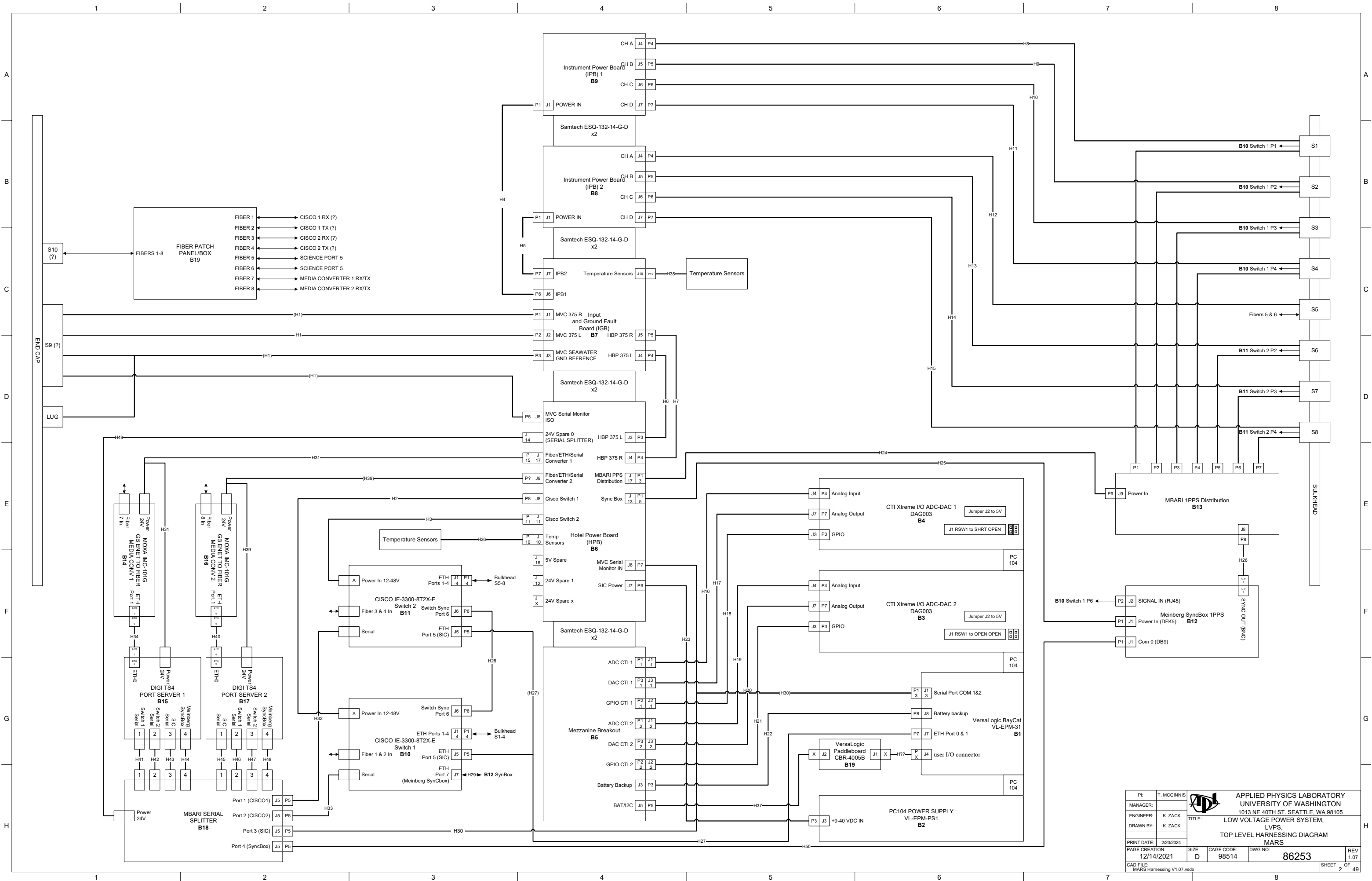


REF DESIG	DESCRIPTION	PAGE		
A1H1	MVC-LVPS Bulkhead Connector	3-4		
A1H2	Cisco Switch 1 Power	5		
A1H3	Cisco Switch 2 Power	6		
A1H4	IPB 1 375V In	7		
A1H5	IPB 2 375V In	8		
A1H6	HPB 375L In	9		
A1H7	HPB 375R In	10		
A1H8	IPS 1 CHA 375V Out ODI	11		
A1H9	IPS 1 CHB 375V Out ODI	12		
A1H10	IPS 1 CHC 375V Out ODI	13		
A1H11	IPS 1 CHD 375V Out ODI	14		
A1H12	IPS 2 CHA 375V Out ODI	15		
A1H13	IPS 2 CHB 375V Out ODI	16		
A1H14	IPS 2 CHC 375V Out ODI	17		UW/APL - POWER
A1H15	IPS 2 CHD 375V Out ODI	18		MBARI - DATA
A1H16	CTI ADC I/O 1	19-20		
A1H17	CTI DAC I/O 1	21		
A1H18	CTI GPIO I/O 1	22		
A1H19	CTI ADC I/O 2	23-24		
A1H20	CTI DAC I/O 2	25		
A1H21	CTI GPIO I/O 2	26		
A1H22	BAYCAT BATTERY BACKUP	27		
A1H23	PSU POWER	28		
A1H24	1PPS DISTRIBUTION POWER	29		
A1H25	MEINBERG SYNC 1PPS POWER	30		
A1H26	1PPS SIGNAL	31		
A1H27	SIC ETHERNET	32		
A1H28	SWITCH 1-2 BRIDGE	33		
A1H29	MEINBERG SYNC ETHERNET	34		
A1H30	SIC MVC CONTROLLER CONSOLE	35		
A1H31	MEDIA CONV - PORT SERVER 1 POWER	36		
A1H32	CISCO 2 CONSOLE	37		
A1H33	CISCO 1 CONSOLE	38		
A1H34	MEDIA CONV - PORT SERVER 1 DATA	39		
A1H35	IGB TEMP SENSORS	40		
A1H36	HPB TEMP SENSORS	41-42		
A1H37	PADDLEBOARD-BOB I2C	43		
A1H38	SIC-PADDLEBOARD I2C	44		
A1H39	MEDIA CONV - PORT SERVER 2 POWER	45		
A1H40	MEDIA CONV - PORT SERVER 2 DATA	46		
A1H41	PORT SERVER 1 PORT 1 - SERIAL SPLITTE	47		
A1H42	PORT SERVER 1 PORT 2 - SERIAL SPLITTE	47		
A1H43	PORT SERVER 1 PORT 3 - SERIAL SPLITTE	47		
A1H44	PORT SERVER 1 PORT 4 - SERIAL SPLITTE	47		
A1H45	PORT SERVER 2 PORT 1 - SERIAL SPLITTE	47		
A1H46	PORT SERVER 2 PORT 2 - SERIAL SPLITTE	47		
A1H47	PORT SERVER 2 PORT 3 - SERIAL SPLITTE	47		
A1H48	PORT SERVER 2 PORT 4 - SERIAL SPLITTE	47		
A1H49	SERIAL SPLITTER POWER	48		
A1H50	MEINBERG CONSOLE	49		

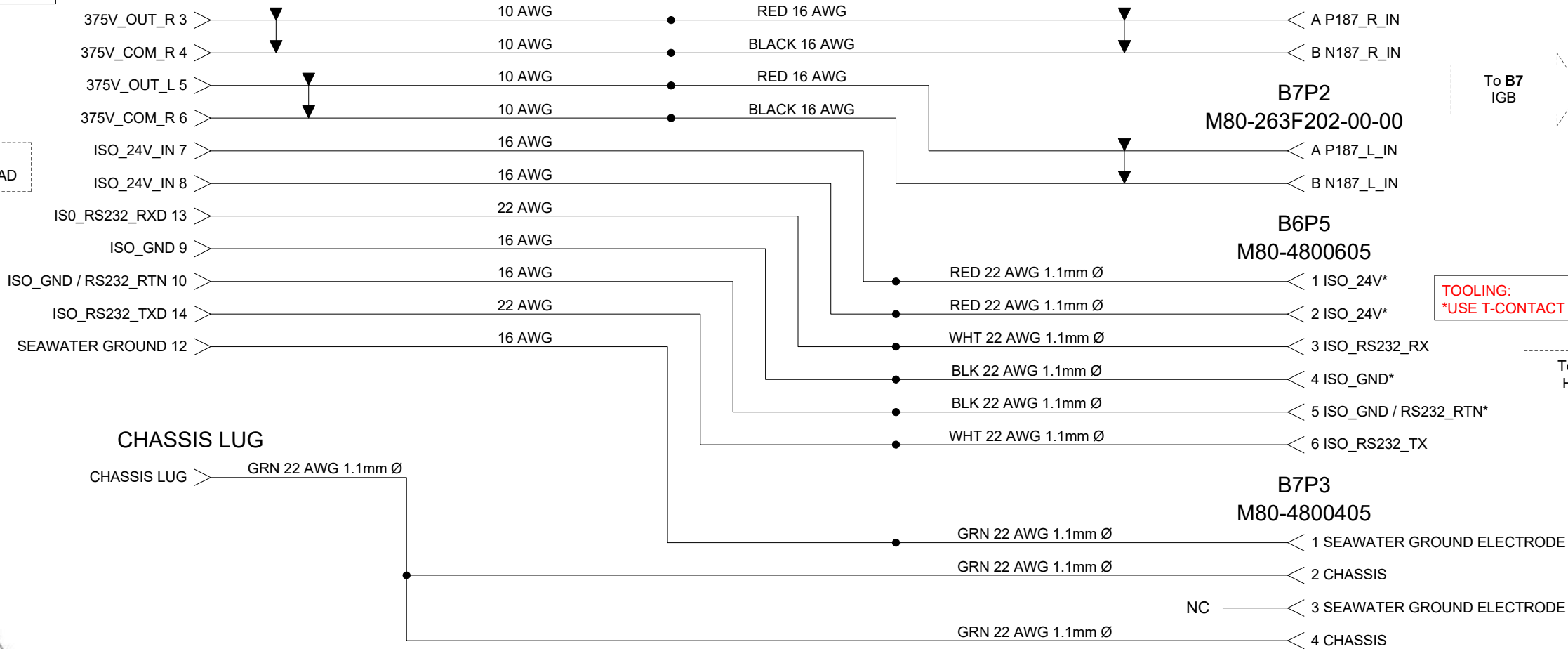
Ref Desig	Component
B1	Baycat CPU
B2	PC104 Powetr Supply
B3	ADC-DAC 2
B4	ADC-DAC 1
B5	BOB
B6	HPB
B7	IGB
B8	IPB 2
B9	IPB 1
B10	CISCO 1
B11	CISCO 2
B12	Meinberg SyncBox
B13	1PPS Distribution
B14	Media Converter 1
B15	Port Server 1
B16	Port Server 2
B17	Media Converter 2
B18	Serial Splitter
B19	I/O Paddleboard

Double click to
open Excel
spreadsheet



WARNING:
CONTACT ORDER
NOT SEQUENTIAL

J1 BULKHEAD
SEACON MINR-84



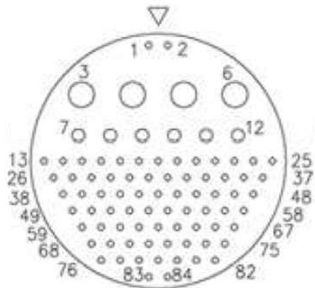
To J1
BULKHEAD

To B7
IGB

TOOLING:
*USE T-CONTACT

To B6
HPB

To B7
IGB



4#10/6#16/74#22 (84 LONG)

PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105			
MANAGER:	-				
ENGINEER:	K. ZACK	TITLE: J1 Bulkhead MVC – LVPS Power and Data MARS			
DRAWN BY:	K. ZACK				
PRINT DATE:	2/20/2024				
PAGE CREATION:	12/14/2021	SIZE:	B	CAGE CODE:	98514
CAD FILE:		DWG NO:		REV	1.01
MARS Harnessing V1.07.vsd		SHEET		3	OF 49

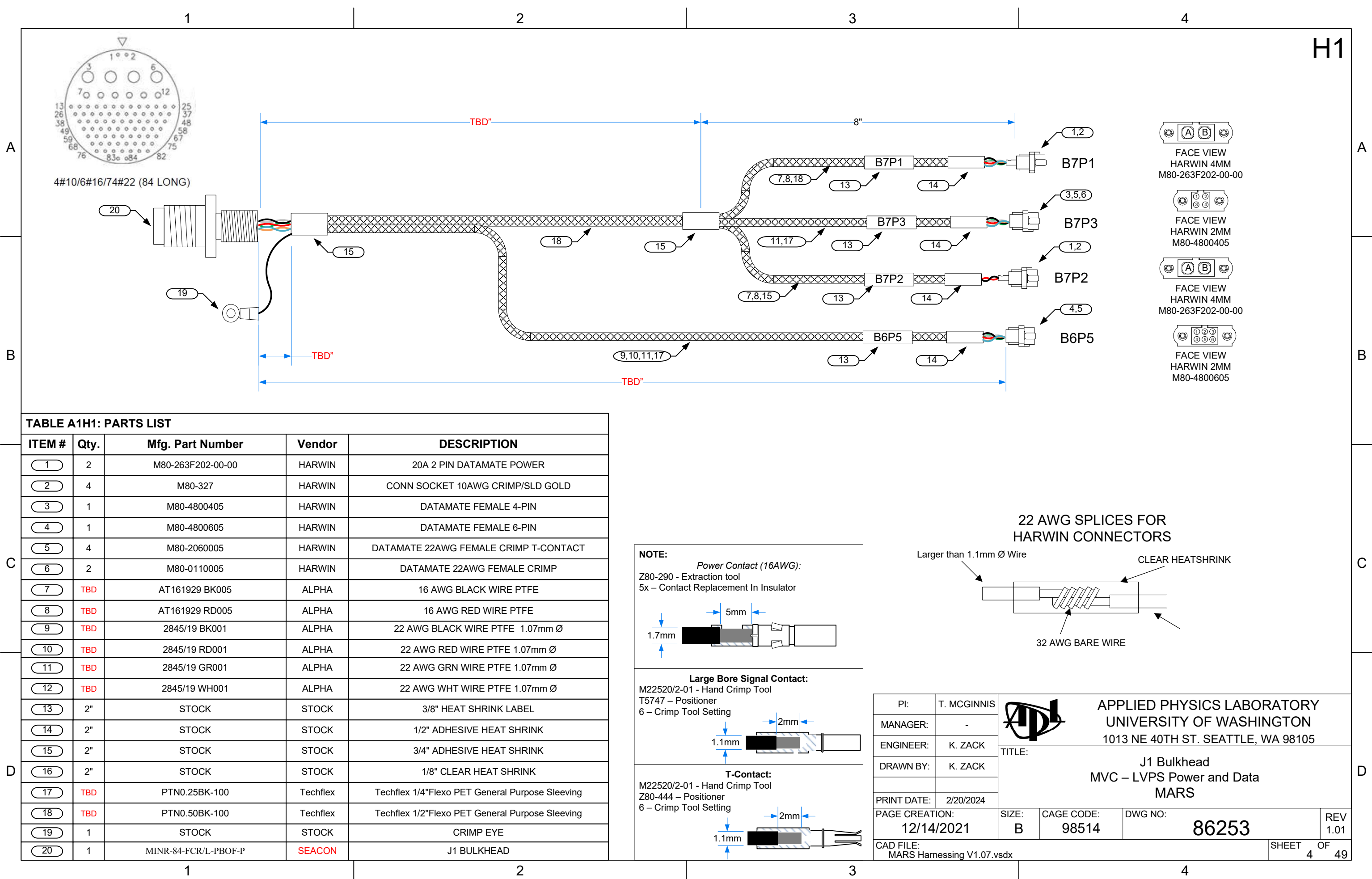
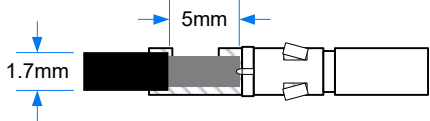


TABLE A1H1: PARTS LIST

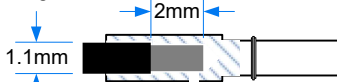
ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	2	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	4	M80-327	HARWIN	CONN SOCKET 10AWG CRIMP/SLD GOLD
3	1	M80-4800405	HARWIN	DATAMATE FEMALE 4-PIN
4	1	M80-4800605	HARWIN	DATAMATE FEMALE 6-PIN
5	4	M80-2060005	HARWIN	DATAMATE 22AWG FEMALE CRIMP T-CONTACT
6	2	M80-0110005	HARWIN	DATAMATE 22AWG FEMALE CRIMP
7	TBD	AT161929 BK005	ALPHA	16 AWG BLACK WIRE PTFE
8	TBD	AT161929 RD005	ALPHA	16 AWG RED WIRE PTFE
9	TBD	2845/19 BK001	ALPHA	22 AWG BLACK WIRE PTFE 1.07mm Ø
10	TBD	2845/19 RD001	ALPHA	22 AWG RED WIRE PTFE 1.07mm Ø
11	TBD	2845/19 GR001	ALPHA	22 AWG GRN WIRE PTFE 1.07mm Ø
12	TBD	2845/19 WH001	ALPHA	22 AWG WHT WIRE PTFE 1.07mm Ø
13	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
14	2"	STOCK	STOCK	1/2" ADHESIVE HEAT SHRINK
15	2"	STOCK	STOCK	3/4" ADHESIVE HEAT SHRINK
16	2"	STOCK	STOCK	1/8" CLEAR HEAT SHRINK
17	TBD	PTN0.25BK-100	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeving
18	TBD	PTN0.50BK-100	Techflex	Techflex 1/2"Flexo PET General Purpose Sleeving
19	1	STOCK	STOCK	CRIMP EYE
20	1	MINR-84-FCR/L-PBOF-P	SEACON	J1 BULKHEAD

NOTE:

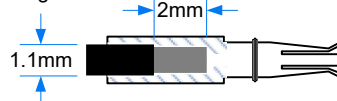
Power Contact (16AWG):
Z80-290 - Extraction tool
5x – Contact Replacement In Insulator



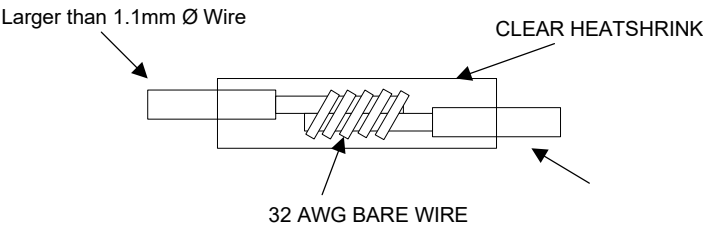
Large Bore Signal Contact:
M22520/2-01 - Hand Crimp Tool
T5747 – Positioner
6 – Crimp Tool Setting



T-Contact:
M22520/2-01 - Hand Crimp Tool
Z80-444 – Positioner
6 – Crimp Tool Setting



22 AWG SPLICES FOR HARWIN CONNECTORS



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105			
MANAGER:	-				
ENGINEER:	K. ZACK	TITLE: J1 Bulkhead MVC – LVPS Power and Data MARS			
DRAWN BY:	K. ZACK				
PRINT DATE:	2/20/2024	SIZE:	CAGE CODE:	DWG NO:	REV
PAGE CREATION:	12/14/2021	B	98514	86253	1.01
CAD FILE: MARS Harnessing V1.07.vsdX				SHEET	OF
				4	49

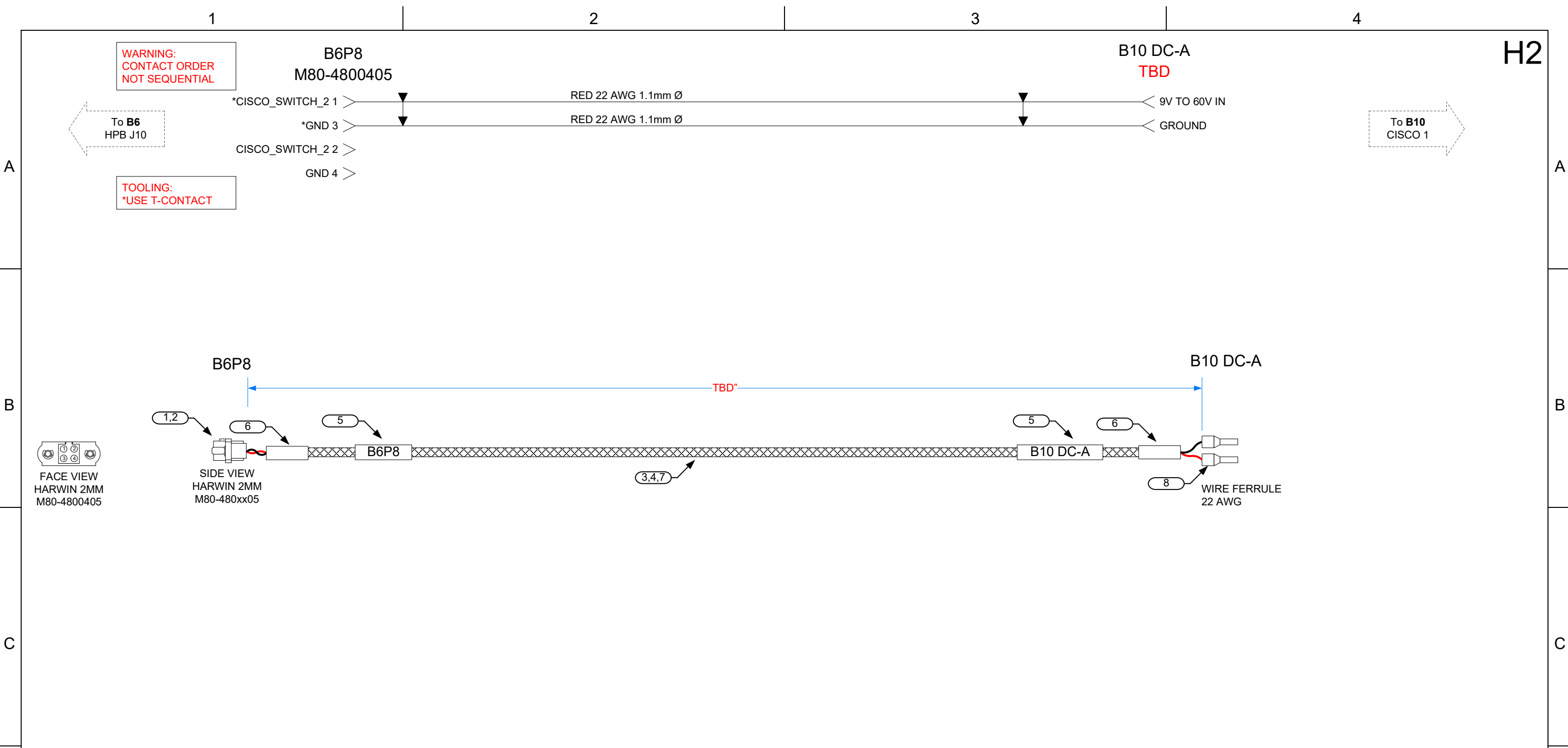


TABLE A1H2: PARTS LIST				
ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-4800405	HARWIN	DATAMATE FEMALE 4-PIN
2	2	M80-2060005	HARWIN	DATAMATE 22AWG FEMALE CRIMP T-CONTACT
3	TBD	2845/19 BK001	HARWIN	22 AWG BLACK WIRE PTFE 1.07mm Ø
4	TBD	2845/19 RD001	HARWIN	22 AWG RED WIRE PTFE 1.07mm Ø
5	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	1/2" ADHESIVE HEAT SHRINK
7	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeving
8	2	FSD75-8-D	Panduit Corp	CONN FERRULE DIN 22AWG WHITE

T-Contact:
M22520/2-01 - Hand Crimp Tool
Z80-444 – Positioner
6 – Crimp Tool Setting

1.1mm

2mm

PI:	T. MCGINNIS	APL APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105 H2 CISCO Switch 1 Switch Power MARS		
MANAGER:	-			
ENGINEER:	K. ZACK			
DRAWN BY:	K. ZACK			
PRINT DATE:	2/20/2024			
PAGE CREATION:	12/14/2021	SIZE: B	CAGE CODE: 98514	DWG NO: 86253
CAD FILE: MARS Harnessing V1.07.vsdw				REV 1.01

SHEET 5 OF 49

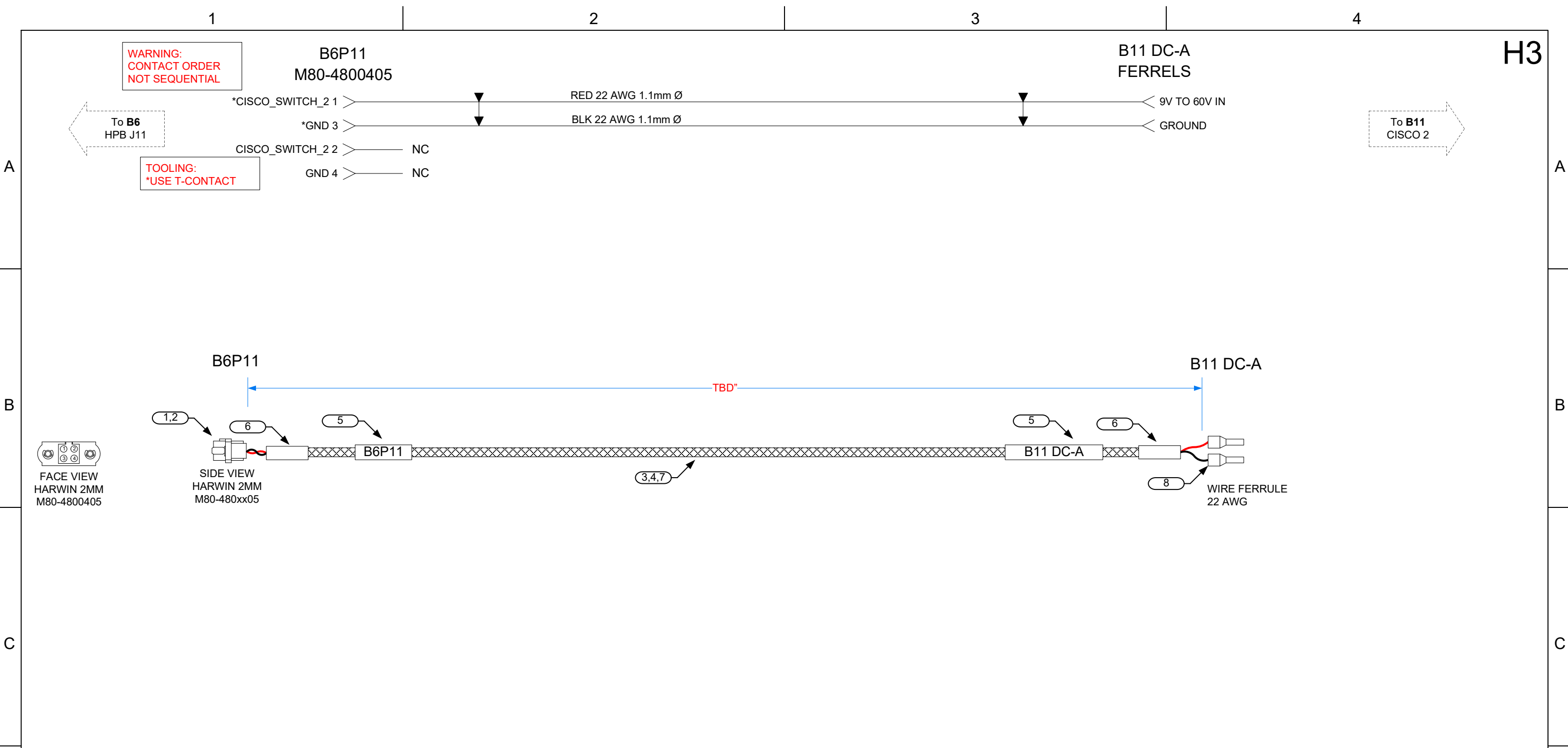
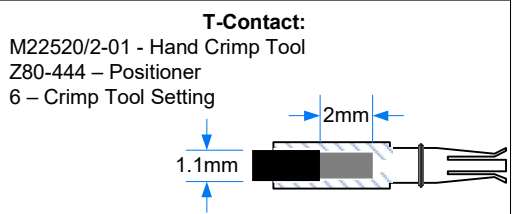
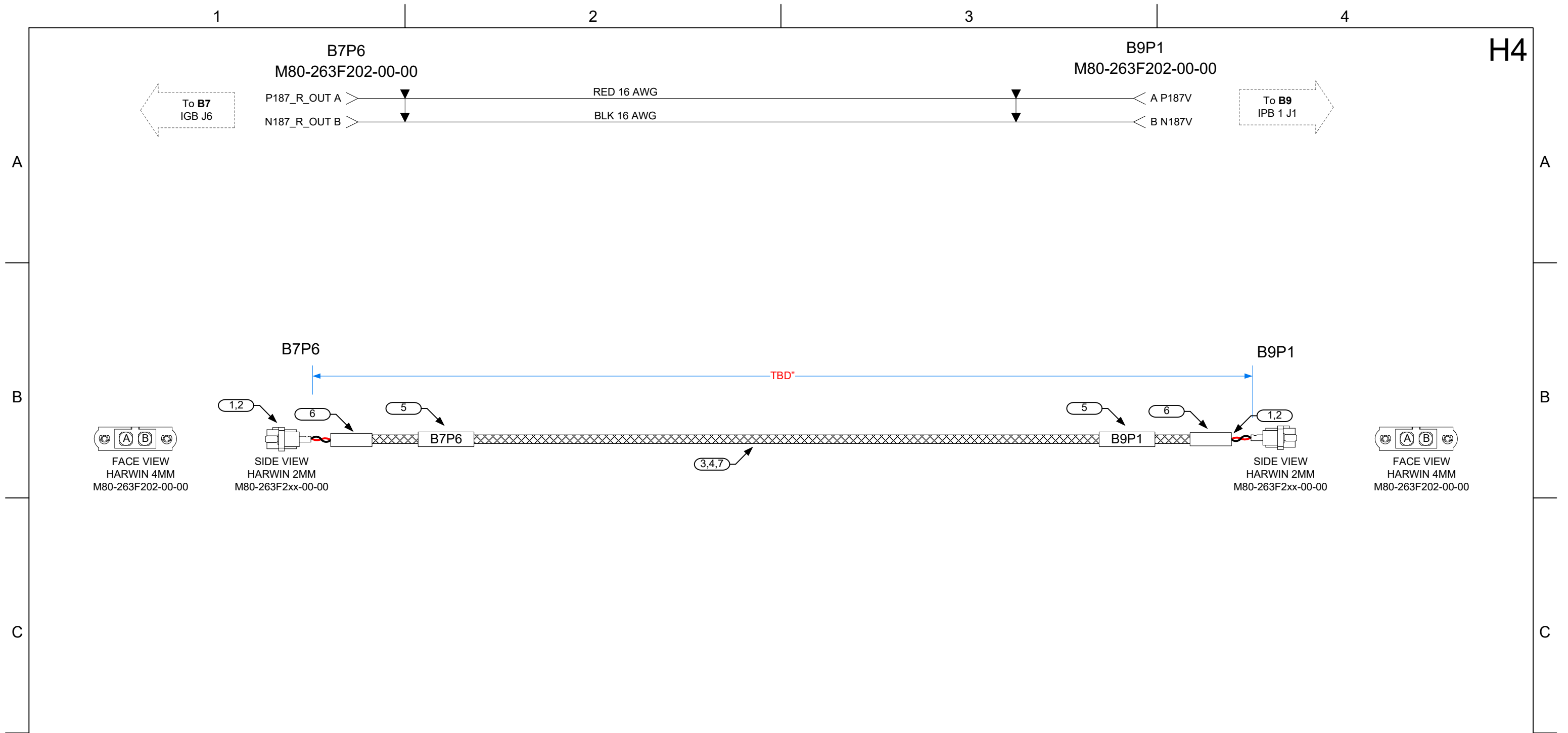


TABLE A1H3: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-4800405	HARWIN	DATAMATE FEMALE 4-PIN
2	2	M80-2060005	HARWIN	DATAMATE 22AWG FEMALE CRIMP T-CONTACT
3	TBD	2845/19 BK001	HARWIN	22 AWG BLACK WIRE PTFE 1.07mm Ø
4	TBD	2845/19 RD001	HARWIN	22 AWG RED WIRE PTFE 1.07mm Ø
5	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	1/2" ADHESIVE HEAT SHRINK
7	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeving
8	2	FSD75-8-D	Panduit Corp	CONN FERRULE DIN 22AWG WHITE

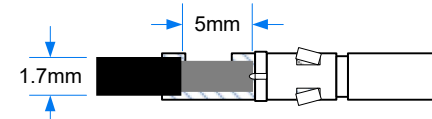


PI:	T. MCGINNIS	APL APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105 H3 CISCO Switch 2 Switch Power MARS			
MANAGER:	-				
ENGINEER:	K. ZACK				
DRAWN BY:	K. ZACK				
PRINT DATE:	2/20/2024				
PAGE CREATION:	12/14/2021	SIZE: B	CAGE CODE: 98514	DWG NO: 86253	REV 1.01
CAD FILE: MARS Harnessing V1.07.vsdX				SHEET 6	OF 49

[illegible]

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	2	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	4	M80-327	HARWIN	CONN SOCKET 16AWG CRIMP/SLD GOLD
3	TBD		HARWIN	16 AWG BLACK WIRE PTFE
4	TBD		HARWIN	16 AWG RED WIRE PTFE
5	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	1/2" ADHESIVE HEAT SHRINK
7	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeving

NOTE: *Power Contact (16AWG):*
Z80-290 - Extraction tool
5x – Contact Replacement In Insulator



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105			
MANAGER:	-				
ENGINEER:	K. ZACK	TITLE: H4 IPB 1 POWER 375V Power MARS			
DRAWN BY:	K. ZACK				
PRINT DATE:	2/20/2024				
PAGE CREATION: 12/14/2021		SIZE: B	CAGE CODE: 98514	DWG NO: 86253	REV 1.01
CAD FILE: MARS Harnessing V1.07.vsdw				SHEET 7	OF 49

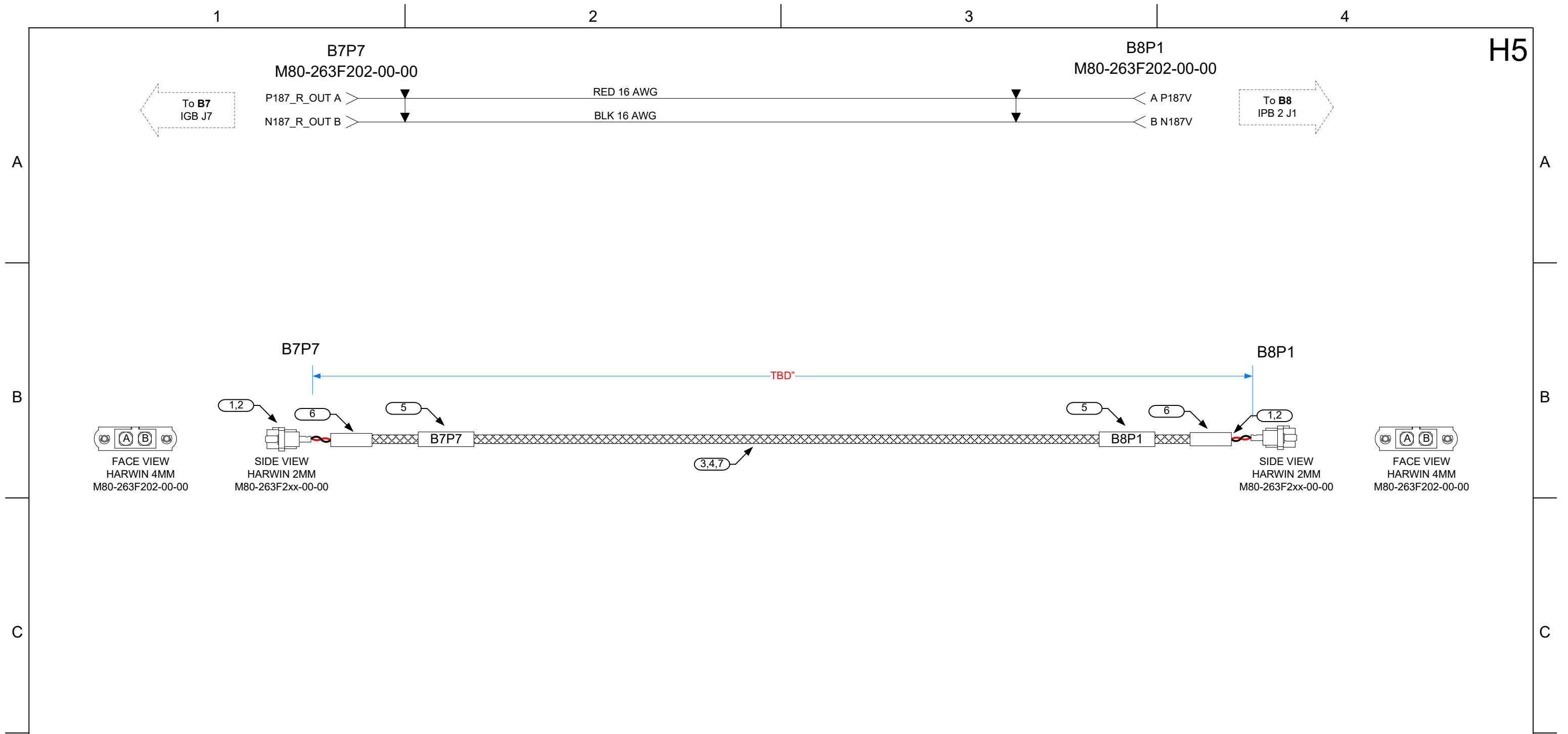
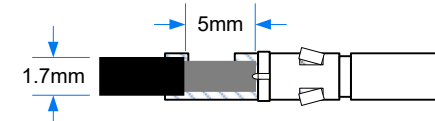


TABLE A1H5: PARTS LIST	
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4	...
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99	...
100	...

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	2	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	4	M80-327	HARWIN	CONN SOCKET 16AWG CRIMP/SLD GOLD
3	TBD	AT161929 BK005	HARWIN	16 AWG BLACK WIRE PTFE
4	TBD	AT161929 RD005	HARWIN	16 AWG RED WIRE PTFE
5	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	1/2" ADHESIVE HEAT SHRINK
7	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeving

NOTE: *Power Contact (16AWG):*
Z80-290 - Extraction tool
5x – Contact Replacement In Insulator



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105		
MANAGER:	-			
ENGINEER:	K. ZACK			
DRAWN BY:	K. ZACK			
		TITLE: H5 IPB 2 POWER 375V Power MARS		
PRINT DATE:	2/20/2024			
PAGE CREATION:	SIZE:	CAGE CODE:	DWG NO:	REV
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CAD FILE:			SHEET	OF
MARS Harnessing V1.07.vsd			8	49

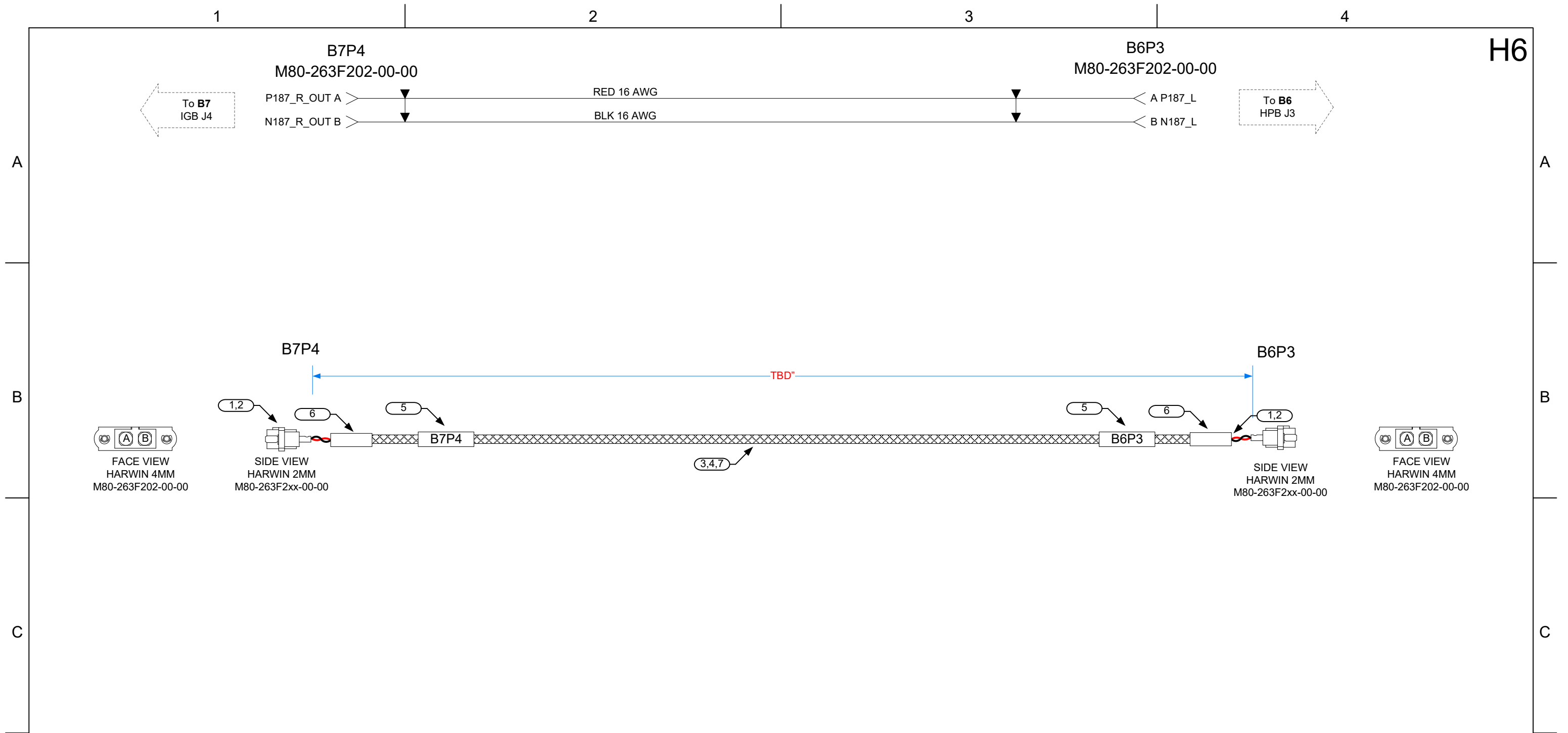
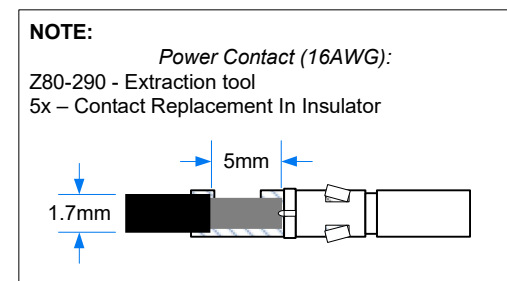


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100	100.000000

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	2	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	4	M80-327	HARWIN	CONN SOCKET 16AWG CRIMP/SLD GOLD
3	TBD	AT161929 BK005	HARWIN	16 AWG BLACK WIRE PTFE
4	TBD	AT161929 RD005	HARWIN	16 AWG RED WIRE PTFE
5	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	1/2" ADHESIVE HEAT SHRINK
7	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeving



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105				
MANAGER:	-					
ENGINEER:	K. ZACK					
DRAWN BY:	K. ZACK					
PRINT DATE:	2/20/2024	TITLE: H6 HOTEL POWER BOARD POWER 375V Power LEFT MARS				
PAGE CREATION:		SIZE:	CAGE CODE:	DWG NO:	REV	
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MARS Harnessing V1 07 vsdx					9	49

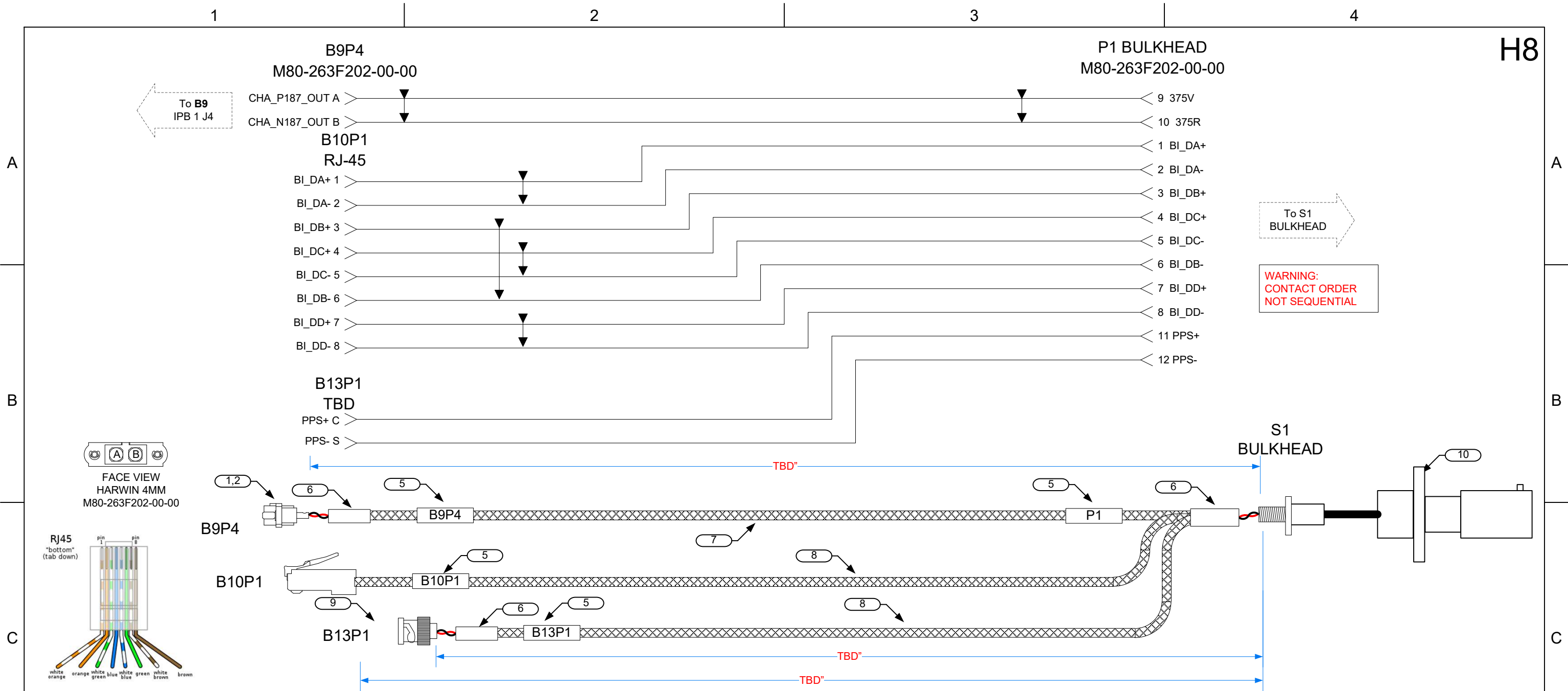
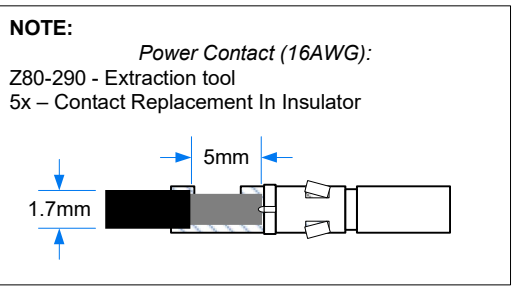


TABLE A1H8: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	2	M80-327	HARWIN	CONN SOCKET 16AWG CRIMP/SLD GOLD
2	1	STOCK	STOCK	RJ45 CONNECTOR
5	2"	STOCK	STOCK	1/2" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	3/4" ADHESIVE HEAT SHRINK
7	TBD	PTN0.50BK-200	Techflex	Techflex 1/2"Flexo PET General Purpose Sleaving
8	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleaving
9	1	STOCK	STOCK	GENERIC BNC SOLDER
9	TBD	TBD	TBD	WET MATE PENETRATOR CONNECTOR



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105			
MANAGER:	-				
ENGINEER:	K. ZACK				
DRAWN BY:	K. ZACK	TITLE: H8 S1 BULKHEAD IPS 1 CHA 375V OUTPUT MARS			
PRINT DATE:	2/20/2024	SIZE:	CAGE CODE:	DWG NO:	REV
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CAD FILE: MARS Harnessing V1.07.vsdw					SHEET 11 OF 49

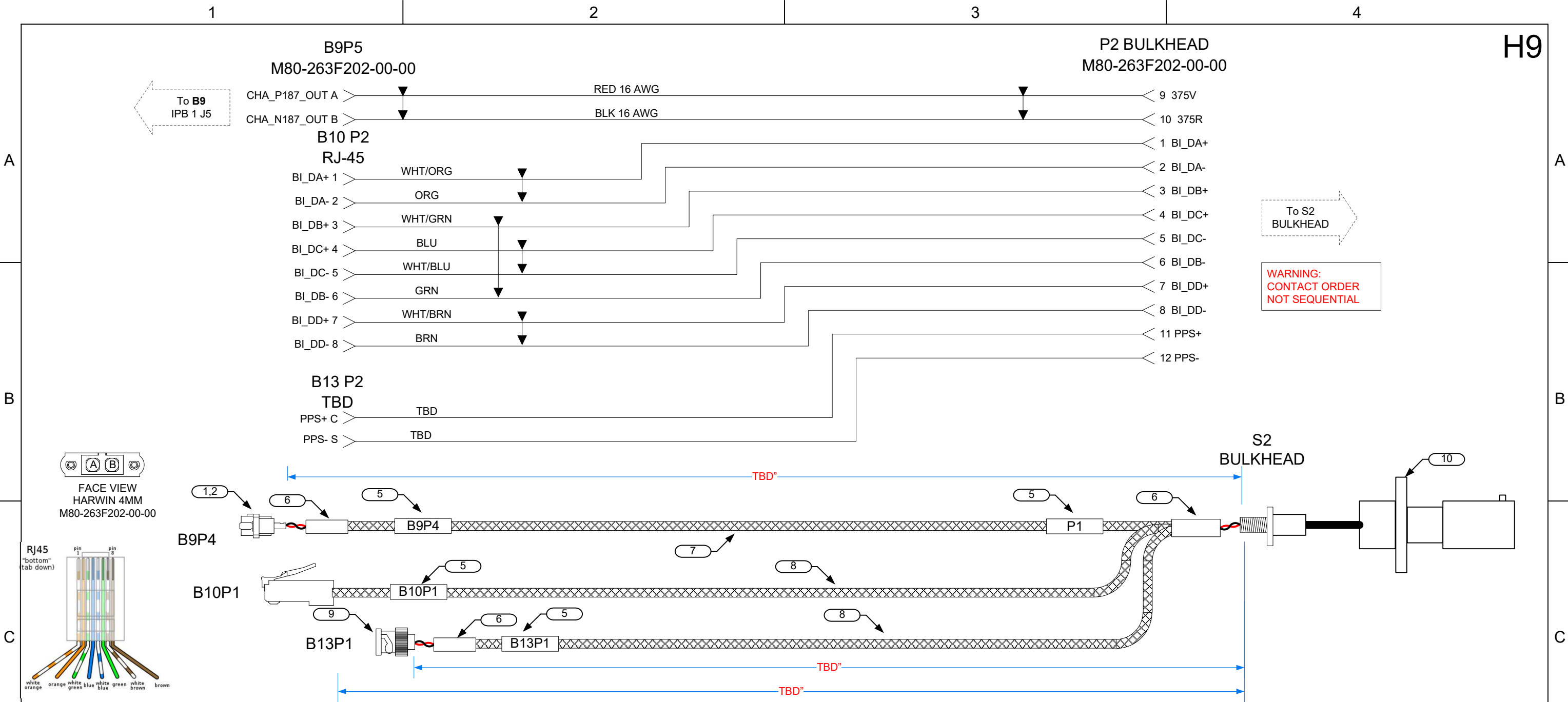
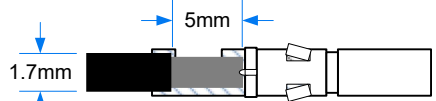


TABLE A1H9: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	2	M80-327	HARWIN	CONN SOCKET 16AWG CRIMP/SLD GOLD
2	1	STOCK	STOCK	RJ45 CONNECTOR
5	2"	STOCK	STOCK	1/2" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	3/4" ADHESIVE HEAT SHRINK
7	TBD	PTN0.50BK-200	Techflex	Techflex 1/2"Flexo PET General Purpose Sleeving
8	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeving
9	1	STOCK	STOCK	GENERIC BNC SOLDER
10	TBD	TBD	TBD	WET MATE PENETRATOR CONNECTOR

NOTE:

Power Contact (16AWG):
Z80-290 - Extraction tool
5x - Contact Replacement In Insulator



PI:	T. MCGINNIS			APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105						
MANAGER:	-									
ENGINEER:	K. ZACK									
DRAWN BY:	K. ZACK									
PRINT DATE:	2/20/2024	TITLE: H9 S2 BULKHEAD IPS 1 CHB 375V OUTPUT MARS								
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12/14/2021							B	98514	86253	1.01
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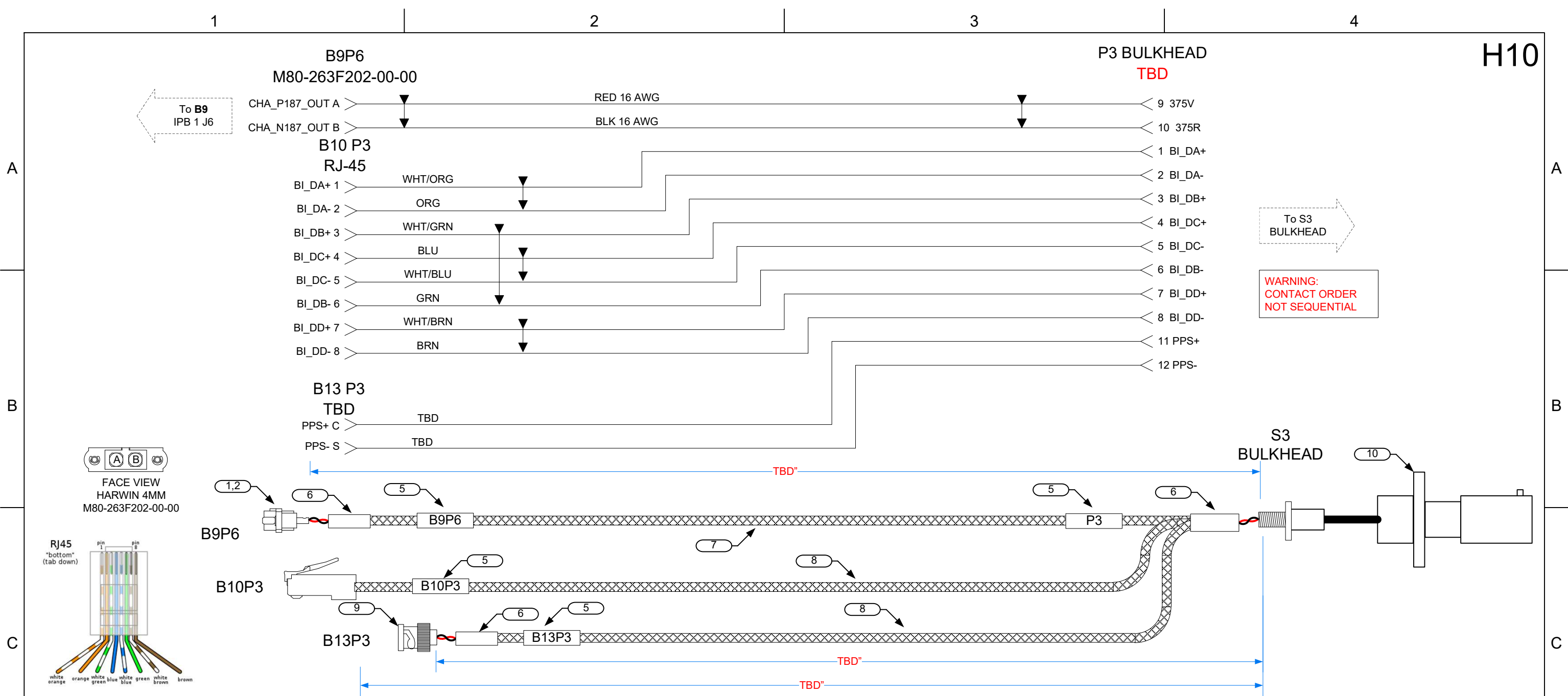
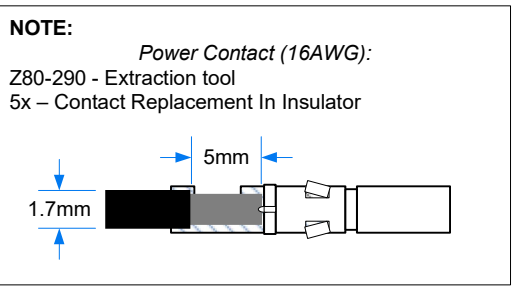


TABLE A1H10: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	2	M80-327	HARWIN	CONN SOCKET 16AWG CRIMP/SLD GOLD
2	1	STOCK	STOCK	RJ45 CONNECTOR
5	2"	STOCK	STOCK	1/2" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	3/4" ADHESIVE HEAT SHRINK
7	TBD	PTN0.50BK-200	Techflex	Techflex 1/2"Flexo PET General Purpose Sleeving
8	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeving
9	1	STOCK	STOCK	GENERIC BNC SOLDER
10	TBD	TBD	TBD	WET MATE PENETRATOR CONNECTOR



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105			
MANAGER:	-				
ENGINEER:	K. ZACK	TITLE: H10 S3 BULKHEAD IPS 1 CHC 375V OUTPUT MARS			
DRAWN BY:	K. ZACK				
PRINT DATE:	2/20/2024	SIZE:	CAGE CODE:	DWG NO:	REV
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CAD FILE: MARS Harnessing V1.07.vsdX					SHEET 13 OF 49

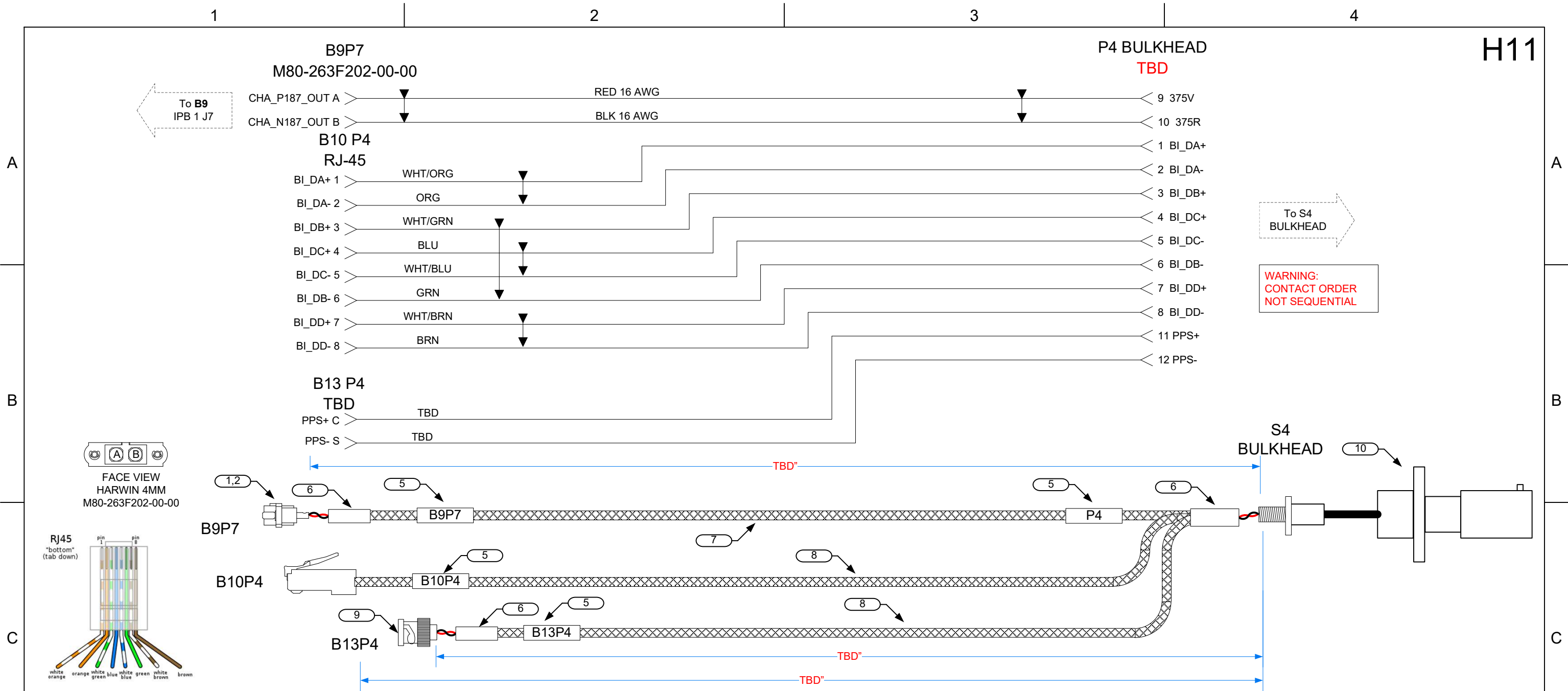
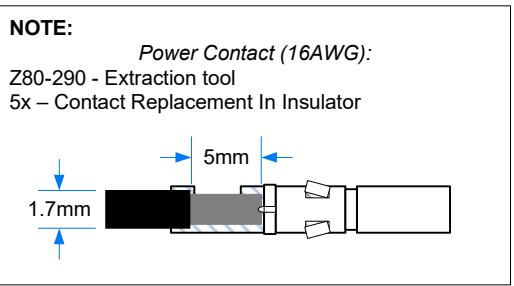


TABLE A1H11: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	2	M80-327	HARWIN	CONN SOCKET 16AWG CRIMP/SLD GOLD
2	1	STOCK	STOCK	RJ45 CONNECTOR
5	2"	STOCK	STOCK	1/2" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	3/4" ADHESIVE HEAT SHRINK
7	TBD	PTN0.50BK-200	Techflex	Techflex 1/2"Flexo PET General Purpose Sleeveing
8	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeveing
9	1	STOCK	STOCK	GENERIC BNC SOLDER
10	TBD	TBD	TBD	WET MATE PENETRATOR CONNECTOR



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105		
MANAGER:	-			
ENGINEER:	K. ZACK	TITLE: H11 S4 BULKHEAD IPS 1 CHD 375V OUTPUT MARS		
DRAWN BY:	K. ZACK			
PRINT DATE:	2/20/2024	SIZE:	CAGE CODE:	DWG NO:
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CAD FILE:	MARS Harnessing V1.07.vsd	SHEET 14 OF 49		
		REV 1.01		

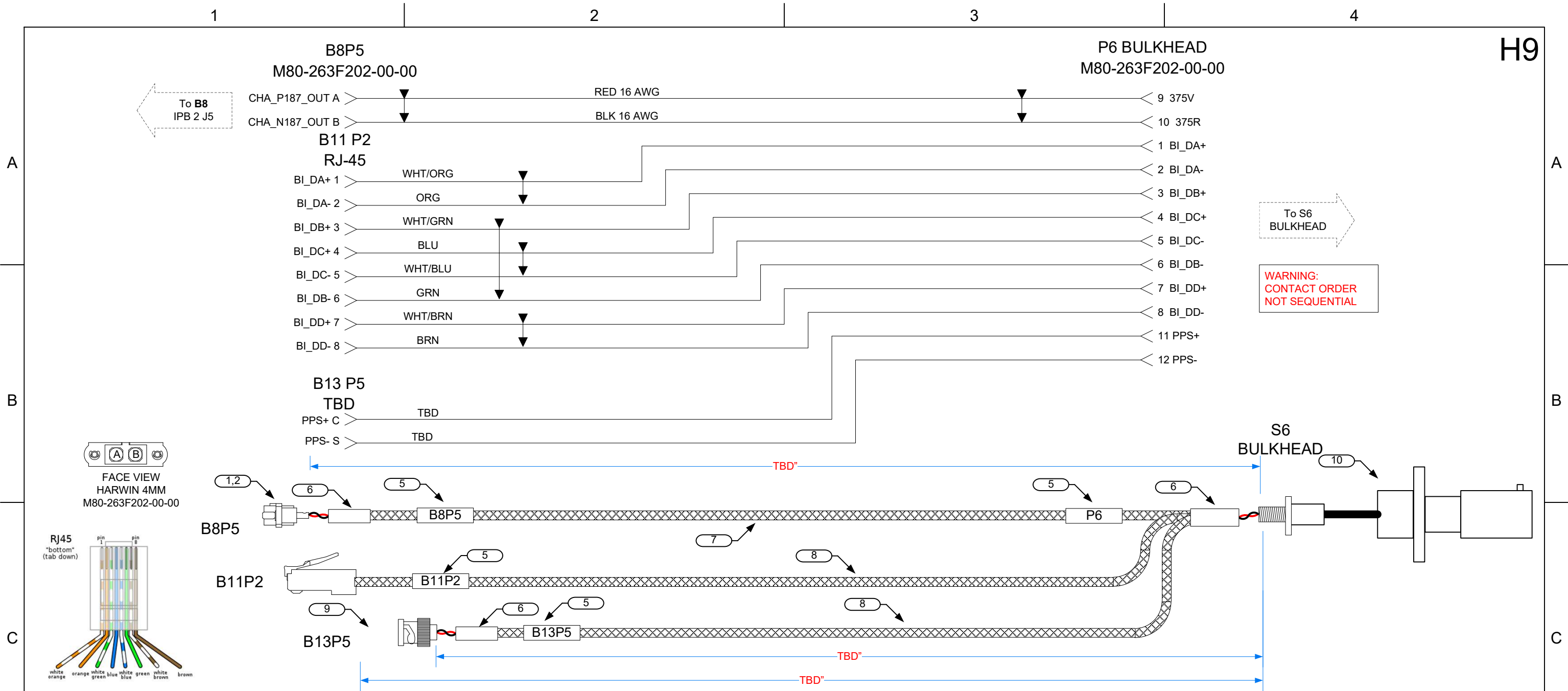


TABLE A1H13: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	2	M80-327	HARWIN	CONN SOCKET 16AWG CRIMP/SLD GOLD
2	1	STOCK	STOCK	RJ45 CONNECTOR
5	2"	STOCK	STOCK	1/2" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	3/4" ADHESIVE HEAT SHRINK
7	TBD	PTN0.50BK-200	Techflex	Techflex 1/2"Flexo PET General Purpose Sleeving
8	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeving
9	1	STOCK	STOCK	GENERIC BNC SOLDER
10	TBD	TBD	TBD	WET MATE PENETRATOR CONNECTOR

PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105			
MANAGER:	-				
ENGINEER:	K. ZACK				
DRAWN BY:	K. ZACK	TITLE: H13 S6 BULKHEAD IPS 1 CHB 375V OUTPUT MARS			
PRINT DATE:	2/20/2024	SIZE: B	CAGE CODE: 98514	DWG NO: 86253	REV 1.01
PAGE CREATION: 12/14/2021					
CAD FILE: MARS Harnessing V1.07.vsd		SHEET 16 OF 49			

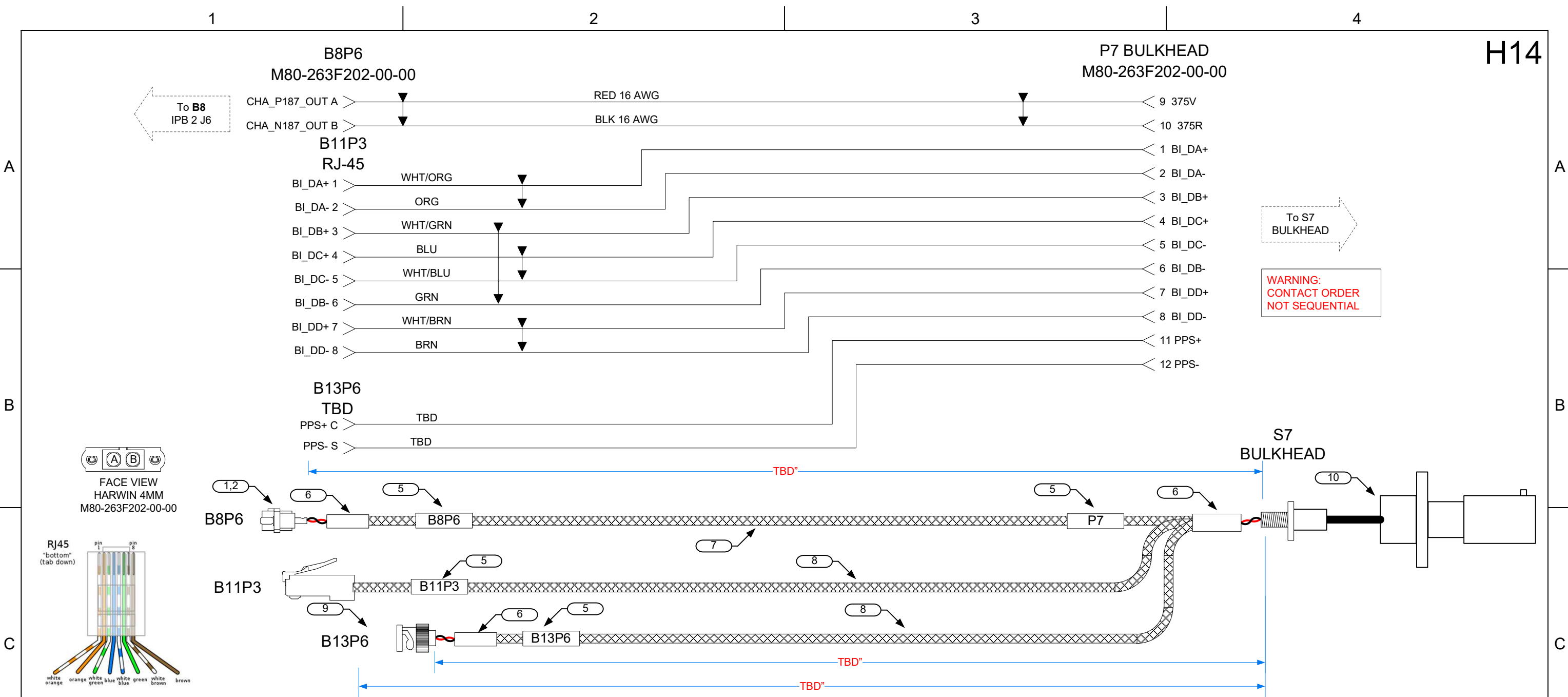
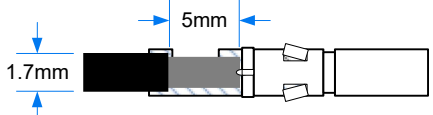


TABLE A1H14: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	2	M80-327	HARWIN	CONN SOCKET 16AWG CRIMP/SLD GOLD
2	1	STOCK	STOCK	RJ45 CONNECTOR
5	2"	STOCK	STOCK	1/2" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	3/4" ADHESIVE HEAT SHRINK
7	TBD	PTN0.50BK-200	Techflex	Techflex 1/2"Flexo PET General Purpose Sleeveing
8	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeveing
9	1	STOCK	STOCK	GENERIC BNC SOLDER
10	TBD	TBD	TBD	WET MATE PENETRATOR CONNECTOR

NOTE:

Power Contact (16AWG):
Z80-290 - Extraction tool
5x - Contact Replacement In Insulator



PI:	T. MCGINNIS			APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105						
MANAGER:	-									
ENGINEER:	K. ZACK									
DRAWN BY:	K. ZACK									
PRINT DATE:	2/20/2024	TITLE: H14 S7 BULKHEAD IPS 2 CHC 375V OUTPUT MARS								
PAGE CREATION:							SIZE:	CAGE CODE:	DWG NO:	REV
12/14/2021							B	98514	86253	1.01
CAD FILE:				SHEET		OF				
MARS Harnessing V1.07.vsd				17		49				

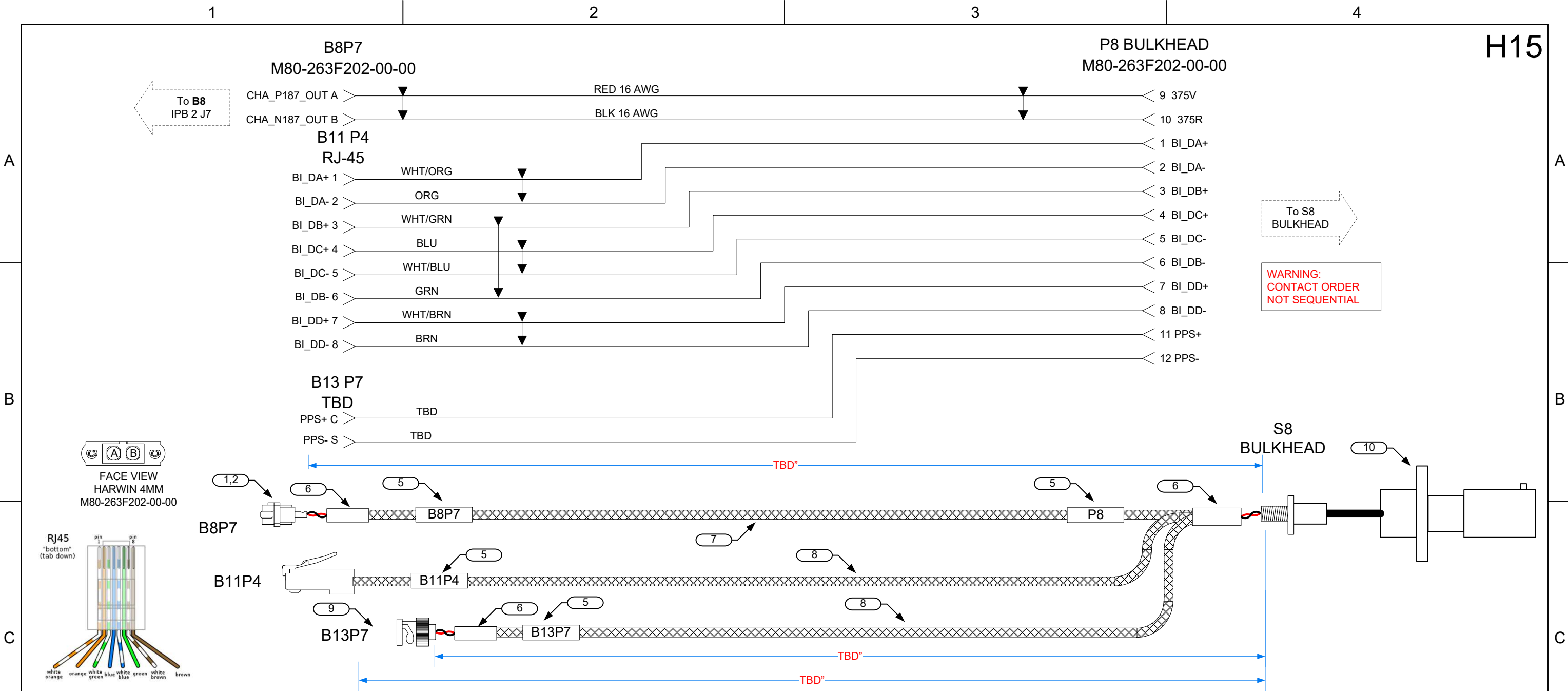
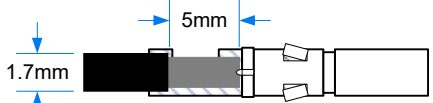


TABLE A1H15: PARTS LIST

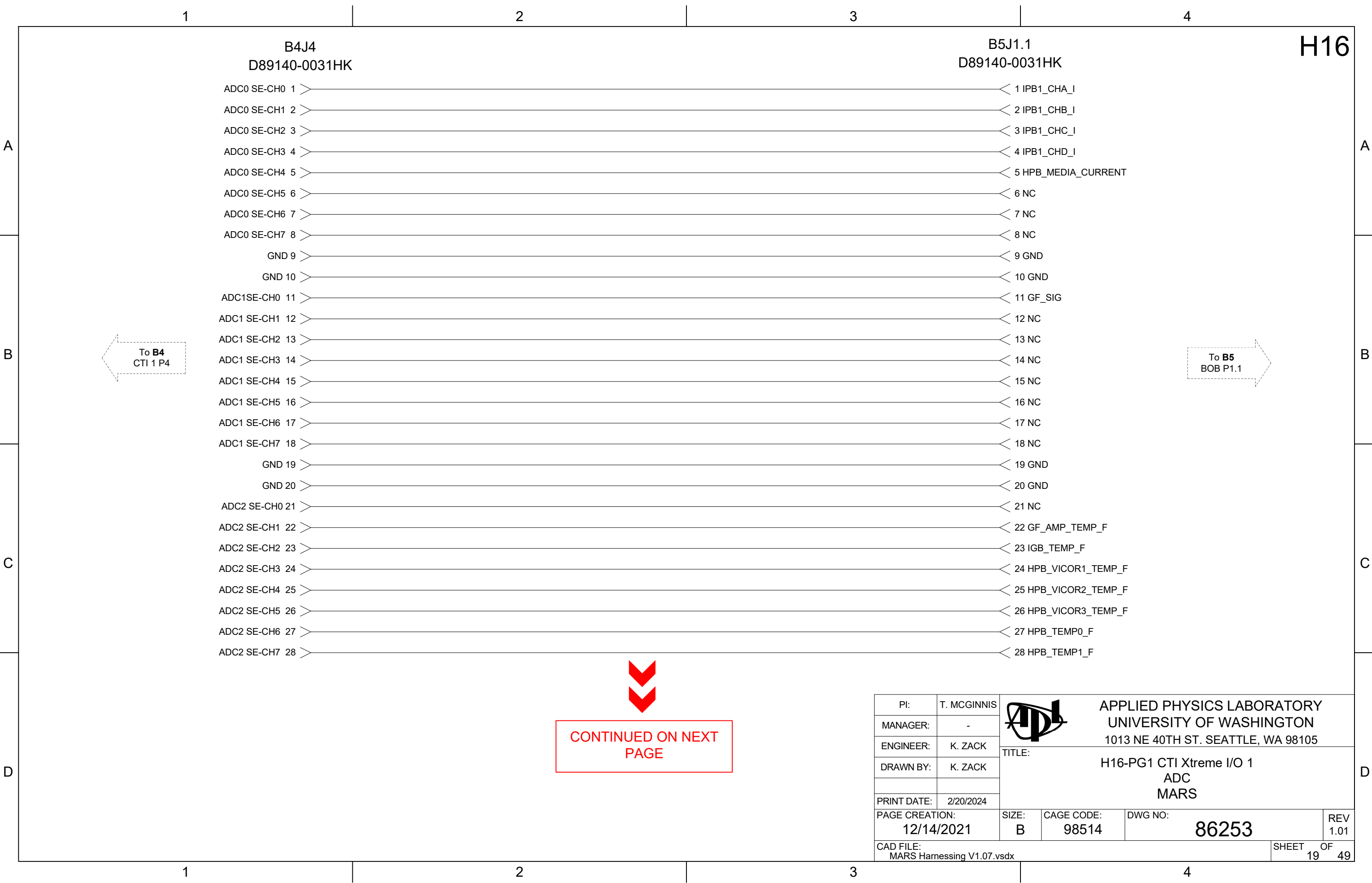
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1	1	M80-263F202-00-00	HARWIN	20A 2 PIN DATAMATE POWER
2	2	M80-327	HARWIN	CONN SOCKET 16AWG CRIMP/SLD GOLD
2	1	STOCK	STOCK	RJ45 CONNECTOR
5	2"	STOCK	STOCK	1/2" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	3/4" ADHESIVE HEAT SHRINK
7	TBD	PTN0.50BK-200	Techflex	Techflex 1/2"Flexo PET General Purpose Sleeving
8	TBD	PTN0.25BK-200	Techflex	Techflex 1/4"Flexo PET General Purpose Sleeving
9	1	STOCK	STOCK	GENERIC BNC SOLDER
10	TBD	TBD	TBD	WET MATE PENETRATOR CONNECTOR

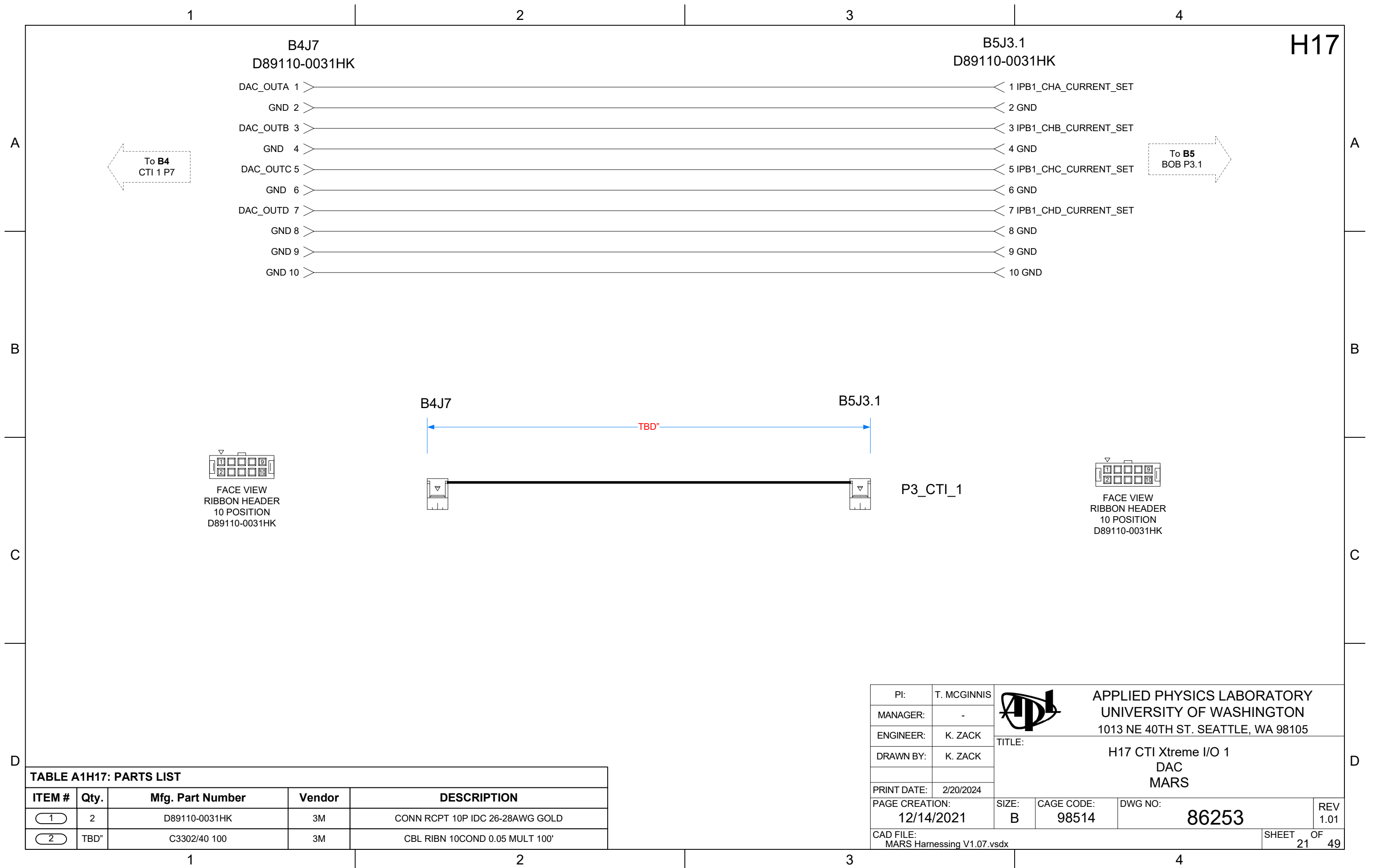
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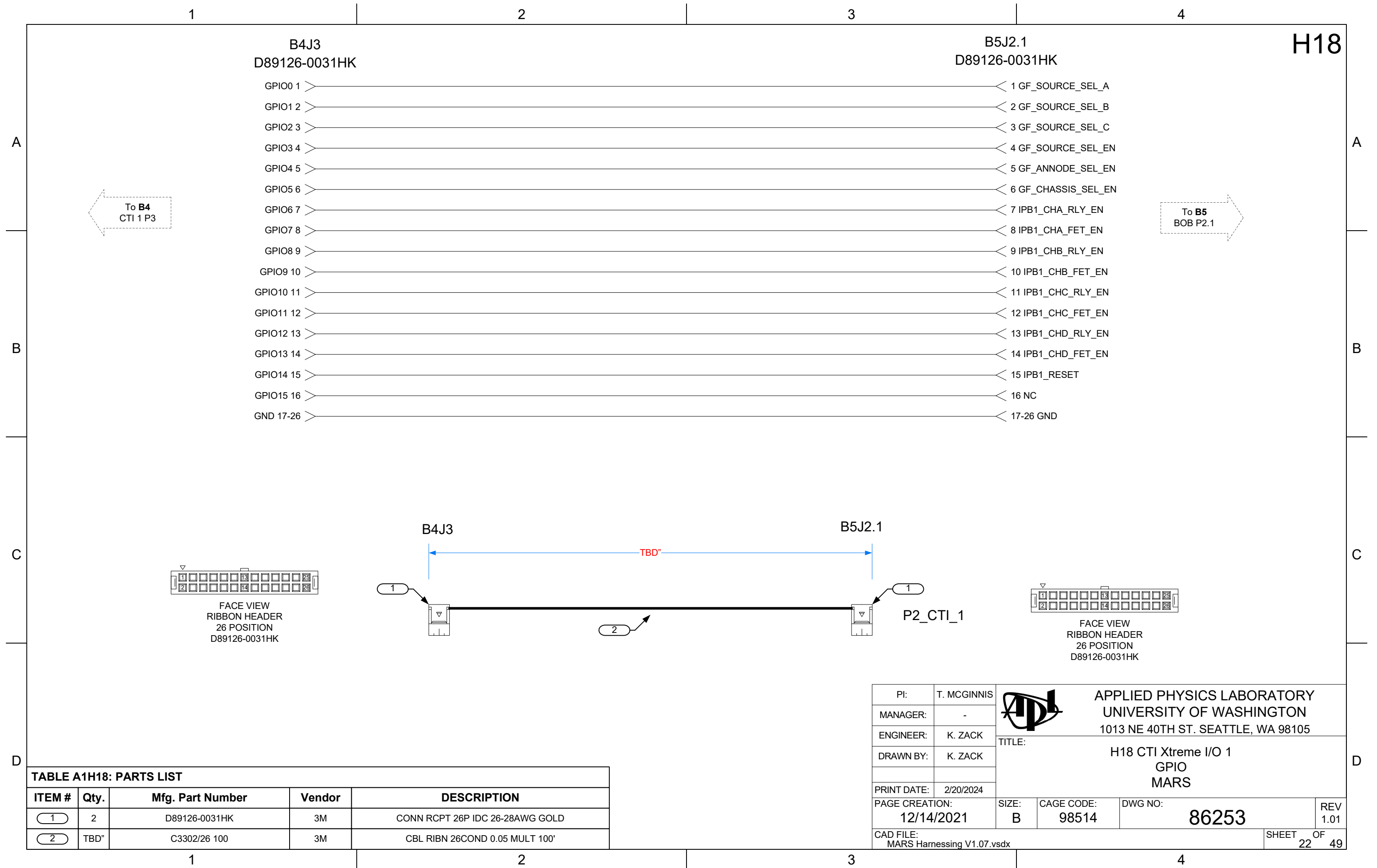
Power Contact (16AWG):
Z80-290 - Extraction tool
5x - Contact Replacement In Insulator

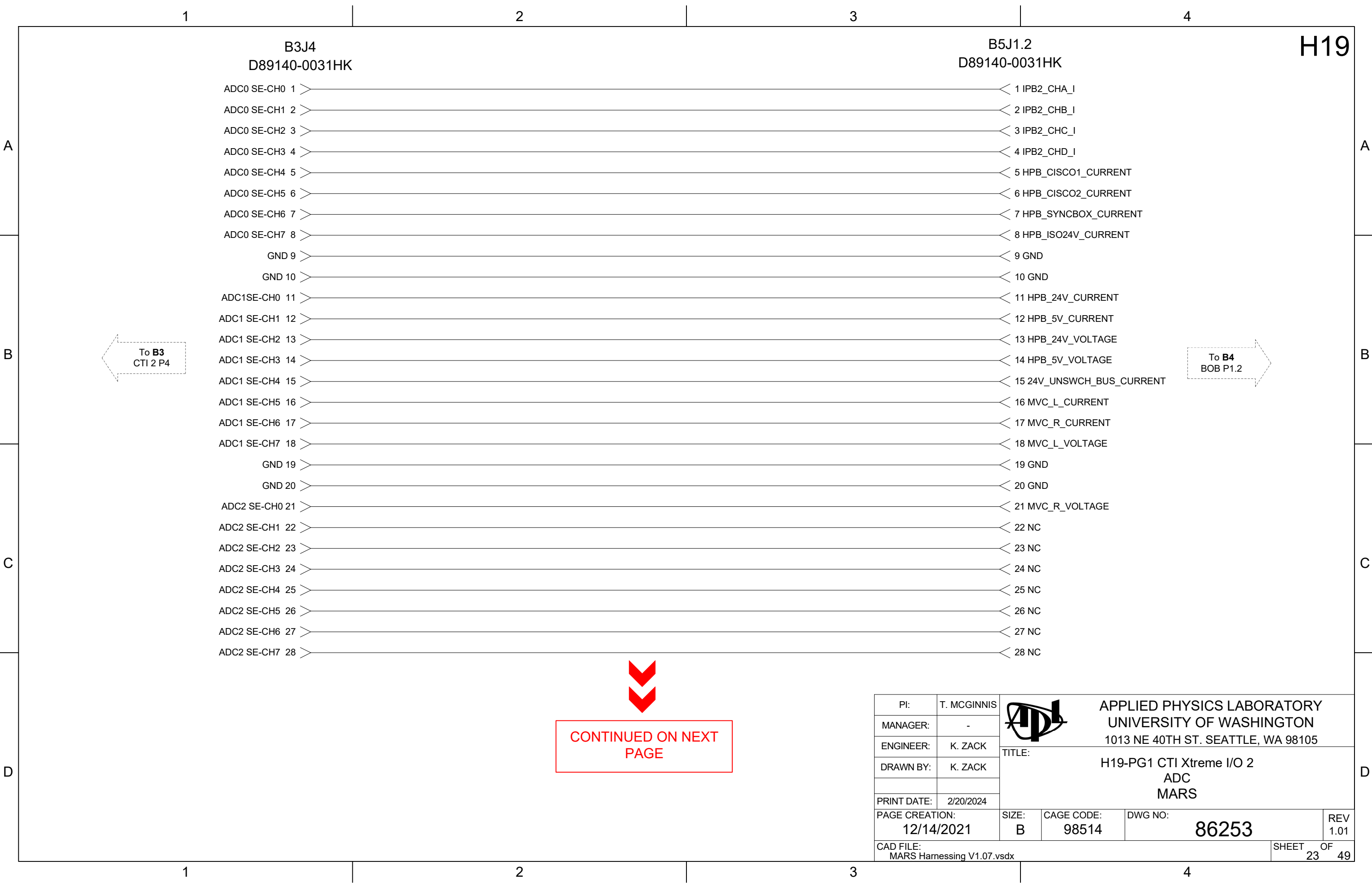


PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105			
MANAGER:	-				
ENGINEER:	K. ZACK				
DRAWN BY:	K. ZACK				
		TITLE: H15 S8 BULKHEAD IPS 2 CHD 375V OUTPUT MARS			
PRINT DATE:	2/20/2024				
PAGE CREATION: 12/14/2021		SIZE: B	CAGE CODE: 98514	DWG NO: 86253	REV 1.01
CAD FILE: MARS Harnessing V1.07.vsd				SHEET 18	OF 49









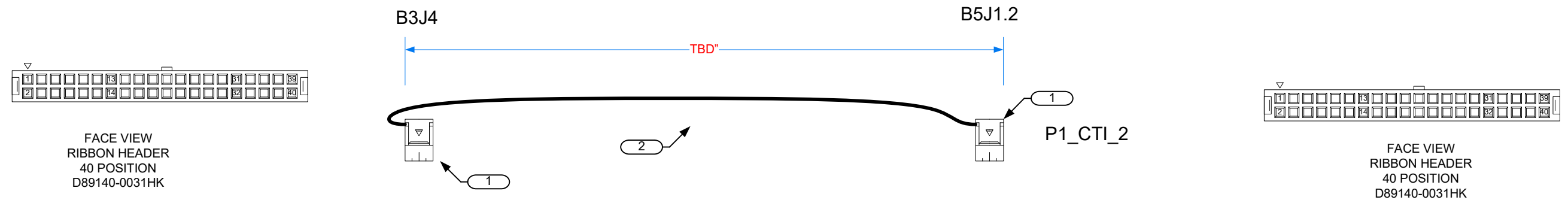
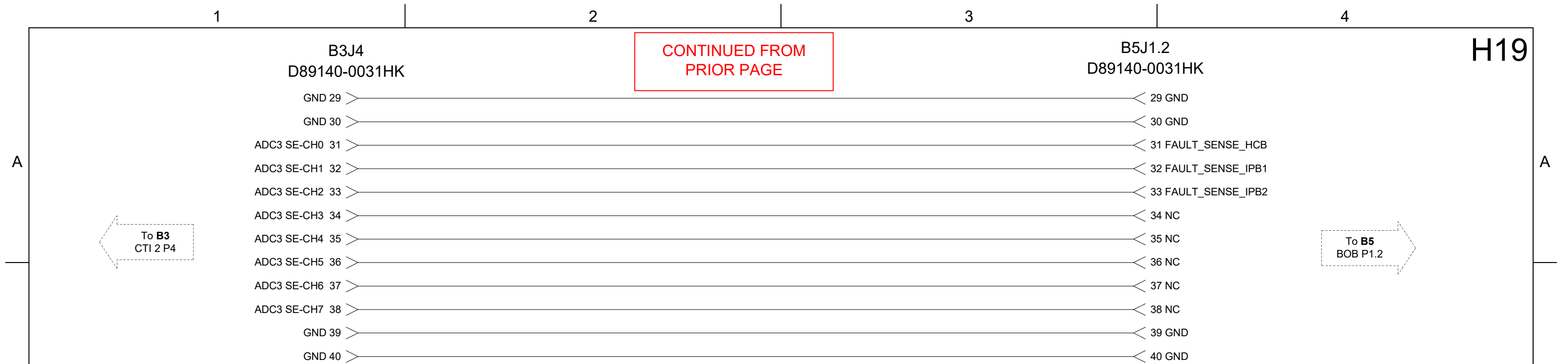


TABLE A1H19: PARTS LIST				
ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	2	D89140-0031HK	3M	CONN RCPT 40P IDC 26-28AWG GOLD
2	TBD"	C3302/40 100	HARWIN	CBL RIBN 40COND 0.05 MULT 100'

PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105					
MANAGER:	-						
ENGINEER:	K. ZACK						
DRAWN BY:	K. ZACK						
PRINT DATE:	2/20/2024	TITLE: H19-PG2 CTI Xtreme I/O 2 ADC MARS					
PAGE CREATION: 12/14/2021							
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CAD FILE: MARS Harnessing V1.07.vsd						SHEET 24	OF 49

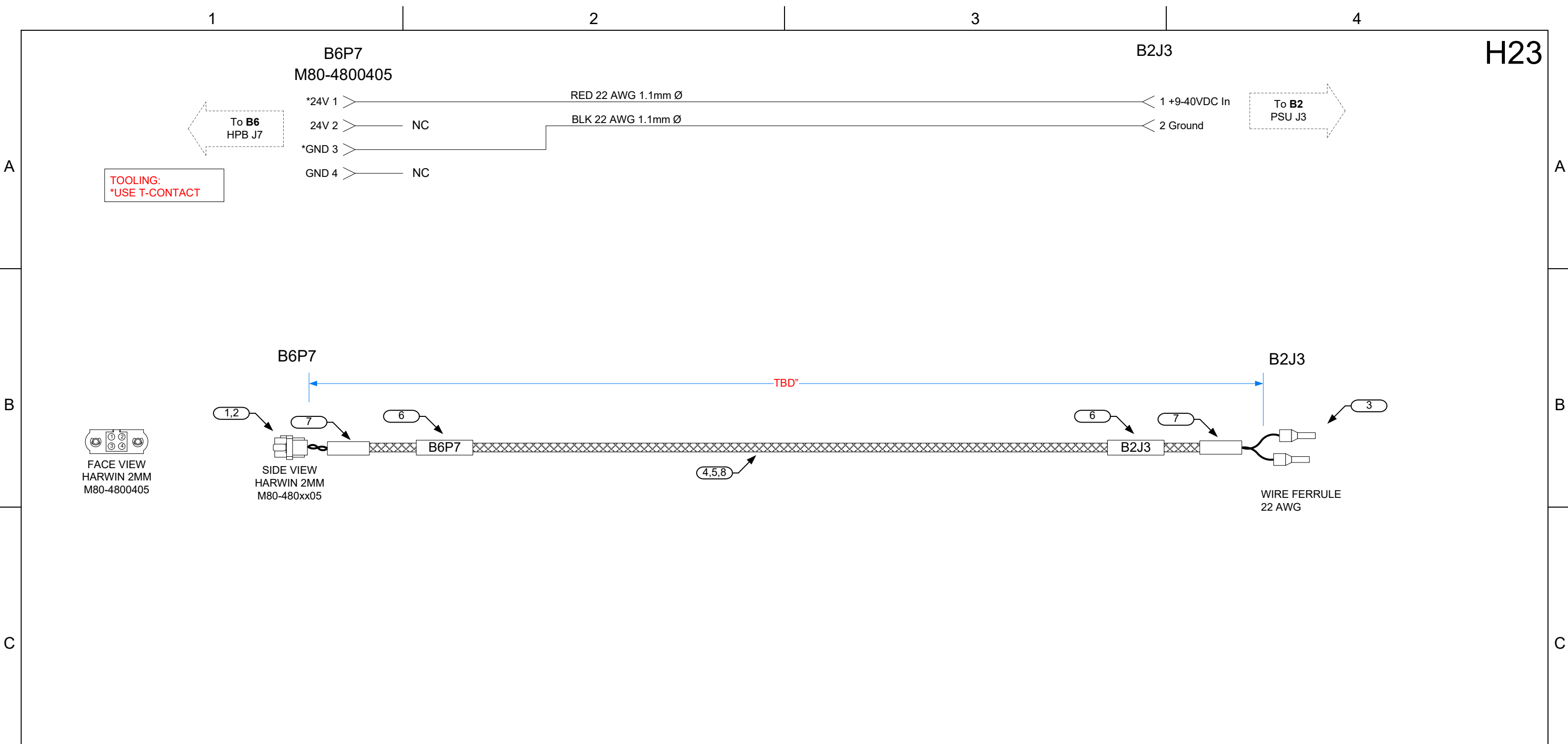
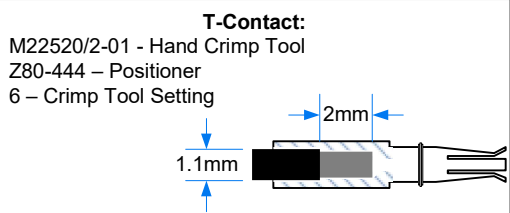


TABLE A1H23: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-4800405	HARWIN	DATAMATE FEMALE 4-PIN
2	2	M80-2060005	HARWIN	DATAMATE 22AWG FEMALE CRIMP T-CONTACT
3	2	FSD75-8-D	Panduit Corp	CONN FERRULE DIN 22AWG WHITE
4	TBD	2845/19 BK001	Alpha	22 AWG BLACK WIRE PTFE 1.07mm Ø
5	TBD	2845/19 RD001	Alpha	22 AWG RED WIRE PTFE 1.07mm Ø
6	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
7	2"	STOCK	STOCK	1/4" ADHESIVE HEAT SHRINK
8	TBD	PTN0.13BK-200	Techflex	Techflex 1/8"Flexo PET General Purpose Sleeving



PI:	T. MCGINNIS	APL APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105		
MANAGER:	-			
ENGINEER:	K. ZACK	TITLE: H23 PSU PC104 POWER MARS		
DRAWN BY:	K. ZACK			
PRINT DATE:	2/20/2024			
PAGE CREATION:	12/14/2021	SIZE: B	CAGE CODE: 98514	DWG NO: 86253
CAD FILE: MARS Harnessing V1.07.vsd				REV 1.01
SHEET OF 28 49				

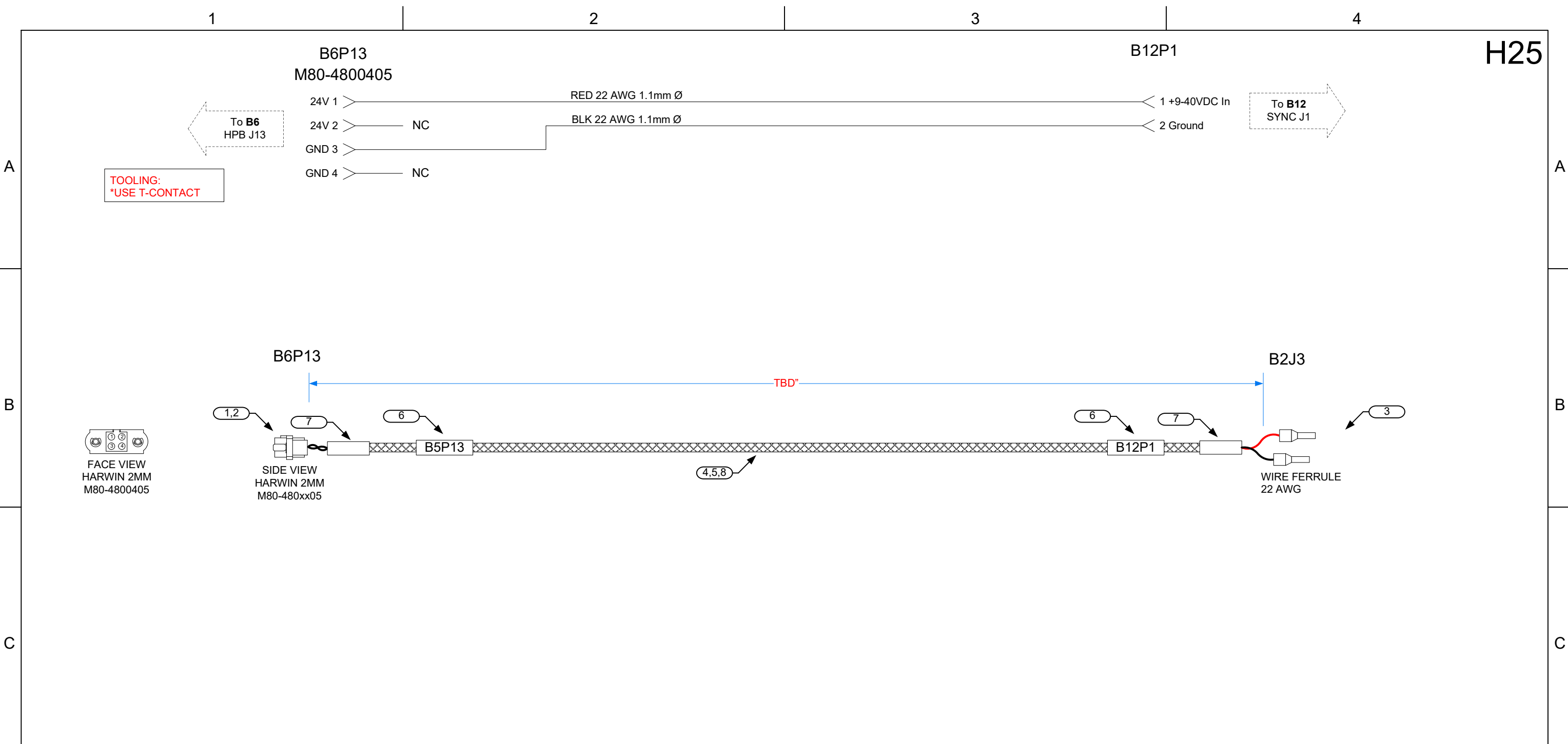
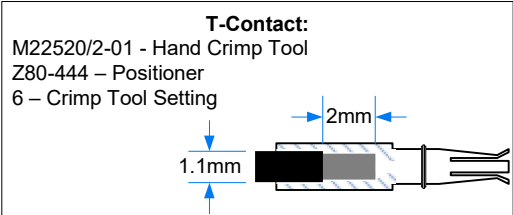


TABLE A1H25: PARTS LIST				
ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-4800405	HARWIN	DATAMATE FEMALE 4-PIN
2	2	M80-2060005	HARWIN	DATAMATE 22AWG FEMALE CRIMP T-CONTACT
3	1	FSD75-8-D	Panduit Corp	CONN FERRULE DIN 22AWG WHITE
4	TBD	2845/19 BK001	Alpha	22 AWG BLACK WIRE PTFE 1.07mm Ø
5	TBD	2845/19 RD001	Alpha	22 AWG RED WIRE PTFE 1.07mm Ø
6	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
7	2"	STOCK	STOCK	1/4" ADHESIVE HEAT SHRINK
8	TBD	PTN0.13BK-200	Techflex	Techflex 1/8"Flexo PET General Purpose Sleeveing



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105		
MANAGER:	-			
ENGINEER:	K. ZACK	TITLE: H25 MEINBERG SYNC 1PPS POWER MARS		
DRAWN BY:	K. ZACK			
PRINT DATE:	2/20/2024	SIZE:	CAGE CODE:	DWG NO:
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CAD FILE: MARS Harnessing V1.07.vsd				REV 1.01
				SHEET OF 30 49



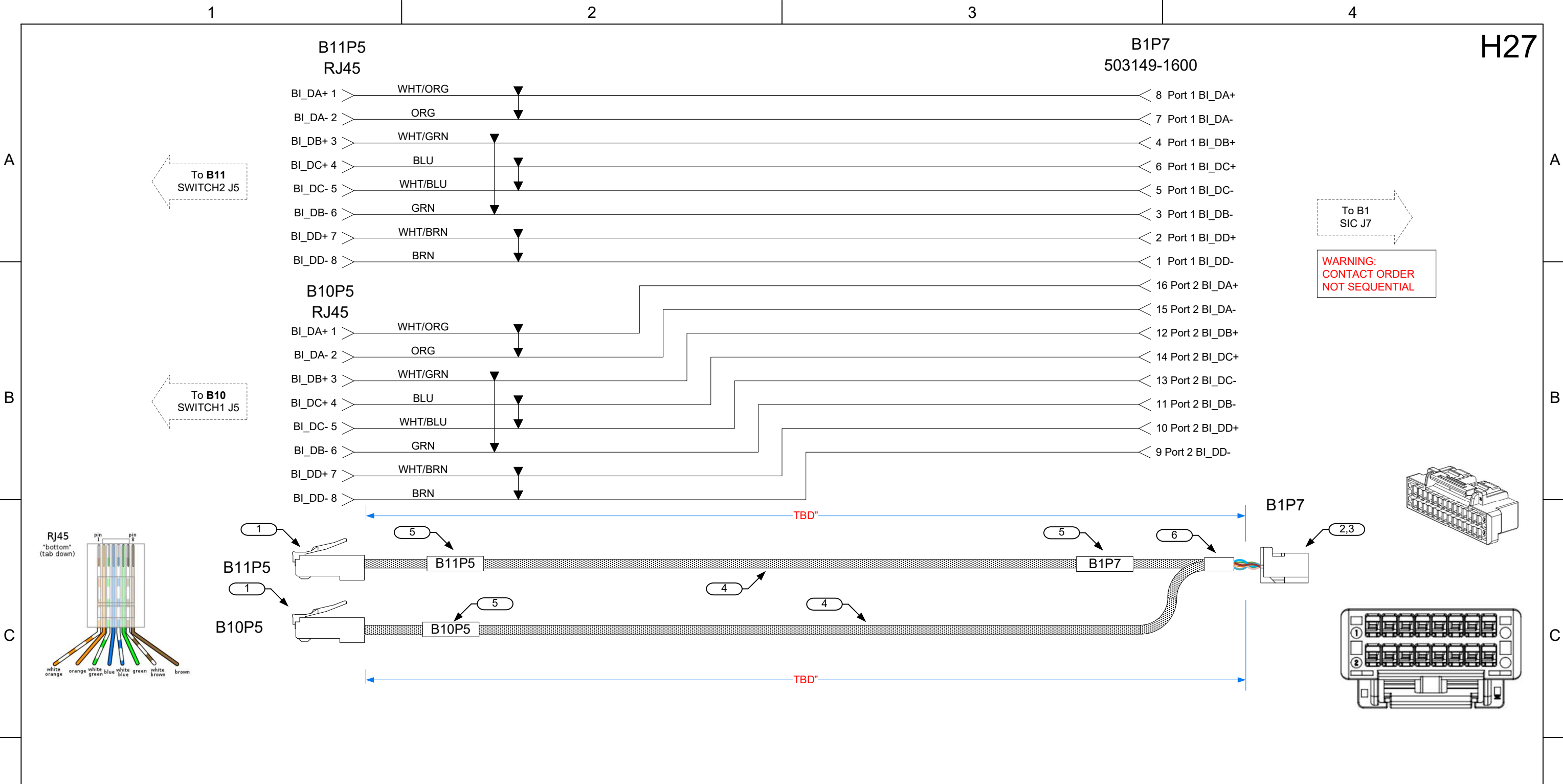
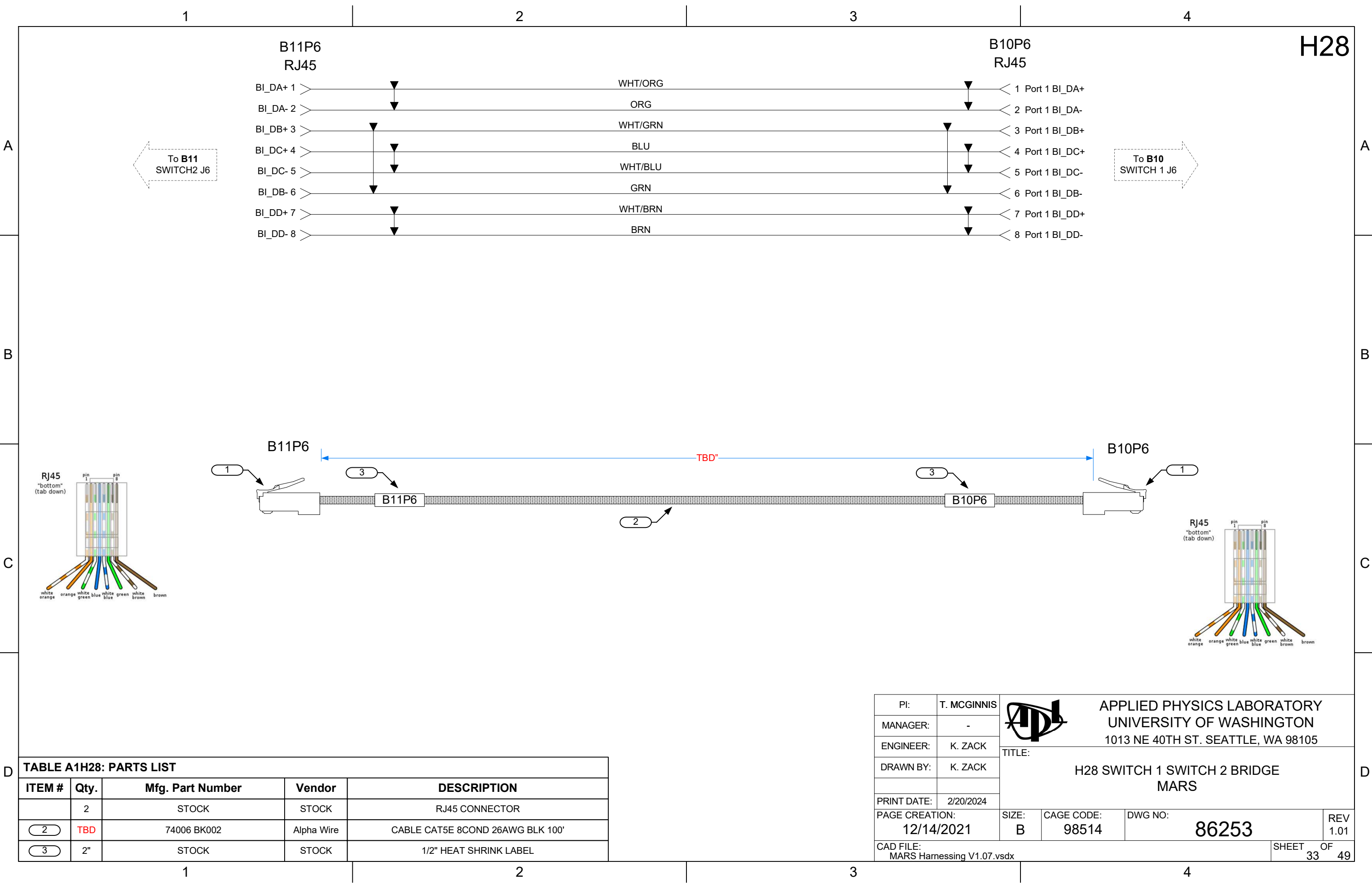
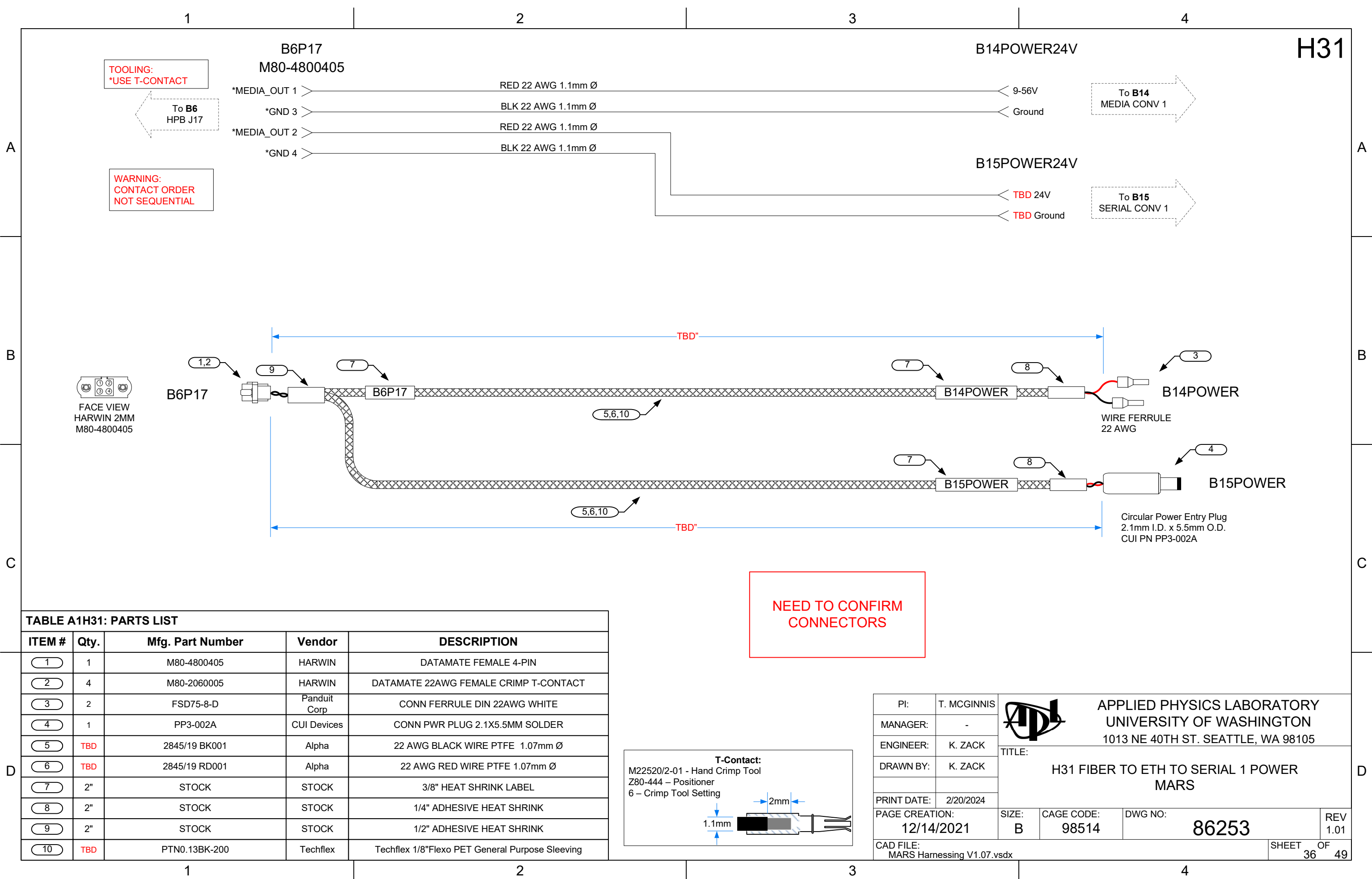


TABLE A1H27: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	2	STOCK	STOCK	RJ45 CONNECTOR
2	2	503149-1600	Molex	Molex CLIK-Mate 503149 16 Pin
3	16	2130287000	Molex	CRIMP TERM 1.5 #24-26 C AU0.76
4	TBD	74006 BK002	Alpha Wire	CABLE CAT5E 8COND 26AWG BLK 100'
5	2"	STOCK	STOCK	1/2" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	3/4" ADHESIVE HEAT SHRINK

PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105		
MANAGER:	-			
ENGINEER:	K. ZACK	TITLE: H27 SIC ETHERNET MARS		
DRAWN BY:	K. ZACK			
PRINT DATE:	2/20/2024	SIZE: B CAGE CODE: 98514 DWG NO: 86253 REV 1.01		
PAGE CREATION:	12/14/2021			
CAD FILE: MARS Harnessing V1.07.vsdX		SHEET 32 OF 49		





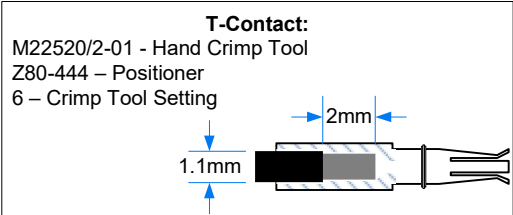
TOOLING:
*USE T-CONTACT

WARNING:
CONTACT ORDER
NOT SEQUENTIAL

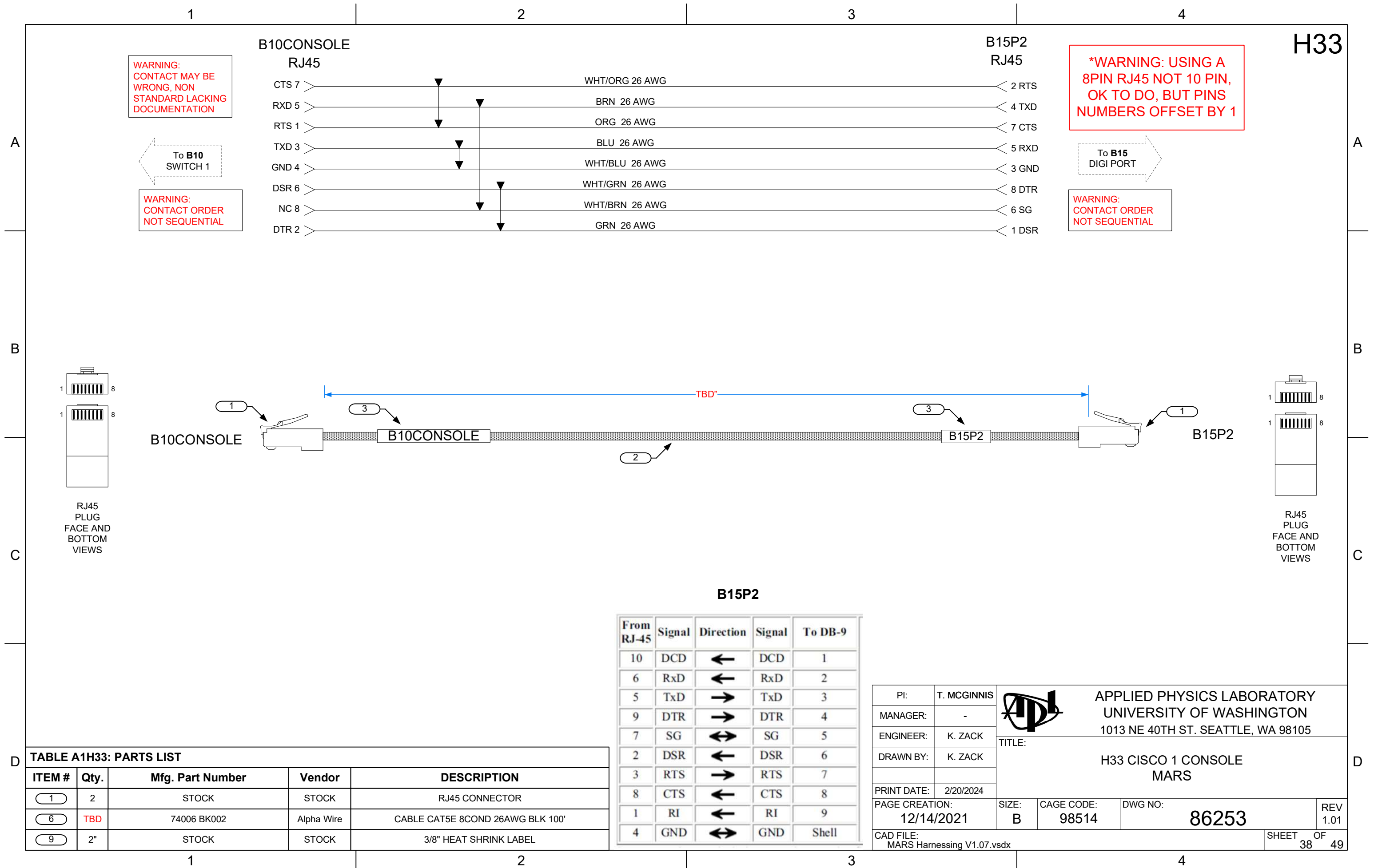
FACE VIEW
HARWIN 2MM
M80-4800405

TABLE A1H31: PARTS LIST				
ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-4800405	HARWIN	DATAMATE FEMALE 4-PIN
2	4	M80-2060005	HARWIN	DATAMATE 22AWG FEMALE CRIMP T-CONTACT
3	2	FSD75-8-D	Panduit Corp	CONN FERRULE DIN 22AWG WHITE
4	1	PP3-002A	CUI Devices	CONN PWR PLUG 2.1X5.5MM SOLDER
5	TBD	2845/19 BK001	Alpha	22 AWG BLACK WIRE PTFE 1.07mm Ø
6	TBD	2845/19 RD001	Alpha	22 AWG RED WIRE PTFE 1.07mm Ø
7	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
8	2"	STOCK	STOCK	1/4" ADHESIVE HEAT SHRINK
9	2"	STOCK	STOCK	1/2" ADHESIVE HEAT SHRINK
10	TBD	PTN0.13BK-200	Techflex	Techflex 1/8"Flexo PET General Purpose Sleeveing

NEED TO CONFIRM
CONNECTORS



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105			
MANAGER:	-				
ENGINEER:	K. ZACK	TITLE: H31 FIBER TO ETH TO SERIAL 1 POWER MARS			
DRAWN BY:	K. ZACK				
PRINT DATE:	2/20/2024				
PAGE CREATION:	12/14/2021	SIZE: B	CAGE CODE: 98514	DWG NO: 86253	REV 1.01
CAD FILE: MARS Harnessing V1.07.vsd					SHEET 36 OF 49



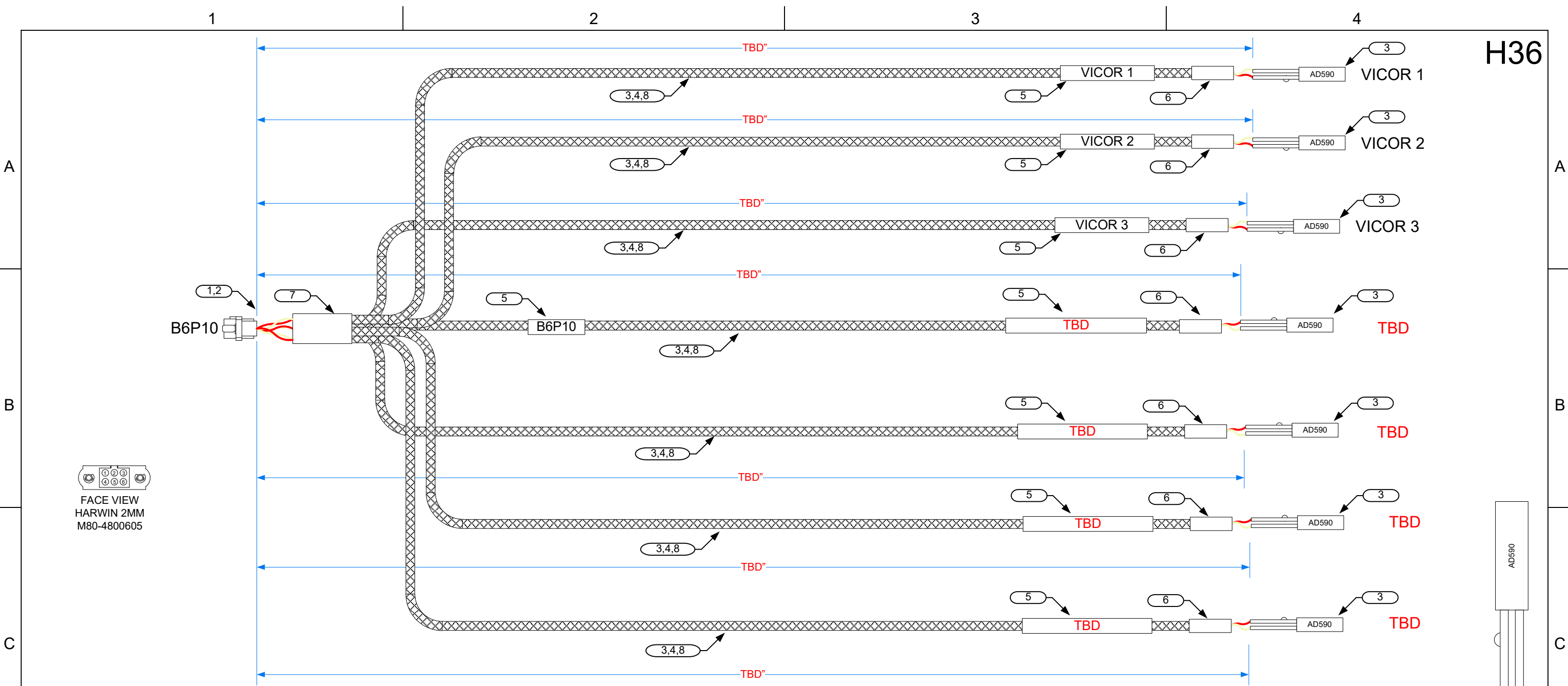
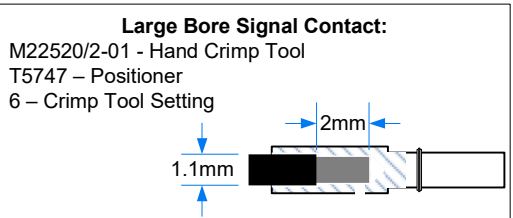


TABLE A1H36: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-4801405	HARWIN	DATAMATE FEMALE 14-PIN
2	6	M80-0110005	HARWIN	DATAMATE 22AWG FEMALE CRIMP
3	3	AD590JF	Analog Devices Inc.	SENSOR ANALOG -55C-150C 2FLATPK
3	TBD	2845/19 WH001	Alpha	22 AWG WHITE WIRE PTFE 1.07mm Ø
4	TBD	2845/19 RD001	Alpha	22 AWG RED WIRE PTFE 1.07mm Ø
5	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	1/4" ADHESIVE HEAT SHRINK
7	2"	STOCK	STOCK	3/4" ADHESIVE HEAT SHRINK
8	TBD	PTN0.13BK-200	Techflex	Techflex 1/8"Flexo PET General Purpose Sleaving



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105				
MANAGER:	-					
ENGINEER:	K. ZACK					
DRAWN BY:	K. ZACK	TITLE: H36 PG2 HPB TEMPERATURE SENSORS MARS				
PRINT DATE:	2/20/2024					
PAGE CREATION: 12/14/2021		SIZE: B	CAGE CODE: 98514	DWG NO: 86253		REV 1.01
CAD FILE: MARS Harnessing V1.07.vsd					SHEET 42	OF 49

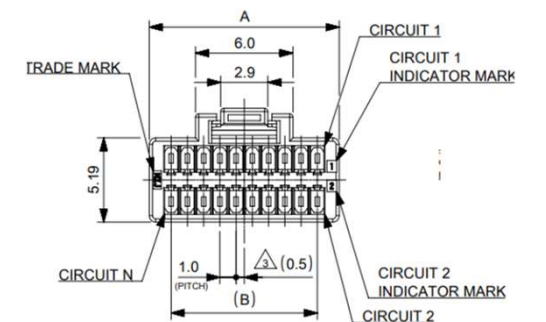
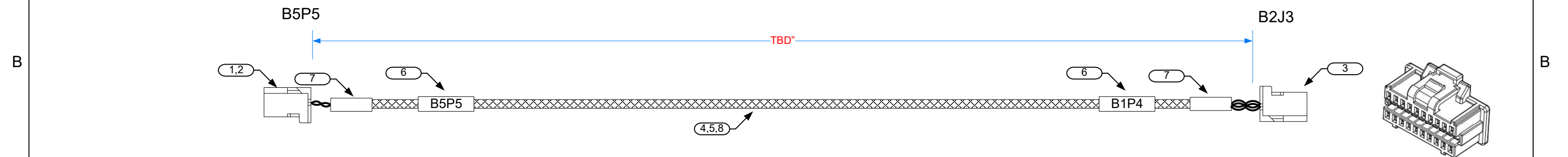
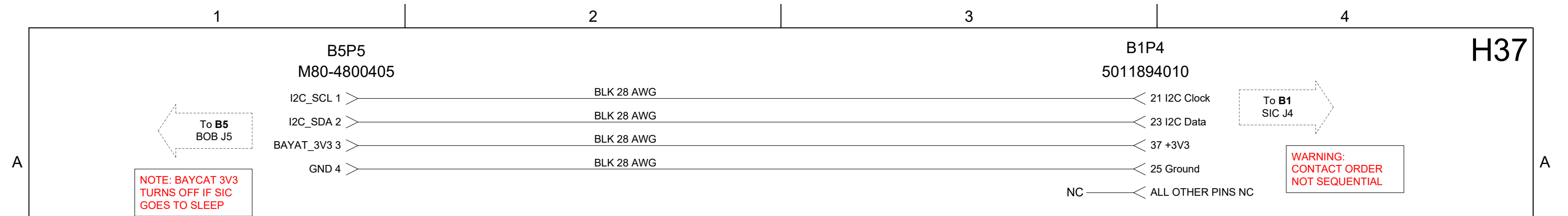
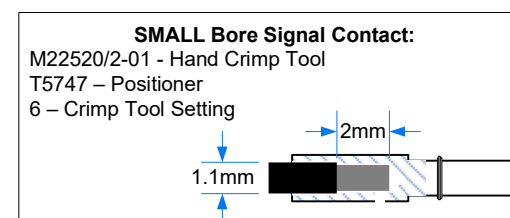


TABLE A1H37: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-4800405	HARWIN	DATAMATE FEMALE 4-PIN
2	4	M80-0130005	HARWIN	CONN SOCKET 24-28AWG CRIMP GOLD
3	1	5011894010	Molex	CONN RCPT HSG 40POS 1.00MM
4	4	0797581018	Molex	PICO-CLASP 150MM 28AWG PRE-CRIMP
5	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	1/4" ADHESIVE HEAT SHRINK
7	TBD	PTN0.13BK-200	Techflex	Techflex 1/8"Flexo PET General Purpose Sleeving



PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105			
MANAGER:	-				
ENGINEER:	K. ZACK	TITLE: H37 SIC TO PADDLEBOARD I2C MARS			
DRAWN BY:	K. ZACK				
PRINT DATE:	2/20/2024				
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12/14/2021		B	98514	86253	1.01
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MARS Harnessing V1 07 vstd					43 49

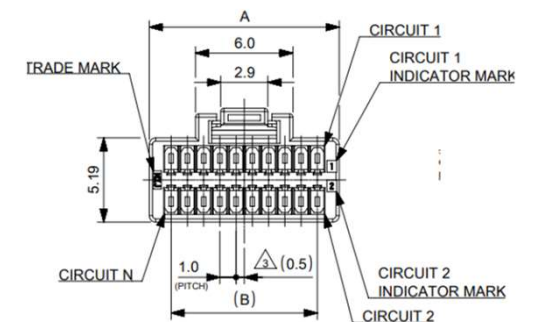
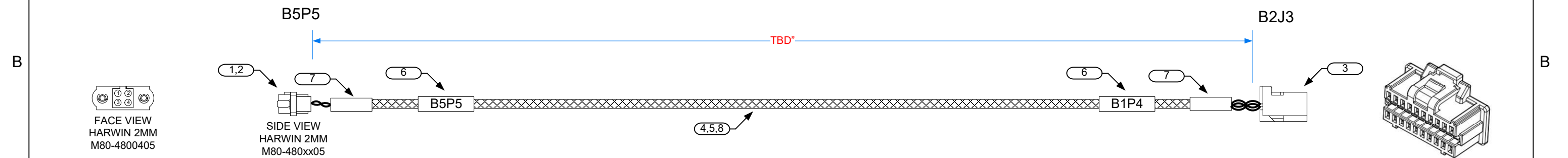
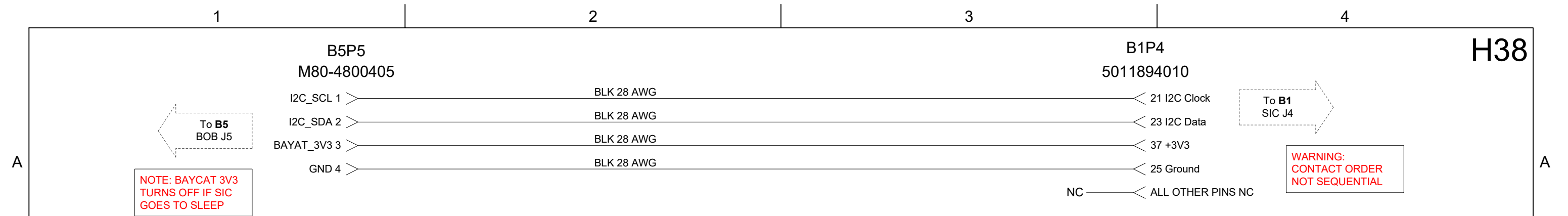
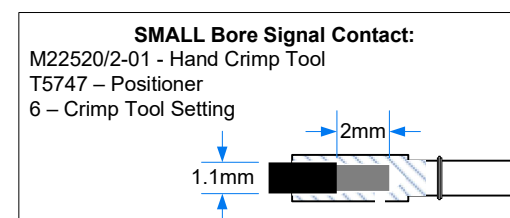


TABLE A1H37: PARTS LIST	
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ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	1	M80-4800405	HARWIN	DATAMATE FEMALE 4-PIN
2	4	M80-0130005	HARWIN	CONN SOCKET 24-28AWG CRIMP GOLD
3	1	5011894010	Molex	CONN RCPT HSG 40POS 1.00MM
4	4	0797581018	Molex	PICO-CLASP 150MM 28AWG PRE-CRIMP
5	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL
6	2"	STOCK	STOCK	1/4" ADHESIVE HEAT SHRINK
7	TBD	PTN0.13BK-200	Techflex	Techflex 1/8"Flexo PET General Purpose Sleeving



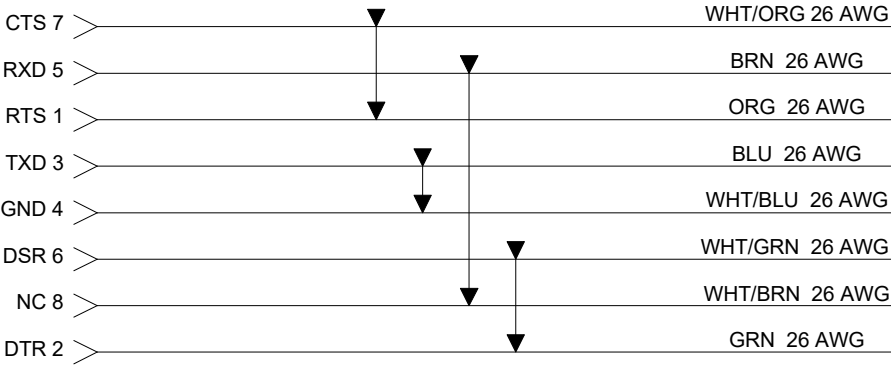
PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105			
MANAGER:	-				
ENGINEER:	K. ZACK	TITLE: H38 PADDLEBOARD TO BOB I2C MARS			
DRAWN BY:	K. ZACK				
PRINT DATE:	2/20/2024				
PAGE CREATION:		SIZE:	CAGE CODE:	DWG NO:	REV
12/14/2021		B	98514	86253	1.01
CAD FILE:					SHEET
MARS Harnessing V1.07.vsd					OF
					44 49

WARNING:
CONTACT MAY BE
WRONG, NON
STANDARD LACKING
DOCUMENTATION

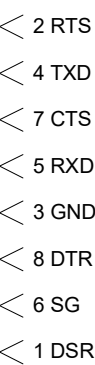
To B10
SWITCH 1

WARNING:
CONTACT ORDER
NOT SEQUENTIAL

B10CONSOLE
RJ45



B15P2
RJ45



*WARNING: USING A
8PIN RJ45 NOT 10 PIN,
OK TO DO, BUT PINS
NUMBERS OFFSET BY 1

To B15
DIGI PORT

WARNING:
CONTACT ORDER
NOT SEQUENTIAL

B10CONSOLE

B10CONSOLE

B15P2

B15P2

NEED TO UPDATE
INFO ABOUT
CONNECTED DEVICES
FOR 8 CABLE
ASSEMBLIES

B15P2

From RJ-45	Signal	Direction	Signal	To DB-9
10	DCD	←	DCD	1
6	RxD	←	RxD	2
5	TxD	→	TxD	3
9	DTR	→	DTR	4
7	SG	↔	SG	5
2	DSR	←	DSR	6
3	RTS	→	RTS	7
8	CTS	←	CTS	8
1	RI	←	RI	9
4	GND	↔	GND	Shell

TABLE A1H33: PARTS LIST

ITEM #	Qty.	Mfg. Part Number	Vendor	DESCRIPTION
1	2	STOCK	STOCK	RJ45 CONNECTOR
6	TBD	74006 BK002	Alpha Wire	CABLE CAT5E 8COND 26AWG BLK 100'
9	2"	STOCK	STOCK	3/8" HEAT SHRINK LABEL

PI:	T. MCGINNIS	 APPLIED PHYSICS LABORATORY UNIVERSITY OF WASHINGTON 1013 NE 40TH ST. SEATTLE, WA 98105		
MANAGER:	-			
ENGINEER:	K. ZACK	TITLE: H41-48 PORT SERVER – SERIAL SPLITTER MARS		
DRAWN BY:	K. ZACK			
PRINT DATE:	2/20/2024	SIZE: B CAGE CODE: 98514 DWG NO: 86253 REV 1.01		
PAGE CREATION:	12/14/2021			
CAD FILE: MARS Harnessing V1.07.vsd				SHEET 47 OF 49

