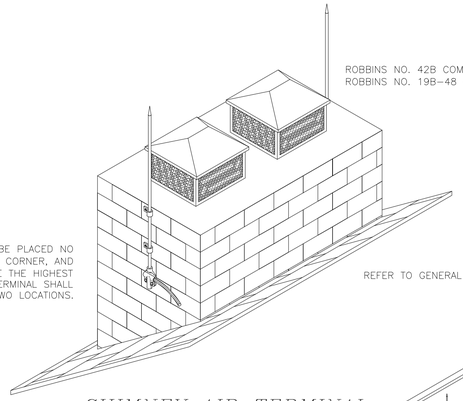
Lightning Protection Example
Typical Exposed Residence

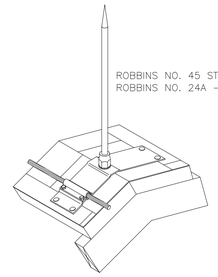
THE DESIGN & DETAILS SHOWN WILL MEET THE REQUIREMENTS OF UNDERWRITERS LABORATORY CODE 96/96A, NATIONAL FIRE PROTECTION ASSOCIATION CODE 780 & THE LIGHTNING PROTECTION INSTITUTE CODE 175 FOR LIGHTNING PROTECTION SYSTEMS



ROBBINS NO. 42B COMBINATION POINT BASE AND
ROBBINS NO. 19B–48 – 3/8" DIA X 48" LONG COPPER POINT

CHIMNEY AIR TERMINALS SHALL BE PLACED NO MORE THAN 24" AWAY FROM EACH CORNER, AND SHALL EXTEND AT LEAST 10" ABOVE THE HIGHEST POINT ON THE CHIMNEY. EACH AIR TERMINAL SHALL BE ANCHORED AT A MINIMUM OF TWO LOCATIONS.

CHIMNEY AIR TERMINAL



ROBBINS NO. 45 STRAP RIDGE POINT BASE AND
ROBBINS NO. 24A – 3/8" DIA X 12" TALL COPPER POINT

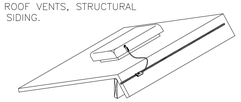
AIR TERMINALS SHALL BE SPACED NO FARTHER THAN 20' APART, AND SHALL EXTEND AT LEAST 10" ABOVE THE OBJECT BEING PROTECTED. EACH AIR TERMINAL SHALL BE ANCHORED AT A MINIMUM OF TWO LOCATIONS.

RIDGE AIR TERMINAL

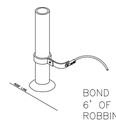
CABLE SHALL BE ANCHORED EVERY 3'–0" MINIMUM

REFER TO GENERAL NOTES NOS. 4 & 14

ALL METAL OBJECTS IN CONSTRUCTION WITHIN 6' OF ANY LIGHTNING PROTECTION CABLE INCLUDING GUTTERS, METALIC ROOF VENTS, STRUCTURAL REBAR AND METAL SIDING.



ROOF VENT BOND

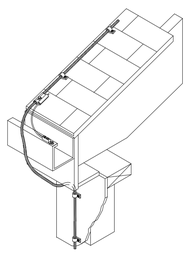


BOND ALL METAL V.T.R.'S THAT ARE WITHIN 6' OF A LIGHTNING PROTECTION CABLE WITH ROBBINS NO. 677S–4 BONDING STRAP.

VENT THRU ROOF BOND

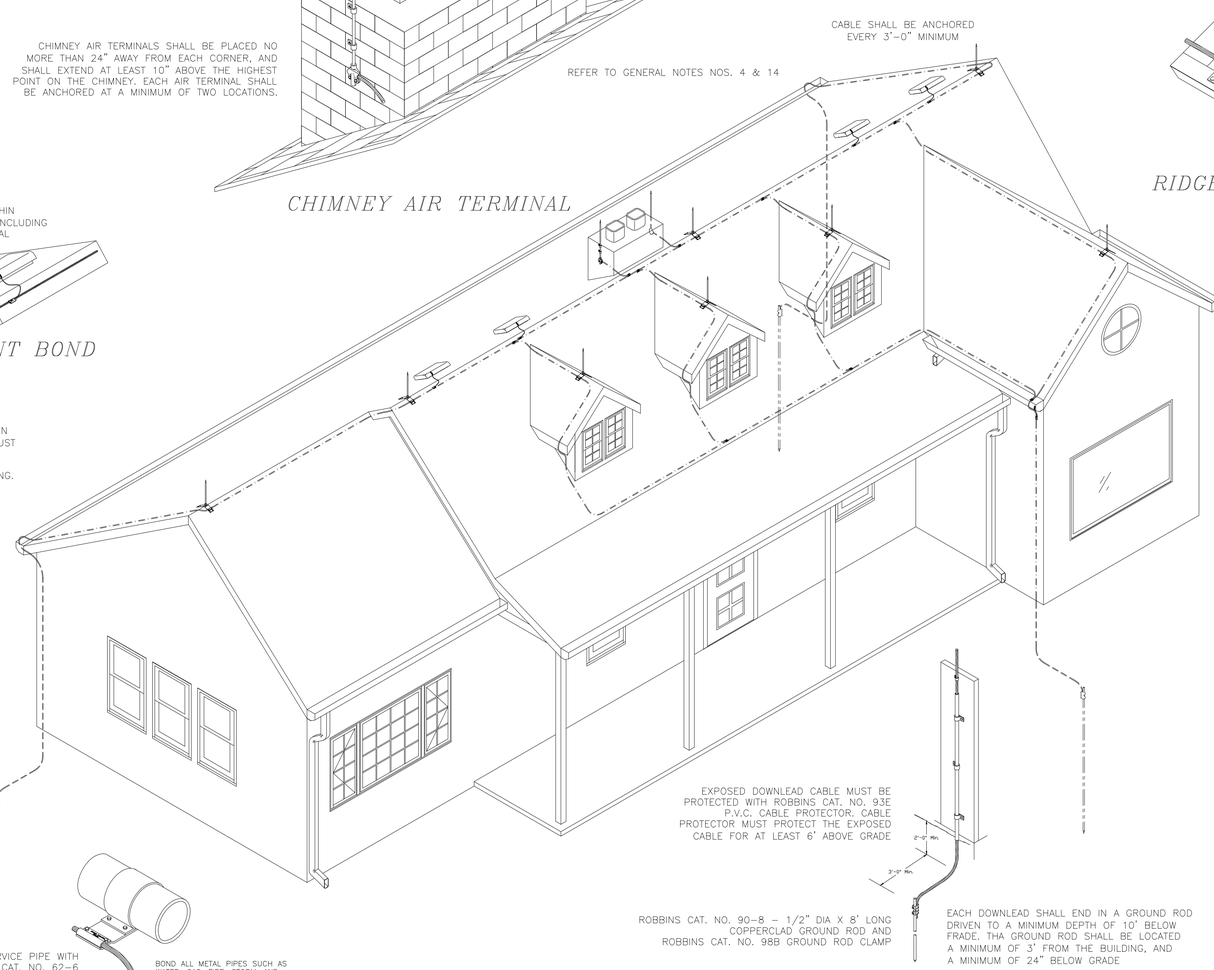
ALL METAL OBJECTS IN CONSTRUCTION WITHIN 6' OF ANY LIGHTNING PROTECTION CABLE MUST BE BONDED TO THE LIGHTNING PROTECTION SYSTEM, INCLUDING GUTTERS, METALIC ROOF VENTS, STRUCTURAL REBAR AND METAL SIDING.

REFER TO GENERAL NOTE 12



RUN ROBBINS NO. 10C COPPER BONDING WIRE TO GUTTER AND BOND WITH ROBBINS NO. 655 BONDING LUG. ATTACH WIRE TO DOWNLEAD WITH ROBBINS NO. 53A CABLE SPLICER

TYPICAL DOWNLEAD



BOND SERVICE PIPE WITH ROBBINS CAT. NO. 62–6 BONDING STRAP

BOND ALL METAL PIPES SUCH AS WATER, GAS, FIRE, STORM, AND SEWER WHICH ENTER THE STRUCTURE TO THE NEAREST DOWNLEAD, GROUND ROD, OR COUNTERPOISE

UNDERGROUND PIPE BOND

EXPOSED DOWNLEAD CABLE MUST BE PROTECTED WITH ROBBINS CAT. NO. 93E P.V.C. CABLE PROTECTOR. CABLE PROTECTOR MUST PROTECT THE EXPOSED CABLE FOR AT LEAST 6' ABOVE GRADE

ROBBINS CAT. NO. 90–8 – 1/2" DIA X 8' LONG COPPERCLAD GROUND ROD AND ROBBINS CAT. NO. 98B GROUND ROD CLAMP

EACH DOWNLEAD SHALL END IN A GROUND ROD DRIVEN TO A MINIMUM DEPTH OF 10' BELOW FRADE. THA GROUND ROD SHALL BE LOCATED A MINIMUM OF 3' FROM THE BUILDING, AND A MINIMUM OF 24" BELOW GRADE

DOWNLEAD AND GROUNDING ROD

Materials Manufactured By
ROBBINS LIGHTNING, INC.
Marysville, Missouri

GENERAL NOTES

1.) CONDUCTOR BEND SHALL NOT FORM A SHARPER ANGLE THAN 90 DEGREES OR HAVE A RADIUS LESS THAN 8 INCHES.
2.) METAL BODIES OF INDUCTANCE LOCATED WITHIN 6' OF A MAIN LIGHTNING CONDUCTOR SHALL BE BONDED TO THE LIGHTNING PROTECTION SYSTEM. (INCLUDING METAL VENTS, FLASHING, LOUVERS & ROOF DRAINS)
3.) AIR TERMINALS SHALL BE PLACED AT LOCATIONS NOT MORE THAN 2'–0 FROM THE ENDS OF RIDGES, OUTSIDE CORNERS, OR OUTSIDE EDGES OF MAIN ROOFS AND MUST EXTEND A MINIMUM OF 10" ABOVE THE OBJECT TO BE PROTECTED.
4.) CONDUCTORS SHALL MAINTAIN A HORIZONTAL OR DOWNWARD PATH FREE FROM "U" AND "V" POCKETS. ANY RISE IN HORIZONTAL CONDUCTOR SHALL NOT EXCEED 6 INCHES.
5.) COPPER LIGHTNING PROTECTION MATERIALS SHALL NOT BE PLACED ON ALUMINUM SURFACES, NOR SHALL ALUMINUM MATERIALS BE PLACED ON COPPER SURFACES.
6.) ALL STRUCTURAL STEEL, REBAR, FRAMING & MISCELLANOUS STEEL SHALL BE MADE ELECTRICALLY CONTINUOUS THROUGH CONSTRUCTION (NOT THE RESPONSIBILITY OF THE LIGHTNING PROTECTION CONTRACTOR.)
7.) ELECTRIC, TELEPHONE, AND ANTENNA SYSTEM GROUNDS SHALL BE CONNECTED WITH MAIN SIZED CONDUCTOR TO ONE LIGHTNING PROTECTION GROUND OR METAL WATER PIPE.
8.) A LIGHTNING ARRESTOR, PROTECTOR, OR ANTENNA–DISCHARGE UNIT MUST BE INSTALLED ON EACH ELECTRIC AND TELEPHONE SERVICE ENTRANCE AND RADIO AND TELEVISION ANTENNA LEAD IN. (TO BE PROVIDED BY ELECTRICAL CONTRACTOR.)
9.) ALL ADHESIVE FIXTURES SHALL BE SET WITH AN ADHESIVE COMPOUND COMPATIBLE WITH THE ROOFING MATERIAL.
10.) BOND ALL METAL PIPES SUCH AS WATER, GAS, FIRE, STORM, SEWER WHICH ENTER THE STRUCTURE TO THE NEAREST DOWNLEAD, GROUND ROD OR COUNTERPOISE.
11.) SEAL THE ENDS OF CONDUIT MOISTURE TIGHT WITH DUCT SEAL OR SILICONE.
12.) CABLE WILL BE FASTENED EVERY 3'–0" O.C. MAX. SPACING.
13.) ALL BUILDINGS SHALL HAVE AT LEAST 2 GROUND LOCATIONS, SPACED SUCH THAT THEY ARE AS FAR APART AS IS PRACTICABLE. MORE GROUNDS MAY BE REQUIRED DUE TO PERIMETER, OR LAYOUT OF BUILDING
14.) EVERY AIR TERMINAL SHALL HAVE 2 AVAILABLE PATHS TOWARD GROUND. NO AIR TERMINAL MAY HAVE ONLY A SINGLE CABLE RUN LONGER THAN 8' TOWARDS A MAIN CONDUCTOR