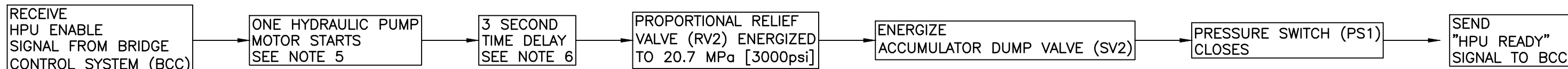
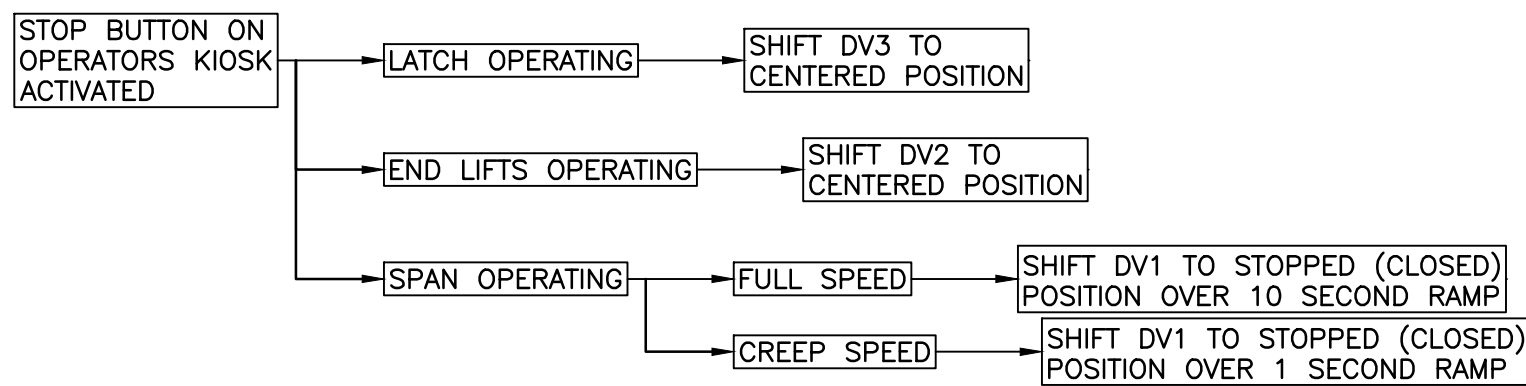


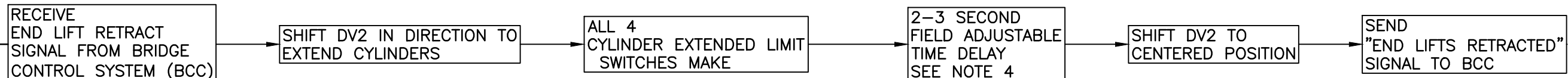
HPU OPERATING SEQUENCE



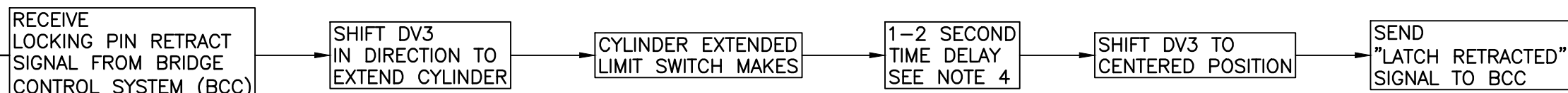
ACTIVATION OF STOP BUTTON ON OPERATORS KIOSK



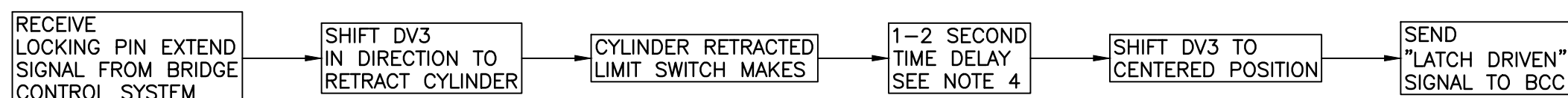
END LIFT RETRACT SEQUENCE



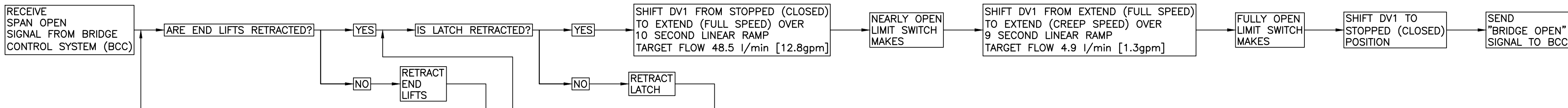
LOCKING PIN RETRACT SEQUENCE



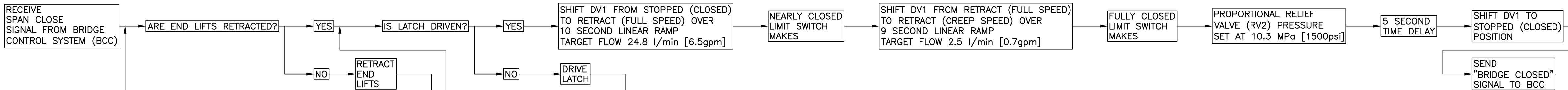
LOCKING PIN DRIVE SEQUENCE



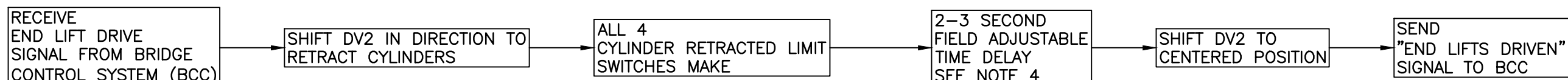
SPAN OPEN SEQUENCE



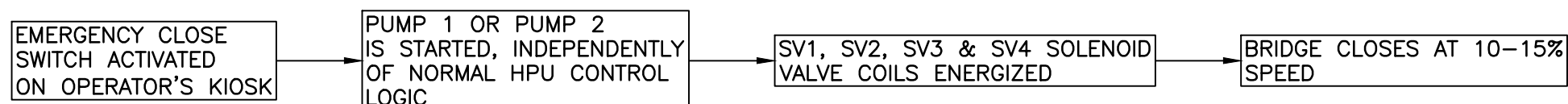
SPAN CLOSE SEQUENCE



END LIFT DRIVE SEQUENCE



EMERGENCY CLOSE SEQUENCE



NOTES:

- PUMP OPERATION SHALL BE INTERLOCKED WITH SUCTION VALVE LIMIT SWITCHES AND "LOW-LOW" FLOAT LEVEL SWITCH.
- HEATER OPERATION SHALL BE INTERLOCKED WITH "LOW-LOW" LEVEL SWITCH.
- DURING AN EMERGENCY STOP, THE PUMP MOTORS SHALL BE SHUT OFF IMMEDIATELY. THE PROPORTIONAL RELIEF VALVE (RV2) SHALL REMAIN ENERGIZED AND, IF OPEN, THE PROPORTIONAL DIRECTIONAL CONTROL VALVE (DV1) SHALL RAMP TO THE CLOSED POSITION OVER 5 SECONDS.
- TIME DELAY IS TO ENSURE THAT CYLINDERS ARE STROKED TO THE PHYSICAL END OF TRAVEL IN EACH DIRECTION.
- HPU MOTOR IS TO BE INDIVIDUALLY SELECTABLE. AUTOMATIC ALTERNATION OF HPU PUMPS IS ALSO TO BE PROVIDED, THIS SHALL BE THE NORMAL MODE OF OPERATION.
- ALL PARAMETERS (TIME DELAYS, RAMP TIMES, FLOW RATES, PRESSURES, ETC.) SHOWN ON THIS SHEET ARE PRELIMINARY AND ARE TO BE FIELD ADJUSTABLE.
- HYDRAULIC WORK - TO INCLUDE THE REMOVAL OF THE EXISTING HPU AND THE FABRICATION, TESTING AND INSTALLATION OF THE NEW HPU LOCATED IN THE EXISTING PARKS BUILDING. ALL CONNECTIONS TO THE CYLINDERS, THE END LIFT CYLINDERS AND THE SPAN CENTERING CYLINDER ARE PART OF THIS WORK.
- UNLESS OTHERWISE NOTED, THE NEW COMPONENTS OF THE HYDRAULIC SYSTEM HAVE BEEN DESIGNED TO CONFORM TO THE APPLICABLE REQUIREMENTS OF THE CANCSA-S6-14, CANADIAN HIGHWAY BRIDGE DESIGN CODE AND THE AASHTO, LRFD 2007 STANDARD SPECIFICATION FOR MOVABLE HIGHWAY BRIDGES, 2ND EDITION AND ALL INTERIM REVISIONS.
- INSTALL AND FURNISH ONE (1) NEW ELECTRICALLY CONTROLLED HYDRAULIC SYSTEM. THE SYSTEM SHALL BE COMPRISED OF TWO (2) SPAN DRIVE CYLINDERS, TWO (2) END LIFT MECHANISMS, ONE (1) SPAN LOCKING PIN MECHANISM, FOUR (4) END STOPS, ONE (1) HYDRAULIC POWER UNIT, ONE (1) ELECTRICAL CONTROL SYSTEM, HYDRAULIC VALVES, HYDRAULIC TUBING/HOSES WITH SUPPORTS, FOR A FULLY FUNCTIONAL SYSTEM.
- CONNECT ELECTRICAL POWER TO NEW ELECTRIC MOTORS AND VALVES IN THE NEW HYDRAULIC SYSTEM. THE CONTRACTOR SHALL NOT START THE ELECTRIC MOTORS IN HPU UNTIL ALL WIRING HAS BEEN CHECKED AND IS OPERATING CORRECTLY. PERFORM A COMPLETE FUNCTIONAL TEST AND INSPECTION. VERIFY PROPER OPERATION OF HYDRAULIC AND ELECTRICAL SYSTEMS.

04		
03		
02		
01	ISSUED FOR TENDER	2018-07-20
revision		date

Do not scale drawings.  
Verify all dimensions and conditions on site and immediately notify the Departmental Representative of all discrepancies.

A	Detail No. No. du détail
B	drawing no. - where detail required dessin no. - où détail exigé
C	drawing no. - where detailed dessin no. - où détaillé

project title  
titre du projet  
Ontario  
HAMLET BRIDGES  
(BRIDGE 57 & 58)  
SWING AND FIXED BRIDGES

drawing title  
titre du dessin  
HYDRAULIC SYSTEM  
OPERATING SEQUENCE

drawn by  
dessiné par  
IMRAN SIDDIQUI

designed by  
conçu par  
JEFF KEIT

approved by  
approuvé par  
JEFF KEIT

bid  
offre  
JULIO LEON

project manager  
administrateur  
de projets

project date  
date du projet  
2018-07-20

project no.  
no. du projet  
R.073593.001

drawing no.  
dessiné no.  
M-22