

## Case Erector Control - With Simulation

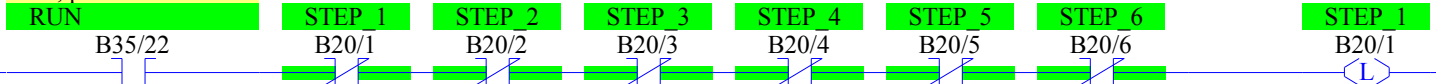
Copyright (c) 2013, 2015 Dogwood Valley Press, LLC

Additional internal memory:

Symbol	Address	
STEP_1 to STEP_6	B20/1 to B20/6	Step-in-progress bits
UP_TMR	T4:1	Times opening up
BDOWN_TMR	T4:2	Times deactivate of bottom cylinder
PULSE_CNT	C5:1	Count encoder pulses

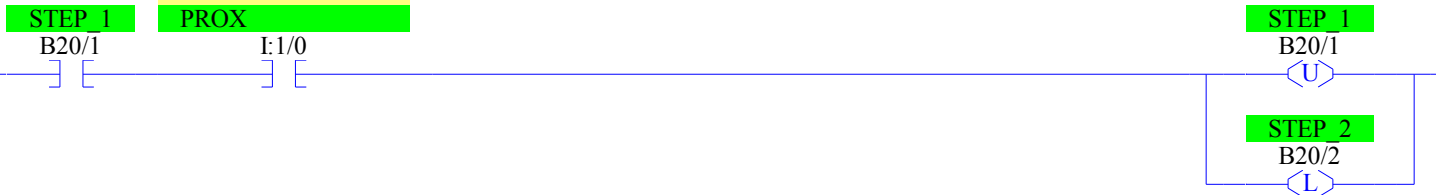
Initial start.

When on, allow case  
erector to run. When  
off, pause.



Step 1 Move in.

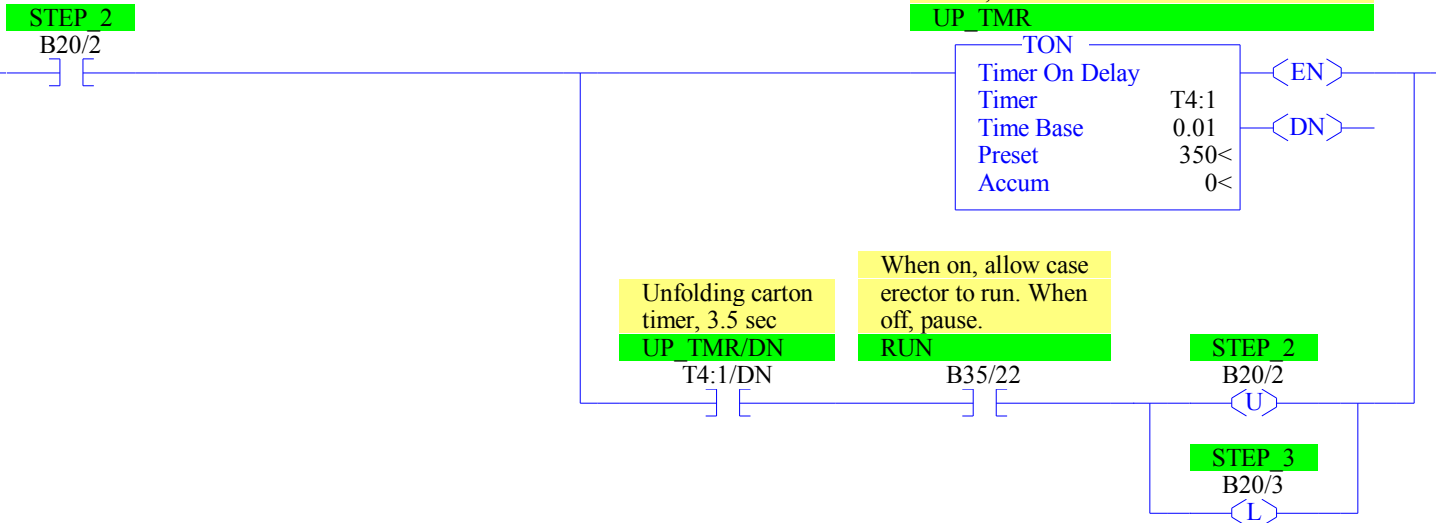
Proximity switch, on  
when flat carton is  
in position to be  
erected



Step 2 Open up.

Unfolding carton  
timer, 3.5 sec

UP\_TMR

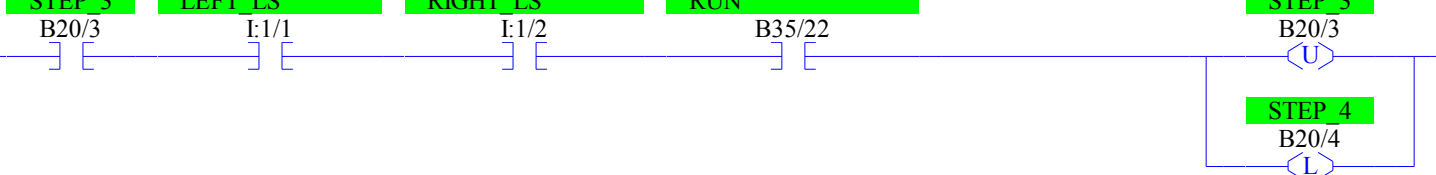


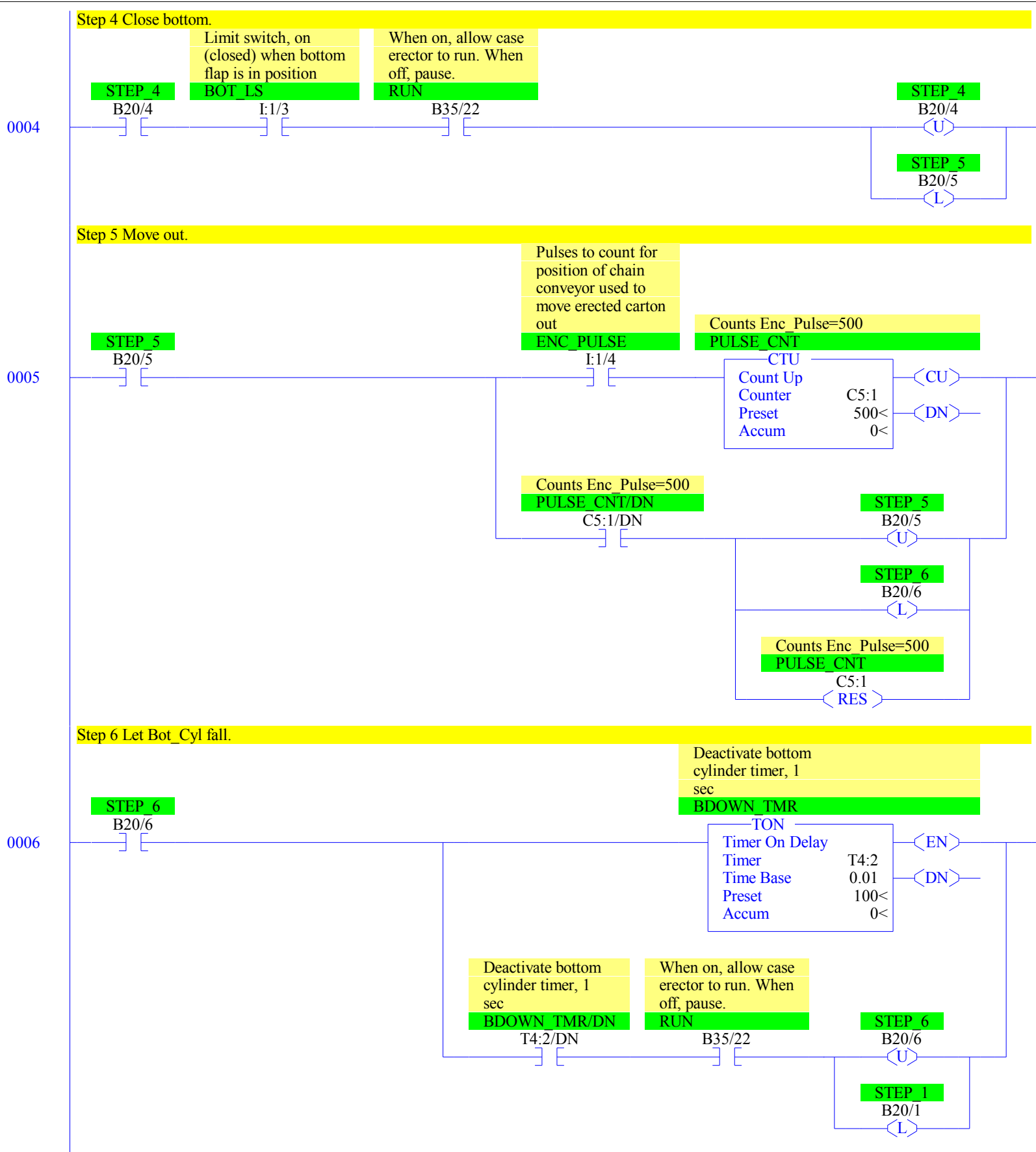
Step 3 Close sides.

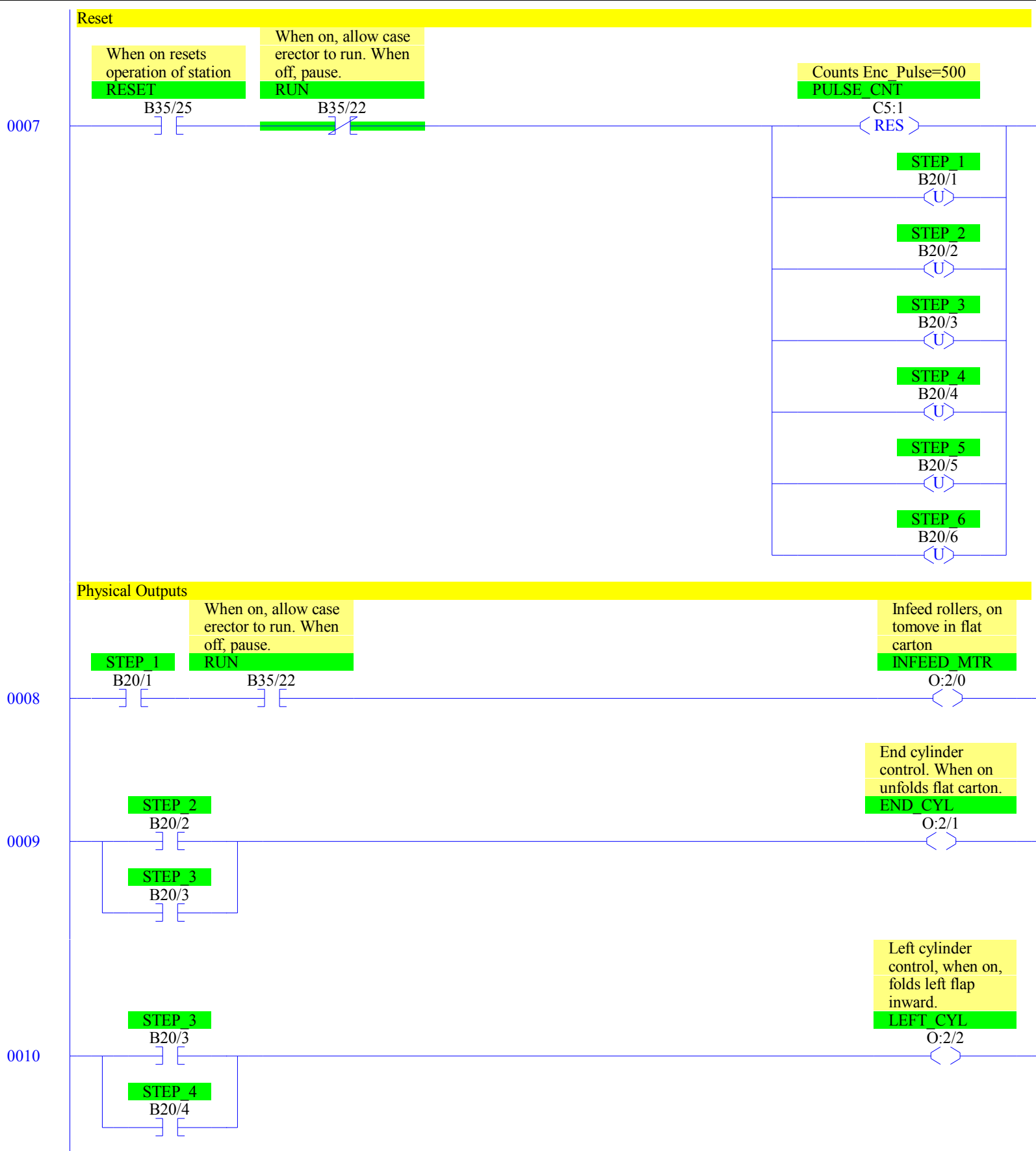
Limit switch, on  
(closed) when left  
flap is in position

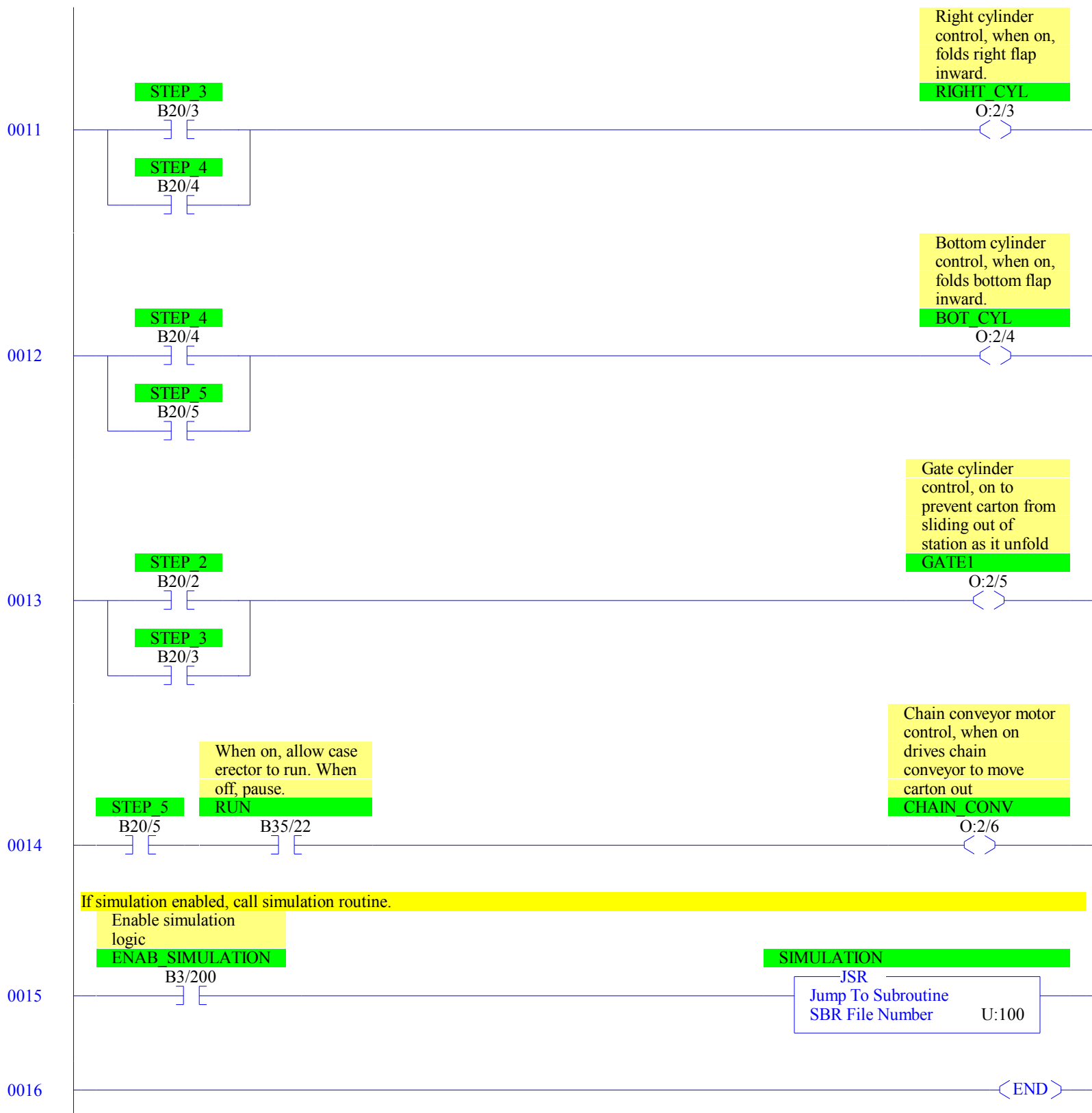
Limit switch, on  
(closed) when right  
flap is in position

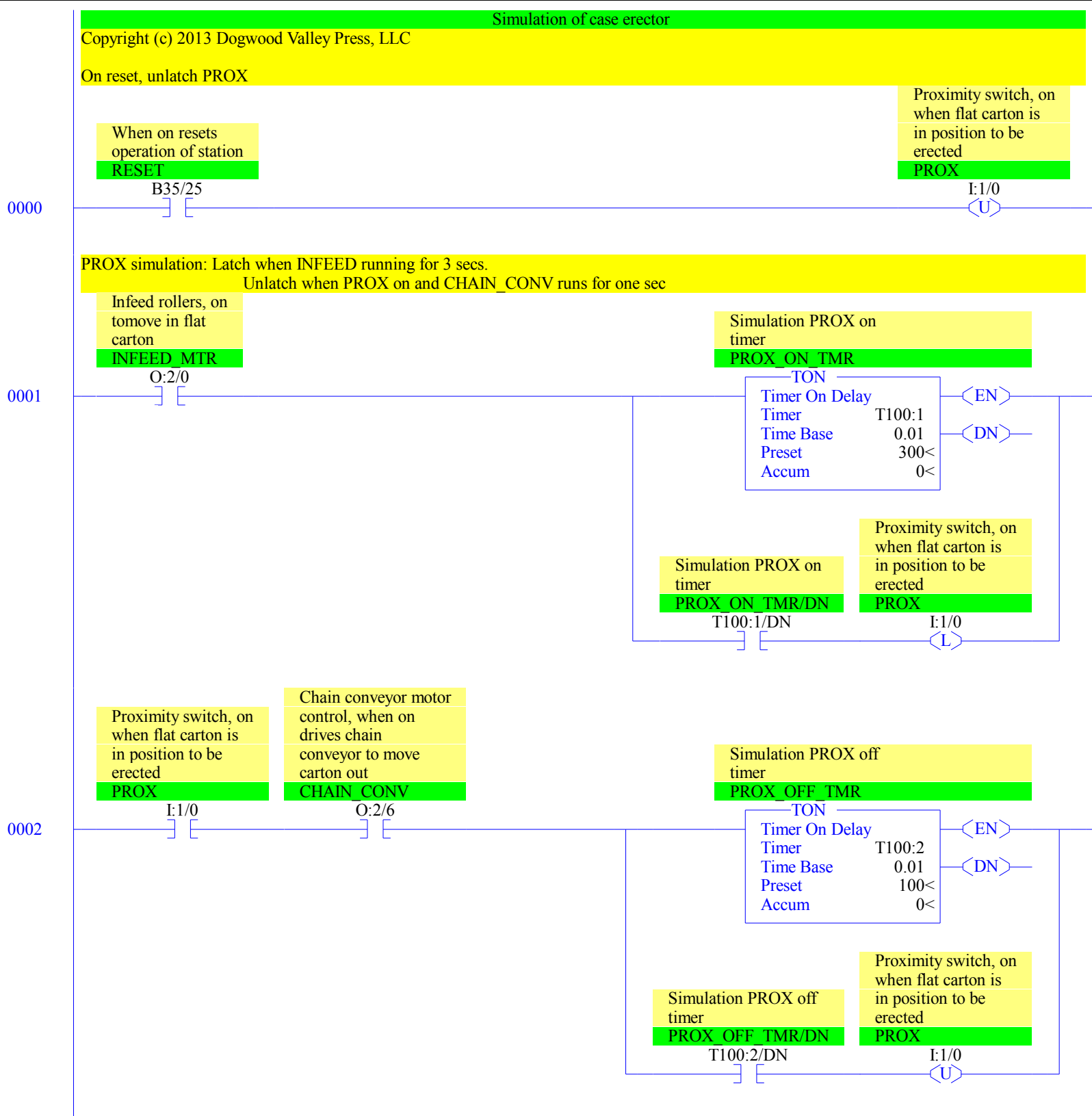
When on, allow case  
erector to run. When  
off, pause.











0003

**LEFT\_LS simulation: Turn on when LEFT\_CYL on for 3 sec**

Left cylinder  
control, when on,  
folds left flap  
inward.

**LEFT\_CYL**

O:2/2

Simulation LEFT\_LS

timer

**LEFT\_TMR**

TON

Timer On Delay

Timer

Time Base

Preset

Accum

T100:3

0.01

300&lt;

0&lt;

&lt;EN&gt;

&lt;DN&gt;

Simulation LEFT\_LS  
timer**LEFT\_TMR/DN**

T100:3/DN

Limit switch, on  
(closed) when left  
flap is in position**LEFT\_LS**

I:1/1

0004

**RIGHT\_LS simulation: Turn on when RIGHT\_CYL on for 3 sec**

Right cylinder  
control, when on,  
folds right flap  
inward.

**RIGHT\_CYL**

O:2/3

Simulation RIGHT\_LS

timer

**RIGHT\_TMR**

TON

Timer On Delay

Timer

Time Base

Preset

Accum

T100:4

0.01

300&lt;

0&lt;

&lt;EN&gt;

&lt;DN&gt;

Simulation RIGHT\_LS  
timer**RIGHT\_TMR/DN**

T100:4/DN

Limit switch, on  
(closed) when right  
flap is in position**RIGHT\_LS**

I:1/2

0005

**BOT\_LS simulation: Turn on when BOT\_CYL on for 3 sec**

Bottom cylinder  
control, when on,  
folds bottom flap  
inward.

**BOT\_CYL**

O:2/4

Simulation BOT\_LS

timer

**BOT\_TMR**

TON

Timer On Delay

Timer

Time Base

Preset

Accum

T100:5

0.01

300&lt;

0&lt;

&lt;EN&gt;

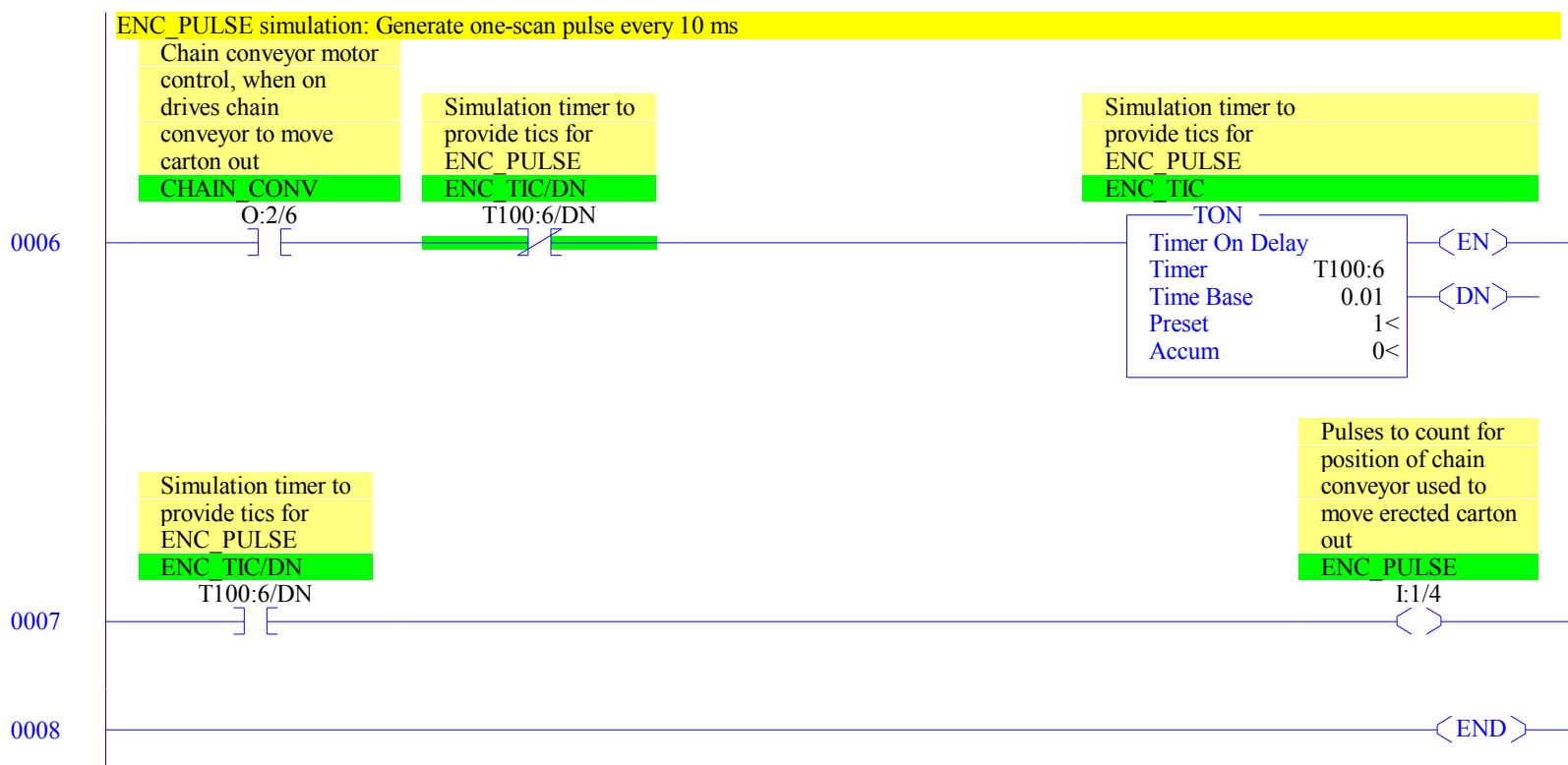
&lt;DN&gt;

Simulation BOT\_LS  
timer**BOT\_TMR/DN**

T100:5/DN

Limit switch, on  
(closed) when bottom  
flap is in position**BOT\_LS**

I:1/3



## RSLogix 500 Cross Reference Report - Sorted by Address

O:2/0	- {INFEED_MTR} Infeed rollers, on to move in flat carton OTE - File #2 - 8 XIC - File #100 SIMULATE - 1
O:2/1	- {END_CYL} End cylinder control. When on unfolds flat carton. OTE - File #2 - 9
O:2/2	- {LEFT_CYL} Left cylinder control, when on, folds left flap inward. OTE - File #2 - 10 XIC - File #100 SIMULATE - 3
O:2/3	- {RIGHT_CYL} Right cylinder control, when on, folds right flap inward. OTE - File #2 - 11 XIC - File #100 SIMULATE - 4
O:2/4	- {BOT_CYL} Bottom cylinder control, when on, folds bottom flap inward. OTE - File #2 - 12 XIC - File #100 SIMULATE - 5
O:2/5	- {GATE1} Gate cylinder control, on to prevent carton from sliding out of station as it unfolds OTE - File #2 - 13
O:2/6	- {CHAIN_CONV} Chain conveyor motor control, when on drives chain conveyor to move carton out OTE - File #2 - 14 XIC - File #100 SIMULATE - 2, 6
I:1/0	- {PROX} Proximity switch, on when flat carton is in position to be erected OTL - File #100 SIMULATE - 1 OTU - File #100 SIMULATE - 0, 2 XIC - File #2 - 1 File #100 SIMULATE - 2
I:1/1	- {LEFT_LS} Limit switch, on (closed) when left flap is in position OTE - File #100 SIMULATE - 3 XIC - File #2 - 3
I:1/2	- {RIGHT_LS} Limit switch, on (closed) when right flap is in position OTE - File #100 SIMULATE - 4 XIC - File #2 - 3
I:1/3	- {BOT_LS} Limit switch, on (closed) when bottom flap is in position OTE - File #100 SIMULATE - 5 XIC - File #2 - 4
I:1/4	- {ENC_PULSE} Pulses to count for position of chain conveyor used to move erected carton out OTE - File #100 SIMULATE - 7 XIC - File #2 - 5
B3/200	- {ENAB_SIMULATION} Enable simulation logic XIC - File #2 - 15
T4:1	- {UP_TMR} Unfolding carton timer, 3.5 sec TON - File #2 - 2
T4:1/DN	- XIC - File #2 - 2
T4:2	- {BDOWN_TMR} Deactivate bottom cylinder timer, 1 sec TON - File #2 - 6
T4:2/DN	- XIC - File #2 - 6
C5:1	- {PULSE_CNT} Counts Enc_Pulse=500 CTU - File #2 - 5 RES - File #2 - 5, 7
C5:1/DN	- XIC - File #2 - 5
B20/1	- {STEP_1} OTL - File #2 - 0, 6 OTU - File #2 - 1, 7 XIC - File #2 - 1, 8 XIO - File #2 - 0
B20/2	- {STEP_2} OTL - File #2 - 1 OTU - File #2 - 2, 7



## RSLogix 500 Cross Reference Report - Sorted by Address

```

B20/3      XIC - File #2 - 2, 9, 13
           XIO - File #2 - 0
           - {STEP_3}
           OTL - File #2 - 2
           OTU - File #2 - 3, 7
           XIC - File #2 - 3, 9, 10, 11, 13
           XIO - File #2 - 0
B20/4      - {STEP_4}
           OTL - File #2 - 3
           OTU - File #2 - 4, 7
           XIC - File #2 - 4, 10, 11, 12
           XIO - File #2 - 0
B20/5      - {STEP_5}
           OTL - File #2 - 4
           OTU - File #2 - 5, 7
           XIC - File #2 - 5, 12, 14
           XIO - File #2 - 0
B20/6      - {STEP_6}
           OTL - File #2 - 5
           OTU - File #2 - 6, 7
           XIC - File #2 - 6
           XIO - File #2 - 0
B35/22     - {RUN} When on, allow case erector to run. When off, pause.
           XIC - File #2 - 0, 2, 3, 4, 6, 8, 14
           XIO - File #2 - 7
B35/25     - {RESET} When on resets operation of station
           XIC - File #2 - 7
           File #100 SIMULATE - 0
T100:1     - {PROX_ON_TMR} Simulation PROX on timer
           TON - File #100 SIMULATE - 1
T100:1/DN  - XIC - File #100 SIMULATE - 1
T100:2     - {PROX_OFF_TMR} Simulation PROX off timer
           TON - File #100 SIMULATE - 2
T100:2/DN  - XIC - File #100 SIMULATE - 2
T100:3     - {LEFT_TMR} Simulation LEFT_LS timer
           TON - File #100 SIMULATE - 3
T100:3/DN  - XIC - File #100 SIMULATE - 3
T100:4     - {RIGHT_TMR} Simulation RIGHT_LS timer
           TON - File #100 SIMULATE - 4
T100:4/DN  - XIC - File #100 SIMULATE - 4
T100:5     - {BOT_TMR} Simulation BOT_LS timer
           TON - File #100 SIMULATE - 5
T100:5/DN  - XIC - File #100 SIMULATE - 5
T100:6     - {ENC TIC} Simulation timer to provide tics for ENC_PULSE
           TON - File #100 SIMULATE - 6
T100:6/DN  - XIC - File #100 SIMULATE - 7
           XIO - File #100 SIMULATE - 6
U:100      - {SIMULATION}
           JSR - File #2 - 15

```