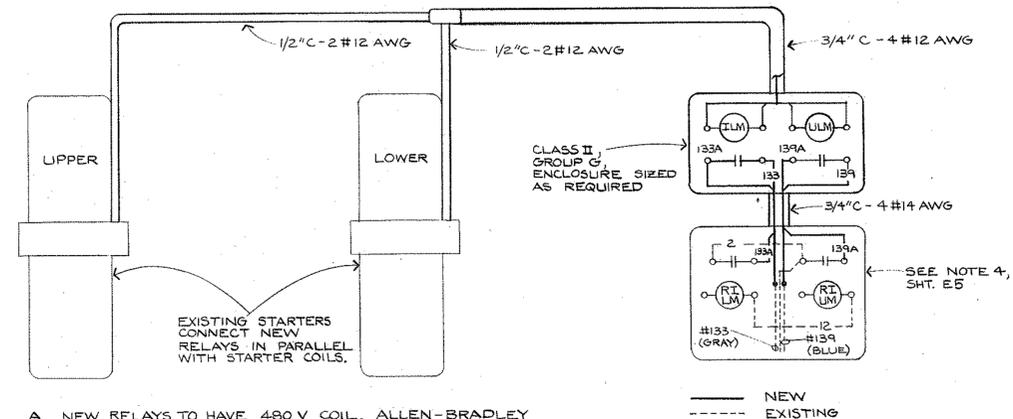


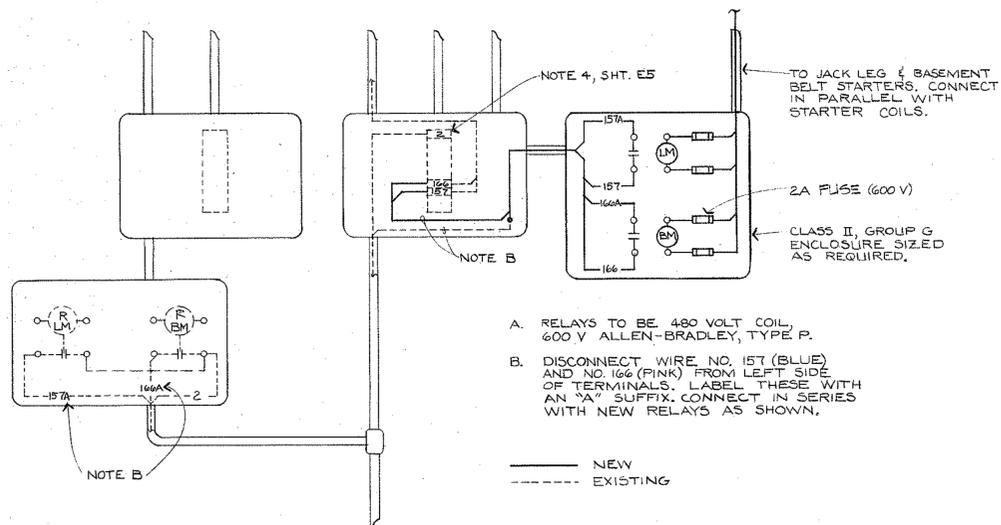
- A. NEW RELAYS TO BE 600 V CLASS ALLEN-BRADLEY TYPE P WITH 480 V COILS.
- B. DISCONNECT EXISTING WIRE NOS. 112 AND 312 AND RECONNECT TO NEW RELAY CONTACTS AS SHOWN.
- EXISTING STARTERS CONNECT NEW RELAYS IN PARALLEL WITH STARTER COILS.
- CLASS II, GROUP G, ENCLOSURE, SIZE AS REQUIRED.

ELEVATION AT GALLERY BELT STARTERS 1  
N.T.S. E16



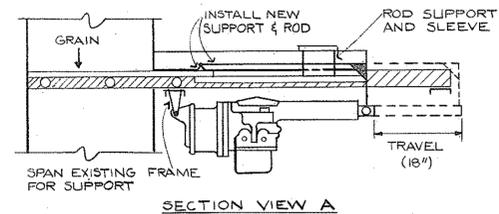
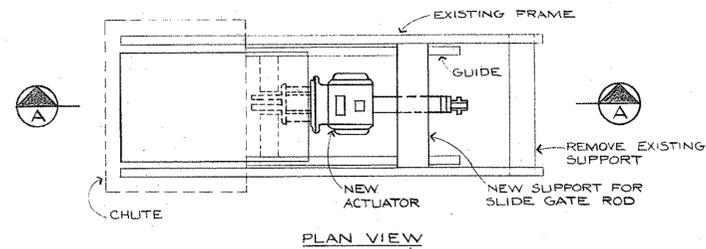
- A. NEW RELAYS TO HAVE 480 V COIL, ALLEN-BRADLEY 600 V, TYPE P.
- B. DISCONNECT EXISTING WIRE NOS. 133 AND 139 AS SHOWN AND RECONNECT TO NEW RELAY CONTACTS. VERIFY THAT THE LEFT HAND RELAY IS CONNECTED TO CONTROL PANEL TERMINALS NO. 133 AND V33, AND THE RIGHT HAND RELAY TO 139 AND V13. IF REVERSED THEN REVERSE CONNECTIONS TO NEW RELAYS.
- EXISTING STARTERS CONNECT NEW RELAYS IN PARALLEL WITH STARTER COILS.
- CLASS II, GROUP G, ENCLOSURE SIZED AS REQUIRED.
- NEW EXISTING

ELEVATION AT INCLINE BELT STARTERS 2  
N.T.S. E16



- A. RELAYS TO BE 480 VOLT COIL, 600 V ALLEN-BRADLEY, TYPE P.
- B. DISCONNECT WIRE NO. 157 (BLUE) AND NO. 166 (PINK) FROM LEFT SIDE OF TERMINALS. LABEL THESE WITH AN "A" SUFFIX. CONNECT IN SERIES WITH NEW RELAYS AS SHOWN.
- NEW EXISTING

ELEVATION AT JACK LEG TAIL PULLEY ROOM-WEST 3  
N.T.S. E16



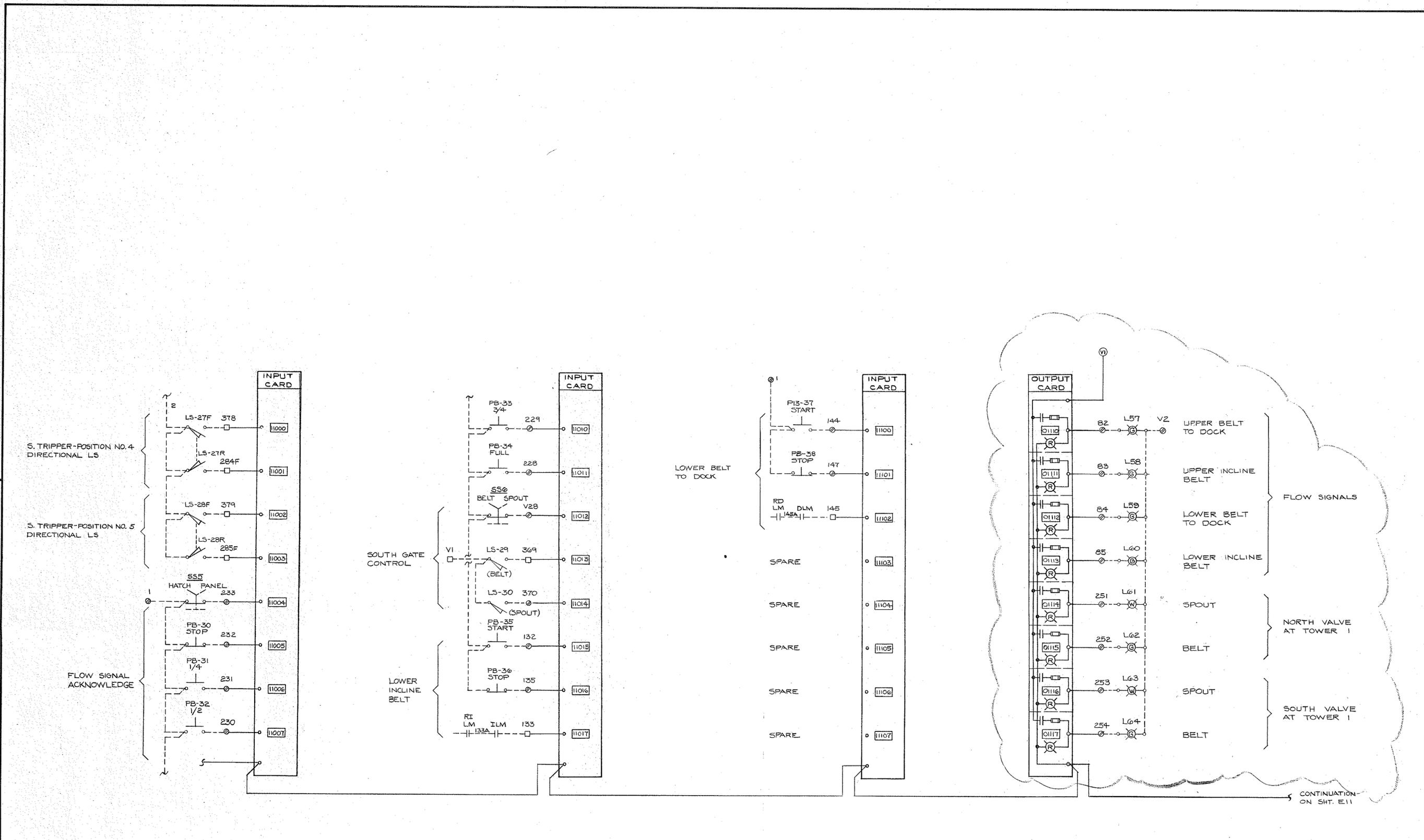
SEE NOTE 4, SHT. E1

ACTUATOR MOUNTING FOR BIN 28 GATE (38 GATE SIMILAR) 4  
N.T.S. (APPROX. 1" = 1'-0") E16

NO.	DATE	REVISION	BY
R&W ENGINEERING, INC.		CONTINENTAL GRAIN COMPANY	DES MCW
		Longview, Washington	DRN LML
		1981 SHIPPING GALLERY	CHK MCW
		CONTROL MODIFICATIONS	SCALE NONE
			DRAWING NO.
PROJECT NO. 7.06		DETAILS	E 16 OF 16
DATE 9-2-81			

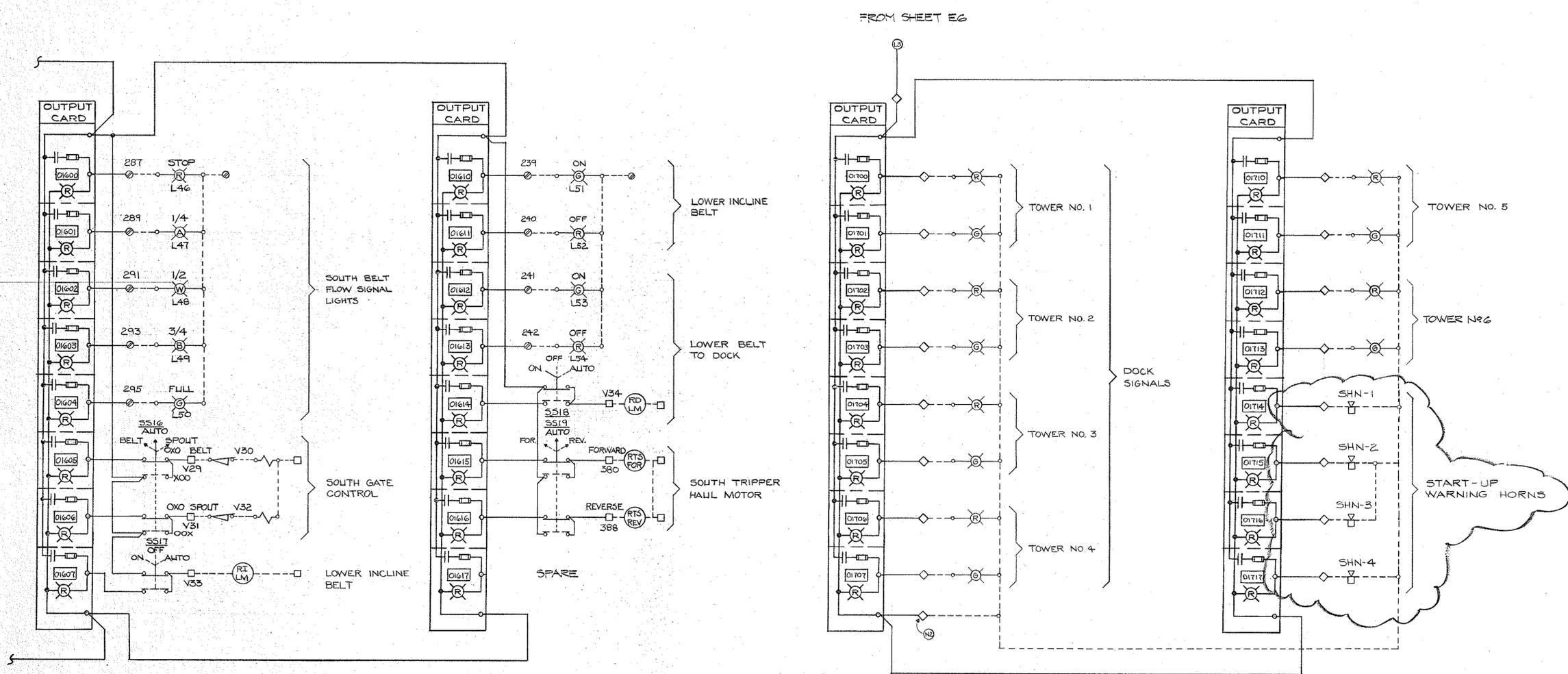
*Mark C. Wolf*

DRAWING NUMBER: B464  
 DRAWING TITLE: 1981 SHIPPING GALLERY CONTROL MODIFICATIONS  
 PROJECT NO.: 7.06  
 DATE: 9/9/81



NO.	5-82	ADDED L57 THRU L64, CHANGED CARD TO OUTPUT TYPE	MCW
DATE		REVISION	BY
<b>R&amp;W ENGINEERING, INC.</b> 6223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676		CONTINENTAL GRAIN COMPANY Longview, Washington 1981 SHIPPING GALLERY CONTROL MODIFICATIONS	DES MCW DRN LML CHK MCW SCALE NONE DRAWING NO.
PROJECT NO.	7.06	NEW CONTROL PANEL INTERCONNECTION DIAGRAMS	E10 OF 16
DATE	9/9/81		

6467



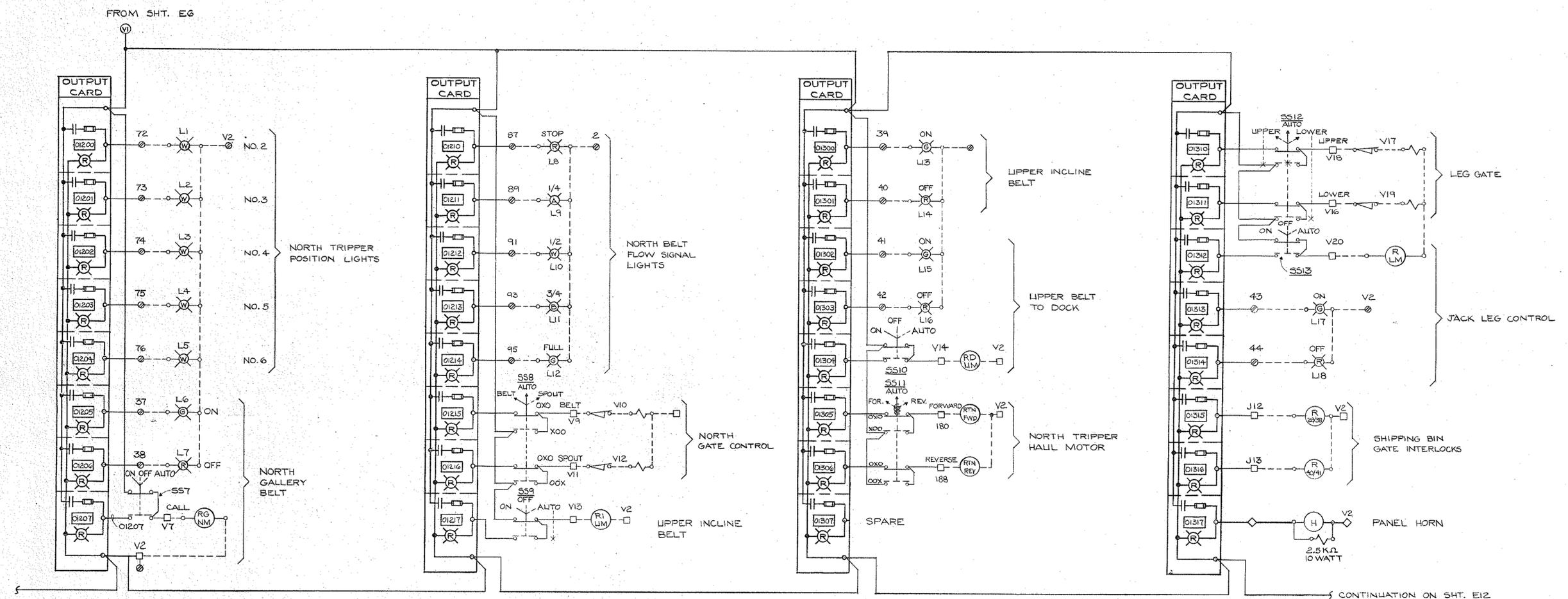
*John C. Wolf*

NO.	5-82	ADDED START-UP HORNS	MCW
DATE		REVISION	BY
<b>R&amp;W ENGINEERING INC.</b> 6223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676		<b>CONTINENTAL GRAIN COMPANY</b> Longview, Washington <b>1981 SHIPPING GALLERY CONTROL MODIFICATIONS</b>	
PROJECT NO.	7.06	NEW CONTROL PANEL INTERCONNECTION DIAGRAMS	DES MCW DRN LML CHK MCW SCALE NONE DRAWING NO.
DATE	9-9-81		E13 OF

8465

DRAWING NUMBER

DATE 9/9/81

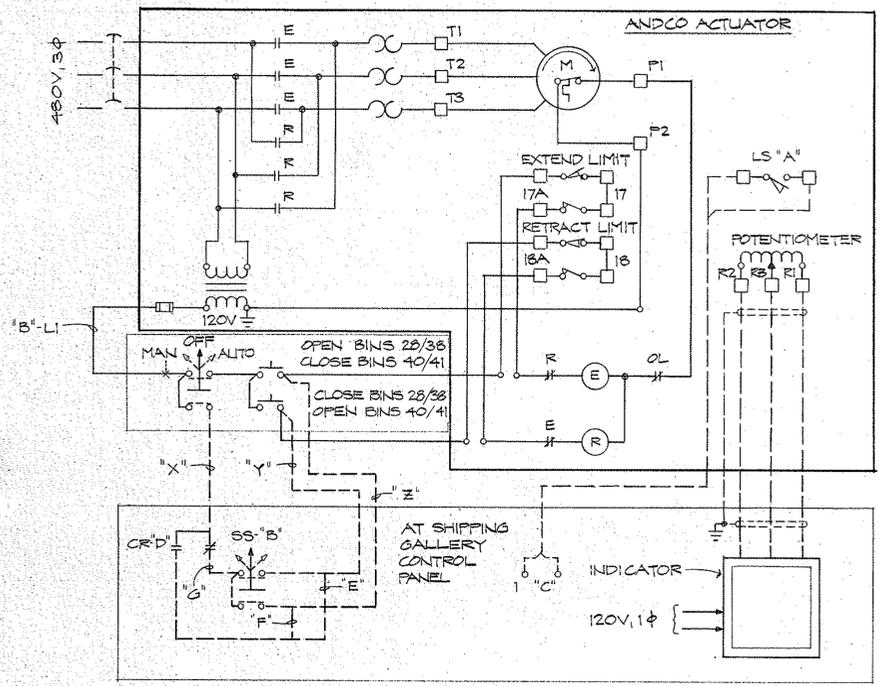


CONTINUATION ON SHT. E12

*Mark C. Wolf*

NO.	DATE	REVISION	BY
R&W ENGINEERING INC.		CONTINENTAL GRAIN COMPANY	
5223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676		Longview, Washington	
PROJECT NO. 1.06		1981 SHIPPING GALLERY CONTROL MODIFICATIONS	
DATE 9/9/81		NEW CONTROL PANEL INTERCONNECTION DIAGRAMS	
		DES: MCW DRI: LML CHK: MCW SCALE: NONE DRAWING NO. E11 OF 16	

8469

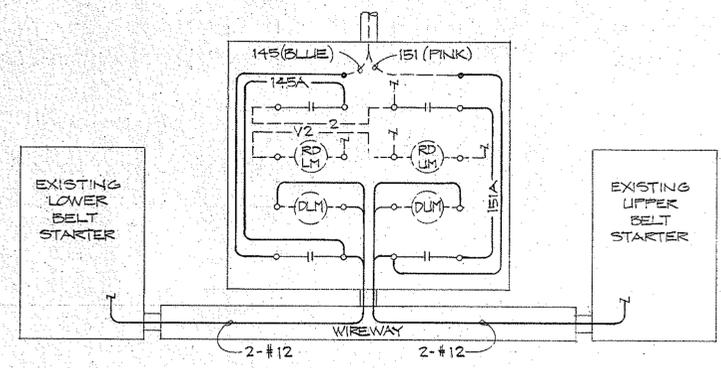


NOTE: BIN 28 & 38 GATES/EXTEND TO OPEN } LS "A" SHALL BE SET TO  
 BIN 40 & 41 GATES/RETRACT TO OPEN } CLOSE AT GATE FULL SEATED

SCHEDULE OF GATE WIRE NUMBERS & DEVICES

GATE	X	Y	Z	A	B	C	D	E	F	G
BIN 28	A1	A2	A3	19	28	J11	28-38	NONE	A3	M1
BIN 38	A4	A5	A6	20	38	J21	28-38	NONE	A6	M2
BIN 40	A7	A8	A9	15	40	J31	40-41	A8	NONE	M3
BIN 41	A10	A11	A12	16	41	J41	40-41	A11	NONE	M4

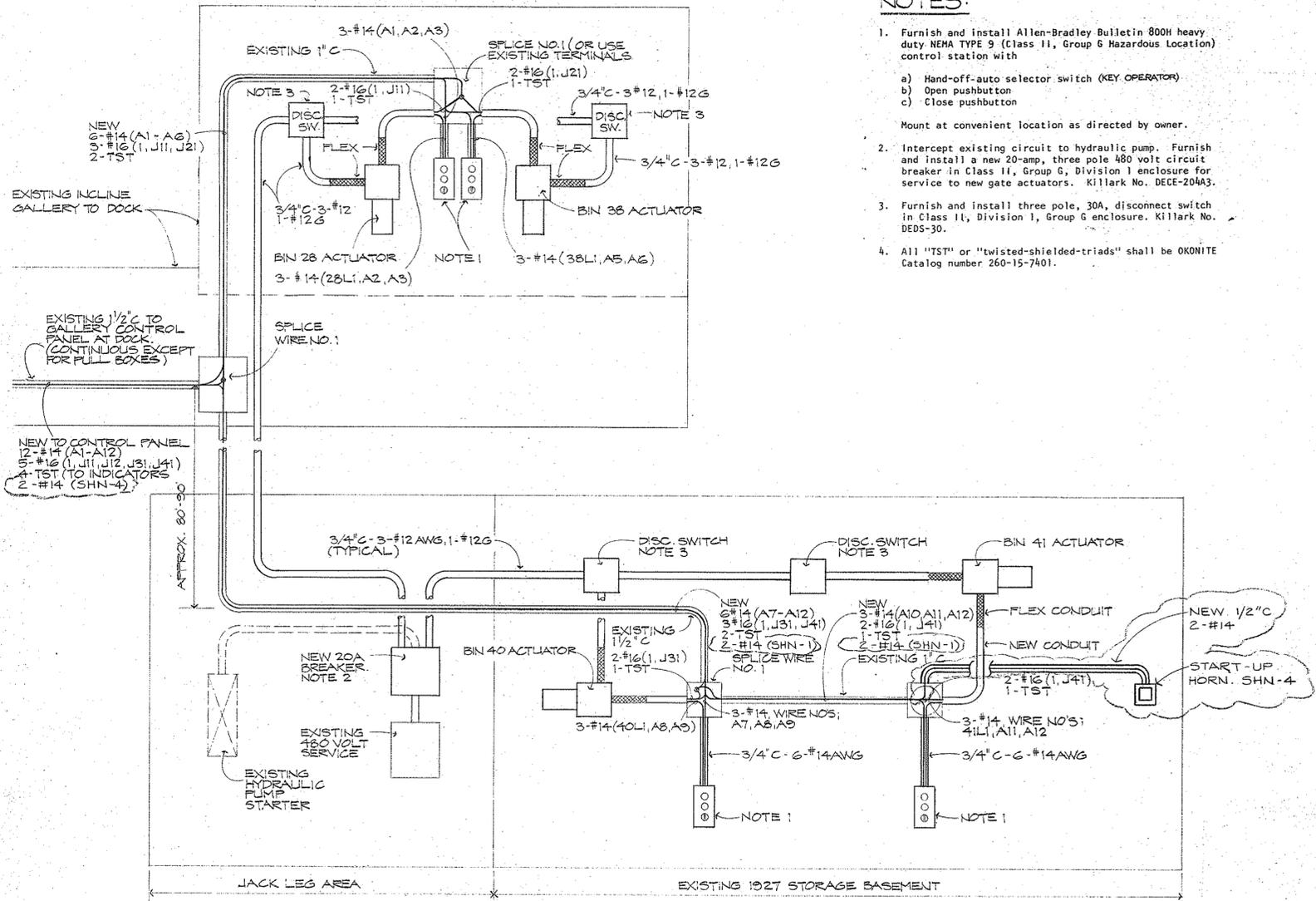
SHIPPING GATE CONTROL CONNECTIONS 2  
 N.T.S. (TYPICAL FOR 4 EACH) E15



— NEW  
 — OR — EXISTING

- A. Connect existing spare 440V coil relay, to motor starters as shown and in parallel with coil.
- B. Reconnect existing wires 145 and 151 in series with contacts of relays as shown.
- C. See NOTE 4, sheet E5 in regards to wire no. 2.

ELEVATION AT BELT-TO-DOCK STARTERS 3  
 N.T.S. E15



NOTES:

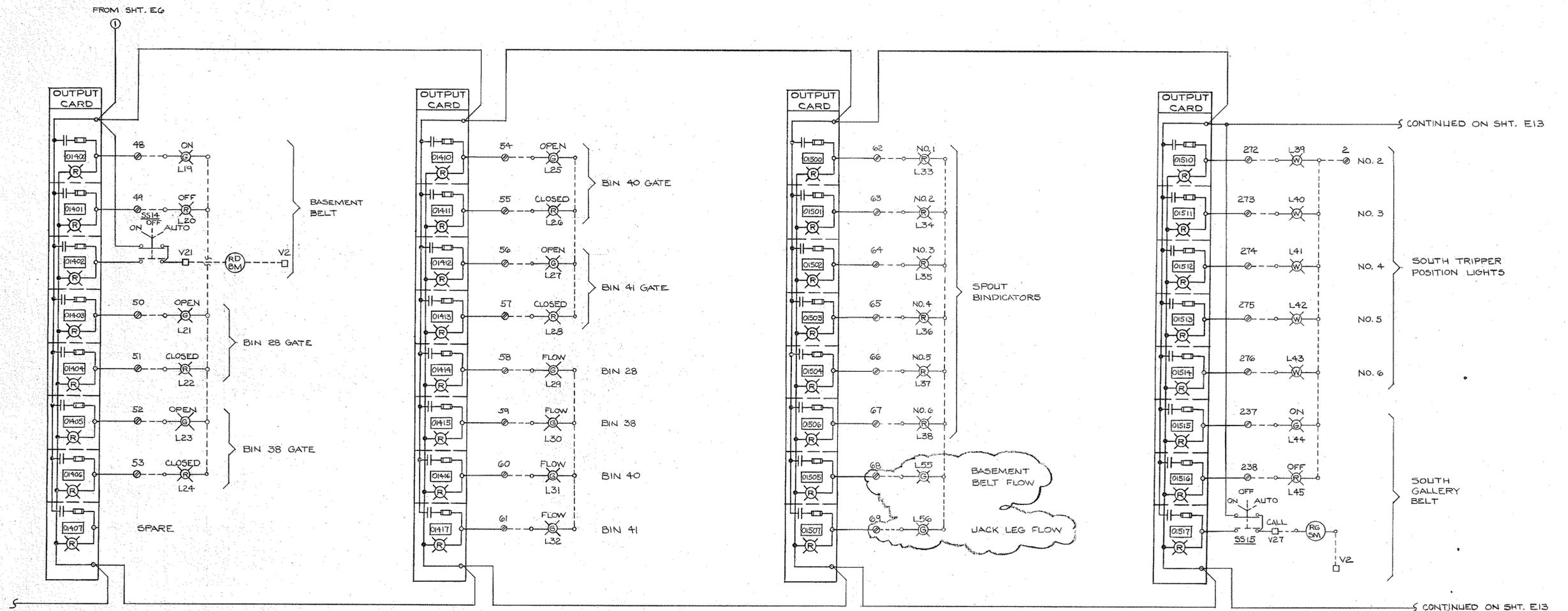
1. Furnish and install Allen-Bradley Bulletin 800H heavy duty NEMA TYPE 9 (Class II, Group G Hazardous Location) control station with
  - a) Hand-off-auto selector switch (KEY OPERATOR)
  - b) Open pushbutton
  - c) Close pushbutton
 Mount at convenient location as directed by owner.
2. Intercept existing circuit to hydraulic pump. Furnish and install a new 20-amp, three pole 480 volt circuit breaker in Class II, Group G, Division 1 enclosure for service to new gate actuators. Killark No. DECE-204A3.
3. Furnish and install three pole, 30A, disconnect switch in Class II, Division 1, Group G enclosure. Killark No. DECS-30.
4. All "TST" or "twisted-shielded-triads" shall be OKONITE Catalog number 260-15-7401.

SHIPPING BIN GATE ACTUATORS INTERCONNECTION RISER DIAGRAM 1  
 N.T.S. E15

*Mark C. Wipf*  
 1906

NO.	DATE	REVISION	BY
5-82		ADDED CONNECTION TO START-UP HORN	MCW
<b>R&amp;W ENGINEERING, INC.</b> Longview, Washington 1981 SHIPPING GALLERY CONTROL MODIFICATIONS			DES MCW DRN SMB CHK MCW SCALE NONE DRAWING NO.
PROJECT NO. 07.06 DATE 3-9-81			MISCELLANEOUS DETAILS E15 OF 16

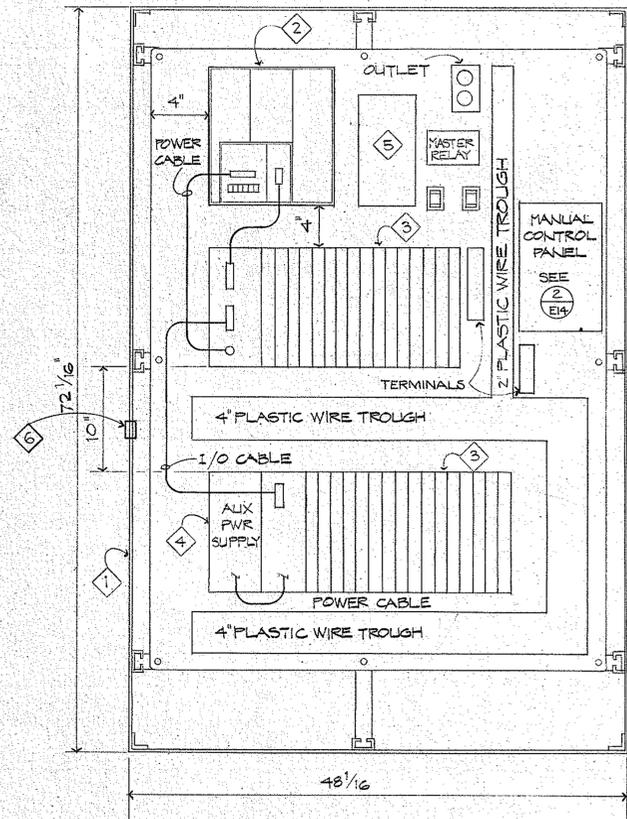
6466



*Mark C. Wolf*

NO.	5-82	ADDED L55 AND L56	MCW
DATE			BY
<b>R&amp;W ENGINEERING INC.</b> 6223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676			DES MCW
<b>CONTINENTAL GRAIN COMPANY</b> Longview, Washington <b>1981 SHIPPING GALLERY CONTROL MODIFICATIONS</b>			DR: LML
PROJECT NO. 706 DATE 9/9/81			CHK MCW
NEW CONTROL PANEL INTERCONNECTION DIAGRAMS			SCALE NONE
			DRAWING NO.
			E12 OF 16

6468



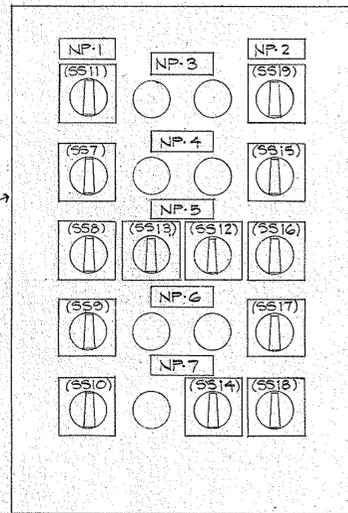
**CONTROL PANEL - ENCLOSURE DOORS NOT SHOWN**  
SCALE: 1 1/2" = 1'-0"

ITEM	DESCRIPTION
1	HOFFMAN BULLETIN A-31 TWO DOOR NEHA TYPE 12 FREE STANDING ENCLOSURE, CATALOG NO. A-724818FSD WITH FULL PANEL CATALOG NO. A-72P48F1. SPECIAL ORDER ENCLOSURE WITH 12-INCH DEPTH INSTEAD OF STD. 18-INCH DEPTH.
2	ALLEN-BRADLEY NO. 1772-LP2 PLC-2/20 PROGRAMMABLE CONTROLLER. FURNISH WITH FOUR MEMORY SEGMENTS FOR A TOTAL OF 8K WORD MEMORY. PROVIDE ONE INDUSTRIAL TERMINAL SYSTEM, CATALOG NO. 1770-T2.
3	ALLEN-BRADLEY NO. 1771-AA 1/0 RACK WITH CAT. NO. 1771-1A OR 0A MODULES AS SHOWN ON INTER-CONNECTION DIAGRAM (ALL SLOTS FILLED). FURNISH TWO EACH SPARE NO. 1771-1A AND 1771-0A MODULES.
4	ALLEN-BRADLEY NO. 1771-P1 AUXILIARY POWER SUPPLY FOR ITEM NO. 3.
5	SOLA VOLTAGE REGULATOR, 250 VOLT-AMP, CAT. NO. 63-23-125 120 VOLT OUTPUT, 120 VOLT INPUT.
6	PANEL HORN, SOLA LET NO. SC1103, CONNECT 25 K.Ω 10 WATT RESISTOR ACROSS TERMINALS FOR CONTROLLER OUTPUT LOADING.

**NOTES**

- ALL WIRING SHALL BE STRANDED, COPPER, TYPE THHN WITH WIRE LABELS AT ALL TERMINATIONS. WHERE WIRE/TERMINAL NOS. ARE NOT INDICATED USE THE 5-DIGIT I/O TERMINAL ADDRESS NUMBER.
- USE #12 AWG FOR POWER SERVICE WIRING. USE #16 AWG FOR ALL OTHER WIRING PROTECTED BY .10 AMP PANEL FUSE, OUTPUT MODULE FUSES, OR POWER ISOLATOR OUTPUT FUSE.
- PROVIDE ALL NECESSARY AUXILIARY CABLES AND CONNECTORS TO PROVIDE A COMPLETE AND OPERATIONAL PROGRAMMABLE CONTROL SYSTEM. PROGRAMMING WILL BE DONE BY OTHERS.
- PROVIDE TERMINALS FOR INTERFACING TO MANUAL CONTROL PANEL AND DISTRIBUTION OF PANEL CONTROL VOLTAGES, OTHERWISE ALL FIELD WIRING WILL GO DIRECTLY TO TERMINALS AT RACKS.

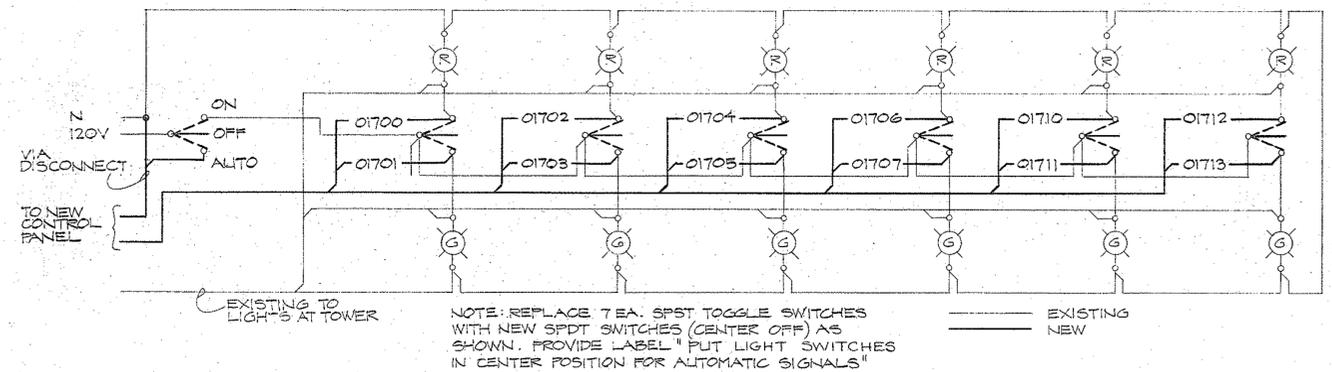
HOFFMAN BULLETIN E.1 NO. E-20FBGX (PROVIDE BLANKS OVER UNUSED OPENINGS)



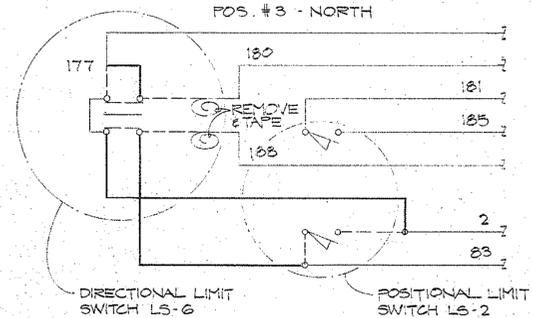
**MANUAL CONTROL PANEL DETAIL**  
HALF SCALE

NAMEPLATES (COMMA INDICATES SECOND LINE)	
NP-1	NORTH/UPPER, SYSTEMS
NP-2	SOUTH/LOWER, SYSTEMS
NP-3	TRIPPERS
NP-4	GALLERY BELTS
NP-5	INCLINE GATES, JACK LEG AND GATE
NP-6	INCLINE BELTS
NP-7	BELTS TO DOCK, BASEMENT BELT

NO.	DESCRIPTION	QUANTITY
7, 9, 10, 13, 14, 15, 17, 18	MICROSWITCH, TYPE PW, 3-POSITION SELECTOR SWITCH, NO. PWSEB102FF-B49	9 ea. (1 spare)
8, 16	MICROSWITCH, TYPE PW, 3-POSITION SELECTOR SWITCH, CUSTOM LEGEND "BELT-AUTO-SPOUT" NO. PWSEJ102FGFG-B99	3 ea. (1 spare)
12	SAME AS 8 AND 16 EXCEPT LEGEND "UPPER-AUTO-LOWER"	1 ea.
11, 19	MICROSWITCH, TYPE PW, 3-POSITION SELECTOR SWITCH, SPRING RETURN TO CENTER, CUSTOM LEGEND "FOR-AUTO-REV" NO. PWSHJ102FGFG-B99	3 ea. (1 spare)



**MODIFICATIONS AT EXISTING TOWER SIGNAL CONTROLS**  
NTS



**TRIPPER LIMIT SWITCH MODIFICATION DETAIL**  
NTS

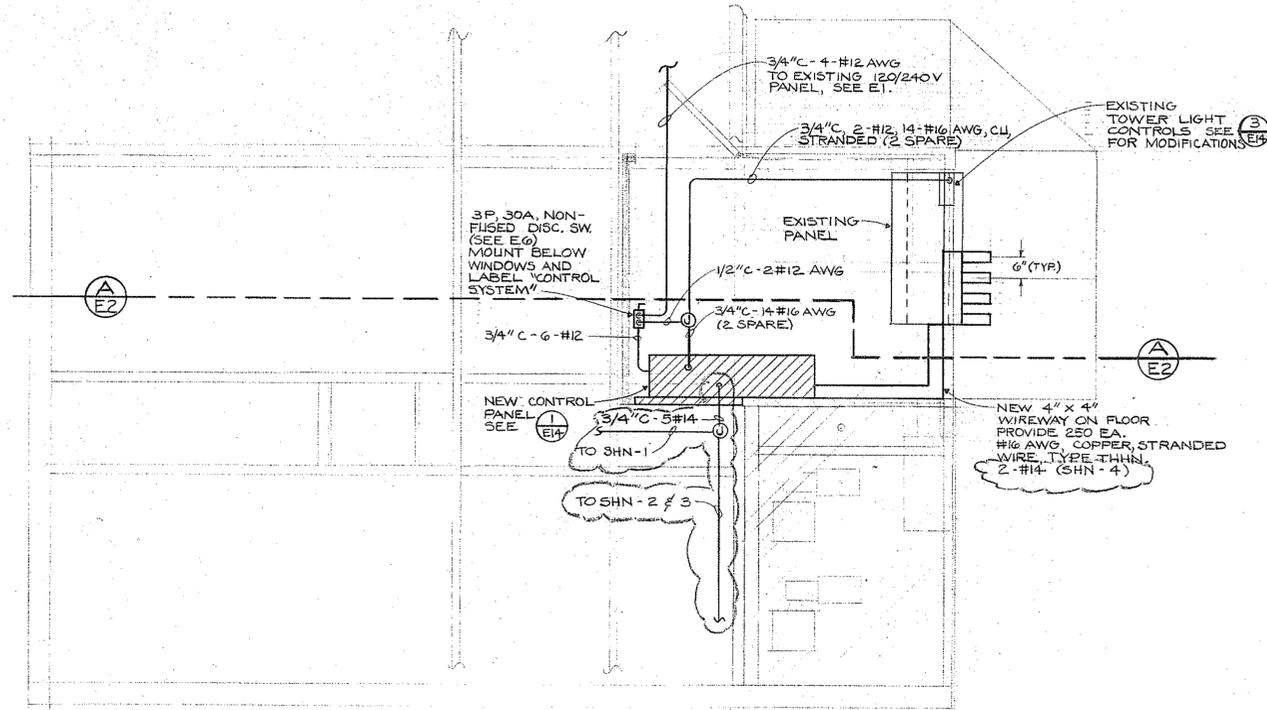
LOCATION	L. S. NO.	WIRE NOS.	L. S. NO.	WIRE NOS.
NORTH - SPOUT 3	6	177 180 188	2	181 185 83 2
NORTH - SPOUT 4	7	178 180 188	3	181 184 84 2
NORTH - SPOUT 5	8	179 180 188	4	181 183 85 2
SOUTH - SPOUT 3	26	377 380 388	22	381 385 283 2
SOUTH - SPOUT 4	27	378 380 388	23	381 384 284 2
SOUTH - SPOUT 5	28	379 380 388	24	381 383 285 2

--- EXISTING TO REMAIN  
- - - EXISTING TO BE REMOVED OR DISCONNECTED  
= = = NEW CONNECTION OR EXTENSION

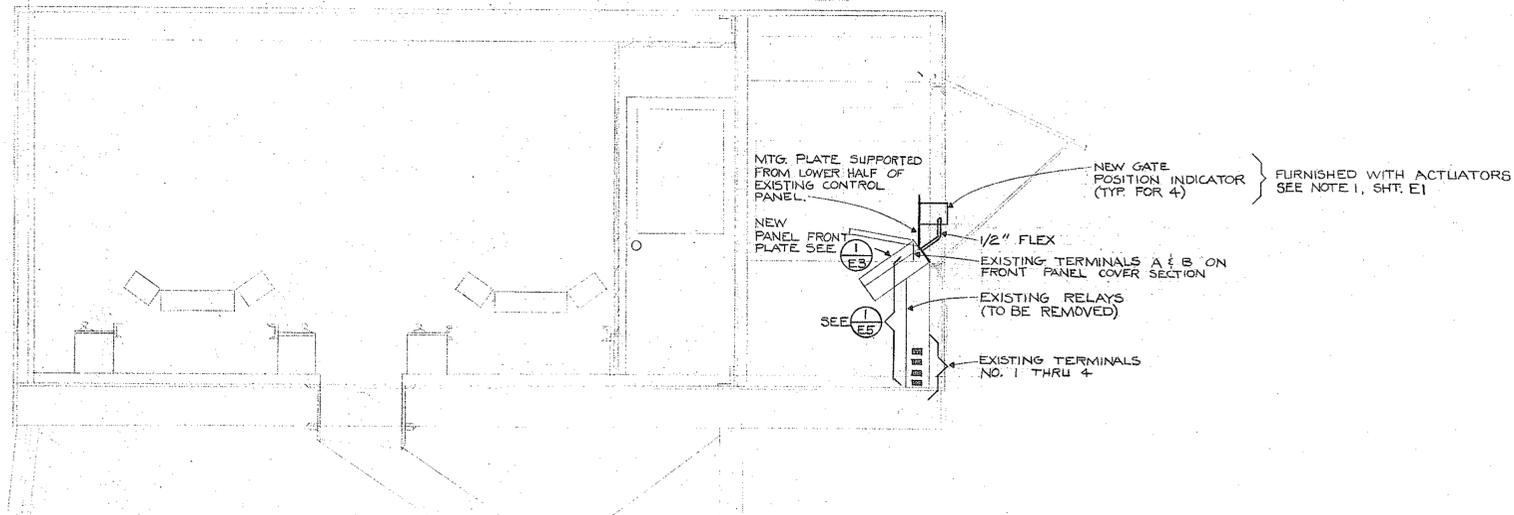


NO.	DATE	REVISION	BY
R&W ENGINEERING, INC.		CONTINENTAL GRAIN COMPANY	DES MCW
6223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676		Longview, Washington 1981 SHIPPING GALLERY CONTROL MODIFICATIONS	DRN SMB
PROJECT NO. 7.06		NEW CONTROL PANEL	CHK. MCW
DATE 3-3-81			SCALE AS SHOWN
			DRAWING NO. E14 OF 16

6456



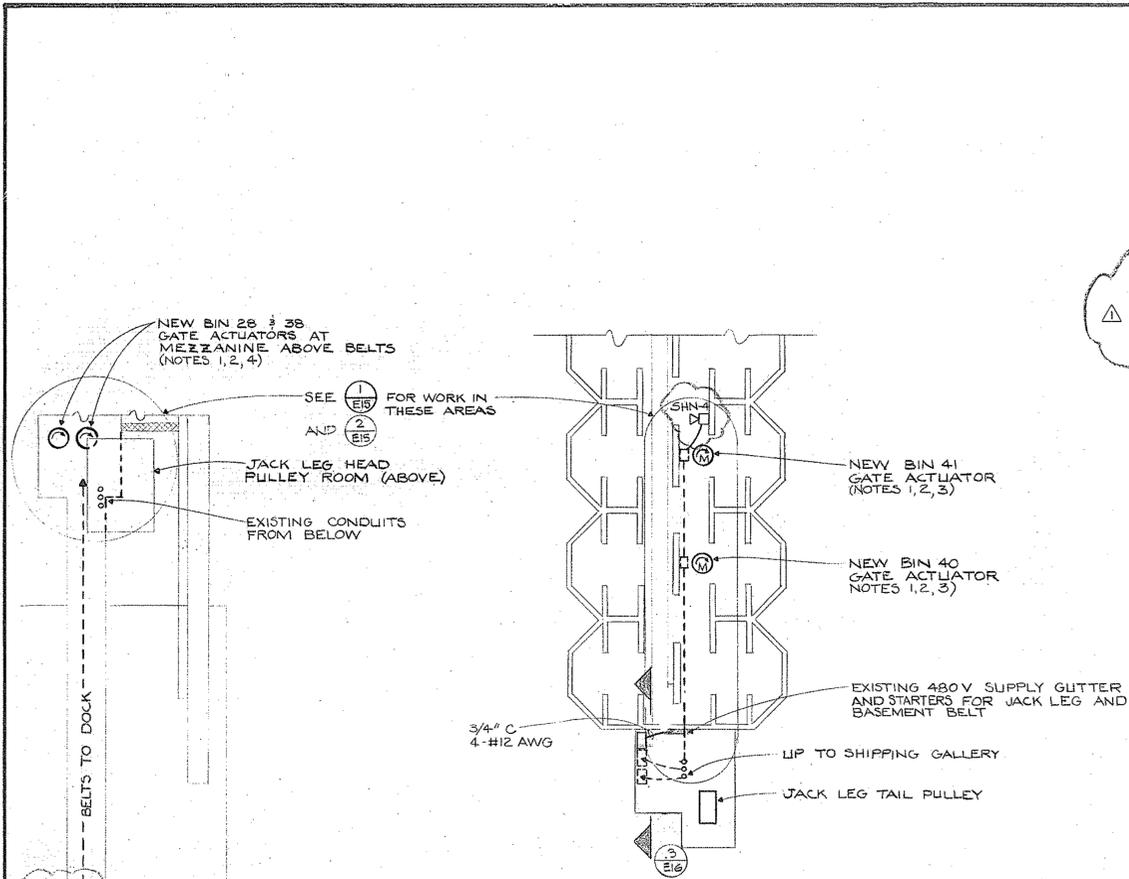
CONTROL ROOM PLAN AT TOWER NO. 1 (1) E2  
SCALE: 1/2" = 1'-0"



CONTROL ROOM/SHIPPING GALLERY SECTION (A) E2  
SCALE: 1/2" = 1'-0"

*Mark C. White*

NO.	DATE	REVISION	BY
Δ	5-82	ADDED CONNECTIONS TO START-UP HORNS	MCW
R&W ENGINEERING, INC.		CONTINENTAL GRAIN COMPANY	
5223 S.W. Canyon Ct. Portland, OR - 97221 Phone: 503-297-5676		Longview, Washington	
PROJECT NO. 7.06		1981 SHIPPING GALLERY CONTROL MODIFICATIONS	
DATE 5-9-81		CONTROL ROOM PLAN	
		E2 OF 16	



**1927 STORAGE BASEMENT PLAN**  
 NORTH  
 SCALE: APPROX. 1/16" = 1'-0"

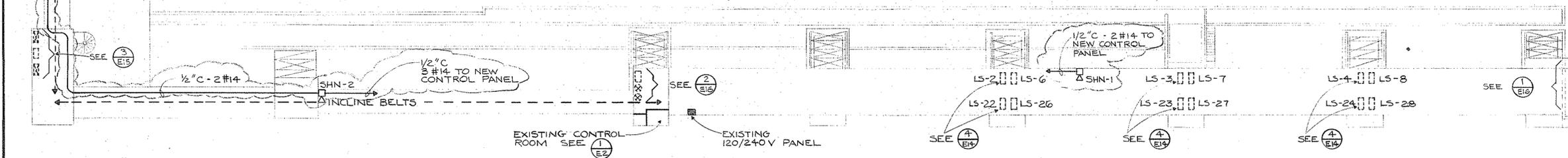
OWNER FURNISHED,  
 CONTRACTOR INSTALLED

**NOTES**

- NEW SHIPPING BIN SLIDE GATE ACTUATORS SHALL BE ANDCO SERIES 7000 BALL SCREW LINEAR ACTUATORS IN MODEL 7205T WITH A TRAVEL VELOCITY OF 3.8 (NOMINAL) INCHES PER SECOND DEVELOPING 2250 LBS OF BREAKAWAY THRUST AND 500 LBS OF RUNNING THRUST. TRAVEL LENGTH SHALL BE 18-INCHES. ACTUATOR SHALL INCLUDE THRUST LIMIT SWITCHES, TWO ADDITIONAL LIMIT SWITCHES FOR EACH END OF THE STROKE (4 TOTAL), 3-WIRE PRECISION GEARED POTENTIOMETER TO INDICATE POSITION, AND INTEGRAL REVERSING STARTER AND CONTROL TRANSFORMER. UNIT SHALL OPERATE FROM 480 VOLTS 3-PHASE AND SHALL HAVE A 120 VOLT CONTROL VOLTAGE. ENCLOSURE AND UNIT HOUSING SHALL BE RATED FOR CLASS II, GROUP G, DIV. 1 HAZARDOUS AREAS. FURNISH ONE ANDCO MODEL 4000 POSITION INDICATOR FOR EACH ACTUATOR.
- AT EACH SHIPPING BIN GATE REMOVE EXISTING ELECTRO/HYDRAULIC ACTUATING EQUIPMENT.
- AT BINS 40 AND 41 GATES INSTALL ACTUATOR BY EXTENDING THE EXISTING SUPPORT FRAME AS REQUIRED AND MOUNT THE ACTUATOR VIA A REAR CLEVIS AND WITH THE LIMIT SWITCH COVER TOWARDS THE FLOOR ("UPSIDE DOWN"). OPERATOR SHALL DIRECTLY ACT ON THE SLIDE AND WILL EXTEND TO CLOSE THE GATE AND RETRACT TO OPEN THE GATE.
- AT BINS 28 AND 38 RESTRICTED CLEARANCES WILL REQUIRE A REVERSE MOUNTING ARRANGEMENT. SEE DETAIL NO. 4 ON SHT. E16. THIS DETAIL REPRESENTS THE ARRANGEMENT INTENDED. FINAL DESIGN AND DETAILS SHALL BE BY THE CONTRACTOR AND SHALL BE SUITABLE TO WITHSTAND THE SPECIFIED BREAKAWAY THRUST OF THE ACTUATOR. NOTE THAT OPERATOR WILL RETRACT TO CLOSE THE GATE AND EXTEND TO OPEN THE GATE.

**WORK SCOPE**

- ALL ELECTRICAL WORK SHALL CONFORM TO THE STATE OF WASHINGTON AND THE 1981 NEC. WORK IN INTERIOR AREAS SHALL MEET REQUIREMENTS FOR CLASS II, DIV. 1, GROUP G HAZARDOUS LOCATIONS CLASSIFICATIONS.
- WORK GENERALLY INCLUDES THE FOLLOWING:
  - REMOVE EXISTING SHIPPING BIN GATE HYDRAULIC/ELECTRIC POSITIONING EQUIPMENT AND INSTALL NEW ALL ELECTRIC ACTUATORS.
  - MODIFY AND RE-WIRE EXISTING SHIPPING GALLERY CONTROL PANEL.
  - FURNISH AND INSTALL NEW CONTROL PANEL AT SHIPPING GALLERY FOR IMPLEMENTATION OF NEW PROGRAMMABLE CONTROL SYSTEM.
  - MODIFY EXISTING FIELD LIMIT SWITCHES, MOTOR STARTERS AND CONTROLS AS SHOWN ON THE PLANS.
- ALL WORK SHALL BE CAREFULLY COORDINATED WITH CONTINENTAL GRAIN COMPANY TO MINIMIZE DISRUPTION OF PLANT OPERATIONS.
- CONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF CONTINENTAL GRAIN COMPANY'S SAFETY RULES AND SHALL PROVIDE INSURANCE COVERAGES AS OUTLINED BY THE OWNER.
- ALL FIELD WIRING SHALL BE #14 AWG, THWN, COPPER (MINIMUM). CONDUCTORS SHALL BE IDENTIFIED AT TERMINAL CONNECTIONS WITH WIRE MARKERS. WHEN WORKING ON EXISTING SYSTEMS PROVIDE NEW LABELLING TO UPGRADE OLD IDENTIFICATIONS.
- START-UP HORNS SHALL BE CROUSE-HINDS ETH2703, 115VAC, RATED FOR CLASS II, GROUP G. MOUNT AT CEILING AS DIRECTED BY OWNER.

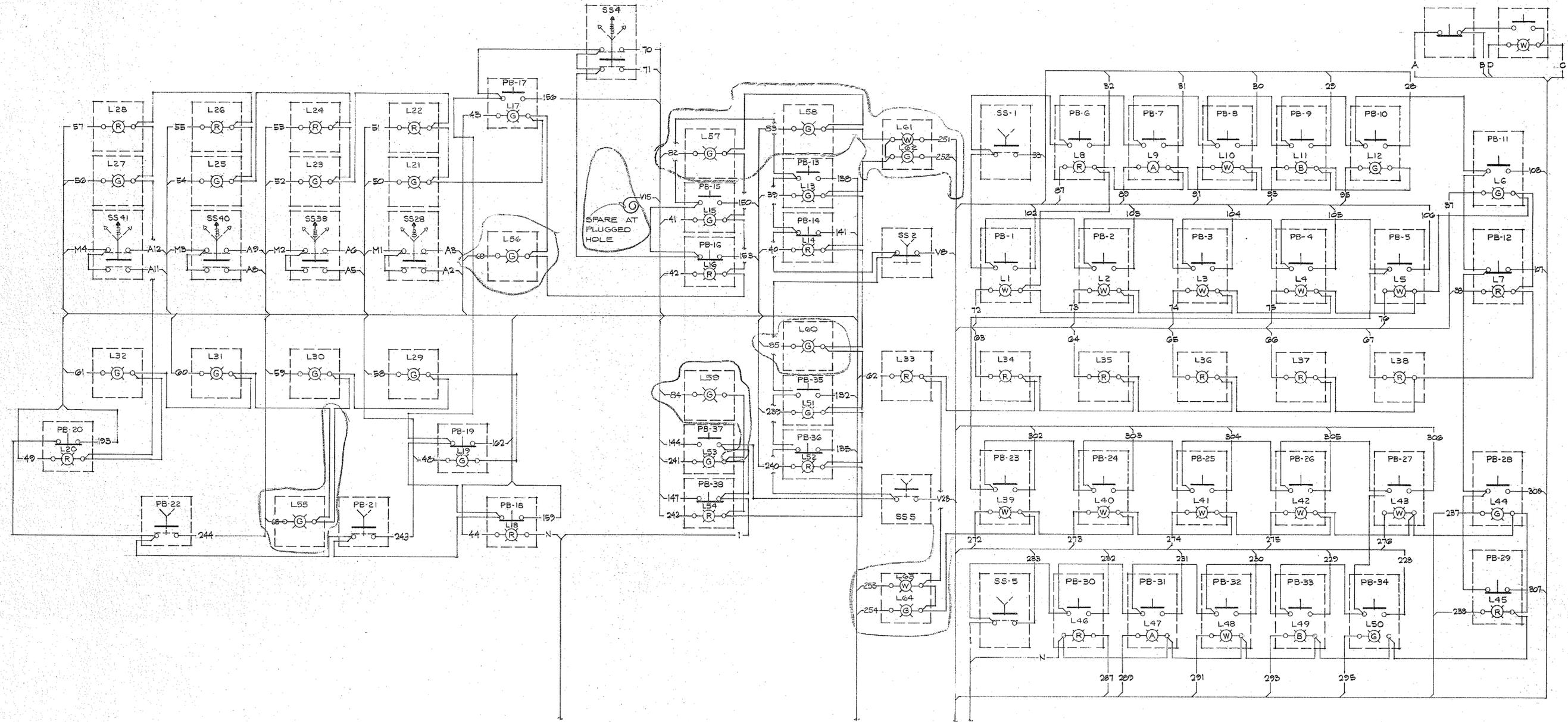


**PLAN OF SHIPPING GALLERY & DOCK**  
 NORTH  
 SCALE: 1" = 20'-0"

*Mark C. Wolf*

NO.	5-82	ADDED START-UP HORNS, MODIFIED NOTE #1	MCW
DATE		REVISION	BY
<b>R&amp;W ENGINEERING, INC.</b> 1223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676	<b>CONTINENTAL GRAIN COMPANY</b> Longview, Washington 1981 SHIPPING GALLERY CONTROL MODIFICATIONS		DES MCW
			DRN LML
			CHK MCW
			SCALE 1" = 20'-0"
PROJECT NO.	7.06	LOCATION PLANS	DRAWING NO.
DATE	5-9-81		E1 OF 16

8458



FRONT PANEL WIRING DIAGRAM (REAR VIEW)

478

1  
E4

SEE NOTES ON SH. E3 FOR WIRING



S-82		ADDED L55 THRU L64, REMOVED SS3	MCW
NO.	DATE	REVISION	BY
R&W ENGINEERING, INC.			DES MCW
6223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676			DRN APV/EVM
PROJECT NO. 7.06			CHK MCW
DATE 2-2-51			SCALE AS SHOWN
CONTINENTAL GRAIN COMPANY Longview, Washington 1981 SHIPPING GALLERY CONTROL MODIFICATIONS			DRAWING NO.
EXISTING CONTROL PANEL FRONT WIRING DIAGRAM			E4 OF 16

6549

DRAWING NUMBER

DATE

PROJECT

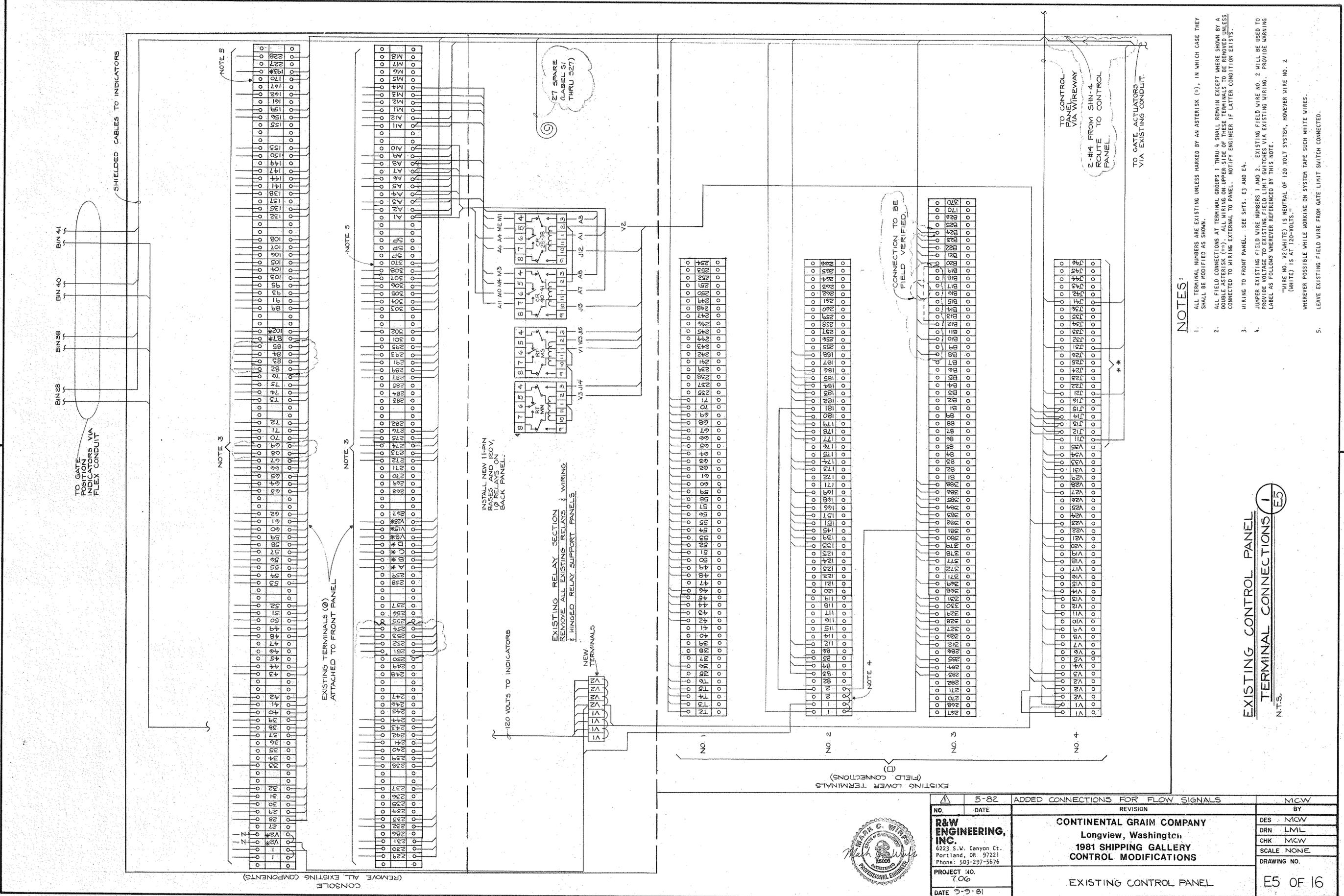
REVISED DRAWING

DATE

PROJECT

REVISED DRAWING

REVISED DRAWING



NOTES:

- ALL TERMINAL NUMBERS ARE EXISTING UNLESS MARKED BY AN ASTERISK (\*), IN WHICH CASE THEY SHALL BE MODIFIED AS SHOWN.
- ALL FIELD CONNECTIONS AT TERMINAL GROUPS 1 THRU 4 SHALL REMAIN EXCEPT WHERE SHOWN BY A DOUBLE ASTERISK (\*\*). ALL WIRING ON UPPER SIDE OF THESE TERMINALS TO BE REMOVED UNLESS CONNECTED TO WIRING EXTERNAL TO PANEL. NOTIFY ENGINEER IF LATTER CONDITION EXISTS.
- WIRING TO FRONT PANEL. SEE SHTS. E3 AND E4.
- JUMPER EXISTING FIELD WIRE NUMBERS 1 AND 2. EXISTING FIELD WIRE NO. 2 WILL BE USED TO PROVIDE VOLTAGE TO EXISTING FIELD LIMIT SWITCHES VIA EXISTING WIRING. PROVIDE MARKING LABEL AS FOLLOWS WHEREVER REFERENCED BY THIS NOTE.  
"WIRE NO. V2 (WHITE) IS NEUTRAL OF 120 VOLT SYSTEM, HOWEVER WIRE NO. 2 (WHITE) IS AT 120-VOLTS."
- WHEREVER POSSIBLE WHILE WORKING ON SYSTEM TAPE SUCH WHITE WIRES. LEAVE EXISTING FIELD WIRE FROM GATE LIMIT SWITCH CONNECTED.

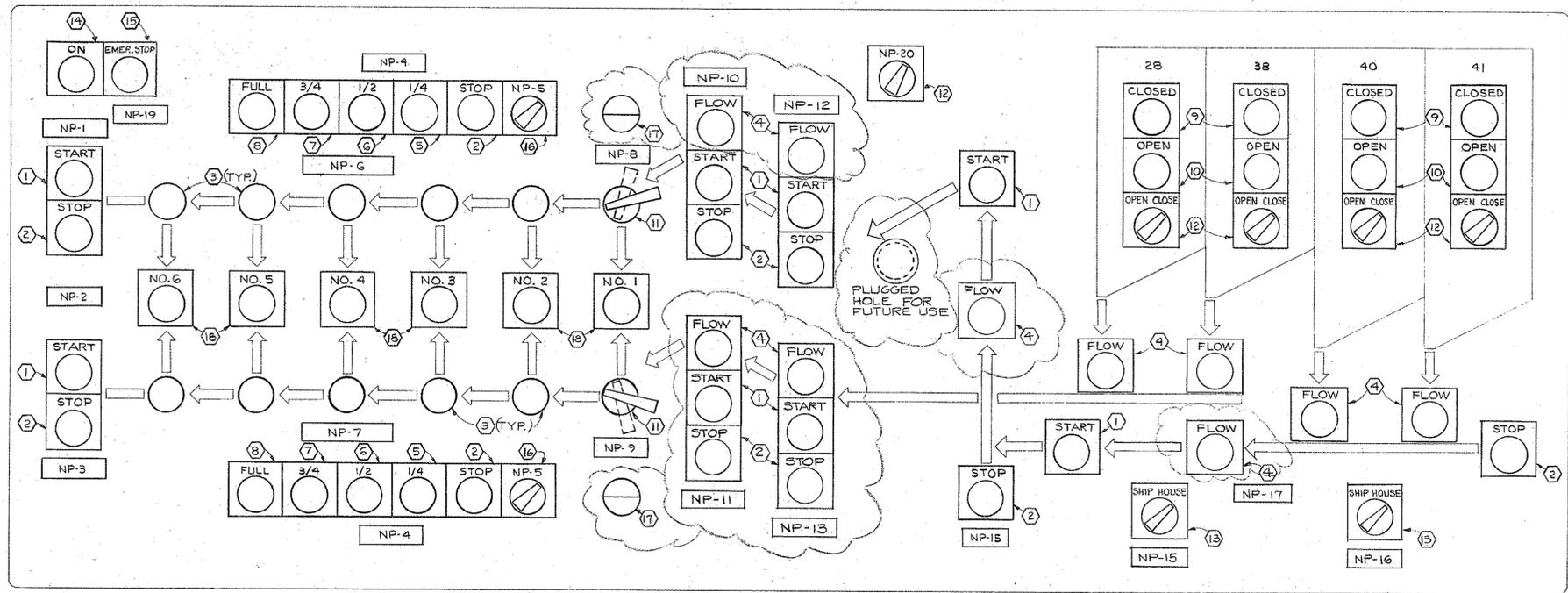
EXISTING CONTROL PANEL  
 TERMINAL CONNECTIONS 1  
 E5

N.T.S.



NO.	5-82	ADDED CONNECTIONS FOR FLOW SIGNALS	MCW
DATE		REVISION	BY
R&W ENGINEERING, INC.		CONTINENTAL GRAIN COMPANY	
6223 S.W. Canyon Ct. Portland, OR 97221 Phone: 503-297-5676		Longview, Washington 1981 SHIPPING GALLERY CONTROL MODIFICATIONS	
PROJECT NO.	700	EXISTING CONTROL PANEL	
DATE	81-6-6	E5 OF 16	

8457



NAMEPLATE SCHEDULE	
(SLANT INDICATES 1ST AND 2ND LINE)	
NP-1	NORTH GALLERY BELT
2	SPOUT INDICATORS
3	SOUTH GALLERY BELT
4	FLOW SIGNAL FROM HATCH
5	CONTROL/PANEL-HATCH
6	NORTH TRIPPER SELECTION
7	SOUTH TRIPPER SELECTION
8	NORTH GATE
9	SOUTH GATE
10	UPPER INCLINE BELT
11	LOWER INCLINE BELT
12	UPPER BELT TO DOCK
13	LOWER BELT TO DOCK
14	
15	JACK LEG
16	28-38 BINS/WIEGHBACK
17	BASEMENT BELT
18	40-41 BINS/WIEGHBACK
19	POWER
20	LAMPS-SILENCE

**CONTROL PANEL FRONT LAYOUT** 1  
HALF-SCALE E3

CONTROL DEVICE SCHEDULE		
ITEM	MICROSWITCH TYPE PW DESCRIPTION	QUANTITY
1	LIGHTED PUSHBUTTON, GREEN LENS, NO. PWH3616F-B28.	9 ea. (1 spare)
2	LIGHTED PUSHBUTTON, RED LENS, RED "STOP" LEGEND. NO. PWH3613G-B57.	11 ea. (1 spare)
3	LIGHTED PUSHBUTTON, WHITE LENS. NO. PWH3618F.	11 ea. (1 spare)
4	INDICATING LIGHT, GREEN LENS, NO. PWL616-B99. CUSTOM LEGEND.	11 ea. (1 spare)
5	LIGHTED PUSHBUTTON, AMBER LENS, CUSTOM LEGEND. NO. PWH5614F-B99.	2 ea.
6	LIGHTED PUSHBUTTON, WHITE LENS, CUSTOM LEGEND. NO. PWH3618F-B99.	2 ea.
7	LIGHTED PUSHBUTTON, BLUE LENS, CUSTOM LEGEND. NO. PWH3617F-B99.	2 ea.
8	LIGHTED PUSHBUTTON, GREEN LENS, CUSTOM LEGEND. NO. PWH3616F-B99.	2 ea.
9	INDICATING LIGHT, RED LENS. NO. PWL613-B01.	4 ea.
10	INDICATING LIGHT, GREEN LENS. NO. PWL616-B19.	5 ea. (1 spare)
11	TWO-POSITION SELECTOR SWITCH, MAINTAINED CONTACT WITH WING LEVER OPERATOR. NO. PWSB1126FAA.	3 ea. (1 spare)
12	THREE-POSITION SELECTOR SWITCH. SPRING RETURN TO CENTER WITH STANDARD KNOB. CUSTOM LEGEND. NO. PWSH102FFAA-B99.	6 ea. (1 spare)
13	TWO-POSITION KEY OPERATED SELECTOR SWITCH. CUSTOM LEGEND. NO. PWSB1121GF-B99.	3 ea. (1 SPARE)
14	LIGHTED PUSHBUTTON, WHITE LENS. NO. PWH3618F-B18.	1 ea.
15	UNLIGHTED PUSHBUTTON, RED CAP NO. PWH330G-T04-B04.	1 ea.
16	TWO-POSITION SELECTOR SWITCH, MAINTAINED CONTACT, CUSTOM LEGEND, NO. PWSB1102GFAA-B99.	3 EA. (1 SPARE)

ITEM	MICROSWITCH TYPE PW DESCRIPTION	QUANTITY
17	TWO-LAMP INDICATING UNIT, TOP LENS WHITE, BOTTOM LENS GREEN, NO. BWDF6186. PROVIDE LENSES INDICATOR LEGEND WITH "SPOUT" ON TOP HALF AND "BELT" ON BOTTOM.	3 EA. (1 SPARE)
18	SAME AS 4 EXCEPT RED LENS. NO. PWL613-B99.	7 EA. (1 SPARE)

**NOTES**

- PANEL FRONT IS TO BE FABRICATED FROM 12-GAUGE ALUMINUM AND SHALL BE SIZED TO EXACTLY MATCH EXISTING PANEL FRONT MOUNTING DIMENSIONS. GRAPHIC ARROWS AND BIN SYMBOLS SHALL BE MADE OF BLACK FORMICA AS SHOWN AND SHALL BE PERMANENTLY BONDED TO THE ALUMINUM WITH A SUITABLE GLUE. DOUBLE-STICK TAPES WILL NOT BE ACCEPTABLE, ENGRAVE BIN NOS. AS SHOWN.
- NAMEPLATES SHALL BE ENGRAVED PHENOLIC LAMINATES WITH WHITE ON BLACK LETTERING.
- BACK PANEL WIRING SHALL BE DONE WITH #16 AWG, COPPER, STRANDED WIRE, TYPE THHN. ALL CONTROL COMPONENTS HAVE BEEN SPECIFIED WITH "QUICK-CONNECT" TERMINALS. CONDUCTORS SHALL BE CRIMPED WITH MATCHING TERMINALS.
- ALL BACK PANEL WIRING SHALL BE TERMINATED AT EXISTING TERMINALS A & B (SEE E5 AND E4) WITH CRIMPED SPADE TYPE TERMINATIONS.
- SEE E4 FOR BACK-PANEL WIRING.



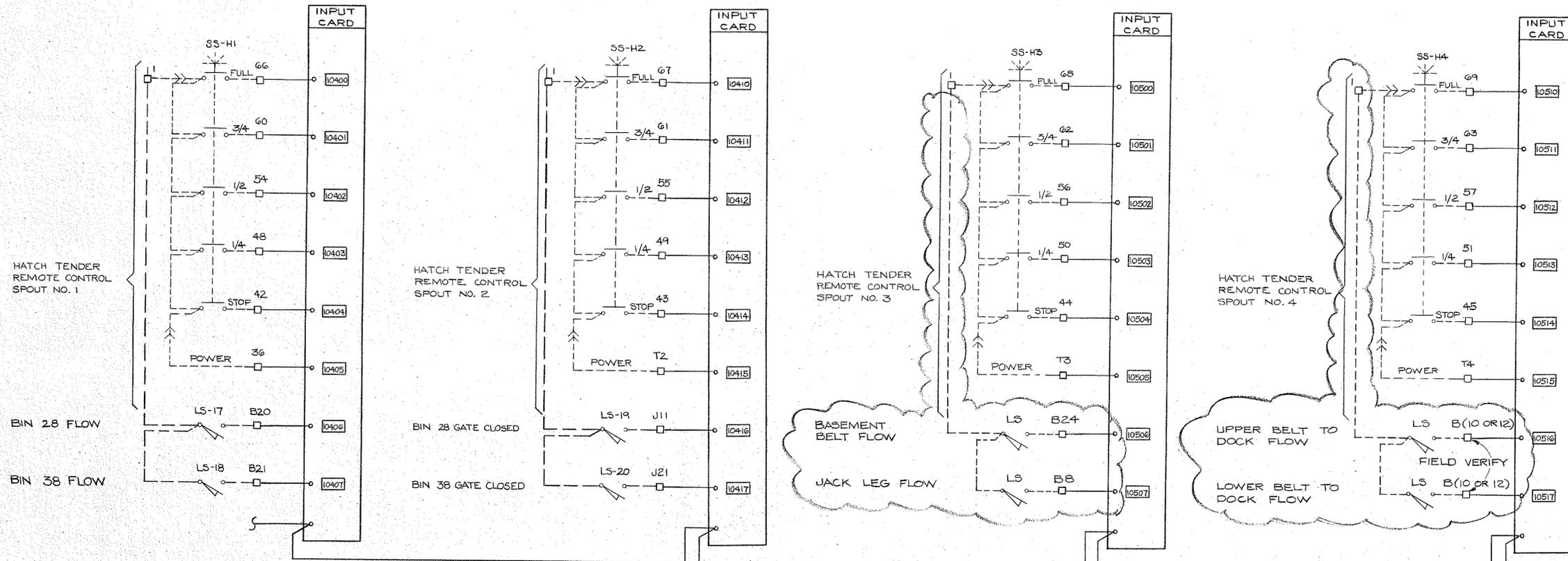
NO.	5-82	ADDED 8 INDICATORS, REMOVED NPI4 & S53	MCW
DATE		REVISION	BY
<b>R&amp;W ENGINEERING, INC.</b>		<b>CONTINENTAL GRAIN COMPANY</b>	
6223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676		Longview, Washington	
PROJECT NO. 7.06		1981 SHIPPING GALLERY CONTROL MODIFICATIONS	
DATE 9-5-81		EXISTING CONTROL PANEL FRONT	
		SCALE HALF-SCALE	
		DRAWING NO. E3 OF 16	

B462  
 1247 10/10/1981  
 10/10/1981

DRAWING NUMBER

DRAWING NUMBER

DRAWING NUMBER

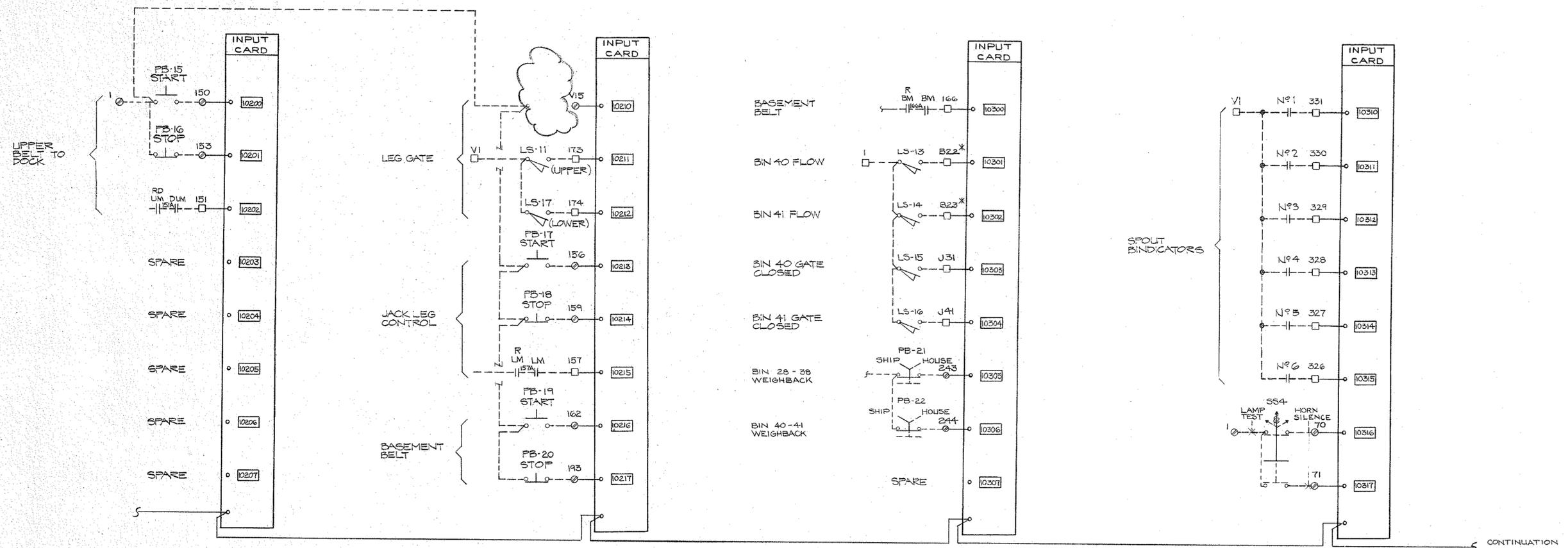


CONTINUATION ON SHT. E9

*Mark C. Wulf*

NO.	5-82	ADDED CONNECTIONS TO FLOW SIGNAL SWITCHES	MCW
DATE		REVISION	BY
<b>R&amp;W ENGINEERING INC.</b> 6223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676		<b>CONTINENTAL GRAIN COMPANY</b> Longview, Washington <b>1981 SHIPPING GALLERY CONTROL MODIFICATIONS</b>	
PROJECT NO.	7.06	SCALE	NONE
DATE	9/9/81	DRAWING NO.	E8 OF 16

6461



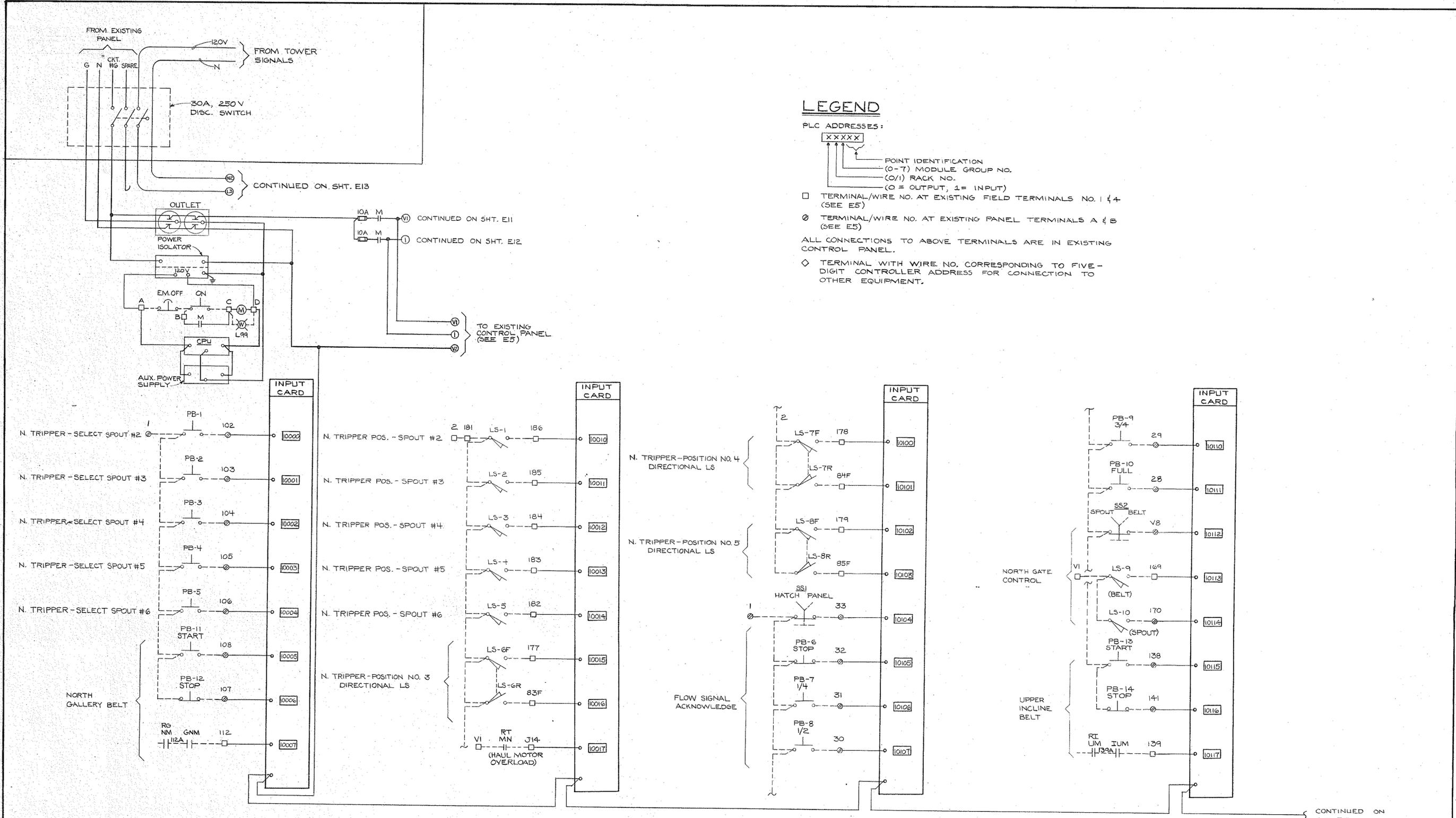
CONTINUATION ON SHT. EB

\* TO BE FIELD VERIFIED



NO.	DATE	REVISION	BY
5-82		REMOVED SS-3	MCW
<b>R&amp;W ENGINEERING INC.</b> 6223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676			DES MCW DRN SMB CHR MCW SCALE NONE DRAWING NO.
PROJECT NO. 7.06 DATE 9/9/81			CONTINENTAL GRAIN COMPANY Longview, Washington 1981 SHIPPING GALLERY CONTROL MODIFICATIONS NEW CONTROL PANEL INTERCONNECTION DIAGRAMS E7 OF 16

8460



### LEGEND

- PLC ADDRESSES:  
 XXXXX  
 POINT IDENTIFICATION  
 (0-7) MODULE GROUP NO.  
 (0/1) RACK NO.  
 (0 = OUTPUT, 1 = INPUT)
- TERMINAL/WIRE NO. AT EXISTING FIELD TERMINALS NO. 1-4 (SEE E5)
  - ⊙ TERMINAL/WIRE NO. AT EXISTING PANEL TERMINALS A & B (SEE E5)
- ALL CONNECTIONS TO ABOVE TERMINALS ARE IN EXISTING CONTROL PANEL.
- ◇ TERMINAL WITH WIRE NO. CORRESPONDING TO FIVE-DIGIT CONTROLLER ADDRESS FOR CONNECTION TO OTHER EQUIPMENT.

CONTINUED ON SHT. E7



NO.	DATE	REVISION	BY
R&W ENGINEERING INC. 6223 S.W. Canyon Court Portland, Oregon 97221 Phone: 503-297-5676		CONTINENTAL GRAIN COMPANY Longview, Washington 1981 SHIPPING GALLERY CONTROL MODIFICATIONS	DES MCW DRN LML CHK MCW SCALE NONE
PROJECT NO. 7.06 DATE 9-9-81		NEW CONTROL PANEL INTERCONNECTION DIAGRAMS	DRAWING NO. E6 OF 16