



We appreciate the opportunity to recommend a power protection and back-up power plant for your facility. The first step should definitely be to install Category "C" surge suppression at the main service as recommended by the IEEE to guard against damage from outside sources such as lightning and utility switching transients. Categories "B" and "A" should also be evaluated and added if necessary.

### **CATEGORY "C" PROTECTION**

This is a device rated for installation at the electrical service with a high surge current rating to suppress transients from incoming power lines.

### **CATEGORY "B" PROTECTION**

This is a device at downstream panelboards to further reduce transient let-through voltages and suppress internally generated transients (such as switching transients from mechanical equipment).

### **CATEGORY "A" PROTECTION**

This is a device located at a particular piece of equipment and includes the typical surge strips that are commercially available.

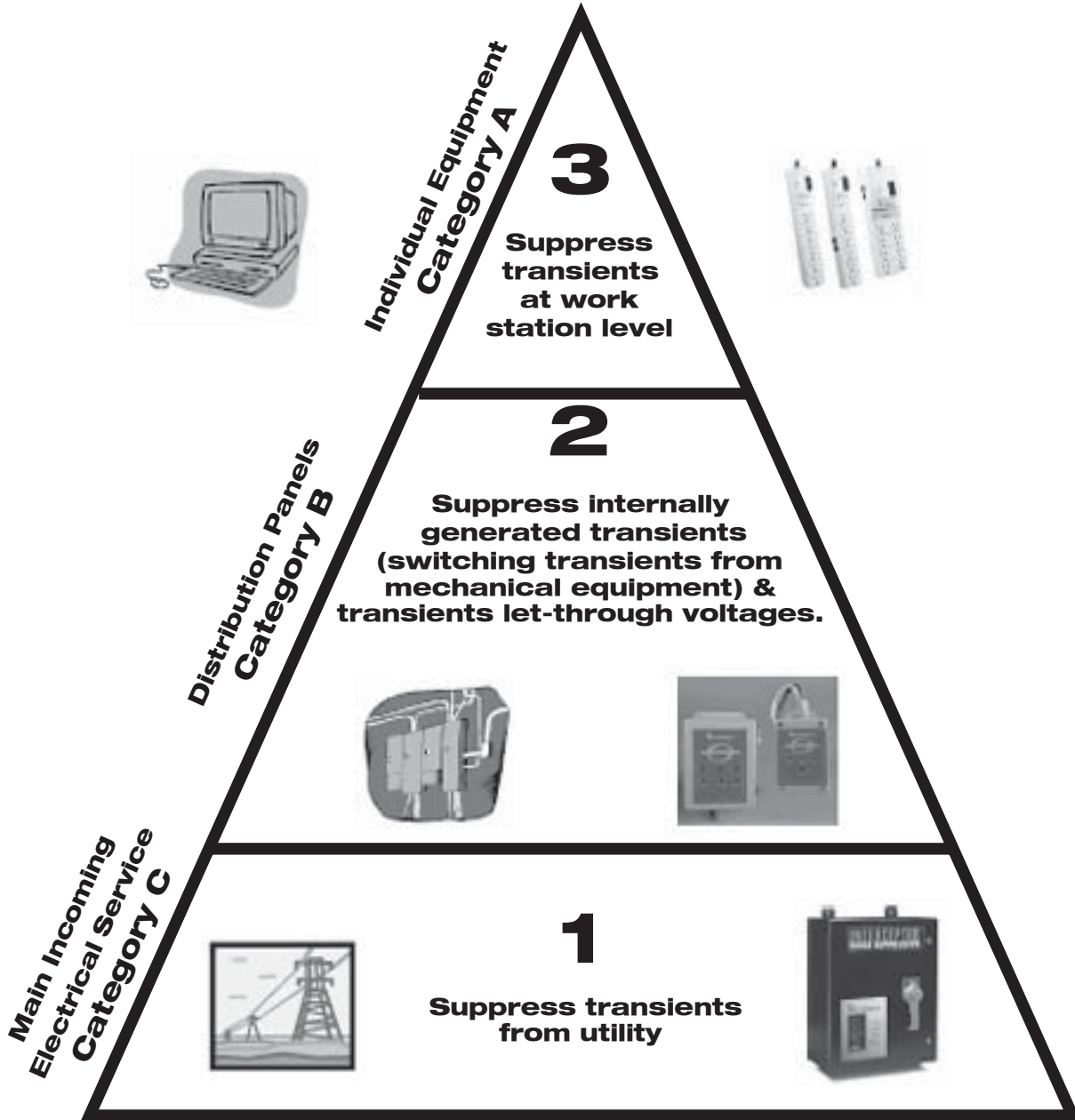
Although it is recommended that a building incorporate all three levels of protections to minimize equipment damage the *priority* would be first – Category "C", second – Category "B", and third – Category "A". This is the opposite of what many people do, electing to only put on Category "A" devices since they are the cheapest. These devices are not adequate to handle large surge currents by themselves.



# Electrical Surge Protection

## A Three-Tiered Approach

*A brief overview of surge suppression strategies as recommended by IEEE  
(Institute of Electrical and Electronic Engineers).*



For sizing or application questions,  
call Votaw Electric at 260-482-7099