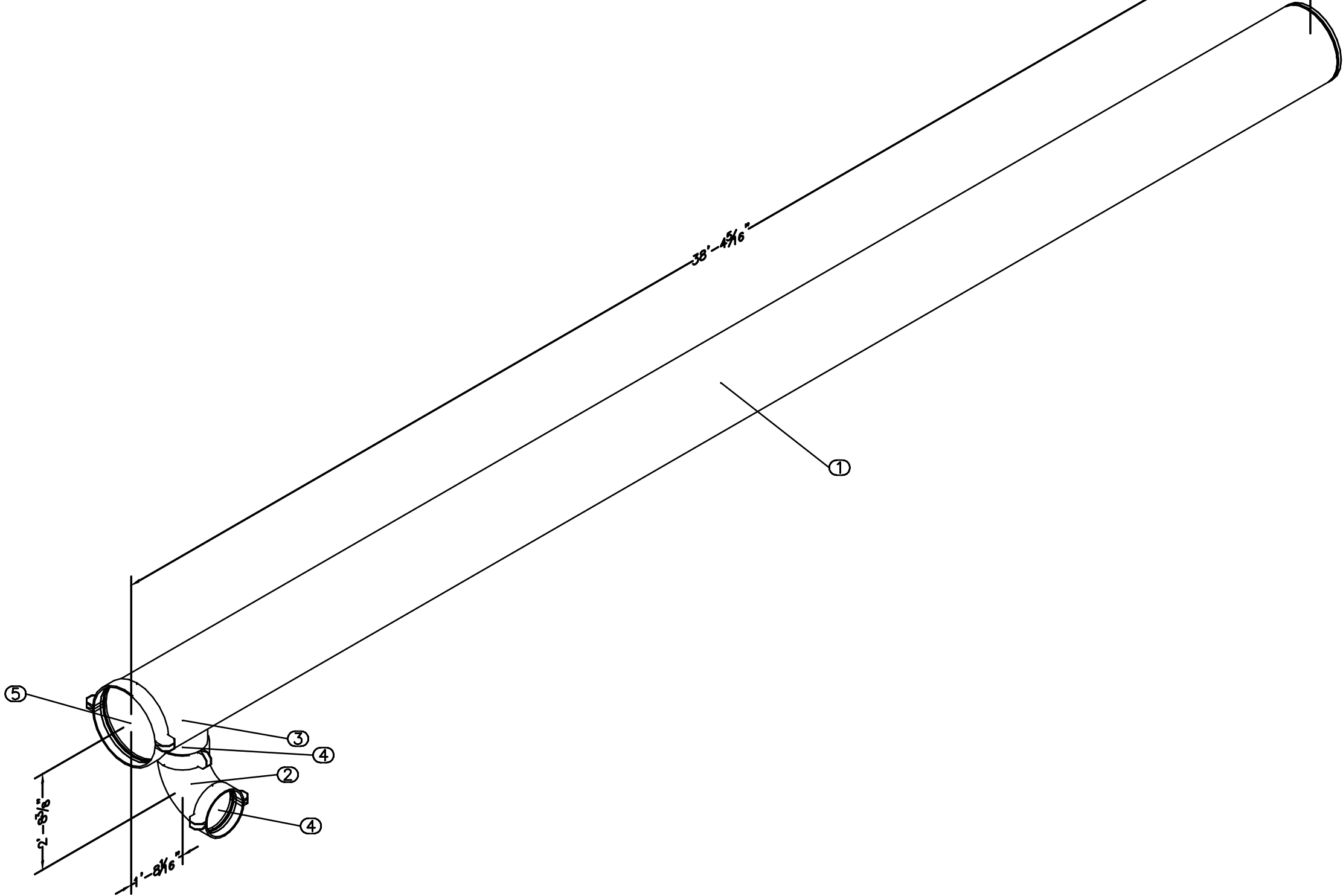
BOM-STEEL					
Item No	Order	Description	Qty	Size	Steel L
H1	Fig137	Fig.137 U-Bolt (4)-Nut Black	6	24	
S1	C8x11.5	ASTM A36 CS C-Channel	1	C8x11.5	348 3/4"
S2	W8x40	ASTM A36 CS Wide Flange	3	W8x40	73"
S3		ASTM A36 CS Plate 1/4" Thick	3	1/4	8"x8"

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DRN JMM	4/19/2021	WUSM RESEARCH BUILDING				QA/QC ACCEPT				FLANGE WEIGHT/ORIENTATION			
CHK		NRB CUP				X-RAY				FITTING ORIENTATION			
APP		PIPE RACKS				ASME				BOLTS/CPLG'S/TH'D TIGHT			
JOB NO.	210140	SERVICE NAME				NA				SPOOL IDENTIFICATION			
REF.DWG.		CUP LEVEL 02				NA				HYDRO TEST			
DRAWING NO./TRACKING NO.	210140-A-UPL2-7	QTY.				1				PWHT			
		SHT/NO				6 of 6				NA			
		REV				0				MURPHY WPS#			
		DESCRIPTION				REV				DATE			
		DRN				CHK				APP			



Murphy-PFFS-SPOOL-BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
3	1	Sch 40 SA-53B CS ERW Pipe Saddle			6"	6.000	24x14
4	2	Style W07 Rigid Coupling					14
5	1	Style W07 Rigid Coupling					24
2	1	No W10 90 Deg El					14
1	1	Std Wt SA-53B CS ERW Pipe GRV	Grooved Pipe End	Grooved End	38'-4 5/16"	460.313	24

DRN

JMM

4/22/2021

CHK

APP

JOB NO.

210140

REF.DWG.

DRAWING NO./TRACKING NO.

210140-A-UPL2-7-1

WUSM RESEARCH BUILDING

NRB CUP

PIPE RACKS

SERVICE NAME

CUP LEVEL 02

QTY.

1

SHT/NO

1

of 1

REV

0

QA/QC ACCEPT

FLANGE WEIGHT/ORIENTATION

☐

FITTING ORIENTATION

☐

BOLTS/CPLG'S/TH'D TIGHT

☐

SPOOL IDENTIFICATION

☐

SPEC.

NA

ASME

NA

X-RAY

NA

HYDRO TEST

NA

DATE

REV

0

COMMENTS

PWHT

NA

MURPHY WPS#

DESCRIPTION

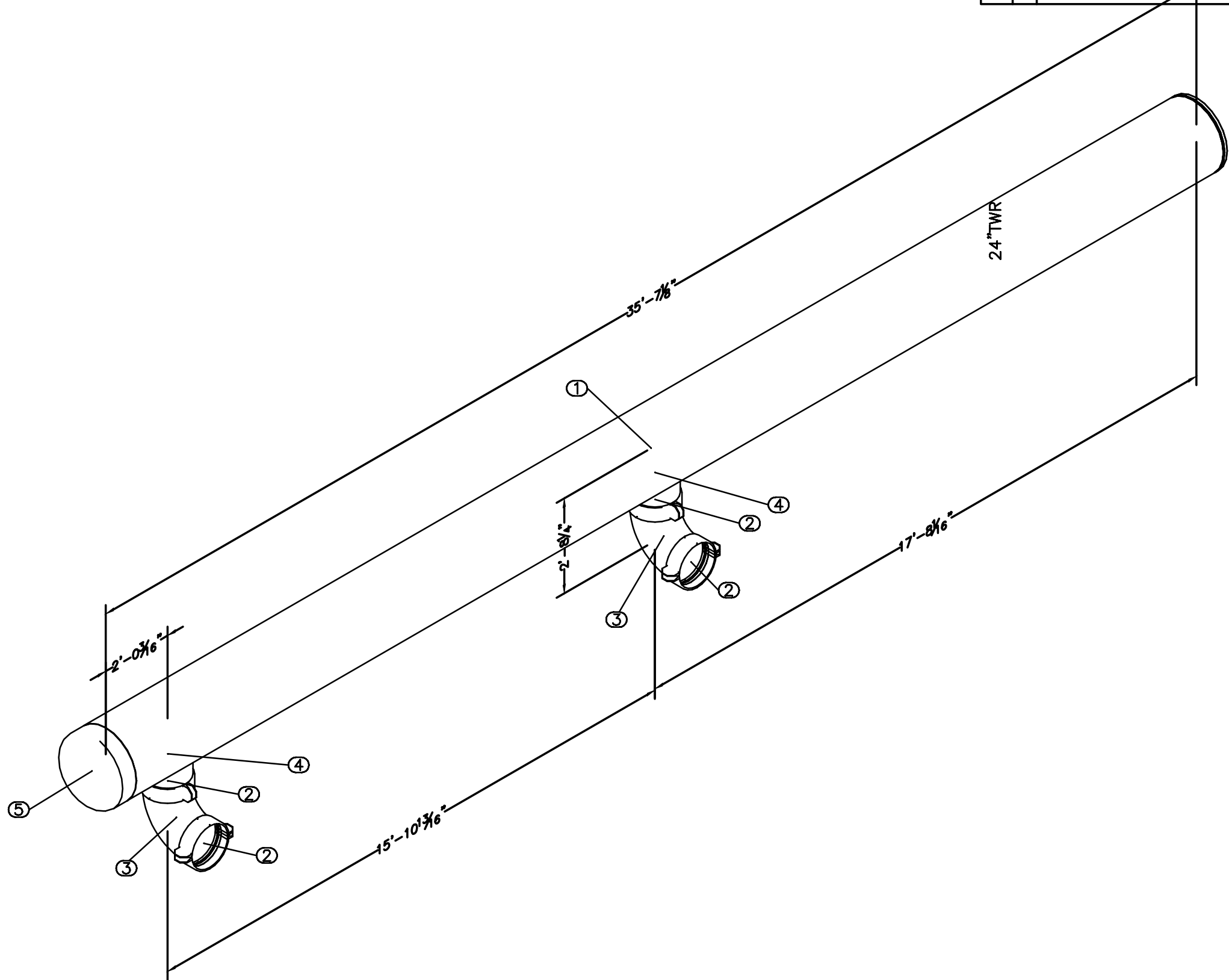
DRN

CHK

APP

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Murphy-PFFS-SPOOL-BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
4	2	Sch 40 SA-53B CS ERW Pipe Saddle			6"	6.000	24x14
2	4	Style W07 Rigid Coupling					14
5	1	Std Wt SA234 WPB CS BW Cap					24
3	2	No W10 90 Deg El					14
1	1	Std Wt SA-53B CS ERW Pipe GRV	Grooved Pipe End	BEV	35'-7 1/8"	427.128	24

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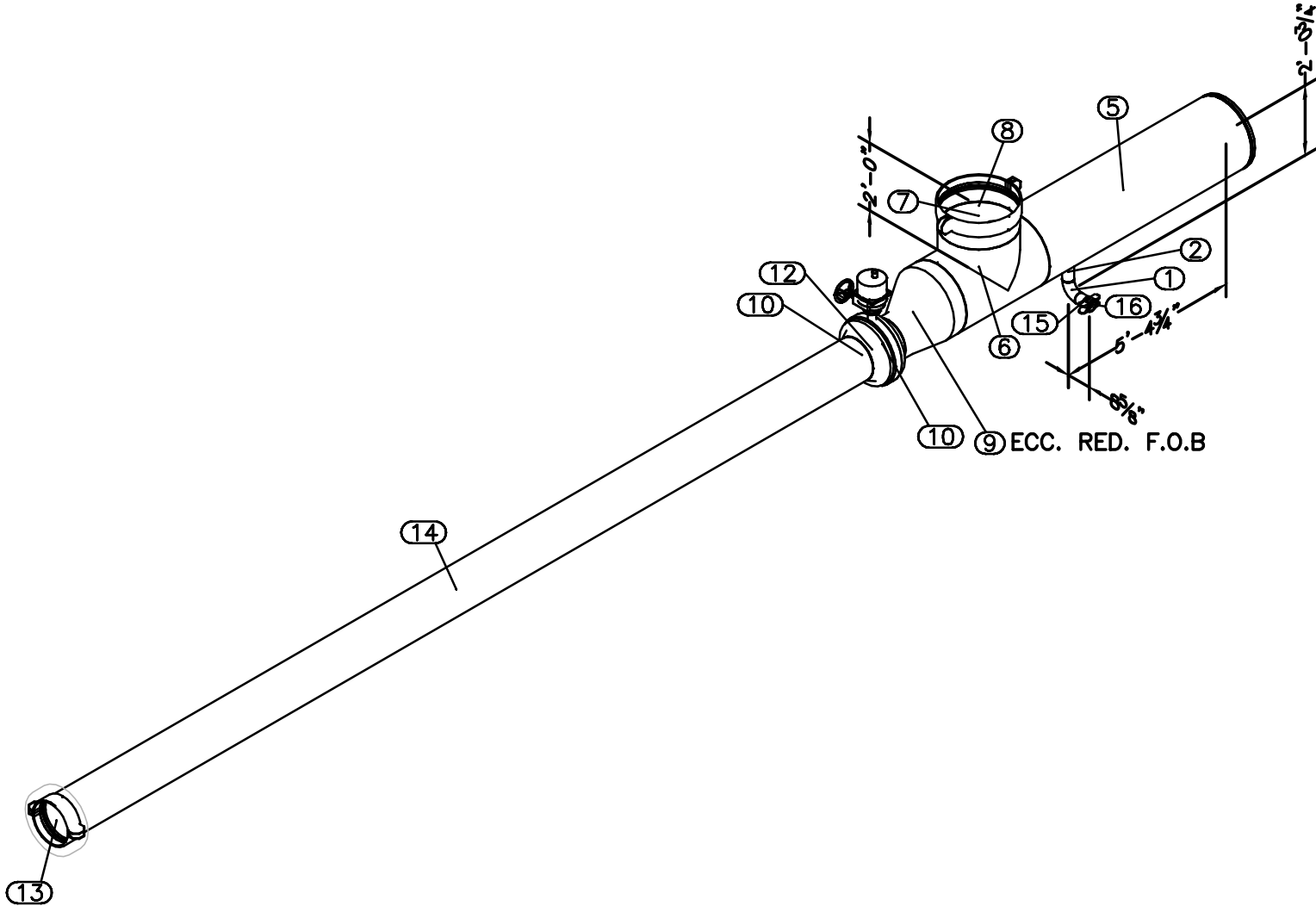
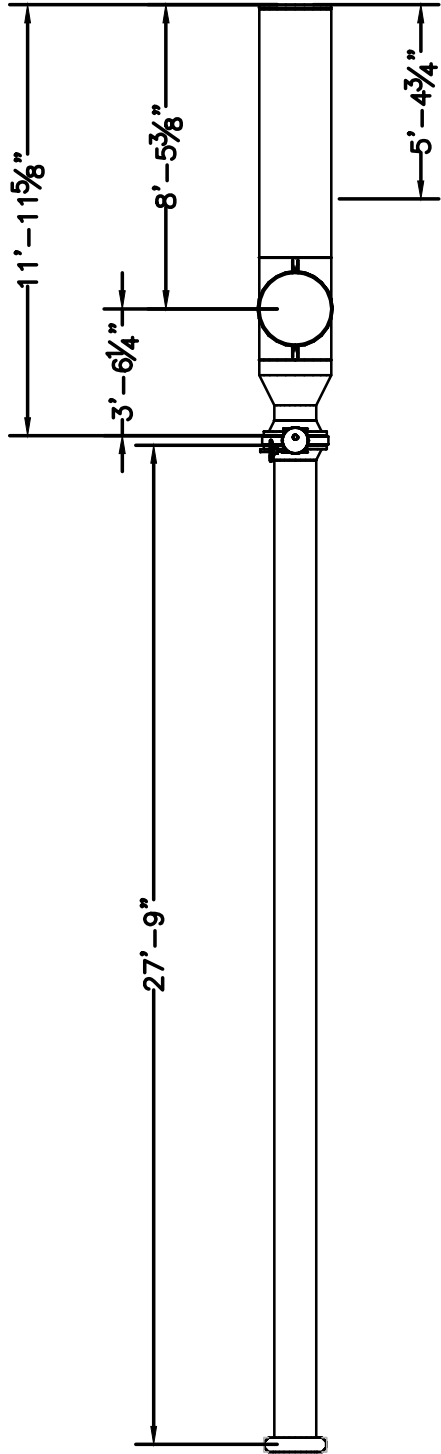
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<input type="checkbox"/>	FLANGE WEIGHT/ORIENTATION
<input type="checkbox"/>	FITTING ORIENTATION
<input type="checkbox"/>	BOLTS/CPLG'S/TH'D TIGHT
<input type="checkbox"/>	SPOOL IDENTIFICATION

QA/QC ACCEPT		HYDRO TEST		COMMENTS	
SPEC.	ASME	X-RAY	PWHT		
NA	NA	NA	NA	MURPHY WPS#	
0					
REV	DATE	DESCRIPTION		DRN	CHK APP

DRN	JMM	4/22/2021	WUSM RESEARCH BUILDING		
CHK			NRB CUP		
APP			PIPE RACKS		
JOB NO.	210140	SERVICE NAME	CUP LEVEL 02		
REF.DWG.			QTY.	SHT/NO	REV
DRAWING NO./TRACKING NO.		210140-A-UPL2-7-2	1	1 of 1	0





## Murphy-PFFS-SPOOL-BOM

Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
6	1	Std Wt SA234 WPB CS BW TEE					24
2	1	Sch 40 SA-53B CS ERW Pipe Saddle			8"	8.000	24x3
10	2	150lb RF Sch 40 Bore SA105 CS WN Flg					14
9	1	Std Wt SA234 WPB CS BW ECC RED					24x14
16	1	Style 107N QuickVic EHP Pnt Rigid Cpl					3
13	1	Style W07 Rigid Coupling					14
8	1	Style W07 Rigid Coupling					24
1	1	Std Wt SA234 WPB CS BW LR 90 Deg El					3
14	1	Std Wt SA-53B CS ERW Pipe PE	Grooved End	BEV	27'-4"	328.000	14
15	1	Sch 40 SA-53B CS ERW Pipe PE	BEV	Grooved End	4"	4.000	3
5	1	Std Wt SA-53B CS ERW Pipe PE	BEV	Grooved End	7'-0 1/4"	84.250	24
7	1	Std Wt SA-53B CS ERW Pipe PE	BEV	Grooved End	6 7/8"	6.875	24
12	1	Valve-Butterfly-2_Way-Belimo-F6_SY4_S Y5_SY6-Non_Spring_14.00 in_F6350HD+SY5-120MFT					14

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☐ FLANGE WEIGHT/ORIENTATION  
☐ FITTING ORIENTATION  
☐ BOLTS/CPLG'S/TH'D TIGHT  
☐ SPOOL IDENTIFICATION

QA/QC ACCEPT

SPEC.

NA

0

ASME

NA

REV

X-RAY

NA

DATE

HYDRO TEST

NA

PWHT

NA

COMMENTS

MURPHY WPS#

DESCRIPTION

DRN

CHK

APP

WUSM RESEARCH BUILDING

NRB CUP

PIPE RACKS

4/22/2021

210140

REF.DWG.

DRAWING NO./TRACKING NO.

210140-A-UPL2-7-3

1

1 of 1

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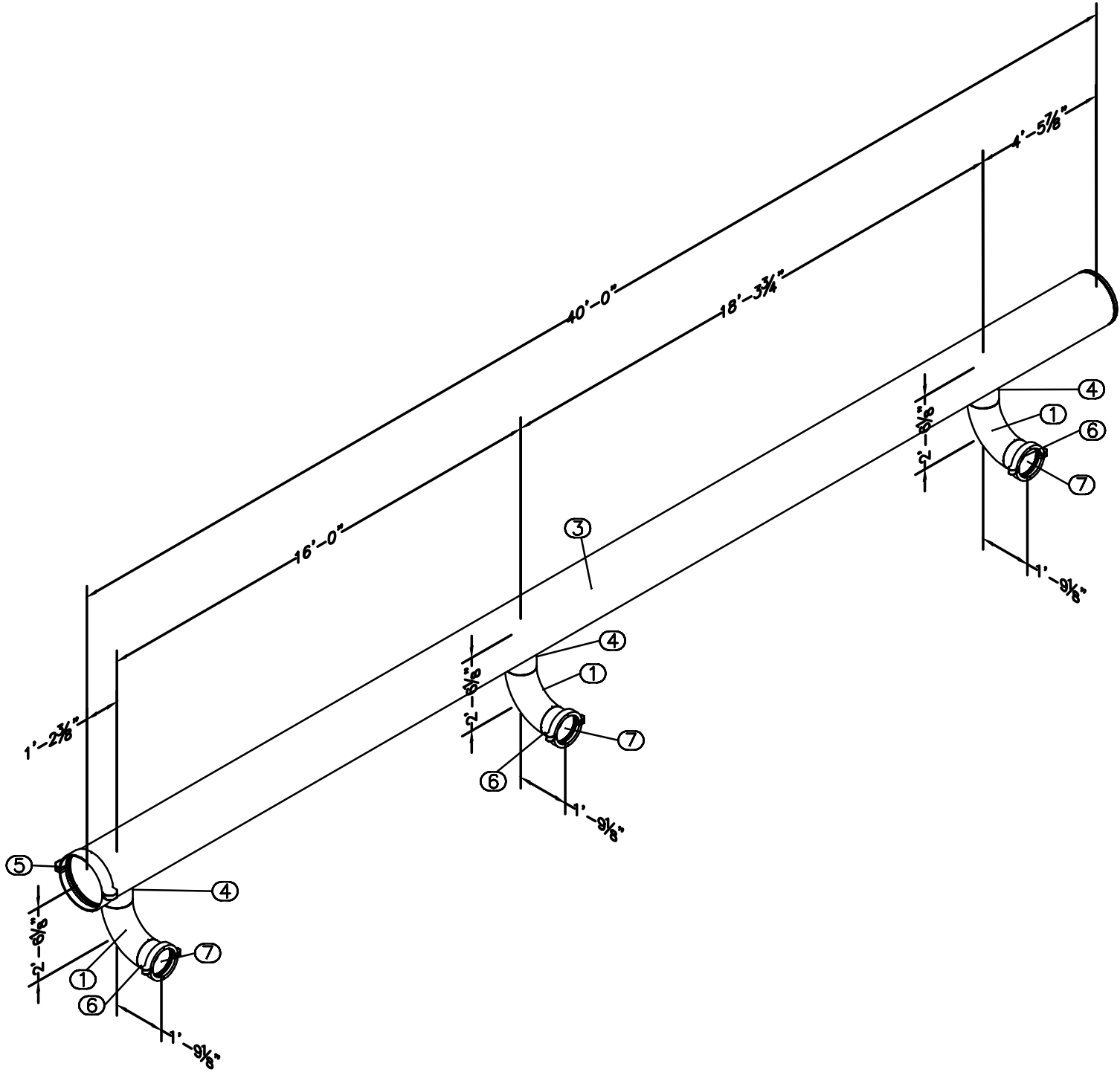
SERVICE NAME

CUP LEVEL 02

QTY.

SHT/NO

REV



# Murphy-PFFS-SPOOL-BOM

Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
4	2	Sch 40 SA-53B CS ERW Pipe Saddle			5"	5.000	20x10
7	3	Style 07 Zero-Flex Cplg					10
5	1	Style W07 Rigid Coupling					20
1	3	Std Wt SA234 WPB CS BW LR 90 Deg El					10
6	3	Sch 40 SA-53B CS ERW Pipe PE	BEV	Grooved End	6"	6.000	10
3	1	Std Wt SA-53B CS ERW Pipe GRV	Grooved Pipe End	Grooved Pipe End	40'-0"	480.000	20

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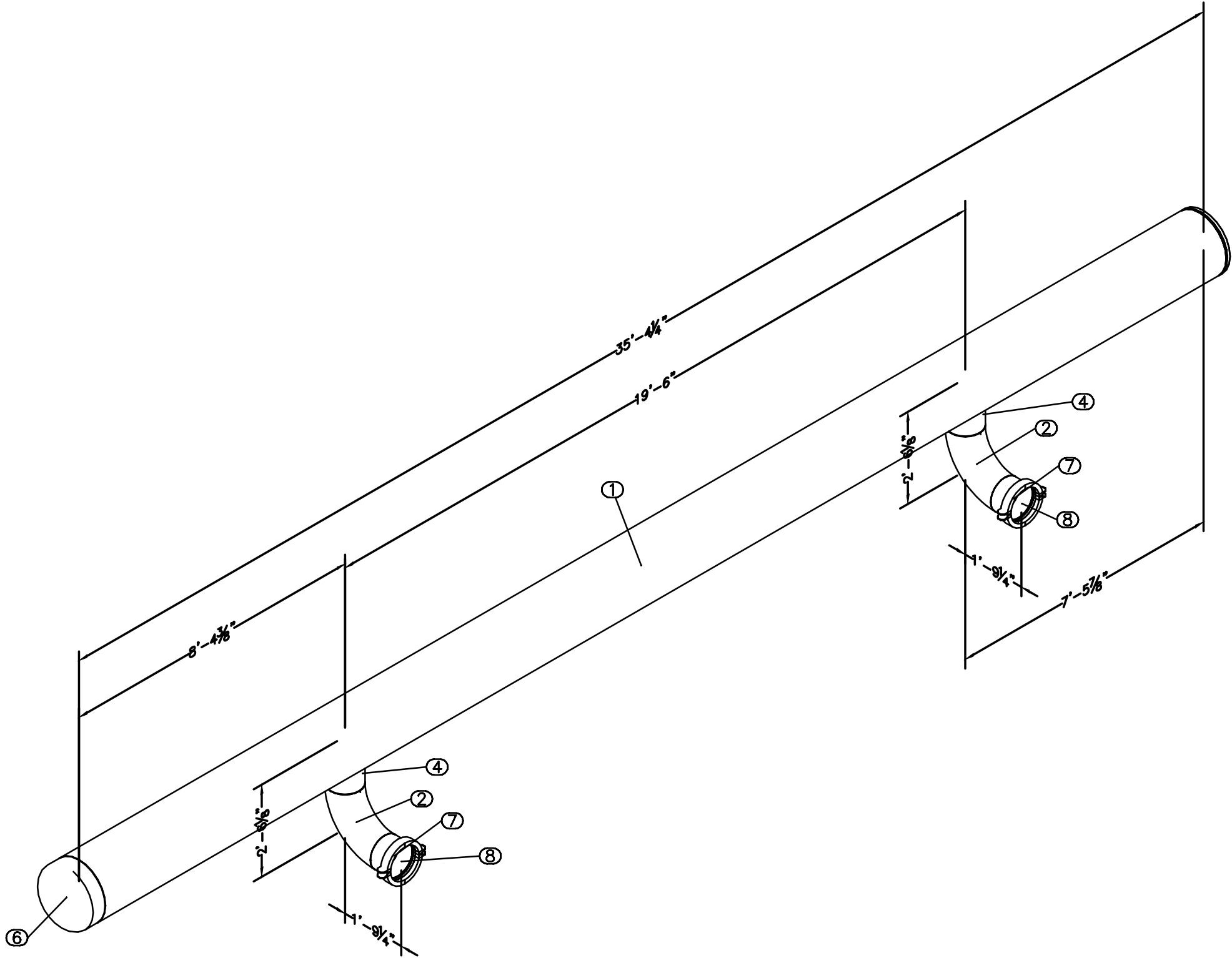
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314-997-6600 phone  
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<input type="checkbox"/>	FITTING ORIENTATION
<input type="checkbox"/>	BOLTS/CPLG'S/TH'D TIGHT
<input type="checkbox"/>	SPOOL IDENTIFICATION

QA/QC ACCEPT	ASME	X-RAY	HYDRO TEST	COMMENTS
	NA	NA	NA	
	NA	NA	NA	MURPHY WPS#

0	REV	DATE	DESCRIPTION	DRN	CHK	APP

DRN	JMM	4/22/2021	WUSM RESEARCH BUILDING
CHK			NRB CUP
APP			PIPE RACKS
JOB NO.	210140	SERVICE NAME	CUP LEVEL 02
REF.DWG.		QTY.	1
DRAWING NO./TRACKING NO.	210140-A-UPL2-7-4	SHT/NO	1 of 1
		REV	0



Murphy–PFFS–SPOOL–BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
4	2	Sch 40 SA-53B CS ERW Pipe Saddle			5"	5.000	20x10
8	2	Style 07 Zero-Flex Cplg					10
6	1	Std Wt SA234 WPB CS BW Cap					20
2	2	Std Wt SA234 WPB CS BW LR 90 Deg El					10
1	1	Std Wt SA-53B CS ERW Pipe GRV	Grooved End	BEV	35'-4 1/4"	424.250	20
7	2	Sch 40 SA-53B CS ERW Pipe PE	Grooved End	BEV	6 1/8"	6.125	10

DRN

JMM

4/22/2021

CHK

APP

JOB NO.

210140

REF.DWG.

DRAWING NO./TRACKING NO.

210140-A-UPL2-7-5

1

QTY.

1

1 of 1

REV

0

WUSM RESEARCH BUILDING

NRB CUP

PIPE RACKS

SERVICE NAME

CUP LEVEL 02

QTY.

1

1 of 1

REV

0

QA/QC ACCEPT

FLANGE WEIGHT/ORIENTATION

FITTING ORIENTATION

BOLTS/CPLG'S/TH'D TIGHT

SPOOL IDENTIFICATION

SPEC.

NA

0

REV

DATE

DESCRIPTION

DRN

CHK

APP

ASME

NA

NA

HYDRO TEST

NA

NA

PWHT

NA

COMMENTS

MURPHY WPS#

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