



ALASKA RAILROAD PASSENGER CAR WIRELESS AND WIFI SERVICE

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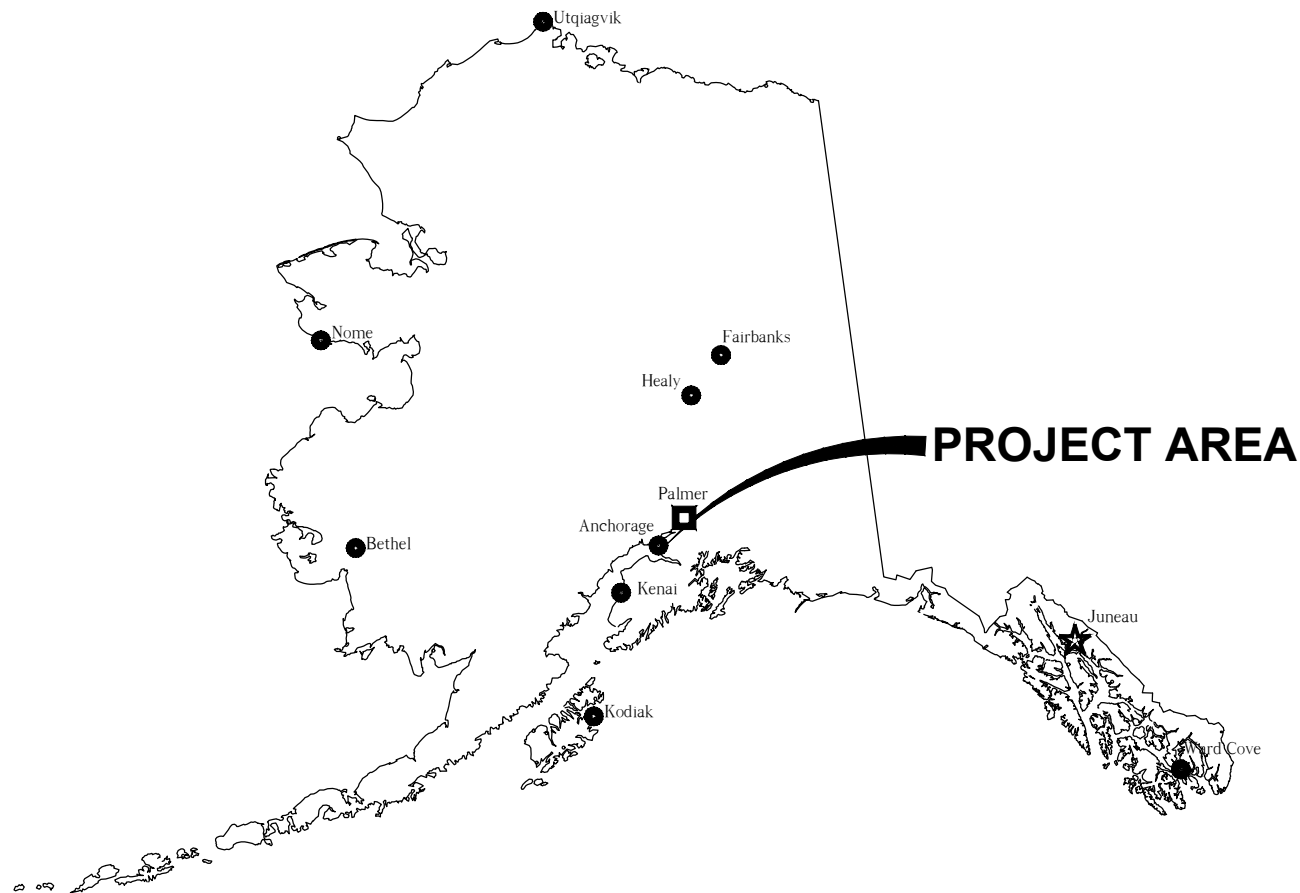
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PROJECT INFORMATION

PROJECT LOCATION: ANCHORAGE, AK
NHTI PROJECT NUMBER: 23-0117-20

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IFC

REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	240201

COVER
SHEET

T1.0

GENERAL NOTES:

1. THE INTENT OF THIS DESIGN IS NOT TO DICTATE EXACT LOCATIONS OF EQUIPMENT AND CABLE PATHWAYS. SOME DEVIATION MAY BE REQUIRED. ANY SIGNIFICANT RELOCATIONS MUST BE APPROVED BY THE "OWNER."
2. BIDDERS ARE RESPONSIBLE FOR VERIFYING LOCATIONS AND QUANTITIES.
3. FOLLOW EQUIPMENT MANUFACTURER'S INSTALLATION AND OPERATION INSTRUCTIONS.
4. CARRIAGES EXPAND AND CONTRACT APPROXIMATELY 3 INCHES BETWEEN SUMMER AND WINTER. INSTALLER SHOULD ADJUST QUANTITIES ACCORDINGLY AND USE EXPANSION JOINTS WHERE APPLICABLE.
5. A 72 VDC, 10 AMP, FUSED CIRCUIT TO SUPPLY POWER TO THE SWITCH SUPPLIED BY ALASKA RAILROAD.

SPECIFICATIONS:

1. EN 50155 RAILWAY APPLICATIONS
2. EN 45545-2 FIRE PROTECTION.
3. NFPA 130 FIRE PROTECTION.
4. MINIMUM IP66 INGRESS PROTECTION.
5. LAYER 3, MANAGED, 12 PORT PoE/PoE+ SWITCH TO OPERATE ON 72 VDC.
6. MINIMUM OF TWO, 1 GBPS PORTS FOR THE BACKBONE NETWORK. WIRELESS INTER-CONSIST LINK (ICL).
7. ALL CABLES PLENUM RATED.
8. ARRC TO PROVIDE PAINT COLOR CODES FOR ANY SURFACE THAT REQUIRES PAINTING.
9. ALL PAINT BRANDS AND TYPES SHALL BE APPROVED BY ARRC.

WIRELESS INTER-CONSIST LINK (ICL):

1. WIFI 6
2. PoE/PoE+
3. OPERATES IN BRIDGE MODE
4. AUTO CONFIGURABLE
5. MEETS PCI SECURITY STANDARDS FOR THE TRANSMISSION OF CREDIT CARD DATA.
6. ANTENNA OPTIMIZED FOR ICL AND MEETS IP67 AND IP69 FOR OUTSIDE MOUNTING.
7. EXTERIOR MOUNTING HARDWARE STAINLESS STEEL AND PAINTED TO MATCH SURROUNDING AREA.
8. EVERY ATTEMPT SHOULD BE MADE TO MOUNT THE RADIO AS CLOSE TO THE ANTENNA AS POSSIBLE. KEEP COAX CABLE LENGTH UNDER 30 FT.
9. ANY EXPOSED CABLING TO BE PLACED IN WIRE MOLDING THAT IS PAINTED TO MATCH THE SURROUNDING SURFACES.

INTERIOR WIFI:

1. WIFI 5 OR 6.
2. RADIO AND ANTENNA ALL IN ONE UNIT AND LOW PROFILE FOR MAXIMUM HEAD CLEARANCE.
3. PoE/PoE+
4. AUTO CONFIGURABLE.
5. MEETS PCI SECURITY STANDARDS FOR THE TRANSMISSION OF CREDIT CARD DATA.
6. CONFIGURE A SEPARATE VLANS FOR CREDIT CARD PROCESSING AND GUEST WIFI.

INSTALLATION NOTES:

- ① MOUNT INSIDE CABINET/CLOSET IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- ② MOUNT IN THE OVERHEAD IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- ③ MOUNT ON EXPOSED VERTICAL SURFACE.
- ④ ALL IN ONE ACCESS POINT/ANTENNA FLUSH MOUNTED ON OVERHEAD SURFACE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- ⑤ MOUNT ON THE CENTER LINE OF THE CARRIAGE ABOVE THE DOOR AND BETWEEN COLLISION BARS, WITH NO OBSTRUCTIONS WITHIN 4" OF THE RF PATH. SEE DETAIL, SHEET 4.0.
- ⑥ ROUTE CABLE IN OVERHEAD.
- ⑦ ROUTE CABLE INSIDE ALUMINUM WIRE MOLDING WITH 3" EXPANSION JOINTS.
- ⑧ COAX TO BE KEPT AS SHORT AS POSSIBLE (30 FEET MAXIMUM) AND ROUTED IN OVERHEAD.
- ⑨ ANY EXPOSED CABLING TO BE PLACED IN WIRE MOLDING THAT IS PAINTED TO MATCH THE SURROUNDING SURFACES.
- ⑩ IF SPACE PERMITS, INSTALL A 5 FOOT SERVICE LOOP AT EACH END OF THE COAX AND DATA CABLE.
- ⑪ ANY PENETRATIONS TO THE EXTERIOR SHALL BE MADE BY ARRC.

EQUIPMENT LEGEND:

- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
- ② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
- ③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
- ④ PATCH ANTENNA (ANT)
- ⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
- ⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
- ⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS

LEGEND:

- — CAT6A
- COAX

CABLE LABEL:

1. CAR#/TYPE-SEQ/NEAR END EQUIP/DISTANT END EQUIP
2. LABEL EXAMPLE: ARR1-P-001/PDP-1/SW
3. LABEL BOTH ENDS OF CABLE AT CABLE TERMINATION



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IFC

REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	240201

ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV
JOB #: 23-0117-20	DATE: 240201		0

ELECTRICAL
NOTES

E1.0

ATTENTION: ALL CABLE LENGTHS TO BE VERIFIED

NOTES:

1. CABLE LABEL FORMAT: CAR#/TYPE-SEQ/NEAR END EQUIP/DISTANT END EQUIP
2. CABLE LABEL EXAMPLE: ARR1/P-001/PDP-1/SW
3. LABEL BOTH ENDS OF CABLE AT CABLE TERMINATION
4. CABLE LENGTHS INCLUDE 5' SERVICE LOOP ON EACH END AND SHOULD BE VERIFIED

CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 1	P	001	30	ARR1	/	PS-1	/	SW
ARR 1	D	001	65	ARR1	/	SW	/	AP-A
ARR 1	D	002	N/A	ARR1	/	SW	/	AP-B
ARR 1	D	003	13	ARR1	/	SW	/	ICL-A
ARR 1	D	004	100	ARR1	/	SW	/	ICL-B
ARR 1	R	001	16	ARR1	/	ICL-A	/	ANT-A-1
ARR 1	R	002	16	ARR1	/	ICL-A	/	ANT-A-2
ARR 1	R	003	20	ARR1	/	ICL-B	/	ANT-B-1
ARR 1	R	004	20	ARR1	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
CABLE NUMBER				R - RF				
CABLE NUMBER <th colspan="5">LABEL (REVERSE LABEL OTHER END)</th>				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 100	P	001	30	ARR 100	/	PS-1	/	SW
ARR 100	D	001	31	ARR 100	/	SW	/	AP-A
ARR 100	D	002	N/A	ARR 100	/	SW	/	AP-B
ARR 100	D	003	36	ARR 100	/	SW	/	ICL-A
ARR 100	D	004	62	ARR 100	/	SW	/	ICL-B
ARR 100	R	001	16	ARR 100	/	ICL-A	/	ANT-A-1
ARR 100	R	002	16	ARR 100	/	ICL-A	/	ANT-A-2
ARR 100	R	003	16	ARR 100	/	ICL-B	/	ANT-B-1
ARR 100	R	004	16	ARR 100	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
CABLE NUMBER				R - RF				
CABLE NUMBER <th colspan="5">LABEL (REVERSE LABEL OTHER END)</th>				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 101	P	001	30	ARR 101	/	PS-1	/	SW
ARR 101	D	001	31	ARR 101	/	SW	/	AP-A
ARR 101	D	002	N/A	ARR 101	/	SW	/	AP-B
ARR 101	D	003	36	ARR 101	/	SW	/	ICL-A
ARR 101	D	004	62	ARR 101	/	SW	/	ICL-B
ARR 101	R	001	16	ARR 101	/	ICL-A	/	ANT-A-1
ARR 101	R	002	16	ARR 101	/	ICL-A	/	ANT-A-2
ARR 101	R	003	16	ARR 101	/	ICL-B	/	ANT-B-1
ARR 101	R	004	16	ARR 101	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
CABLE NUMBER				R - RF				
CABLE NUMBER <th colspan="5">LABEL (REVERSE LABEL OTHER END)</th>				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 102	P	001	30	ARR 102	/	PS-1	/	SW
ARR 102	D	001	31	ARR 102	/	SW	/	AP-A
ARR 102	D	002	N/A	ARR 102	/	SW	/	AP-B
ARR 102	D	003	36	ARR 102	/	SW	/	ICL-A
ARR 102	D	004	62	ARR 102	/	SW	/	ICL-B
ARR 102	R	001	16	ARR 102	/	ICL-A	/	ANT-A-1
ARR 102	R	002	16	ARR 102	/	ICL-A	/	ANT-A-2
ARR 102	R	003	16	ARR 102	/	ICL-B	/	ANT-B-1
ARR 102	R	004	16	ARR 102	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
CABLE NUMBER				R - RF				
CABLE NUMBER <th colspan="5">LABEL (REVERSE LABEL OTHER END)</th>				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 103	P	001	30	ARR 103	/	PS-1	/	SW
ARR 103	D	001	31	ARR 103	/	SW	/	AP-A
ARR 103	D	002	N/A	ARR 103	/	SW	/	AP-B
ARR 103	D	003	36	ARR 103	/	SW	/	ICL-A
ARR 103	D	004	62	ARR 103	/	SW	/	ICL-B
ARR 103	R	001	16	ARR 103	/	ICL-A	/	ANT-A-1
ARR 103	R	002	16	ARR 103	/	ICL-A	/	ANT-A-2
ARR 103	R	003	16	ARR 103	/	ICL-B	/	ANT-B-1
ARR 103	R	004	16	ARR 103	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
CABLE NUMBER				R - RF				

CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 110	P	001	30	ARR 110	/	PS-1	/	SW
ARR 110	D	001	24	ARR 110	/	SW	/	AP-A
ARR 110	D	002	N/A	ARR 110	/	SW	/	AP-B
ARR 110	D	003	33	ARR 110	/	SW	/	ICL-A
ARR 110	D	004	55	ARR 110	/	SW	/	ICL-B
ARR 110	R	001	16	ARR 110	/	ICL-A	/	ANT-A-1
ARR 110	R	002	16	ARR 110	/	ICL-A	/	ANT-A-2
ARR 110	R	003	16	ARR 110	/	ICL-B	/	ANT-B-1
ARR 110	R	004	16	ARR 110	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
R - RF								
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 111	P	001	30	ARR 111	/	PS-1	/	SW
ARR 111	D	001	24	ARR 111	/	SW	/	AP-A
ARR 111	D	002	N/A	ARR 111	/	SW	/	AP-B
ARR 111	D	003	33	ARR 111	/	SW	/	ICL-A
ARR 111	D	004	55	ARR 111	/	SW	/	ICL-B
ARR 111	R	001	16	ARR 111	/	ICL-A	/	ANT-A-1
ARR 111	R	002	16	ARR 111	/	ICL-A	/	ANT-A-2
ARR 111	R	003	16	ARR 111	/	ICL-B	/	ANT-B-1
ARR 111	R	004	16	ARR 111	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
R - RF								
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 200	P	001	30	ARR 200	/	PS-1	/	SW
ARR 200	D	001	55	ARR 200	/	SW	/	AP-A
ARR 200	D	002	N/A	ARR 200	/	SW	/	AP-B
ARR 200	D	003	13	ARR 200	/	SW	/	ICL-A
ARR 200	D	004	84	ARR 200	/	SW	/	ICL-B
ARR 200	R	001	19	ARR 200	/	ICL-A	/	ANT-A-1
ARR 200	R	002	19	ARR 200	/	ICL-A	/	ANT-A-2
ARR 200	R	003	21	ARR 200	/	ICL-B	/	ANT-B-1
ARR 200	R	004	21	ARR 200	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
R - RF								
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 201	P	001	30	ARR 201	/	PS-1	/	SW
ARR 201	D	001	55	ARR 201	/	SW	/	AP-A
ARR 201	D	002	N/A	ARR 201	/	SW	/	AP-B
ARR 201	D	003	13	ARR 201	/	SW	/	ICL-A
ARR 201	D	004	84	ARR 201	/	SW	/	ICL-B
ARR 201	R	001	19	ARR 201	/	ICL-A	/	ANT-A-1
ARR 201	R	002	19	ARR 201	/	ICL-A	/	ANT-A-2
ARR 201	R	003	21	ARR 201	/	ICL-B	/	ANT-B-1
ARR 201	R	004	21	ARR 201	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
R - RF								
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 202	P	001	30	ARR 202	/	PS-1	/	SW
ARR 202	D	001	55	ARR 202	/	SW	/	AP-A
ARR 202	D	002	N/A	ARR 202	/	SW	/	AP-B
ARR 202	D	003	13	ARR 202	/	SW	/	ICL-A
ARR 202	D	004	84	ARR 202	/	SW	/	ICL-B
ARR 202	R	001	19	ARR 202	/	ICL-A	/	ANT-A-1
ARR 202	R	002	19	ARR 202	/	ICL-A	/	ANT-A-2
ARR 202	R	003	21	ARR 202	/	ICL-B	/	ANT-B-1
ARR 202	R	004	21	ARR 202	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
R - RF								

CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 203	P	001	30	ARR 203	/	PS-1	/	SW
ARR 203	D	001	55	ARR 203	/	SW	/	AP-A
ARR 203	D	002	N/A	ARR 203	/	SW	/	AP-B
ARR 203	D	003	13	ARR 203	/	SW	/	ICL-A
ARR 203	D	004	84	ARR 203	/	SW	/	ICL-B
ARR 203	R	001	19	ARR 203	/	ICL-A	/	ANT-A-1
ARR 203	R	002	19	ARR 203	/	ICL-A	/	ANT-A-2
ARR 203	R	003	21	ARR 203	/	ICL-B	/	ANT-B-1
ARR 203	R	004	21	ARR 203	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 204	P	001	30	ARR 204	/	PS-1	/	SW
ARR 204	D	001	55	ARR 204	/	SW	/	AP-A
ARR 204	D	002	N/A	ARR 204	/	SW	/	AP-B
ARR 204	D	003	13	ARR 204	/	SW	/	ICL-A
ARR 204	D	004	84	ARR 204	/	SW	/	ICL-B
ARR 204	R	001	19	ARR 204	/	ICL-A	/	ANT-A-1
ARR 204	R	002	19	ARR 204	/	ICL-A	/	ANT-A-2
ARR 204	R	003	21	ARR 204	/	ICL-B	/	ANT-B-1
ARR 204	R	004	21	ARR 204	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 205	P	001	30	ARR 205	/	PS-1	/	SW
ARR 205	D	001	55	ARR 205	/	SW	/	AP-A
ARR 205	D	002	N/A	ARR 205	/	SW	/	AP-B
ARR 205	D	003	13	ARR 205	/	SW	/	ICL-A
ARR 205	D	004	101	ARR 205	/	SW	/	ICL-B
ARR 205	R	001	16	ARR 205	/	ICL-A	/	ANT-A-1
ARR 205	R	002	16	ARR 205	/	ICL-A	/	ANT-A-2
ARR 205	R	003	13	ARR 205	/	ICL-B	/	ANT-B-1
ARR 205	R	004	13	ARR 205	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 206	P	001	30	ARR 206	/	PS-1	/	SW
ARR 206	D	001	55	ARR 206	/	SW	/	AP-A
ARR 206	D	002	N/A	ARR 206	/	SW	/	AP-B
ARR 206	D	003	13	ARR 206	/	SW	/	ICL-A
ARR 206	D	004	101	ARR 206	/	SW	/	ICL-B
ARR 206	R	001	16	ARR 206	/	ICL-A	/	ANT-A-1
ARR 206	R	002	16	ARR 206	/	ICL-A	/	ANT-A-2
ARR 206	R	003	13	ARR 206	/	ICL-B	/	ANT-B-1
ARR 206	R	004	13	ARR 206	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 207	P	001	30	ARR 207	/	PS-1	/	SW
ARR 207	D	001	55	ARR 207	/	SW	/	AP-A
ARR 207	D	002	N/A	ARR 207	/	SW	/	AP-B
ARR 207	D	003	13	ARR 207	/	SW	/	ICL-A
ARR 207	D	004	101	ARR 207	/	SW	/	ICL-B
ARR 207	R	001	16	ARR 207	/	ICL-A	/	ANT-A-1
ARR 207	R	002	16	ARR 207	/	ICL-A	/	ANT-A-2
ARR 207	R	003	13	ARR 207	/	ICL-B	/	ANT-B-1
ARR 207	R	004	13	ARR 207	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				

ATTENTION: ALL CABLE LENGTHS TO BE VERIFIED

NOTES:

1. CABLE LABEL FORMAT: CAR#/TYPE-SEQ/NEAR END EQUIP/DISTANT END EQUIP
2. CABLE LABEL EXAMPLE: ARR1/P-001/PDP-1/SW
3. LABEL BOTH ENDS OF CABLE AT CABLE TERMINATION
4. CABLE LENGTHS INCLUDE 5' SERVICE LOOP ON EACH END AND SHOULD BE VERIFIED

CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 208	P	001	30	ARR 208	/	PS-1	/	SW
ARR 208	D	001	55	ARR 208	/	SW	/	AP-A
ARR 208	D	002	N/A	ARR 208	/	SW	/	AP-B
ARR 208	D	003	13	ARR 208	/	SW	/	ICL-A
ARR 208	D	004	101	ARR 208	/	SW	/	ICL-B
ARR 208	R	001	16	ARR 208	/	ICL-A	/	ANT-A-1
ARR 208	R	002	16	ARR 208	/	ICL-A	/	ANT-A-2
ARR 208	R	003	13	ARR 208	/	ICL-B	/	ANT-B-1
ARR 208	R	004	13	ARR 208	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 209	P	001	30	ARR 209	/	PS-1	/	SW
ARR 209	D	001	55	ARR 209	/	SW	/	AP-A
ARR 209	D	002	N/A	ARR 209	/	SW	/	AP-B
ARR 209	D	003	13	ARR 209	/	SW	/	ICL-A
ARR 209	D	004	101	ARR 209	/	SW	/	ICL-B
ARR 209	R	001	16	ARR 209	/	ICL-A	/	ANT-A-1
ARR 209	R	002	16	ARR 209	/	ICL-A	/	ANT-A-2
ARR 209	R	003	13	ARR 209	/	ICL-B	/	ANT-B-1
ARR 209	R	004	13	ARR 209	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 210	P	001	30	ARR 210	/	PS-1	/	SW
ARR 210	D	001	55	ARR 210	/	SW	/	AP-A
ARR 210	D	002	N/A	ARR 210	/	SW	/	AP-B
ARR 210	D	003	13	ARR 210	/	SW	/	ICL-A
ARR 210	D	004	101	ARR 210	/	SW	/	ICL-B
ARR 210	R	001	16	ARR 210	/	ICL-A	/	ANT-A-1
ARR 210	R	002	16	ARR 210	/	ICL-A	/	ANT-A-2
ARR 210	R	003	13	ARR 210	/	ICL-B	/	ANT-B-1
ARR 210	R	004	13	ARR 210	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 301	P	001	30	ARR 301	/	PS-1	/	SW
ARR 301	D	001	48	ARR 301	/	SW	/	AP-A
ARR 301	D	002	N/A	ARR 301	/	SW	/	AP-B
ARR 301	D	003	13	ARR 301	/	SW	/	ICL-A
ARR 301	D	004	93	ARR 301	/	SW	/	ICL-B
ARR 301	R	001	16	ARR 301	/	ICL-A	/	ANT-A-1
ARR 301	R	002	16	ARR 301	/	ICL-A	/	ANT-A-2
ARR 301	R	003	16	ARR 301	/	ICL-B	/	ANT-B-1
ARR 301	R	004	16	ARR 301	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 351	P	001	30	ARR 351	/	PS-1	/	SW
ARR 351	D	001	52	ARR 351	/	SW	/	AP-A
ARR 351	D	002	66	ARR 351	/	SW	/	AP-B
ARR 351	D	003	90	ARR 351	/	SW	/	ICL-A
ARR 351	D	004	13	ARR 351	/	SW	/	ICL-B
ARR 351	R	001	19	ARR 351	/	ICL-A	/	ANT-A-1
ARR 351	R	002	19	ARR 351	/	ICL-A	/	ANT-A-2
ARR 351	R	003	19	ARR 351	/	ICL-B	/	ANT-B-1
ARR 351	R	004	19	ARR 351	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				

CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 352	P	001	30	ARR 352	/	PS-1	/	SW
ARR 352	D	001	63	ARR 352	/	SW	/	AP-A
ARR 352	D	002	N/A	ARR 352	/	SW	/	AP-B
ARR 352	D	003	95	ARR 352	/	SW	/	ICL-A
ARR 352	D	004	13	ARR 352	/	SW	/	ICL-B
ARR 352	R	001	17	ARR 352	/	ICL-A	/	ANT-A-1
ARR 352	R	002	17	ARR 352	/	ICL-A	/	ANT-A-2
ARR 352	R	003	17	ARR 352	/	ICL-B	/	ANT-B-1
ARR 352	R	004	17	ARR 352	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 401	P	001	30	ARR 401	/	PS-1	/	SW
ARR 401	D	001	48	ARR 401	/	SW	/	AP-A
ARR 401	D	002	N/A	ARR 401	/	SW	/	AP-B
ARR 401	D	003	13	ARR 401	/	SW	/	ICL-A
ARR 401	D	004	93	ARR 401	/	SW	/	ICL-B
ARR 401	R	001	16	ARR 401	/	ICL-A	/	ANT-A-1
ARR 401	R	002	16	ARR 401	/	ICL-A	/	ANT-A-2
ARR 401	R	003	13	ARR 401	/	ICL-B	/	ANT-B-1
ARR 401	R	004	13	ARR 401	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 451	P	001	30	ARR 451	/	PS-1	/	SW
ARR 451	D	001	45	ARR 451	/	SW	/	AP-A
ARR 451	D	002	65	ARR 451	/	SW	/	AP-B
ARR 451	D	003	97	ARR 451	/	SW	/	ICL-A
ARR 451	D	004	13	ARR 451	/	SW	/	ICL-B
ARR 451	R	001	17	ARR 451	/	ICL-A	/	ANT-A-1
ARR 451	R	002	17	ARR 451	/	ICL-A	/	ANT-A-2
ARR 451	R	003	16	ARR 451	/	ICL-B	/	ANT-B-1
ARR 451	R	004	16	ARR 451	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 452	P	001	30	ARR 452	/	PS-1	/	SW
ARR 452	D	001	45	ARR 452	/	SW	/	AP-A
ARR 452	D	002	65	ARR 452	/	SW	/	AP-B
ARR 452	D	003	97	ARR 452	/	SW	/	ICL-A
ARR 452	D	004	13	ARR 452	/	SW	/	ICL-B
ARR 452	R	001	17	ARR 452	/	ICL-A	/	ANT-A-1
ARR 452	R	002	17	ARR 452	/	ICL-A	/	ANT-A-2
ARR 452	R	003	16	ARR 452	/	ICL-B	/	ANT-B-1
ARR 452	R	004	16	ARR 452	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 500	P	001	30	ARR 500	/	PS-1	/	SW
ARR 500	D	001	52	ARR 500	/	SW	/	AP-A
ARR 500	D	002	55	ARR 500	/	SW	/	AP-B
ARR 500	D	003	51	ARR 500	/	SW	/	ICL-A
ARR 500	D	004	54	ARR 500	/	SW	/	ICL-B
ARR 500	R	001	53	ARR 500	/	ICL-A	/	ANT-A-1
ARR 500	R	002	13	ARR 500	/	ICL-A	/	ANT-A-2
ARR 500	R	003	23	ARR 500	/	ICL-B	/	ANT-B-1
ARR 500	R	004	23	ARR 500	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				

CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 501	P	001	30	ARR 501	/	PS-1	/	SW
ARR 501	D	001	52	ARR 501	/	SW	/	AP-A
ARR 501	D	002	55	ARR 501	/	SW	/	AP-B
ARR 501	D	003	51	ARR 501	/	SW	/	ICL-A
ARR 501	D	004	54	ARR 501	/	SW	/	ICL-B
ARR 501	R	001	53	ARR 501	/	ICL-A	/	ANT-A-1
ARR 501	R	002	13	ARR 501	/	ICL-A	/	ANT-A-2
ARR 501	R	003	23	ARR 501	/	ICL-B	/	ANT-B-1
ARR 501	R	004	23	ARR 501	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
CABLE NUMBER				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 502	P	001	30	ARR 502	/	PS-1	/	SW
ARR 502	D	001	52	ARR 502	/	SW	/	AP-A
ARR 502	D	002	55	ARR 502	/	SW	/	AP-B
ARR 502	D	003	51	ARR 502	/	SW	/	ICL-A
ARR 502	D	004	54	ARR 502	/	SW	/	ICL-B
ARR 502	R	001	53	ARR 502	/	ICL-A	/	ANT-A-1
ARR 502	R	002	13	ARR 502	/	ICL-A	/	ANT-A-2
ARR 502	R	003	23	ARR 502	/	ICL-B	/	ANT-B-1
ARR 502	R	004	23	ARR 502	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
CABLE NUMBER				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 521	P	001	30	ARR 521	/	PS-1	/	SW
ARR 521	D	001	35	ARR 521	/	SW	/	AP-A
ARR 521	D	002	80	ARR 521	/	SW	/	AP-B
ARR 521	D	003	84	ARR 521	/	SW	/	ICL-A
ARR 521	D	004	16	ARR 521	/	SW	/	ICL-B
ARR 521	R	001	16	ARR 521	/	ICL-A	/	ANT-A-1
ARR 521	R	002	16	ARR 521	/	ICL-A	/	ANT-A-2
ARR 521	R	003	26	ARR 521	/	ICL-B	/	ANT-B-1
ARR 521	R	004	26	ARR 521	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
CABLE NUMBER				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 522	P	001	30	ARR 522	/	PS-1	/	SW
ARR 522	D	001	35	ARR 522	/	SW	/	AP-A
ARR 522	D	002	80	ARR 522	/	SW	/	AP-B
ARR 522	D	003	84	ARR 522	/	SW	/	ICL-A
ARR 522	D	004	16	ARR 522	/	SW	/	ICL-B
ARR 522	R	001	16	ARR 522	/	ICL-A	/	ANT-A-1
ARR 522	R	002	16	ARR 522	/	ICL-A	/	ANT-A-2
ARR 522	R	003	26	ARR 522	/	ICL-B	/	ANT-B-1
ARR 522	R	004	26	ARR 522	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
CABLE NUMBER				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 523	P	001	30	ARR 523	/	PS-1	/	SW
ARR 523	D	001	35	ARR 523	/	SW	/	AP-A
ARR 523	D	002	80	ARR 523	/	SW	/	AP-B
ARR 523	D	003	84	ARR 523	/	SW	/	ICL-A
ARR 523	D	004	16	ARR 523	/	SW	/	ICL-B
ARR 523	R	001	16	ARR 523	/	ICL-A	/	ANT-A-1
ARR 523	R	002	16	ARR 523	/	ICL-A	/	ANT-A-2
ARR 523	R	003	26	ARR 523	/	ICL-B	/	ANT-B-1
ARR 523	R	004	26	ARR 523	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
CABLE NUMBER				R - RF				

ATTENTION: ALL CABLE LENGTHS TO BE VERIFIED

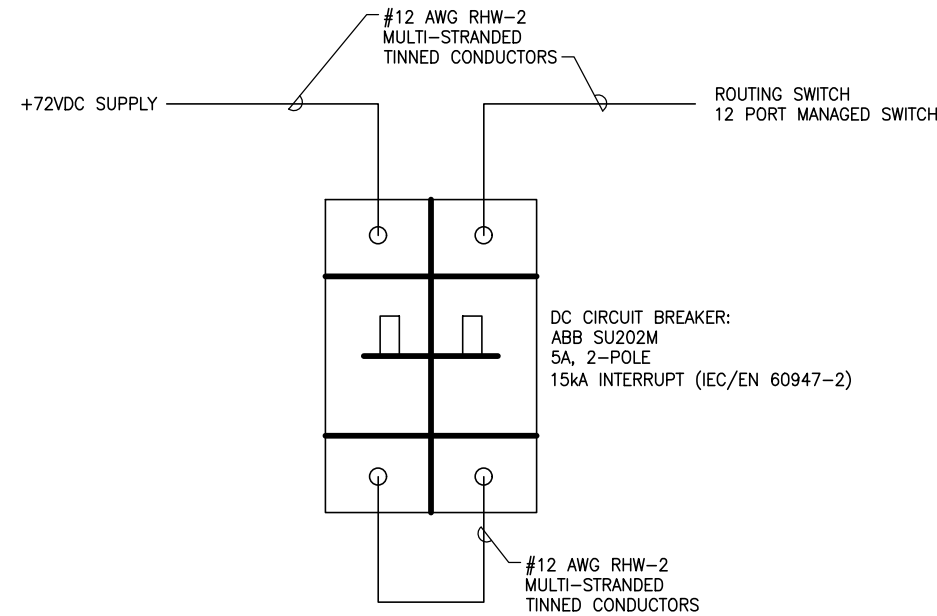
NOTES:

1. CABLE LABEL FORMAT: CAR#/TYPE-SEQ/NEAR END EQUIP/DISTANT END EQUIP
2. CABLE LABEL EXAMPLE: ARR1/P-001/PDP-1/SW
3. LABEL BOTH ENDS OF CABLE AT CABLE TERMINATION
4. CABLE LENGTHS INCLUDE 5' SERVICE LOOP ON EACH END AND SHOULD BE VERIFIED

CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 551	P	001		ARR 551	/	PS-1	/	SW
ARR 551	D	001	34	ARR 551	/	SW	/	AP-A
ARR 551	D	002	N/A	ARR 551	/	SW	/	AP-B
ARR 551	D	003	3	ARR 551	/	SW	/	ICL-A
ARR 551	D	004	69	ARR 551	/	SW	/	ICL-B
ARR 551	R	001	16	ARR 551	/	ICL-A	/	ANT-A-1
ARR 551	R	002	16	ARR 551	/	ICL-A	/	ANT-A-2
ARR 551	R	003	6	ARR 551	/	ICL-B	/	ANT-B-1
ARR 551	R	004	6	ARR 551	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 552	P	001		ARR 552	/	PS-1	/	SW
ARR 552	D	001	34	ARR 552	/	SW	/	AP-A
ARR 552	D	002	N/A	ARR 552	/	SW	/	AP-B
ARR 552	D	003	3	ARR 552	/	SW	/	ICL-A
ARR 552	D	004	69	ARR 552	/	SW	/	ICL-B
ARR 552	R	001	16	ARR 552	/	ICL-A	/	ANT-A-1
ARR 552	R	002	16	ARR 552	/	ICL-A	/	ANT-A-2
ARR 552	R	003	6	ARR 552	/	ICL-B	/	ANT-B-1
ARR 552	R	004	6	ARR 552	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 553	P	001		ARR 553	/	PS-1	/	SW
ARR 553	D	001	34	ARR 553	/	SW	/	AP-A
ARR 553	D	002	N/A	ARR 553	/	SW	/	AP-B
ARR 553	D	003	3	ARR 553	/	SW	/	ICL-A
ARR 553	D	004	69	ARR 553	/	SW	/	ICL-B
ARR 553	R	001	16	ARR 553	/	ICL-A	/	ANT-A-1
ARR 553	R	002	16	ARR 553	/	ICL-A	/	ANT-A-2
ARR 553	R	003	6	ARR 553	/	ICL-B	/	ANT-B-1
ARR 553	R	004	6	ARR 553	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 554	P	001		ARR 554	/	PS-1	/	SW
ARR 554	D	001	34	ARR 554	/	SW	/	AP-A
ARR 554	D	002	N/A	ARR 554	/	SW	/	AP-B
ARR 554	D	003	3	ARR 554	/	SW	/	ICL-A
ARR 554	D	004	69	ARR 554	/	SW	/	ICL-B
ARR 554	R	001	16	ARR 554	/	ICL-A	/	ANT-A-1
ARR 554	R	002	16	ARR 554	/	ICL-A	/	ANT-A-2
ARR 554	R	003	6	ARR 554	/	ICL-B	/	ANT-B-1
ARR 554	R	004	6	ARR 554	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 555	P	001		ARR 555	/	PS-1	/	SW
ARR 555	D	001	40	ARR 555	/	SW	/	AP-A
ARR 555	D	002	N/A	ARR 555	/	SW	/	AP-B
ARR 555	D	003	3	ARR 555	/	SW	/	ICL-A
ARR 555	D	004	79	ARR 555	/	SW	/	ICL-B
ARR 555	R	001	4	ARR 555	/	ICL-A	/	ANT-A-1
ARR 555	R	002	4	ARR 555	/	ICL-A	/	ANT-A-2
ARR 555	R	003	9	ARR 555	/	ICL-B	/	ANT-B-1
ARR 555	R	004	9	ARR 555	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				

CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 556	P	001	30	ARR 556	/	PS-1	/	SW
ARR 556	D	001	55	ARR 556	/	SW	/	AP-A
ARR 556	D	002	N/A	ARR 556	/	SW	/	AP-B
ARR 556	D	003	13	ARR 556	/	SW	/	ICL-A
ARR 556	D	004	89	ARR 556	/	SW	/	ICL-B
ARR 556	R	001	14	ARR 556	/	ICL-A	/	ANT-A-1
ARR 556	R	002	14	ARR 556	/	ICL-A	/	ANT-A-2
ARR 556	R	003	19	ARR 556	/	ICL-B	/	ANT-B-1
ARR 556	R	004	19	ARR 556	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
R - RF								
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 557	P	001	30	ARR 557	/	PS-1	/	SW
ARR 557	D	001	55	ARR 557	/	SW	/	AP-A
ARR 557	D	002	N/A	ARR 557	/	SW	/	AP-B
ARR 557	D	003	13	ARR 557	/	SW	/	ICL-A
ARR 557	D	004	89	ARR 557	/	SW	/	ICL-B
ARR 557	R	001	14	ARR 557	/	ICL-A	/	ANT-A-1
ARR 557	R	002	14	ARR 557	/	ICL-A	/	ANT-A-2
ARR 557	R	003	19	ARR 557	/	ICL-B	/	ANT-B-1
ARR 557	R	004	19	ARR 557	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
R - RF								
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 651	P	001	30	ARR 651	/	PS-1	/	SW
ARR 651	D	001	67	ARR 651	/	SW	/	AP-A
ARR 651	D	002	123	ARR 651	/	SW	/	AP-B
ARR 651	D	003	90	ARR 651	/	SW	/	ICL-A
ARR 651	D	004	13	ARR 651	/	SW	/	ICL-B
ARR 651	R	001	20	ARR 651	/	ICL-A	/	ANT-A-1
ARR 651	R	002	20	ARR 651	/	ICL-A	/	ANT-A-2
ARR 651	R	003	20	ARR 651	/	ICL-B	/	ANT-B-1
ARR 651	R	004	20	ARR 651	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
R - RF								
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 652	P	001	30	ARR 652	/	PS-1	/	SW
ARR 652	D	001	67	ARR 652	/	SW	/	AP-A
ARR 652	D	002	123	ARR 652	/	SW	/	AP-B
ARR 652	D	003	90	ARR 652	/	SW	/	ICL-A
ARR 652	D	004	13	ARR 652	/	SW	/	ICL-B
ARR 652	R	001	20	ARR 652	/	ICL-A	/	ANT-A-1
ARR 652	R	002	20	ARR 652	/	ICL-A	/	ANT-A-2
ARR 652	R	003	20	ARR 652	/	ICL-B	/	ANT-B-1
ARR 652	R	004	20	ARR 652	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
R - RF								
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 653	P	001	30	ARR 653	/	PS-1	/	SW
ARR 653	D	001	67	ARR 653	/	SW	/	AP-A
ARR 653	D	002	123	ARR 653	/	SW	/	AP-B
ARR 653	D	003	90	ARR 653	/	SW	/	ICL-A
ARR 653	D	004	13	ARR 653	/	SW	/	ICL-B
ARR 653	R	001	20	ARR 653	/	ICL-A	/	ANT-A-1
ARR 653	R	002	20	ARR 653	/	ICL-A	/	ANT-A-2
ARR 653	R	003	20	ARR 653	/	ICL-B	/	ANT-B-1
ARR 653	R	004	20	ARR 653	/	ICL-B	/	ANT-B-2
P - POWER				D - DATA				
R - RF								

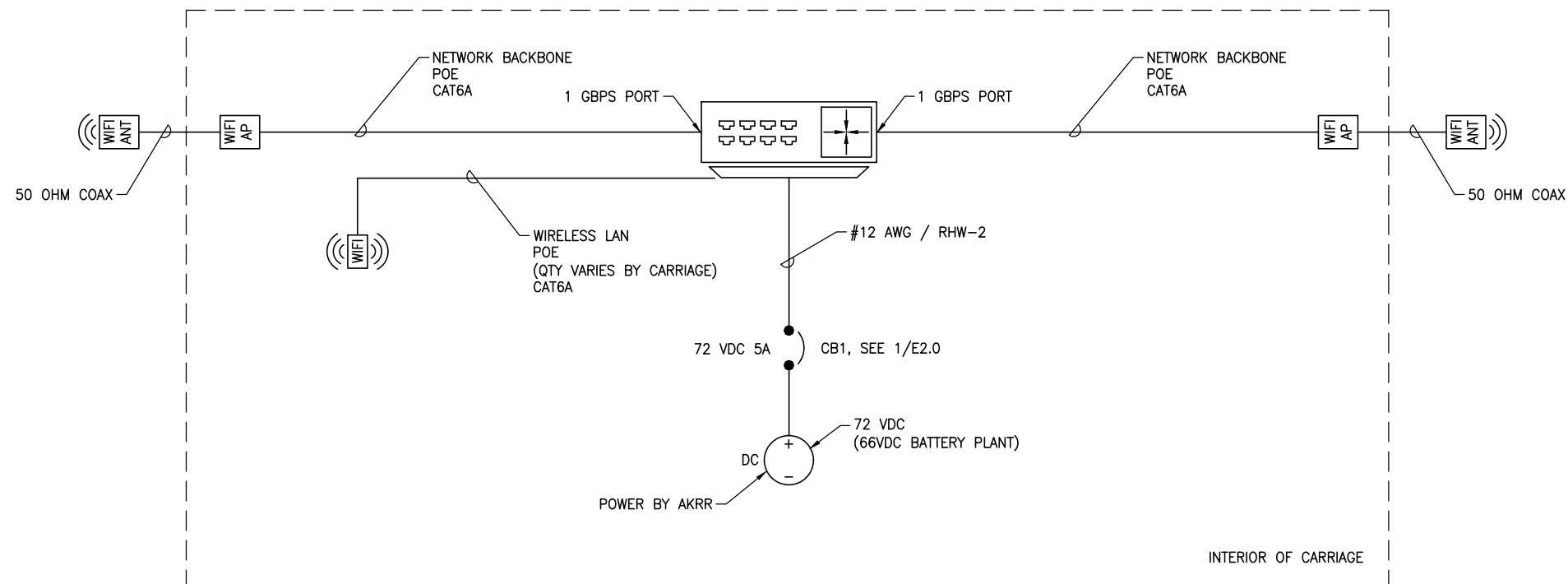
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 654	P	001	30	ARR 654	/	PS-1	/	SW
ARR 654	D	001	67	ARR 654	/	SW	/	AP-A
ARR 654	D	002	123	ARR 654	/	SW	/	AP-B
ARR 654	D	003	90	ARR 654	/	SW	/	ICL-A
ARR 654	D	004	13	ARR 654	/	SW	/	ICL-B
ARR 654	R	001	20	ARR 654	/	ICL-A	/	ANT-A-1
ARR 654	R	002	20	ARR 654	/	ICL-A	/	ANT-A-2
ARR 654	R	003	20	ARR 654	/	ICL-B	/	ANT-B-1
ARR 654	R	004	20	ARR 654	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 655	P	001	30	ARR 655	/	PS-1	/	SW
ARR 655	D	001	67	ARR 655	/	SW	/	AP-A
ARR 655	D	002	123	ARR 655	/	SW	/	AP-B
ARR 655	D	003	90	ARR 655	/	SW	/	ICL-A
ARR 655	D	004	13	ARR 655	/	SW	/	ICL-B
ARR 655	R	001	20	ARR 655	/	ICL-A	/	ANT-A-1
ARR 655	R	002	20	ARR 655	/	ICL-A	/	ANT-A-2
ARR 655	R	003	20	ARR 655	/	ICL-B	/	ANT-B-1
ARR 655	R	004	20	ARR 655	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 656	P	001	30	ARR 656	/	PS-1	/	SW
ARR 656	D	001	67	ARR 656	/	SW	/	AP-A
ARR 656	D	002	123	ARR 656	/	SW	/	AP-B
ARR 656	D	003	90	ARR 656	/	SW	/	ICL-A
ARR 656	D	004	13	ARR 656	/	SW	/	ICL-B
ARR 656	R	001	20	ARR 656	/	ICL-A	/	ANT-A-1
ARR 656	R	002	20	ARR 656	/	ICL-A	/	ANT-A-2
ARR 656	R	003	20	ARR 656	/	ICL-B	/	ANT-B-1
ARR 656	R	004	20	ARR 656	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 751	P	001	30	ARR 751	/	PS-1	/	SW
ARR 751	D	001	56	ARR 751	/	SW	/	AP-A
ARR 751	D	002	84	ARR 751	/	SW	/	AP-B
ARR 751	D	003	13	ARR 751	/	SW	/	ICL-A
ARR 751	D	004	93	ARR 751	/	SW	/	ICL-B
ARR 751	R	001	20	ARR 751	/	ICL-A	/	ANT-A-1
ARR 751	R	002	20	ARR 751	/	ICL-A	/	ANT-A-2
ARR 751	R	003	16	ARR 751	/	ICL-B	/	ANT-B-1
ARR 751	R	004	16	ARR 751	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				
CABLE NUMBER				LABEL (REVERSE LABEL OTHER END)				
CAR #	TYPE	SEQ	LENGTH FT	CAR #	SEPERATOR	EQUIP FROM	SEPERATOR	EQUIP TO
ARR 2000	P	001	30	ARR 2000	/	PS-1	/	SW
ARR 2000	D	001	46	ARR 2000	/	SW	/	AP-A
ARR 2000	D	002	N/A	ARR 2000	/	SW	/	AP-B
ARR 2000	D	003	28	ARR 2000	/	SW	/	ICL-A
ARR 2000	D	004	67	ARR 2000	/	SW	/	ICL-B
ARR 2000	R	001	13	ARR 2000	/	ICL-A	/	ANT-A-1
ARR 2000	R	002	13	ARR 2000	/	ICL-A	/	ANT-A-2
ARR 2000	R	003	25	ARR 2000	/	ICL-B	/	ANT-B-1
ARR 2000	R	004	25	ARR 2000	/	ICL-B	/	ANT-B-2
P - POWER D - DATA				R - RF				



TO GET THE REQUIRED VOLTAGE RATING (72VDC) A
2-POLE CIRCUIT BREAKER CONNECTED IN SERIES IS
REQUIRED.

1
E2.0

BREAKER CONFIGURATION DETAIL
SCALE: NTS



2
E2.0

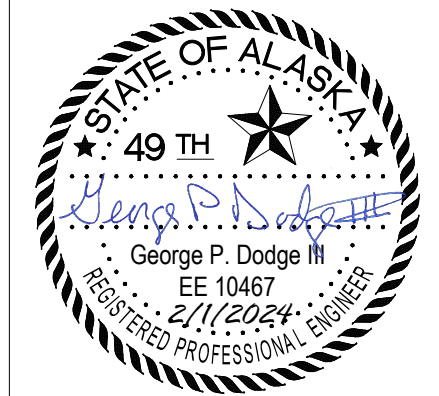
ELECTRICAL ONE-LINE DIAGRAM
SCALE: NTS

NOTES:

1. THIS ONE-LINE DIAGRAM TYPICAL OF ALL RAILROAD CARS IN THIS DRAWING PACKAGE.
2. ALL CONDUCTORS TO BE COPPER.
3. CONDUCTORS TO BE ROUTED AND INSTALLED PER ARRC SPECIFICATIONS AND STANDARDS.
4. CIRCUIT BREAKER CB1 TO BE INSTALLED IN A PROTECTED LOCATION ANYWHERE BETWEEN THE DC POWER SOURCE AND THE ROUTING SWITCH.



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REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	240201

**ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES**

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

**ELECTRICAL
ONE-LINE DIAGRAM**

E2.0

NOTES:

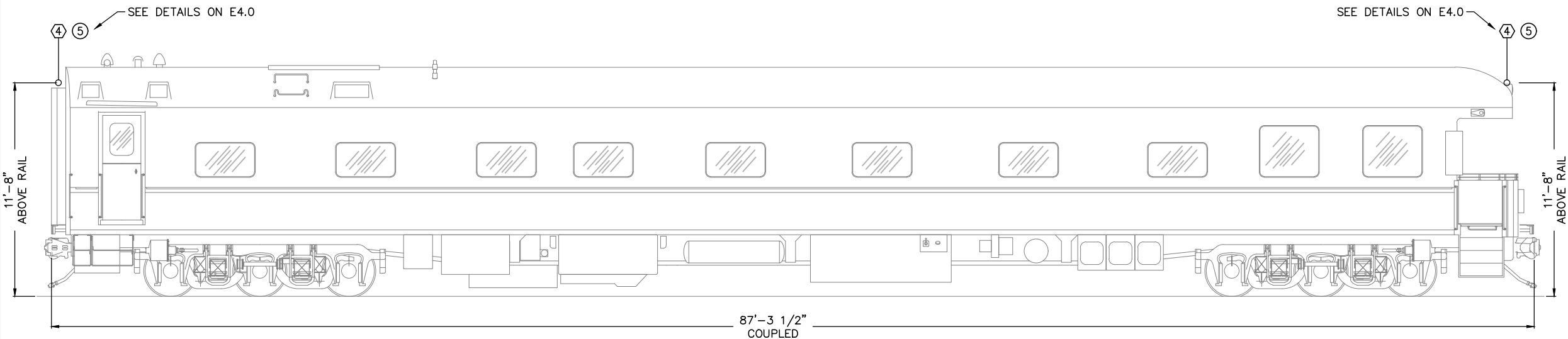
1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

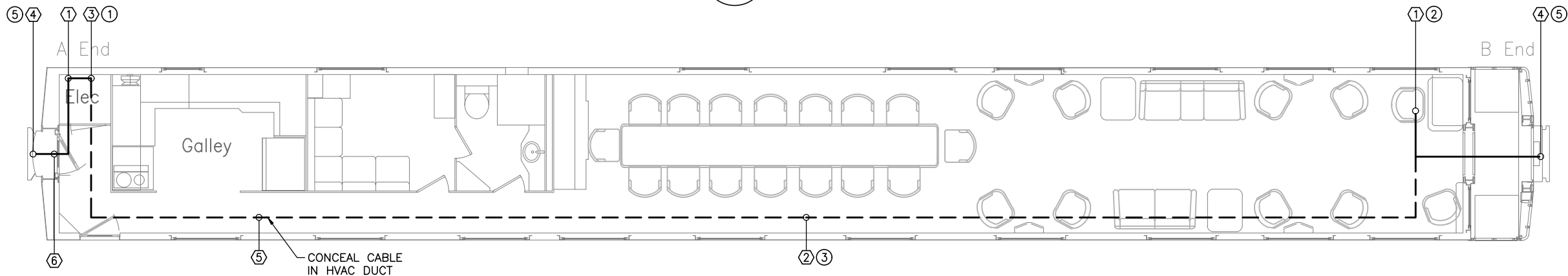
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
④ PATCH ANTENNA (ANT)
⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



A
E3.0 CAR ARR 1 - ELEVATION
SCALE: NOT TO SCALE



1
E3.0 CAR ARR 1 - PLAN VIEW
SCALE: NOT TO SCALE



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IFC

REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	240201

ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR 1
DENALI BUSINESS
CAR
E3.0

NOTES:

1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

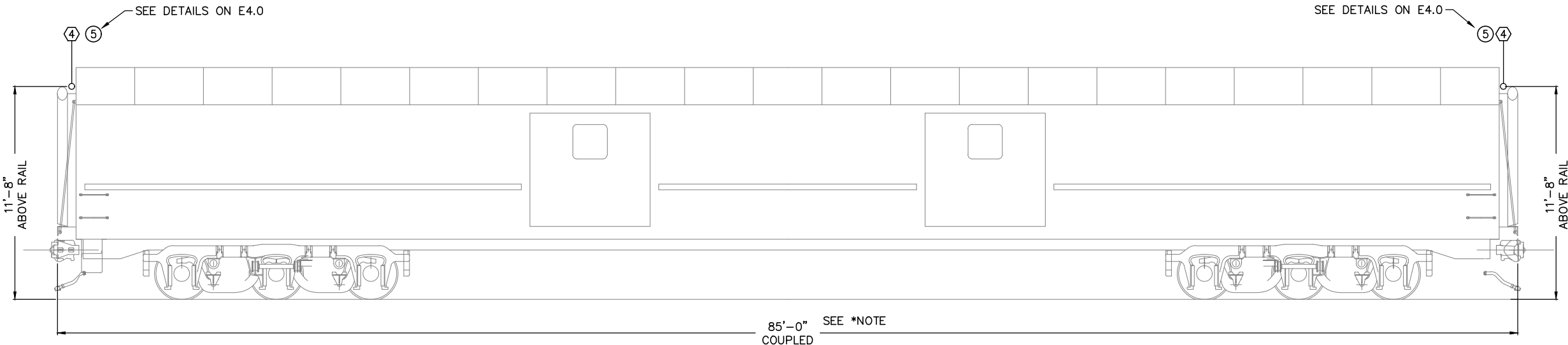
- CAT6A
--- COAX

EQUIPMENT LEGEND:

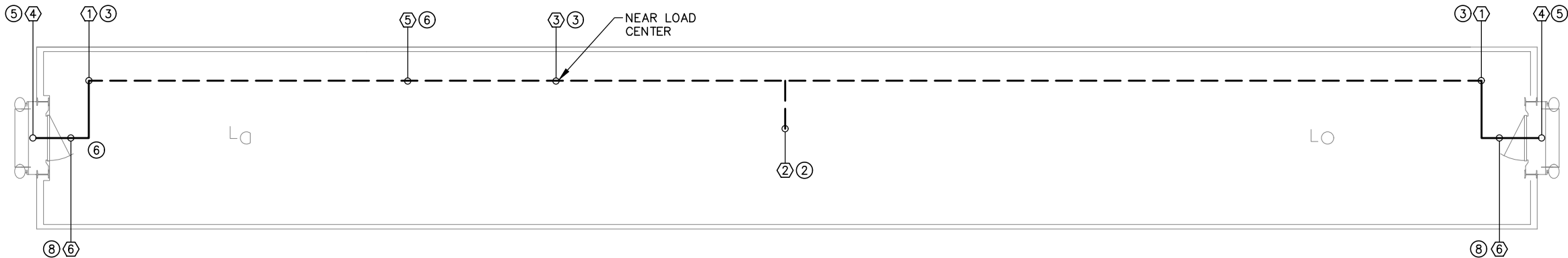
- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
④ PATCH ANTENNA (ANT)
⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS

*NOTE:

THE COUPLED LENGTH OF THE CARRIAGES:
100-103 ~85 FEET
110 AND 111 ~75 FEET



A
E3.1 CARS ARR 100 - 103, 110, 111 - ELEVATION
SCALE: NOT TO SCALE



1
E3.1 CARS ARR 100 - 103, 110, 111 - PLAN VIEW
SCALE: NOT TO SCALE



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REV	DESCRIPTION	DATE
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ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV
JOB #: 23-0117-20	DATE: 240201		0

ARR
100 - 103, 110, 111
BAGGAGE CARS
E3.1

NOTES:

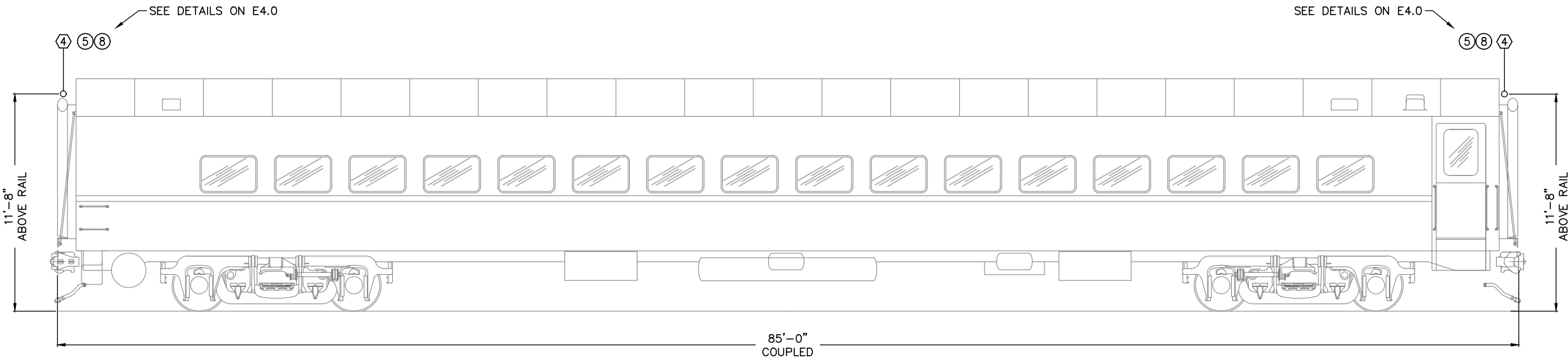
1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

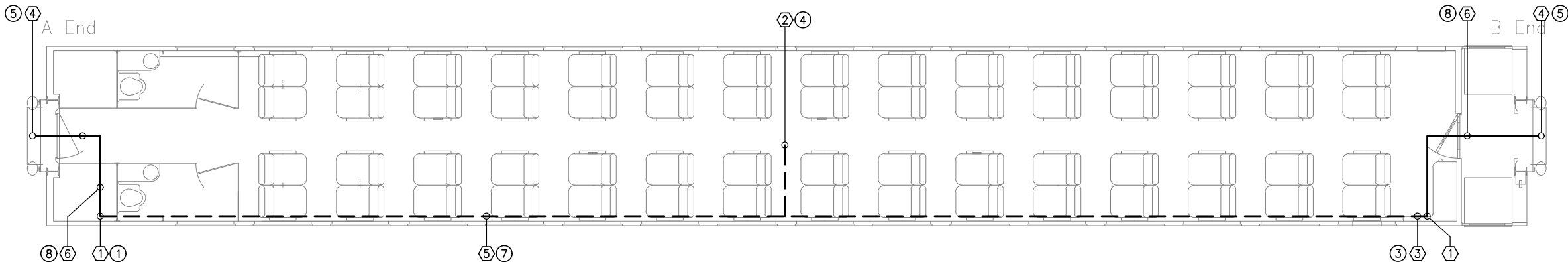
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
④ PATCH ANTENNA (ANT)
⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



A
E3.2 CAR ARR 200 - 204 - ELEVATION
SCALE: NOT TO SCALE



1
E3.2 CAR ARR 200 - 204 - PLAN VIEW
SCALE: NOT TO SCALE



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ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR
200 - 204
COACH CARS
E3.2

NOTES:

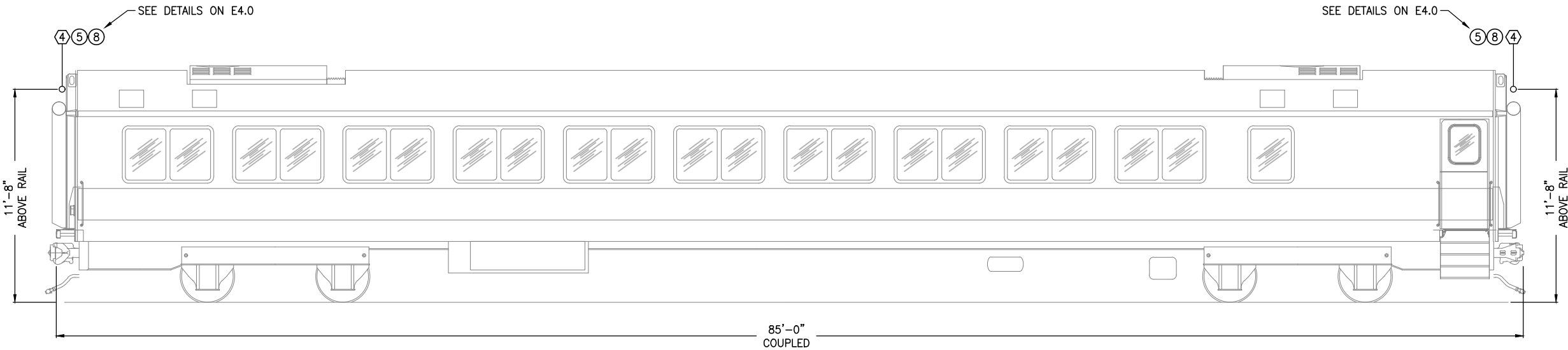
1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

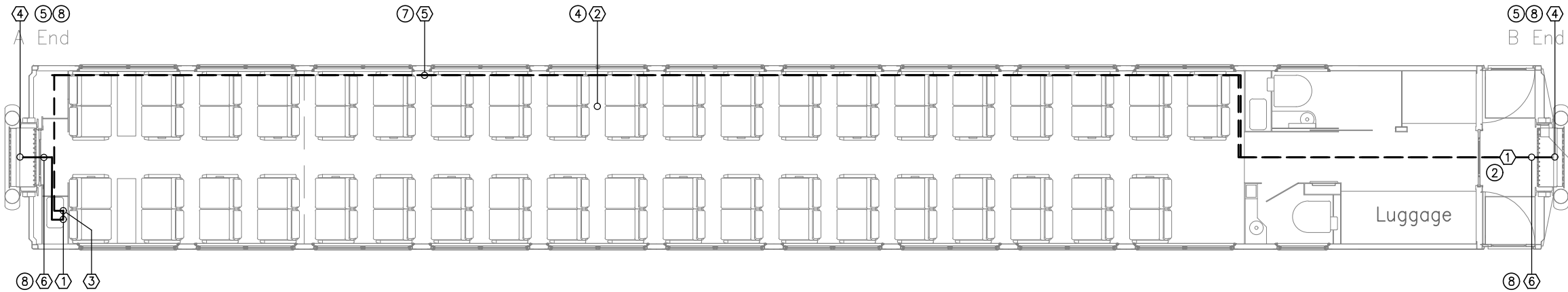
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- (1) ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
(2) ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
(3) 12 PORT MANAGED LAYER 3 SWITCH (SW)
(4) PATCH ANTENNA (ANT)
(5) CAT6A M12 CONNECTOR TO M12 CONNECTOR
(6) COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
(7) WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



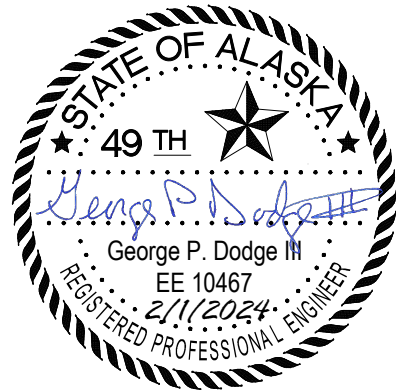
A
E3.3 CAR ARR 205 - 210 - ELEVATION
SCALE: NOT TO SCALE



1
E3.3 CAR ARR 205 - 210 - PLAN VIEW
SCALE: NOT TO SCALE



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ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR
205 - 210
COACH CARS
E3.3

NOTES:

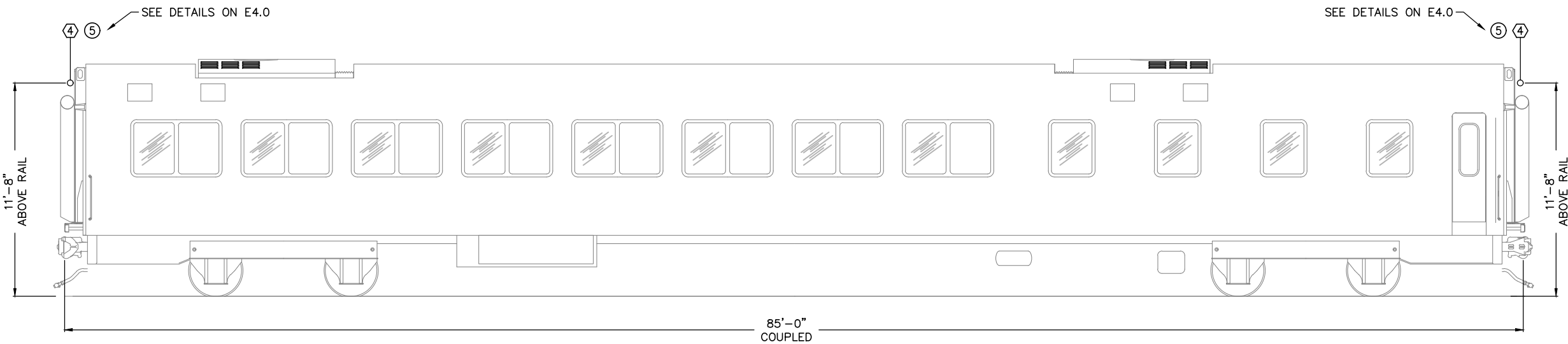
1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

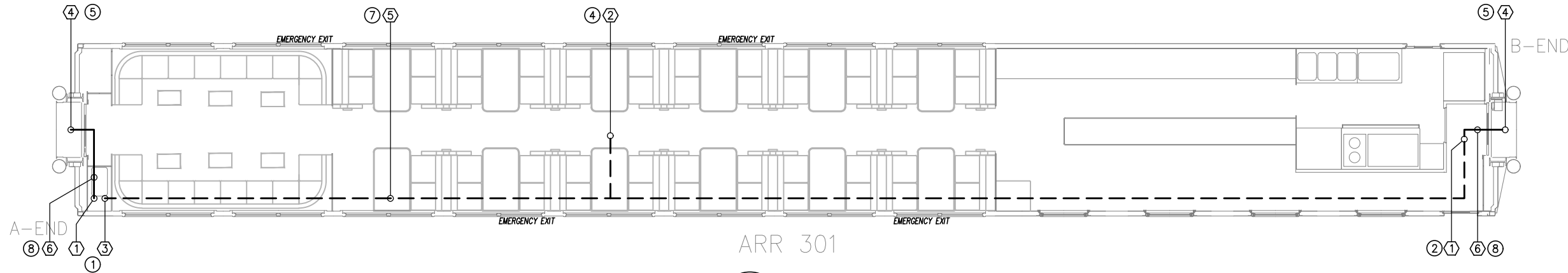
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- (1) ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
(2) ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
(3) 12 PORT MANAGED LAYER 3 SWITCH (SW)
(4) PATCH ANTENNA (ANT)
(5) CAT6A M12 CONNECTOR TO M12 CONNECTOR
(6) COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
(7) WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



A
E3.4 CAR ARR 301 - ELEVATION
SCALE: NOT TO SCALE



1
E3.4 CAR ARR 301 - PLAN VIEW
SCALE: NOT TO SCALE



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ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20		DATE: 240201	

ARR 301
DINER AND LUNCH
COUNTER CAR
E3.4

NOTES:

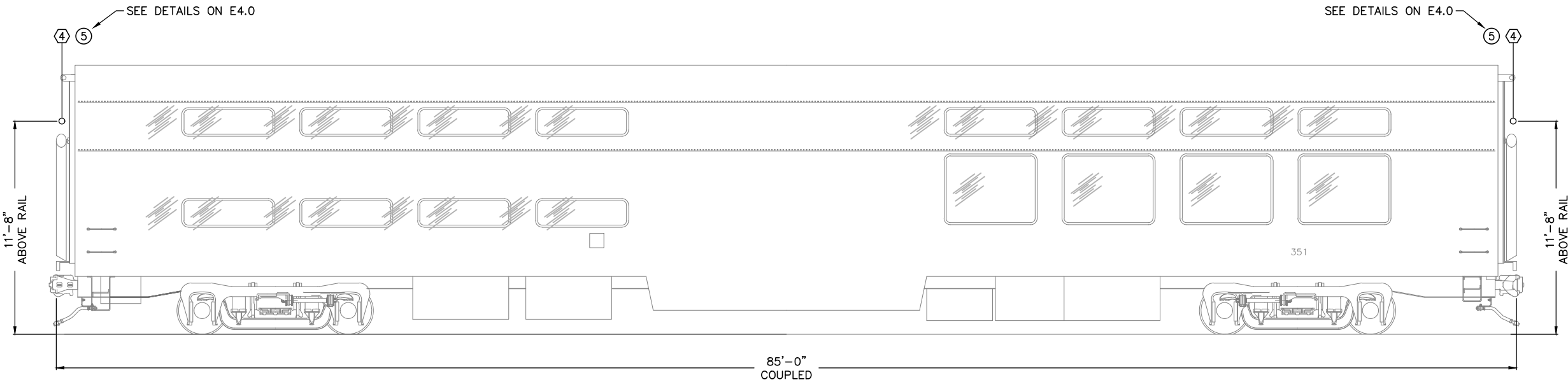
1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

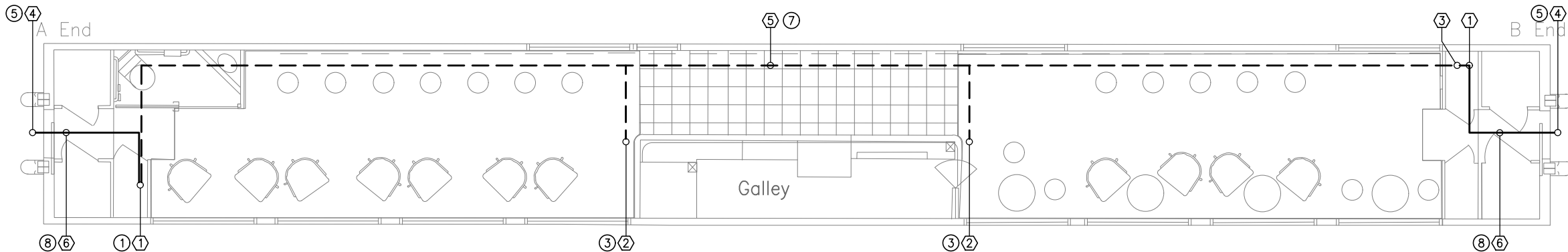
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
④ PATCH ANTENNA (ANT)
⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



A
E3.5 CAR ARR 351 - ELEVATION
SCALE: NOT TO SCALE



1
E3.5 CAR ARR 351 - PLAN VIEW
SCALE: NOT TO SCALE



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ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR 351
BAR CAFE
CAR
E3.5

NOTES:

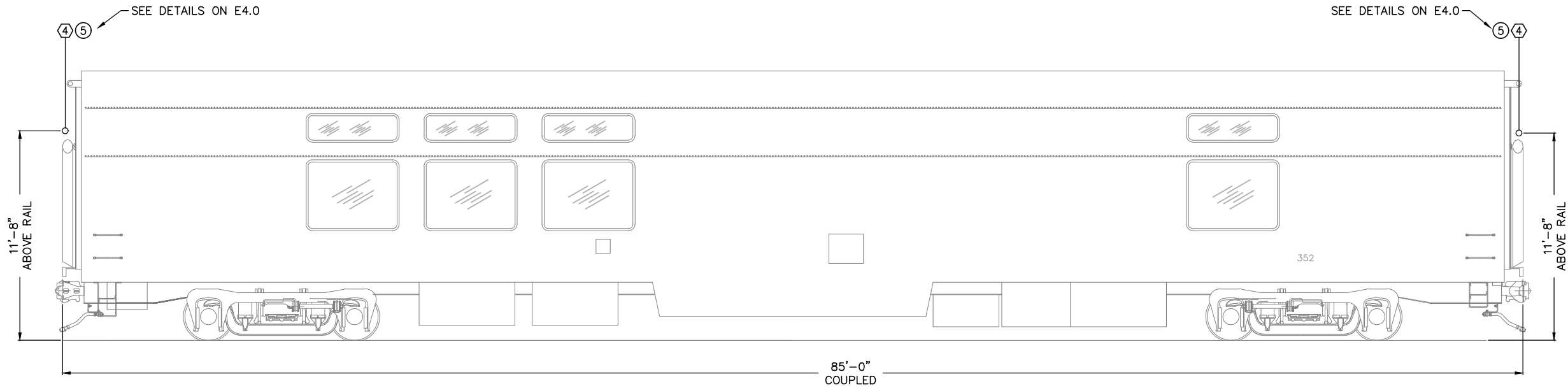
1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

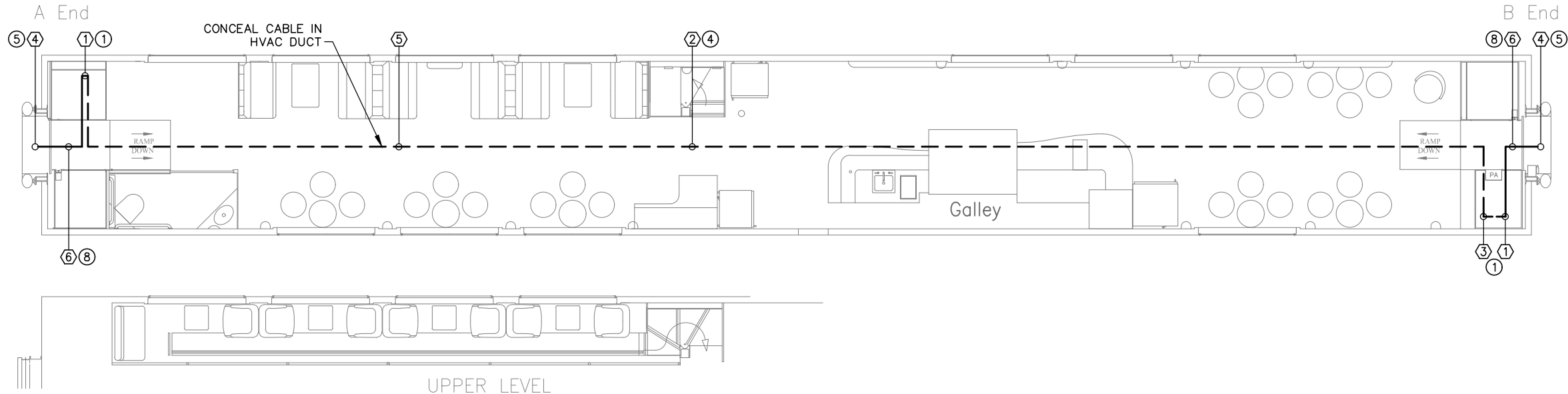
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
④ PATCH ANTENNA (ANT)
⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



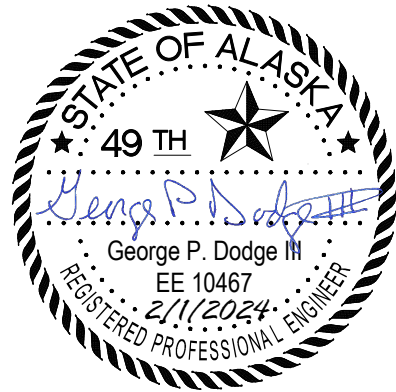
A
E3.6 CAR ARR 352 - ELEVATION
SCALE: NOT TO SCALE



1
E3.6 CAR ARR 352 - PLAN VIEW
SCALE: NOT TO SCALE



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0	ISSUE FOR CONSTRUCTION	240201

ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20			DATE: 240201

ARR 352
BAR CAFE
LOUNGE CAR
E3.6

NOTES:

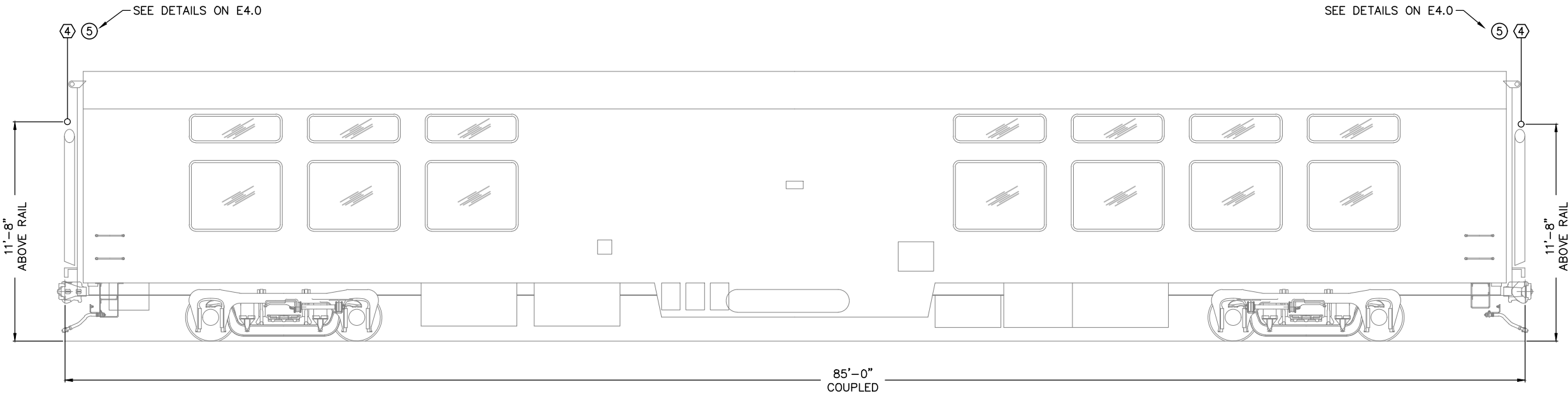
1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

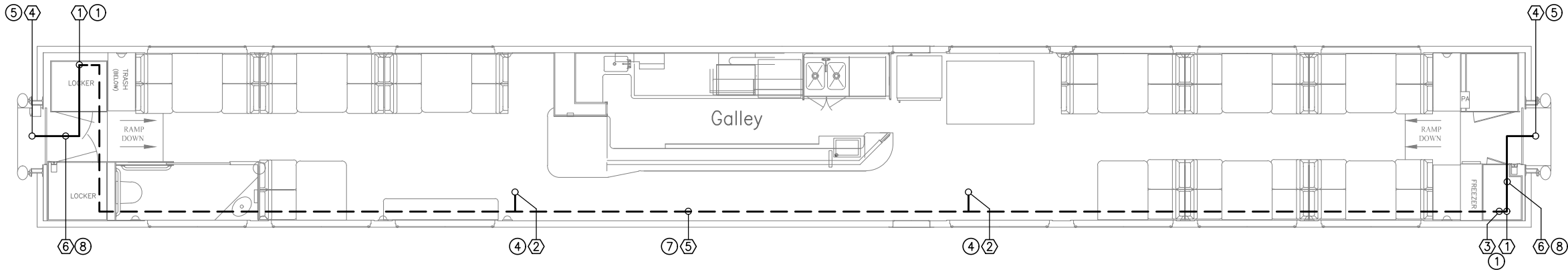
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
④ PATCH ANTENNA (ANT)
⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



A
E3.8 CAR ARR 451 AND 452 - ELEVATION
SCALE: NOT TO SCALE



1
E3.8 CAR ARR 451 AND 452 - PLAN VIEW
SCALE: NOT TO SCALE



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0	ISSUE FOR CONSTRUCTION	240201

ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR 451 AND 452
DINER LUNCH
COUNTER CAR

E3.8

NOTES:

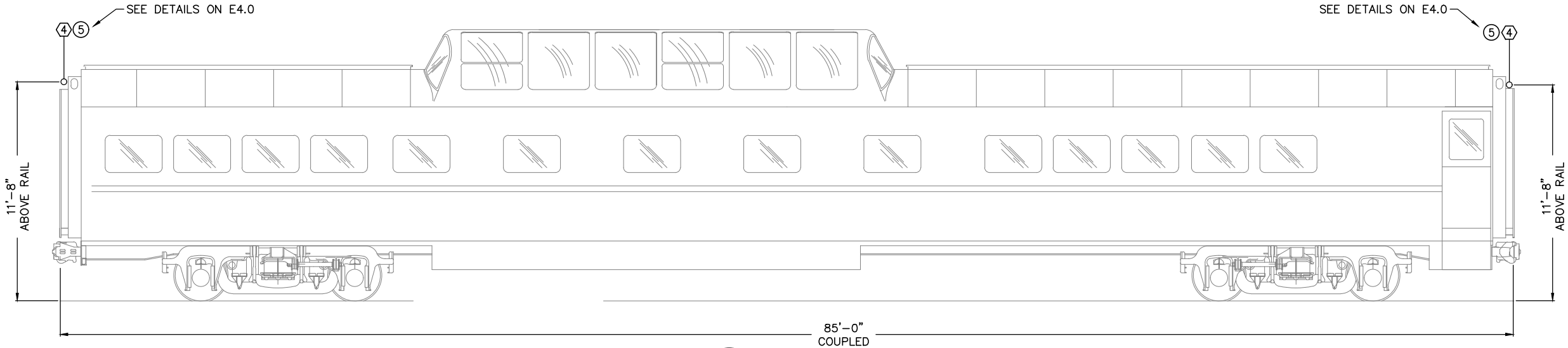
- 1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
- 2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
- 3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

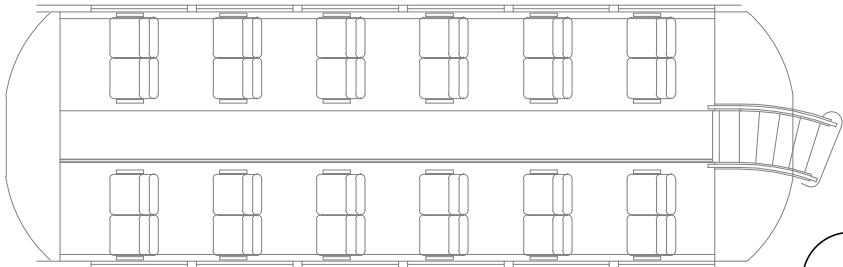
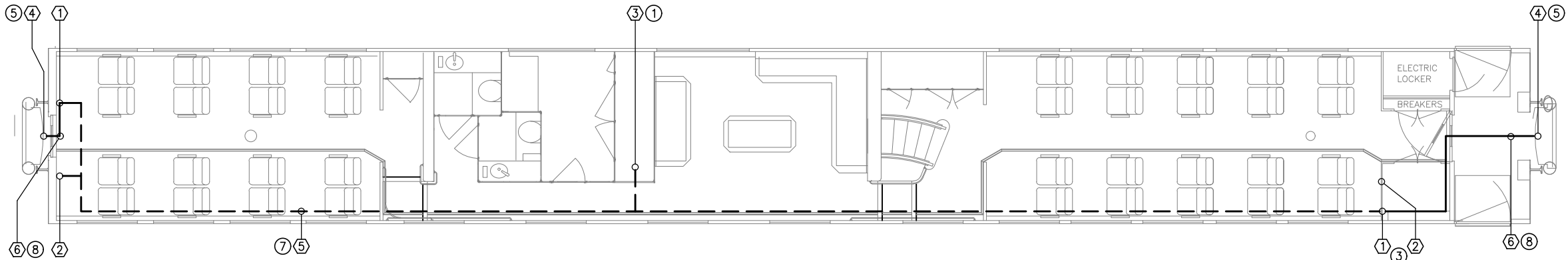
- CAT6A
- COAX

EQUIPMENT LEGEND:

- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
- ② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
- ③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
- ④ PATCH ANTENNA (ANT)
- ⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
- ⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
- ⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



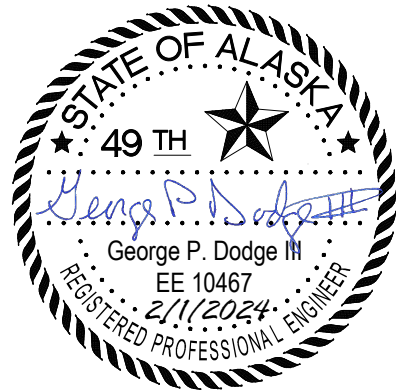
A
E3.9 CAR ARR 500-502 - ELEVATION
SCALE: NOT TO SCALE



1
E3.9 CAR ARR 500-502 - PLAN VIEW
SCALE: NOT TO SCALE



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REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	240201

ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR 500 - 502
DOME COACH
CARS
E3.9

NOTES:

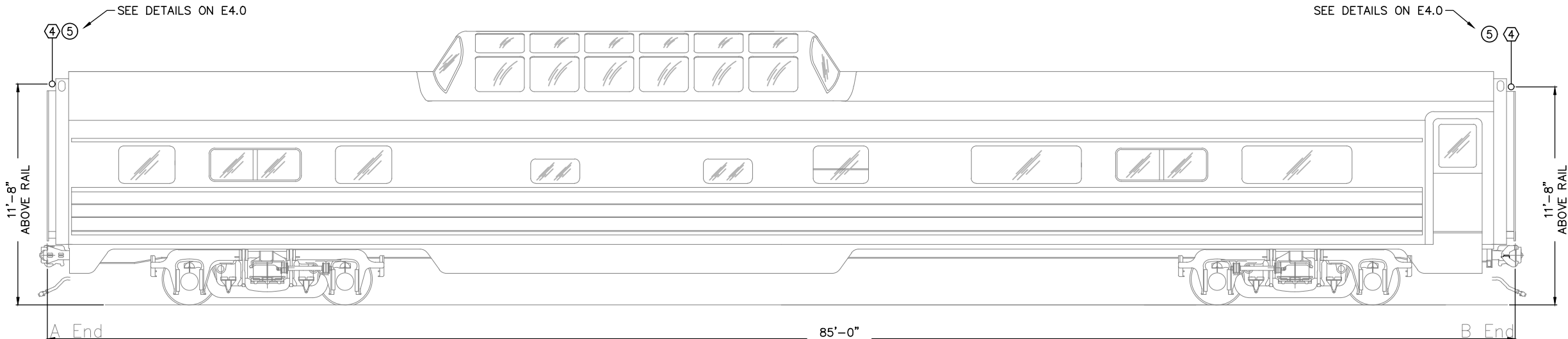
1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

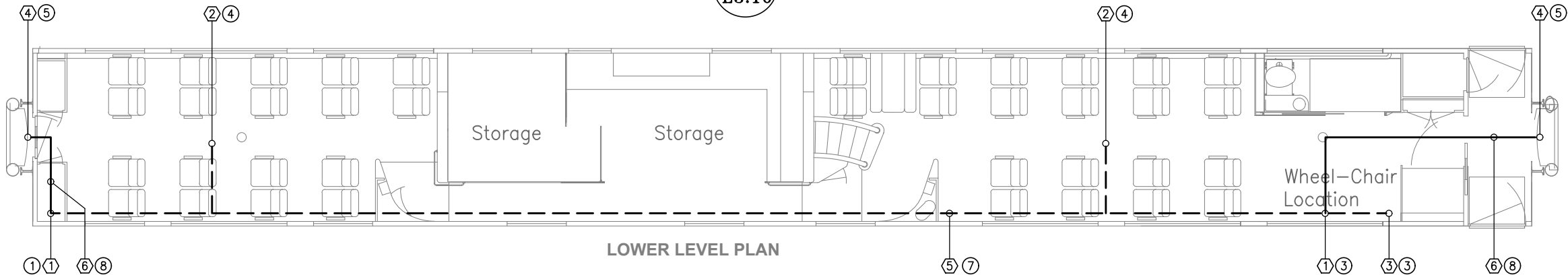
- CAT6A
--- COAX

EQUIPMENT LEGEND:

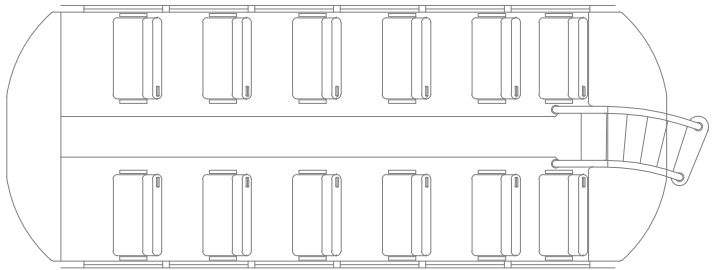
- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
④ PATCH ANTENNA (ANT)
⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



A
E3.10 CAR ARR 521-523 - ELEVATION
SCALE: NOT TO SCALE



LOWER LEVEL PLAN



DOME LEVEL PLAN

1
E3.10 CAR ARR 521-523 - PLAN VIEW
SCALE: NOT TO SCALE



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REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	240201

ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR 521 - 523
DOME COACH
CARS
E3.10

NOTES:

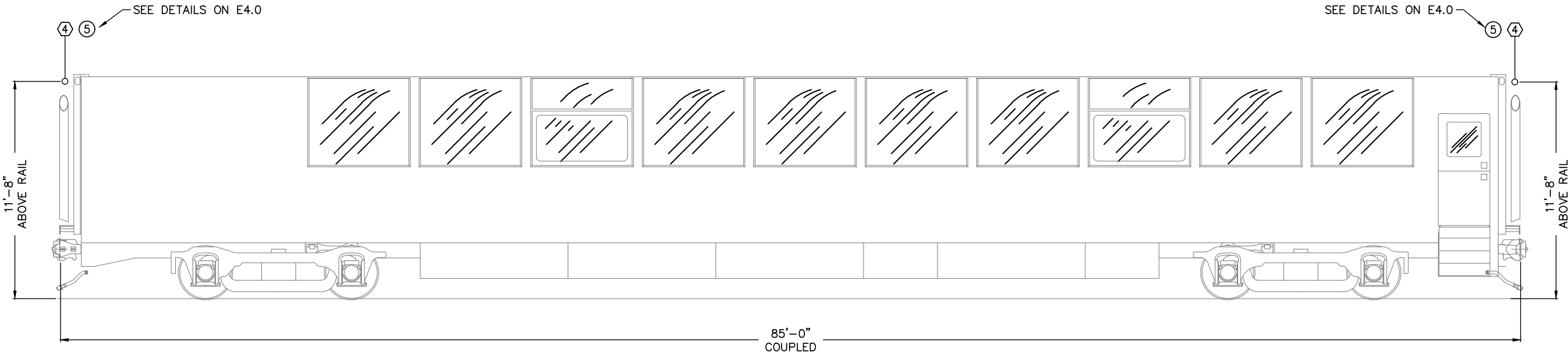
1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

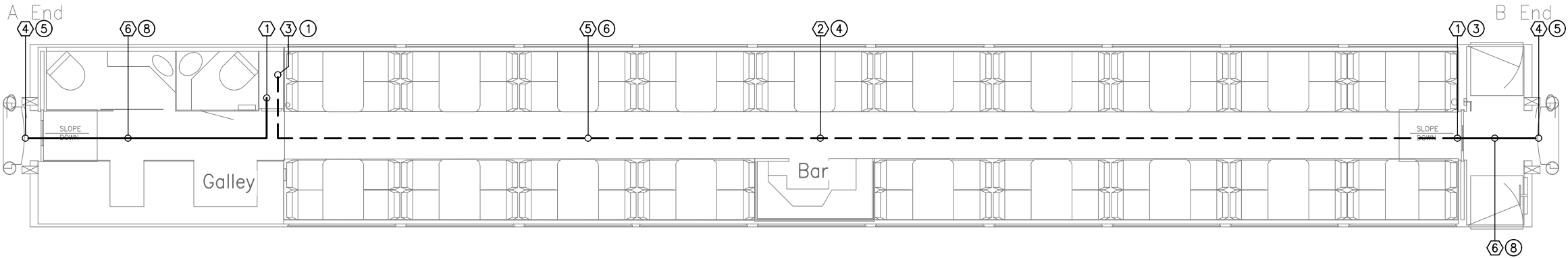
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
④ PATCH ANTENNA (ANT)
⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



A
E3.11
CAR ARR 551-554 - ELEVATION
SCALE: NOT TO SCALE



1
E3.11
CAR ARR 551-554 - PLAN VIEW
SCALE: NOT TO SCALE



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IFC

REV	DESCRIPTION	DATE
0	ISSUE FOR CONSTRUCTION	240201

ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR 551 - 554
SERIES COACH
CARS
E3.11

NOTES:

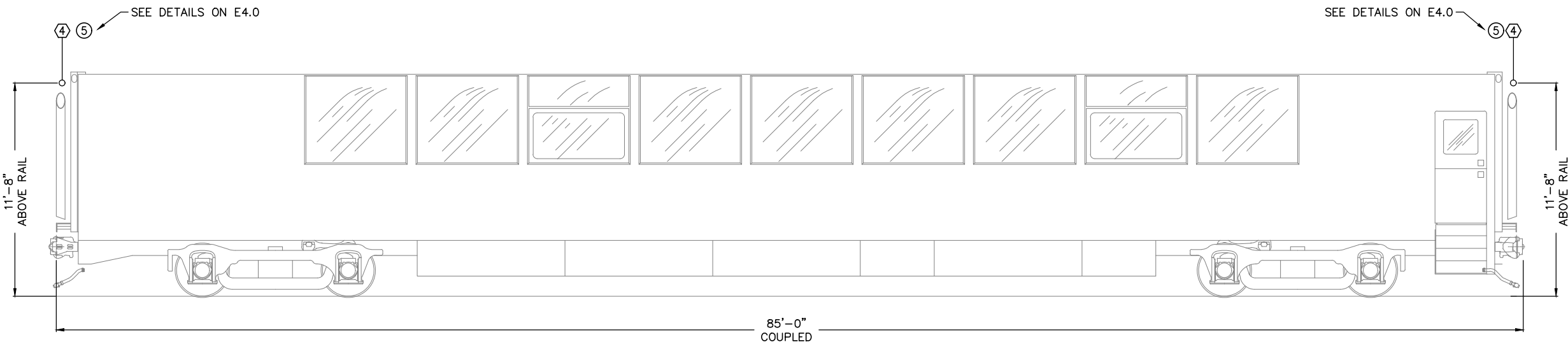
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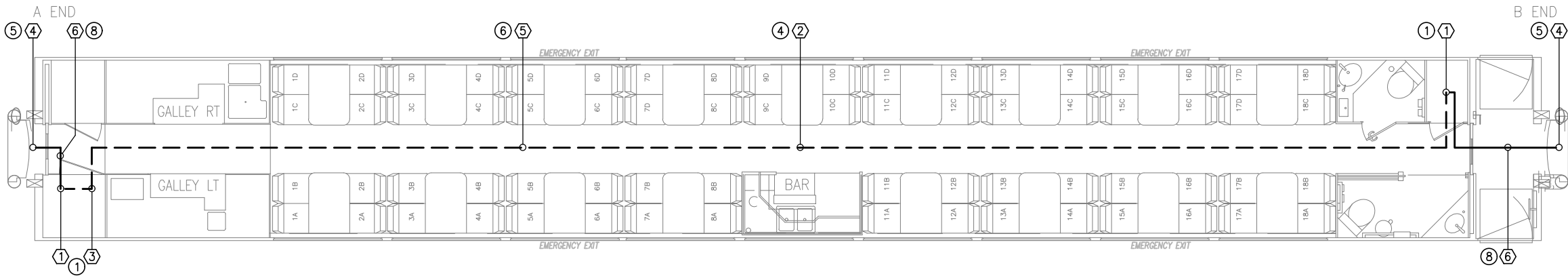
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- (1) ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
(2) ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
(3) 12 PORT MANAGED LAYER 3 SWITCH (SW)
(4) PATCH ANTENNA (ANT)
(5) CAT6A M12 CONNECTOR TO M12 CONNECTOR
(6) COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
(7) WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



A
E3.12 CAR ARR 555-557 - ELEVATION
SCALE: NOT TO SCALE



1
E3.12 CAR ARR 555-557 - PLAN VIEW
SCALE: NOT TO SCALE



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ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

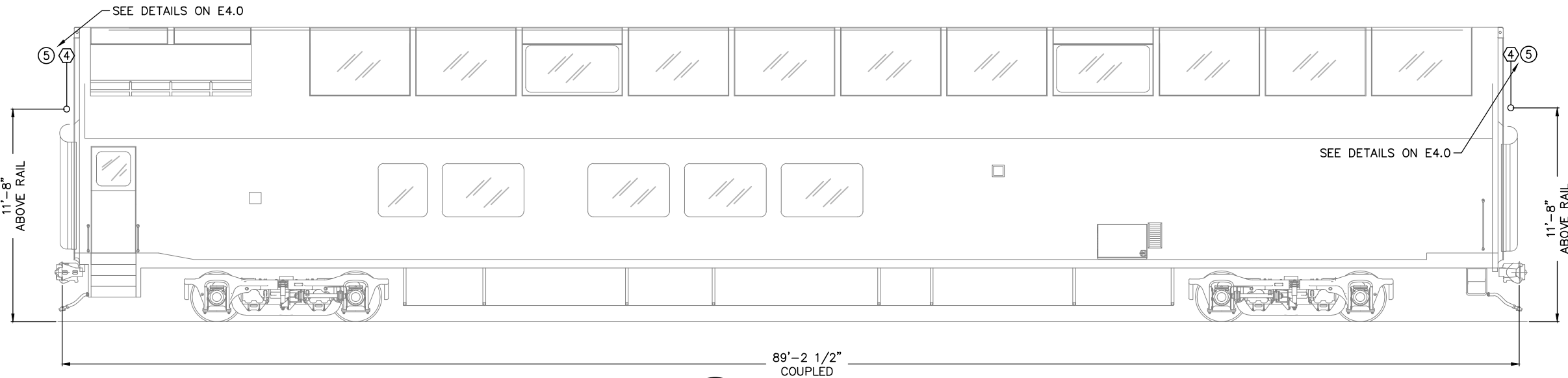
DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR 555 - 557
SERIES COACH
CARS
E3.12

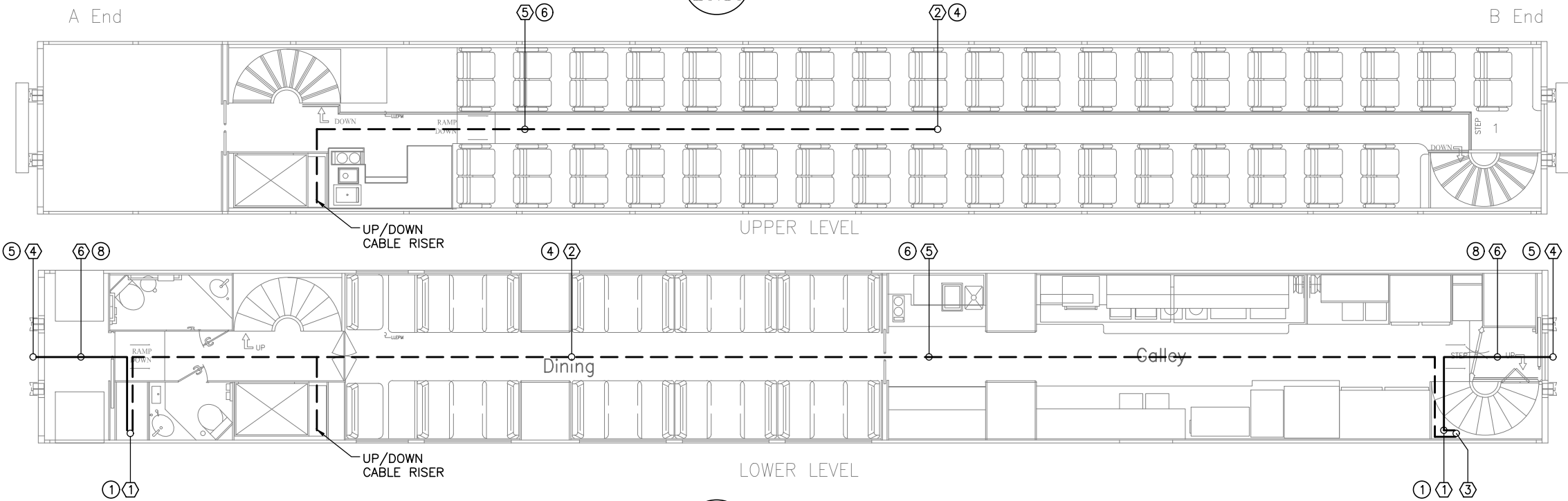
- NOTES:
1. (N) ALL EQUIPMENT CALL OUTS MAY NOT BE ON THIS SHEET.
 2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
 3. SEE SHEET E2.0 FOR POWER INSTALL.

- LEGEND:
- CAT6A
 - COAX

- EQUIPMENT LEGEND:
- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
 - ② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
 - ③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
 - ④ PATCH ANTENNA (ANT)
 - ⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
 - ⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
 - ⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



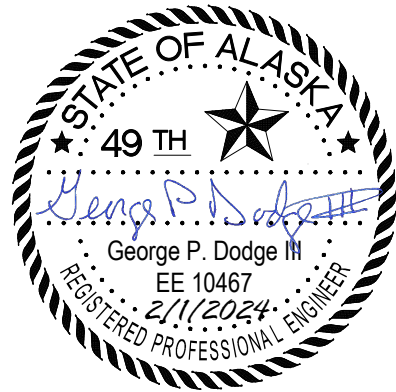
A
E3.13 CAR ARR 651-656 - ELEVATION
SCALE: NOT TO SCALE



1
E3.13 CAR ARR 651-656 - PLAN VIEW
SCALE: NOT TO SCALE



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ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR 651 - 656
BI-LEVEL DOME
CARS
E3.13

NOTES:

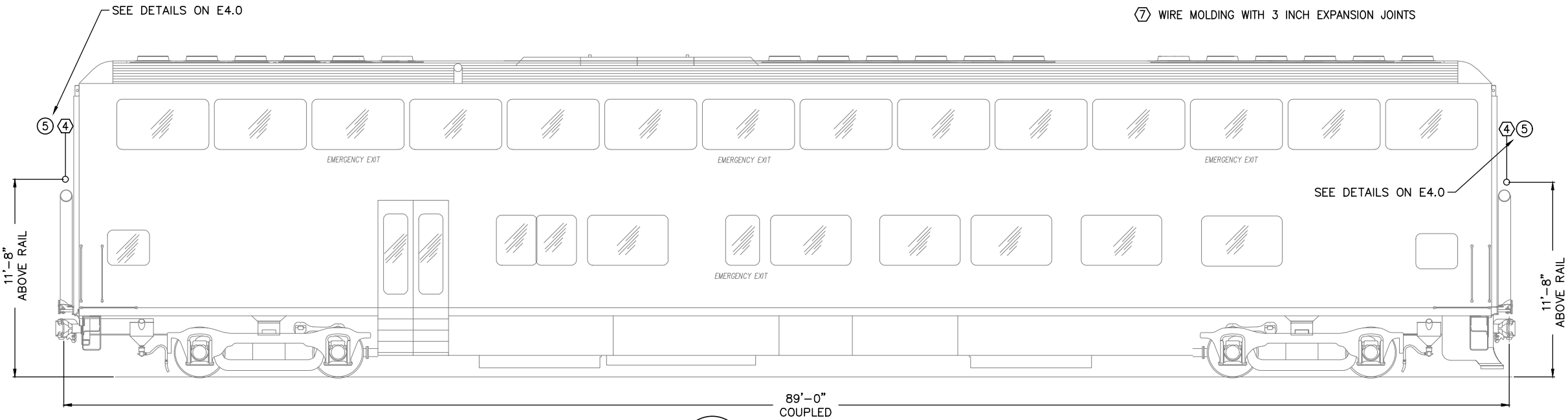
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3. SEE SHEET E2.0 FOR POWER INSTALL.

LEGEND:

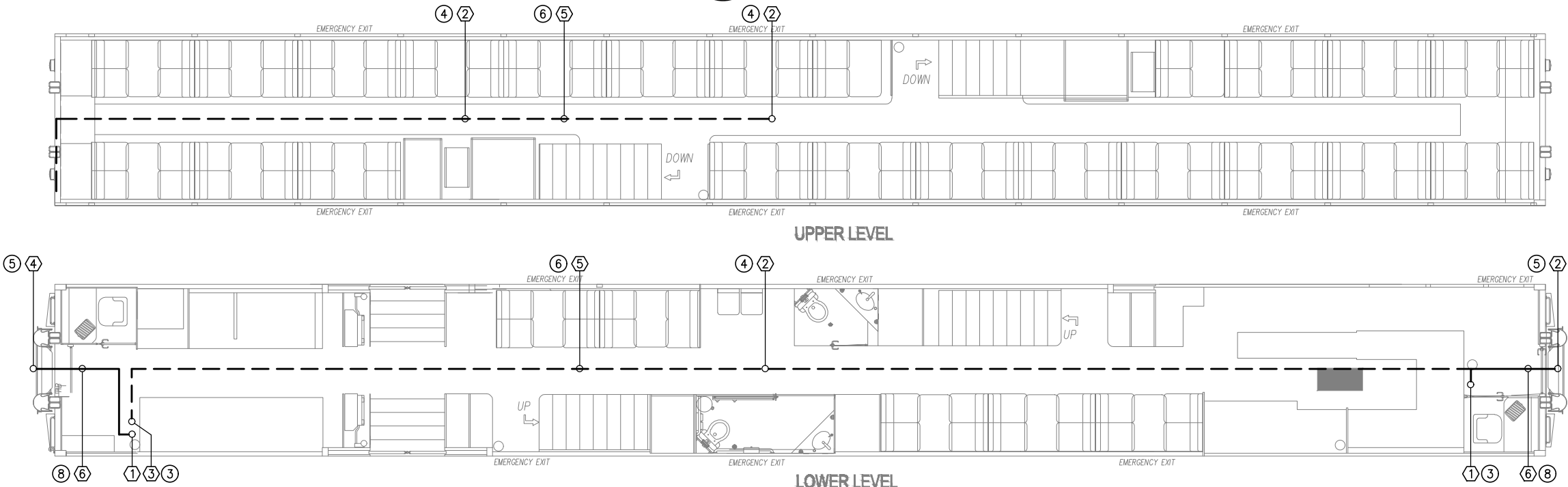
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
④ PATCH ANTENNA (ANT)
⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



A
E3.14 CAR ARR 751 - ELEVATION
SCALE: NOT TO SCALE



1
E3.14 CAR ARR 751 - PLAN VIEW
SCALE: NOT TO SCALE



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ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR 751 DIESEL
MULTIPLE UNIT
CAR
E3.14

NOTES:

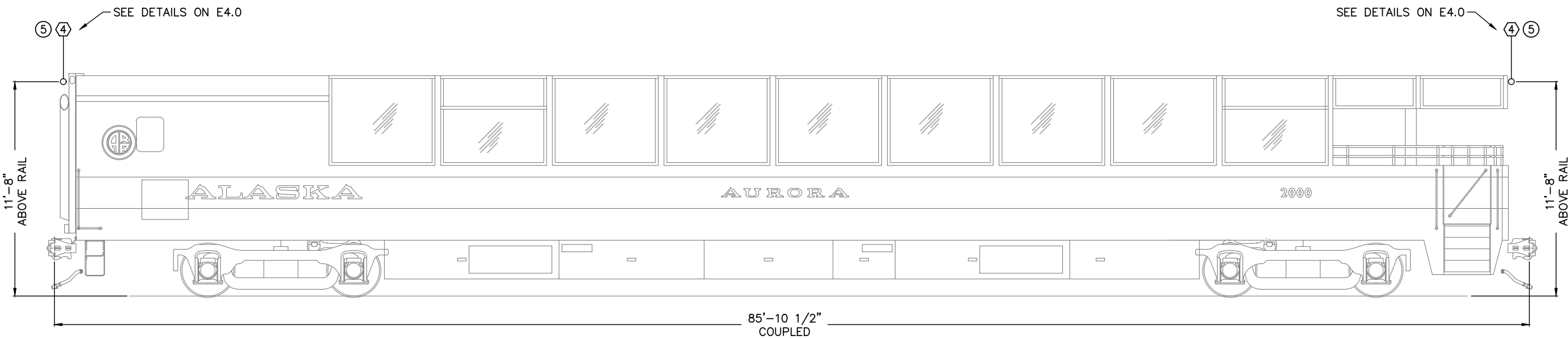
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2. (N) CIRCLED NUMBERS REFERENCE INSTALLATION NOTES ON SHEET E1.0
3. SEE SHEET E2.0 FOR POWER INSTALL.

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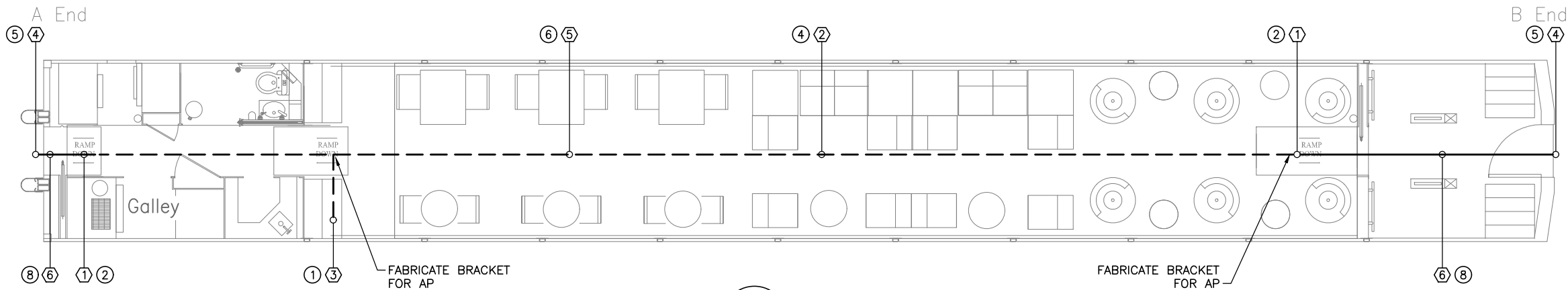
- CAT6A
--- COAX

EQUIPMENT LEGEND:

- ① ACCESS POINT IN BRIDGE MODE INTER-CONSIST LINK (ILC)
② ACCESS POINT (ALL IN ONE UNIT) IN CLIENT MODE (AP)
③ 12 PORT MANAGED LAYER 3 SWITCH (SW)
④ PATCH ANTENNA (ANT)
⑤ CAT6A M12 CONNECTOR TO M12 CONNECTOR
⑥ COAX QMA CONNECTOR TO QMA CONNECTOR (TWO CABLES PER ANTENNA)
⑦ WIRE MOLDING WITH 3 INCH EXPANSION JOINTS



A
E3.15 CAR ARR 2000 - ELEVATION
SCALE: NOT TO SCALE



1
E3.15 CAR ARR 2000 - PLAN VIEW
SCALE: NOT TO SCALE



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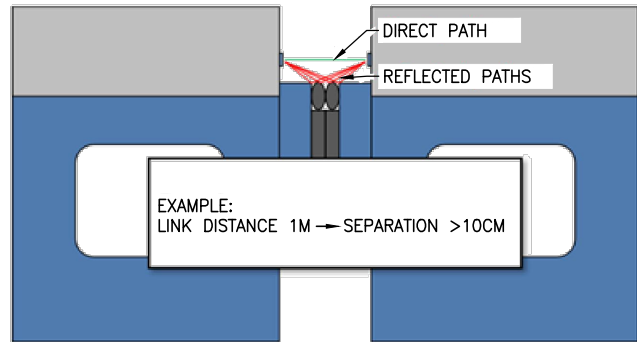
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ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV 0
JOB #: 23-0117-20	DATE: 240201		

ARR 2000
BUSINESS
CAR
E3.15



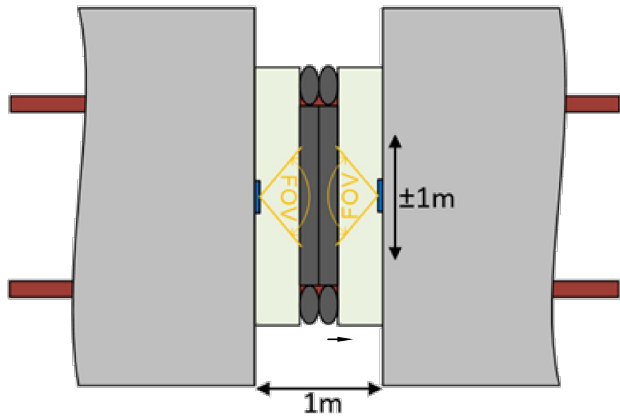
THERE SHOULD BE NO OBJECT CLOSER TO THE RF PATH THAN 10CM, SO THAT THE REFLECTIVE PATHS DO NOT DISTURB THE DIRECT PATH

1

E4.0

DETAIL

SCALE: NOT TO SCALE



FOR THE BEST PERFORMANCE, ICL ANTENNAS SHOULD BE POSITIONED IN THE MIDDLE OF THE TRACK.
VERTICAL POSITION IS TYPICALLY ABOVE THE CARRIAGE DOOR.
THE HORIZONTAL MOVING TOLERANCE IS ABOUT +/-1m, WHICH IS NEEDED WHEN THE WAGON IS IN NARROW CURVES OR MOVING OVER CROSSINGS.

AN ANTENNA PLACEMENT SURVEY SHOULD BE PERFORMED PRIOR TO FINALIZING/SPECIFYING THE INSTALLATION LOCATION(S).

2

E4.0

DETAIL

SCALE: NOT TO SCALE



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ALASKA RAILROAD
PASSENGER CAR
WIRELESS AND WIFI
SERVICES

DWN: JAA	DSN: DBK	APP: GPD	REV
JOB #: 23-0117-20	DATE: 240201		0

ICL ANTENNA
LOCATION DETAILS

E4.0