1-Hour Core Seminar (HSW Credit) (Scheduled – Classroom)

I. Introduction and Learning Objectives
   a. Structural Steel: Strong & Sustainable

II. Hot-Dip Galvanizing (HDG) Process

III. What is Zinc?
   a. Zinc – Natural, Essential, Common
   b. Other Zinc Coatings

IV. Why Hot-Dip Galvanizing
   a. Corrosion Protection
      i. Barrier protection
      ii. Cathodic Protection
      iii. Zinc Patina
   b. Durability
      i. Abrasion Resistance
      ii. Uniform Protection
      iii. Complete Coverage
   c. Longevity
      i. In Atmosphere
      ii. In Soil
      iii. Moisture Rich Environments
      iv. In Concrete
      v. In Other Environments
   d. Availability & Versatility
      i. Abundant
      ii. Efficiency
      iii. Safety
   e. Aesthetics
      i. Modern, Natural Appearance
      ii. Duplex Systems
   f. Sustainability
      i. Environmental Advantages
      ii. Economic Advantages

V. Design and Specification

VI. Summary

Revised: October 2016
2-Hour Core Seminar (HSW Credit) (Scheduled – Classroom)

I. Introduction and Learning Objectives

II. Structural Steel: Strong & Sustainable

III. Hot-Dip Galvanizing (HDG) Process

IV. What is Zinc?
   a. Zinc – Natural, Essential, Common
   b. Other Zinc Coatings

V. Why Hot-Dip Galvanizing
   a. Corrosion Protection
      i. Barrier protection
      ii. Cathodic Protection
      iii. Zinc Patina
   b. Durability
      i. Abrasion Resistance
      ii. Uniform Protection
      iii. Complete Coverage
   c. Longevity
      i. In Atmosphere
      ii. In Soil
      iii. In water
      iv. In other environments
   d. Availability & Versatility
      i. Abundant
      ii. Efficiency
      iii. Safety
   e. Aesthetics
      i. Modern, Natural Appearance
      ii. Duplex Systems
   f. Sustainability
      i. Environmental Advantages
      ii. Economic Advantages

VI. Design & Fabrication
   a. Steel Chemistry/Surface Conditions
   b. Size & Shape
   c. Process Temperature Concerns
   d. Venting & Drainage
   e. Welding
   f. Threaded & Moving Parts
   g. Additional Design Considerations
2-Hour Core Seminar (HSW Credit) (Scheduled – Classroom)

VII. Specifications & Inspection
   a. ASTM Standards
   b. ASTM Supporting Specifications
   c. Other Standards
   d. Coating Thickness
   e. Adherence
   f. Finish & Appearance
   g. Weathering
   h. Touch-Up & Repair
   i. Storage & Handling

VIII. Duplex Systems: Painting/Powder Coating Hot-Dip Galvanized Steel
   j. Why Duplex?
   k. Preparation/Surface Conditions
   l. Case Study

IX. Summary