

ENGINEERING ORDER

1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 1

SBU SHEET

2. SHEET 1 OF 25 SHEETS

NASA KSC Export Control Office (ECO) Export/SBU Determination Record

EDDR# 10706

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ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

ENGINEERING ORDER

1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)

EO1-79K38608

2.
SHEET 2 OF 25 SHEETS

3. EFFECTIVITY (Facility & Vehicle)

LC39 Area – LBS-763 & LBS -766

4. DISPOSITION OF OLD PARTS (Check One)

SCRAP REWORK USE X NOT APPLICABLE

5. TITLE OF DRAWING

Replace Feeders And Ducts – VAB Area North

6. REASON FOR CHANGE

- 1) To incorporate the replacement of LBS-763 and LBS-766 into the VAB North feeder replacement project.

DESCRIPTION OF CHANGE

- 1) Drawing 79K38608, sheets 4, 6, 9, 10, 16, & 19: Replace LBS-763 with a 5-Way, vault style LBS and replace LBS-766 with a 6-way (2 Switch, 4 Interrupter) pad mount VFI, revise One Lines, Plans and Manhole Detail.

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PARTS LIST

8. SIGNATURES

REQUESTER Dung Trang	DATE 3/19/10	DRAFTSMAN V. Kelemen	DATE 2/23/10
STRESS	DATE	ENGINEER	DATE
CHECKER	DATE	APPROVED BY: TA-83B	DATE 3/19/10

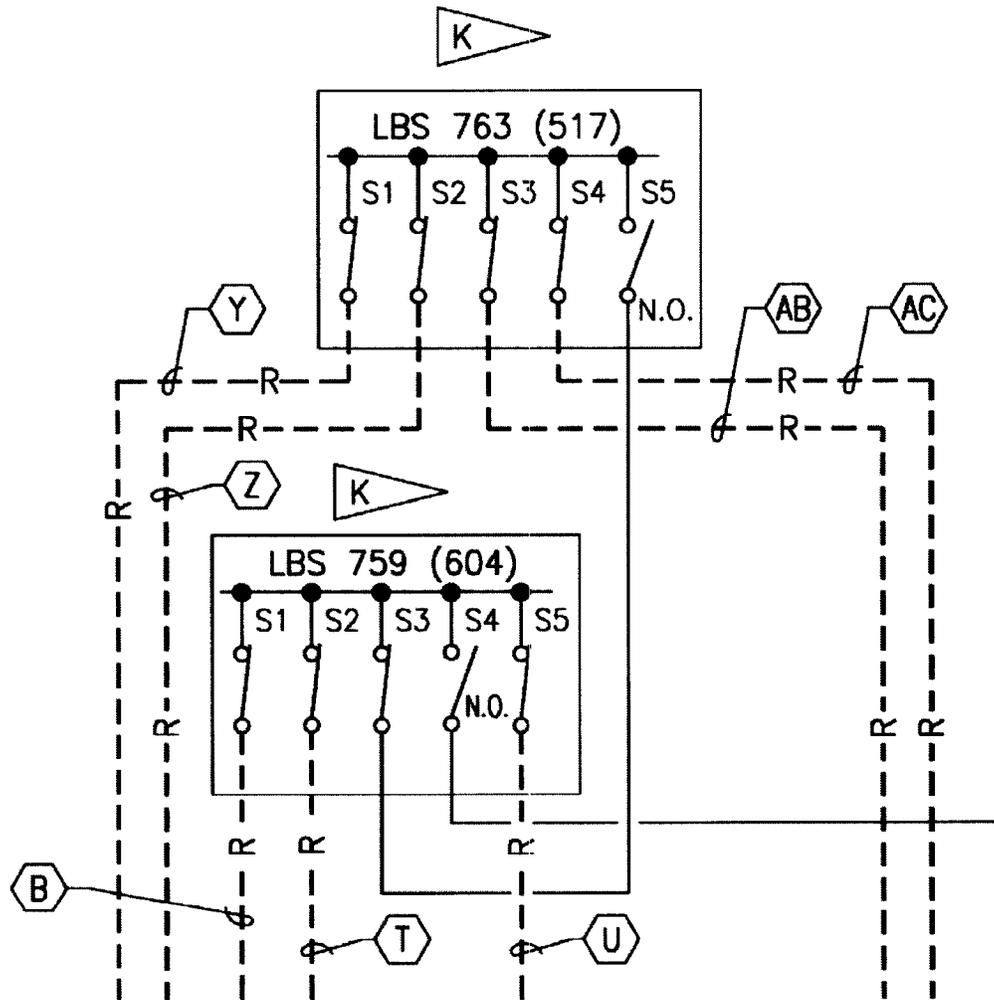
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 4

EXISTING ONE-LINE - LBS-763

2. SHEET 3 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



PARTIAL EXISTING ONE-LINE - LBS-763
WAS

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

ENGINEERING ORDER

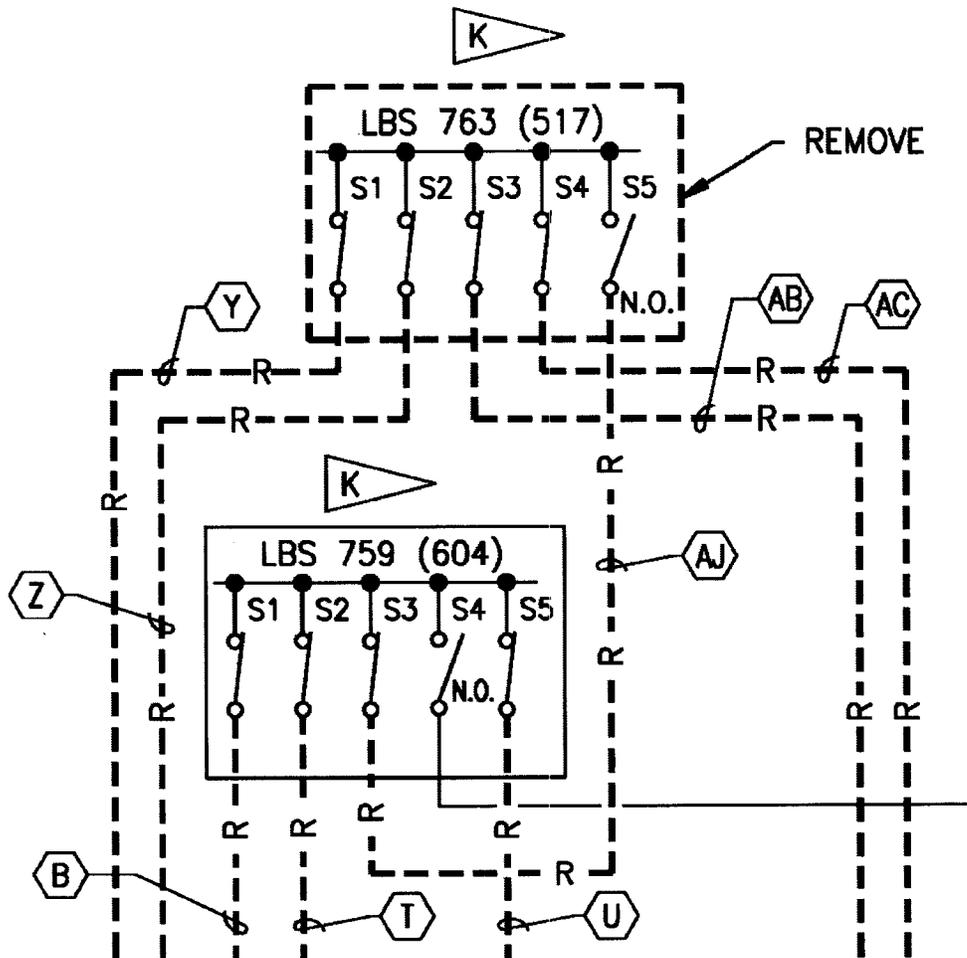
1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 4

EXISTING ONE-LINE - LBS-763

2. SHEET 4 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)

21-34a FORMS



PARTIAL EXISTING ONE LINE - LBS-763

IS

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

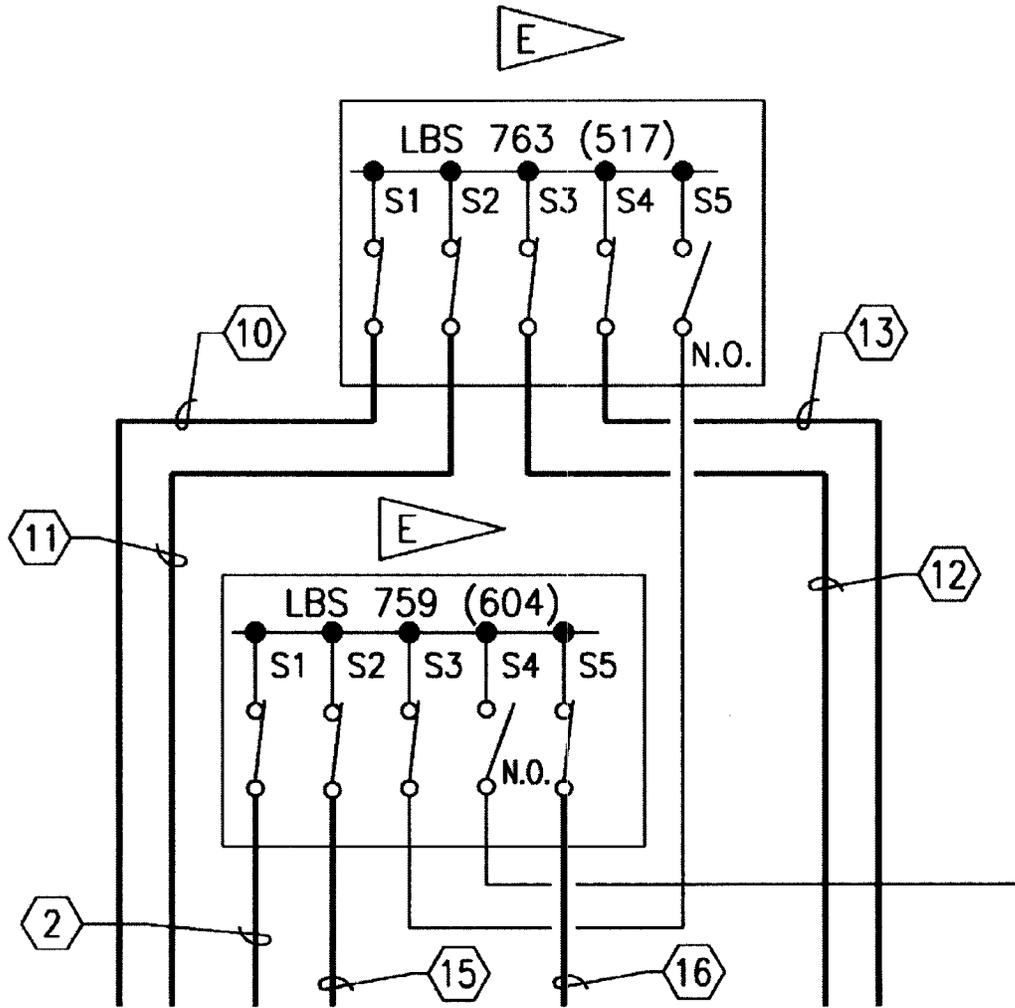
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 6

MODIFIED ONE-LINE - LBS-763

2. SHEET 5 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



PARTIAL MODIFIED ONE-LINE - LBS-763

WAS

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

ENGINEERING ORDER

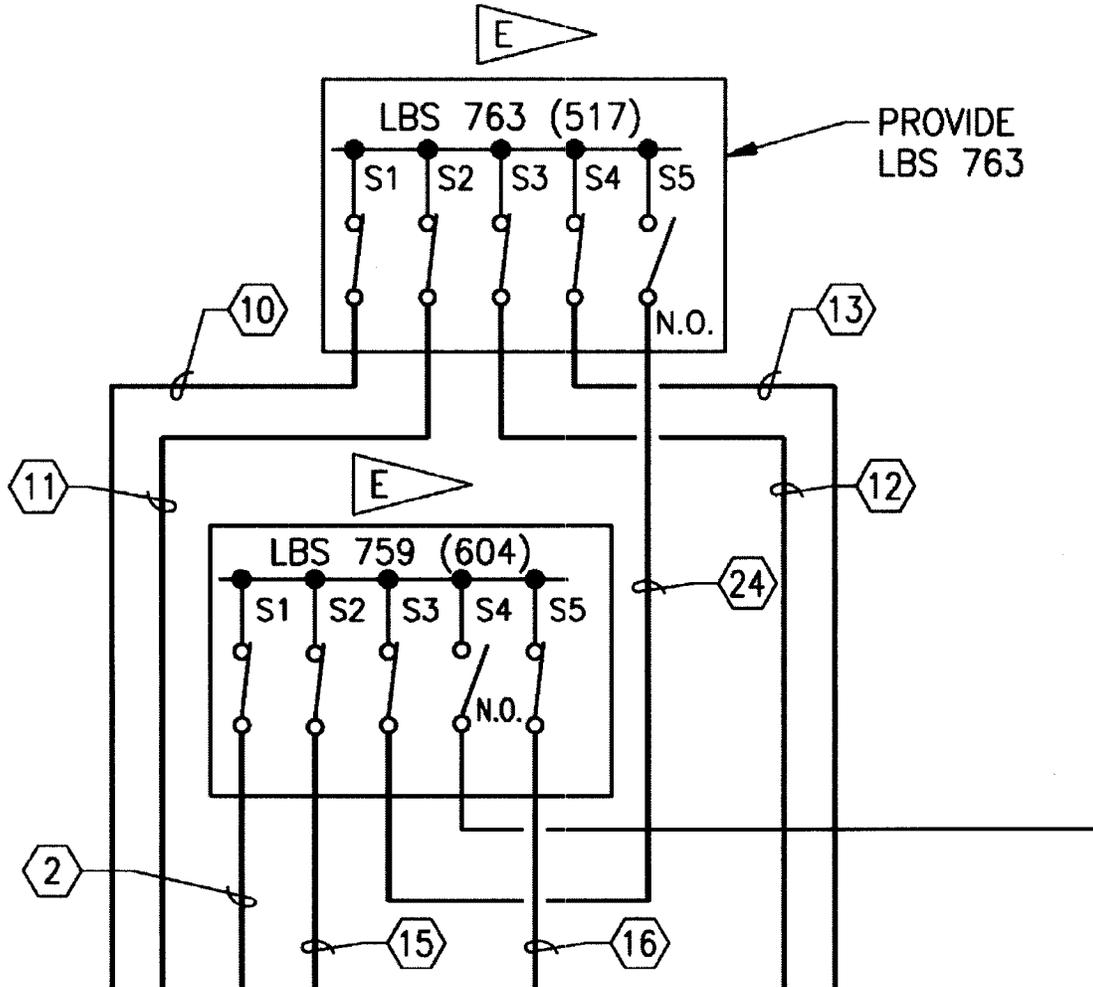
1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 6

MODIFIED ONE-LINE - LBS-763

2. SHEET 6 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)

21-34a FORMS



PARTIAL MODIFIED ONE-LINE - LBS-763 IS

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

ENGINEERING ORDER

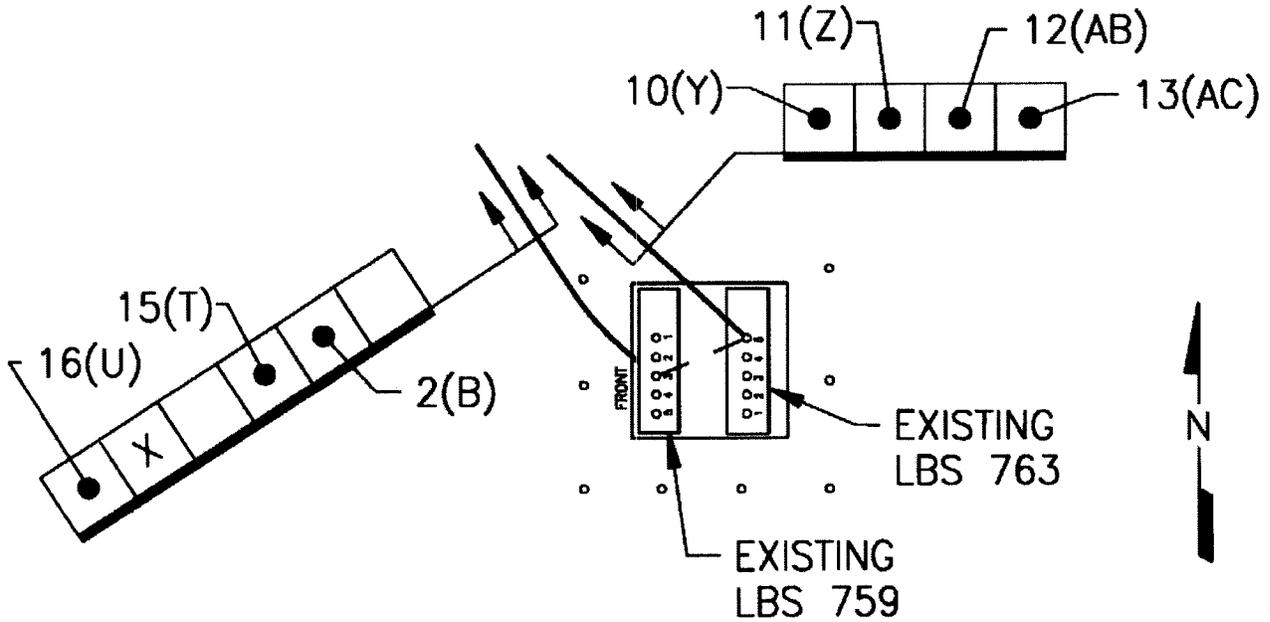
1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 9

PLAN - LBS-763

2. SHEET 7 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)

21-34a FORMS



PARTIAL ENLARGED PLAN '1'
WAS

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

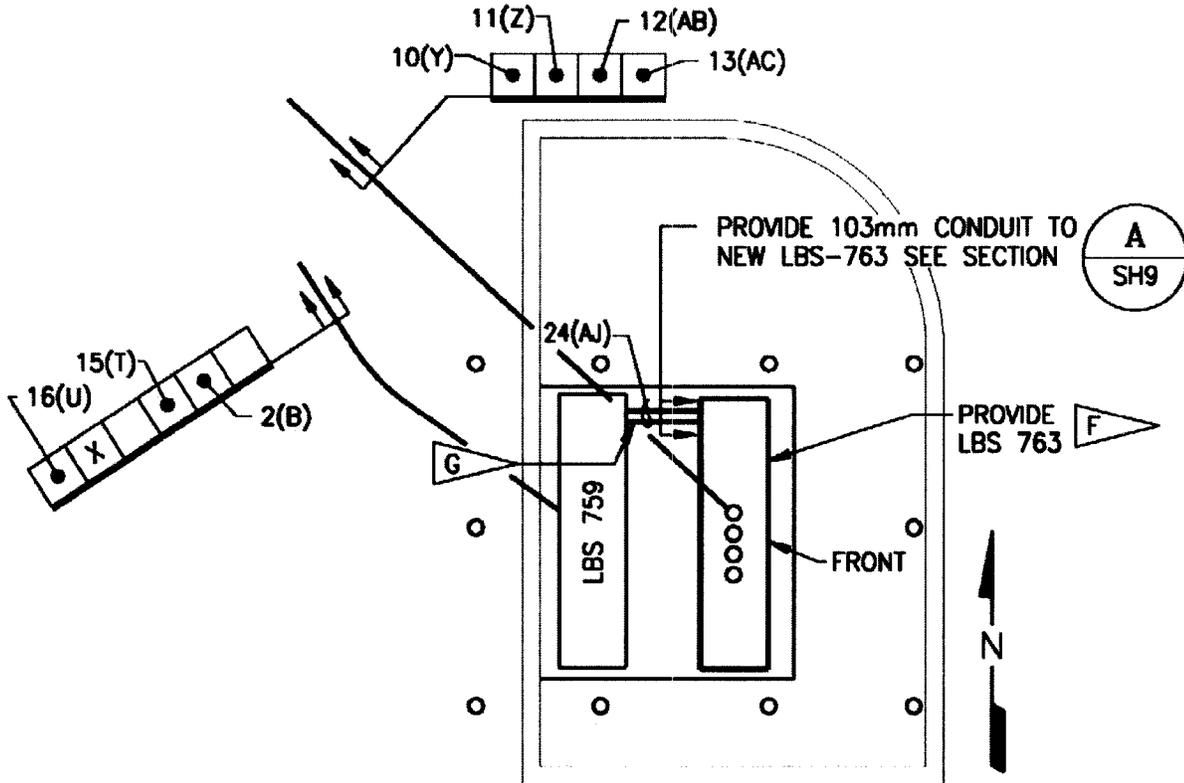
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 9

PLAN - LBS-763

2. SHEET 8 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



PARTIAL ENLARGED PLAN - LBS 763

NOT TO SCALE

IS

SPECIFIC NOTES:

- F** REMOVE EXISTING LBS-763. PROVIDE 5-WAY, VAULT STYLE, SF6-GAS SWITCH. PHYSICAL SIZE OF SWITCH MAY DIFFER, DEPENDING ON MANUFACTURER. SEE DETAIL B, SHEET 10.
- G** PROVIDE 103mm RGS CONDUIT FOR TIE BETWEEN LBS-763 AND LBS-759. PROVIDE GROUNDING BUSHINGS AND TIE TO EQUIPMENT GROUND.

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC
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PARTS LIST

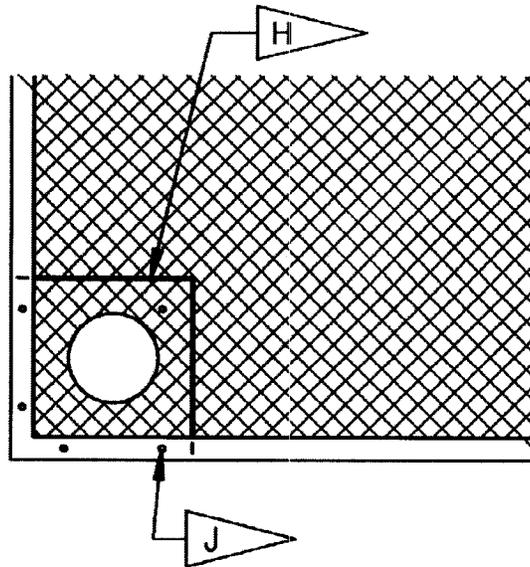
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 9

DETAIL

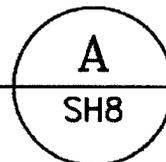
2. SHEET 9 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



SECTION

NOT TO SCALE



SPECIFIC NOTES:

 PROVIDE 254mmx254mm, 16 GAUGE STAINLESS STEEL PLATE.
PROVIDE CUTOUT FOR 103mm RGS CONDUIT.

 PROVIDE 8mm-20x35mm BOLT, 27mmx8mm FENDER WASHERS,
AND NUT TO SECURE STAINLESS STEEL PLATE.

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

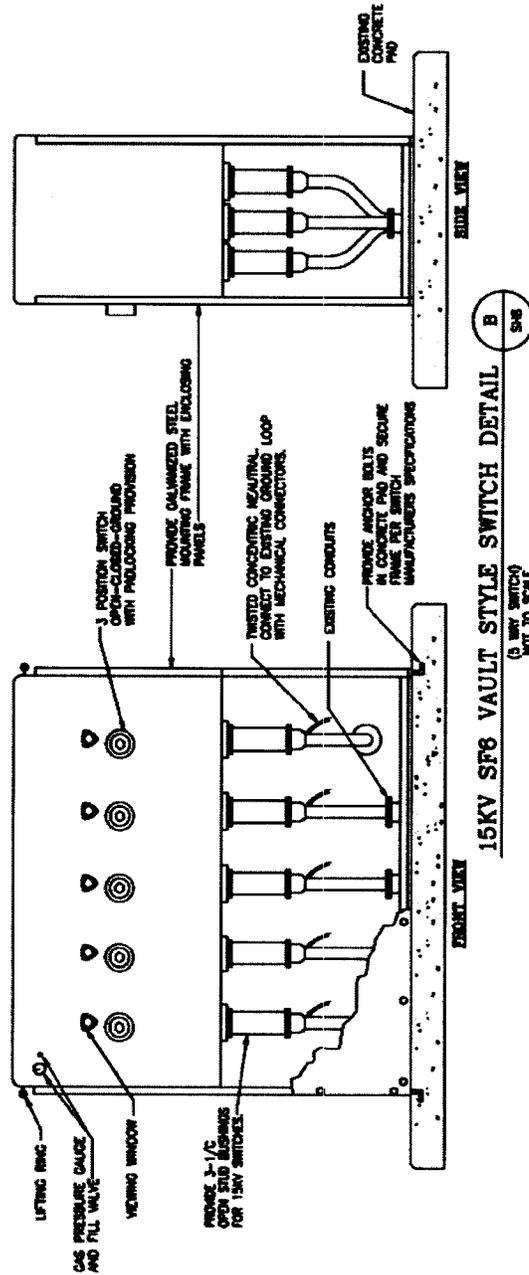
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 19

DETAIL - VAULT STYLE SWITCH

2. SHEET 10 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

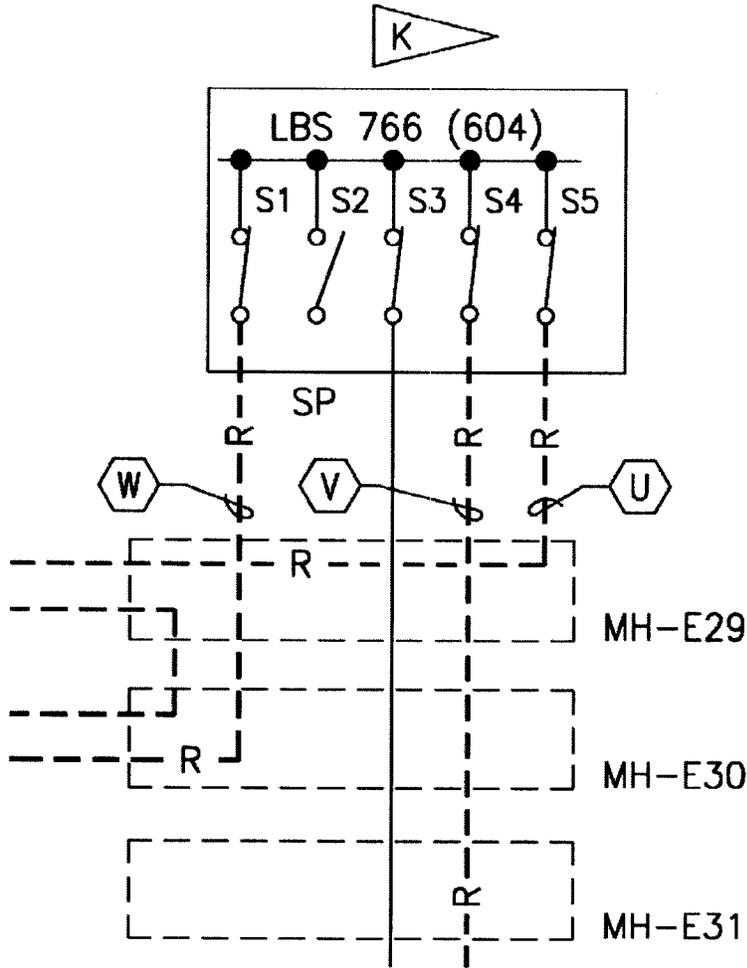
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 4

EXISTING ONE-LINE - LBS-766

2. SHEET 11 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



PARTIAL EXISTING ONE-LINE - LBS-766
WAS

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

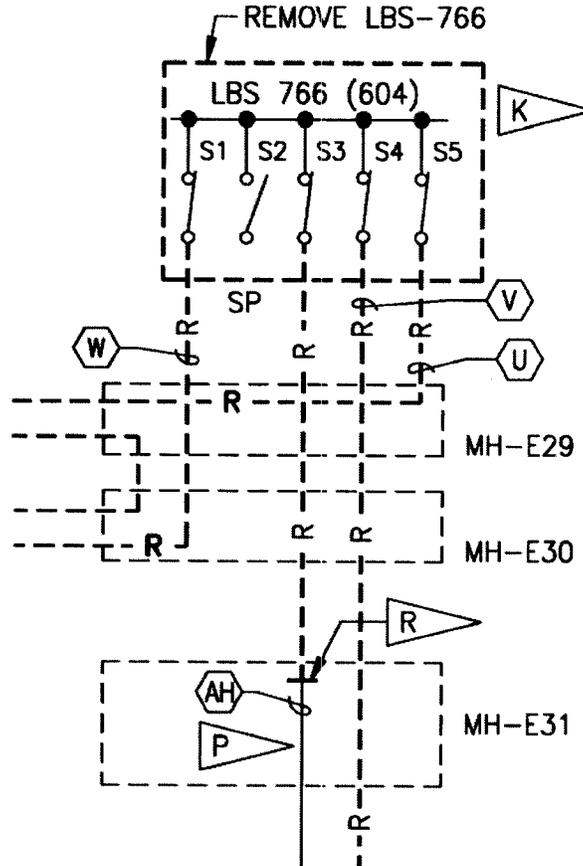
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
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EO1-79K38608, Sheet 4

EXISTING ONE-LINE - LBS-766

2. SHEET 12 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



PARTIAL EXISTING ONE-LINE - LBS-766

IS

SPECIFIC NOTES:

-  CONTRACTOR TO VERIFY SIZE OF CABLE 'AH'. REMOVE CABLE FROM LBS 766/S3 TO MH-E31.
-  CUT CABLE 'AH' IN MH-E31. LEAVE ENOUGH SLACK ON REMAINING CABLE 'AH' IN MH-E31 FOR SPLICING.

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

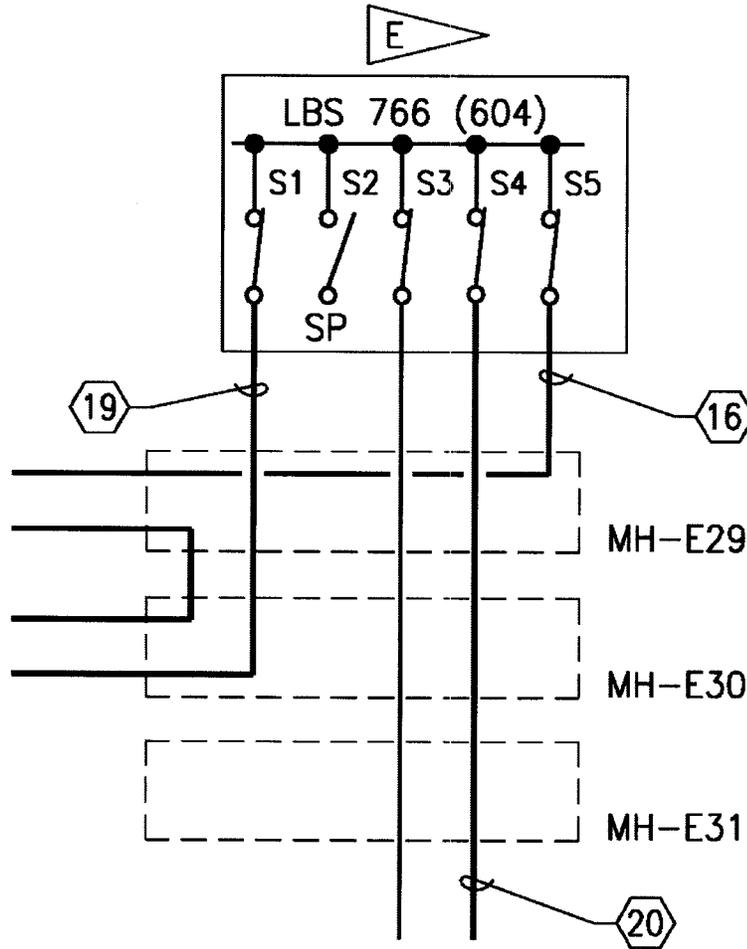
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 6

MODIFIED ONE-LINE - LBS-766

2. SHEET 13 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



PARTIAL MODIFIED ONE-LINE - LBS-766

WAS

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

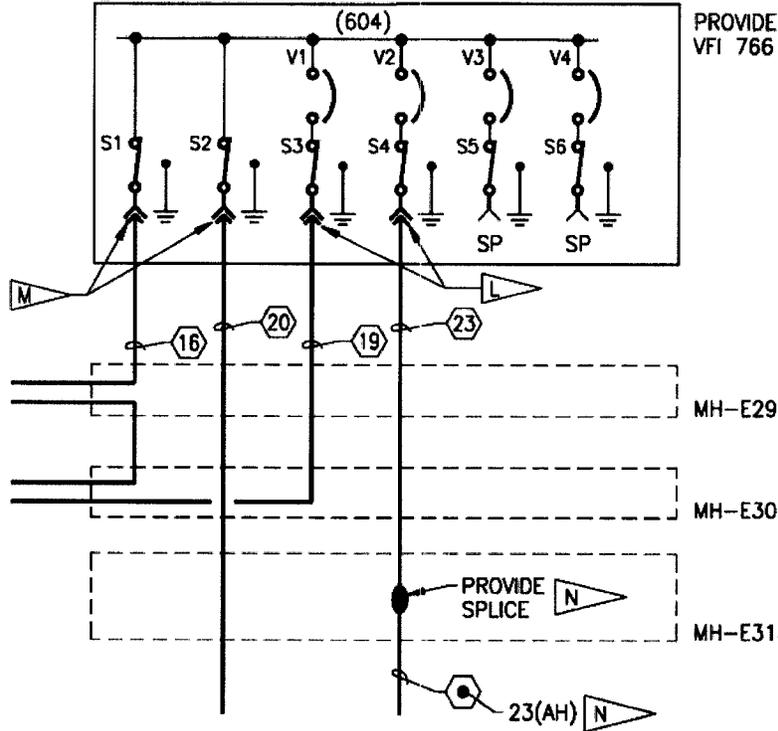
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
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MODIFIED ONE-LINE - VFI-766

2. SHEET 14 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



PARTIAL MODIFIED ONE-LINE - VFI-766

IS

SPECIFIC NOTES:

- PROVIDE 200A LOAD BREAK ELBOWS. FOR TERMINATIONS AT SWITCH POSITIONS V3 AND V4, SEE DETAIL "BM" ON DRAWING E16.
- PROVIDE 600A NON-LOAD BREAK ELBOW.
- CONTRACTOR SHALL VERIFY EXISTING CABLE SIZE OF CABLE 'AH'. IF CABLE SIZE OF 'AH' DIFFERS FROM SIZE OF NEW CABLE '23', PROVIDE ADAPTER KIT.

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

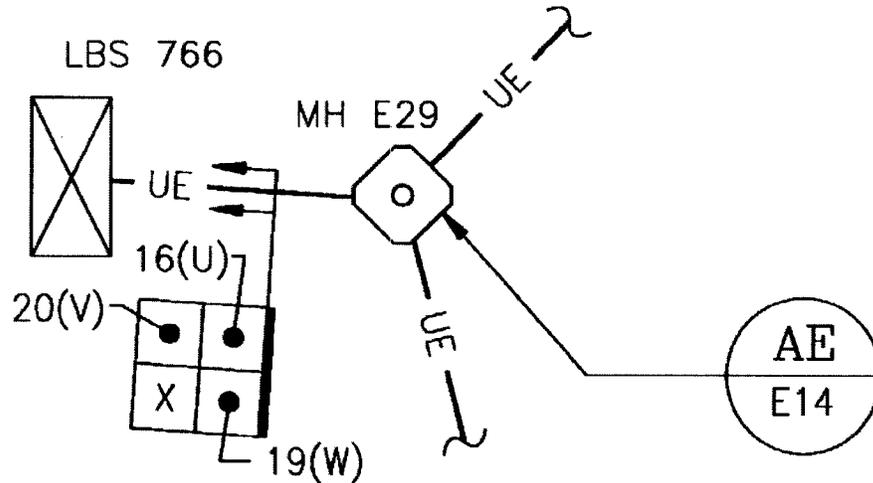
ENGINEERING ORDER

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EO1-79K38608, Sheet 10

PLAN - LBS-766

2. SHEET 15 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



ENLARGED PLAN 1 - LBS 766

NOT TO SCALE

WAS



ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

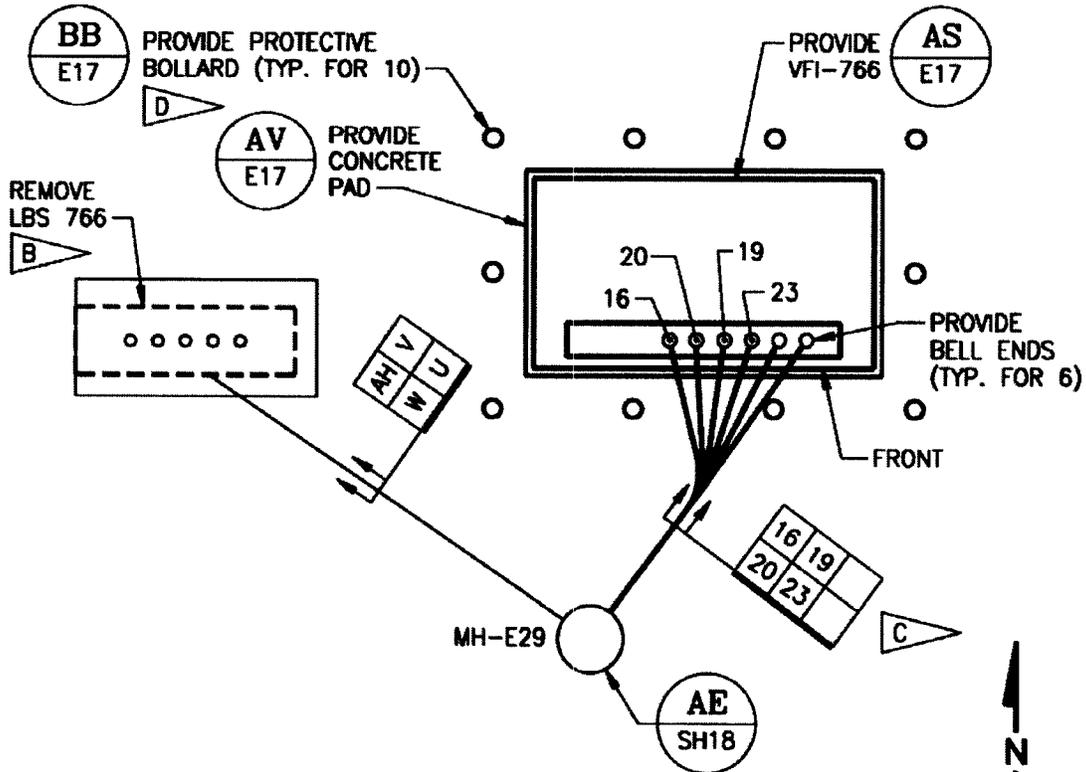
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
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EO1-79K38608, Sheet 10

PLAN - VFI-766

2. SHEET 16 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



ENLARGED PLAN 1 - LBS 766

NOT TO SCALE

IS

SPECIFIC NOTES:

- B** REMOVE LBS-766 AND CONCRETE PAD. CUT CONDUIT TO 155mm BELOW GRADE, CAP AND ABANDON IN PLACE.
- C** PROVIDE 6 SIZE 127mm SCH 40 PVC CONDUITS FROM MH-E-29 TO VFI-766 CONDUIT/CABLE ENTRY AREA.
- D** INSTALL AND LOCATE BOLLARDS SO AS TO ALLOW CLEARANCE OF DOOR OPENING OF AT LEAST 1.30' IN FRONT AND BACK OF VFI-766.

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

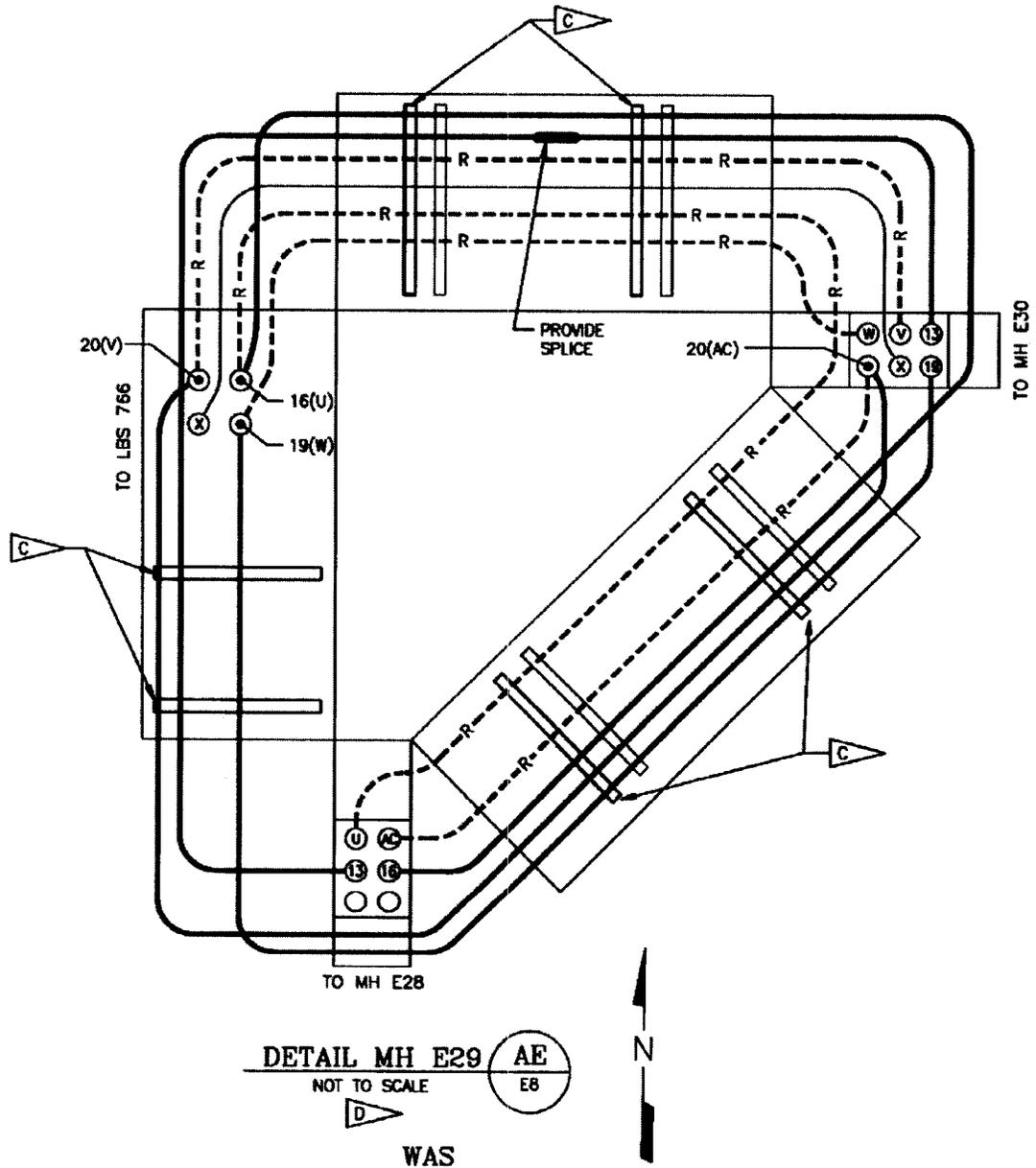
ENGINEERING ORDER

1. ENGINEERING ORDER NO.
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EO1-79K38608, Sheet 16

MANHOLE DETAIL - MH-E29

2. SHEET 17 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS



ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

ENGINEERING ORDER

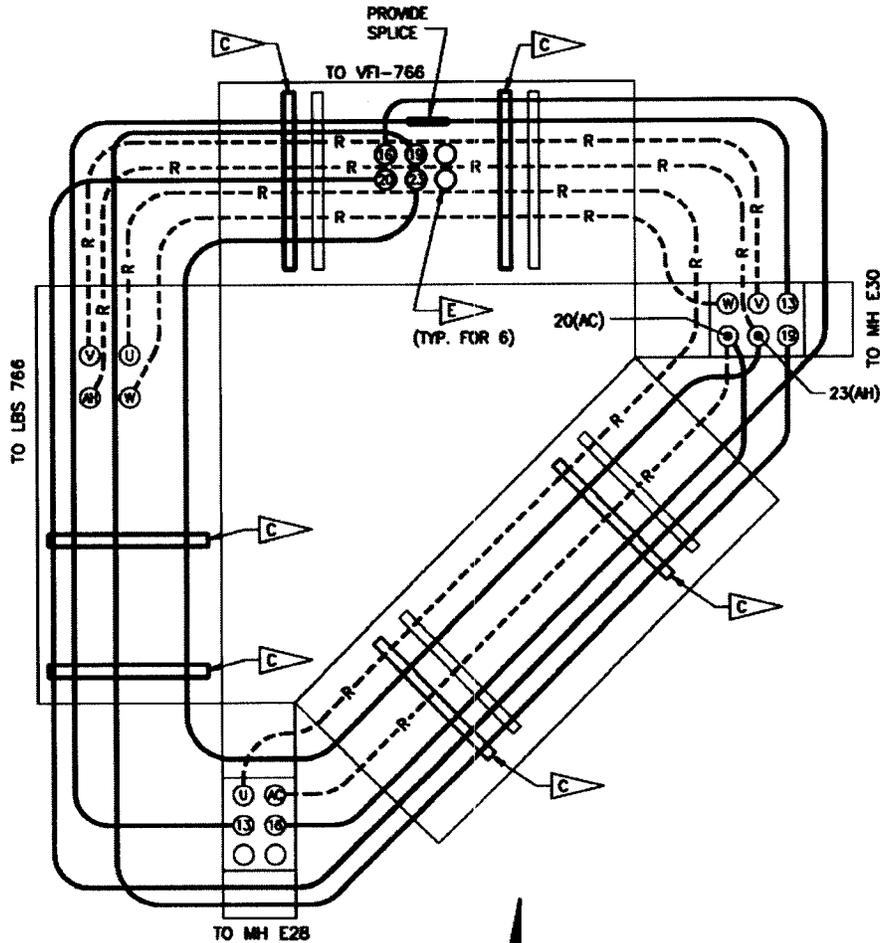
1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 16

MANHOLE DETAIL - MH-E29

2. SHEET 18 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)

21-34a FORMS



DETAIL MH E29 (AE SH16)
NOT TO SCALE
IS

SPECIFIC NOTES:

- E** CORE DRILL FOR 6 SIZE 127mm SCH 40 PVC CONDUITS. SEAL WITH EPOXY. PROVIDE BELL ENDS AT MANHOLE ENTRY FLUSH WITH INSIDE WALL OF MANHOLE. FILL VOIDS WITH GROUT ALL AROUND.
- F** CONTRACTOR SHALL VERIFY CABLE ROUTING AND CIRCUIT NUMBERS PRIOR TO PERFORMING ANY WORK ON THAT CABLE.

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

ENGINEERING ORDER

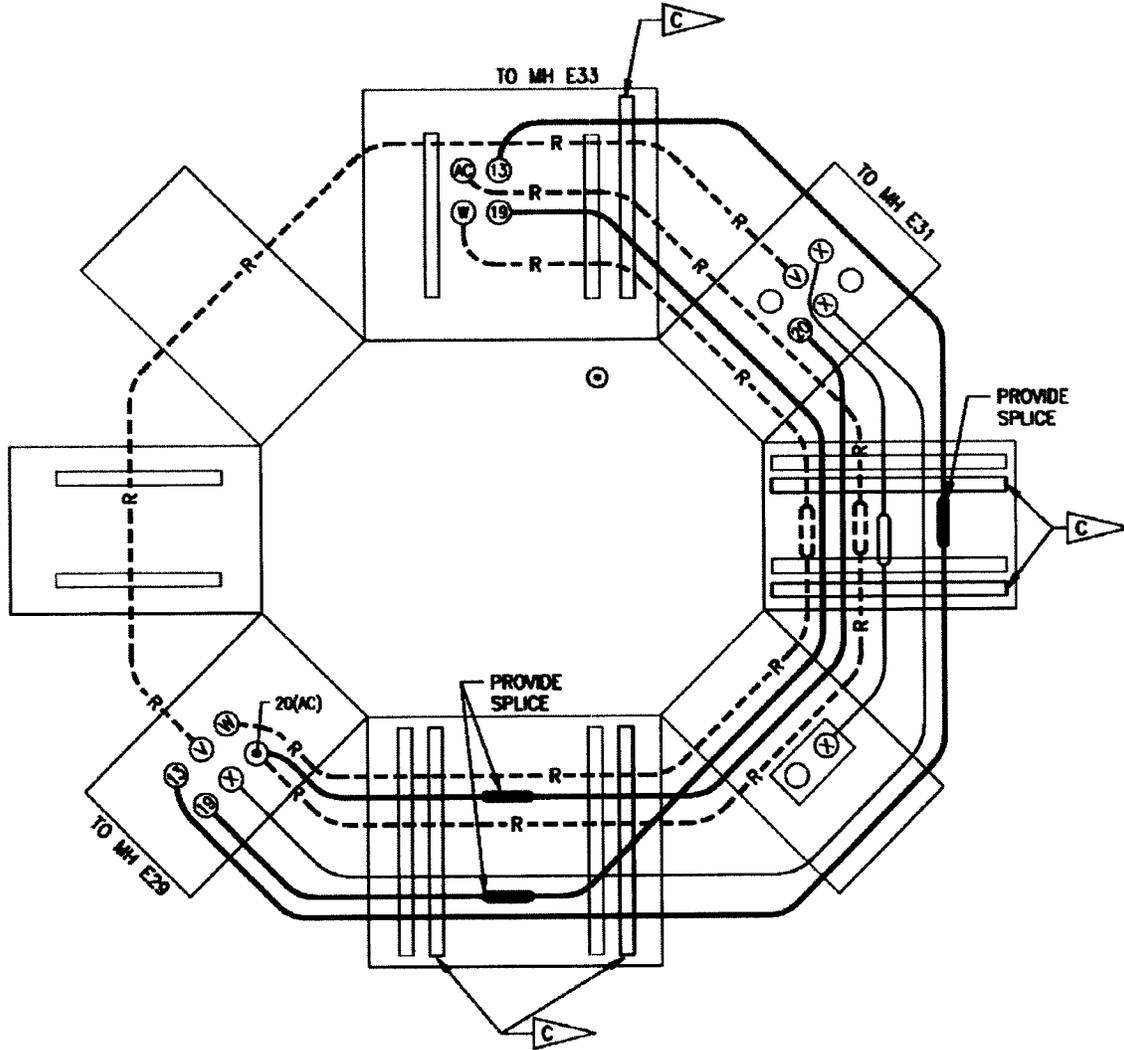
1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 16

MANHOLE DETAIL - MH-E30

2. SHEET 19 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)

21-34a FORMS



DETAIL MH E30

NOT TO SCALE

D

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EB

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

ENGINEERING ORDER

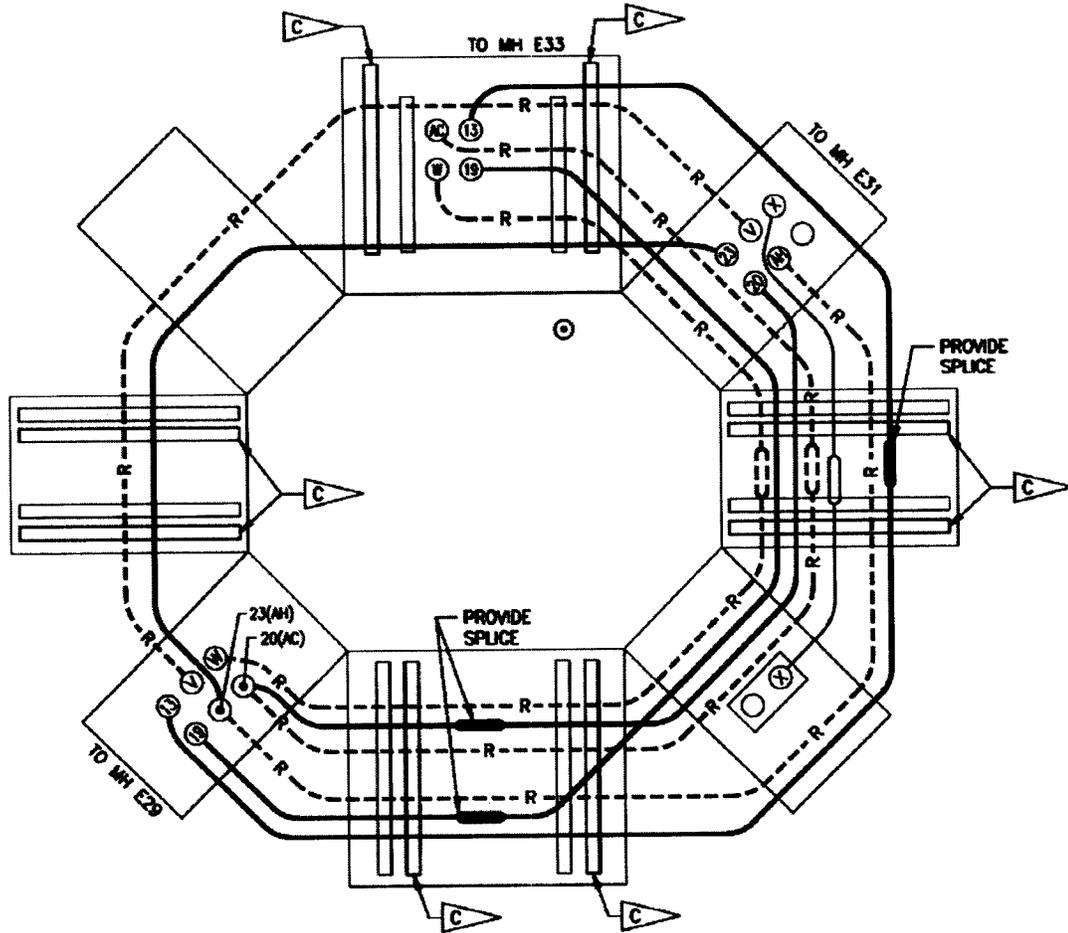
1. ENGINEERING ORDER NO.
(Prefix followed by Dwg. No.)
EO1-79K38608, Sheet 16

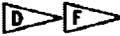
MANHOLE DETAIL - MH-E30

2. SHEET 20 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)

21-34a FORMS




DETAIL MH E30
 NOT TO SCALE
 IS

SPECIFIC NOTES:

 CONTRACTOR SHALL VERIFY CABLE ROUTING AND CIRCUIT NUMBERS
 PRIOR TO PERFORMING ANY WORK ON THAT CABLE.

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

ENGINEERING ORDER

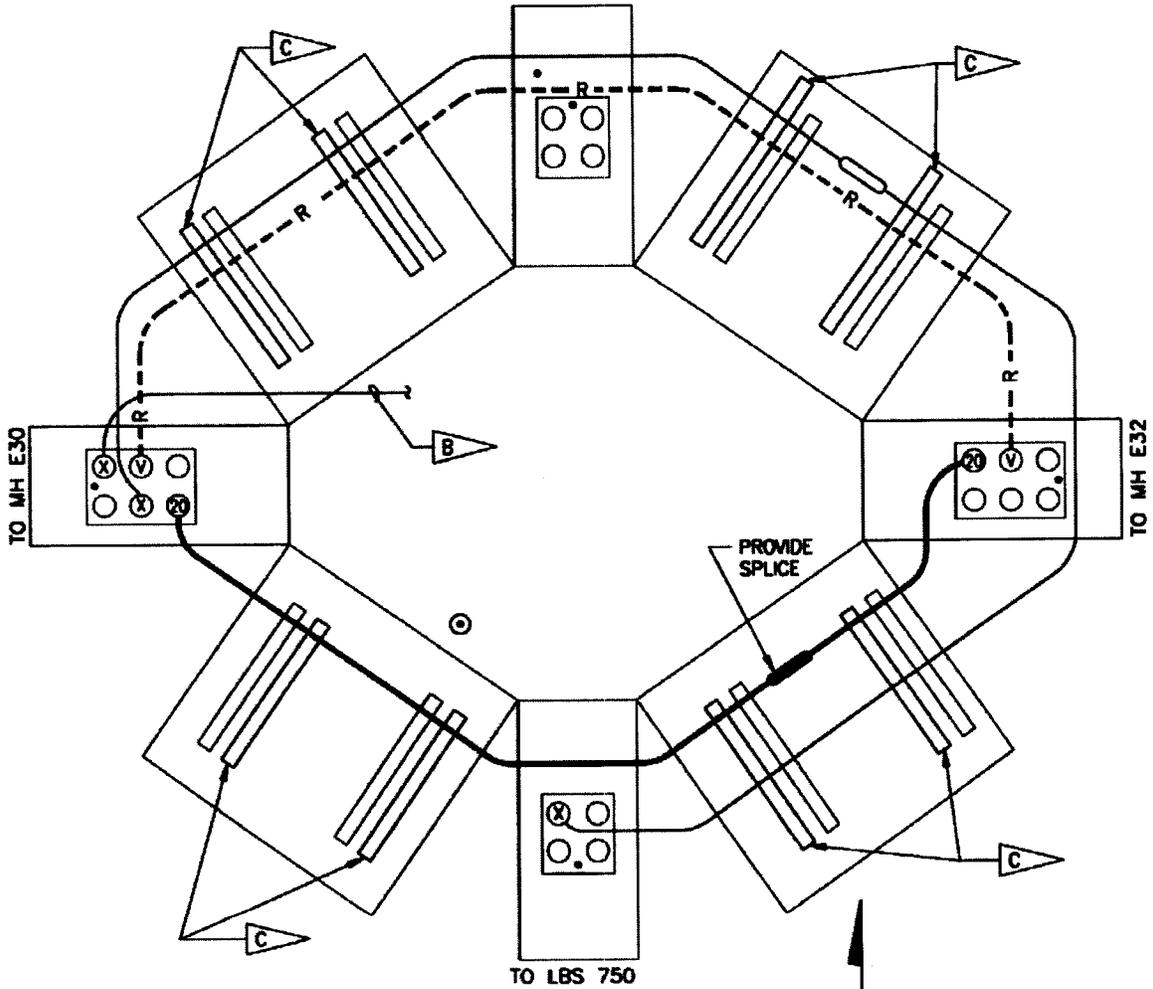
1. ENGINEERING ORDER NO.
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EO1-79K38608, Sheet 16

MANHOLE DETAIL - MH-E31

2. SHEET 21 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)

21-34a FORMS



DETAIL MH E31

NOT TO SCALE

AH
E8

D

WAS

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

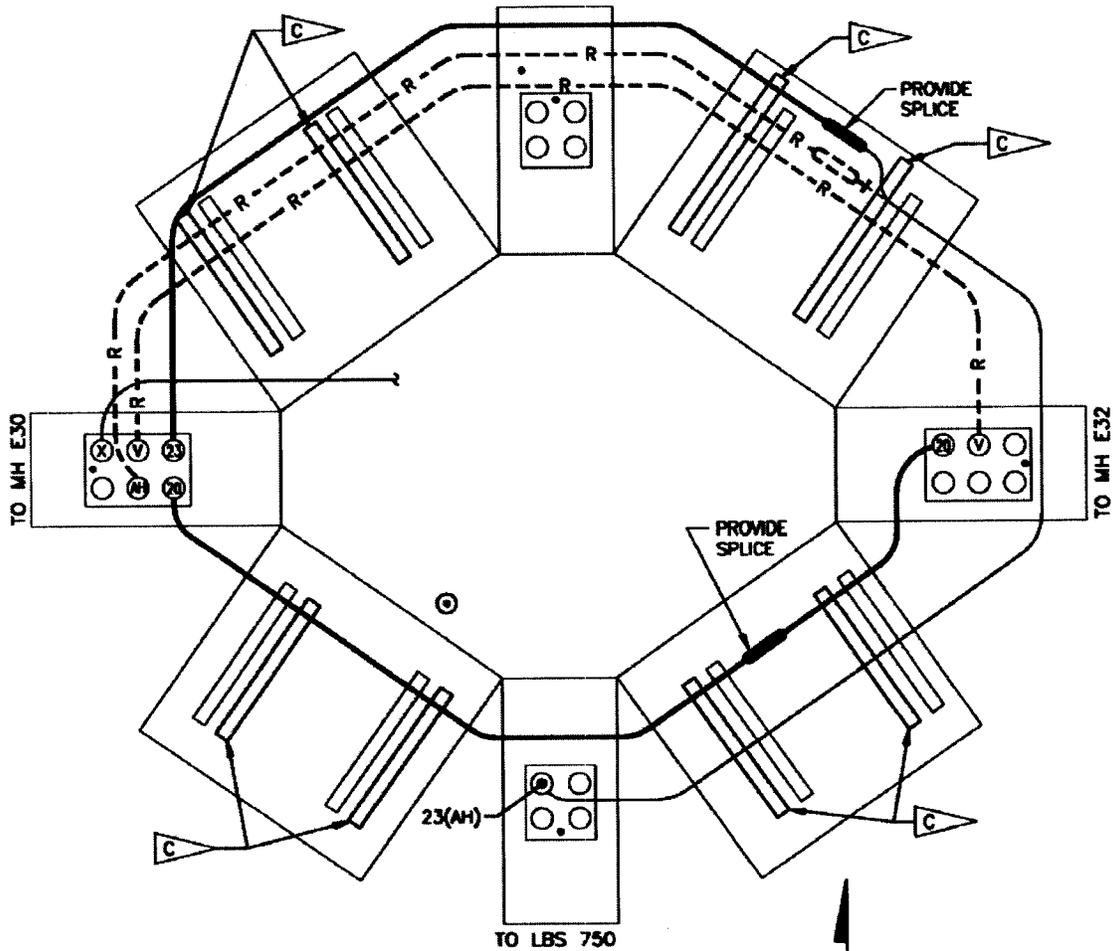
ENGINEERING ORDER

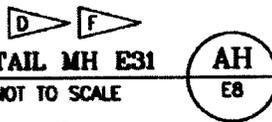
1. ENGINEERING ORDER NO.
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MANHOLE DETAIL - MH-E31

2.
SHEET 22 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS




DETAIL MH E31
 NOT TO SCALE
 IS

SPECIFIC NOTES:

 CONTRACTOR SHALL VERIFY CABLE ROUTING AND CIRCUIT NUMBERS PRIOR TO PERFORMING ANY WORK ON THAT CABLE.

ACTION	QTY	FIND NO.	MFR. CODE	PART NO.	DESCRIPTION	STOCK SIZE	MATERIAL SPEC

PARTS LIST

ENGINEERING ORDER

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EO1-79K38608, Sheet 4

EXISTING CABLE SCHEDULE

2. SHEET 23 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)

21-34a FORMS

IS

EXISTING CABLE SCHEDULE					
CABLE NO.	FDR	DESCRIPTION	FROM	TO	REMARKS
AH	604	3-1/C 4/0, EPR/XLP	LBS 766/SS	MH-E31	REMOVE
AJ	604	3-1/C 4/0	LBS 759/SS	LBS 763/SS	

SPECIFIC NOTE:



CABLE SIZE/TYPER VERIFIED BY EC&G HIGH VOLTAGE SHOP.
REMOVE CABLE FROM LBS-766 TO MH-E31.

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EO1-79K38608, Sheet 6

MODIFIED CABLE SCHEDULE

2. SHEET 24 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)
21-34a FORMS

WAS

SEE DETAIL 

NEW CABLE SCHEDULE

CABLE NO.	FDR	FROM	TO	REMARKS
16	604	3-1/C 350KCMIL EPR, 1/3 NEUTRAL LBS. 759/55	LBS. 766/55	PROVIDE CABLE
19	604	3-1/C 1470 EPR, FULL NEUTRAL LBS. 766/51	SS 85-8B	PROVIDE CABLE
20	604	3-1/C 350KCMIL EPR, 1/3 NEUTRAL LBS. 766/54	VFI 765/51	EXTEND DUCT TO VFI 765

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MODIFIED CABLE SCHEDULE

2. SHEET 25 OF 25 SHEETS

7. DESCRIPTION OF CHANGE (CONTINUATION)

21-34a FORMS

IS

NEW CABLE SCHEDULE						
CABLE NO.	FDR	DESCRIPTION	FROM	TO	REMARKS	
16	604	3-1/C 350KCMIL EPR, 1/3 NEUTRAL	LBS 759/S5	VF1 766/S1	PROVIDE CABLE	<div style="border: 1px solid black; border-radius: 50%; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> A V2 </div> <p>SEE DETAIL</p>
19	604	3-1/C #14/O EPR, FULL NEUTRAL	VF1 766/V1	SS 859B	PROVIDE CABLE	
20	604	3-1/C 350KCMIL EPR, 1/3 NEUTRAL	VF1 766/S2	VF1 765/S1	EXTEND DUCT TO VF1 765	
23	604	3-1/C #14/O EPR, FULL NEUTRAL	VF1 766/V2	MH-E31	SPLICE TO CABLE 'AH' IN MH-E31	
24	604	3-1/C 350KCMIL EPR, 1/3 NEUTRAL	LBS 759/S3	LBS 763/S5	PROVIDE CABLE	

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