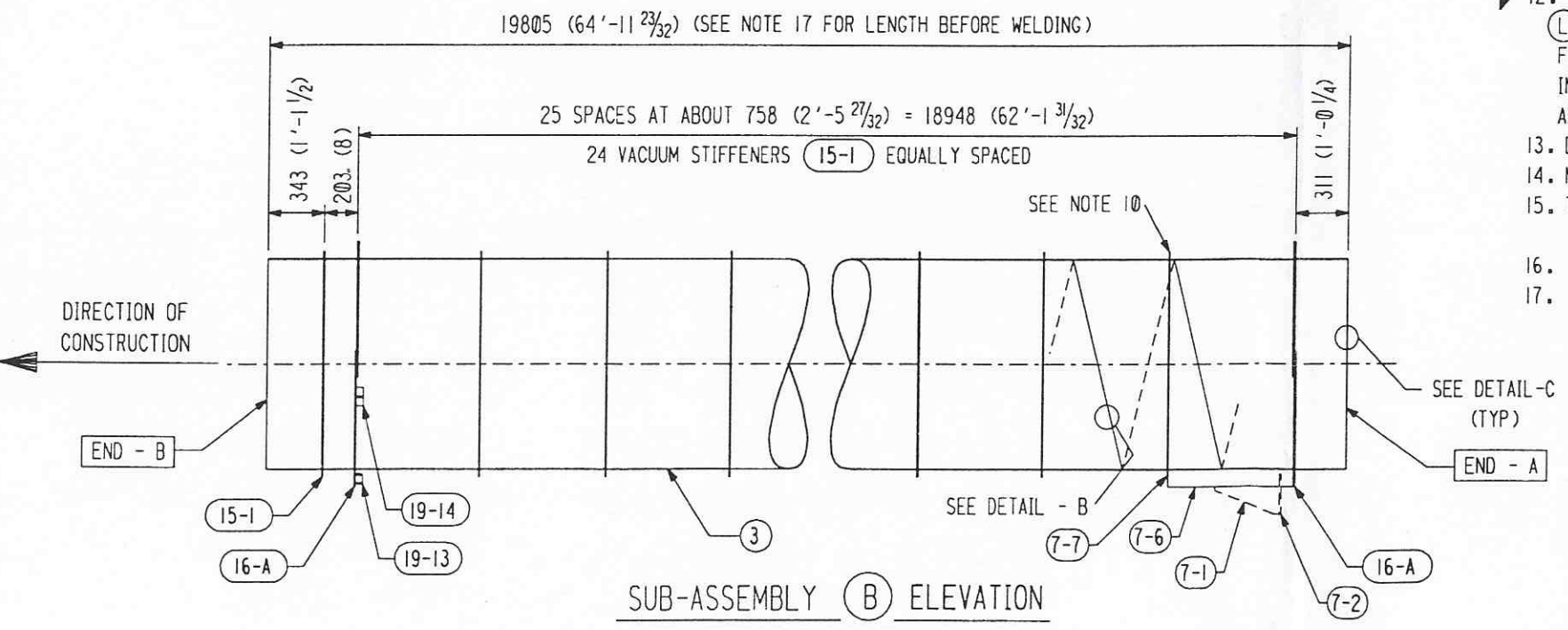
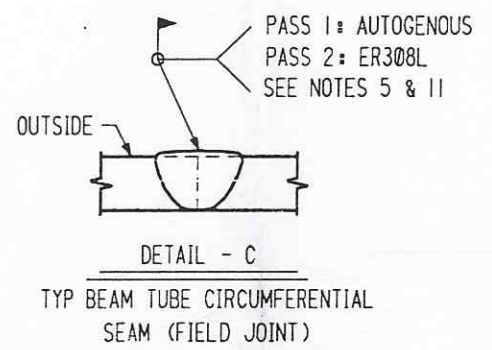
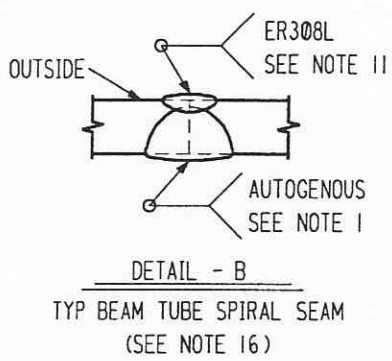
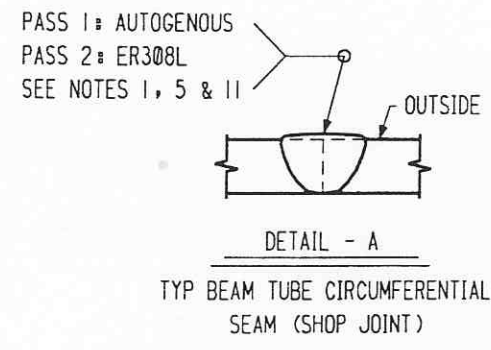


SUB-ASSEMBLY (A) ELEVATION
 DETAILED AND BILLED FOR (1), (384) REQUIRED



SUB-ASSEMBLY (B) ELEVATION
 DETAILED AND BILLED FOR (1), (320) REQUIRED

SHP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	ID
1	4-A		BEAM TUBE SUB-ASSEMBLY - A			
	4-1	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 62'-10 23/32)	19170	M1	A
	4-2	1	EXPANSION JOINT (SEE HYSpan DWG. #50418)	635 (2'-1)	M2	A
	15-1	25	VACUUM STIFFENER			
	16-A	1	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
1	4-B		BEAM TUBE SUB-ASSEMBLY - B			
	4-3	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 64'-11 23/32)	19805	M1	A
	7-6	1	FIXED SUPPORT BRACKET			
	7-7	1	STIFFENER REINFORCEMENT			
	15-1	25	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
			M1 = MAT'L SPEC C-240-0186 (SA240 TP 304L HRAP)			
			M2 = MAT'L SPEC C-EJ-CO (SA240 TP 304L HRAP)			

NOTES: (FOR DWG. #4 SHT. 1 THRU 7)

- CIRCUMFERENTIAL SEAM WILL BE WELDED BEFORE CLEANING AND LEAK TESTING.
- DIMENSIONS POSITIONING VACUUM STIFFENERS (15-1) LOCATE THE CENTERLINE OF THE STIFFENER.
- DIMENSIONS POSITIONING SUPPORT RINGS (16-A) LOCATE THE CENTER OF THE LAP JOINT.
- ORIENT SUPPORT RINGS (16-A) SO BOTTOM HALF OF RING IS CLOSEST TO THE NEAREST TUBE END (UNLESS NOTED).
- ORIENT BEAM TUBE SPIRAL WELD SEAMS AND EXPANSION JOINT LONGITUDINAL SEAMS AS SHOWN ON DWG. 0 SHT. 2.
- MARK END-A AND END-B OF EACH BEAM TUBE SECTION AFTER SPIRAL WELDING PER FABSEQ, SECT. 3.3.
- WORK THIS DRAWING WITH DWG. #0, 7, 15, 16, 19, 20 AND 21.
- DIMENSIONS POSITIONING SUPPORT RINGS (21-A) LOCATE THE CENTERLINE OF THE RING.
- RECORD WIDTH OF COIL MATERIAL USED TO FABRICATE EACH TUBE SECTION ON THE QA RECORD DWG. FOR THAT TUBE.
- SEE DRAWING #7 FOR LOCATION OF WELD FOR THIS RING ONLY. OTHER RINGS CAN BE WELDED ON EITHER SIDE.
- WELD FILLER METAL TO BE CLEANED PER SPEC WMS-ER308L.
- TOLERANCE OF SUB-ASSEMBLY LENGTH IS +/- 4 MM. THE LENGTH OF SUB-ASSEMBLIES (A), (B), (C), (D), (F), (G), (L), (M) AND (S) MAY BE INCREASED BY 8 (5/16") OR DECREASED BY 16 (5/8"). THE CHANGE IS TO BE MADE AT THE FIXED SUPPORT END. THE LENGTH OF SUB-ASSEMBLIES (E), (H), (I), (J), (K), (N), (O), (P), (Q) AND (R) MAY BE INCREASED OR DECREASED BY 51 (2"). THE CHANGE IS TO BE MADE BETWEEN THE TERMINATION STIFFENER (21-A) AND THE VACUUM STIFFENER (15-1) NEXT TO THE PUMP PORT.
- DISTANCE FROM EACH SUPPORT RING (16-A) TO NEAREST END OF SUB-ASSEMBLY TO BE AS DETAILED WITHIN +/- 4 MM.
- MAXIMUM CLEAR SPACE BETWEEN TWO ADJACENT STIFFENERS TO BE NO GREATER THAN 762 MM (30 IN).
- THE EXPANSION JOINTS (2) FOR SUB-ASSEMBLIES (E), (G), (J), (K), (M) AND (R) SHALL HAVE EQUAL OR HIGHER SPRING RATES THAN THE EXPANSION JOINTS FOR THE ADJACENT SUB-ASSEMBLY (A).
- INSIDE AND OUTSIDE WELD AT THE SEAM SHALL OVERLAP TO PROVIDE COMPLETE PENETRATION.
- ALL DIMENSIONS ARE AFTER WELDING UNLESS NOTED OTHERWISE. STIFFENER WELDING WILL DECREASE OVERALL LENGTH BY ABOUT 2 MM (1/16").

APPROVED

M. Jellison 4-23-97
 CBI DATE

Don 7/24/97
 CALTECH DATE

CBI SUPPLIER'S / PURCHASER'S NO

LIGO BEAM TUBE
 HANFORD, WA & LIVINGSTON, LA

SUB-ASSEMBLIES
 (A) & (B)

CUSTOMER'S NO
 BY KJR CHKD DET DATE 3-15-94 CONTRACT NO 953571

ENGINEERING ASSIGNED
 D.E. THORN DWG 4 REV 7
 SHT 1

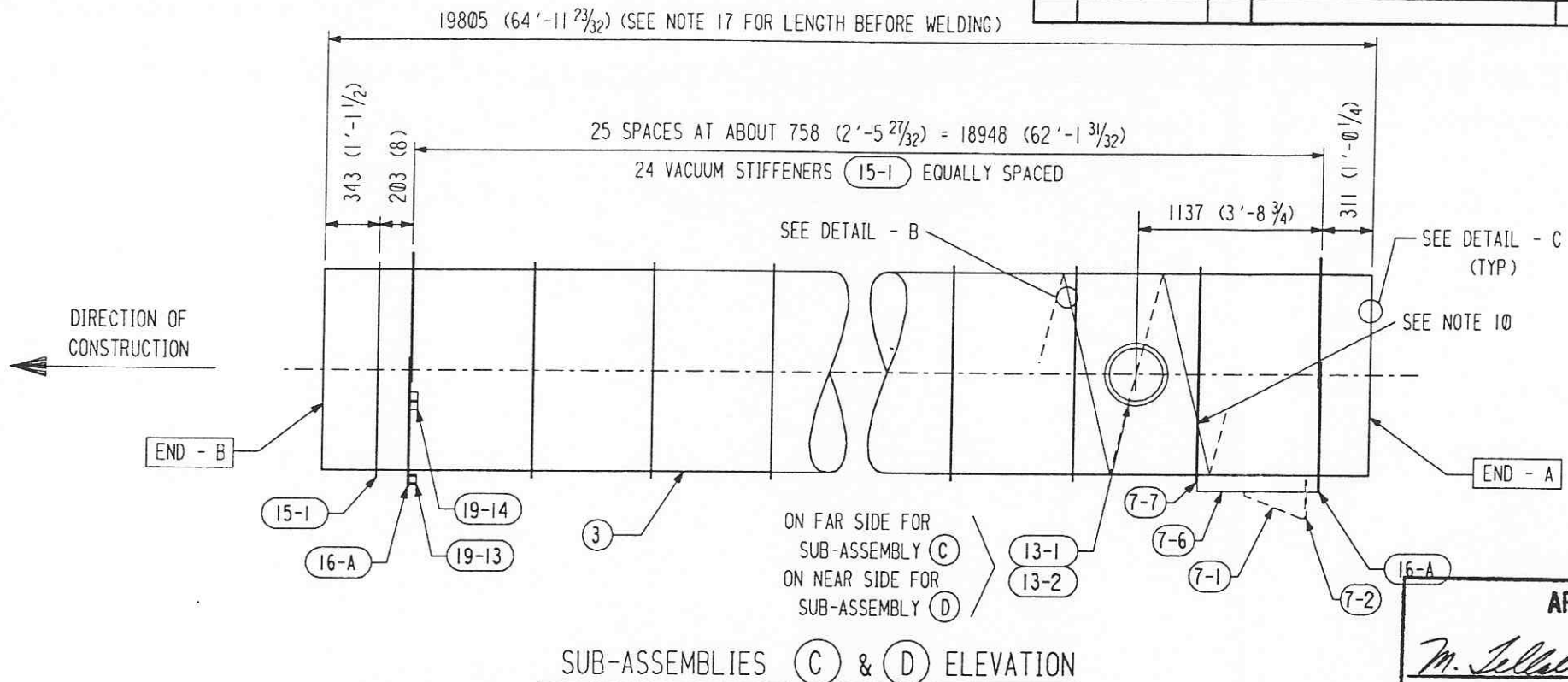
REVISIONS
 L190-D950034-07-B

55710104.DGN

INDICATES CHANGE FROM PREVIOUS ISSUE

SHIP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	ID
	21-3 R/L	2	TERM. SUPPORT RING BRACKET (SHORT)			
	21-4 R/L	2	TERM. SUPPORT RING BRACKET (LONG)			

SHIP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	ID
1	4-C		BEAM TUBE SUB-ASSEMBLY - C			
	4-3	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 64'-11 23/32)	19805	MI	A
	7-6	1	FIXED SUPPORT BRACKET			
	7-7	1	STIFFENER REINFORCEMENT			
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	25	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
1	4-D		BEAM TUBE SUB-ASSEMBLY - D			
	4-3	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 64'-11 23/32)	19805	MI	A
	7-6	1	FIXED SUPPORT BRACKET			
	7-7	1	STIFFENER REINFORCEMENT			
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	25	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
1	4-E		BEAM TUBE SUB-ASSEMBLY - E			
	4-4	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 49'-7 11/32)	15122	MI	A
	4-2	1	EXPANSION JOINT (SEE HYSPAN DWG. #50418)	635 (2'-1)	M2	A
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	18	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
	21-A	2	TERMINATION SUPPORT RING ASS'Y			
	21-2	4	TERM. SUPPORT RING BRACKET (RECT.)			
	21-3 R/L	2	TERM. SUPPORT RING BRACKET (SHORT)			
	21-4 R/L	2	TERM. SUPPORT RING BRACKET (LONG)			
1	4-J		BEAM TUBE SUB-ASSEMBLY - J			
	4-4	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 49'-7 11/32)	15122	MI	A
	4-2	1	EXPANSION JOINT (SEE HYSPAN DWG. #50418)	635 (2'-1)	M2	A
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	18	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
	21-A	2	TERMINATION SUPPORT RING ASS'Y			
	21-2	4	TERM. SUPPORT RING BRACKET (RECT.)			



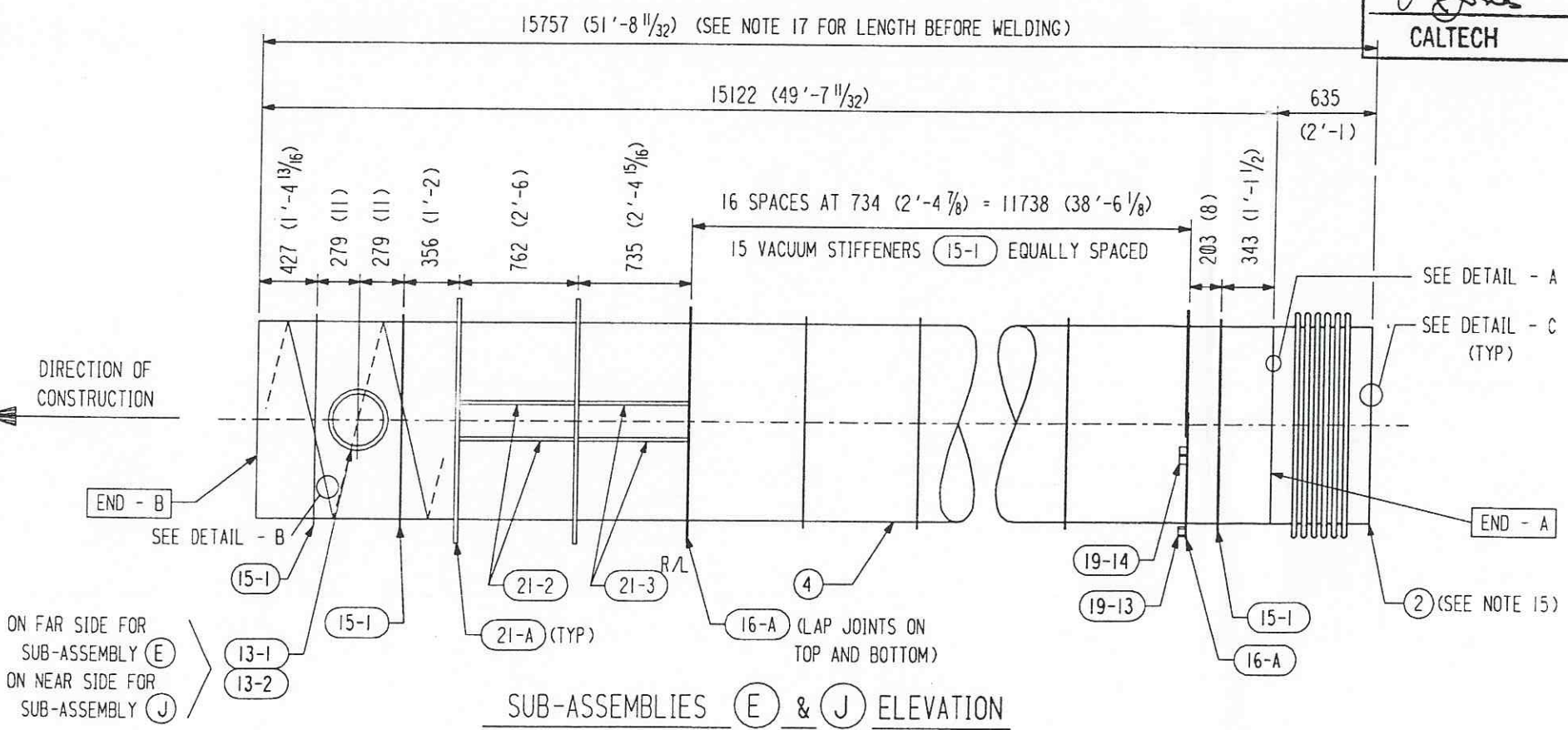
SUB-ASSEMBLIES (C) & (D) ELEVATION

(C) DETAILED AND BILLED FOR (1), (28) REQUIRED ; (D) DETAILED AND BILLED FOR (1), (28) REQUIRED

APPROVED

M. Tellalian 4-23-97
CBI DATE

J. Jones 7/24/97
CALTECH DATE



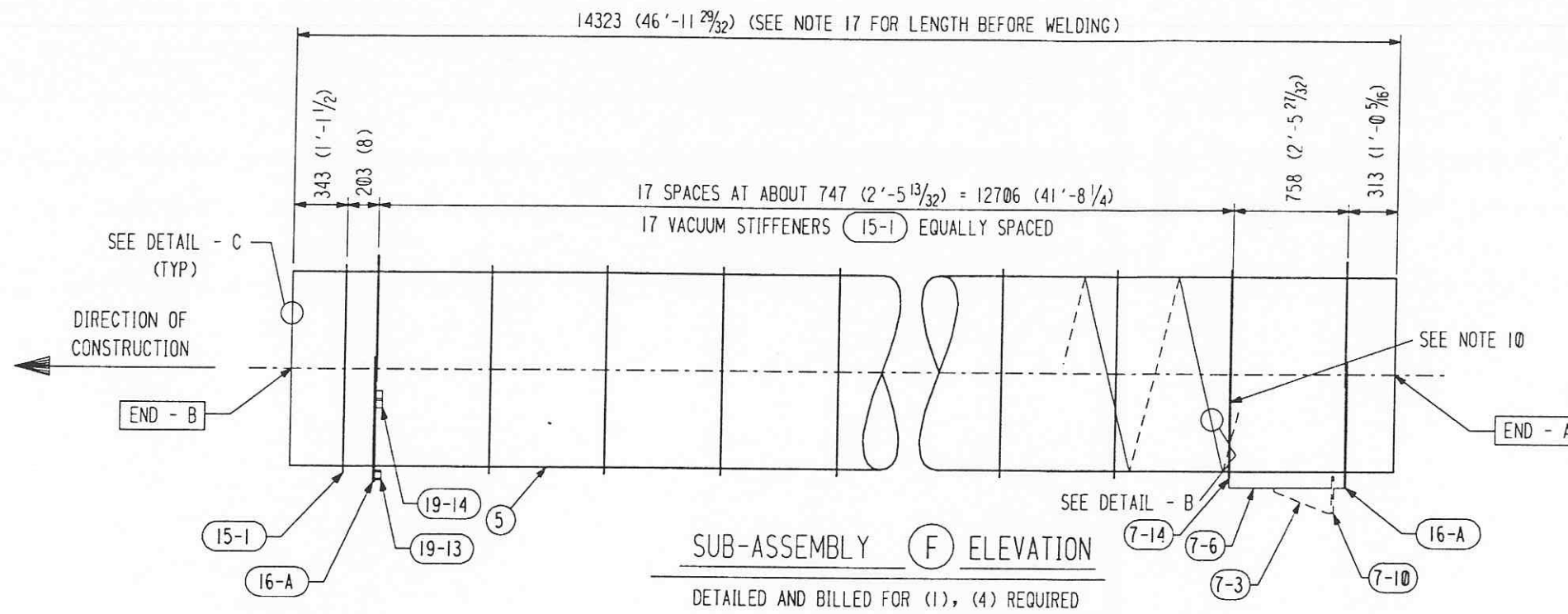
SUB-ASSEMBLIES (E) & (J) ELEVATION

(E) DETAILED AND BILLED FOR (1), (2) REQUIRED ; (J) DETAILED AND BILLED FOR (1), (2) REQUIRED

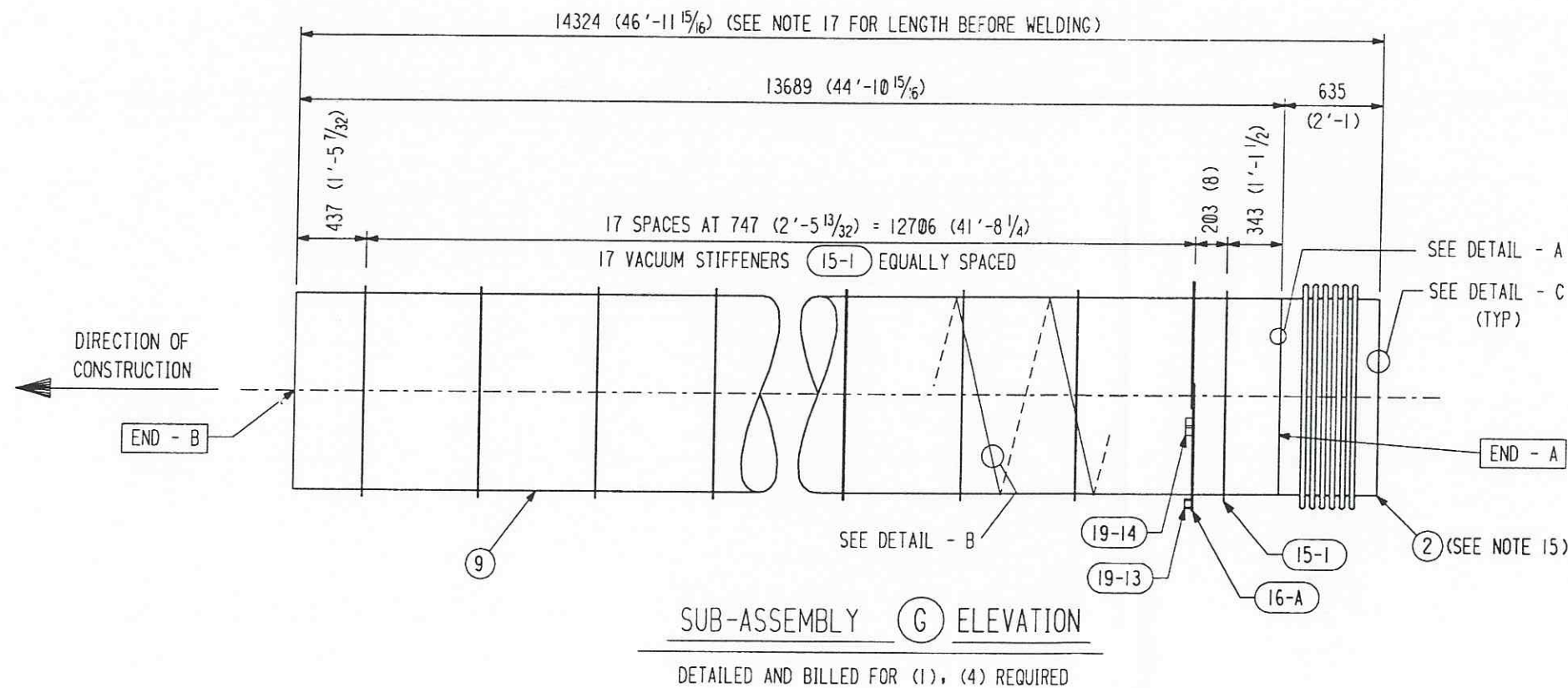
INDICATES CHANGE FROM PREVIOUS ISSUE

SUPPLIER'S / PURCHASER'S NO CBI		CUSTOMER'S NO 953571	
LIGO BEAM TUBE HANFORD, WA & LIVINGSTON, LA SUB-ASSEMBLIES (C), (D), (E) & (J)		CONTRACT NO 953571	
BY DTR CHKD CST DATE 3/11/96 M. L. TELLALIAN ENGINEERING ASSIGNED		DWG 4 SHT 2 REV 7	

55710204.DGN



SHP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	ID
1	4-F		BEAM TUBE SUB-ASSEMBLY - F			
	4-5	1	TUBE 1245 OD X 3.2 (49.000 OD X 0.127 X 46'-11 29/32)	14323	M1	A
	7-6	1	FIXED SUPPORT BRACKET			
	7-14	1	STIFFENER REINFORCEMENT			
	15-1	18	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
1	4-G		BEAM TUBE SUB-ASSEMBLY - G			
	4-9	1	TUBE 1245 OD X 3.2 (49.000 OD X 0.127 X 44'-10 15/16)	13689	M1	A
	4-2	1	EXPANSION JOINT (SEE HYPAN DWG. #50418)	635 (2'-1)	M2	A
	15-1	18	VACUUM STIFFENER			
	16-A	1	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			



APPROVED

M. Tellalian 4-23-97
CBI DATE

J. Jones 7/24/97
CALTECH DATE

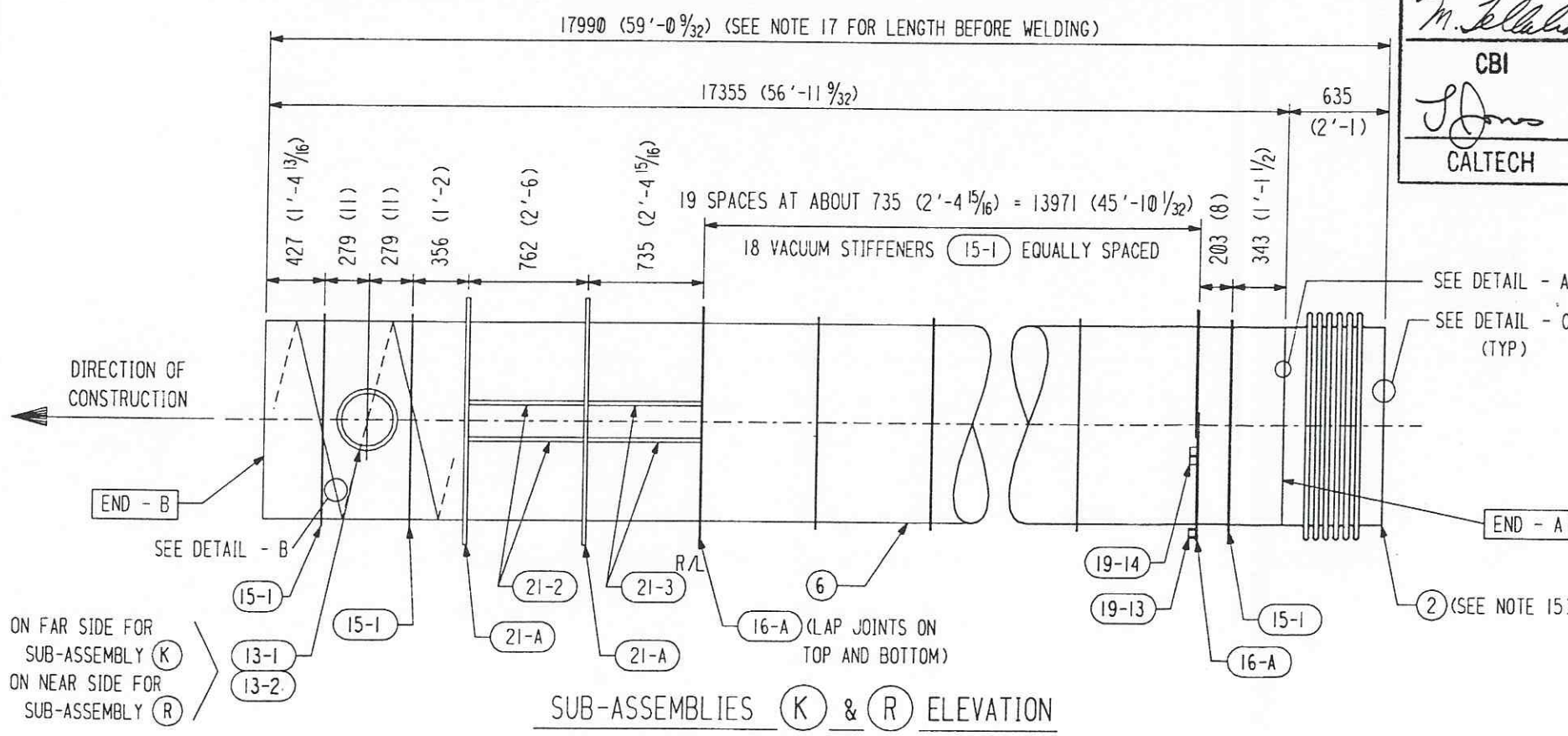
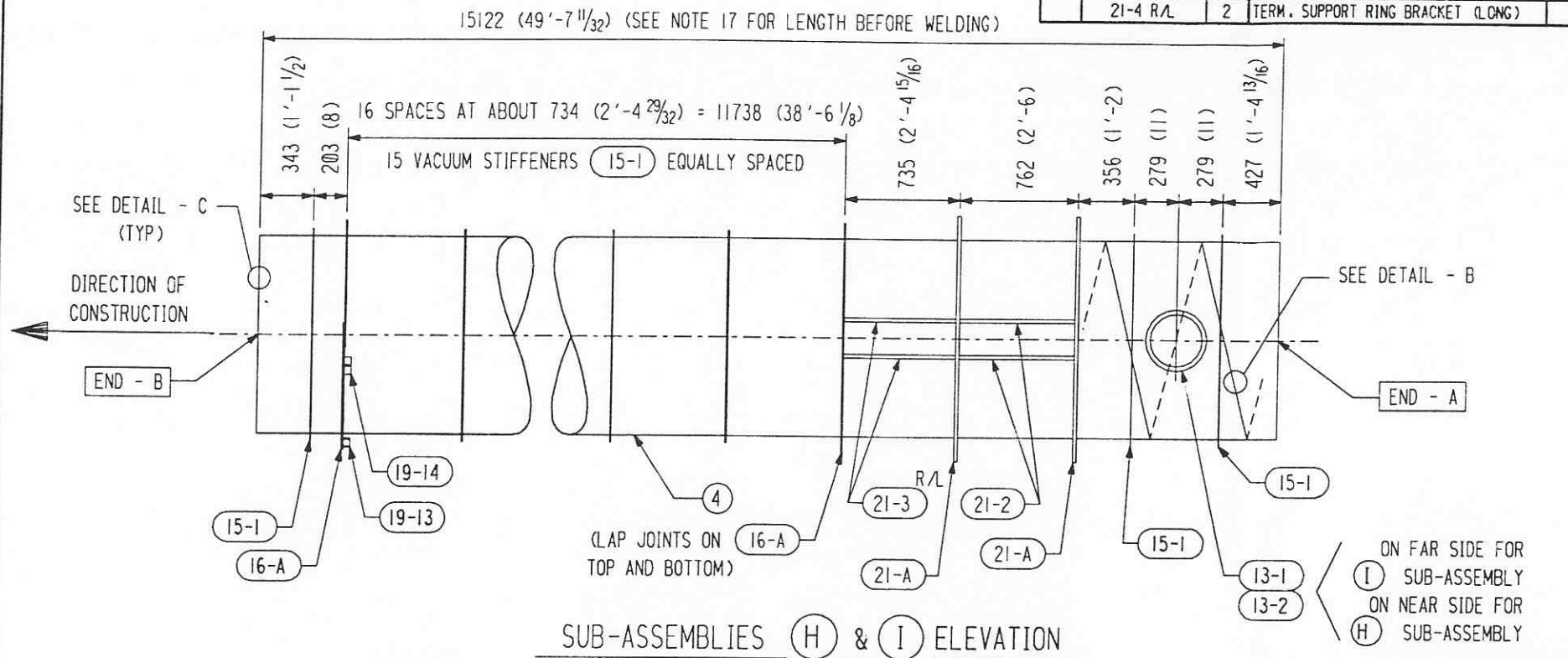
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BY	DATE	REVISIONS	REMARKS
CHKD	DATE		
APP'D	DATE		
DES	DATE		

CBI		SUPPLIER'S / PURCHASER'S NO	
LIGO BEAM TUBE HANFORD, WA & LIVINGSTON, LA SUB-ASSEMBLIES (F) & (G)			
CUSTOMER'S NO		CONTRACT NO	
BY DTR CHKD CST DATE 3/11/96		953571	
M. L. TELLALIAN ENGINEERING ASSIGNED		DWG 4	REV 7
		SHT 3	

▶ INDICATES CHANGE FROM PREVIOUS ISSUE

SHP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	ID
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
	21-A	2	TERMINATION SUPPORT RING ASS'Y			
	21-2	4	TERM. SUPPORT RING BRACKET (RECT.)			
	21-3 R/L	2	TERM. SUPPORT RING BRACKET (SHORT)			
	21-4 R/L	2	TERM. SUPPORT RING BRACKET (LONG)			

SHP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	ID
1	4-H		BEAM TUBE SUB-ASSEMBLY - H			
	4-4	1	TUBE 1245 OD X 3.2 (49.00 OD) X 0.127 X 49'-7 11/32)	15122	MI	A
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	18	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
	21-A	2	TERMINATION SUPPORT RING ASS'Y			
	21-2	4	TERM. SUPPORT RING BRACKET (RECT.)			
	21-3 R/L	2	TERM. SUPPORT RING BRACKET (SHORT)			
	21-4 R/L	2	TERM. SUPPORT RING BRACKET (LONG)			
1	4-I		BEAM TUBE SUB-ASSEMBLY - I			
	4-4	1	TUBE 1245 OD X 3.2 (49.00 OD) X 0.127 X 49'-7 11/32)	15122	MI	A
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	18	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
	21-A	2	TERMINATION SUPPORT RING ASS'Y			
	21-2	4	TERM. SUPPORT RING BRACKET (RECT.)			
	21-3 R/L	2	TERM. SUPPORT RING BRACKET (SHORT)			
	21-4 R/L	2	TERM. SUPPORT RING BRACKET (LONG)			
1	4-K		BEAM TUBE SUB-ASSEMBLY - K			
	4-6	1	TUBE 1245 OD X 3.2 (49.00 OD) X 0.127 X 56'-11 9/32)	17355	MI	A
	4-2	1	EXPANSION JOINT (SEE HYPAN DWG. #50418)	635 (2'-1)	M2	A
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	21	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
	21-A	2	TERMINATION SUPPORT RING ASS'Y			
	21-2	4	TERM. SUPPORT RING BRACKET (RECT.)			
	21-3 R/L	2	TERM. SUPPORT RING BRACKET (SHORT)			
	21-4 R/L	2	TERM. SUPPORT RING BRACKET (LONG)			
1	4-R		BEAM TUBE SUB-ASSEMBLY - R			
	4-6	1	TUBE 1245 OD X 3.2 (49.00 OD) X 0.127 X 56'-11 9/32)	17355	MI	A
	4-2	1	EXPANSION JOINT (SEE HYPAN DWG. #50418)	635 (2'-1)	M2	A
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	21	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			



APPROVED

M. Tellalian 4-23-97
CBI DATE

J. Jones 7/24/97
CALTECH DATE

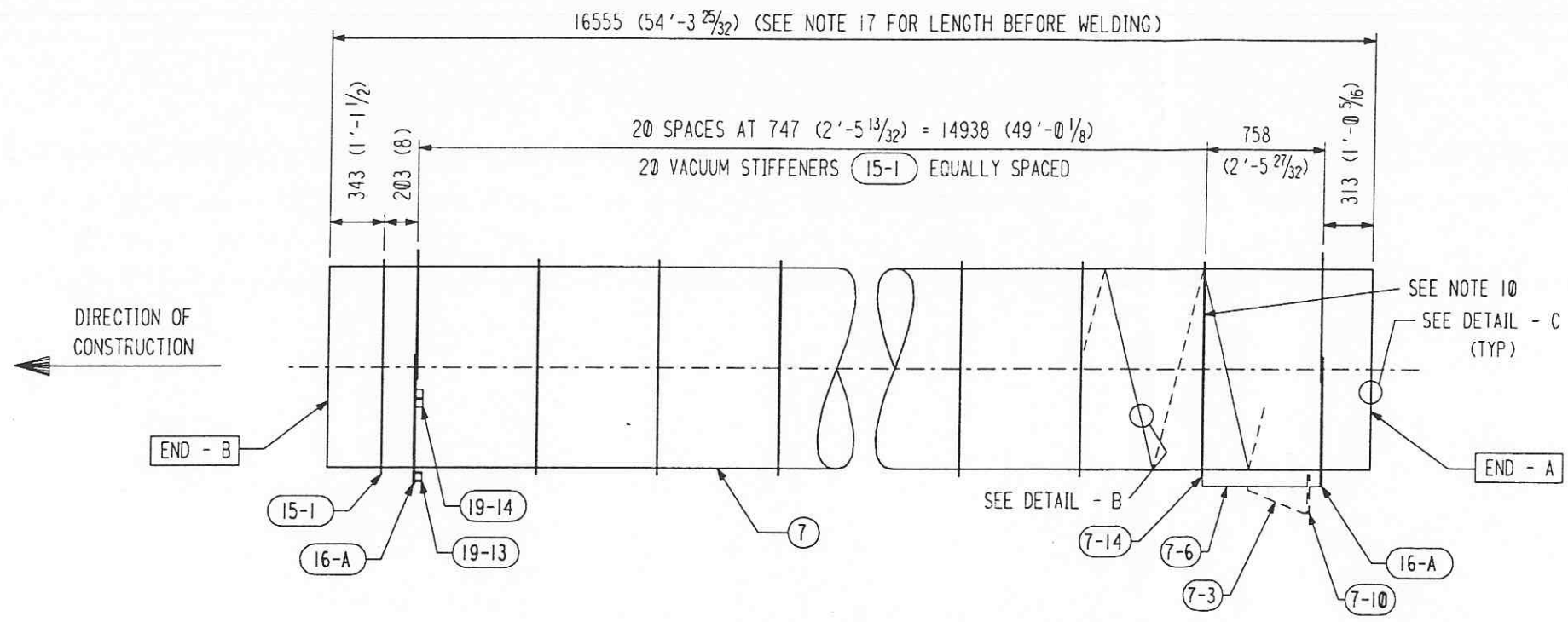
SUPPLIER'S / PURCHASER'S NO CBI	
LIGO BEAM TUBE HANFORD, WA & LIVINGSTON, LA SUB-ASSEMBLIES (H), (I), (K) & (R)	
CUSTOMER'S NO BY DTR CHKD CST DATE 3/11/96 M. L. TELLALIAN ENGINEERING ASSIGNED	CONTRACT NO 953571 DWG 4 SHT 4 REV 7

REVISIONS

NO	DATE	BY	DESCRIPTION
1	11-21-96	DTR	REVISED TUBE LENGTHS DUE TO HIGHER BAKE TEMPERATURE.
2	7-26-96	M.L.T.	REVISED OTHER SHEETS
3	4-23-97	M.L.T.	NO REVISION TO THIS SHEET

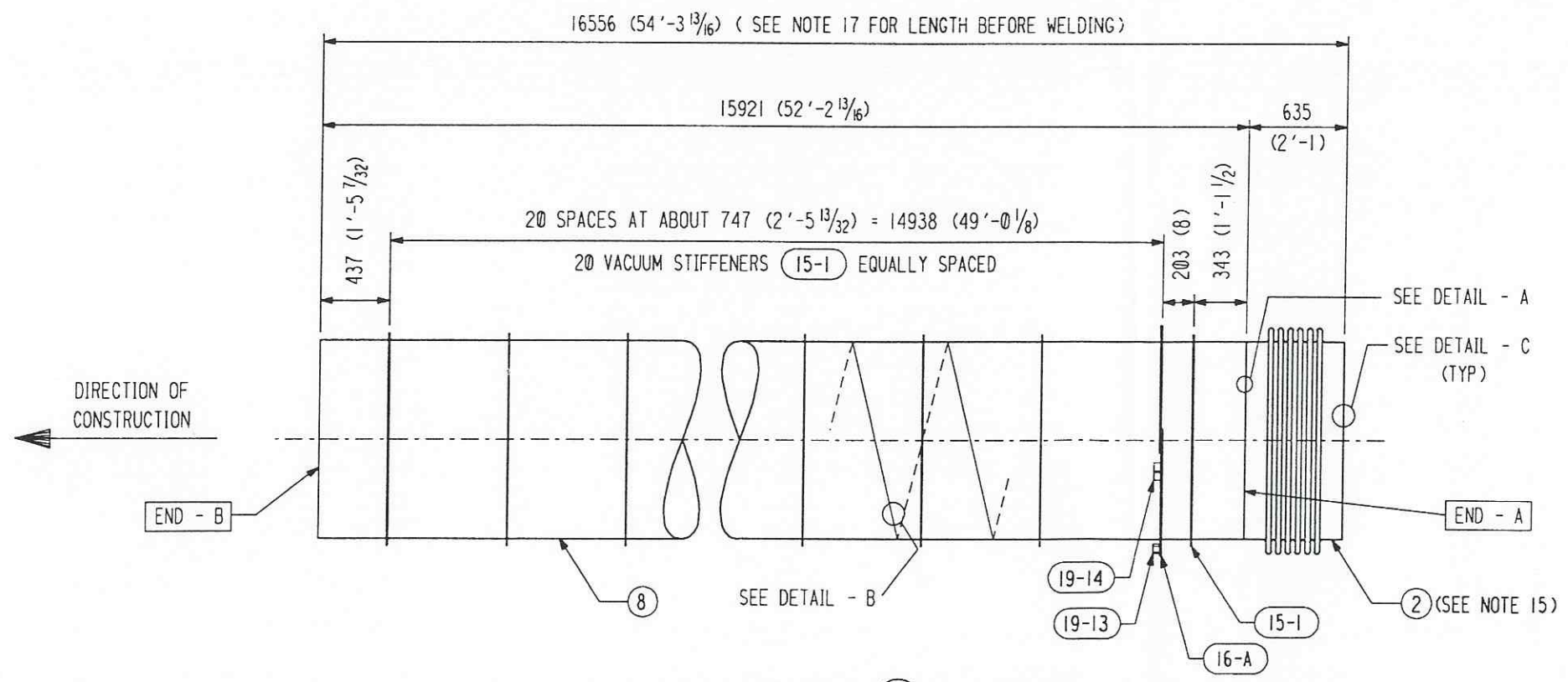
55710404.DGN

INDICATES CHANGE FROM PREVIOUS ISSUE



SUB-ASSEMBLY (L) ELEVATION

DETAILED AND BILLED FOR (1), (4) REQUIRED



SUB-ASSEMBLY (M) ELEVATION

DETAILED AND BILLED FOR (1), (4) REQUIRED

SHP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	ID
1	4-L		BEAM TUBE SUB-ASSEMBLY - L			
	4-7	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 54'-3 25/32)	16555	M1	A
	7-6	1	FIXED SUPPORT BRACKET			
	7-14	1	STIFFENER REINFORCEMENT			
	15-1	21	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
1	4-M		BEAM TUBE SUB-ASSEMBLY - M			
	4-8	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 52'-2 13/16)	15921	M1	A
	4-2	1	EXPANSION JOINT (SEE HYSpan DWG. #50418)	635 (2'-1)	M2	A
	15-1	21	VACUUM STIFFENER			
	16-A	1	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			

APPROVED

M. Lellalian 4-23-97
CBI DATE

J. Jones 7/24/97
CALTECH DATE

BY: []		REVISIONS		REMARKS		CBI		SUPPLIER'S / PURCHASER'S NO	
CHKD	DATE	CHKD	DATE			LIGO BEAM TUBE HANFORD, WA & LIVINGSTON, LA			
BY	DATE	BY	DATE			SUB-ASSEMBLIES (L) & (M)			
BY	DATE	BY	DATE			CUSTOMER'S NO		CONTRACT NO	
BY	DATE	BY	DATE			BY DIR CHKD CST DATE 3/11/96		953571	
BY	DATE	BY	DATE			M. L. TELLALIAN		DWG 4 REV	
BY	DATE	BY	DATE			ENGINEERING ASSIGNED		SHT 5 REV 7	

55710504.DGN

INDICATES CHANGE FROM PREVIOUS ISSUE

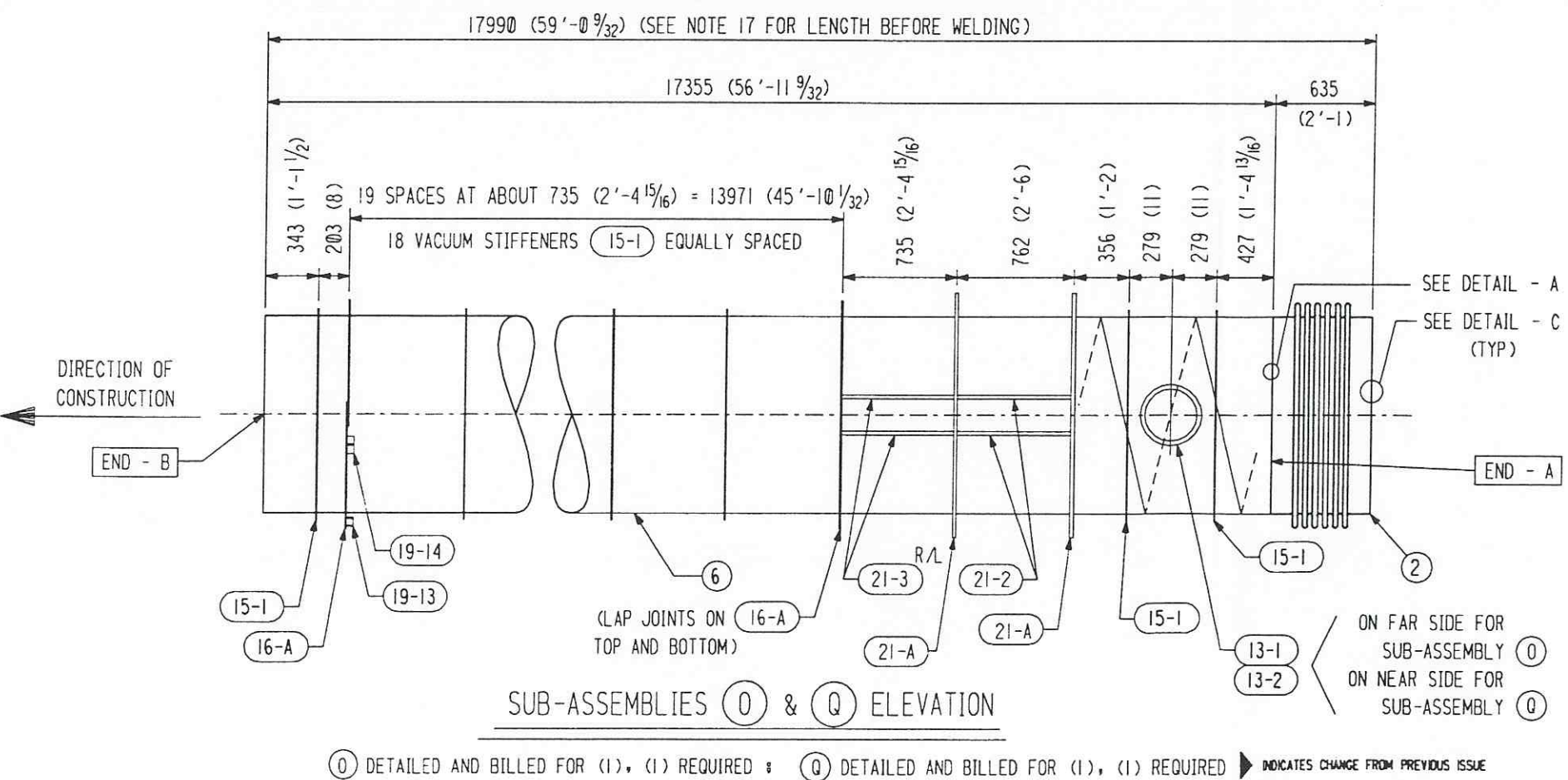
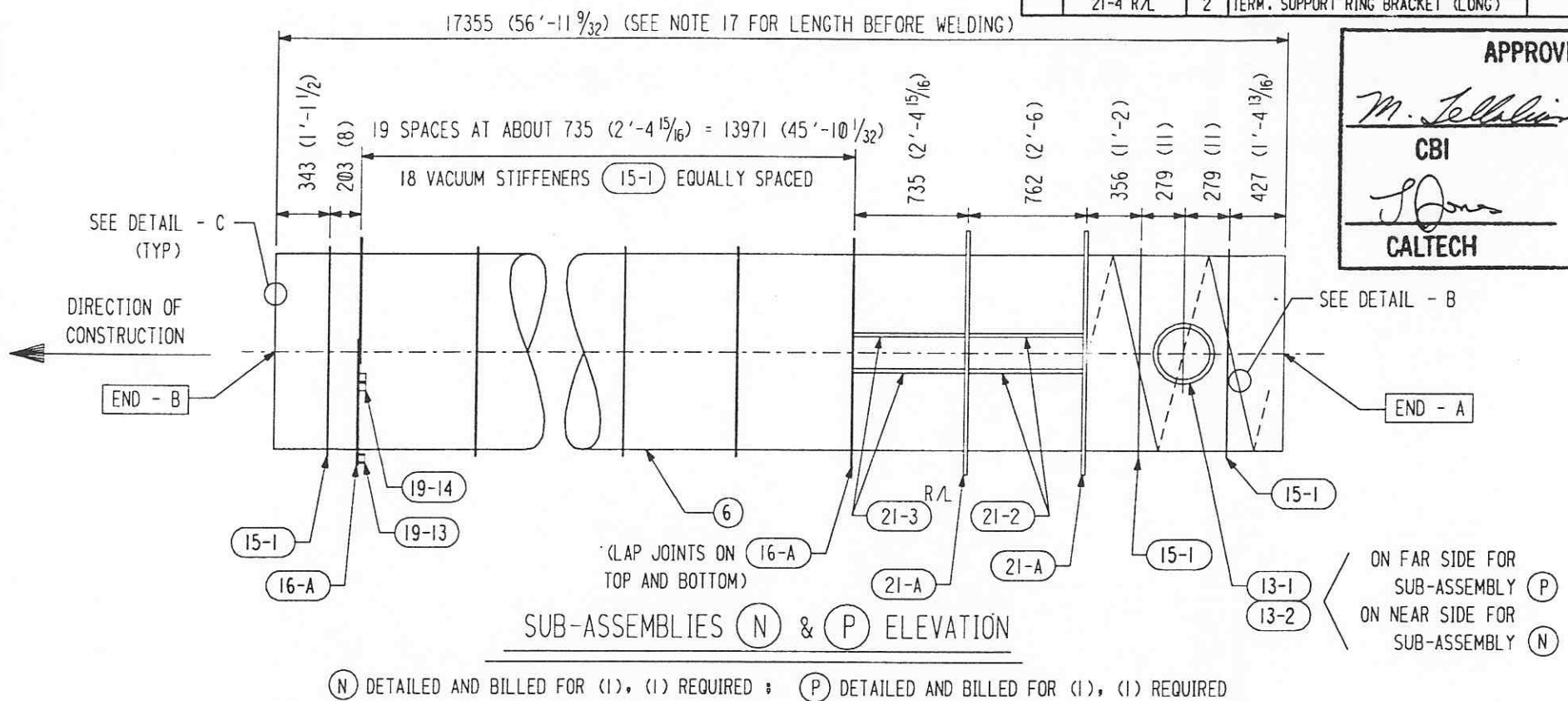
SHIP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	D
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
	21-A	2	TERMINATION SUPPORT RING ASS'Y			
	21-2	4	TERM. SUPPORT RING BRACKET (RECT.)			
	21-3 R/L	2	TERM. SUPPORT RING BRACKET (SHORT)			
	21-4 R/L	2	TERM. SUPPORT RING BRACKET (LONG)			

SHIP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	D
1	4-N		BEAM TUBE SUB-ASSEMBLY - N			
	4-6	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 56'-11 9/32)	17355	MI	A
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	21	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
	21-A	2	TERMINATION SUPPORT RING ASS'Y			
	21-2	4	TERM. SUPPORT RING BRACKET (RECT.)			
	21-3 R/L	2	TERM. SUPPORT RING BRACKET (SHORT)			
	21-4 R/L	2	TERM. SUPPORT RING BRACKET (LONG)			
1	4-P		BEAM TUBE SUB-ASSEMBLY - P			
	4-6	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 56'-11 9/32)	17355	MI	A
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	21	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
	21-A	2	TERMINATION SUPPORT RING ASS'Y			
	21-2	4	TERM. SUPPORT RING BRACKET (RECT.)			
	21-3 R/L	2	TERM. SUPPORT RING BRACKET (SHORT)			
	21-4 R/L	2	TERM. SUPPORT RING BRACKET (LONG)			
1	4-O		BEAM TUBE SUB-ASSEMBLY - O			
	4-6	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 56'-11 9/32)	17355	MI	A
	4-2	1	EXPANSION JOINT (SEE HYPAN DWG. #50418)	635 (2'-1)	M2	A
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	21	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			
	21-A	2	TERMINATION SUPPORT RING ASS'Y			
	21-2	4	TERM. SUPPORT RING BRACKET (RECT.)			
	21-3 R/L	2	TERM. SUPPORT RING BRACKET (SHORT)			
	21-4 R/L	2	TERM. SUPPORT RING BRACKET (LONG)			
1	4-Q		BEAM TUBE SUB-ASSEMBLY - Q			
	4-6	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 56'-11 9/32)	17355	MI	A
	4-2	1	EXPANSION JOINT (SEE HYPAN DWG. #50418)	635 (2'-1)	M2	A
	13-1	1	PUMP PORT FLANGE			
	13-2	1	PUMP PORT PAD PLATE			
	15-1	21	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			

APPROVED

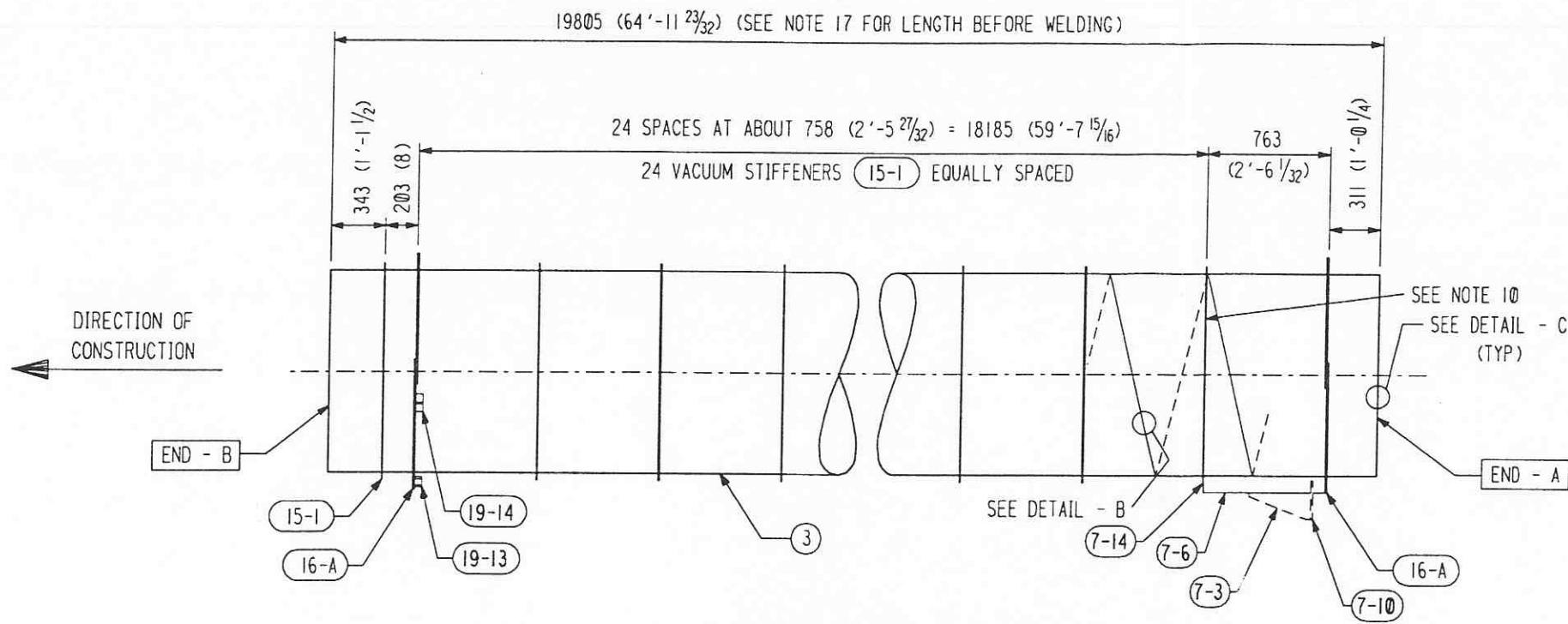
M. Tellalian 4-23-97
CBI DATE

J. Jones 7/24/97
CALTECH DATE



CBI LIGO BEAM TUBE HANFORD, WA & LIVINGSTON, LA SUB-ASSEMBLIES (N), (O), (P) & (Q)		SUPPLIER'S / PURCHASER'S NO 953571	
		CUSTOMER'S NO BY DIR CHKD CST DATE 3/11/96	CONTRACT NO 953571
M. L. TELLALIAN ENGINEERING ASSIGNED	DWG 4 REV 6	REV 7	7

55710604.DGN



SUB-ASSEMBLY (S) ELEVATION
 DETAILED AND BILLED FOR (1), (8) REQUIRED

SHP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	ID
1	4-5		BEAM TUBE SUB-ASSEMBLY - S			
	4-3	1	TUBE 1245 OD X 3.2 (49.00 OD X 0.127 X 64'-11 23/32)	19805	MI	A
	7-6	1	FIXED SUPPORT BRACKET			
	7-14	1	STIFFENER REINFORCEMENT			
	15-1	25	VACUUM STIFFENER			
	16-A	2	SUPPORT RING ASS'Y			
	19-13	1	LATERAL SUPPORT BRACKET			
	19-14	2	VERTICAL SUPPORT BRACKET			

APPROVED

M. Tellalian 4-23-97
 CBI DATE

J. Jones 7/24/97
 CALTECH DATE

SUPPLIER'S / PURCHASER'S NO CBI	
LIGO BEAM TUBE HANFORD, WA & LIVINGSTON, LA SUB-ASSEMBLY (S)	
CUSTOMER'S NO BY DTR CHKD CST DATE 3/11/96 M.L. TELLALIAN ENGINEERING ASSIGNED	CONTRACT NO 953571 DWG 4 REV 7 SH1 7

DTS 6 11-21-96 5 7-26-96 7 4-23-97	REVISED TUBE LENGTHS DUE TO HIGHER BAKE TEMPERATURE. ADDED PC. 7-14 TO ASSY. 5. NO REVISIONS TO THIS SHEET
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INDICATES CHANGE FROM PREVIOUS ISSUE

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