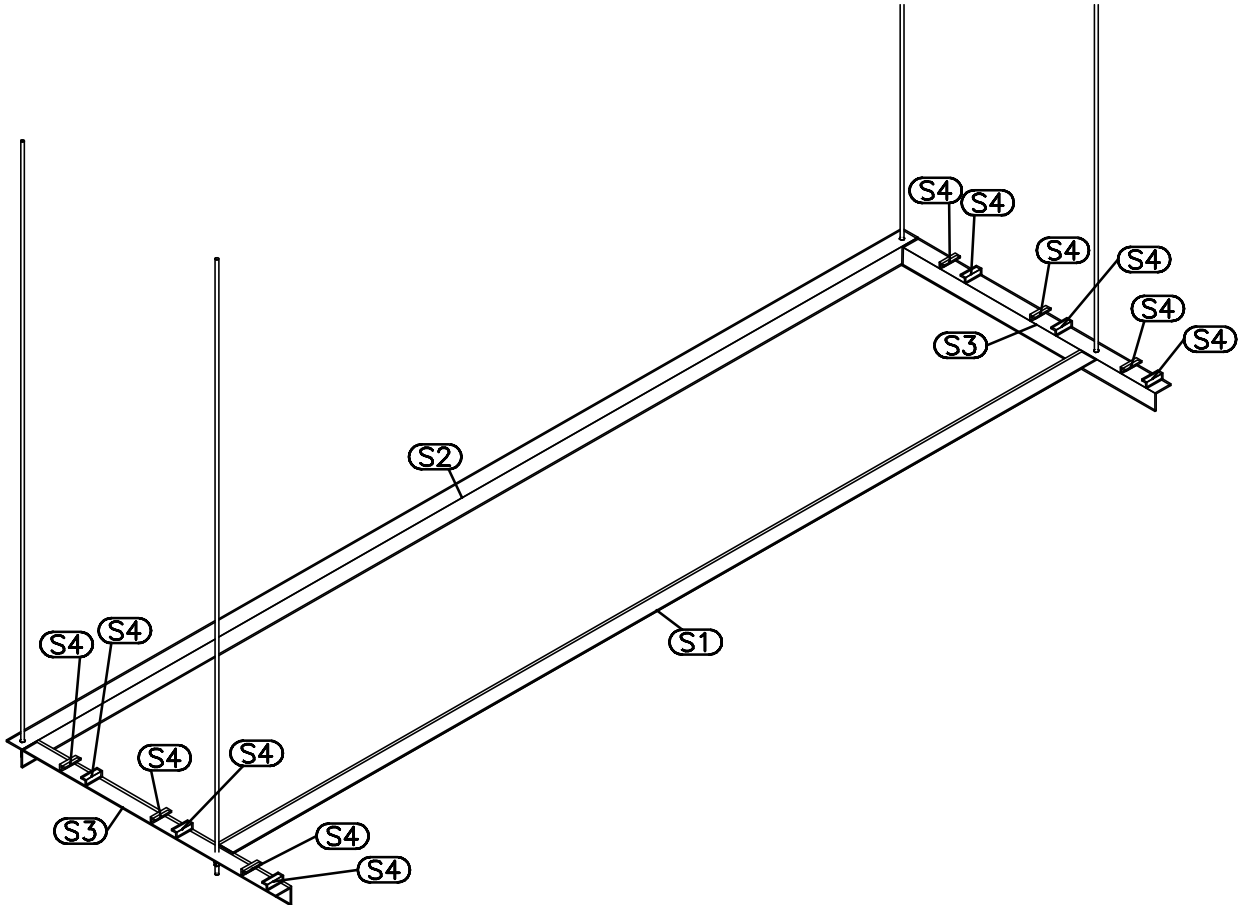
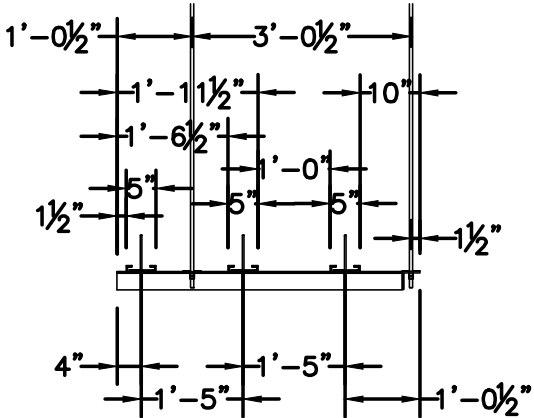
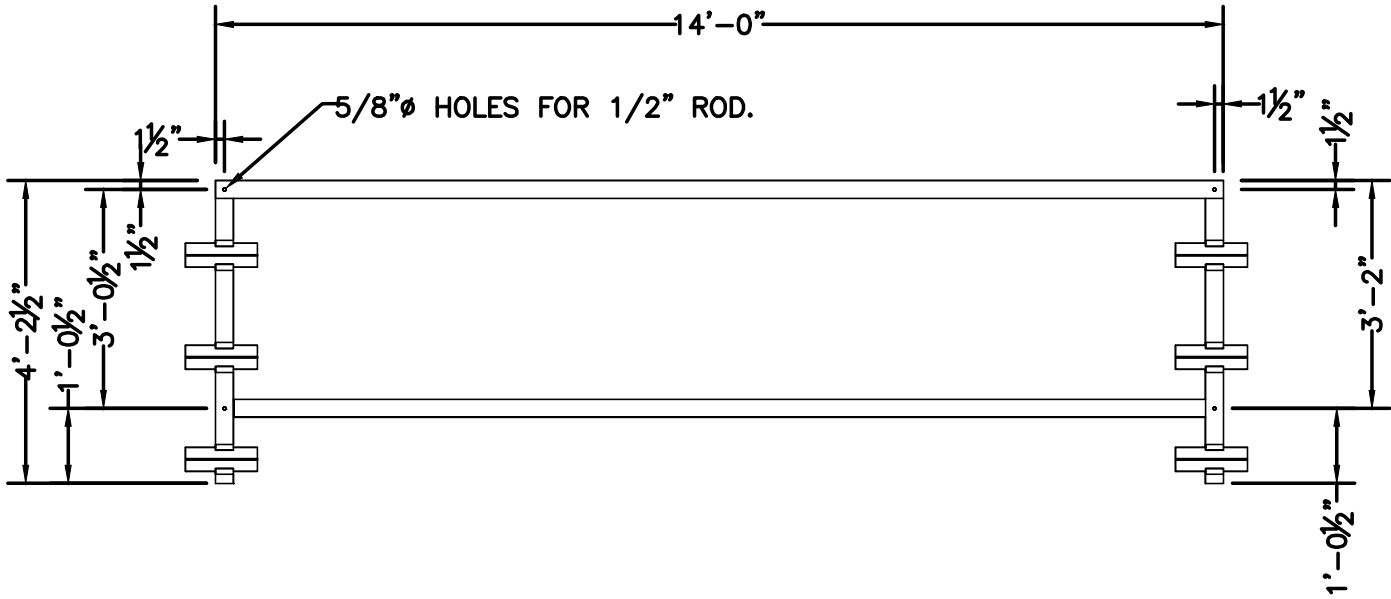


MURPHY
CONSTRUCTORS • ENGINEERS MECHANICAL • INDUSTRIAL

1233 N. Price Rd.
St. Louis, MO 63132-2303
314-997-6600 phone
BIMCAD@murphy-stl.com

DRN JMM	5/5/2021	WUSM RESEARCH BUILDING				QA/QC ACCEPT		FLANGE WEIGHT/ORIENTATION				<input type="checkbox"/>
		NRB CUP						FITTING ORIENTATION				<input type="checkbox"/>
		PIPE RACKS						BOLTS/CPLG'S/TH'D TIGHT				<input type="checkbox"/>
CHK		SERVICE NAME						SPOOL IDENTIFICATION				<input type="checkbox"/>
APP		CUP LEVEL 02				SPEC.	ASME	X-RAY	HYDRO TEST	PWHT	COMMENTS	
JOB NO.	210140					NA	NA	NA	NA	NA	MURPHY WPS#	
REF.DWG.						0						
DRAWING NO./TRACKING NO.		QTY.		SHT/NO		REV	DATE	DESCRIPTION		DRN	CHK	APP
210140-UPL2-2		1		1 of 2		0						



BOM-STEEL

Item No	Order	Description	Qty	Size	Steel L
S1	L3x3x1/4	ASTM A36 CS Equal Angle	1	L3x3x1/4	162"
S2	L3x3x1/4	ASTM A36 CS Equal Angle	1	L3x3x1/4	168"
S3	L3x3x1/4	ASTM A36 CS Equal Angle	2	L3x3x1/4	47 1/2"
S4	L1x1x1/4	ASTM A36 CS Equal Angle	12	L1x1x1/4	3"

MURPHY
SINCE 1907

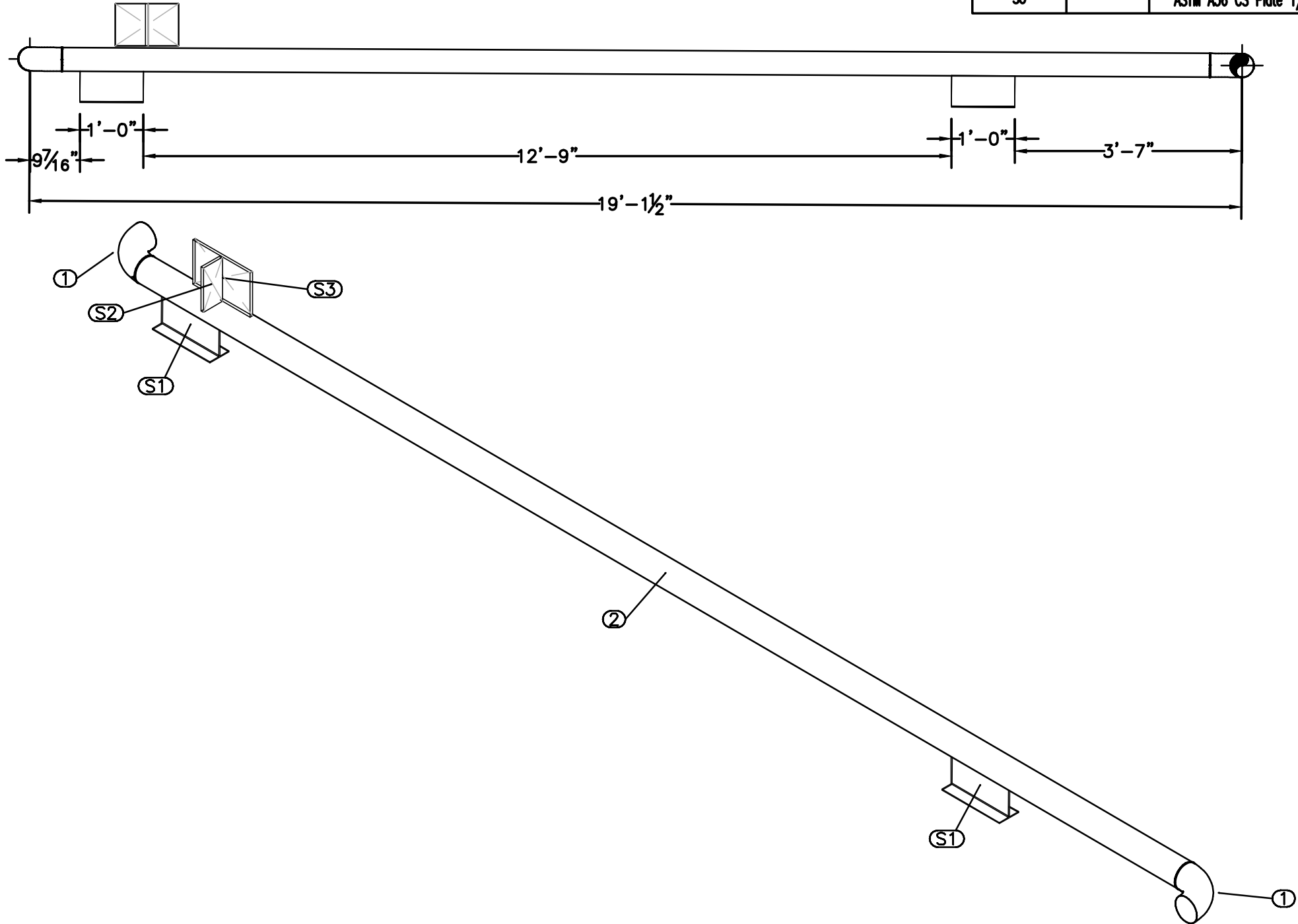
CONSTRUCTORS • ENGINEERS MECHANICAL • INDUSTRIAL

1233 N. Price Rd.
St. Louis, MO 63132-2303
314-997-6600 phone
BIMCAD@murphy-stl.com

<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/CPLG'S/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		SPEC.		ASME		X-RAY		HYDRO TEST		PWHT		COMMENTS	
		NA		NA		NA		NA		NA		MURPHY WPS#	
0		REV		DATE		DESCRIPTION		DRN		CHK		APP	

DRN JMM		5/5/2021		WUSM RESEARCH BUILDING		SERVICE NAME	
CHK				NRB CUP		CUP LEVEL 02	
APP				PIPE RACKS			
JOB NO.		210140		QTY.		SHT/NO	
REF.DWG.				1		2 OF 2	
DRAWING NO./TRACKING NO.		210140-UPL2-2		REV		0	



Murphy-PFFS-SPOOL-BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	2	XH SA234 WPB CS BW LR 90 Deg El					4
2	1	XH SA-53B CS SMLS Pipe	BEV	BEV	18'-1 1/4"	217.235	4

BOM-STEEL					
Item No	Order	Description	Qty	Size	Steel L
S1	WT6x7		2		12"
S2		ASTM A36 CS Plate 1/2" Thick	1	12x8x1/2	0"
S3		ASTM A36 CS Plate 1/2" Thick	1	8x4x1/2	0"

MURPHY
SINCE 1907

CONSTRUCTORS • ENGINEERS MECHANICAL • INDUSTRIAL

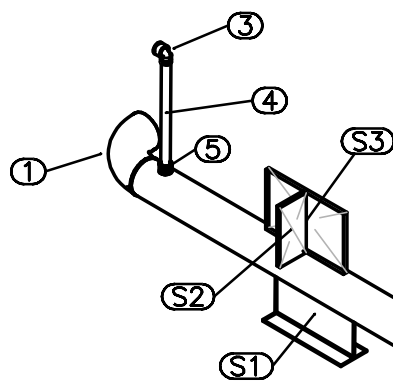
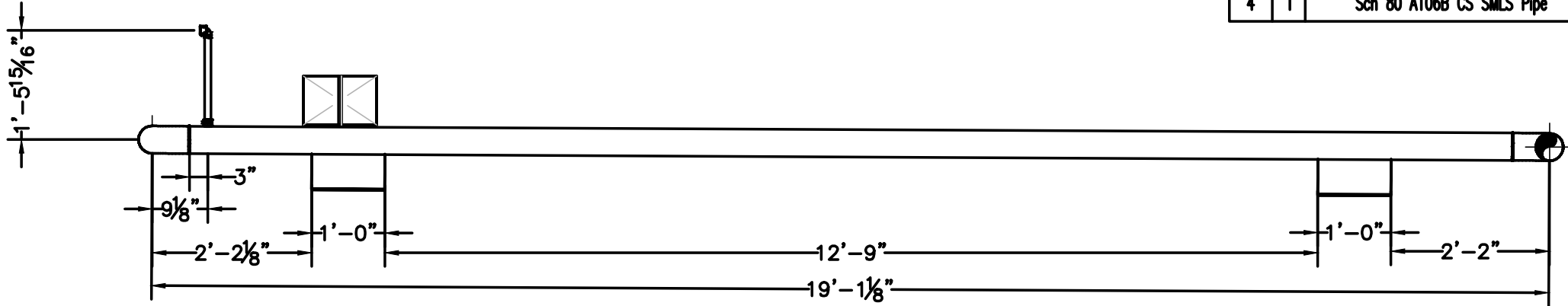
1233 N. Price Rd.
St. Louis, MO 63132-2303
314-997-6600 phone
BIMCAD@murphy-stl.com

<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	ASME	X-RAY	HYDRO TEST	PWHT	COMMENTS
	NA	NA	NA	NA	MURPHY WPS#

0	REV	DATE	DESCRIPTION	DRN	CHK	APP

DRN JMM	5/7/2021	WUSM RESEARCH BUILDING			
CHK		NRB CUP			
APP		PIPE RACKS			
JOB NO.	210140	SERVICE NAME	210140-UPL2-2	QTY.	1
REF.DWG.				SHT/NO	1 of 1
DRAWING NO./TRACKING NO.	210140-UPL2-2-01			REV	0



Murphy-PFFS-SPOOL-BOM

Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	2	XH SA234 WPB CS BW LR 90 Deg El					4
3	1	3M A105 FS SW 90 Deg El					3/4
5	1	3000# FS Soc-O-Let			1 1/16"	1.063	3/4x4
2	1	XH SA-53B CS SMLS Pipe	BEV	BEV	18'-0 7/8"	216.894	4
4	1	Sch 80 A106B CS SMLS Pipe	SW	SW	1'-2 3/16"	14.203	3/4

BOM-STEEL

Item No	Order	Description	Qty	Size	Steel L
S1	WT6x7		2		12"
S2		ASTM A36 CS Plate 1/2" Thick	1	12x8x1/2	0"
S3		ASTM A36 CS Plate 1/2" Thick	1	8x4x1/2	0"

MURPHY
SINCE 1907

CONSTRUCTORS • ENGINEERS MECHANICAL • INDUSTRIAL

1233 N. Price Rd.
St. Louis, MO 63132-2303
314-997-6600 phone
BIMCAD@murphy-stl.com

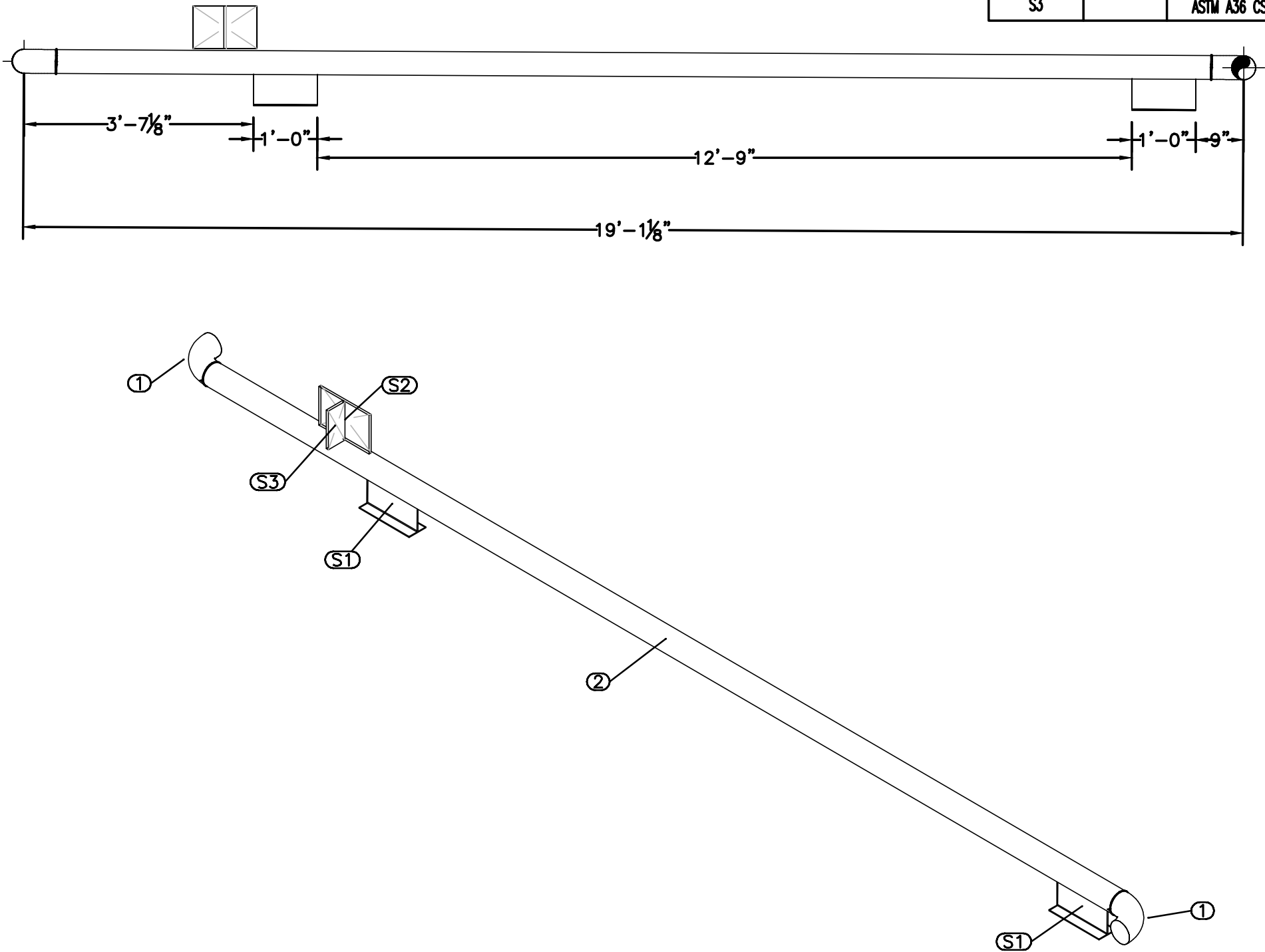
<input type="checkbox"/>	FLANGE WEIGHT/ORIENTATION
<input type="checkbox"/>	FITTING ORIENTATION
<input type="checkbox"/>	BOLTS/CPLG'S/TH'D TIGHT
<input type="checkbox"/>	SPOOL IDENTIFICATION

QA/QC ACCEPT	HYDRO TEST	COMMENTS
	NA	MURPHY WPS#

SPEC.	ASME	X-RAY	DATE	REV
NA	NA	NA		0

DESCRIPTION	DRN	CHK	APP

WUSM RESEARCH BUILDING	5/7/2021
NRB CUP	
PIPE RACKS	
SERVICE NAME	210140-UPL2-2
REF.DWG.	
DRAWING NO./TRACKING NO.	QTY. 1 SHT/NO 1 OF 1 REV 0
210140-UPL2-2-02	



Murphy-PFFS-SPOOL-BOM							
Mark	Qty	Description	End 1	End 2	Lft	LDec	Size
1	2	XH SA234 WPB CS BW LR 90 Deg El					4
2	1	XH SA-53B CS SMLS Pipe	BEV	BEV	18'-0 7/8"	216.887	4

BOM-STEEL					
Item No	Order	Description	Qty	Size	Steel L
S1	WT6x7		2		12"
S2		ASTM A36 CS Plate 1/2" Thick	1	12x8x1/2	0"
S3		ASTM A36 CS Plate 1/2" Thick	1	8x4x1/2	0"

MURPHY
SINCE 1907

CONSTRUCTORS • ENGINEERS MECHANICAL • INDUSTRIAL

1233 N. Price Rd.
St. Louis, MO 63132-2303
314-997-6600 phone
BIMCAD@murphy-stl.com

<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		PWHT		COMMENTS	
SPEC.	ASME	X-RAY	NA	NA	NA	MURPHY WPS#	
NA	NA	NA	NA	NA	NA		
0	REV	DATE	DESCRIPTION		DRN	CHK	APP

DRN JMM	5/7/2021	WUSM RESEARCH BUILDING			
CHK		NRB CUP			
APP		PIPE RACKS			
JOB NO.	210140	SERVICE NAME	210140-UPL2-2		
REF.DWG.		QTY.	1	SHT/NO	1 of 1
DRAWING NO./TRACKING NO.	210140-UPL2-2-03	REV	0		