



SIVA CORROSION SERVICES, INC.
Materials, Corrosion, and NDT Services

Preserving and Extending the Service Life of Infrastructure

 *An Independent
Firm*

 *Decades of NDT &
Corrosion
Experience*

 *Expertise to Assist
with Meeting
Structural Goals*

 *Comprehensive,
Cost-Effective
Corrosion
Protection Design*



Siva Corrosion Services
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(610) 692-6551
www.sivacorrosion.com

*Partnering with Clients
to Solve Problems*

TYPES OF STRUCTURES INSPECTED



PT Box Girder Bridges



Pre-Stressed Box Beam Bridges



Pre-Stressed I-Beam Bridges



Steel Bridges



Stay Cable Bridges



Reinforced Concrete Bridges



Concrete and Steel Buildings



Concrete and Steel Tanks



Tunnels



Pipelines (Concrete, Steel, PCCP)



Cooling Towers



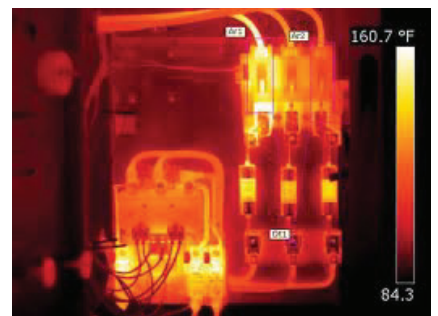
Parking Garages



Marine Structures



Roofing Leaks
(Commercial & Residential)



Electrical & Electronics Systems

NON DESTRUCTIVE TESTING SERVICES

Field Inspection Services

We use a unique combination of non-destructive testing, laboratory testing, and experience to develop efficient, cost-effective inspection methodologies to identify hidden problems, even in complex structures. We tailor our field inspection techniques for each project to get the most information possible, within a given budget. This allows us to cost-effectively collect data necessary to help the client make an informed, data-driven decision.

STEEL STRUCTURES



Ultrasonic Flaw Detection

- Identifies Cracks, Inclusions, and Flaws in Metals
- Measures Member Thickness and Section Loss



Magnetic Particle/ Liquid Penetrant Testing

- Locates Surface-Opening Cracks and Other Near Surface Flaws in Metals
- Measures the Location and Approximate Size of the Discontinuity

CONCRETE STRUCTURES

Ground Penetrating Radar

- Identify Reinforcement, Voids, Delaminations at Highway Speeds on Roadways
- Measures Pavement Thickness, Reinforcement Cover, and Void Depth



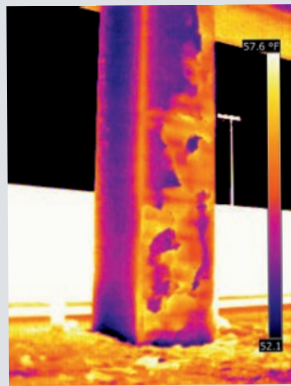
Impact-Echo

- Identifies Delaminations, Voids, Honeycombing, and Cracks
- Measures Slab Thickness, Flaw Depth, and Crack Depth



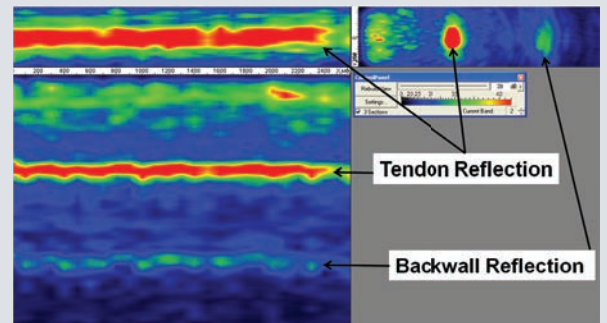
Infrared Thermography

- Identifies Delaminations, Water Leakage, Missing Insulation, Mechanical/Electrical Failures



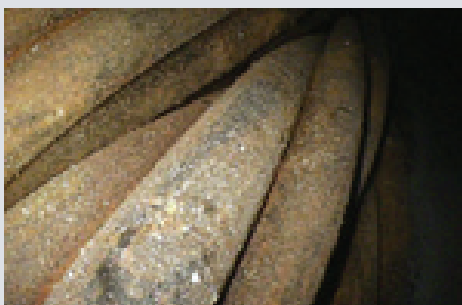
Ultrasonic Tomography

- Identifies Cracks, Inclusions, and Flaws in Metals
- Measures Flaw Depth and Slab Thickness



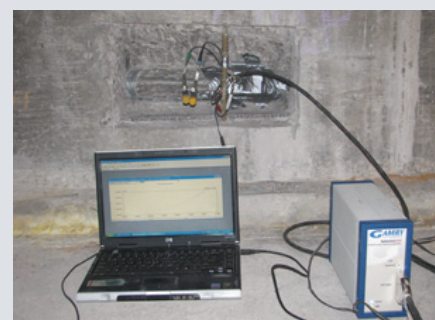
Borescope Inspection

- Visually Inspect Hidden Areas such as Voids Inside of Tendon Ducts Box Beam Interiors
- Visual Access to Difficult to See Areas like Tendons



Corrosion Potential/ Rate Measurements

- Identifies Areas of Active Corrosion
- Measures the Rate of Metal Loss



CORROSION PROTECTION DESIGN

We use information gathered from past inspection reports, laboratory, and non-destructive testing, coupled with our experience with similar structures in the same environment to develop effective corrosion protection systems.

CORROSION PROTECTION DESIGN INCLUDES:

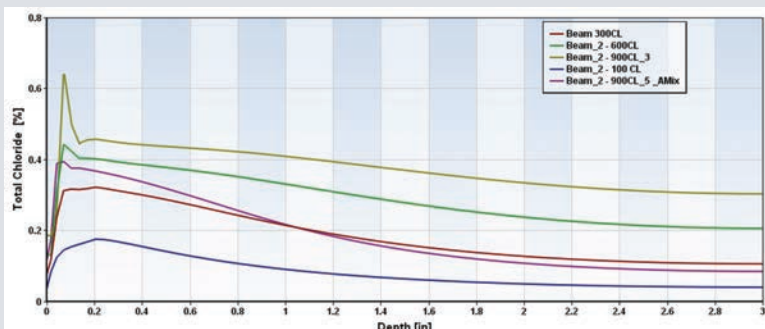
- Cathodic Protection Design
 - Impressed Current
 - Galvanic/Sacrificial
- Electrochemical Chloride Extraction
- Chloride/Carbonation Ingress Modeling
- Concrete Mix Design
- Membrane/Sealer Selection
- Concrete Repair Recommendations
- Materials Selection



SERVICE LIFE MODELING

Service Life Modeling Includes:

- Determining the Time to Corrosion Initiation
- Developing Concrete Mix Designs to Meet Service Life Goals
- Determining the Most Effective Repair Options
- Determining the Effect of Corrosion Inhibitor, Membranes, and Sealers



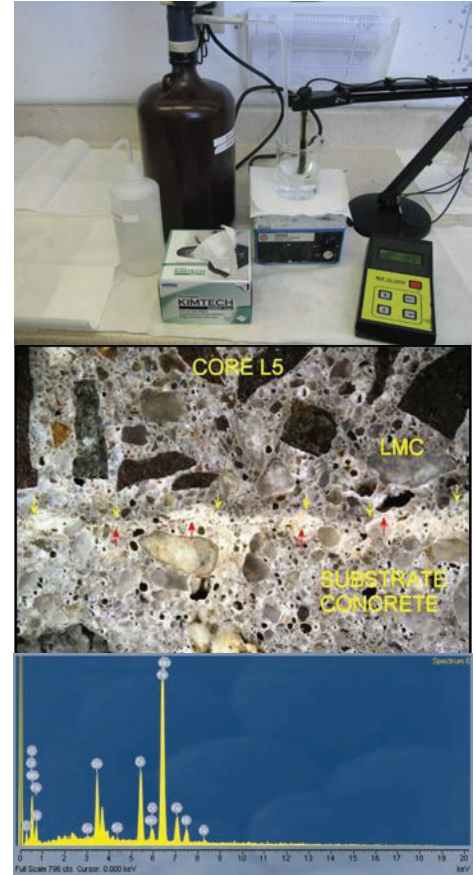
The graph shows chloride content vs. depth for various exposure conditions. This allows us to determine if a concrete mix design will withstand chloride attack for the desired service life.

LABORATORY SERVICES

We provide a full range of laboratory testing services to identify and quantify corrosion and material performance issues. Laboratory testing allows us to determine the root causes of deterioration and develop appropriate rehabilitation strategies.

Laboratory Testing Services Include:

- Chloride Content Analysis
- Chloride Profiling
- Corrosion Rate Testing
- Soil Corrosivity Testing
- Petrographic Analysis
- Alkali Silica Reactivity (ASR) Analysis
- Rapid Chloride Permeability
- Moisture Analysis of Soil and Concrete
- pH of Concrete, Soil, and Water
- Sulfate Analysis
- Corrosion Inhibitor Concentrations in Hardened Concrete
- Electrochemical Impedance Spectroscopy (EIS) Analysis
- Resistivity of Concrete, Soil, and Water



WHY SIVA CORROSION SERVICES?

Our Corrosion Capabilities Enable our Clients to:

- Achieve the Maximum Benefit-to-Cost Ratio
- Budget and Schedule Future Repairs
- Make Decisions Independently to Maximize their Investment Returns

Client Benefits

We understand that finding/quantifying corrosion and scheduling a repair program early in the life of the structure is the key to preserving structures cost-effectively. We help our Clients avoid future, more expensive repairs and unnecessary replacement by creating plans to address deterioration within time and cost constraints.



CLIENTS

Siva Corrosion Services' goal is to provide the best technical service on schedule and at a reasonable cost. We partner with clients to help solve their problems while meeting their schedule and budget requirements. We take great pride in the satisfaction of our clients.

Select List of Clients

B&H Engineering, P.C.
Butler, Fairman & Seufert, Inc.
Coastal Precast Systems
Cherry, Weber & Associates, P.C.
Delaware Department of Transportation
DELCARD Associates, Inc.
DSI, Inc.
Florida Department of Transportation
Georgia Pacific
Greenhorne & O'Mara
Greenman Pedersen, Inc.
HNTB Corporation
Illinois Department of Transportation
Indiana Department of Transportation
Janssen & Spaans Engineering, Inc.
Kentucky Transportation Cabinet
Modjeski & Masters
Marple Newtown High School
Maryland State Highway Administration
McClure Engineering
New Jersey Department of Transportation
New Jersey Turnpike Authority
New York State Department of Transportation
New York Toll Bridge Authority
Oklahoma Department of Transportation
Parsons Brinckerhoff
Southeast Delco High School
Stantec, Inc.
Skanska USA - Civil Southeast
TranSystems
United States Navy, South Eastern Region
URS Corporation
Virginia Department of Transportation
VSL
Wallace Montgomery Associates, Inc.
Wisconsin Department of Transportation





We are an independent consulting firm. We do not sell, promote, or install material, nor are we compensated by any other companies to promote their products. Our Client's needs are our only priority.



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