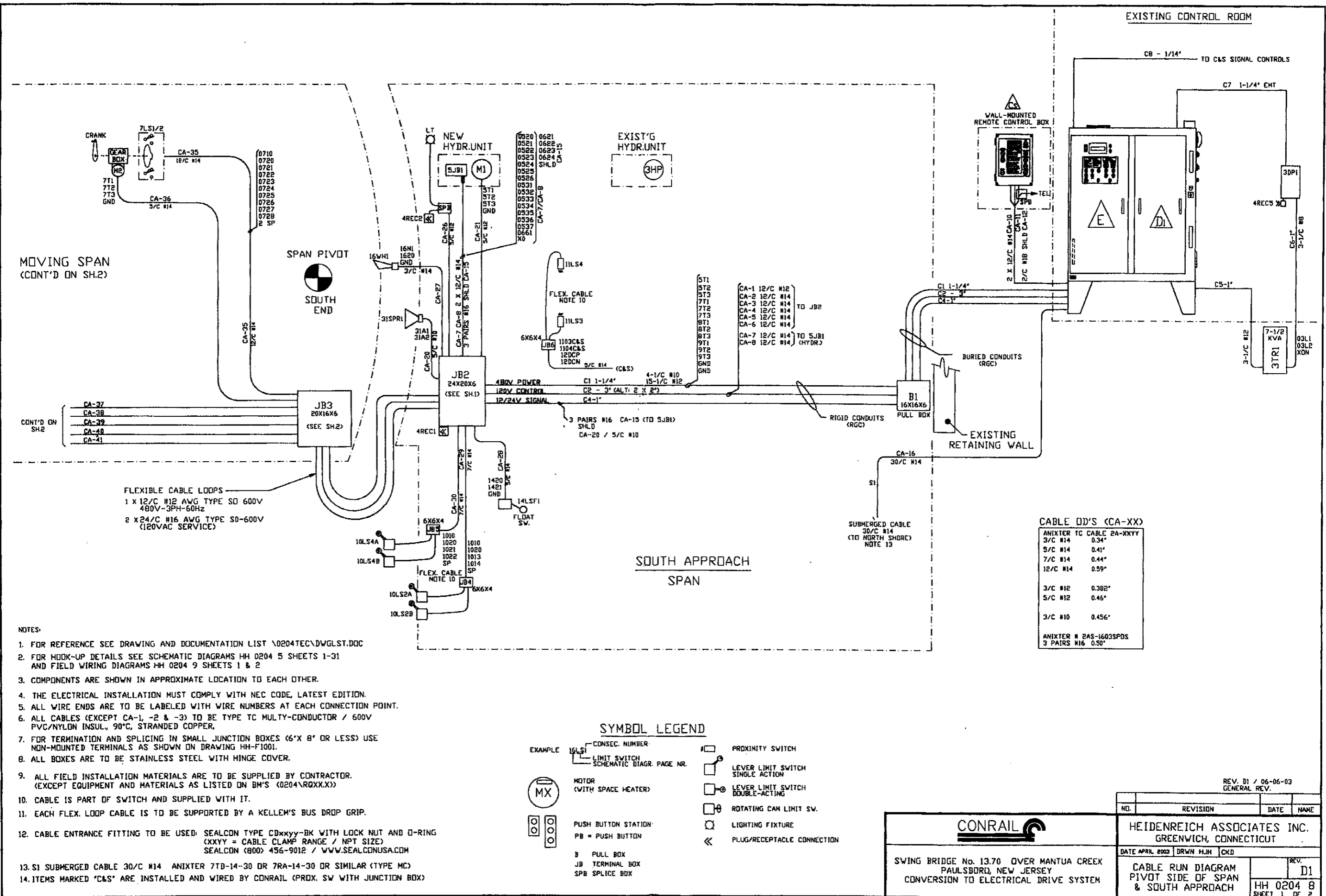


DCA-13-MR-002
Derailment/Hazardous Materials Release
Paulsboro, NJ
November 30, 2012

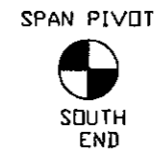
ATTACHMENT 19

Limit Switch Diagram

170



MOVING SPAN
(CONT'D ON SH.2)



EXIST'G HYDR.UNIT
(3HP)

EXISTING CONTROL ROOM

SOUTH APPROACH SPAN

FLEXIBLE CABLE LOOPS
1 x 12/C #12 AWG TYPE SO 600V
480V-3PH-60Hz
2 x 24/C #16 AWG TYPE SO-600V
(120VAC SERVICE)

CABLE OD'S (CA-XX)

ANIXTER TC CABLE 2A-XXYY	
3/C #14	0.34"
5/C #14	0.41"
7/C #14	0.44"
12/C #14	0.59"
3/C #12	0.382"
5/C #12	0.46"
3/C #10	0.456"
ANIXTER # 2AS-1603SPDS	
3 PAIRS #16	0.50"

NOTES:

- FOR REFERENCE SEE DRAWING AND DOCUMENTATION LIST \0204TEC\DWGLST.DOC
- FOR HOOK-UP DETAILS SEE SCHEMATIC DIAGRAMS HH 0204 5 SHEETS 1-31 AND FIELD WIRING DIAGRAMS HH 0204 9 SHEETS 1 & 2
- COMPONENTS ARE SHOWN IN APPROXIMATE LOCATION TO EACH OTHER.
- THE ELECTRICAL INSTALLATION MUST COMPLY WITH NEC CODE, LATEST EDITION.
- ALL WIRE ENDS ARE TO BE LABELED WITH WIRE NUMBERS AT EACH CONNECTION POINT.
- ALL CABLES (EXCEPT CA-1, -2 & -3) TO BE TYPE TC MULTY-CONDUCTOR / 600V PVC/NYLON INSUL., 90°C, STRANDED COPPER.
- FOR TERMINATION AND SPLICING IN SMALL JUNCTION BOXES (6" X 8" OR LESS) USE NON-MOUNTED TERMINALS AS SHOWN ON DRAWING HH-F1001.
- ALL BOXES ARE TO BE STAINLESS STEEL WITH HINGE COVER.
- ALL FIELD INSTALLATION MATERIALS ARE TO BE SUPPLIED BY CONTRACTOR. (EXCEPT EQUIPMENT AND MATERIALS AS LISTED ON BH'S (0204\RQXX.X))
- CABLE IS PART OF SWITCH AND SUPPLIED WITH IT.
- EACH FLEX. LOOP CABLE IS TO BE SUPPORTED BY A KELLEM'S BUS DROP GRIP.
- CABLE ENTRANCE FITTING TO BE USED: SEALCON TYPE CDXXYY-BK WITH LOCK NUT AND O-RING (XXYY = CABLE CLAMP RANGE / NPT SIZE) SEALCON (800) 456-9012 / WWW.SEALCONUSA.COM
- S1 SUBMERGED CABLE 30/C #14 ANIXTER 7TD-14-30 OR 7RA-14-30 OR SIMILAR (TYPE MC)
- ITEMS MARKED 'C&S' ARE INSTALLED AND WIRED BY CONRAIL (PROX. SW WITH JUNCTION BOX)

SYMBOL LEGEND

- EXAMPLE 16LS1
- CONSEC. NUMBER
 - LIMIT SWITCH SCHEMATIC DIAGR. PAGE NR.
 - MOTOR (WITH SPACE HEATER)
 - PUSH BUTTON STATION
PB = PUSH BUTTON
 - PULL BOX
 - JB TERMINAL BOX
 - SPB SPLICE BDX
 - PROXIMITY SWITCH
 - LEVER LIMIT SWITCH SINGLE ACTION
 - LEVER LIMIT SWITCH DOUBLE-ACTING
 - ROTATING CAM LIMIT SW.
 - LIGHTING FIXTURE
 - PLUG/RECEPTACLE CONNECTION

CONRAIL

SWING BRIDGE No. 13.70 OVER MANTUA CREEK
PAULSBORO, NEW JERSEY
CONVERSION TO ELECTRICAL DRIVE SYSTEM

REV. D1 / 06-06-03
GENERAL REV.

NO.	REVISION	DATE	NAME

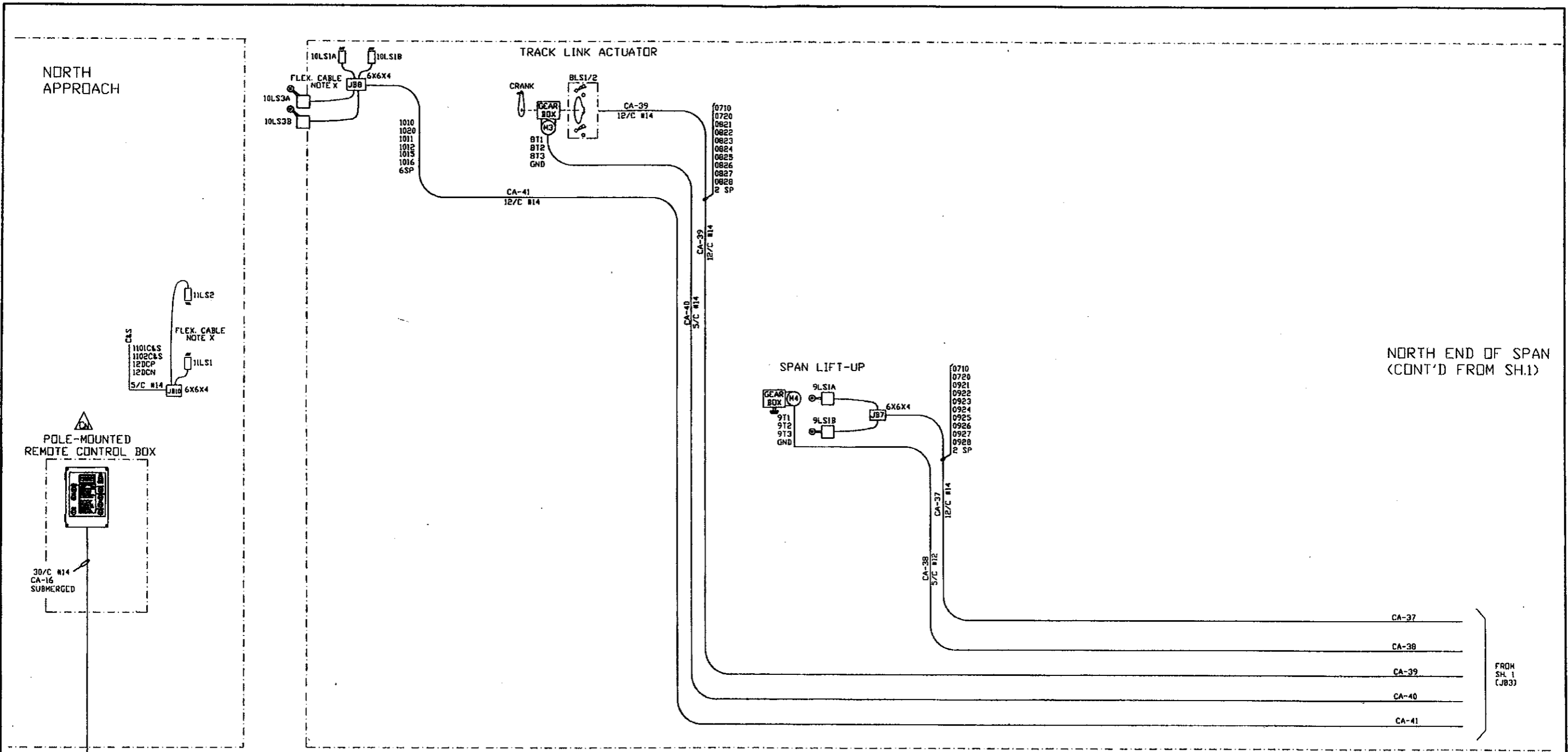
HEIDENREICH ASSOCIATES INC.
GREENWICH, CONNECTICUT

DATE APRIL 2003 DRWN FJH CKD

CABLE RUN DIAGRAM
PIVOT SIDE OF SPAN
& SOUTH APPROACH

REV. D1
HH 0204 8
SHEET 1 OF 2

200

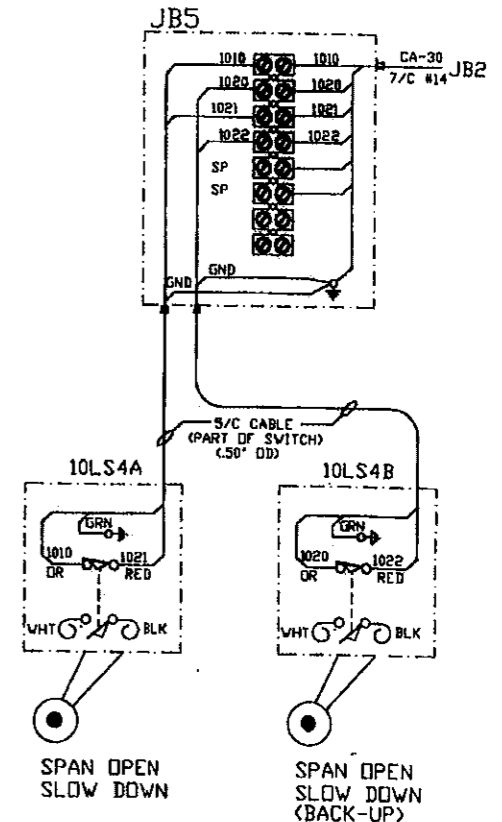
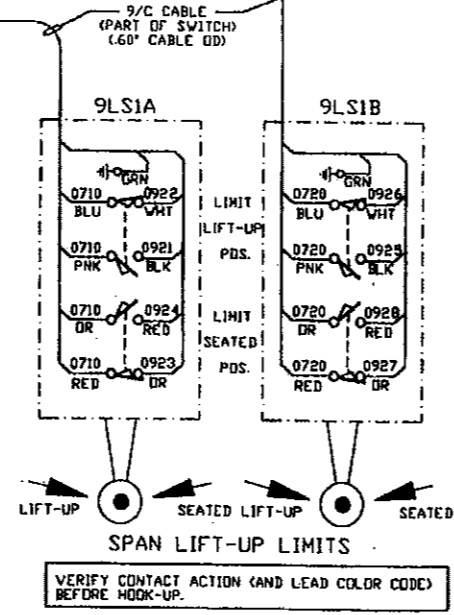
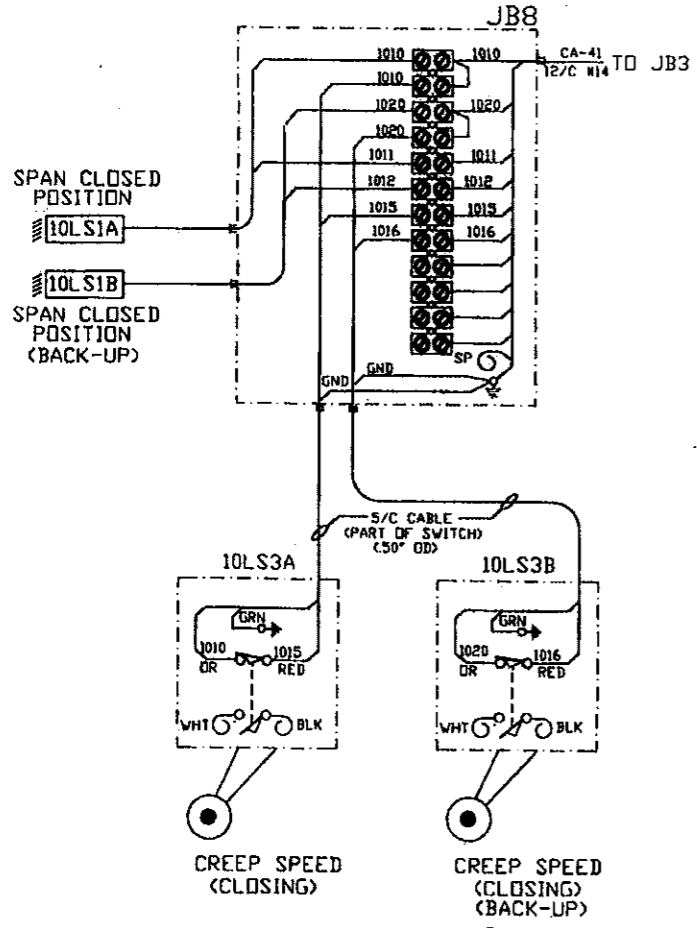
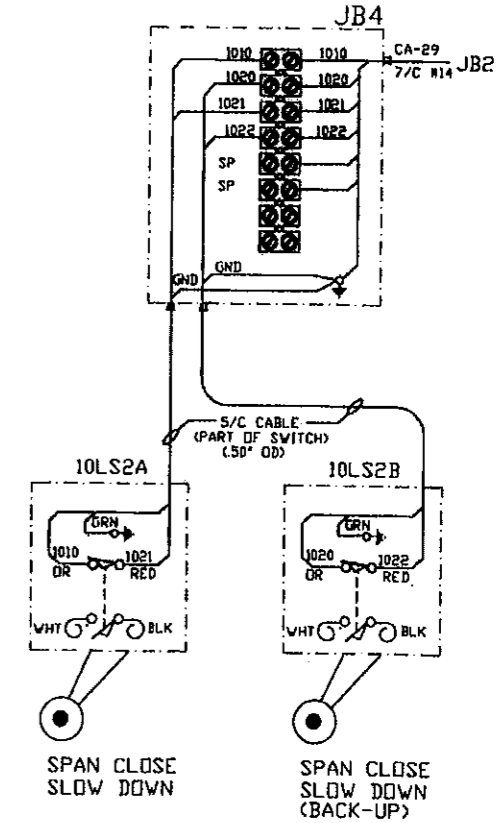
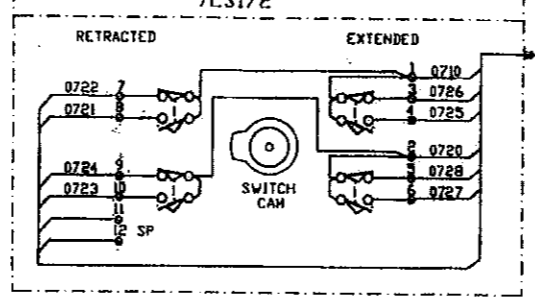
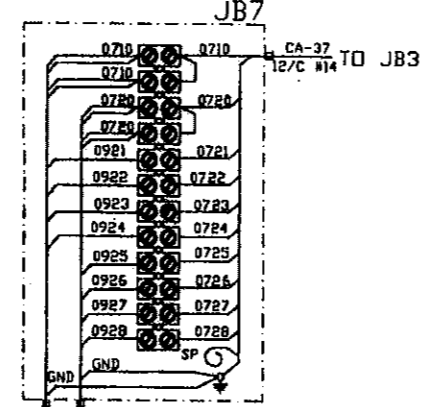
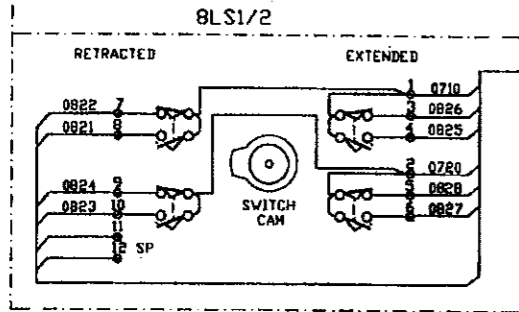
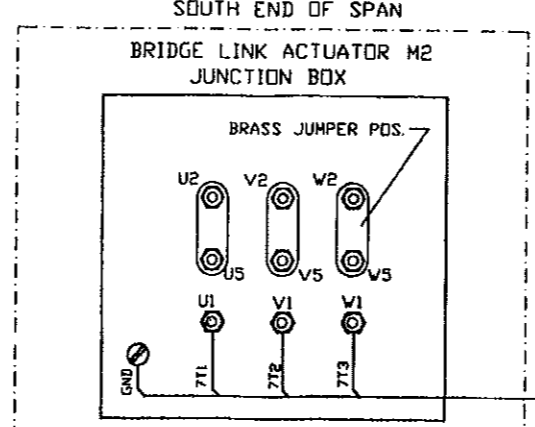
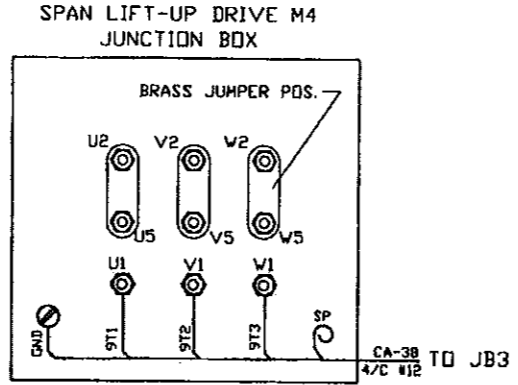
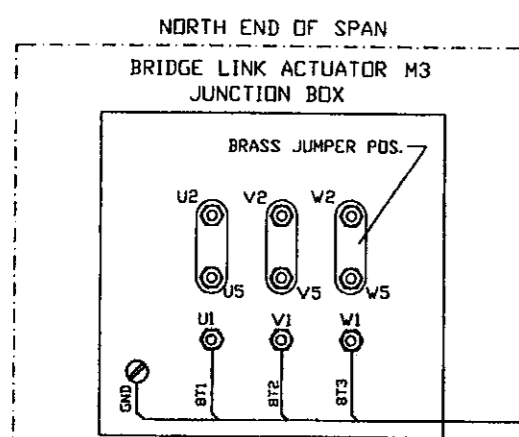


SPAN
OPEN

REV. D1 / 06-06-03
GENERAL REVISION

		HEIDENREICH ASSOCIATES INC. GREENWICH, CONNECTICUT	
		DATE APRIL 2000	DRWN HJH CKD
SWING BRIDGE No. 13.70 OVER MANTUA CREEK PAULSBORO, NEW JERSEY CONVERSION TO ELECTRICAL DRIVE SYSTEM		REV. D1	HH 0204 8
		SHEET 2 OF 2	

1700



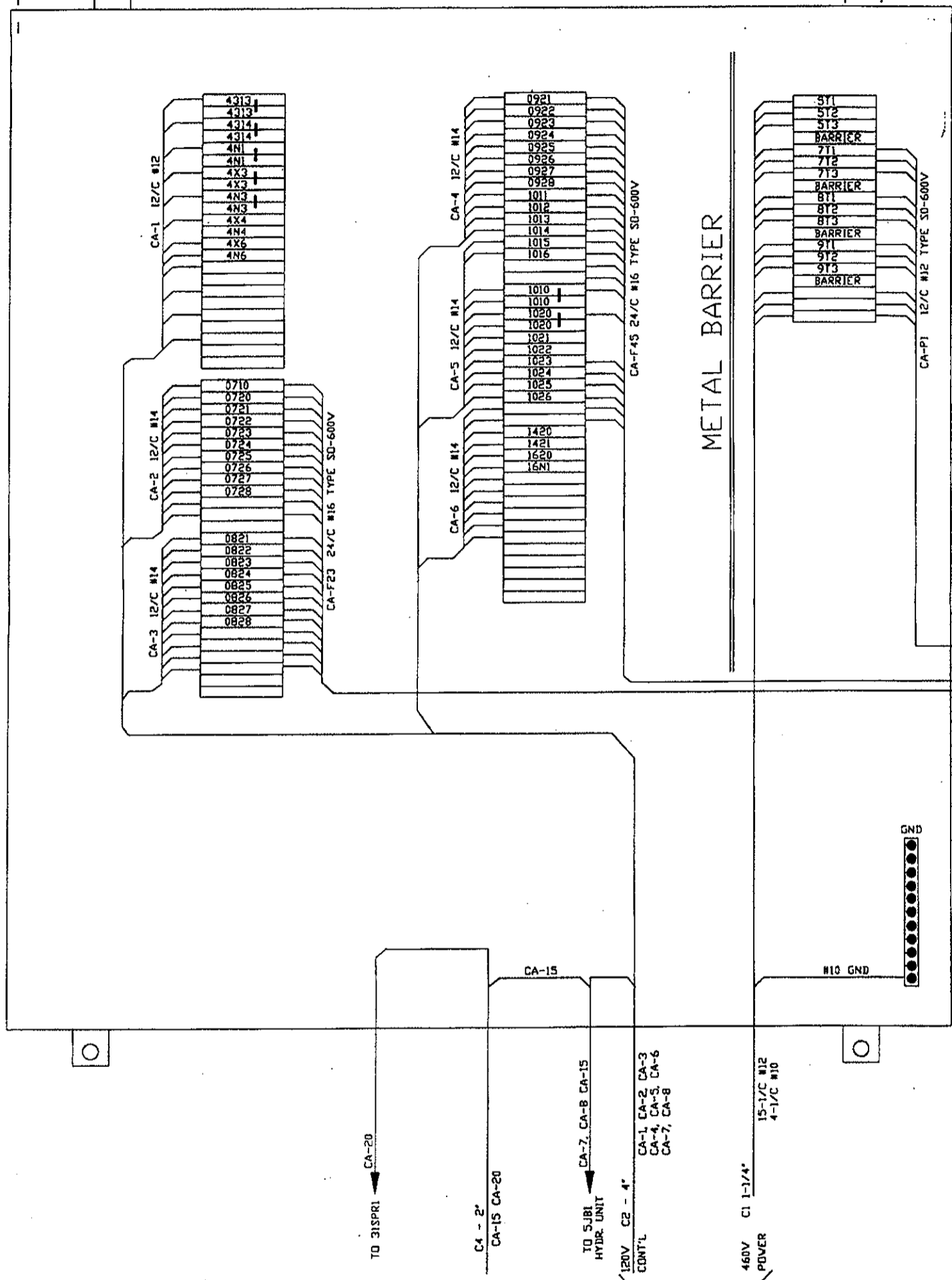
ON SPAN ← → ON SOUTH APPROACH

NOTES:
1. FOR TERMINAL DETAILS AND SPECS SEE DWG HH-F1001

CONRAIL			
SWING BRIDGE No.13.79 OVER MANTUA CREEK PAULSBORO, NEW JERSEY CONVERSION TO ELECTRICAL DRIVE SYSTEM			
NO.	REVISION	DATE	NAME
HEIDENREICH ASSOCIATES INC. GREENWICH, CONNECTICUT			
DATE: APRIL 2003 DRWN: HJM CKD			
WIRING DIAGRAM SOUTH END OF SPAN & SOUTH APPROACH			REV. HH 0904 9 SHEET 3 OF 4

COVER
HINGE

JB2 24X20X6"



NOTE:
ONLY INCOMING CABLES (WIRES) FROM B1 ARE SHOWN
AND PASS-THROUGH CABLES (NOT TERMINATED IN JB2).

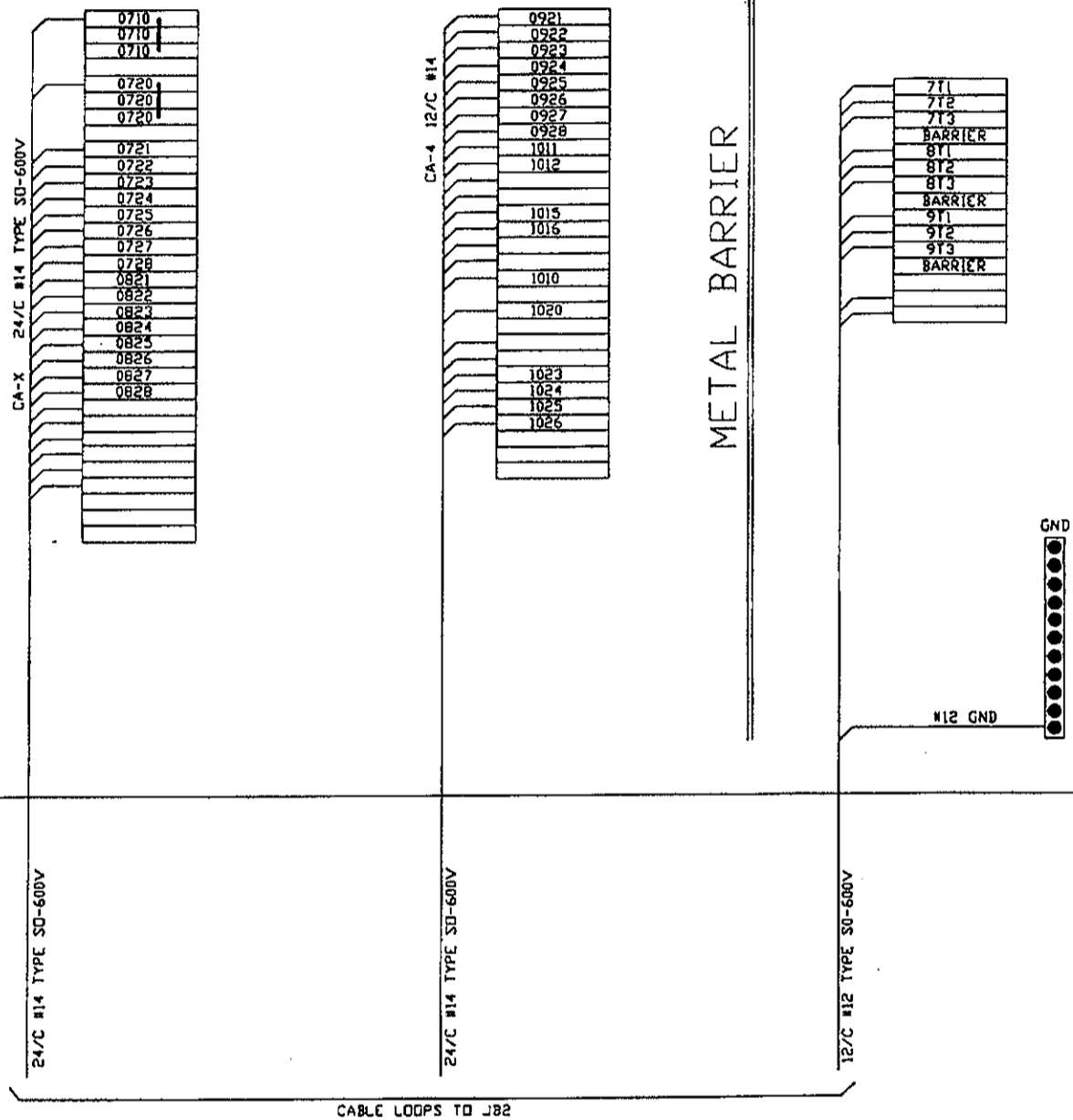
REV. D1 / 06-06-03
FLEX. CABLES SHOWN

		SWING BRIDGE 13.70, PAULSBORO, NEW JERSEY CONVERSION TO ELECTRICAL DRIVE SYSTEM		REV. D1	
		APRIL 2003		JB2 TERMINALS	
REV. 1. 2. 3.	4. 5. 6.	DRWN HJH	CHCKD	HEIDENREICH ASSOC. INC. CONTROL SYSTEM DESIGN GREENWICH, CONNECTICUT	HH 0204 9 SHEET 1 OF 4

CPD

JB3 20X16X6

COVER
HINGE



NOTE:
ONLY INCOMING CABLES (WIRES) FROM B1 ARE SHOWN

		SWING BRIDGE 13.70, PAULSBORO, NEW JERSEY CONVERSION TO ELECTRICAL DRIVE SYSTEM		REV.	
		APRIL 2003		—	
REV.	4.	DRWN	CHCKD	HEIDENREICH ASSOC. INC. CONTROL SYSTEM DESIGN GRENVICH, CONNECTICUT	JB3 TERMINALS
1.	5.	HJH		HH 0204 9	SHEET 2 OF 4
2.	6.				
3.					

Handwritten initials or mark.