



INSTALLATION INSTRUCTIONS

2.4 GHZ AND 900 MHZ ANTENNA AND RADIO ACCESSORY KITS FOR 53325, 53350, AND 53355 ETHERNET SPREAD SPECTRUM RADIOS

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SIEMENS INDUSTRY, INC. RAIL AUTOMATION
2400 NELSON MILLER PARKWAY
LOUISVILLE, KENTUCKY 40223
TELEPHONE: (502) 618-8800
FAX: (502) 618-8810
SALES & SERVICE: (800) 626-2710
WEB SITE: <http://www.rail-automation.com/>

SIEMENS INDUSTRY, INC. RAIL AUTOMATION
939 S. MAIN STREET
MARION, KENTUCKY 42064
TELEPHONE: (270) 918-7800
CUSTOMER SERVICE: (800) 626-2710
TECHNICAL SUPPORT: (800) 793-7233
FAX: (270) 918-7830

FCC RULES COMPLIANCE

The equipment covered in this manual has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.



RF EXPOSURE WARNING



All antenna installation and servicing is to be performed by qualified technical personnel only. When servicing or working at distances closer than 7 feet (2 meters), ensure the transmitter has been disabled. Depending upon the application and the gain of the antenna, the total composite power could exceed 100 watts EIRP. The antenna location should be such that only qualified technical personnel can access it, and under normal operating conditions no other person can come in contact or approach within 7 feet (2 meters) of the antenna.

DOCUMENT HISTORY

Version	Release Date	Sections Changed	Details of Change
A	NOV 2010		Initial Release
D.2	JUL 2015	All	Convert to Siemens format
D.3	NOV 2016	2 and 3	Fig 2-1 Update Part Numbers Fig 2-2 Update Part Numbers Fig 3-2 Update Part Numbers Fig 3-3 Update Part Numbers Fig 3-5 Update Part Numbers Fig 3-6 Update Part Numbers

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NOTES, CAUTIONS, AND WARNINGS

Throughout this manual, notes, cautions, and warnings are frequently used to direct the reader's attention to specific information. Use of the three terms is defined as follows:



WARNING

INDICATES A POTENTIALLY HAZARDOUS SITUATION WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY. WARNINGS ALWAYS TAKE PRECEDENCE OVER NOTES, CAUTIONS, AND ALL OTHER INFORMATION.



CAUTION

REFERS TO PROPER PROCEDURES OR PRACTICES WHICH IF NOT STRICTLY OBSERVED, COULD RESULT IN A POTENTIALLY HAZARDOUS SITUATION AND/OR POSSIBLE DAMAGE TO EQUIPMENT. CAUTIONS TAKE PRECEDENCE OVER NOTES AND ALL OTHER INFORMATION, EXCEPT WARNINGS.

NOTE

NOTE

Generally used to highlight certain information relating to the topic under discussion.

If there are any questions, contact Siemens Industry, Inc. Application Engineering.

ELECTROSTATIC DISCHARGE (ESD) PRECAUTIONS

Static electricity can damage electronic circuitry, particularly low voltage components such as the integrated circuits commonly used throughout the electronics industry. Therefore, procedures have been adopted industry-wide which make it possible to avoid the sometimes invisible damage caused by electrostatic discharge (ESD) during the handling, shipping, and storage of electronic modules and components. Siemens Industry, Inc. has instituted these practices at its manufacturing facility and encourages its customers to adopt them as well to lessen the likelihood of equipment damage in the field due to ESD. Some of the basic protective practices include the following:

- Ground yourself before touching card cages, assemblies, modules, or components.
- Remove power from card cages and assemblies before removing or installing modules.
- Remove circuit boards (modules) from card cages by the ejector lever only. If an ejector lever is not provided, grasp the edge of the circuit board but avoid touching circuit traces or components.
- Handle circuit boards by the edges only.
- Never physically touch circuit board or connector contact fingers or allow these fingers to come in contact with an insulator (e.g., plastic, rubber, etc.).
- When not in use, place circuit boards in approved static-shielding bags, contact fingers first. Remove circuit boards from static-shielding bags by grasping the ejector lever or the edge of the board only. Each bag should include a caution label on the outside indicating static-sensitive contents.
- Cover workbench surfaces used for repair of electronic equipment with static dissipative workbench matting.
- Use integrated circuit extractor/inserters designed to remove and install electrostatic-sensitive integrated circuit devices such as PROM's (OK Industries, Inc., Model EX-2 Extractor and Model MOS-40 Inserter (or equivalent) are highly recommended).
- Utilize only anti-static cushioning material in equipment shipping and storage containers.

For information concerning ESD material applications, please contact the Technical Support Staff at 1-800-793-7233. ESD Awareness Classes and additional ESD product information are also available through the Technical Support Staff.

SECTION 1

PRODUCT DESCRIPTION

1.0 PRODUCT DESCRIPTION

1.1 ANTENNA KITS - OVERVIEW

Eight antenna configurations are available from Siemens for use with the A55325, A53350, and A53355 Ethernet Spread Spectrum Radio (ESSR):

1. Single Yagi
2. Dual Yagi
3. Single Omni
4. Dual Omni
5. Single Parabolic
6. Dual Parabolic
7. Single Radome Protected Yagi
8. Dual Radome Protected Yagi

Two types of installation kits are available for the antenna configurations listed above:

- A53326 – for pole mounted radios
- A53327 – for bungalow mounted radios

This manual covers the basic installation techniques, as well as the kits and components available for each type of installation. For applications not covered by this document, contact Siemens Customer Service at 1-800-793-7233.

See Section 2 for details on A53326 pole mounted radio antenna kits.

See Section 3 for details on A53327 bungalow mounted radio antenna kits.

1.2 RADIO ACCESSORY PACKAGES

- For A53329 Radio Accessory Packages see Section 4.

1.3 WESTERNTILT-TOWER INSTALLATION PRECAUTION

The A53325 and A53350 ESSR radios and the 900 MHz and 2.4 GHz antennas available from Siemens are designed to attach to an antenna mast pipe with a maximum outside diameter (OD) of 2.0 inches.

If using a Western Tower 40 foot Tilt-Tower with Siemens A53325, A53350, and A53355 radios and/or 900 MHz and 2.4 GHz antennas, but **not** using a Siemens antenna kit, the radio and the antenna(s) may not attach to the Tilt-Tower as its mast pipe has an OD of 2-3/8". In this case it is recommended to order the following Items from Siemens:

- A 10 foot x 1-1/4" OD galvanized steel antenna extension pipe (supplied with Siemens antenna kits for tilt-tower) part number Z918-00020-0000.
- (2) Siemens antenna mast pipe-to-pipe mounting clamps, part number Z912-00080-0000, which are used to attach the extension pipe to the Western Tilt-Tower's larger mast pipe.

SECTION 2

A53326 – POLE MOUNTED RADIO ANTENNA KITS

2.0 A53326 – POLE MOUNTED ANTENNA KITS

2.1 OVERVIEW

A pole mounted installation is one in which the radio is mounted near the top of a pole or tower mast, with the antenna mounted just above it. A53326 antenna kits for pole mounted radios contain fewer parts than antenna kits for bungalow mounted radios simply because they do not require the additional RF coax cable needed to run between an elevated antenna and a radio located at ground level inside a bungalow.

2.2 STANDARD MATERIALS INCLUDED IN KITS

A53326 antenna kits contain all necessary parts required for a standard pole mounted radio installation. These kits include:

- The selected antenna(s)
- A galvanized steel pipe mast extension of 1-¼ inch outside diameter x 10 foot length
- Weather proofing material
- Associated grounding and lightning protection materials

2.3 ANTENNA KIT INSTALLATION

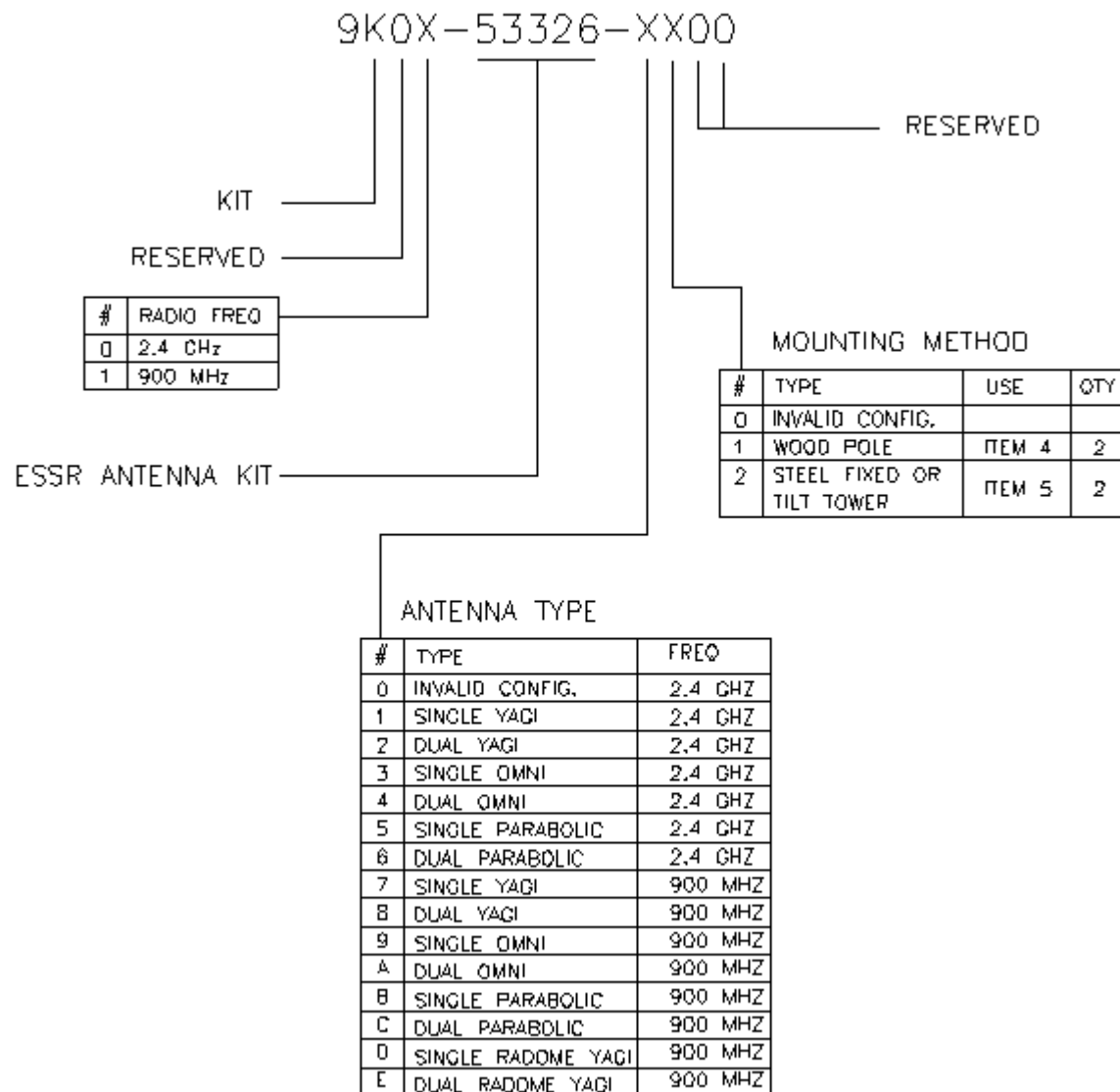
The figures shown on the following pages provide details for a pole mounted radio installation. Paragraph 2.4 provides a Safetran part number ordering chart, and each installation drawing has a corresponding parts list of materials on the opposite page. The column in the parts list containing the Item Numbers corresponds to the circled callout numbers on the installation drawings.

For **single** antenna pole mount installations refer to Figure 2-1 for parts and placement.

For **dual** antenna pole mount installations refer to Figure 2-2 for parts and placement.

2.4 KIT A53326 ORDERING INFORMATION – CONFIGURATION CHART

A53326 Pole Mounted Radio Antenna Kits are ordered from Siemens in accordance with the following configuration part numbering scheme.



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ITEM #	DESCRIPTION	SIEMENS P/N	QTY 1X00	QTY 3X00	QTY 5X00	QTY 7X00	QTY 9X00	QTY BX00	QTY DX00
1	2.4 GHz Yagi Antenna	Z913-00039-0000	1	-	-	-	-	-	-
2	2.4 GHz Omni Antenna	Z913-00025-0000	-	1	-	-	-	-	-
3	2.4 GHz Parabolic Antenna	Z913-00023-0000	-	-	1	-	-	-	-
4	Pipe Mast Mount (Wood Pole Only)	Z801-08469-0000	2	2	2	2	2	2	2
5	Mast / Pipe Bracket (Tilt or Tower)	Z912-00080-0000	2	2	2	2	2	2	2
6	Pipe Mast	Z918-00020-0000	1	1	1	1	1	1	1
7	Mounting Bracket	Z912-00070-0000	-	1	-	-	1	-	-
8	Antenna Mount	Z912-00084-0000	1	-	-	1	-	-	1
9	2.4 GHz Arrestor, NF-NF	Z803-00151-0000	1	1	1	-	-	-	-
12	Tape Kit	Z801-08467-0000	1	1	1	1	1	1	1
13	Cold Shrink (8426-9M)	Z801-08509-0000	1	1	1	1	1	1	1
14	Tie Wrap	Z912-00067-0000	1	1	1	1	1	1	1
16	Round Straps	Z918-00013-0000	1	1	1	1	1	1	1
17	Jumper 3 Ft.	Z706-00272-0000	2	2	2	2	2	2	2
22	900 MHz Yagi Antenna	Z913-00017-0000	-	-	-	1	-	-	-
23	900 MHz Omni Antenna	Z913-00032-0000	-	-	-	-	1	-	-
24	900 MHz Parabolic Antenna	Z913-00051-0000	-	-	-	-	-	1	-
25	900 MHz Radome Yagi Antenna	Z913-00015-0000	-	-	-	-	-	-	1
26	900 MHz Arrestor, NF-NF	Z803-00141-0000	-	-	-	1	1	1	1

Callouts for Figure 2-1 (Next Page)

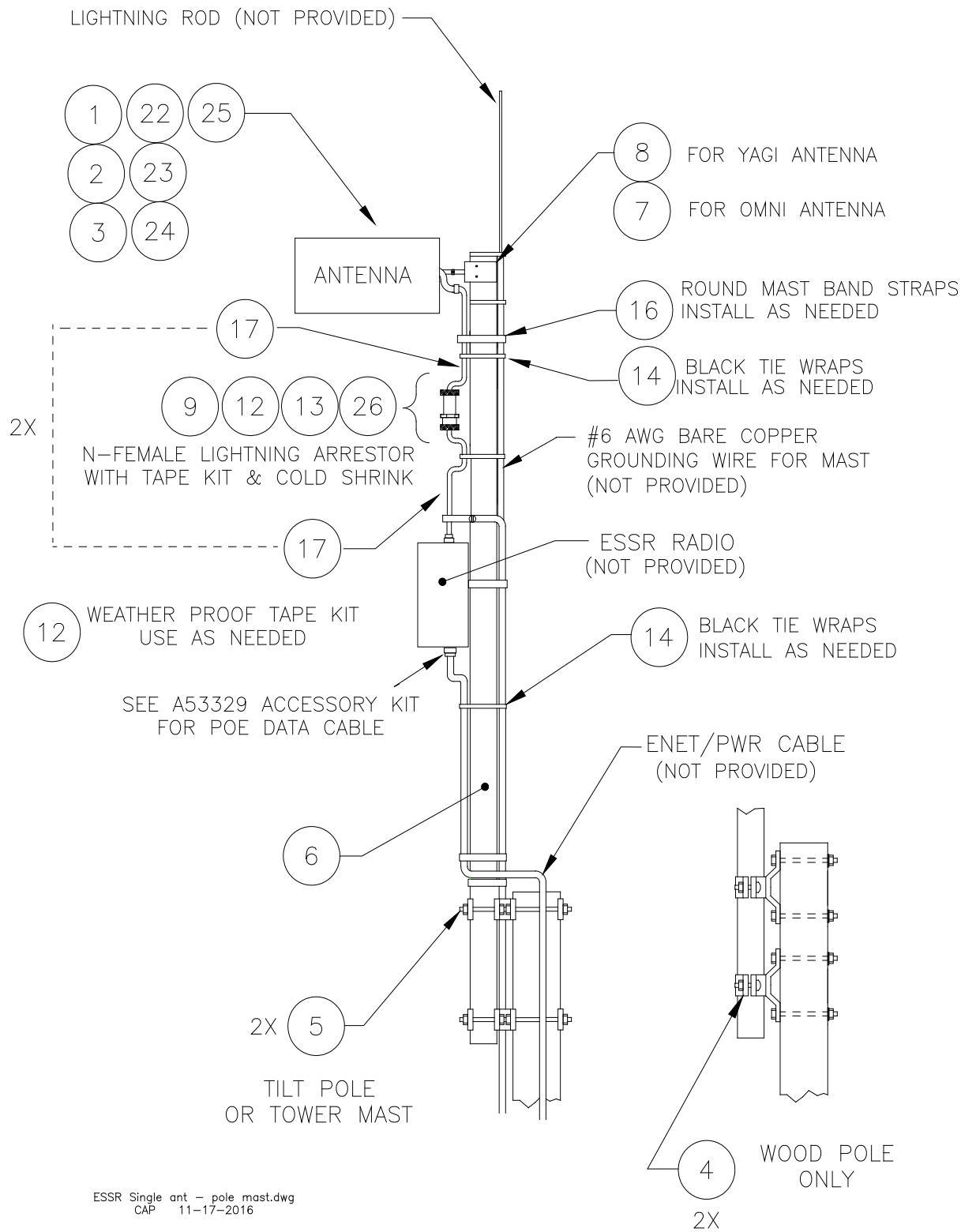


Figure 2-1 A53326 Single Antenna – Radio on Pole – Mast Connections

ITEM #	DESCRIPTION	SIEMENS P/N	QTY 2X00	QTY 4X00	QTY 6X00	QTY 8X00	QTY AX00	QTY CX00	QTY EX00
1	2.4 GHz Yagi Antenna	Z913-00039-0000	2	-	-	-	-	-	-
2	2.4 GHz Omni Antenna	Z913-00025-0000	-	2	-	-	-	-	-
3	2.4 GHz Parabolic Antenna	Z913-00023-0000	-	-	2	-	-	-	-
4	Pipe Mast Mount (Wood Pole Only)	Z801-08469-0000	2	2	2	2	2	2	2
5	Mast / Pipe Bracket (Tilt or Tower)	Z912-00080-0000	2	2	2	2	2	2	2
6	Pipe Mast	Z918-00020-0000	1	1	1	1	1	1	1
7	Mounting Bracket	Z912-00070-0000	-	2	-	-	2	-	-
8	Antenna Mount	Z912-00084-0000	2	-	-	2	-	-	2
9	2.4 GHz Arrestor, NF-NF	Z803-00158-0000	2	2	2	-	-	-	-
12	Tape Kit	Z801-08467-0000	1	1	1	1	1	1	1
13	Cold Shrink (8426-9M)	Z801-08509-0000	1	1	1	1	1	1	1
14	Tie Wrap	Z912-00067-0000	1	1	1	1	1	1	1
16	Round Straps	Z918-00013-0000	1	1	1	1	1	1	1
17	Jumper 3 Ft.	Z706-00272-0000	4	4	4	4	4	4	4
22	900 MHz Yagi Antenna	Z913-00017-0000	-	-	-	2	-	-	-
23	900 MHz Omni Antenna	Z913-00032-0000	-	-	-	-	2	-	-
24	900 MHz Parabolic Antenna	Z913-00051-0000	-	-	-	-	-	2	-
25	900 MHz Radome Yagi Antenna	Z913-00015-0000	-	-	-	-	-	-	2
26	900 MHz Arrestor, NF-NF	Z803-00141-0000	-	-	-	2	2	2	2

Callouts for Figure 2-2 (Next Page)

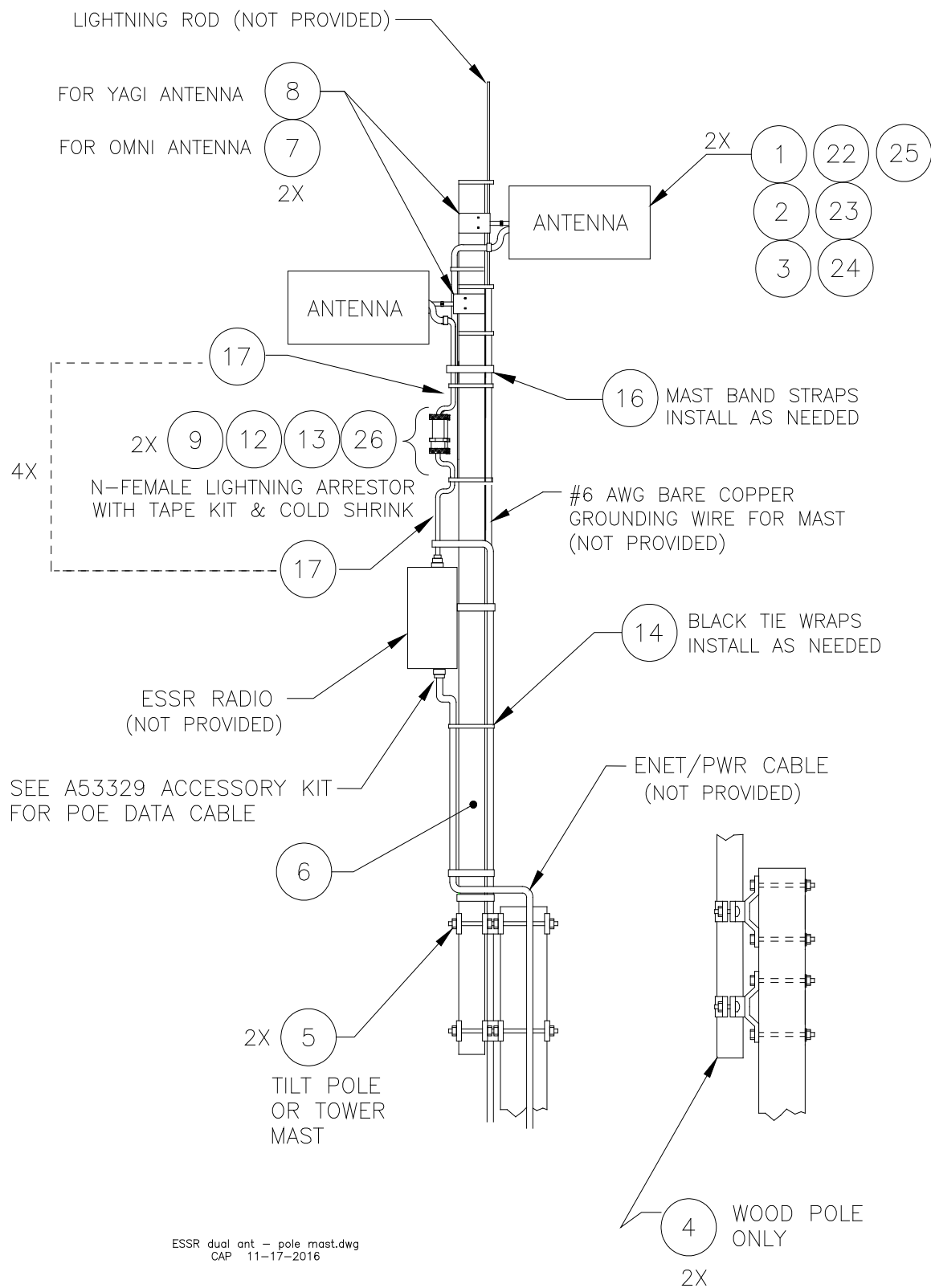


Figure 2-2 A53326 Dual Antenna – Radio on Pole – Mast Connections

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SECTION 3

A53327 – BUNGALOW MOUNTED RADIO ANTENNA KITS

3.0 A53327 – BUNGALOW MOUNTED RADIO ANTENNA KITS

3.1 OVERVIEW

A bungalow mounted installation is one in which the radio is mounted inside a bungalow with the cabling running to the top of a pole or tower mast where the antenna(s) are mounted. A53327 antenna kits for bungalow mounted radios contain additional cables, compared to antenna kits for pole mounted radios, to accommodate the extended distance between the radio and antenna locations.

3.2 STANDARD MATERIALS INCLUDED IN KITS

A53327 antenna kits contain all necessary parts required for a standard bungalow mounted radio installation. These kits include:

- The selected antenna(s)
- A galvanized steel pipe mast extension of 1-¼ inch outside diameter x 10 foot length
- RF coax cables
- Weather proofing material
- Associated grounding and lightning protection materials

3.3 ANTENNA KIT INSTALLATION

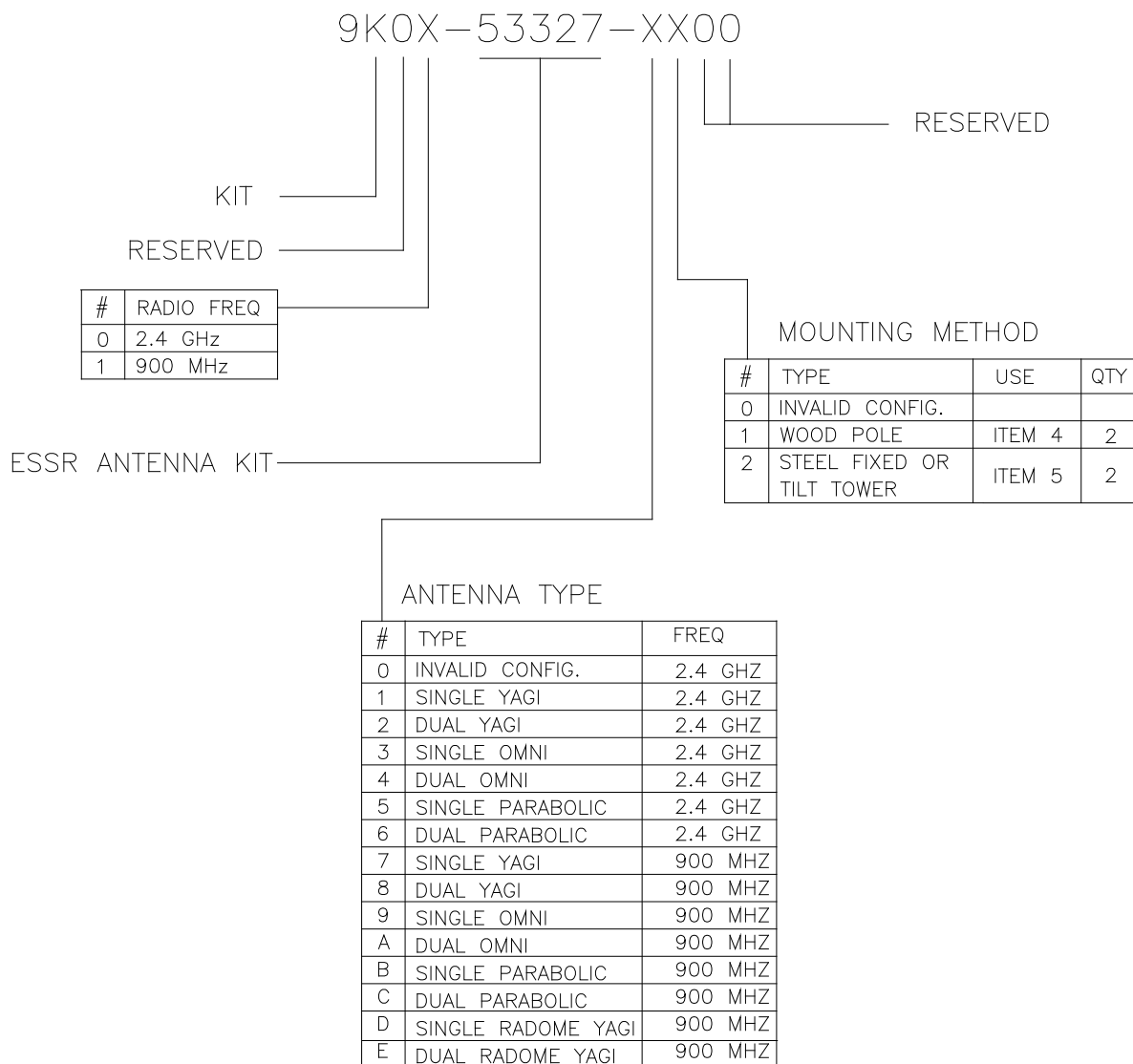
The figures shown on the following pages provide details for a bungalow mount installation. Paragraph 3.4 provides a Safetran part number ordering chart, and each installation drawing has a corresponding parts list of materials on the opposite page. The column in the parts list containing the Item Numbers corresponds to the circled callout numbers on the installation drawings.

For **single** antenna bungalow mount installations refer to Figures 3-2 through 3-4 for parts and placement.

For **dual** antenna bungalow mount installations refer to Figures 3-5 through 3-7 for parts and placement.

3.4 KIT A53327 ORDERING INFORMATION – CONFIGURATION CHART

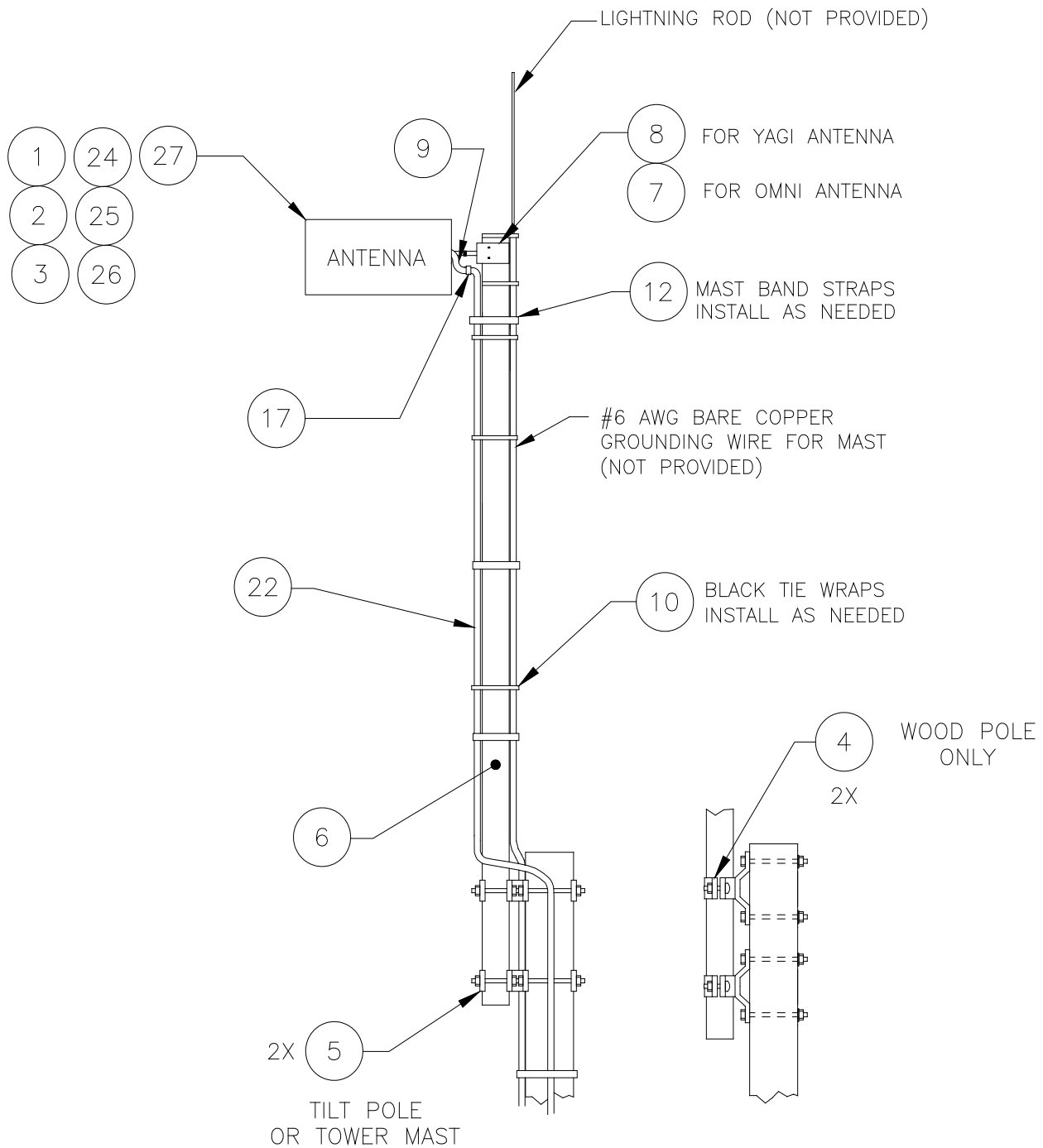
A53327 Bungalow Mounted Radio Antenna Kits are ordered from Siemens in accordance with the following configuration part numbering scheme.



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ITEM #	DESCRIPTION	SIEMENS P/N	QTY 1X00	QTY 3X00	QTY 5X00	QTY 7X00	QTY 9X00	QTY BX00	QTY DX00
1	2.4 GHz Yagi Antenna	Z913-00039-0000	1	-	-	-	-	-	-
2	2.4 GHz Omni Antenna	Z913-00025-0000	-	1	-	-	-	-	-
3	2.4 GHz Parabolic Antenna	Z913-00023-0000	-	-	1	-	-	-	-
4	Pipe Mast Mount (Wood Pole Only)	Z801-08469-0000	2	2	2	2	2	2	2
5	Mast / Pipe Bracket (Tilt or Tower)	Z912-00080-0000	2	2	2	2	2	2	2
6	Pipe Mast	Z918-00020-0000	1	1	1	1	1	1	1
7	Mounting Bracket	Z912-00070-0000	-	1	-	-	1	-	-
8	Antenna Mount	Z912-00084-0000	1	-	-	1	-	-	1
9	Cold Shrink	Z801-08461-0000	1	1	1	1	1	1	1
10	Tie Wrap	Z912-00067-0000	1	1	1	1	1	1	1
12	Round Straps	Z918-00013-0000	1	1	1	1	1	1	1
17	N-Male	Z709-01010-0000	3	3	3	3	3	3	3
24	900 MHz Yagi Antenna	Z913-00017-0000	-	-	-	1	-	-	-
25	900 MHz Omni Antenna	Z913-00032-0000	-	-	-	-	1	-	-
26	900 MHz Parabolic Antenna	Z913-00051-0000	-	-	-	-	-	1	-
22	½" Coax Cable - Superflex	Z935-00023-0000	100 FT	100 FT	100 FT	100 FT	100 FT	100 FT	100 FT
27	900 MHz Radome Yagi Antenna	Z913-00015-0000	-	-	-	-	-	-	1

Callouts for Figure 3-1 (Next Page)



ESSR Single ant - bungalow mast.dwg
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Figure 3-1 A53327 Single Antenna Kit – Radio in Bungalow – Mast Connections

ITEM #	DESCRIPTION	SIEMENS P/N	QTY 1X00	QTY 3X00	QTY 5X00	QTY 7X00	QTY 9X00	QTY 8X00	QTY DX00
9	Cold Shrink	Z801-08461-0000	1	1	1	1	1	1	1
11	Hangers (10 pack)	Z801-08459-0000	1	1	1	1	1	1	1
13	2.4 GHz Arrestor, NF-NF	Z803-00158-0000	1	1	1	-	-	-	-
14	Jumper, 10 FT	Z801-08474-0010	1	1	1	1	1	1	1
16	Ground Kit	Z801-08458-0000	1	1	1	1	1	1	1
17	N-Male	Z709-01010-0000	3	3	3	3	3	3	3
22	½" Coax Cable - Superflex	Z935-00023-0000	100 FT	100 FT	100 FT	100 FT	100 FT	100 FT	100 FT
28	900 MHz Arrestor, NF-NF	Z803-00141-0000	-	-	-	1	1	1	1

Callouts for Figure 3-2 (Next Page)

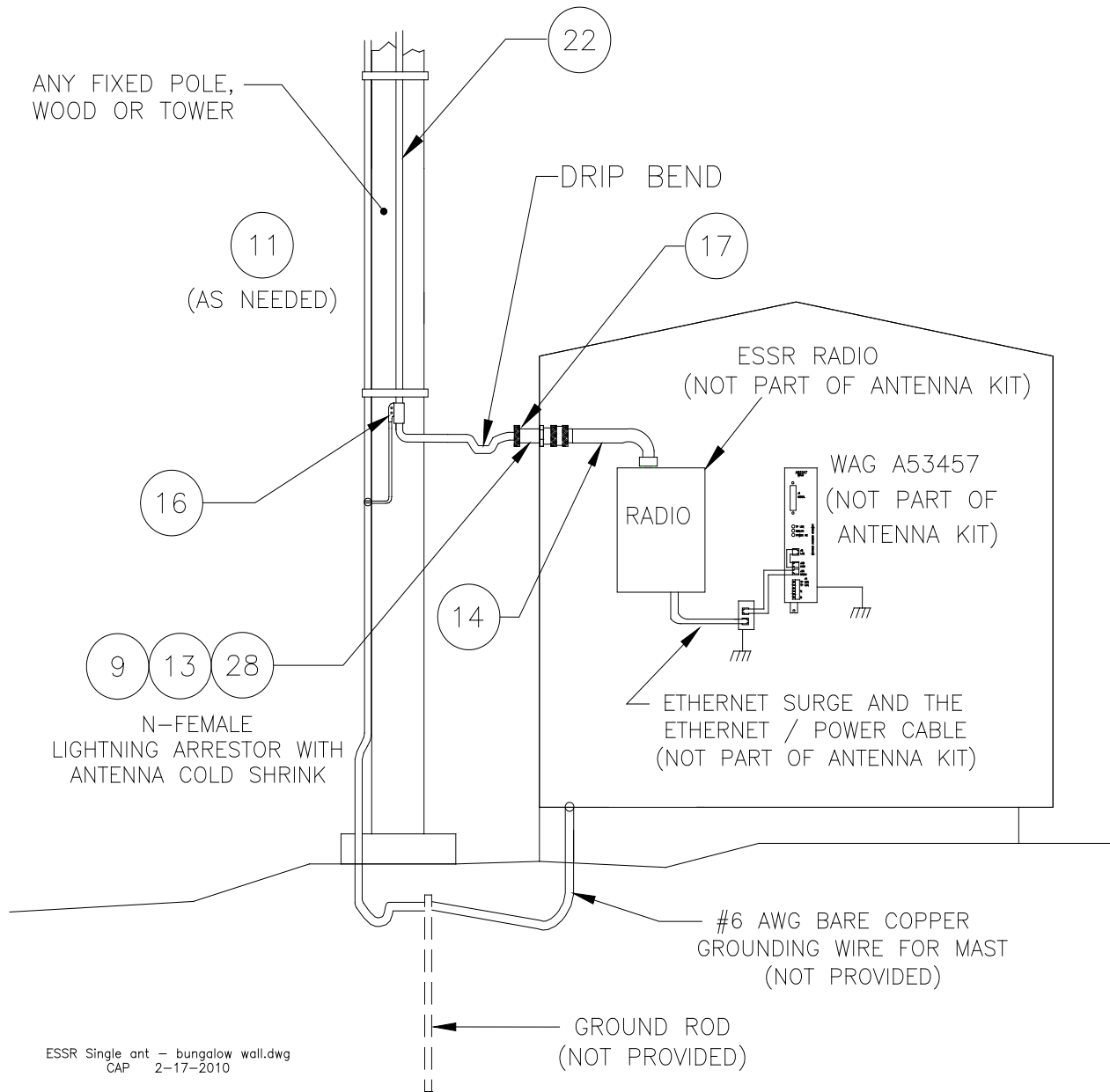


Figure 3-2 A53327 Single Antenna – Radio in Bungalow – Wall Cable

ITEM #	DESCRIPTION	SIEMENS P/N	QTY 1X00	QTY 3X00	QTY 5X00	QTY 7X00	QTY 9X00	QTY BX00	QTY DX00
13	2.4 GHz Arrestor, NF-NF	Z803-00157-0000	1	1	1	-	-	-	-
14	Jumper, 10 FT	Z801-08474-0010	1	1	1	1	1	1	1
15	Ground Plate	Z916-00055-0000	1	1	1	1	1	1	1
16	Ground Kit	Z801-08458-0000	1	1	1	1	1	1	1
17	N-Male	Z709-01010-0000	3	3	3	3	3	3	3
18	N-Female	Z709-10010-0000	1	1	1	1	1	1	1
19	Tape Kit	Z801-08467-0000	1	1	1	1	1	1	1
20	Cold Shrink	Z801-08462-0000	1	1	1	1	1	1	1
22	½" Coax Cable - Superflex	Z935-00023-0000	100 FT	100 FT	100 FT	100 FT	100 FT	100 FT	100 FT
28	900 MHz Arrestor, NF-NF	Z803-00141-0000	-	-	-	1	1	1	1

Callouts for Figure 3-3 (Next Page)

ITEM #	DESCRIPTION	SIEMENS P/N	QTY 2X00	QTY 4X00	QTY 6X00	QTY 8X00	QTY AX00	QTY CX00	QTY EX00
1	2.4 GHz Yagi Antenna	Z913-00039-0000	2	-	-	-	-	-	-
2	2.4 GHz Omni Antenna	Z913-00025-0000	-	2	-	-	-	-	-
3	2.4 GHz Parabolic Antenna	Z913-00023-0000	-	-	2	-	-	-	-
4	Pipe Mast Mount (Wood Pole only)	Z801-08469-0000	2	2	2	2	2	2	2
5	Mast / Pipe Bracket (Tilt or Tower)	Z912-00080-0000	2	2	2	2	2	2	2
6	Pipe Mast	Z918-00020-0000	1	1	1	1	1	1	1
7	Mounting Bracket	Z912-00070-0000	-	2	-	-	2	-	-
8	Antenna Mount	Z912-00084-0000	2	-	-	2	-	-	2
9	Cold Shrink	Z801-08461-0000	2	2	2	2	2	2	2
10	Tie Wrap	Z912-00067-0000	1	1	1	1	1	1	1
12	Round Straps	Z918-00013-0000	1	1	1	1	1	1	1
17	N-Male	Z709-01010-0000	6	6	6	6	6	6	6
22	½" Coax Cable - Superflex	Z935-00023-0000	200 FT	200 FT	200 FT	200 FT	200 FT	200 FT	200 FT
24	900 MHz Yagi Antenna	Z913-00017-0000	-	-	-	2	-	-	-
25	900 MHz Omni Antenna	Z913-00032-0000	-	-	-	-	2	-	-
26	900 MHz Parabolic Antenna	Z913-00051-0000	-	-	-	-	-	2	-
27	900 MHz Radome Yagi Antenna	Z913-00015-0000	-	-	-	-	-	-	2

Callouts for Figure 3-4 (Next Page)

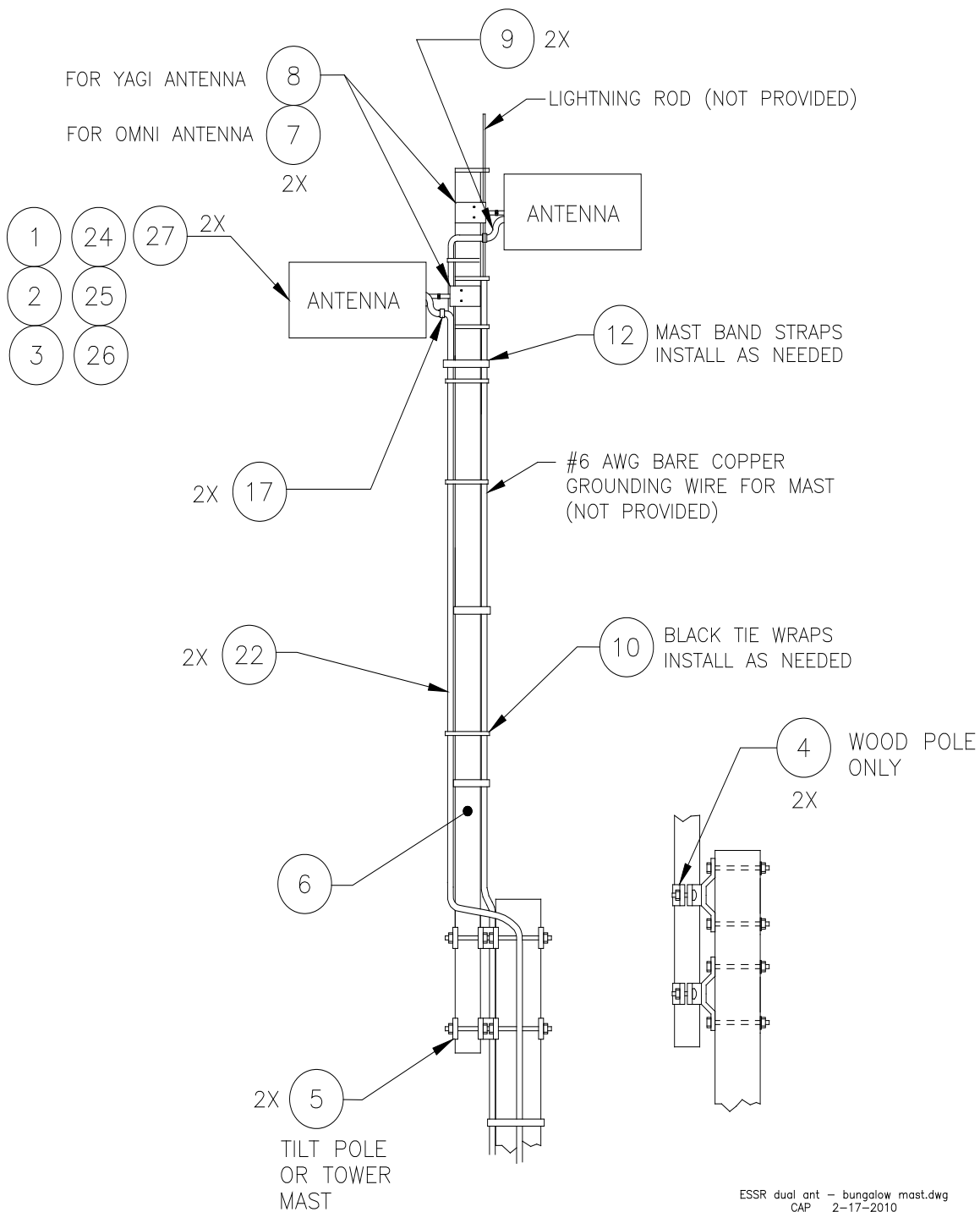


Figure 3-4 A53327 Dual Antenna – Radio in Bungalow – Mast Connections

ITEM #	DESCRIPTION	SIEMENS P/N	QTY 2X00	QTY 4X00	QTY 6X00	QTY 8X00	QTY AX00	QTY CX00	QTY EX00
9	Cold Shrink	Z801-08461-0000	2	2	2	2	2	2	2
11	Hangers (10 Pack)	Z801-08459-0000	2	2	2	2	2	2	2
13	2.4 GHz Arrestor, NF-NF	Z803-00157-0000	2	2	2	-	-	-	-
14	Jumper, 10 FT	Z801-08474-0010	2	2	2	2	2	2	2
16	Ground Kit	Z801-08458-0000	2	2	2	2	2	2	2
17	N-Male	Z709-01010-0000	6	6	6	6	6	6	6
22	½" Coax Cable - Superflex	Z935-00023-0000	200 FT	200 FT	200 FT	200 FT	200 FT	200 FT	200 FT
28	900 MHz Arrestor, NF-NF	Z803-00141-0000	-	-	-	2	2	2	2

Callouts for Figure 3-5 (Next Page)

ITEM #	DESCRIPTION	SIEMENS P/N	QTY 2X00	QTY 4X00	QTY 6X00	QTY 8X00	QTY AX00	QTY CX00	QTY EX00
13	2.4 GHz Arrestor, NF-NF	Z803-00157-0000	2	2	2	-	-	-	-
14	Jumper, 10 FT	Z801-08474-0010	2	2	2	2	2	2	2
15	Ground Plate	Z916-00055-0000	2	2	2	2	2	2	2
16	Ground Kit	Z801-08458-0000	2	2	2	2	2	2	2
17	N-Male	Z709-01010-0000	6	6	6	6	6	6	6
18	N-Female	Z709-10010-0000	2	2	2	2	2	2	2
19	Tape Kit	Z801-08467-0000	1	1	1	1	1	1	1
20	Cold Shrink	Z801-08462-0000	2	2	2	2	2	2	2
22	½" Coax Cable - Superflex	Z935-00023-0000	200 FT	200 FT	200 FT	200 FT	200 FT	200 FT	200 FT
28	900 MHz Arrestor, NF-NF	Z803-00141-0000	-	-	-	2	2	2	2

Callouts for Figure 3-6 (Next Page)

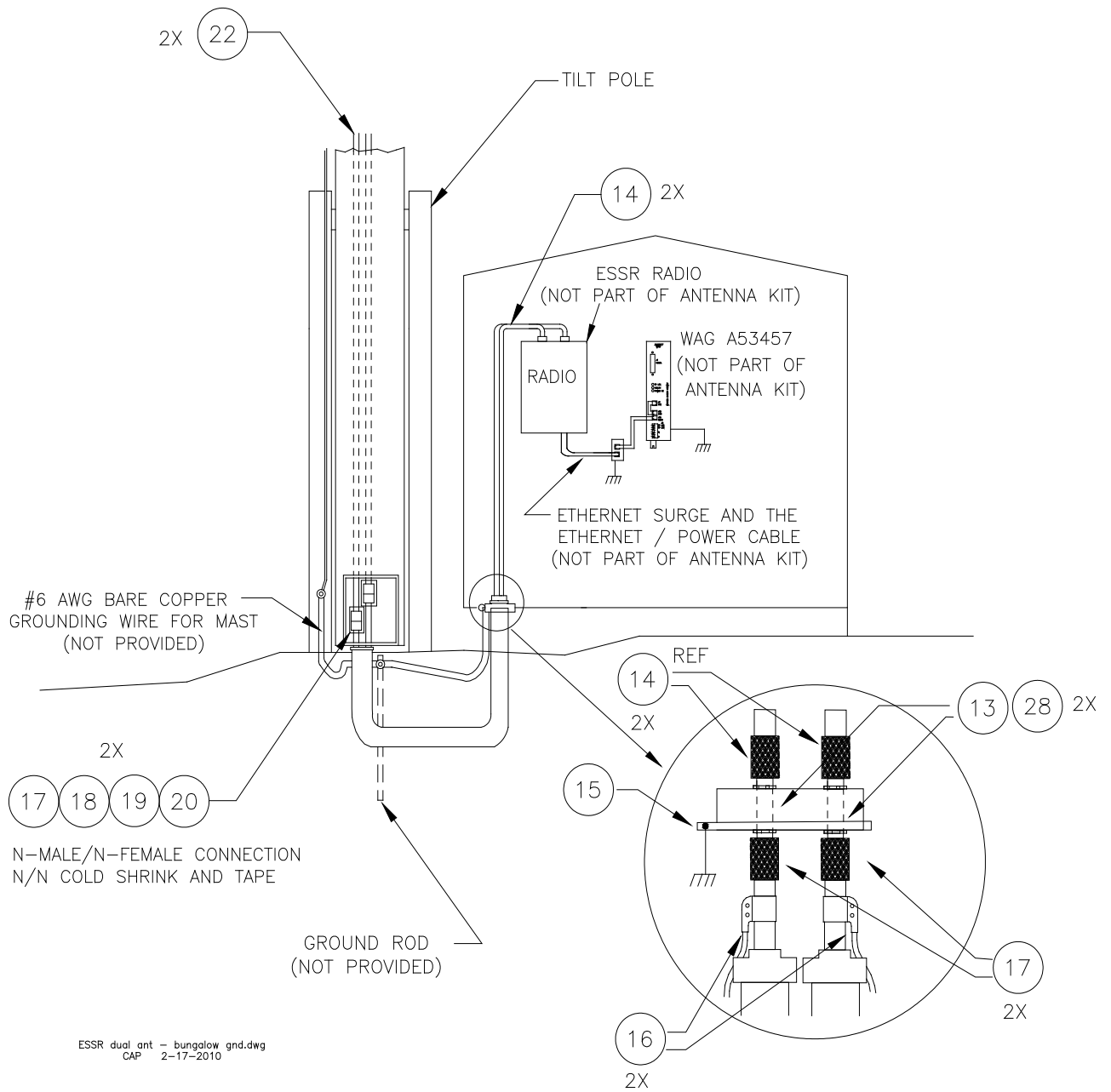


Figure 3-6 A53327 Dual Antennas – Radio in Bungalow – Ground Cable

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SECTION 4

A53329 – ESSR RADIO ACCESSORY PACKAGE

4.0 A53329 – ESSR RADIO ACCESSORY PACKAGE

4.1 OVERVIEW

The A53329 radio accessory package provides multiple hardware and cable options to assist designers and installers in making connections to the ethernet port of Siemens's A53325 and A53350 Ethernet Spread Spectrum Radios (ESSR). For information on how to connect to the RF ports of the ESSR please reference the A53326 and A53327 sections of this document.

Paragraph 4.2 provides an Siemens part number ordering chart for the selection of an Ethernet interface package. Each of the following installation drawings has a corresponding parts list of materials on the opposite page. The column in the parts list containing the Item Numbers corresponds to the circled callout numbers on the installation drawings.

4.2 KIT A53329 ORDERING INFORMATION – CONFIGURATION CHART

A53329 ESSR Radio Accessory Packages are ordered from Siemens in accordance with the following configuration part numbering scheme.

9KXX-53329-XXXX

ETHERNET CABLE REQUIREMENTS

#	LENGTH
000	Refer to Figure 4-2 on Page 4-6.
A20	20 IN
005	5 FT
010	10 FT
020	20 FT
030	30 FT
050	50 FT
100	100 FT
200	200 FT *
300	300 FT *

* See Flag Note 3 on Page 4-4.

RADIO LOCATION

#	MOUNTED
1	BUNGALOW
2	OUTSIDE / POLE

POWER OPTION

#	POWER INSERTER
0	NONE
1	DC TO DC INSERTER
2	AC TO 24 VDC INSERTER

MAINTENANCE TOOLS

#	TOOLS DESIRED
0	NONE
1	CONSOLE CABLE
2	AUDIO ANTENNA ALIGNMENT CABLE
3	ITEMS 1 AND 2

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#	DESCRIPTION	SIEMENS P/N	QTY -2A20	QTY -2005	QTY -2010	QTY -2020	QTY -2030	QTY -2050	QTY -2100	QTY -2200	QTY -2300
2	1 CONSOLE CABLE (RS232)	Z706-00235-0000	-	-	-	-	-	-	-	-	-
	2 ADAPTER CABLE (AUDIO ALIGNMNT)	Z706-00259-0000	-	-	-	-	-	-	-	-	-
3	3 SURGE PROTECTOR (RJ45-RJ45)	Z803-00152-0000	1	1	1	1	1	1	1	1	1
	4 POWER INSERTER, AC TO 24 VDC	Z932-00184-0000	-	-	-	-	-	-	-	-	-
	5 POWER INSERTER, VDC/VDC	Z932-00186-0000	-	-	-	-	-	-	-	-	-
	6 INTERCONNECT (RJ45 FEMALE)	Z714-02104-0008	1	1	1	1	1	1	1	1	1
	7 BACKEND COVER	Z714-02105-0000	2	2	2	2	2	2	2	2	2
	8 COLD SHRINK	Z801-08462-0000	1	1	1	1	1	1	1	1	1
	9 ENET CABLE, 6 FT, SHLD PATCH	Z706-00262-0000	1	1	1	1	1	1	1	1	1
	10 ENET CABLE, 1 FT, CAT5 CROSSOVR	Z706-00261-0000	1	1	1	1	1	1	1	1	1
	11 ENET CABLE, 50 FT, SHLD PATCH	Z706-00264-0000	1	1	1	1	1	1	1	1	1
	12 ENET CABLE, 15 FT, PATCH	Z706-00204-0000	-	-	-	-	-	-	-	-	-
	13 ESR MOUNTING BRACKET	9000-47750-0001	-	-	-	-	-	-	-	-	-
	14 ENET PWR & DAT, 20 IN CAT5 UV	Z706-00253-0000	1	-	-	-	-	-	-	-	-
	15 ENET PWR & DAT, 5 FT CAT5 UV	Z706-00236-0000	-	1	-	-	-	-	-	-	-
	16 ENET PWR & DAT, 10 FT CAT5 UV	Z706-00247-0000	-	-	1	-	-	-	-	-	-
	17 ENET PWR & DAT, 20 FT CAT5 UV	Z706-00254-0000	-	-	-	1	-	-	-	-	-
1	18 ENET PWR & DAT, 30 FT CAT5 UV	Z706-00255-0000	-	-	-	-	1	-	-	-	-
	19 ENET PWR & DAT, 50 FT CAT5 UV	Z706-00237-0000	-	-	-	-	-	1	-	-	-
	20 ENET PWR & DAT, 100 FT CAT5 UV	Z706-00238-0000	-	-	-	-	-	-	1	-	-
	21 ENET PWR & DAT, 200 FT CAT5 UV	Z706-00248-0000	-	-	-	-	-	-	-	1	-
	22 ENET PWR & DAT, 300 FT CAT5 UV	Z706-00249-0002	-	-	-	-	-	-	-	-	1
	23 ETHERNET CABLE, 2 FT, CAT5 PCH	Z706-00266-0002	1	1	1	1	1	1	1	2	2
	24 INSTALLATION INSTRUCTIONS	Z630-39591-0001	1	1	1	1	1	1	1	1	1

Callouts for Figure 4-1 (Next Page)

- 1 See configuration chart to locate the appropriate length for the Ethernet power / data cable. Select the length needed from items 14 to 22.
- 2 Test Accessories (not shown).
- 3 The AC to 24 VDC Power Inserter, or the DC to DC Power Inserter at 24 VDC, is required if the cable length from the WAG to the radio exceeds 100 feet.

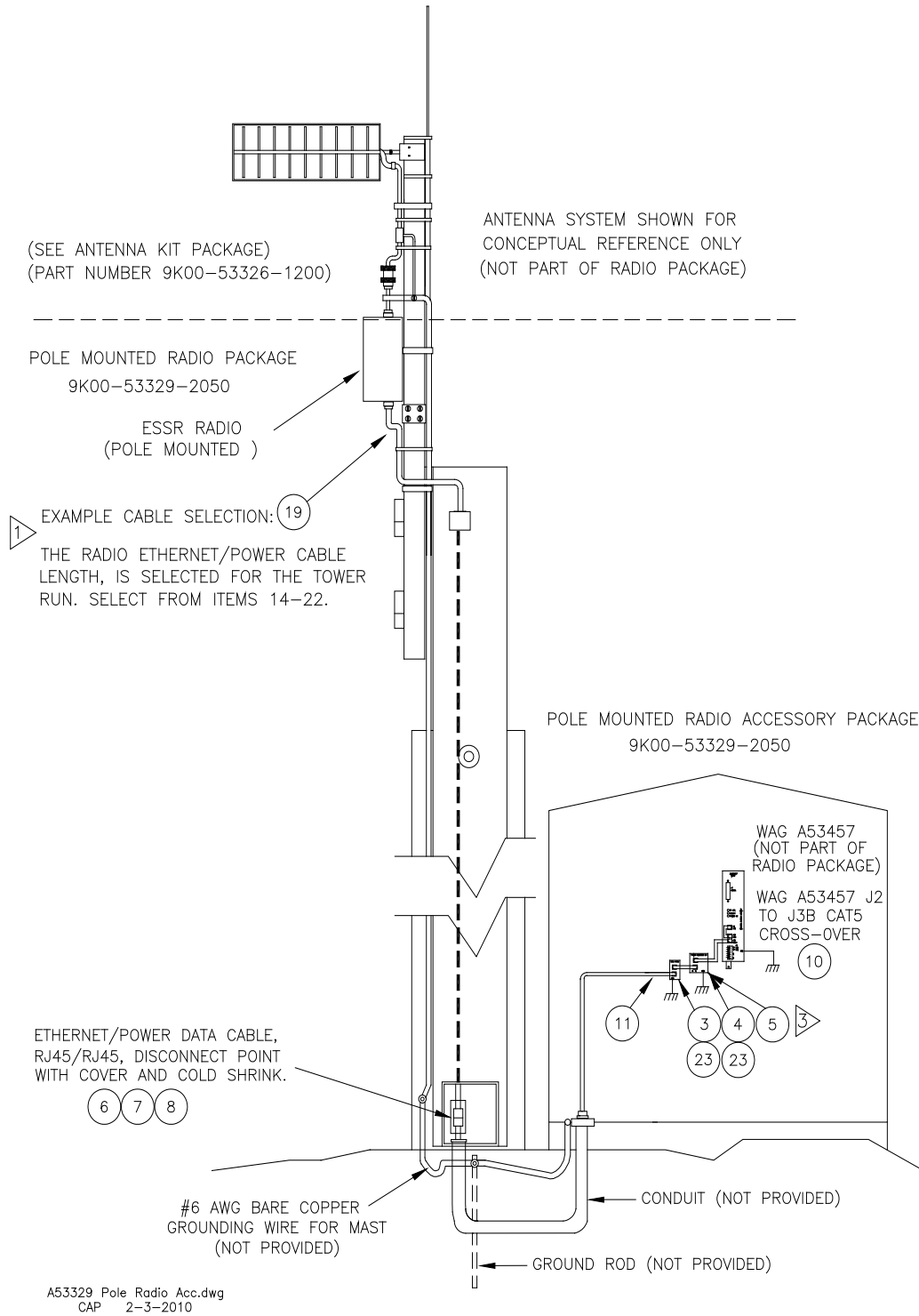


Figure 4-1 ESSR Radio Accessories – Pole Mounted

#	DESCRIPTION	SIEMENS P/N	QTY -1000	QTY -1A20	QTY -1005	QTY -1010	QTY -1020	QTY -1030	QTY -1050	QTY -1100	QTY -1200	QTY -1300
2	1 CONSOLE CABLE (RS232)	Z706-00235-0000	-	-	-	-	-	-	-	-	-	-
2	2 ADAPTER CABLE (AUDIO ALIGNMNT)	Z706-00259-0000	-	-	-	-	-	-	-	-	-	-
3	3 SURGE PROTECTOR (RJ45-RJ45)	Z803-00152-0000	1	1	1	1	1	1	1	1	1	1
3	4 POWER INSERTER, AC TO 24 VDC	Z932-00184-0000	-	-	-	-	-	-	-	-	-	-
3	5 POWER INSERTER, VDC/VDC	Z932-00186-0000	-	-	-	-	-	-	-	-	-	-
6	6 INTERCONNECT (RJ45 FEMALE)	Z714-02104-0008	-	-	-	-	-	-	-	-	-	-
7	7 BACKEND COVER	Z714-02105-0000	-	-	-	-	-	-	-	-	-	-
8	8 COLD SHRINK	Z801-08462-0000	-	-	-	-	-	-	-	-	-	-
9	9 ENET CABLE, 6 FT, SHLD PATCH	Z706-00262-0000	1	1	1	1	1	1	1	1	1	1
10	10 ENET CABLE, 1 FT, CAT5 CROSSOVR	Z706-00261-0000	1	1	1	1	1	1	1	1	1	1
11	11 ENET CABLE, 50 FT, SHLD PATCH	Z706-00264-0000	-	-	-	-	-	-	-	-	-	-
12	12 ENET CABLE, 15 FT, PATCH	Z706-00204-0000	1	-	-	1	1	1	1	1	1	1
13	13 ESSR MOUNTING BRACKET	9000-47750-0001	1	1	1	1	1	1	1	1	1	1
14	14 ENET PWR & DAT, 20 IN CAT5 UV	Z706-00253-0000	1	1	-	-	-	-	-	-	-	-
15	15 ENET PWR & DAT, 5 FT CAT5 UV	Z706-00236-0000	-	-	1	-	-	-	-	-	-	-
16	16 ENET PWR & DAT, 10 FT CAT5 UV	Z706-00247-0000	-	-	-	1	-	-	-	-	-	-
17	17 ENET PWR & DAT, 20 FT CAT5 UV	Z706-00254-0000	-	-	-	-	1	-	-	-	-	-
18	18 ENET PWR & DAT, 30 FT CAT5 UV	Z706-00255-0000	-	-	-	-	-	1	-	-	-	-
19	19 ENET PWR & DAT, 50 FT CAT5 UV	Z706-00237-0000	-	-	-	-	-	-	1	-	-	-
20	20 ENET PWR & DAT, 100 FT CAT5 UV	Z706-00238-0000	-	-	-	-	-	-	-	1	-	-
21	21 ENET PWR & DAT, 200 FT CAT5 UV	Z706-00248-0000	-	-	-	-	-	-	-	-	1	-
22	22 ENET PWR & DAT, 300 FT CAT5 UV	Z706-00249-0002	-	-	-	-	-	-	-	-	-	1
23	23 ETHERNET CABLE, 2 FT, CAT5 PCH	Z706-00266-0002	1	1	1	1	1	1	1	1	2	2
24	24 INSTALLATION INSTRUCTIONS	Z630-39591-0001	1	1	1	1	1	1	1	1	1	1

Callouts for Figure 4-2 (Next Page)

- 1 See configuration chart to locate the appropriate length for the Ethernet power / data cable. Select the length needed from items 14 to 22.
- 2 Test Accessories (not shown).
- 3 The AC to 24 VDC Power Inserter, or the DC to DC Power Inserter at 24 VDC, is required if the cable length from the WAG to the radio exceeds 100 feet.

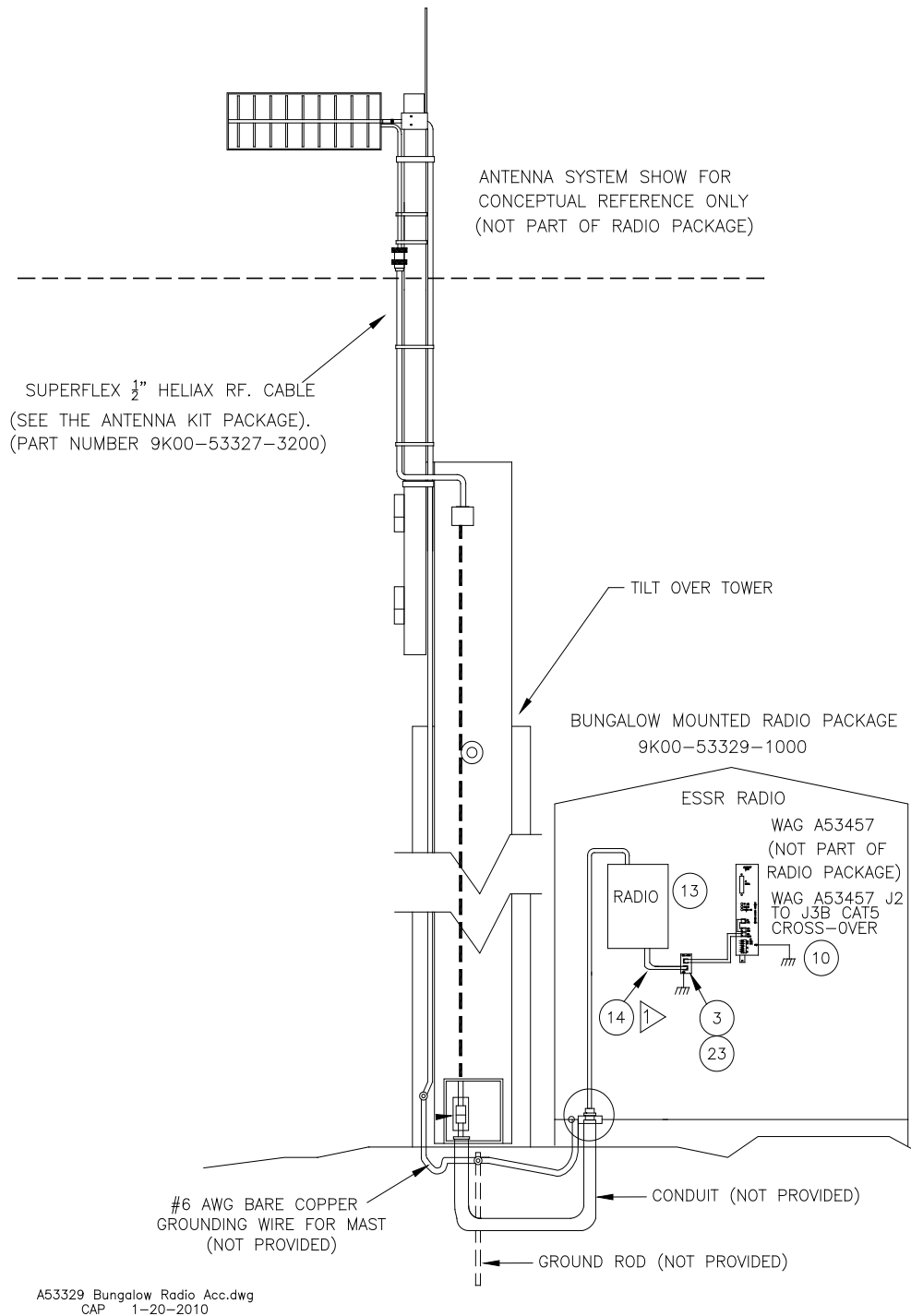


Figure 4-2 ESSR Radio Accessories – Bungalow Mounted

NOTES

NOTES



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