COATINGS and RESTORATIONS INFRASTRUCTURE REPAIR SPECIALISTS

CONTINUING SERVICES













INTRODUCTION TO CROM

CROM[®] is a specialist in the design and construction of prestressed concrete tanks and infrastructure repair and restoration. With over 65 years of experience, our continued success is driven by our self-performing skilled team with zero division of responsibility for our clients. CROM is built on a foundation of core values that is committed to safety, professional integrity, and high quality execution.

HISTORY OF CROM

In the early 1950's, J.M. Crom, Sr. and three associates, Ted Crom, Jack Crom, Jr., and Frank Bertie, established The Crom Corporation, with headquarters in Gainesville, Florida, for the prime purpose of perfecting the design and construction techniques of prestressed concrete tanks. Since then, their successors have continued the tradition of excellence initiated by the company's founders.

CROM COATINGS AND RESTORATIONS

CONTINUING SERVICES

CROM Coatings and Restorations (CCR) brings the experience, quality, and reliability of CROM's 65+ years of design and construction excellence to the restoration of aging infrastructure. CCR specializes in wet/dry inspections, high performance coatings, shotcrete/concrete structural repairs, crack repair with structural epoxy or polyurethane grout injection, external post tensioning, safety modifications, retrofitting, and carbon-fiber reinforcing solutions.

For the past decade, CCR has provided municipalities with Continuing Services. Many proactive owners demand protection, security, and responsiveness for their infrastructure which CCR delivers through Continuing Services Agreements. CCR's trained team, consisting of Engineers, Project Managers, Technicians, and other support staff are able to analyze and recommend procedures for preventative and emergency repairs for all structures associated with water and wastewater treatment facilities. CCR is equipped and able to respond to emergencies within 24 to 48 hours of receiving notice.

COMPLETE REMOVAL OF EXTERIOR COATING SYSTEM & NEW COATING SYSTEM APPLIED



STRUCTURAL CONCRETE REPAIR & WASTEWATER PROTECTIVE COATINGS

COATINGS AND RESTORATIONS **SERVICES PERFORMED STRUCTURAL REPAIR**

COATINGS

- INTERIOR AND EXTERIOR
- INDUSTRIAL
- ABOVE GROUND PIPING AND GALLERIES
- WATERPROOFING
- LOGOS

- EPOXY CRACK INJECTION
- JOINT REPAIR
- UNDERFLOOR GROUTING
- FIBER-REINFORCED POLYMERS
- **RESURFACING**
- HEADWORKS REPAIR AND RESTORATION

















SHOTCRETE RESTORATION

- ARCHITECTURAL
- WET MIX
- DRY MIX
- CALCIUM ALUMINATE





RETROFIT & MODIFICATION

- WALL SLEEVES
- UNDERFLOOR PIPING
- BAFFLE WALLS/CURTAINS
- ACCESSORIES
- MANWAY ADDITIONS













INSPECT, CLEAN & DISINFECT POTABLE WATER STRUCTURES

- WET/DRY INSPECTIONS AND WASHOUTS
- DIVE INSPECTIONS
- STRUCTURE CLEAN OUT





FABRICATE & MAINTAIN ACCESSORIES (TYPICAL)

- VENTILATOR
- HATCH COVER
- LIQUID LEVEL
 INDICATOR
- OVERFLOWS



SAFETY & SECURITY RETROFIT

- HANDRAILS
- FALL PROTECTION
- SAFETY CLIMBS
 AND CABLES
- SECURITY GATES
- INTERIOR & EXTERIOR LADDER



5 YEAR - LEVEL 2 INSPECTIONS - Complying with local, state, and federal regulations

Comprehensive Level 2 inspections investigate the structural integrity of the structures associated with water and wastewater treatment facilities every five years. Inspections can be done either wet, with the use of a diver without having to drain the tank, or dry once the tank has been drained. The inspection is performed as a visual survey of the structure with no invasive procedures employed. The investigation includes examination of the interior and exterior walls of the roof, floor and tank accessories for any visible problems such as leaks or cracks. Any questionable locations are further examined to determine the extent of the problem.

The wall is observed for any deterioration, cracking, spalled concrete, signs of corrosion, or any other indicators of existing problems such as efflorescence or damp spots. The walls are "sound tested" to determine if there is any evidence of the covercoat separating from the core wall.

The inspector, when provided access to the roof, will inspect the concrete roof for any cracking, efflorescence, spalled concrete, signs of corrosion, or other indicators of existing problems. Tank accessories will be assessed as well to determine the extent of weathering of material and the condition of the bolts, fasteners, and the screens. All penetrations are checked for signs of leakage into the tank.

If the tank is drained, CCR will obtain a confined space permit and trained personnel will enter the tank interior. CCR personnel will use air quality monitors to ensure their safety while inspecting the tank interior walls for cracking, spalled concrete, signs of corrosion, or other indications of existing problems. Piping and internal accessories are also checked for corrosion and condition of their supports, bolts, and anchors.

All inspections will be carried out in accordance with AWWA D110 and fulfill the requirements of local, state, and federal regulations. Following the inspection, CCR will prepare a report documenting the details of the inspection and address all apparent problems that of concern for the structural integrity of the structure. Each report is signed and sealed by one of our professional engineers. The report will also highlight issues that could be addressed to avoid the possibility of future problems (preventative maintenance).

Each report grades the condition of the various structure elements using subjective terminology (Excellent, Good, Fair, Poor). In addition, the report provides recommended actions to perform on the structure. Typical elements evaluated include:

- Foundation
- Exterior Roof
- Floor
- Interior Wall
- Interior Roof
- Aerator
- Roof Center Vent
- Roof Safety Handrail

- Roof Access Hatch
- Roof Probe
- Emergency Overflow Openings
- Liquid Level Indicator
- Exterior Ladder
- Wall Manhole
- Interior Piping
- Interior Ladder

With each report CCR will provide a Next Inspection recommendation date along with a follow-up reminder that the service is due in accordance with AWWA, ACI 350 and to fulfill the requirements of local, state, and federal regulations.

ANNUAL - LEVEL 1 INSPECTIONS - For the most comprehensive protection

Exterior and visual (no destructive testing) Level 1 inspections are completed annually and/or when an issue arises. The reports are prepared by the Inspector in tabular and narrative form the information, data, assessments and professional recommendations for the following (each structure is inspected and addressed separately):

- Location and address of tank
- Type and capacity of tank
- Site Security
- General overall condition of exterior wall and roof
- Check all locks: ladder, hatch
- Check condition of all screened openings
- Date of inspection and name of inspector
- Photographic documentation of key items

REPAIR AND RESTORATION SERVICES

CCR furnishes all supervision, labor, material, equipment, scaffold and forms required to complete the necessary repair work. (If exceptions apply, they will be noted in individual Agreements)

Continuing Services on tanks, structures, and coatings include:

- Routine preventative maintenance
- Removal of biogrowth
- Removal of sludge

- Inspections
- Reports
- Corrective maintenance

To ensure the highest quality and workmanship, Continuing Services Agreements with CCR establish CCR as the only authorized company to provide parts and service on CROM Prestressed Concrete Tanks. All services performed will follow prescribed procedures as outlined in CROM's standard for the design and construction of Prestressed Concrete Tanks. Structures under a Continuing Service Agreement receive priority on restorative services and emergency repairs.

CCR performs site visits to ascertain existing conditions of the areas before providing estimates or performing work.

CCR guarantees to provide qualified personnel to completely, efficiently, and safely perform the services requested.

STRUCTURE CLEANING AND DISINFECTIONS IN ACCORDANCE WITH AWWA C652

CLEANINGS: CCR provides structure cleanings, which include interior washouts and/or exterior pressure washing, in accordance with applicable AWWA requirements. Tank cleanings can be performed in a full tank with the assistance of a diver and vacuum system, or in a drained tank.

DISINFECTIONS: All potable water storage facilities taken out of service for inspection, repair, painting, cleaning, or other activity that might lead to contamination of water must be disinfected before they return to service. CCR performs in strict accordance with the AWWA C652-92.









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