City of Conway – Mayor's Office
1201 Oak Street
Conway, AR 72032
www.cityofconway.org

Invitation and Bid – 2010-20

INVITATION

TO THE VENDOR ADDRESSED:

Bidders are invited to offer to purchase the items listed herein in accordance with the terms and conditions attached. **Sealed** bids must be in the Office of the Mayor not later than **10 am, Thursday, February 18th, 2010** at which time all bids will be opened and read in the Downstairs Conference Room in City Hall. Successful bidders will receive purchase order, if necessary, within 30 days after the City Council approval. ***Unsigned bids will be rejected.***

City of Conway – Sanitation Department

BID SPECIFICATIONS

Electrical Service for

AUTOMATED SORTING LINE

CITY OF CONWAY BID SPECIFICATIONS

ELECTRICAL SERVICE FOR AUTOMATED SORTING LINE

- It is intended that the following set of bid specifications be used as a guideline for the electrical service for the City of Conway Automated sorting line.
- All specification are set forth to work in conjunction with the sorting line to be installed by Marathon Equipment Co.
- Bidder must be able to complete the wiring on a time frame set forth by Marathon Equipment installers.
- Bidder is responsible for complying with all OSHA, Department of Labor, and City of Conway requirements.
- Bidder is responsible for all wiring, conduit, breaker boxes, and any other materials need to complete this job.
- Bidder is also responsible for any lifting equipment needed to perform above ground work.
- For more information contact Eric Seals @ Marathon Equip. @ 1-800-633-8974 ext. 1005
- The main power drop to the control cabin must be installed by March 10, 2010.
- Electricians must be onsite to connect main control panel on March 18, 2010.
- Electricians must be onsite to follow installers to wire equipment on March 19, 2010 and be available until job is complete.

Additional Information

The bidder shall include all charges, including taxes, fees, and shipping. (If applicable)

The bidder needs to include an anticipated delivery date. (If applicable)

In submitting this bid, it is understood by the undersigned bidder that the right is reserved by the City of Conway to reject any and all bids:

Contact Information: Cheryl Harrington

cheryl.harrington@cityofconway.org

City of Conway Sanitation Department
(501)450-6155

Bid Specifications can be obtained from our website:
www.cityofconway.org

****Please be sure to mark envelope:**
Bid Number - 2010-20
Bid Opening Date:
Thursday, February 18th, 2010 @ 10:00am

City of Conway
2010-20 – Electrical Service
Automated Sorting Line
Bid Opening Date: Thursday, February 18th, 2010
City Hall - Downstairs Conference Room @ 10:00am

Total Cost of Electrical Service for Automated Sorting Line

$ _____

Unsigned bids will be rejected:

Authorized Agent Bidding on this project:

_____
Company Name

_____
Company Representative Name

_____
Representative's Signature

_____
Address Email Address

_____
City State Zip

_____
Telephone Number Fax Number

_____
Date

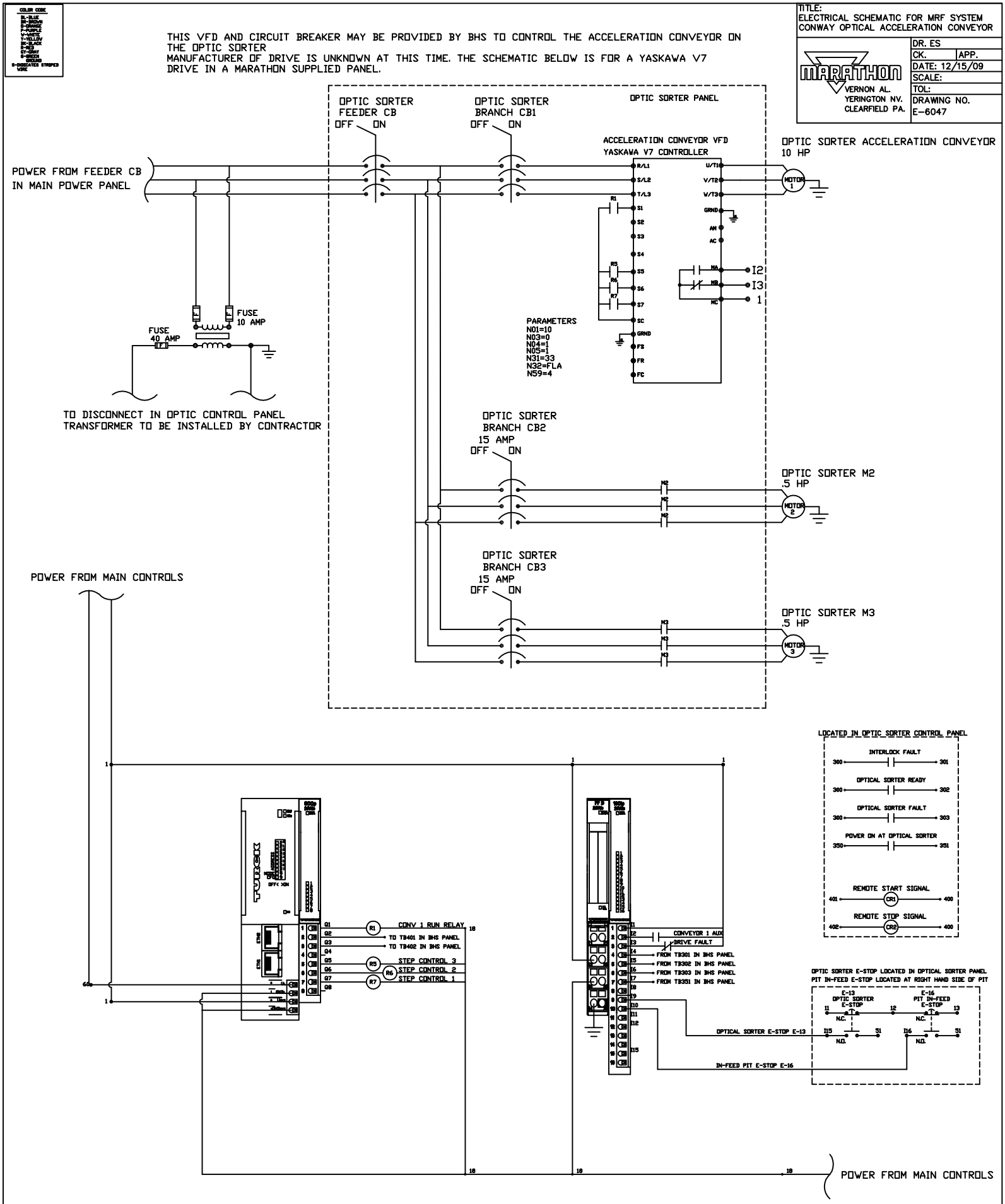
Please feel free to submit additional information on this bid on a separate piece of paper; however this sheet should be included & signed with any bid submitted.

City of Conway – Mayor's Office
Terms & Conditions
www.cityofconway.org
Important – Read Carefully

By Submission of bid, bidder certifies that he has read all terms and conditions and that bid is submitted in accordance therewith.

1. Prices quoted will be considered to be net prices unless otherwise stated by the bidder. Cash discounts requiring payments in less than 30 days will not be considered in making awards.
2. Prices quoted shall be FOB Conway unless otherwise specifically stated on proposal. In either case, delivery charges must be prepaid.
3. All charges including taxes, shipping, freight, and any miscellaneous taxes shall be included in prices quoted, if applicable.
4. Bidder certifies that he will make delivery of items for which he bids within 10 days after receipt of award – ***unless otherwise specifically stated***. Time of delivery in excess of 10 days may be considered a factor in making awards.
5. In case of default of contractor in making deliveries as per contract, the City may procure the articles or services from other sources and hold the contractor responsible for all excess costs occasioned thereby. Bidder's record as to satisfactory performance under previous contracts will be considered a factor in making awards and retention on bid lists.
6. The City reserves the right to reject any or all bids, in part or in whole and to waive information in bids received.
7. If not otherwise specified, bidder must furnish brand names with catalog number, if any, on items which are offered as "equal." In all such cases the burden of establishing equality is upon the bidder and failure to do so within a reasonable time may result in rejection. Alternative bids will not be considered unless no other type bid for the item is received.
8. In the case of equal or tie bids, preference will be given to Arkansas bidders. Other than as stated in the first sentence, awards on tie bids will be made at the discretion of the purchasing official. In such cases, "splitting" will be avoided and awards of previous contract(s) to one or more of the bidders will not be a factor.
9. In the event that bidder is unable to furnish all of an item, bids on portions thereof may be considered.
10. Final inspections and acceptance or rejection will be made after delivery. Items rejected because of non-conformance shall be removed and replaced immediately with those which meet specifications, all at the expense of the contractor. In the event that necessity requires the use of non-conforming items, payment therefore will be made at a proper reduction in price which shall be not greater than contractor's actual cost by purchase, fabrication, manufacture or other production method plus transportation paid to carriers. All costs in connection with testing items that do not meet specifications shall be paid by contractor.
11. Quality, time of performance, probability of performance, and location of bidder will be factors in awards of all contracts.
12. The City reserves the right to purchase any, all or none of the items listed, in combinations thereof that may be in the best interest of the City of Conway.
13. The City reserves the right to change any specifications, terms and/or conditions at any time, with adequate notice in writing to bid invitees of those changes, if any.
14. The City is qualified for "GSA" pricing schedules***, if available and applicable***.

15. The City reserves the right to waive any informalities or minor defects, but this shall not be construed to indicate waiver of any specification, term and/or condition unless in the best interest of the City in the judgment of the City.
16. **CONSTRUCTION/INSTALLATION:** Any construction work that is worth $20,000 or more must comply with Arkansas Code Annotated § 22-9-204.
17. **Arkansas Prevailing Wage Law A.C.A. §22-9-301 through 3-15:** The City of Conway, general contractors or any subcontractors is subject to the Arkansas Prevailing Wage Law, A.C.A. **§22-9-301 through 3-15.** The Labor Standards Division enforces laws related to prevailing wage (PDF). Arkansas's prevailing wage law is commonly referred to as the "little Davis-Bacon Act." The law requires the division to issue a wage determination for each public works project where the cost of all labor and materials exceeds $75,000. *Exemptions are public school construction; work done for or by any drainage, improvement, or levee district; highway, road, street or bridge construction and maintenance, or related work contracted for or performed by incorporated towns, cities, counties, or the Arkansas Highway Department.* If you need a copy of the Prevailing wage Regulation and Laws that are required; this information is available at http://www.arkansas.gov/labor/pdf/prevailing_wage_regs.pdf.
18. **PROHIBITED INTEREST CONDITION:** No official of the City authorized on behalf of the City to specify, plan, design, negotiate, make, accept or approve, or take part in specifying, planning, negotiating, making, accepting or approving any construction or material purchase contract or any subcontract in connection with any purchase made by the City of Conway shall become directly or indirectly interested personally in the purchase in the purchase or any part thereof.
19. **EQUAL OPPORTUNITY IN EMPLOYMENT:** All qualified bidders will receive consideration without regard to race, color, religion, sex, age, disability or national origin.



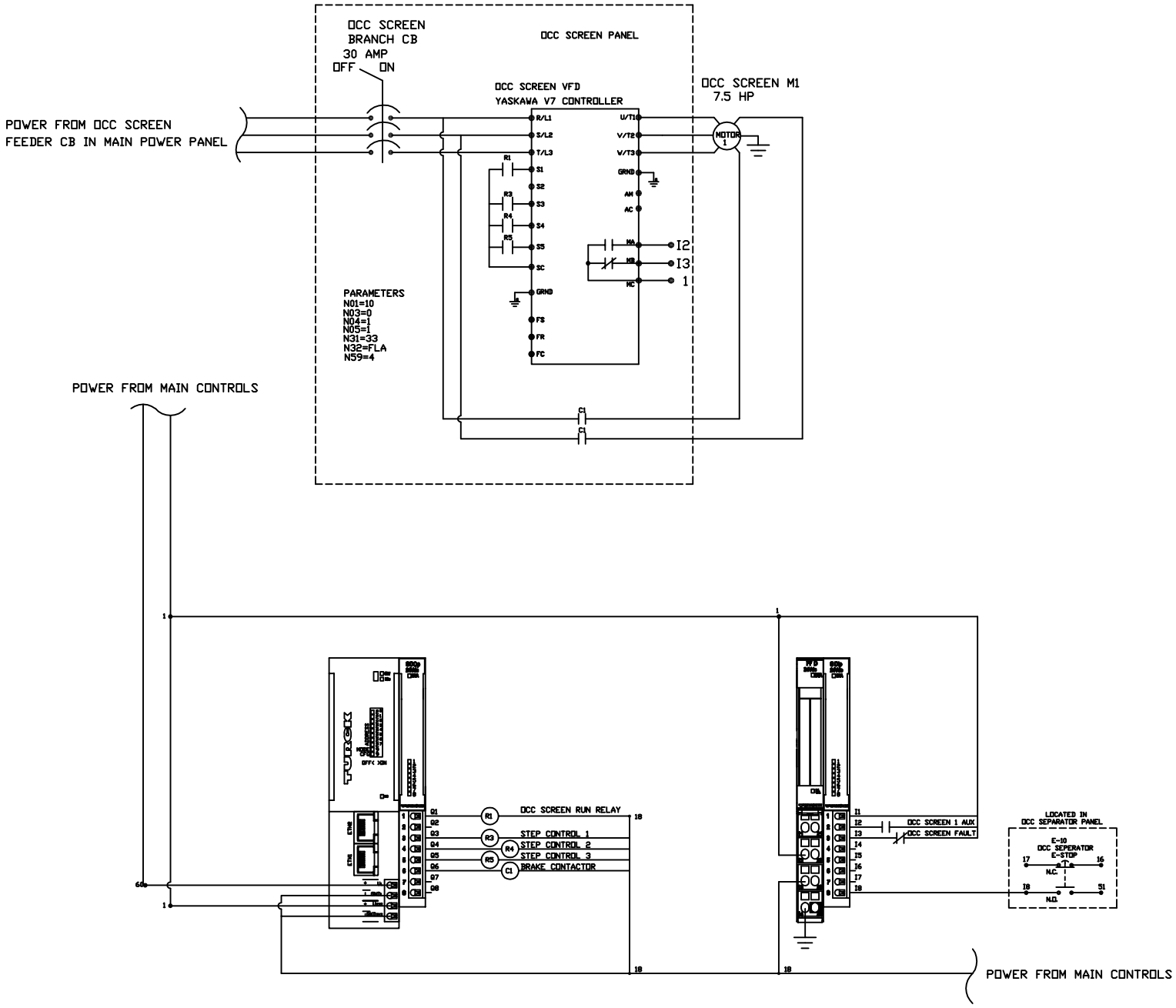
COLOR CODE
BL-BLUE
BR-BROWN
O-ORANGE
P-PURPLE
W-WHITE
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE
THIS VFD AND CIRCUIT BREAKER MAY BE PROVIDED BY BHS TO CONTROL THE ACCELERATION CONVEYOR ON THE OPTIC SORTER
MANUFACTURER OF DRIVE IS UNKNOWN AT THIS TIME. THE SCHEMATIC BELOW IS FOR A YASKAWA V7 DRIVE IN A MARATHON SUPPLIED PANEL.
TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY OPTICAL ACCELERATION CONVEYOR
MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.
DR. ES
CK.
APP.
DATE: 12/15/09
SCALE:
TOL:
DRAWING NO.
E-6047
OPTIC SORTER FEEDER CB
OFF ON
OPTIC SORTER BRANCH CB1
OFF ON
OPTIC SORTER PANEL
ACCELERATION CONVEYOR VFD
YASKAWA V7 CONTROLLER
OPTIC SORTER ACCELERATION CONVEYOR
10 HP
POWER FROM FEEDER CB
IN MAIN POWER PANEL
R/L1
S/L2
T/L3
S1
S2
S3
S4
S5
S6
S7
SC
GRND
FS
FR
FC
U/T1
V/T2
W/T3
GRND
AM
AC
MA
MB
MC
I2
I3
1
MOTOR 1
PARAMETERS
N01=10
N03=0
N04=1
N05=1
N31=33
N32=FLA
N59=4
FUSE
10 AMP
FUSE
40 AMP
TO DISCONNECT IN OPTIC CONTROL PANEL
TRANSFORMER TO BE INSTALLED BY CONTRACTOR
OPTIC SORTER
BRANCH CB2
15 AMP
OFF ON
OPTIC SORTER M2
.5 HP
MOTOR 2
OPTIC SORTER
BRANCH CB3
15 AMP
OFF ON
OPTIC SORTER M3
.5 HP
MOTOR 3
POWER FROM MAIN CONTROLS
LOCATED IN OPTIC SORTER CONTROL PANEL
INTERLOCK FAULT
300
301
OPTICAL SORTER READY
300
302
OPTICAL SORTER FAULT
300
303
POWER ON AT OPTICAL SORTER
350
351
REMOTE START SIGNAL
401
CR1
400
REMOTE STOP SIGNAL
402
CR2
400
CONV 1 RUN RELAY
TO TB401 IN BHS PANEL
TO TB402 IN BHS PANEL
STEP CONTROL 3
STEP CONTROL 2
STEP CONTROL 1
CONVEYOR 1 AUX
DRIVE FAULT
FROM TB301 IN BHS PANEL
FROM TB302 IN BHS PANEL
FROM TB303 IN BHS PANEL
FROM TB351 IN BHS PANEL
OPTIC SORTER E-STOP LOCATED IN OPTICAL SORTER PANEL
PIT IN-FEED E-STOP LOCATED AT RIGHT HAND SIDE OF PIT
E-13
OPTIC SORTER
E-STOP
E-16
PIT IN-FEED
E-STOP
N.C.
N.O.
OPTICAL SORTER E-STOP E-13
IN-FEED PIT E-STOP E-16
POWER FROM MAIN CONTROLS

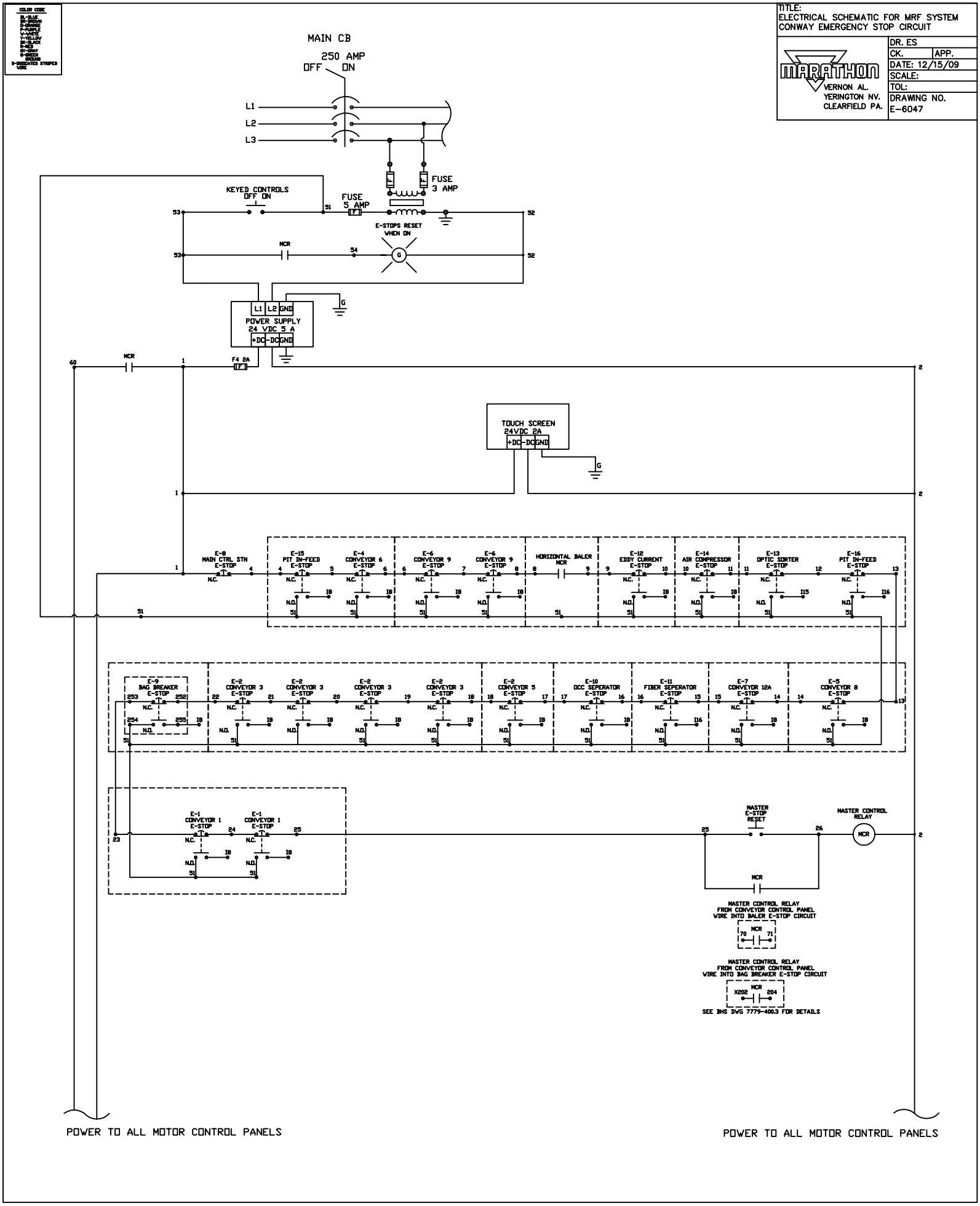
COLOR CODE
BL-BLUE
BR-BROWN
O-ORANGE
P-PURPLE
V-VIOLET
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE

TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY OCC SCREEN

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO. E-6047	





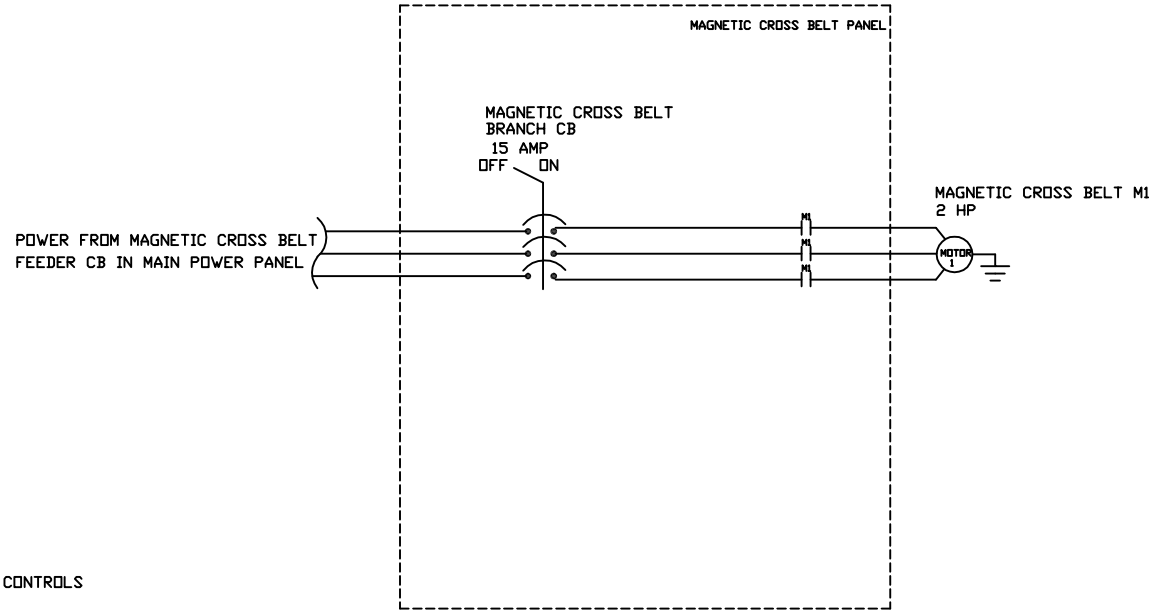
COLOR CODE
BL-BLUE
BR-BROWN
O-ORANGE
P-PURPLE
W-WHITE
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE
TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY EMERGENCY STOP CIRCUIT
MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.
DR. ES
CK.
APP.
DATE: 12/15/09
SCALE:
TOL:
DRAWING NO.
E-6047
MAIN CB
250 AMP
OFF ON
L1
L2
L3
FUSE
3 AMP
KEYED CONTROLS
OFF ON
FUSE
5 AMP
E-STOPS RESET
WHEN ON
MCR
POWER SUPPLY
24 VDC 5 A
+DC -DC GND
F4 2A
TOUCH SCREEN
24VDC 2A
E-8
MAIN CTRL STN
E-STOP
E-15
PIT IN-FEED
E-STOP
E-4
CONVEYOR 6
E-STOP
E-6
CONVEYOR 9
E-STOP
E-6
CONVEYOR 9
E-STOP
HORIZONTAL BALER
MCR
E-12
EDDY CURRENT
E-STOP
E-14
AIR COMPRESSOR
E-STOP
E-13
OPTIC SORTER
E-STOP
E-16
PIT IN-FEED
E-STOP
E-9
BAG BREAKER
E-STOP
E-2
CONVEYOR 3
E-STOP
E-2
CONVEYOR 3
E-STOP
E-2
CONVEYOR 3
E-STOP
E-2
CONVEYOR 3
E-STOP
E-2
CONVEYOR 5
E-STOP
E-10
OCC SEPERATOR
E-STOP
E-11
FIBER SEPERATOR
E-STOP
E-7
CONVEYOR 12A
E-STOP
E-5
CONVEYOR 8
E-STOP
E-1
CONVEYOR 1
E-STOP
E-1
CONVEYOR 1
E-STOP
MASTER
E-STOP
RESET
MASTER CONTROL
RELAY
MCR
MASTER CONTROL RELAY
FROM CONVEYOR CONTROL PANEL
WIRE INTO BALER E-STOP CIRCUIT
MASTER CONTROL RELAY
FROM CONVEYOR CONTROL PANEL
WIRE INTO BAG BREAKER E-STOP CIRCUIT
SEE BHS DWG 7779-400.3 FOR DETAILS
POWER TO ALL MOTOR CONTROL PANELS
POWER TO ALL MOTOR CONTROL PANELS

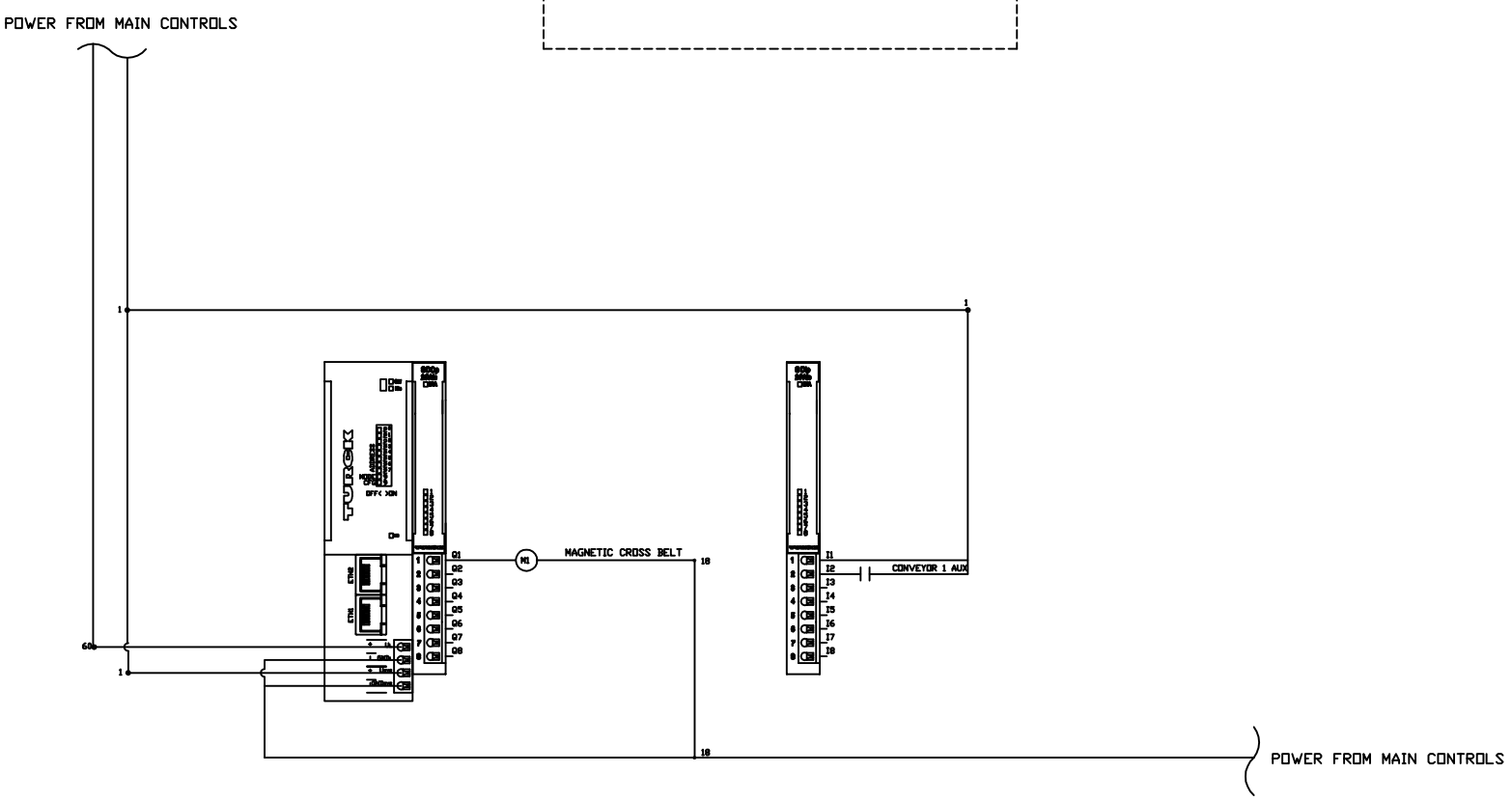
COLOR CODE
BL-BLUE
BR-BROWN
O-ORANGE
P-PURPLE
W-WHITE
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-CHECKER STRIPED WIRE

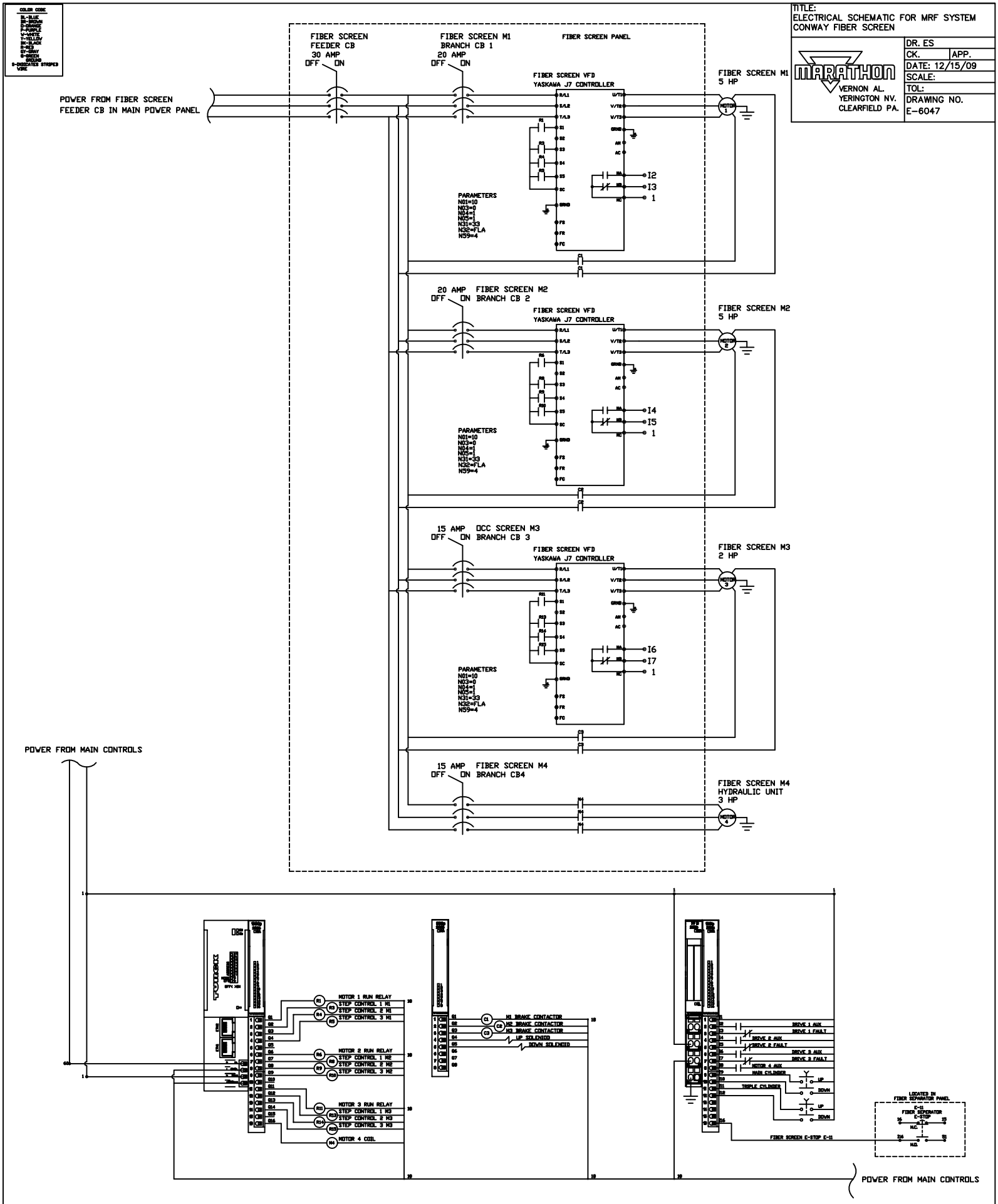
TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY MAGNETIC CROSS BELT CONVEYOR

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO.	
E-6047	





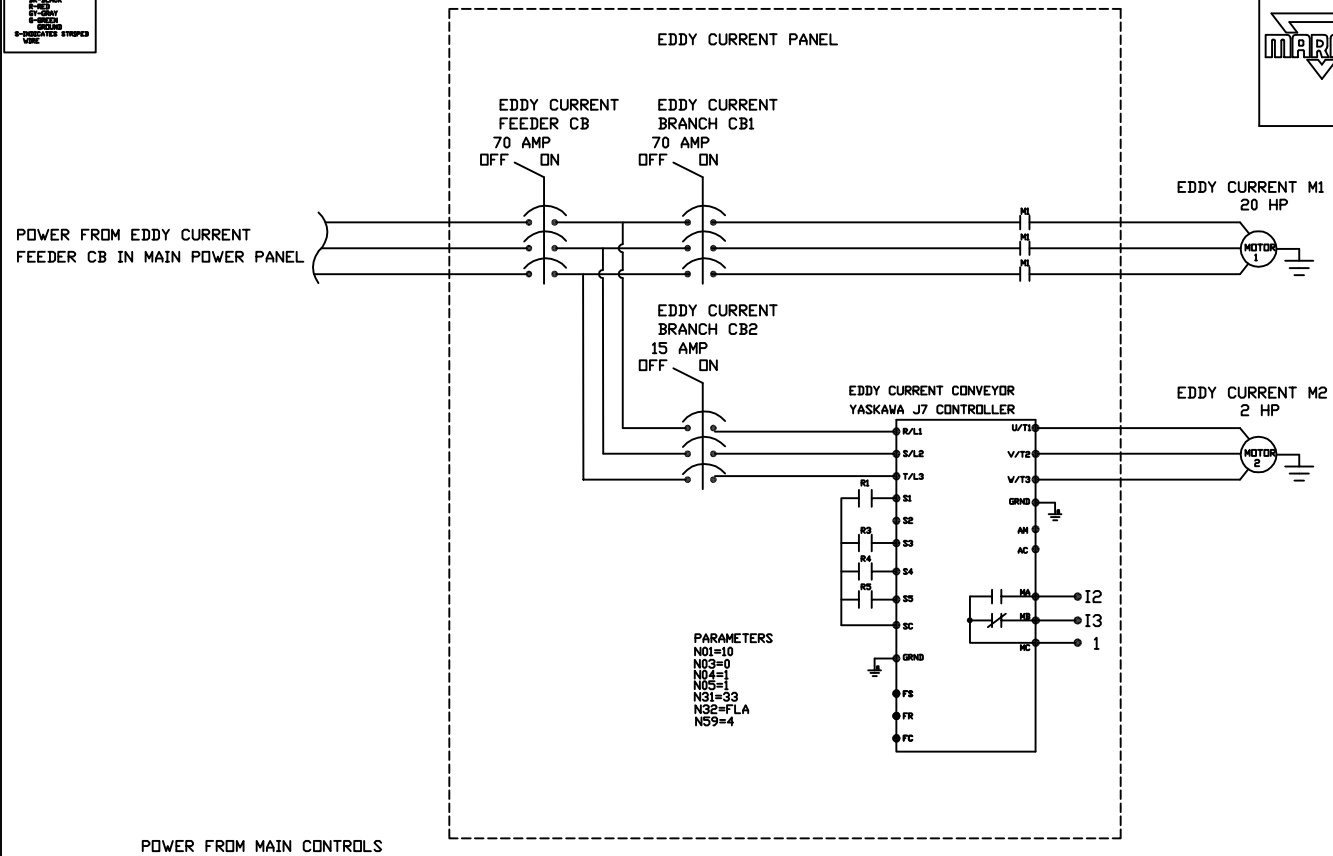

COLOR CODE
BL-BLUE
BR-BROWN
O-ORANGE
P-PURPLE
V-VIOLET
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE
TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY FIBER SCREEN
MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.
DR. ES
CK.
APP.
DATE: 12/15/09
SCALE:
TOL:
DRAWING NO.
E-6047
FIBER SCREEN FEEDER CB
30 AMP
OFF ON
FIBER SCREEN M1 BRANCH CB 1
20 AMP
OFF ON
FIBER SCREEN PANEL
POWER FROM FIBER SCREEN FEEDER CB IN MAIN POWER PANEL
FIBER SCREEN VFD
YASKAWA J7 CONTROLLER
FIBER SCREEN M1
5 HP
PARAMETERS
N01=10
N03=0
N04=1
N05=1
N31=33
N32=FLA
N59=4
20 AMP
OFF ON
FIBER SCREEN M2 BRANCH CB 2
FIBER SCREEN M2
5 HP
15 AMP
OFF ON
OCC SCREEN M3 BRANCH CB 3
FIBER SCREEN M3
2 HP
15 AMP
OFF ON
FIBER SCREEN M4 BRANCH CB4
FIBER SCREEN M4
HYDRAULIC UNIT
3 HP
POWER FROM MAIN CONTROLS
MOTOR 1 RUN RELAY
STEP CONTROL 1 M1
STEP CONTROL 2 M1
STEP CONTROL 3 M1
MOTOR 2 RUN RELAY
STEP CONTROL 1 M2
STEP CONTROL 2 M2
STEP CONTROL 3 M2
MOTOR 3 RUN RELAY
STEP CONTROL 1 M3
STEP CONTROL 2 M3
STEP CONTROL 3 M3
MOTOR 4 COIL
M1 BRAKE CONTACTOR
M2 BRAKE CONTACTOR
M3 BRAKE CONTACTOR
UP SOLENOID
DOWN SOLENOID
DRIVE 1 AUX
DRIVE 1 FAULT
DRIVE 2 AUX
DRIVE 2 FAULT
DRIVE 3 AUX
DRIVE 3 FAULT
MOTOR 4 AUX
MAIN CYLINDER
TRIPLE CYLINDER
UP
DOWN
FIBER SCREEN E-STOP E-11
LOCATED IN FIBER SEPARATOR PANEL
E-11
FIBER SEPERATOR E-STOP
N.C.
N.O.
POWER FROM MAIN CONTROLS

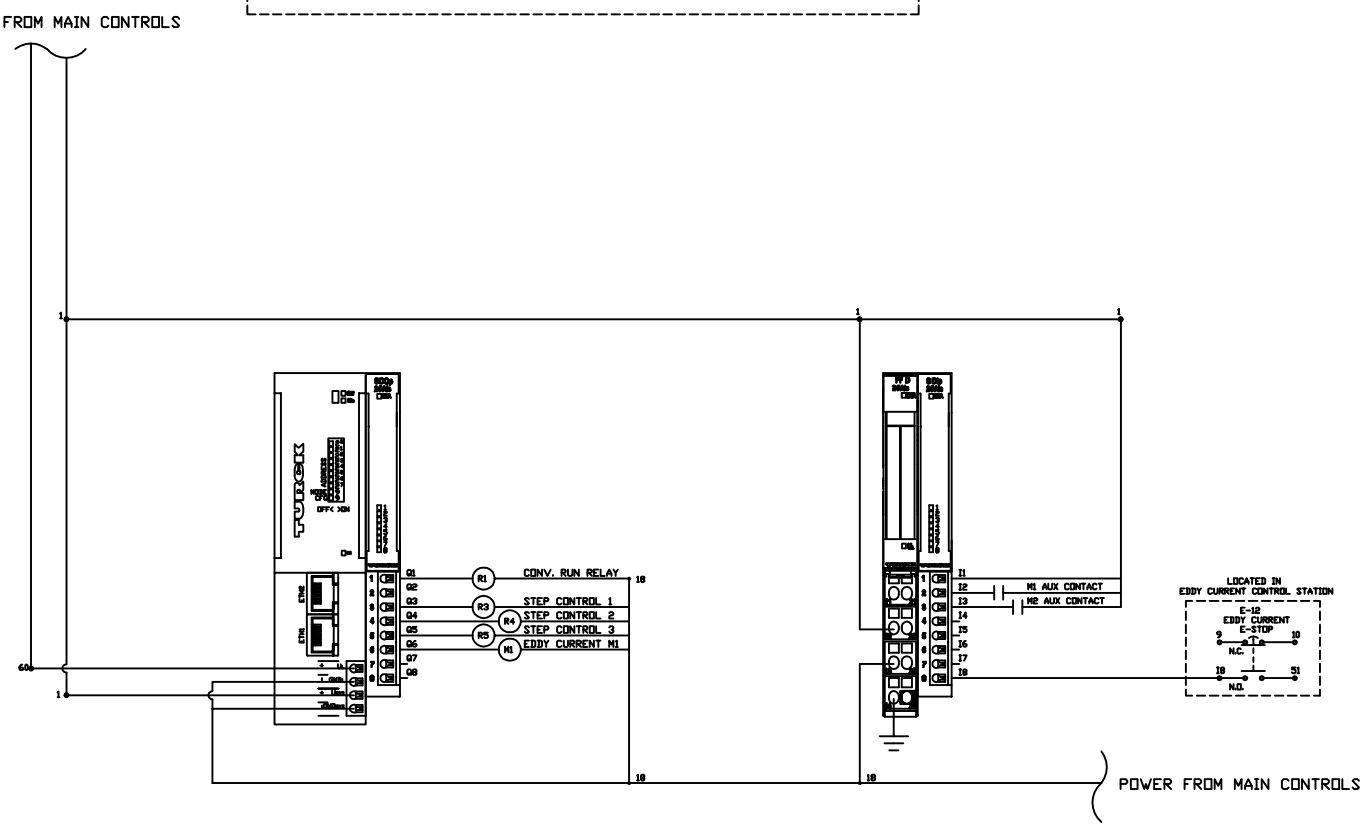
COLOR CODE
BL-BLUE
BR-BROWN
O-ORANGE
R-RED
P-PURPLE
W-WHITE
Y-YELLOW
BK-BLACK
E-NEU
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE

TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY EDDY CURRENT

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO.	
E-6047	

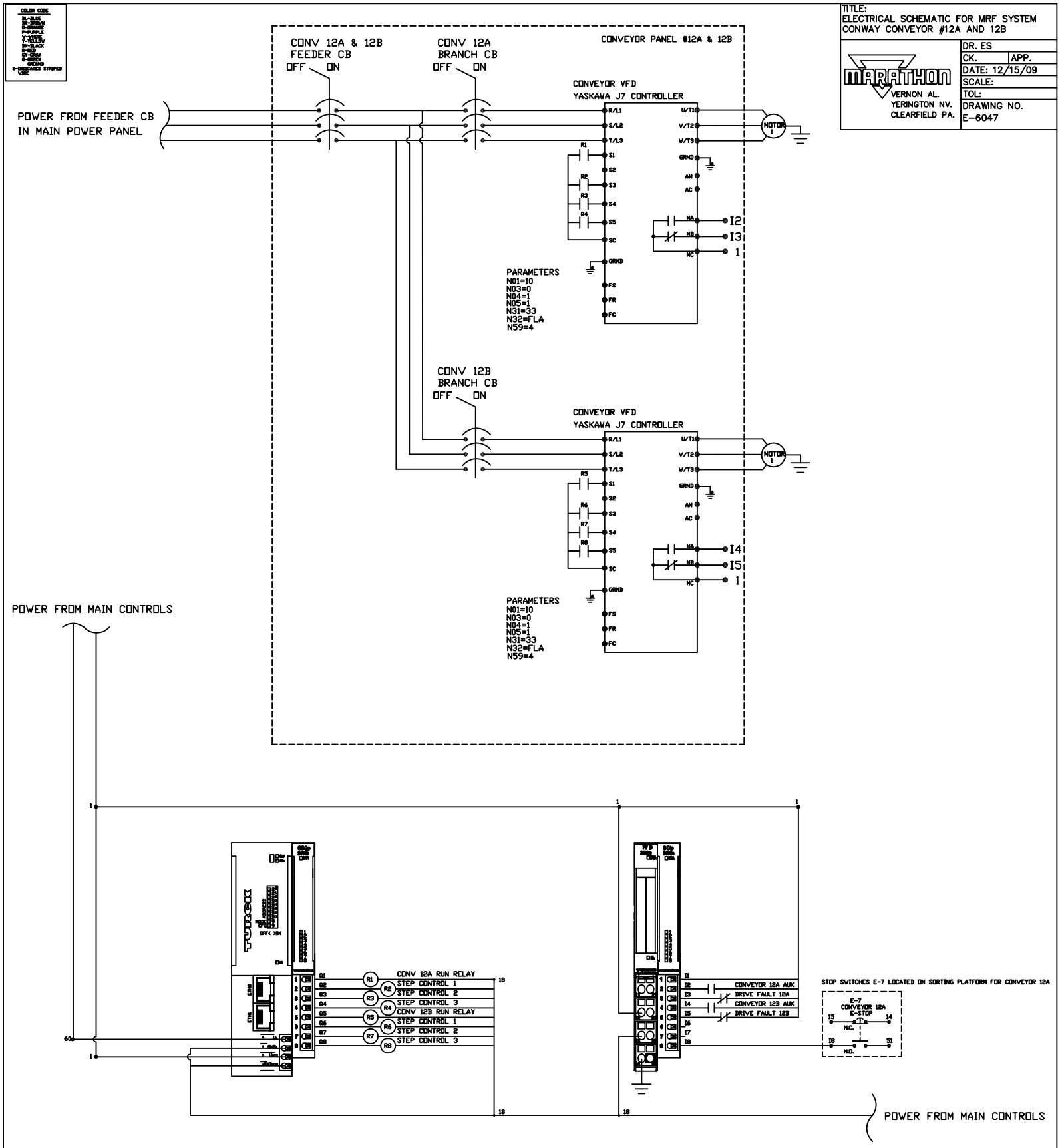




TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY CONVEYOR #12A AND 12B

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO.	
E-6047	

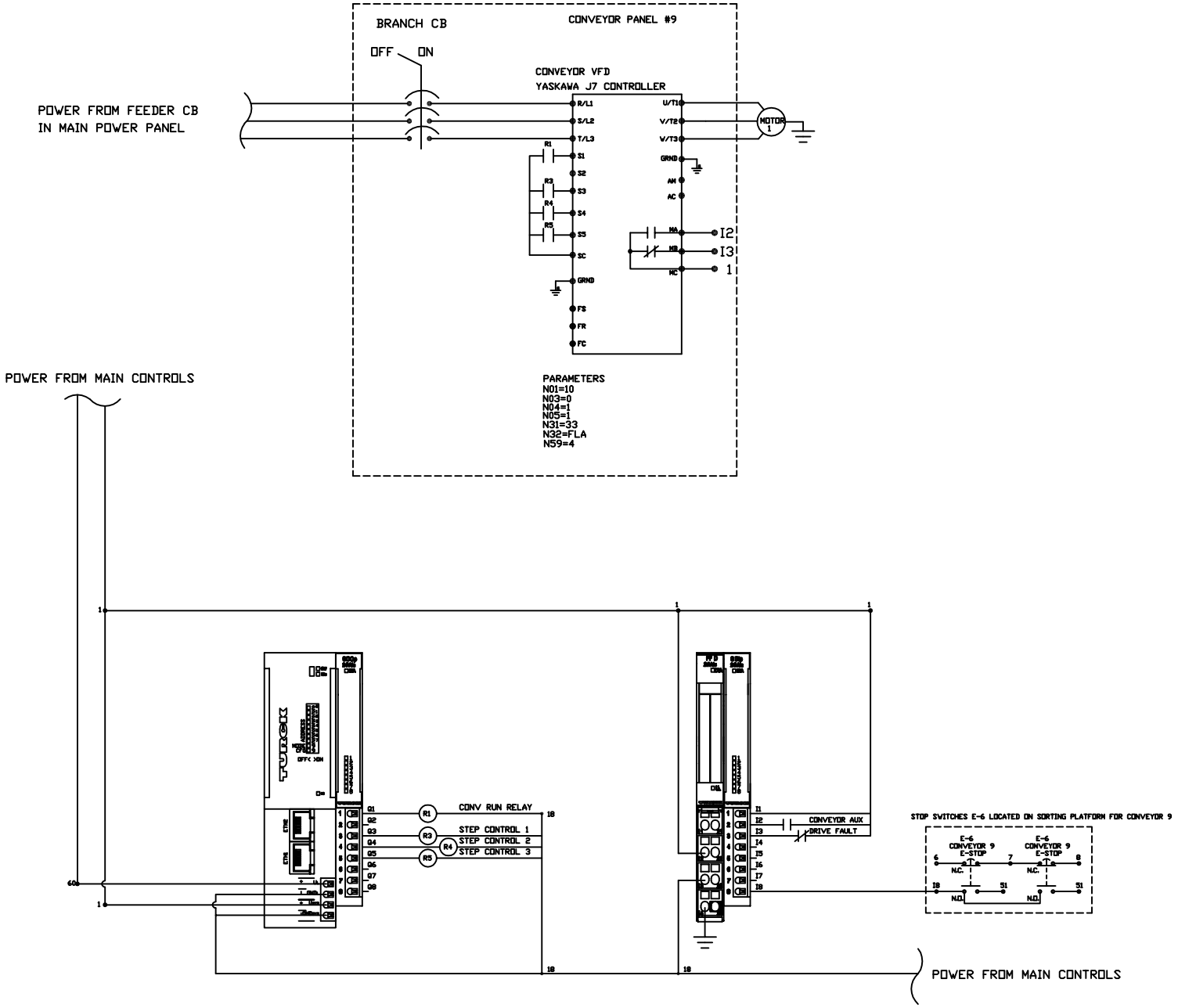


COLOR CODE
BL-BLUE
BR-BROWN
O-ORANGE
P-PURPLE
W-WHITE
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-SUBCOATED STRIPED WIRE

TITLE:
ELECTRICAL SCH FOR CONWAY MRF SYSTEM
CONVEYOR #9

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO.	
E-6047	

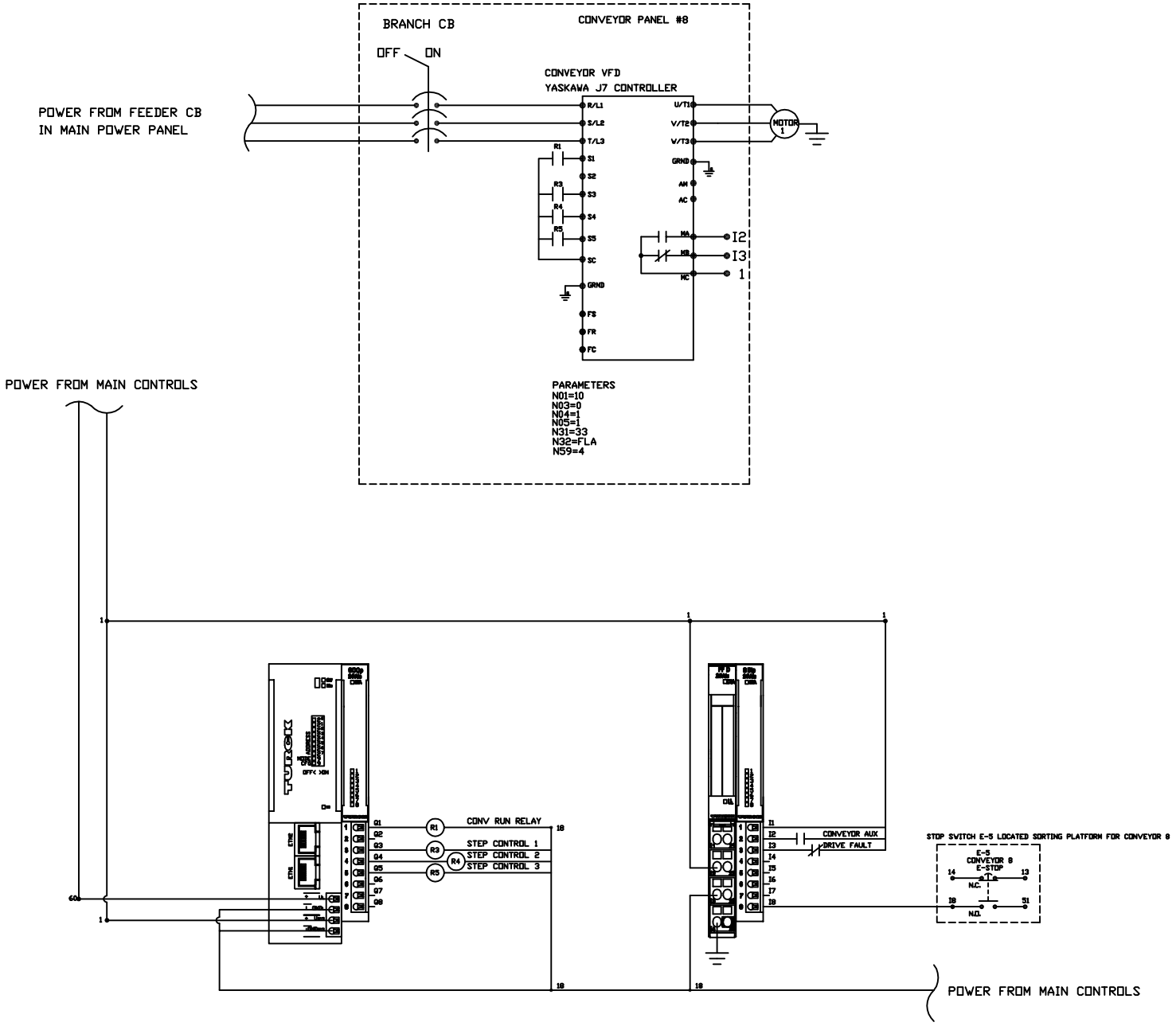


COLOR CODE
BL-BLUE
BR-BROWN
O-ORANGE
P-PURPLE
V-VIRTE
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE

TITLE:
ELECTRICAL SCH FOR CONWAY MRF SYSTEM
CONVEYOR #8

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO. E-6047	

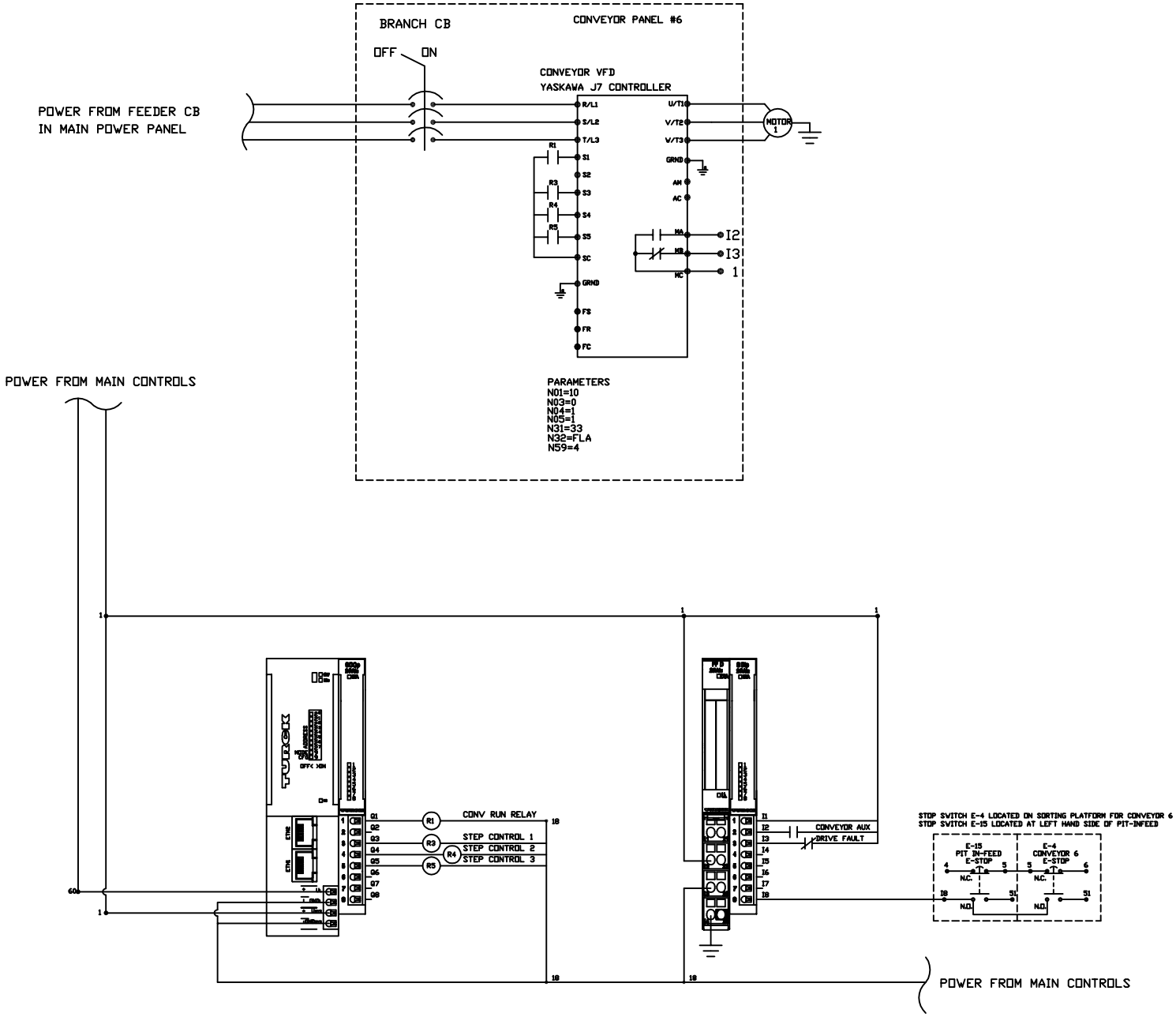


COLOR CODE
BL-BLUE
BR-BROWN
OR-ORANGE
P-PURPLE
Y-YELLOW
W-WHITE
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE

TITLE:
ELECTRICAL SCH FOR CONWAY MRF SYSTEM
CONVEYOR #6

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO.	
E-6047	

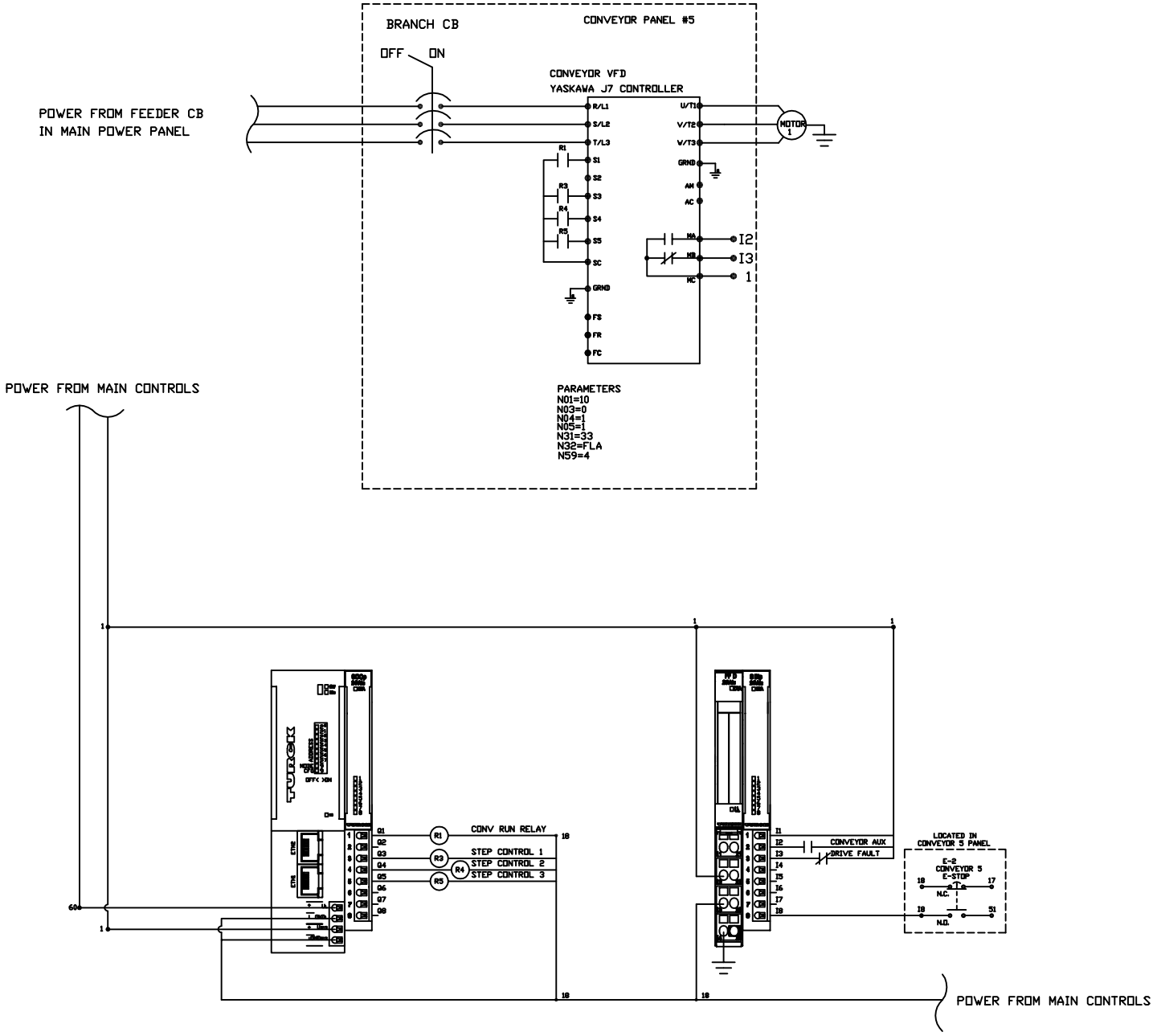


COLOR CODE
BL-BLUE
BR-BROWN
O-ORANGE
P-PURPLE
V-VIOLET
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE

TITLE:
ELECTRICAL SCH FOR CONWAY MRF SYSTEM
CONVEYOR #5

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO. E-6047	

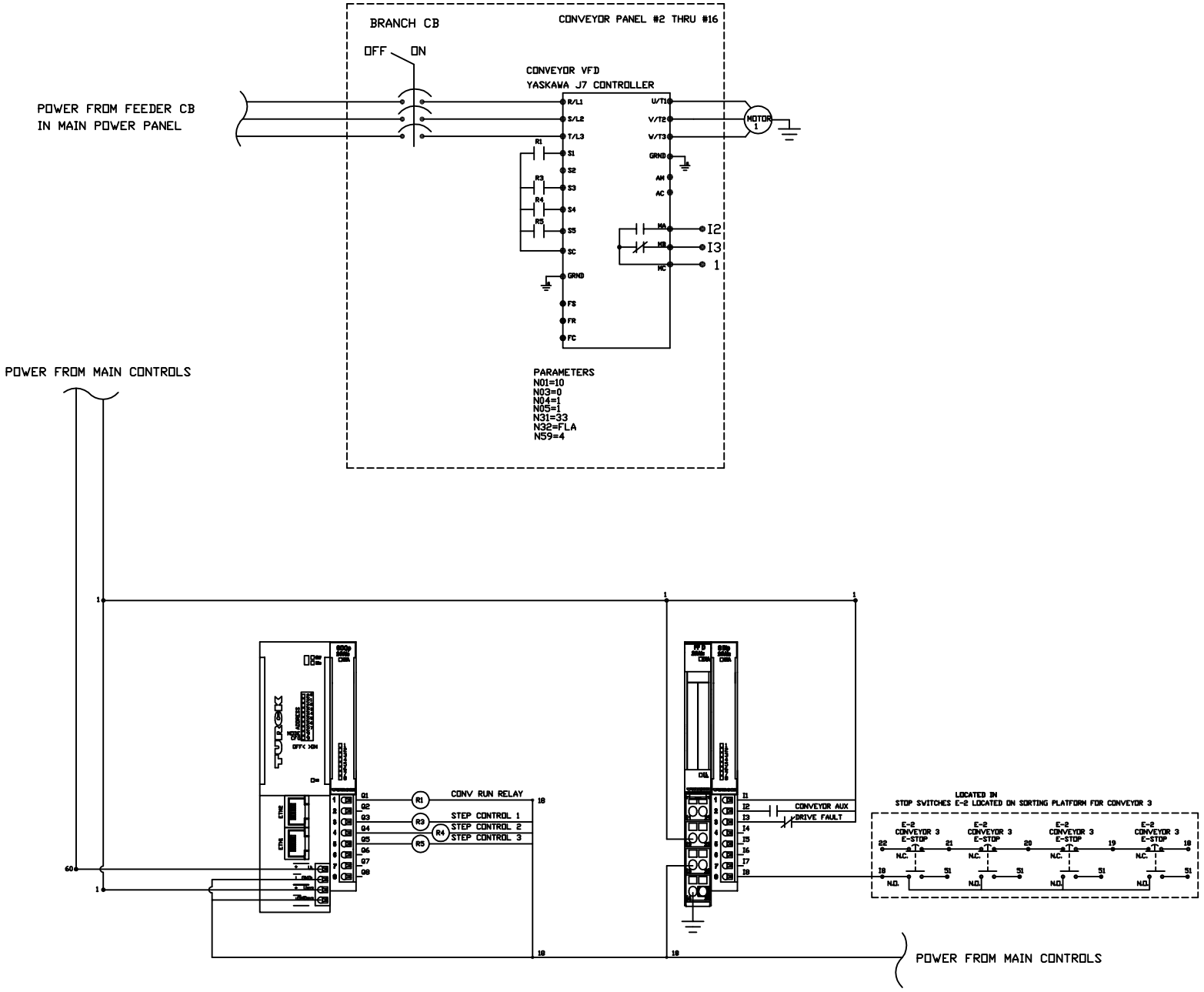


COLOR CODE
BL-BLUE
BR-BROWN
O-ORANGE
R-RED
P-PURPLE
W-WHITE
Y-YELLOW
BK-BLACK
N-NEU
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE

TITLE:
ELECTRICAL SCH FOR CONWAY MRF SYSTEM
CONVEYOR #3

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO.	
E-6047	



COLOR CODE
BL-BLUE
BR-BROWN
OR-ORANGE
P-PURPLE
V-VIOLET
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-SUBCOATED STRIPED WIRE

TITLE:
ELECTRICAL SCH FOR CONWAY MRF SYSTEM
C #2, #4, #7, #10, #11, #13, #14, #15, #16

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO.	
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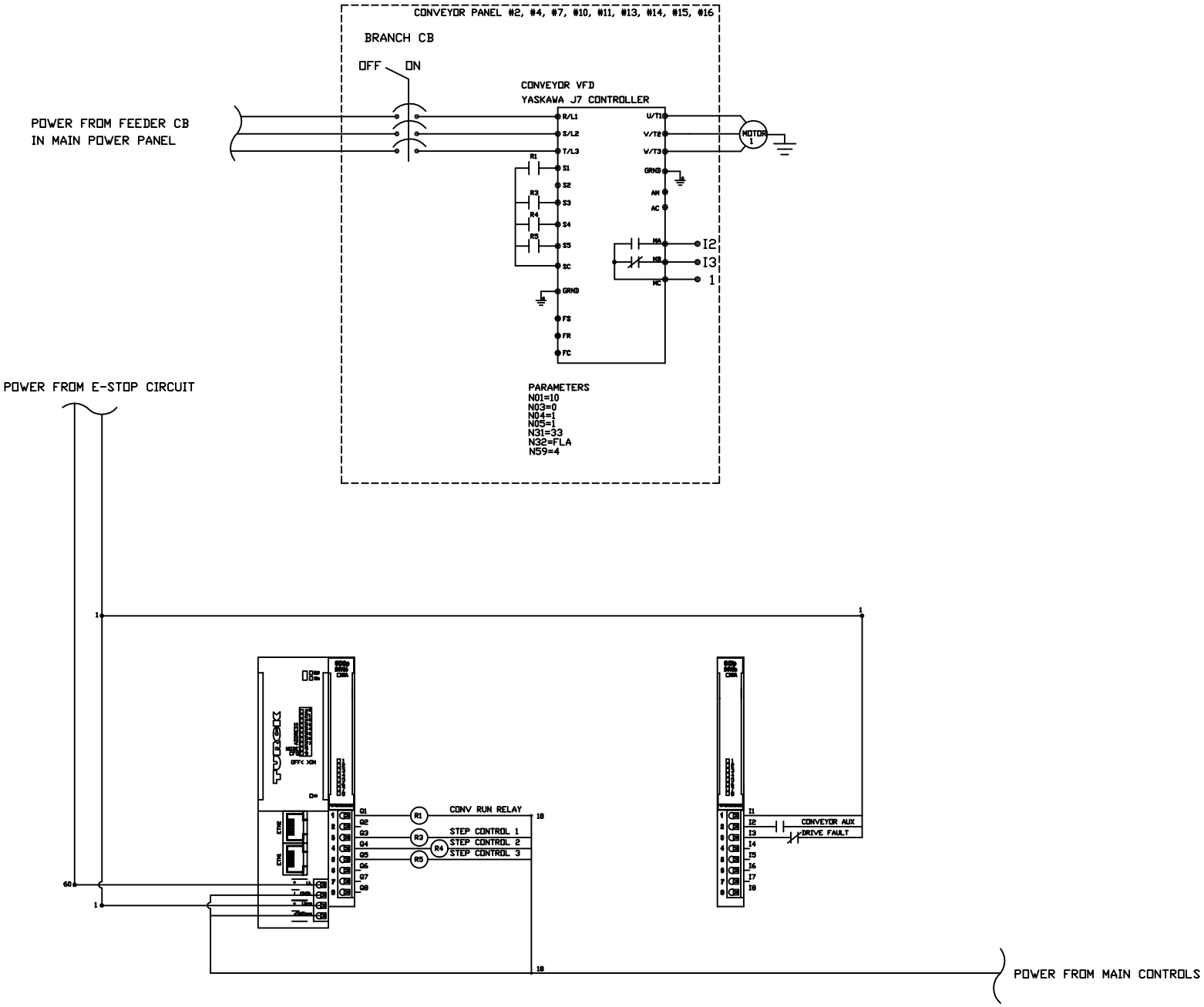

COLOR CODE
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BR-BROWN
OR-ORANGE
P-PURPLE
W-WHITE
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE

TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY CONVEYOR #1

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
SCALE:	
TOL:	
DRAWING NO.	
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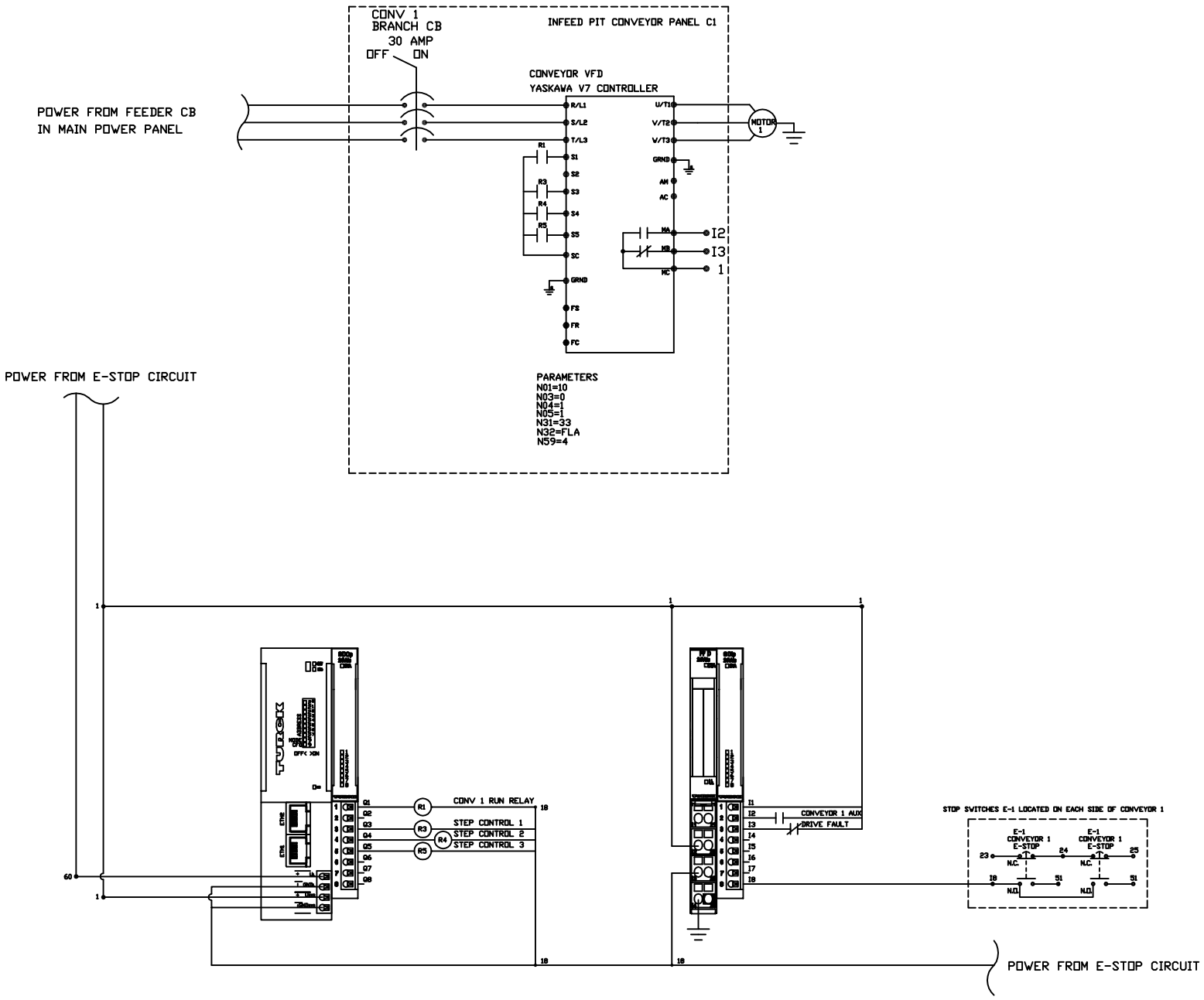

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GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE

TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY CONVEYOR 1 – CONVEYOR 16

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
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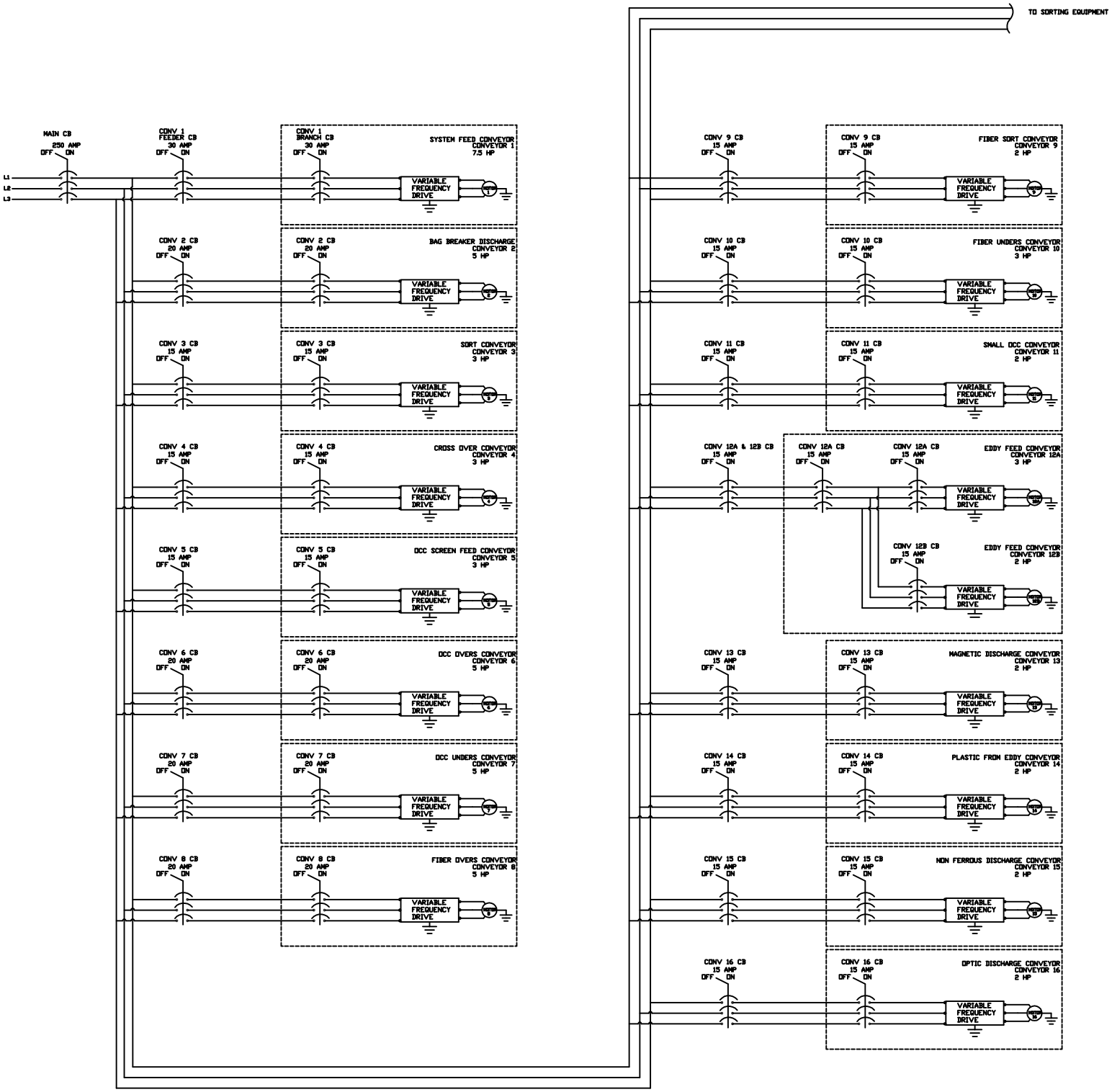

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V-VIOLET
Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-INDICATES STRIPED WIRE

TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY BAG BREAKER

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
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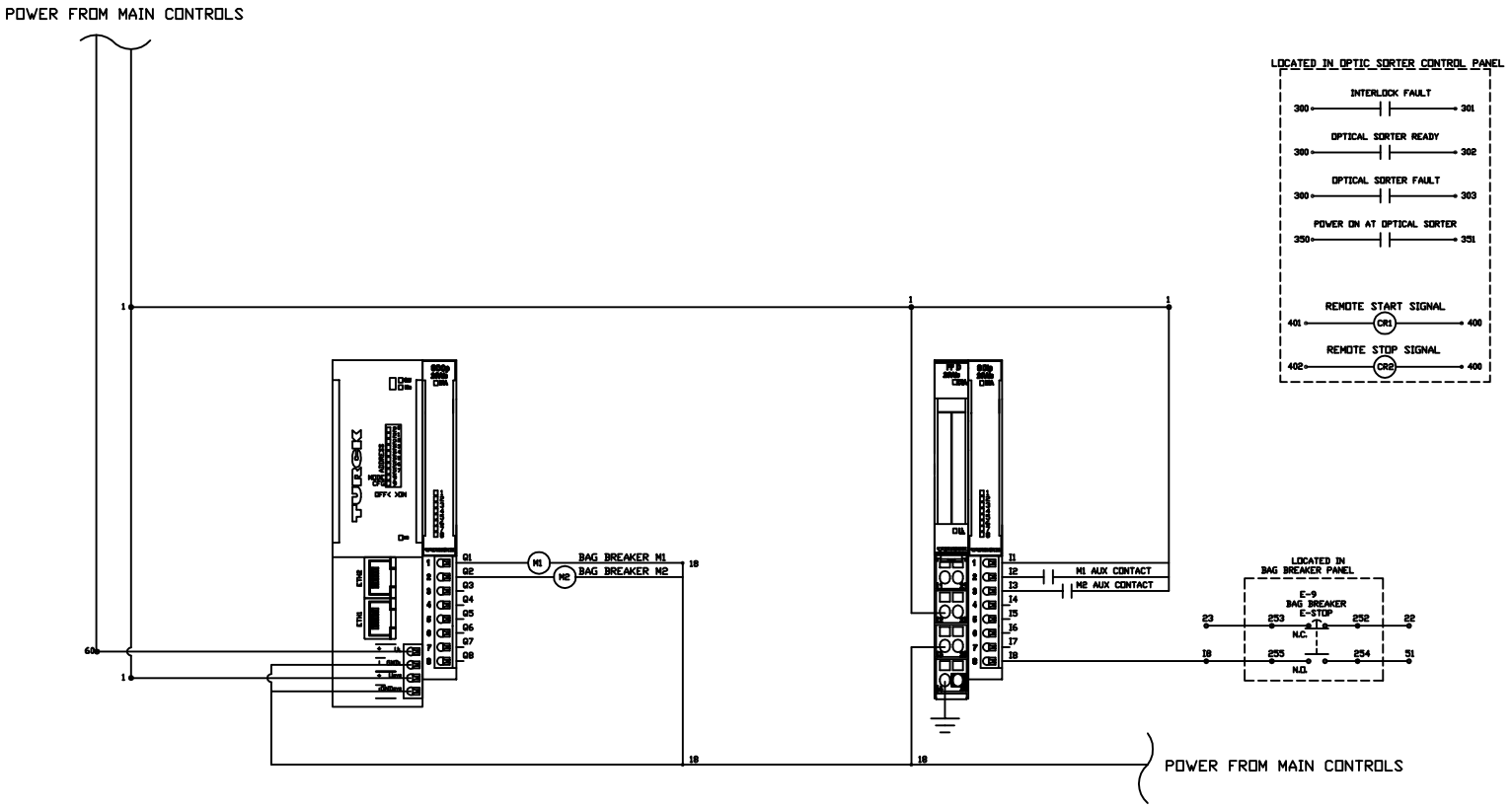

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Y-YELLOW
BK-BLACK
R-RED
GY-GRAY
G-GREEN
GROUND
S-SUBCOATED STRIPED WIRE

TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY AIR COMPRESSOR

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 12/15/09	
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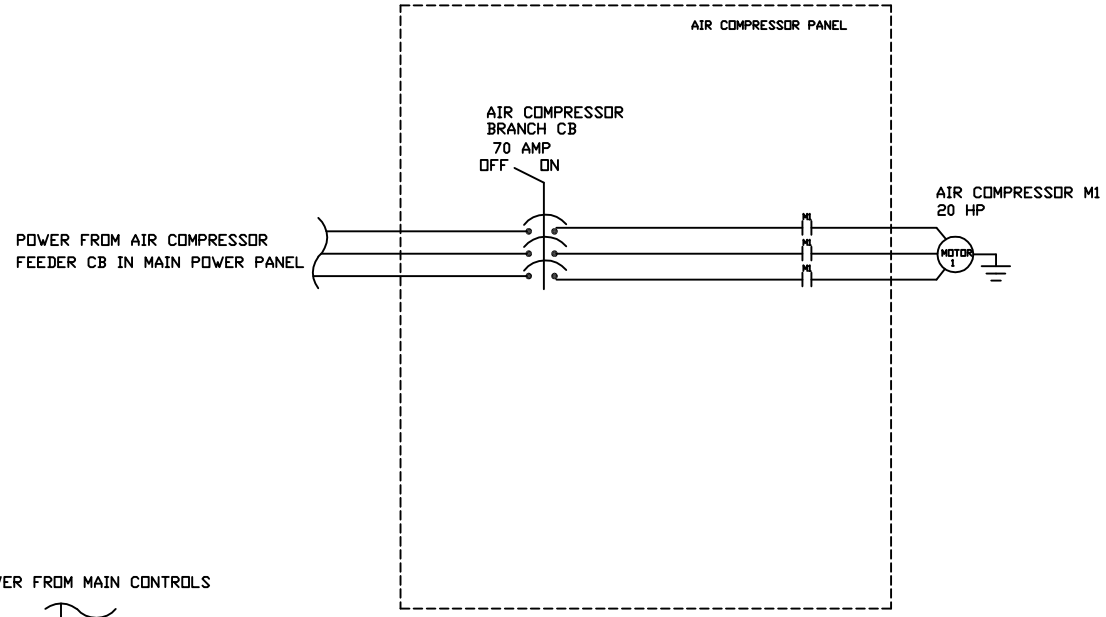

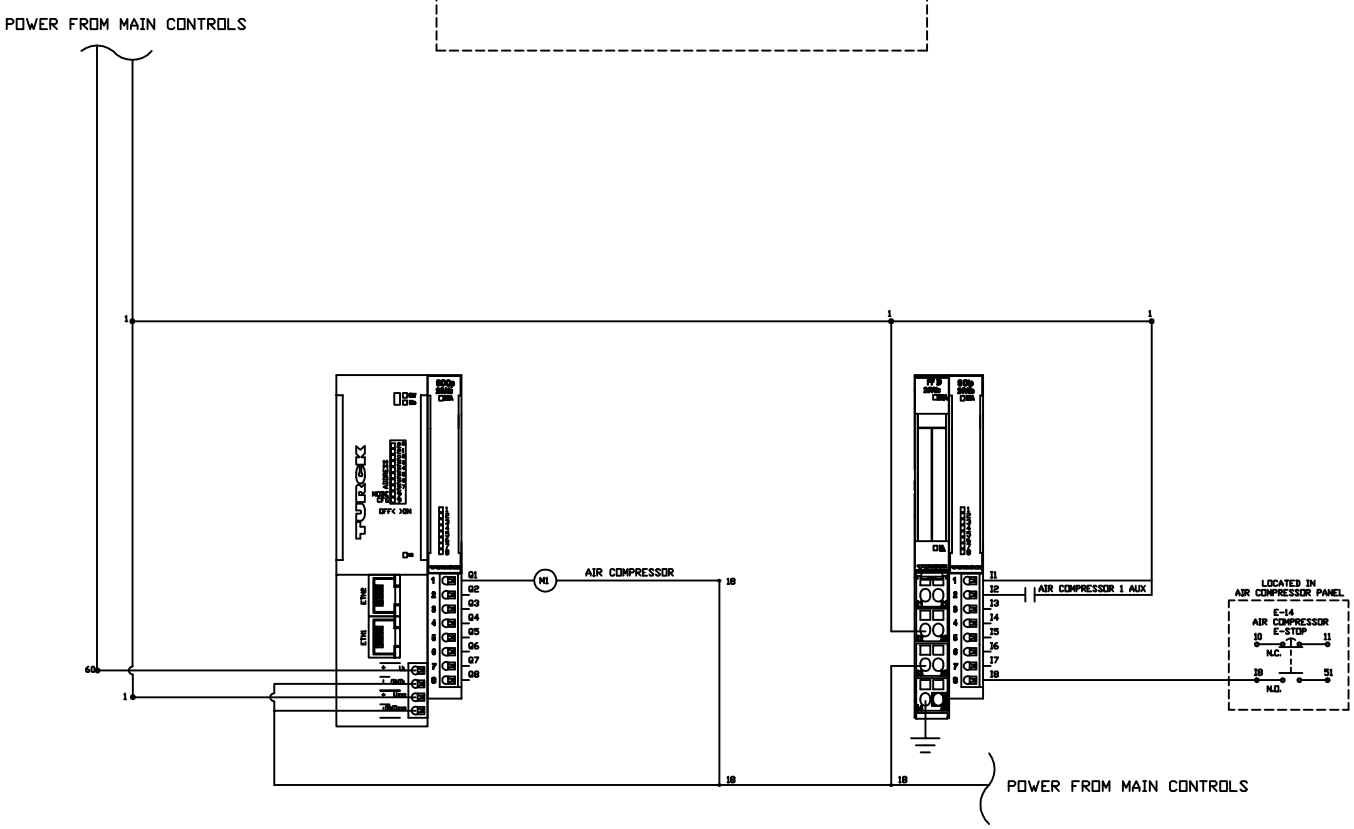

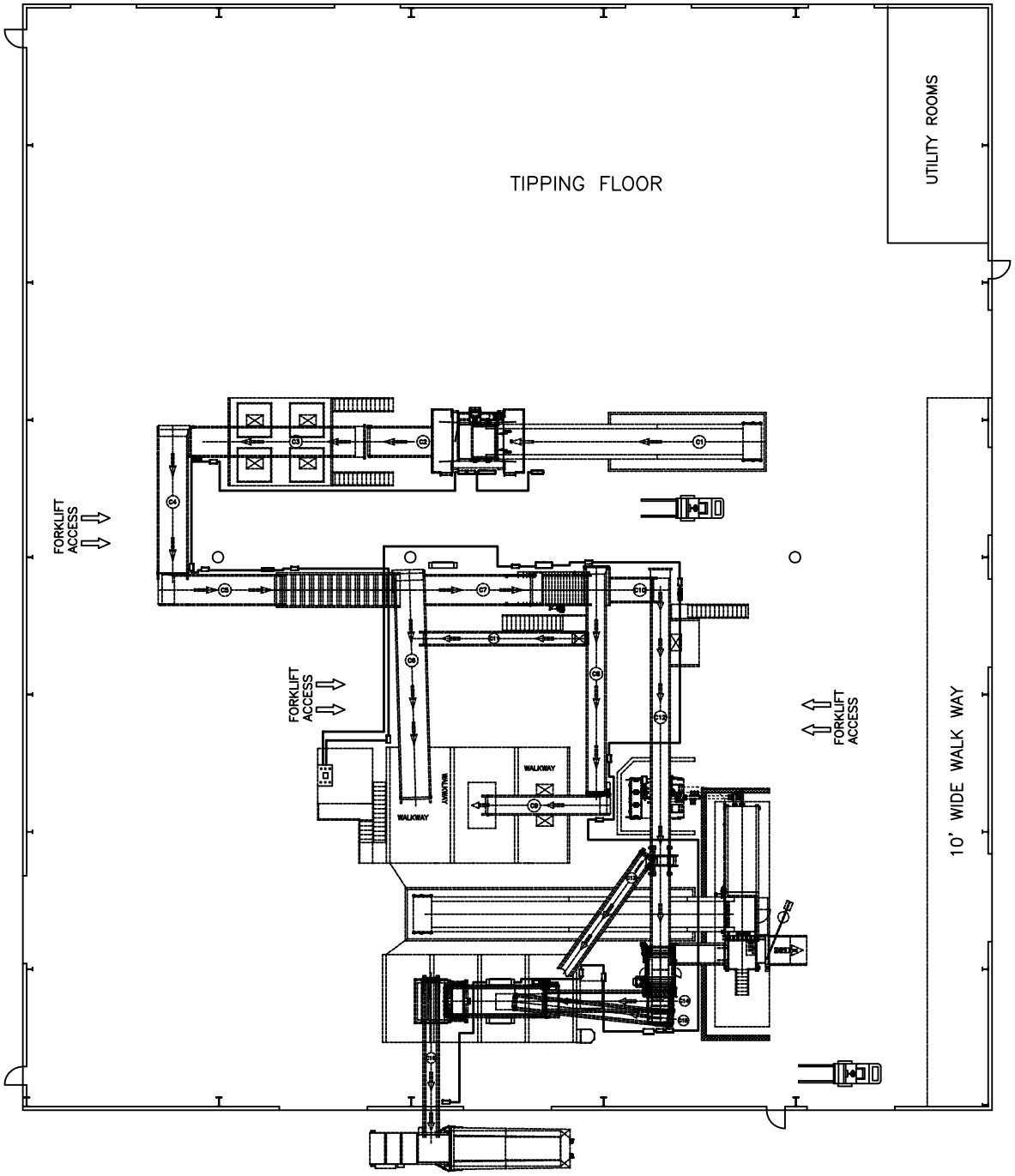

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TITLE:
EHTERNET CONNECTIONS
FOR CITY OF CONWAY

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 1/31/10	
SCALE: 1/16" = 1'	
TOL: ±1/16"	
DRAWING NO.	
ENET CONNECTION	

E-STOP SCHEDULE USE WITH EMERGENCY STOP CIRCUIT SCHEMATIC.

Exit main control panel with seven wires; one for the E-STOP circuit, one for the E-STOP signal circuit, one that will terminate in the horizontal baler motor control panel box, two that will connect into the existing horizontal baler E-STOP circuit, and two that will connect to the Bag Breaker E-STOP circuit.

Make a run to E-15 and make connections for the E-STOP circuit and E-STOP signal. Then make a run to E-4 for C-6 and make connections. Make a run to C-6 panel box and land wires on the terminals designated on the E-STOP circuit schematic.

Make a run from C-6 panel box to E-6 for C-9 and make connections. Then make a run to C-9 panel box and land wires on the terminals designated on the E-STOP circuit schematic.

Make a run from C-9 panel box to the horizontal baler motor control panel box install seven terminals and label them 8, 9, 13, 25, 51, 70, 71. Install the auxiliary contact to the MCR in the main motor control panel box. Using the terminals installed, wire the N.O. contact of the auxiliary contact into the E-STOP circuit between terminals 8 & 9 as shown on the E-STOP circuit schematic. Connect wire #8 from C-9 panel box to terminal 8. Connect wire #25 to terminal 25 and connect wire #51 to terminal 51. Using wire #70 & 71 from the main control panel, make a connection in series with the horizontal baler E-STOP circuit.

Make a run from the horizontal baler motor control panel box to the EDDY CURRENT control station on the EDDY CURRENT cat walk. For this run there will be three wires, wire #9 for making connections to the E-STOP circuit wire #51 for making connections to the E-STOP signal, and #13 that will return from E-STOP E-16 to the horizontal baler motor control panel box.

Make the connections for the EDDY CURRENT E-STOP circuit and the E-STOP signal. Make a run to the EDDY CURRENT panel box and land the wires on the terminals designated on the E-STOP circuit schematic.

Make a run from the EDDY CURRENT panel box to the AIR COMPRESSOR panel box and land the wires on the terminals designated on the E-STOP circuit schematic.

Make a run from the AIR COMPRESSOR panel box to the OPTICAL SORTER panel box and land the wires on the terminals designated on the E-STOP circuit schematic. Make a run to E-STOP E-16 on the in-feed pit conveyor and make the connections for the E-STOP circuit and the E-STOP signal.

Make a run from the horizontal baler main motor control panel box to E-5 for C-8 and make connections for the E-STOP circuit and E-STOP signal. For this run there will be five wires. One wire for making connections to the E-STOP circuit, one wire for the E-STOP signal, one wire that will serve as a return from the E-STOP circuit and two wires that will connect into the Bag Breaker E-STOP circuit.

Make a run to C-8 panel box and land wires on the terminals designated on the E-STOP circuit schematic. For this run there will be three wires. Wire #13 to make connection to the E-STOP circuit. Wire #51 to make E-STOP signal connection. Wire #25 will return from E-1 to complete the E-STOP circuit connection to the main control panel.

Make a run to E-7 E-STOP for C-12A and make connections for the E-STOP circuit and E-STOP signal. Then make a run to C-12A panel box and land wires on the terminals designated on the E-STOP circuit schematic.

Make a run from C-12A panel box to the FIBER SCREEN panel box and land wires on the terminals designated on the E-STOP schematic.

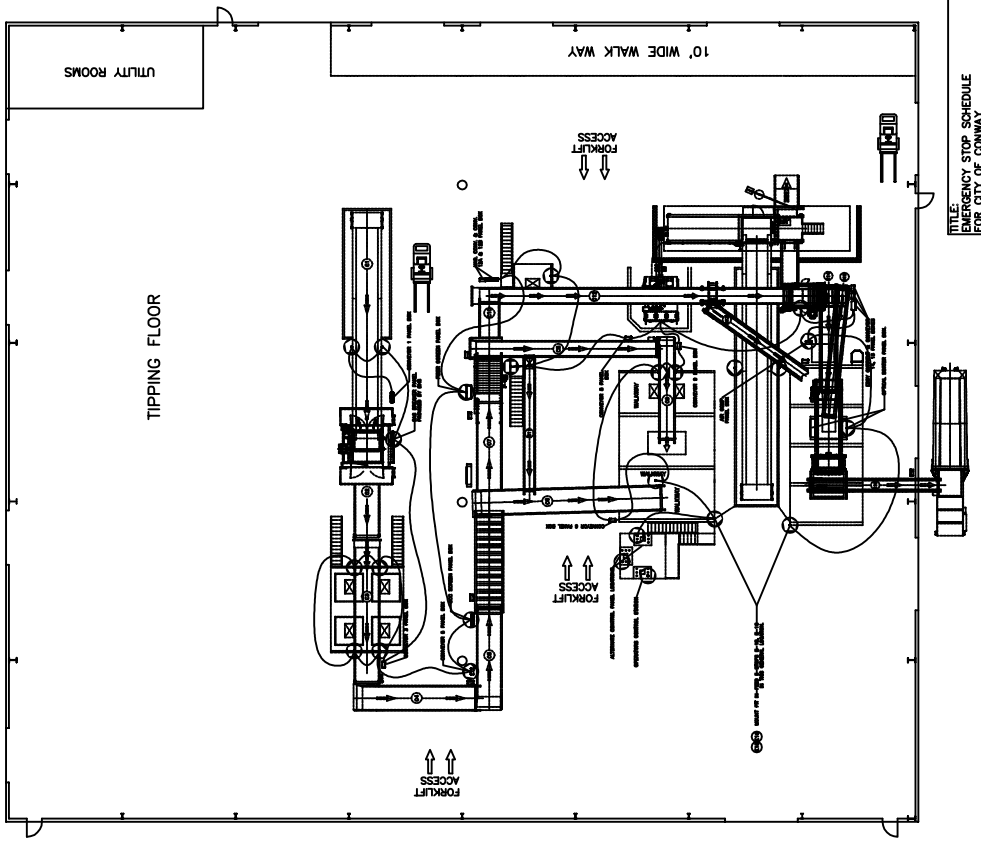
Make a run from the FIBER SCREEN panel box to the OCC SCREEN panel; box and land wires on the terminals designated on the E-STOP circuit schematic.

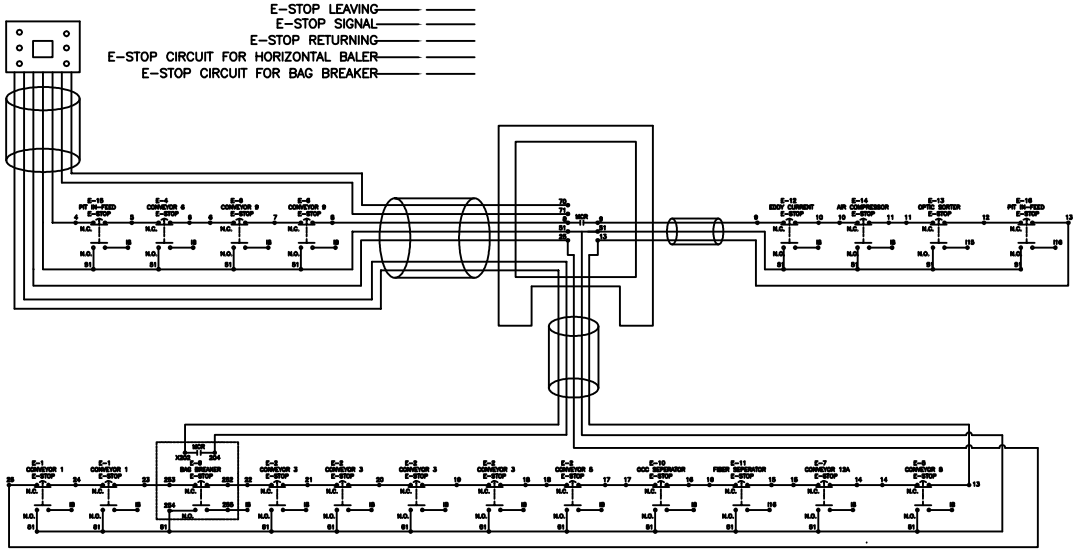
Make a run from the OCC SCREEN panel box to the C-5 panel box and land wires on the terminals designated on the E-STOP circuit schematic.

Make a run to E-2 for C-3 and make connections for the E-STOP circuit and E-STOP signal. Make a run to C-3 panel box and land wires on the terminals designated on the E-STOP circuit schematic.

Make a run from C-3 panel box to the BAG BREAKER panel box. Connect the two wires from the MCR in the main control panel to terminals X202 and 204 in the Bag Breaker panel box supplied by BHS. Also connect wires #22 from the E-STOP circuit to terminal 252 and connect wire #23 to terminal 253 in the Bag Breaker panel box. Land wires on the terminals designated on the E-STOP circuit schematic.

Make a run from the BAG BREAKER panel box to E-1 for C-1 and make connections for the E-STOP circuit and E-STOP signal. Make a run back to C-1 panel box and land wires on the terminals designated on the E-STOP circuit schematic.





TITLE: EMERGENCY STOP SCHEDULE FOR CITY OF CONWAY

DR. ES | APP.
CK. | DATE: 1/31/10
SCALE: 1/16" = 1'
TOL: ±1/16"
DRAWING NO. E-STOP ROUTING

MARATHON
VERNON AL.
VERINGTON NV.
CLEARFIELD PA.

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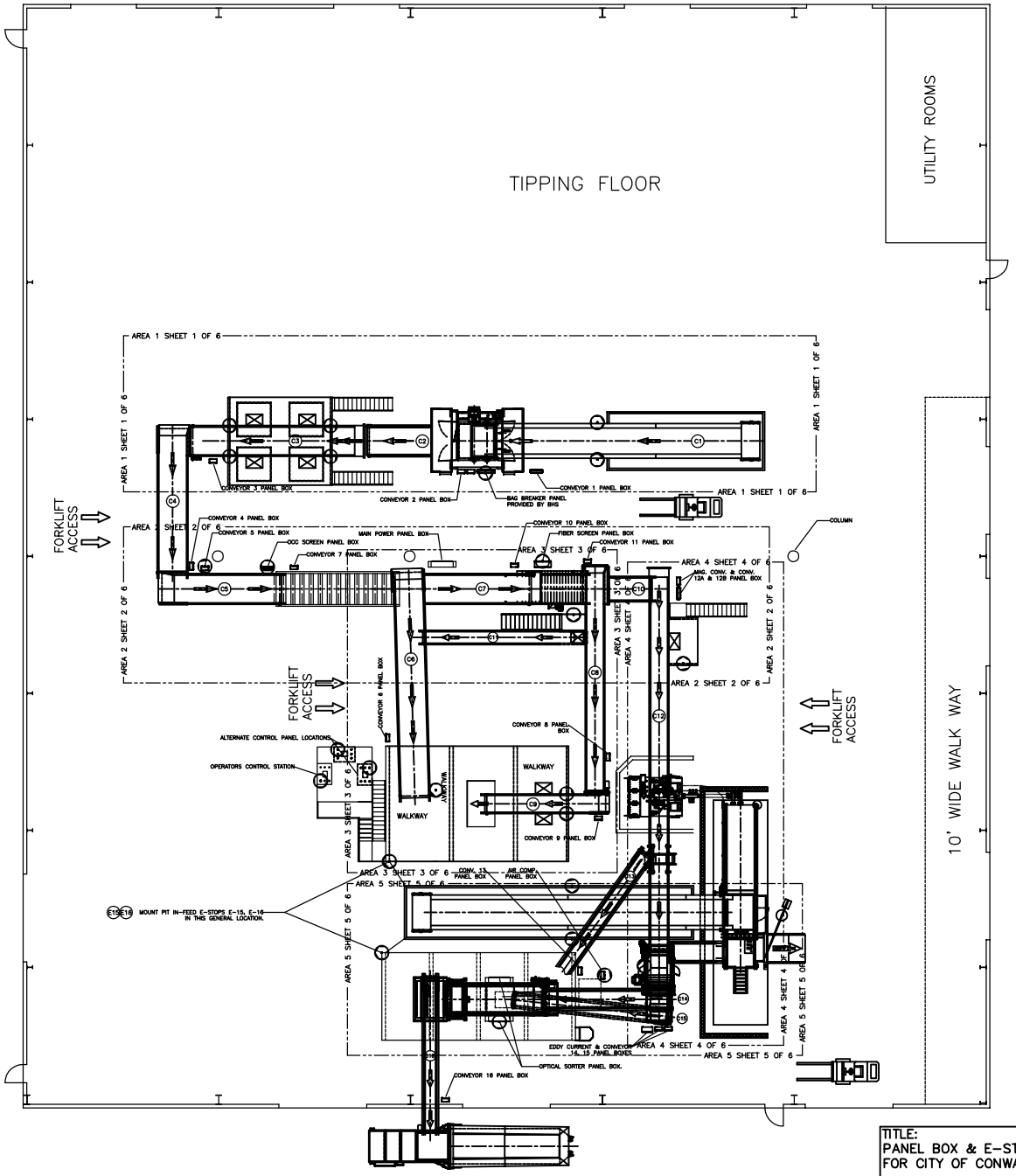
E-STOP SCHEDULE
E1. CONVEYOR #1 TWO E-STOPS LOCATED ONE ON EACH SIDE OF CONVEYOR. SEE AREA 1 SHEET 1 OF 6 FOR LOCATION.
E2. CONVEYOR #3 4 E-STOPS LOCATED ONE ON EACH SIDE AT EACH END. SEE AREA 1 SHEET 1 OF 6 FOR LOCATION.
E3. CONVEYOR #5 ONE E-STOP LOCATED IN PANEL BOX FACE. SEE AREA 2 SHEET 2 OF 6 FOR LOCATION.
E4. CONVEYOR #6 ONE E-STOP LOCATED ON SORTING PLATFORM. SEE AREA 3 SHEET 3 OF 6 FOR LOCATION.
E5. CONVEYOR #8 ONE E-STOP LOCATED ON SORTING PLATFORM. SEE AREA 3 SHEET 3 OF 6 FOR LOCATION.
E6. CONVEYOR #9 TWO E-STOPS LOCATED ONE ON EACH SIDE OF CONVEYOR ON SORTING PLATFORM. SEE AREA 3 SHEET 3 OF 6 FOR LOCATION.
E7. CONVEYOR #12A ONE E-STOP LOCATED ON SORTING PLATFORM. SEE AREA 4 SHEET 4 OF 6 FOR LOCATION.
E8. OPERATORS CONTROL STATION ONE E-STOP LOCATED IN CONTROL PANEL FACE. SEE AREA 3 SHEET 3 OF 6 FOR LOCATION.
E9. BAG BREAKER ONE E-STOP LOCATED IN PANEL BOX FACE CONTROL STATION. SEE AREA 1 SHEET 1 OF FOR LOCATION
E10. OCC SEPARATOR ONE E-STOP LOCATED IN PANEL BOX FACE. SEE AREA 2 SHEET 2 OF 6 FOR LOCATION.
E11. FIBER SEPARATOR ONE E-STOP LOCATED IN PANEL BOX FACE. SEE AREA 2 SHEET 2 OF 6 FOR LOCATION.
E12. EDDY CURRENT ONE E-STOP LOCATED IN PANEL BOX FACE. SEE AREA 5 SHEET 5 OF 6 FOR LOCATION.
E13. OPTIC SORTER ONE E-STOP LOCATED IN PANEL BOX FACE. SEE AREA 5 SHEET 5 OF 6 FOR LOCATION.
E14. AIR COMPRESSOR ONE E-STOP LOCATED IN PANEL BOX FACE. SEE AREA 5 SHEET 5 OF 6 FOR LOCATION.
E15. PIT IN-FEED E-STOP LOCATED NEAR BALER CONVEYOR PIT IN-FEED AREA. SEE SHEET 6 OF 6 FOR LOCATION.
E16. PIT IN-FEED E-STOP LOCATED NEAR BALER CONVEYOR PIT IN-FEED AREA. SEE SHEET 6 OF 6 FOR LOCATION.
E17. BALER CONVEYOR E-STOPS. SEE AREA 5 SHEET 5 OF 6 FOR LOCATION.



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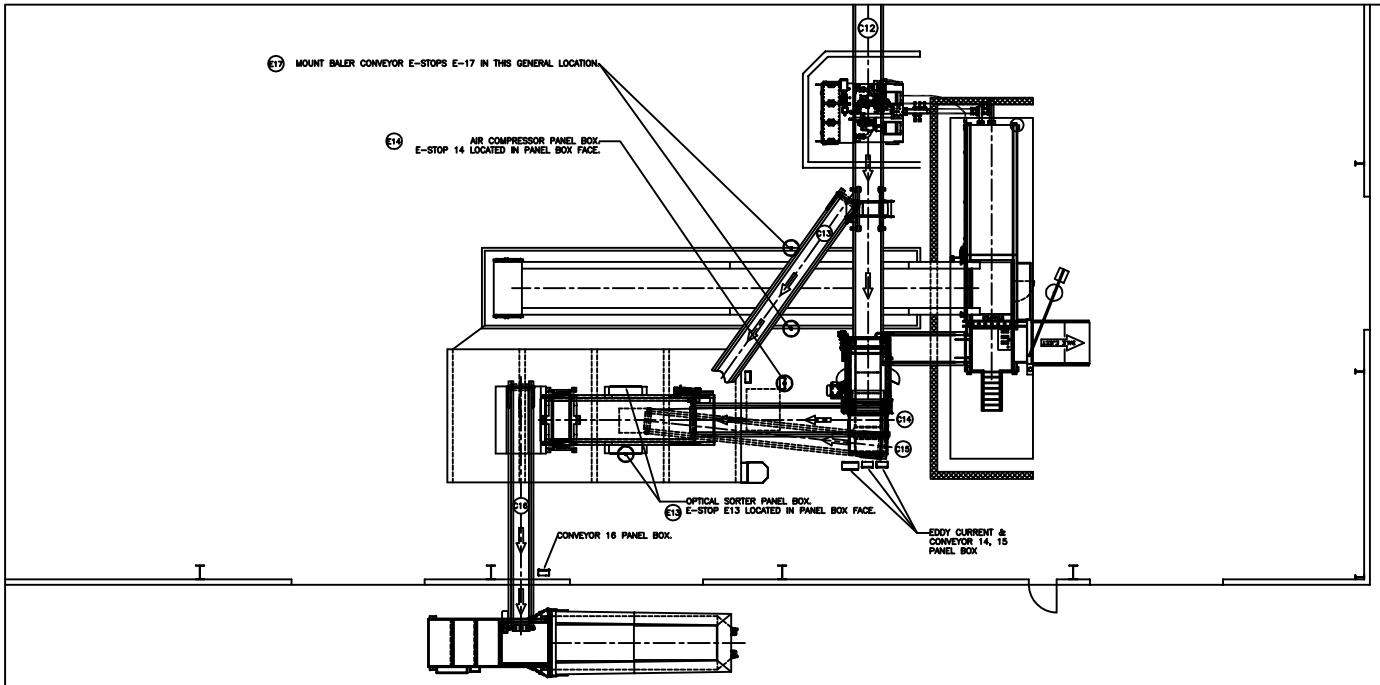
THIS IS NOT AN APPROVAL DRAWING

THIS DRAWING IS FOR PROPOSAL PURPOSES ONLY. DETAILS ARE SUBJECT TO CHANGE DURING APPROVAL/DESIGN PROCESS.

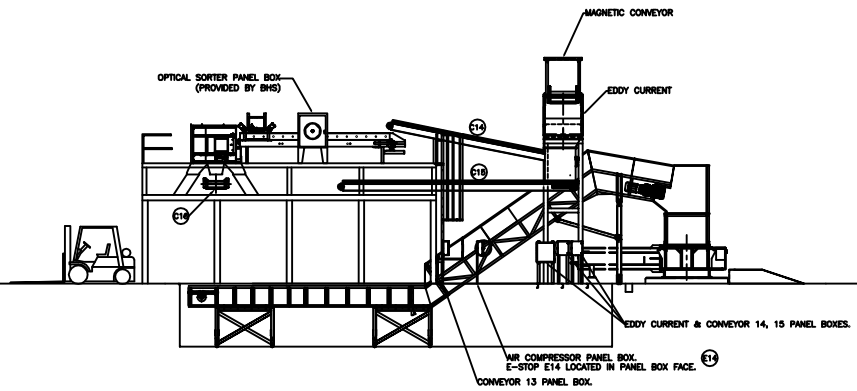
TITLE:
PANEL BOX & E-STOP SCHEDULE
FOR CITY OF CONWAY

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

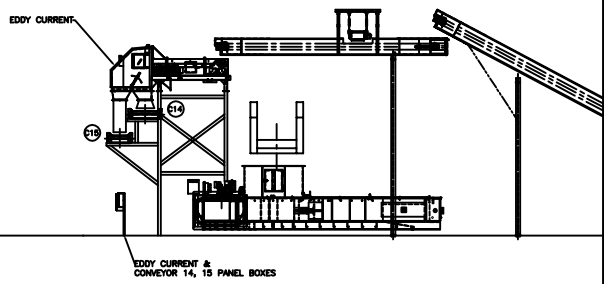
DR. ES	
CK.	APP.
DATE: 1/31/10	
SCALE: 1/16" = 1'	
TOL: ±1/16"	
DRAWING NO.	
OVER VIEW SHEET 6 OF 6	



PLAN VIEW



ELEVATION



END VIEW

TITLE:
PANEL BOX & E-STOP SCHEDULE
FOR CITY OF CONWAY

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 1/31/10	
SCALE: 3/32" = 1'	
TOL: ±1/16"	
DRAWING NO.	
AREA 5 SHEET 5 OF 6	

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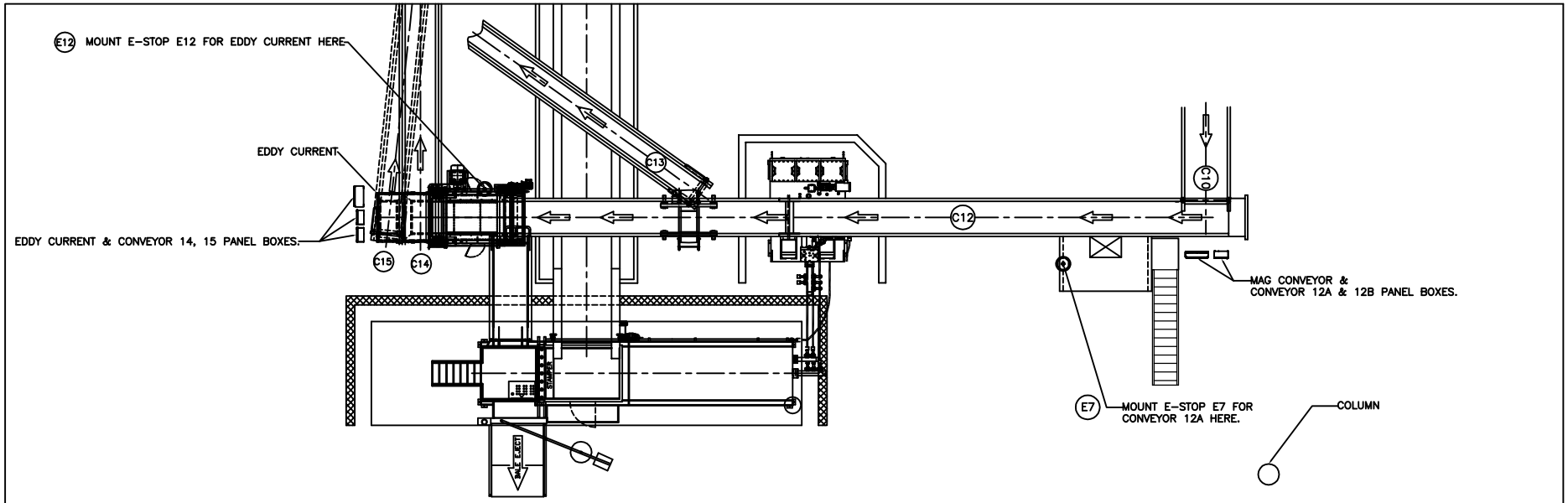

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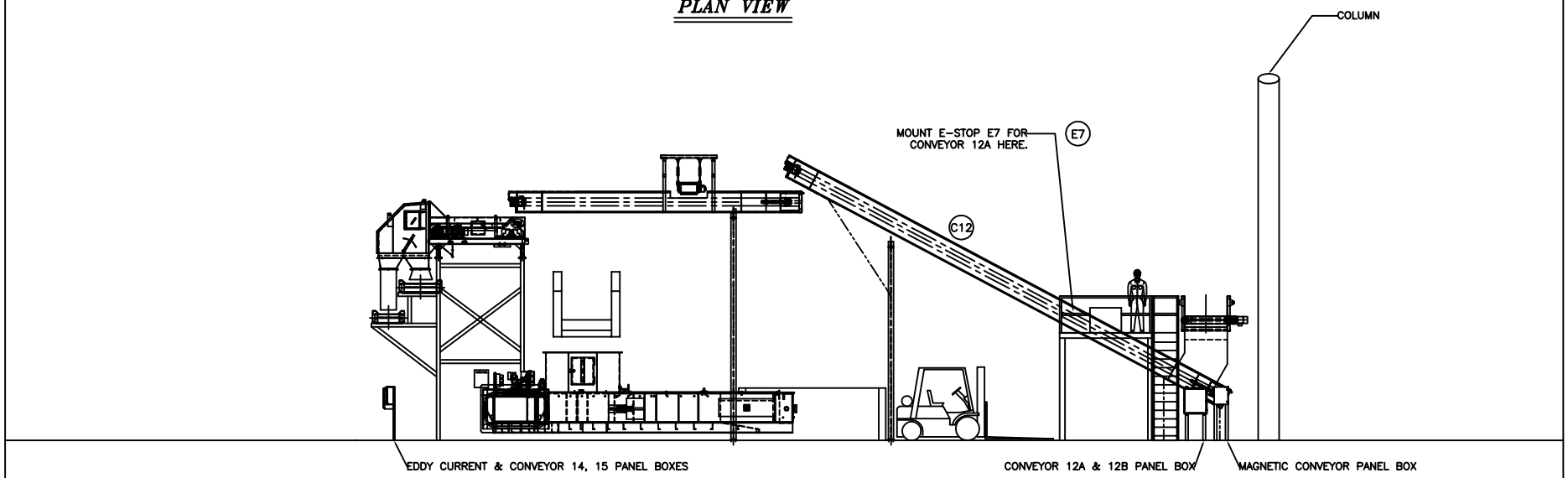

ELEVATION

TITLE:
PANLE BOX & E-STOP SCHEDULE
FOR CITY OF CONWAY

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 1/31/10	
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DRAWING NO.	
AREA 4 SHEET 4 OF 6	

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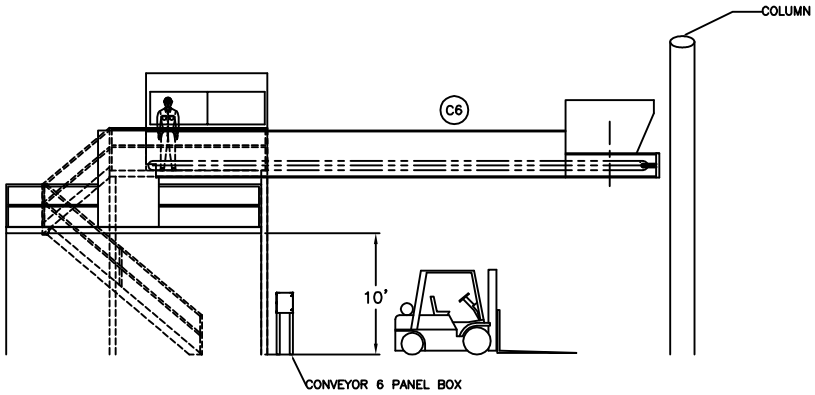
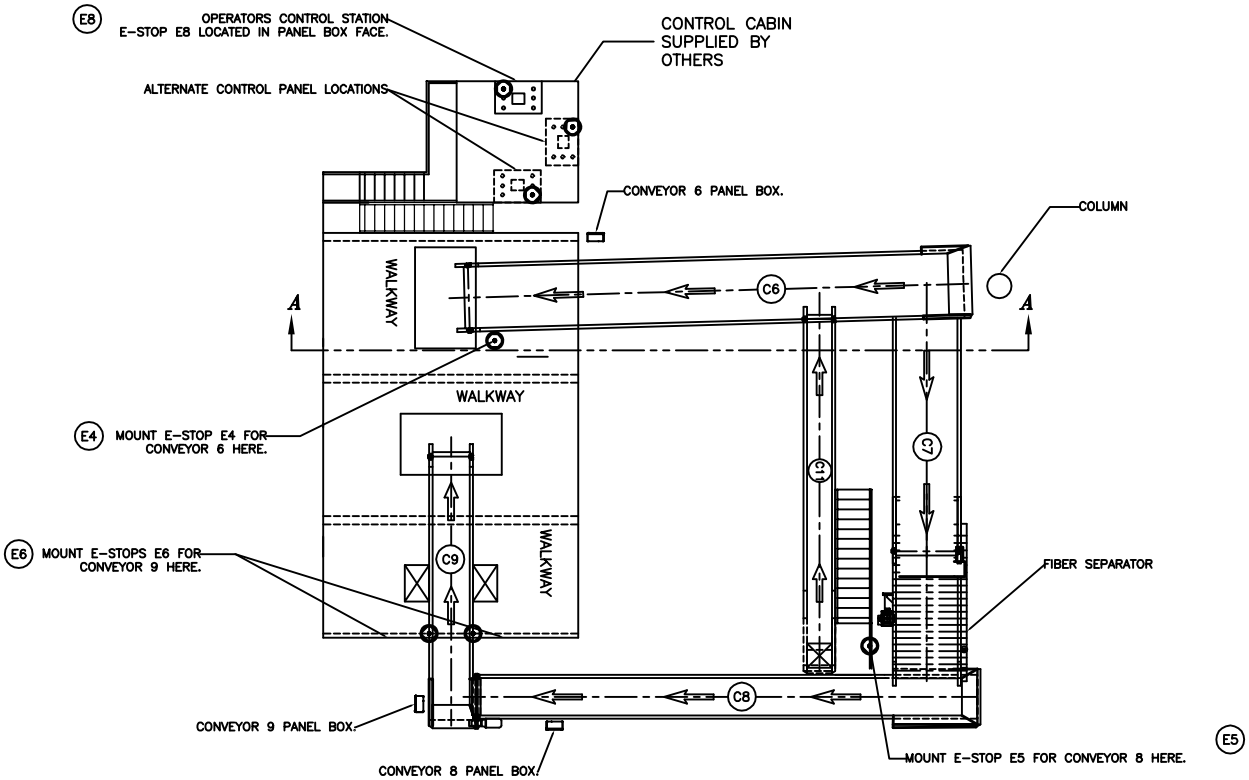
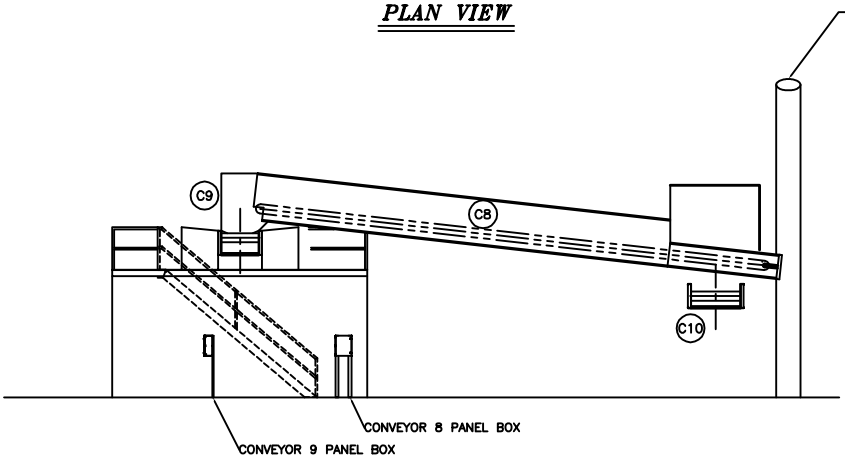


SECTION A–A



PLAN VIEW



ELEVATION

TITLE:
PANEL BOX & E–STOP SCHEDULE
FOR CITY OF CONWAY

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 1/31/10	
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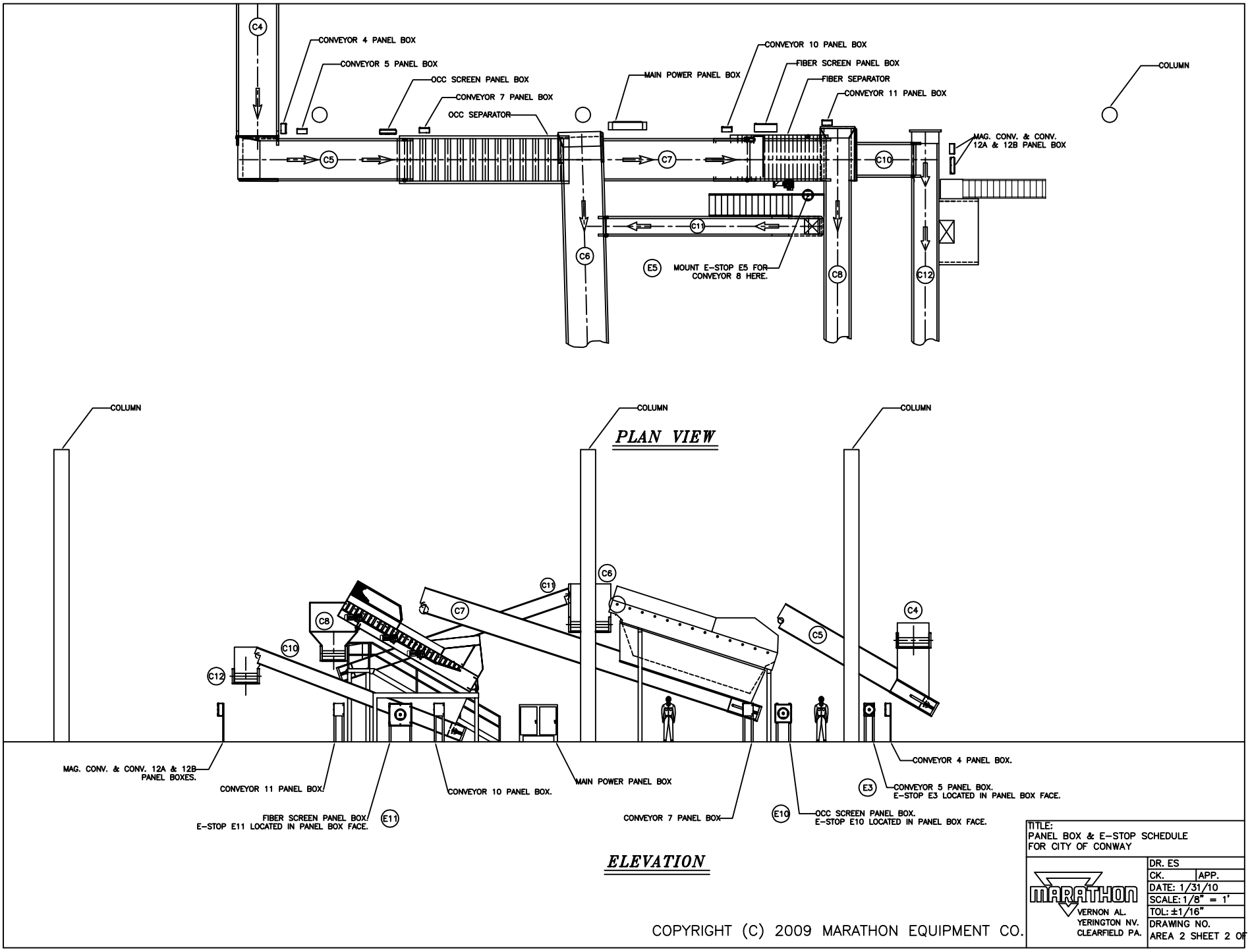
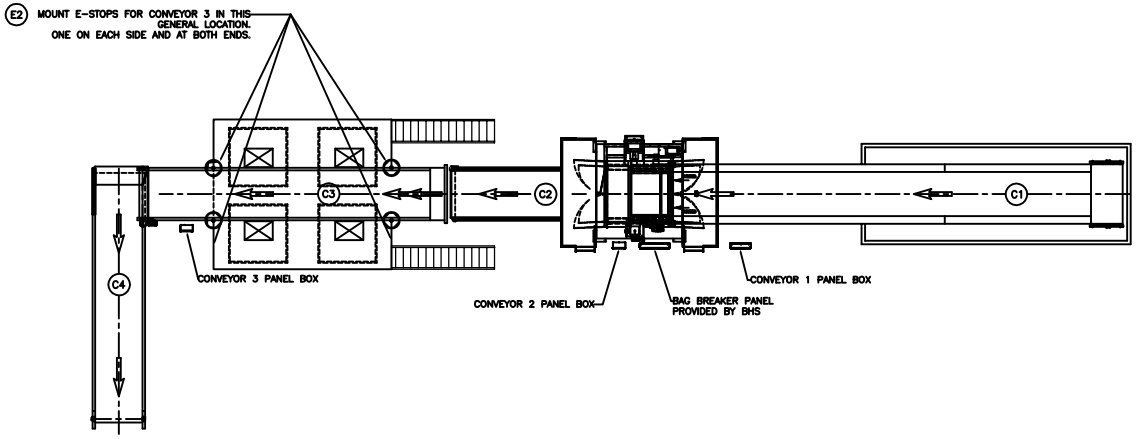
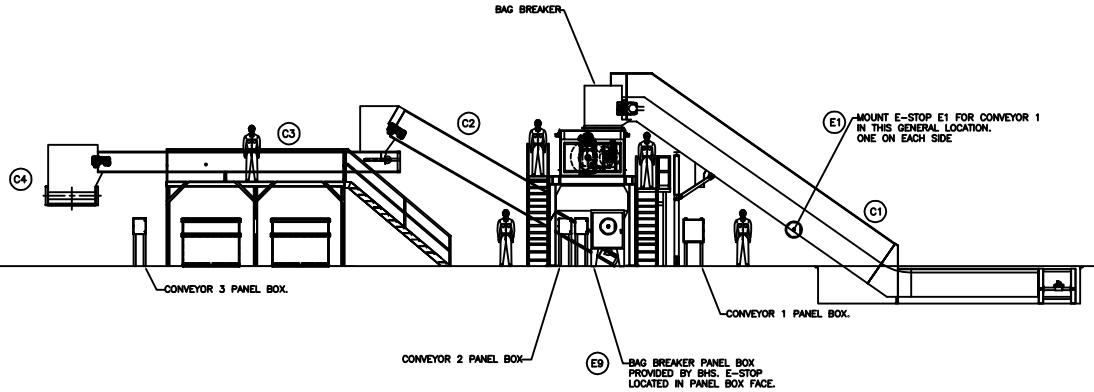


AREA 2 SHEET 2 OF 6



PLAN VIEW



ELEVATION

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PANEL BOX & E-STOP SCHEDULE
FOR CITY OF CONWAY

MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.

DR. ES	
CK.	APP.
DATE: 1/31/10	
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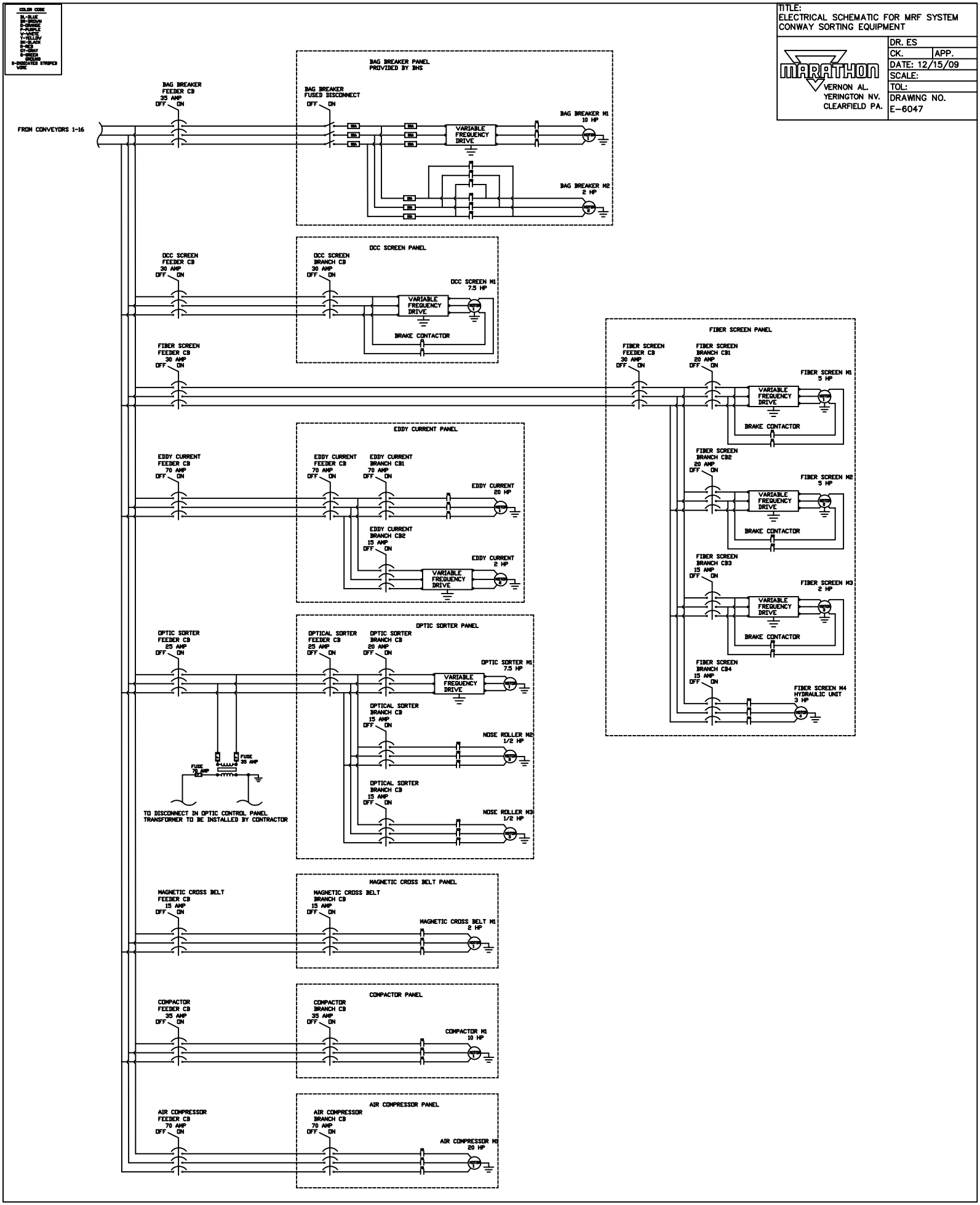
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G-GREEN
GROUND
S-INDICATES STRIPED WIRE
TITLE:
ELECTRICAL SCHEMATIC FOR MRF SYSTEM
CONWAY SORTING EQUIPMENT
MARATHON
VERNON AL.
YERINGTON NV.
CLEARFIELD PA.
DR. ES
CK.
APP.
DATE: 12/15/09
SCALE:
TOL:
DRAWING NO.
E-6047
FROM CONVEYORS 1-16
BAG BREAKER PANEL
PROVIDED BY BHS
BAG BREAKER
FEEDER CB
35 AMP
OFF ON
BAG BREAKER
FUSED DISCONNECT
OFF ON
VARIABLE
FREQUENCY
DRIVE
BAG BREAKER M1
10 HP
BAG BREAKER M2
2 HP
DCC SCREEN PANEL
DCC SCREEN
FEEDER CB
30 AMP
OFF ON
DCC SCREEN
BRANCH CB
30 AMP
OFF ON
DCC SCREEN M1
7.5 HP
BRAKE CONTACTOR
FIBER SCREEN
FEEDER CB
30 AMP
OFF ON
FIBER SCREEN PANEL
FIBER SCREEN
FEEDER CB
30 AMP
OFF ON
FIBER SCREEN
BRANCH CB1
20 AMP
OFF ON
FIBER SCREEN M1
5 HP
FIBER SCREEN
BRANCH CB2
20 AMP
OFF ON
FIBER SCREEN M2
5 HP
FIBER SCREEN
BRANCH CB3
15 AMP
OFF ON
FIBER SCREEN M3
2 HP
FIBER SCREEN
BRANCH CB4
15 AMP
OFF ON
FIBER SCREEN M4
HYDRAULIC UNIT
3 HP
EDDY CURRENT PANEL
EDDY CURRENT
FEEDER CB
70 AMP
OFF ON
EDDY CURRENT
BRANCH CB1
70 AMP
OFF ON
EDDY CURRENT
20 HP
EDDY CURRENT
BRANCH CB2
15 AMP
OFF ON
EDDY CURRENT
2 HP
OPTIC SORTER
FEEDER CB
25 AMP
OFF ON
OPTIC SORTER PANEL
OPTICAL SORTER
FEEDER CB
25 AMP
OFF ON
OPTIC SORTER
BRANCH CB
20 AMP
OFF ON
OPTIC SORTER M1
7.5 HP
OPTICAL SORTER
BRANCH CB
15 AMP
OFF ON
NOSE ROLLER M2
1/2 HP
OPTICAL SORTER
BRANCH CB
15 AMP
OFF ON
NOSE ROLLER M3
1/2 HP
FUSE
70 AMP
FUSE
35 AMP
TO DISCONNECT IN OPTIC CONTROL PANEL
TRANSFORMER TO BE INSTALLED BY CONTRACTOR
MAGNETIC CROSS BELT PANEL
MAGNETIC CROSS BELT
FEEDER CB
15 AMP
OFF ON
MAGNETIC CROSS BELT
BRANCH CB
15 AMP
OFF ON
MAGNETIC CROSS BELT M1
2 HP
COMPACTOR PANEL
COMPACTOR
FEEDER CB
35 AMP
OFF ON
COMPACTOR
BRANCH CB
35 AMP
OFF ON
COMPACTOR M1
10 HP
AIR COMPRESSOR PANEL
AIR COMPRESSOR
FEEDER CB
70 AMP
OFF ON
AIR COMPRESSOR
BRANCH CB
70 AMP
OFF ON
AIR COMPRESSOR M1
20 HP

CONWAY POWER REQUIREMENTS

ITEM	S/N	EQUIPMENT	MODEL	MOTOR HP	FLA Per NEC	Motor Control	BRANCH PROTECTION	FEEDER PROTECTION	MAIN CB CALCULATION	WIRE SIZE 100'	WIRE SIZE 200'	WIRE SIZE 300'
					CONVEYORS							
C1	2245412	SYSTEM FEED CONVEYOR	HS-1-60-9-19-15-BG-D-35-7.5-NTZ	7.5hp	11 FLA	VFD	N/A	30 AMP CB	11	12AWG	12AWG	12AWG
C2	2245413	BAG BREAKER DISCHARGE	SB-M-60-26.5-200-14.5-AG-B-25-3	5hp	7.6 FLA	VFD	N/A	20 AMP CB	7.6	12AWG	12AWG	12AWG
C3	2245414	SORT CONVEYOR	SB-M-60-31-200-0-S-A-0-3	3hp	4.8 FLA	VFD	N/A	15 AMP CB	4.8	12AWG	12AWG	12AWG
C4	2245415	CROSS OVER CONVEYOR	SB-M-60-26-200-13.5-AG-B-15-3	3hp	4.8 FLA	VFD	N/A	15 AMP CB	4.8	12AWG	12AWG	12AWG
C5	2245416	OCC SCREEN FEED	SB-M-60-22-200-16-AG-B-30-3	3hp	4.8 FLA	VFD	N/A	15 AMP CB	4.8	12AWG	12AWG	12AWG
C6	2245417	OCC OVERS	SB-M-60-40-200-?-AG-B-?-5	5hp	7.6 FLA	VFD	N/A	20 AMP CB	7.6	12AWG	12AWG	12AWG
C7	2245418	OCC UNDERS	SB-M-60-45.5-200-18-AG-B-18-5	5hp	7.6 FLA	VFD	N/A	20 AMP CB	7.6	12AWG	12AWG	12AWG
C8	2245419	FIBER OVERS	SB-M-48-40-200-?-AG-B-?-5	5hp	7.6 FLA	VFD	N/A	20 AMP CB	7.6	12AWG	12AWG	12AWG
C9	2245420	FIBER SORT	SB-M-36-21-200-0-S-A-0-2	2hp	3.4 FLA	VFD	N/A	15 AMP CB	3.4	12AWG	12AWG	12AWG
C10	2245421	FIBER UNDERS	SB-M-48-28-200-11.5-AG-B-21-3	3hp	4.8 FLA	VFD	N/A	15 AMP CB	4.8	12AWG	12AWG	12AWG
C11	2245422	SMALL OCC	SB-M-24-36-200-?-AG-B-?-2	2hp	3.4 FLA	VFD	N/A	15 AMP CB	3.4	12AWG	12AWG	12AWG
C12A	2245423	EDDY FEED		3hp	4.8 FLA	VFD	15 AMP CB	15 AMP CB	8.2	12AWG	12AWG	12AWG
C12B				2hp	3.4 FLA	VFD	15 AMP CB					
C13	2245424	MAGNET DISCHARGE	SB-M-24-28-200-?AG-B-?-2	2hp	3.4 FLA	VFD	N/A	15 AMP CB	3.4	12AWG	12AWG	12AWG
C14	2245425	PLASTIC FROM EDDY	SB-M-36-23-200-4.5-AG-B-11-2	2hp	3.4 FLA	VFD	N/A	15 AMP CB	3.4	12AWG	12AWG	12AWG
C15	2245426	NON FERROUS DISCHARGE	SB-M-24-28-200-0-AG-A-0-2	2hp	3.4 FLA	VFD	N/A	15 AMP CB	3.4	12AWG	12AWG	12AWG
C16	2245427	OPTIC DISCHARGE	SB-M-24-29-200-?AG-B-?-2	2hp	3.4 FLA	VFD	N/A	15 AMP CB	3.4	12AWG	12AWG	12AWG
					SORTING EQUIPMENT							
M1	2245436	BAG BREAKER		(1) 10hp (1) 2hp	14 FLA 3.4 FLA	Supplied by BHS	SUPPLIED BY BHS	35 AMP CB	17.4	12AWG	12AWG	10AWG
M2	2245437	OCC SCREEN		(1) 7.5hp	11 FLA	VFD	N/A	30 AMP CB	11	12AWG	12AWG	12AWG
M3	2245438	FIBER SCREEN		(1) 2hp (1) 3hp (2) 5hp	3.4 FLA 4.8 FLA 7.6 FLA	VFD STARTER VFD	15 AMP CB 15 AMP CB 20 AMP CB X 2	30 AMP CB	23.4	12AWG	10AWG	8AWG
M4	2245439	EDDY CURRENT		(1) 20hp (1) 2hp	27FLA 3.4 FLA	STARTER VFD	70 AMP CB 15 AMP CB	70 AMP CB	30.4	8AWG	8AWG	8AWG
M5	2245440	OPTIC SORTER		(1) 7.5hp (2) .5hp	11 FLA 1.1 FLA	VFD STARTER	20 AMP CB 15 AMP CB X 2	25 AMP CB	13.2	12AWG	12AWG	12AWG
M7	2245442	MAGNETIC CROSS BELT AND STAND		2hp	3.4 FLA	STARTER	N/A	15 AMP CB	3.4	12AWG	12AWG	12AWG
		COMPACTOR		10hp	14 FLA	STARTER	N/A	35 AMP CB	14	12AWG	12AWG	10AWG
		AIR COMPRESSOR		20hp	27 FLA	STARTER	N/A	70 AMP CB	67.5 @ 250%	10AWG	10AWG	8AWG
								TOTAL LOAD	279.5	500KCMIL	500KCMIL	500KCMIL
								MAIN CB	250 AMP CB			