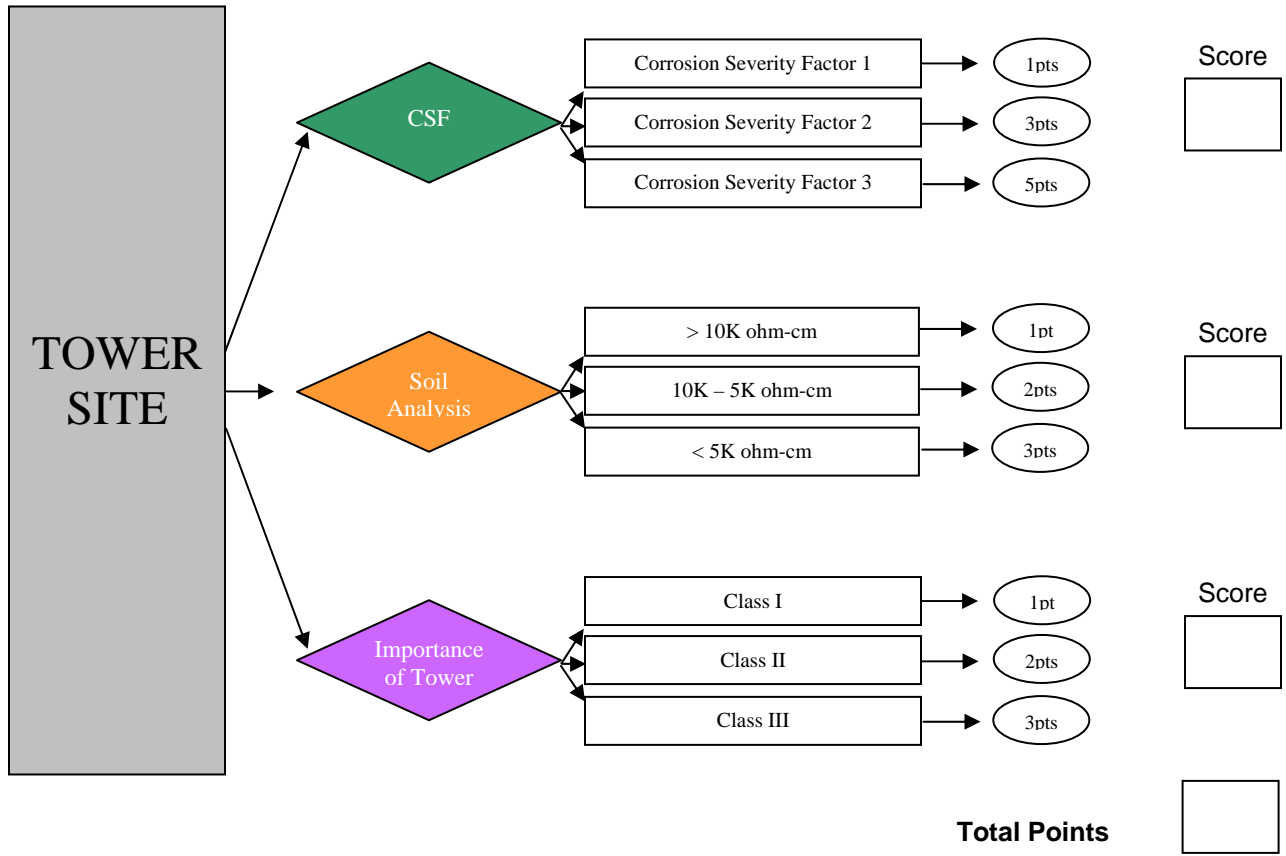


# INDEPTH Guyed Tower Anchor Corrosion Control Flow Chart For EXISTING STRUCTURES



**Add points from each category to determine range**

**OPTION 1**

*Points Range: ≤ 5*

---

**Action:** Reanalyze  
in 3 - 5 yrs.

**OPTION 2**

*Points Range: 6 - 8*

---

**Action:** Install  
AnchorGuard  
View ANSI/TIA222-G

**OPTION 3**

*Points Range: 9 - 11*

---

**Action:** Dig / Inspect  
anchors to concrete  
block & install protection

See reverse side for additional information on this flow chart.

## Reading the Flow Chart

This flow chart is designed to provide a simple and easy method to determine what course of action one must take to protect their towers. View ANSI/TIA 222-G for further information on approved methods of cathodic protection.

**Note:** For a complete method of procedure on assessing the condition of tower anchors and the various methods of corrosion protection, refer to the Anchor Inspection Standard 4/06. It is advisable to install cathodic protection on all guyed towers, especially new structures.

### Corrosion Severity Factor (CSF) (from the Anchor Inspection Standard)

Anchor shafts shall be given a rating at time of inspection relative to the severity of the corrosion found. The rating is based on a scale referred to hereafter as the *corrosion severity factor* or CSF. Corrosion Severity Factor shall be measured at the most corroded area of the shaft.

1. **Corrosion Severity Factor 1** (CSF 1) includes the following: Galvanizing in tact, no signs of rust, no cross sectional material loss. Anchors rated CSF 1 should be monitored in the future during regular tower inspections.
2. **Corrosion Severity Factor 2** (CSF 2) includes any of the following: Galvanizing slightly to mostly gone, rust spots prevalent, minor pitting or flaking, no cross sectional material loss. Additional corrosion control is highly recommended.
3. **Corrosion Severity Factor 3** (CSF 3) includes ANY of the following: Galvanizing mostly to completely gone, heavily corroded, deep pitting, large areas of flaking, measurable cross sectional material loss. Anchors rated CSF 3 require additional corrosion control methods and may require repair or replacement.

### Soil Analysis

Collect a forty-eight ounce sample or six cups of soil from the bottom of the excavation and store in a water tight container. *Soil from one anchor is adequate to perform necessary tests.*

- 2.3.1 Laboratory test the sample in both as-found and saturated state to determine resistivity in ohm-centimeters.

Table 4.1.1: Soil Resistivity Classification <small>A.W.Peabody</small>	
<u>Resistivity in ohm/cm</u>	<u>Category</u>
0 – 5,000	Very Corrosive
5,000 – 10,000	Moderately Corrosive
10,000 – 25,000	Progressively Less Corrosive

### Importance of Tower (from ANSI/TIA-222-G Table 2-1)

Description of the Structure	Class
Structures that due to height, use or location represent a low hazard to human life and damage to property in the event of failure and/or used for services that are optional and/or where a delay in returning the services would be acceptable.	I
Structures that due to height, use or location represent a substantial hazard to human life and/or damage to property in the event of failure and/or used for services that may be provided by other means.	II
Structures that due to height, use or location represent a high hazard to human life and/or damage to property in the event of failure and/or used primarily for essential communications.	III