

Greater Houston Wastewater Program

City of Houston
Houston, Texas

Responsibility: The Greater Houston Wastewater Program (GHWP) was a five-year \$1.2 billion project to control wet weather overflows in the City's sanitary sewer system. Houston's wastewater system is one of the largest in the nation, with 43 wastewater treatment plants, 5,600 miles of sewers and 320 lift stations.

Construction Cost: \$ 1.2 Billion (INR 5400 Crores)

Project Description: Involved in all aspects of the program including project management, design management, environmental engineering and permitting support, comprehensive program management, cost-savings analysis, detailed design and construction management. The sewer



rehabilitation component of the program was the largest sewer rehabilitation effort in the United States at the time. The work included conceptual design of relief and rehabilitation projects ranging from open cut to deep tunnels, slip lining, cured-in-place, deform/reform and pipe-bursting techniques. Over 150,000 feet of new sewer installed by micro tunneling was also completed in the course of the work. The development of design guidelines for underground construction to ensure standardization of designs being prepared by the design sub consultants was also accomplished. Construction Management on the program also required resource planning to optimize the capacity of available contractors (both prime, sub and minority sub) to successfully complete the work. At the peak the Program management team consisted of more than 300 staff from the City and consultants working in an integrated organization.

Invicus and its alliance partners provide multi-disciplined environmental services, specialized in rendering design and construction services in water and wastewater for industries and municipalities worldwide. The direction and goals of the firm reflect the principals' conviction that effective design must be based on a thorough knowledge of the cost-effectiveness and reliability of all available management approaches and treatment technologies, and that the critical decision point in the process is the evaluation and selection of alternatives as a part of the initial planning process.

Invicus is geared to provide a complete, single source service of engineering, design, and construction management on water, wastewater or solid waste facilities. Our strategically located offices both in India and the United States are able to provide a full range of services covering all phases of project development from planning, feasibility studies, engineering design, equipment/systems supply, and construction/installation to start-up and operations. In terms of the size of the projects completed, Invicus and its affiliates have implemented design and construction of wastewater treatment plants from 5,000 GPD (package type plants) to 48 MGD conventional activated sewage treatment plants. Our associates have also implemented turnkey construction of drinking water treatment plants up to 64 MGD in capacity along with the associated transmission systems.

Tapping into a Reservoir of Talent

- Reliable and Cost Effective Solutions
- Proven Track Record
- Innovative Design Concepts

Water or "Blue Gold" will be a much sought after resource in the 21st Century.