

Win/Win Permitting: Working the Public/Private Partnership In a Design/Build/Operate Contract

Richard D. Moore and Charles Carden Jr.

Tampa Bay Water, a regional water supply authority, is implementing its \$609 million Master Water Plan Configuration I to develop new water supplies for the region, required under an agreement with the Southwest Florida Water Management District (SWFWMD) to diversify water supply and relieve stress on existing groundwater sources.

A cornerstone of the program is the new, 66-million-gallons-per-day (mgd) surface-water treatment plant that will treat raw water withdrawn from the Hillsborough River high flows, the Tampa Bypass Canal, and the Alafia River. A new regional reservoir is planned to store seasonal high raw-water flows for treatment during periods when withdrawals are less than 66 mgd.

Tampa Bay Water's objectives for the regional surface-water treatment plant included:

- meeting an aggressive schedule of producing drinking water before December 2002;
- producing high-quality drinking water exceeding the Environmental Protection Agency's (EPA's) primary and secondary standards;
- encouraging creativity, innovation, and competition in the proposal phase to obtain the most cost-effective solution while maintaining quality in design, construction, and operation;
- achieving a balanced risk-management approach through a partnership with the successful proposer.

Tampa Bay Water chose design/build/operate (DBO) as the alternative project delivery method that was best suited to meeting the project objectives. The Request for Proposals (RFP) was advertised in July 1999 and the Notice to Proceed was issued in April 2000 to the successful proposing team of USFilter/CDM, and Clark Construction Group. Located in Brandon, the facility was completed in September 2002 and is now operated and maintained by USFilter for Tampa Bay Water under a 15-year contract.

This article explores lessons learned from this and other projects in meeting aggressive schedule constraints to implement a major DBO water treatment facility, including:

- permitting activities before and after the RFP
- development of the design criteria package

- conceptual permitting for DBO
- partnering at all levels, including:
 - within the DBO team
 - among the DBO team, the owner, and the owner's program consultants
 - among the DBO team, the owner, and regulatory agencies

Why DBO?

One of the key benefits of the DBO project delivery system for Tampa Bay Water was reducing the project implementation schedule. Construction of a public drinking-water system requires a multitude of permits from various regulatory authorities, so in order to realize the schedule implementation benefits, a creative and pro-active approach to permitting was required.

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The traditional project follows a sequential phasing:

- Engineer Selection
- Preliminary Design
 - Final Design
 - Permitting
 - Bidding
- Construction
 - Startup

A typical water treatment plant of this size and complexity would take four to five

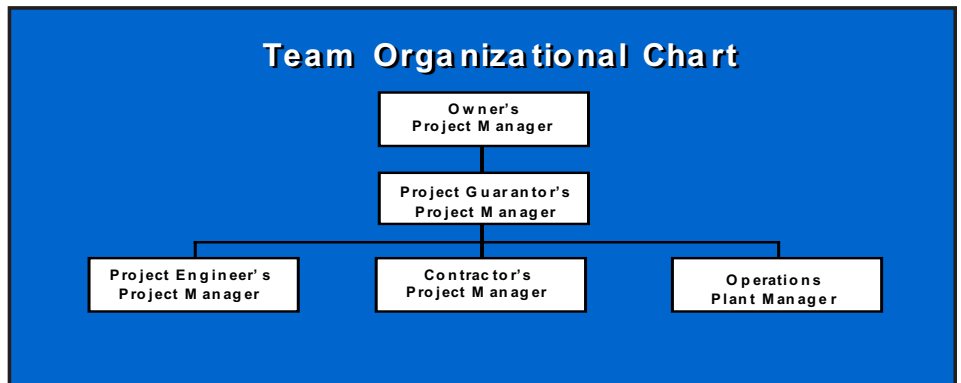
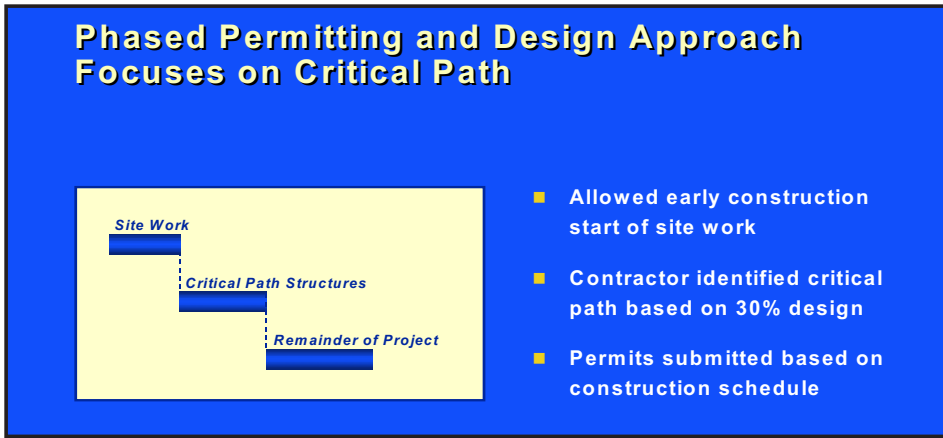


Figure 1

Item	Description of Permit	Responsible Party	Agency
1	Jurisdictional Wetland Delineation	Tampa Bay Water	SWFWMD/ACOE/EPC
2	Water Use Permit	Tampa Bay Water	SWFWMD
3	Individual Section 404 Permit	Tampa Bay Water	ACOE
4	Preliminary Site Development, Land Alteration/Landscaping	Tampa Bay Water	Hillsborough County
5	Final Site Development, Land Alteration/Landscaping	USFilter/CDM/Clark	Hillsborough County
6	Public Drinking Water System Construction Permit	Tampa Bay Water	HC Health Department
7	Wastewater Collection/Transmission System	Tampa Bay Water	HC EPC
8	NPDES Permit	Tampa Bay Water	FDEP
9	Building Permit	Clark	HC Building Department
10	Above Ground Storage Tank Notification	USFilter/CDM/Clark	FDEP/HC EPC
11	Certification of Construction Completion and Request for a Letter of Clearance to Place a Public Drinking Water Facility Into Service	USFilter/CDM/Clark	Hillsborough County Health Department
12	Natural Resources Permit	Tampa Bay Water	Hillsborough County
13	Environmental Resource Permit	Tampa Bay Water	SWFWMD
14	Washwater Permit	USFilter/CDM	HC Water Department
15	Lime and Microsand Silo(s) Air Construction Permit	USFilter/CDM	HCEPC
16	Notice of Intent to Use Stormwater General	Clark	EPA

Table 1 Tampa Bay Water Regional Surface Water Treatment Plant Permit Requirements

Figure 2



years to implement through a traditional design/bid/build (DBB) project delivery system. Many of the necessary permits require complete drawings and specifications as part of supporting documentation.

The DBO project delivery method reduced the implementation schedule to three years by eliminating the bidding phase and overlapping the design and construction activities. For these schedule savings to be realized, permitting must be integrated with the procurement, design, and construction activities of the owner and the DBO development team.

Permit Responsibilities and Tracking

Before issuing the Request for Proposals (RFP) for the DBO project, Tampa Bay Water officials realized that obtaining all permits in a timely manner would be a critical success factor in meeting their schedule objective of water production by December 2002. The required permits are shown in **Table 1**.

Tampa Bay Water retained the engineering firm of Parsons Engineering Science Inc. to develop the design criteria package for the DBO RFP and to prepare site-development designs in sufficient detail to obtain certain permits. With this approach, each permit was assigned a responsible party, included in the RFP package, so that proposers understood which permits they were responsible for and which ones they could expect from Tampa Bay Water. Tampa Bay Water then proceeded to initiate and expedite those permits under its responsibility, even before the RFP for the DBO was advertised.

It is important that the design criteria package (issued with the RFP) provide enough detail to expedite the owner-initiated permits and allow for flexibility, creativity, and innovation from the DBO proposers.

Once the DBO team was under contract and the design process began, the permitting status was tracked and updated at bi-weekly progress meetings.

Preliminary Design Permitting

One of the key permits for this project was the Florida Department of Environmental Protection (FDEP) Permit to Construct Public Drinking Water Facilities. This permit requires a basis of design report and complete drawings and specifications to be submitted with the application.

In order to allow the design and construction activities to overlap, as is common on a DBO project, Tampa Bay Water requested and obtained a Chapter 120 variance to allow for overall project permitting supported with a basis of design report and 30-percent design drawings. This variance represented a significant relief from the regulations and is an example of the benefits of partnering between the owner (Tampa Bay Water) and the regulatory agency (FDEP).

In order to implement this concept in permitting, further partnering proved to be effective. Overlapping the design and construction requires that the design engineering team understand the construction schedule enough to prioritize the design production in a phased manner.

On this project, three major design packages were identified for permitting, and to allow early construction activities to pro-

ceed. The three packages were: Site Work, Critical Path Process Structures, and Remainder of Project, as depicted in **Figure 2**.

A key advantage to DBO project delivery is the partnering of the design engineer with the construction contractor, as shown in **Figure 3**.

Plan B – Partnering to Expedite Permits

The preliminary design permitting approach was delayed due to a third-party challenge by an organization known as SOBAC (Save Our Bays and Canals). An administrative hearing upheld the Chapter 120 variance but delayed the permitting process by nearly four months.

An alternative plan was implemented to keep the project on schedule. The team continued to complete the design and submitted the 100 percent with the permit application for a conventional permit process, but partnered with the permit review team (Hillsborough County Health Department and FDEP) with submittals at 30, 60, and 100 percent, along with workshops to familiarize the permit reviewers with the process and the design. Addressing questions and issues during design saved an estimated four to six months by eliminating several rounds of written Requests for Information (RFIs). **Figure 4** depicts this process timeline.

During construction, the DBO team held site meetings and tours with FDEP and Hillsborough County Health Department officials on several occasions to review progress and familiarize the permitting agencies with the facilities and treatment process. These events promoted a level of involvement and understanding that allowed the Drinking Water Letter of Clearance (needed to start up public drinkings-water facilities) to be obtained without any RFIs. This expedited the transition from construction to startup and enabled the team to meet the September 2002 contract deadline for completion.

continued on page 42

Figure 3

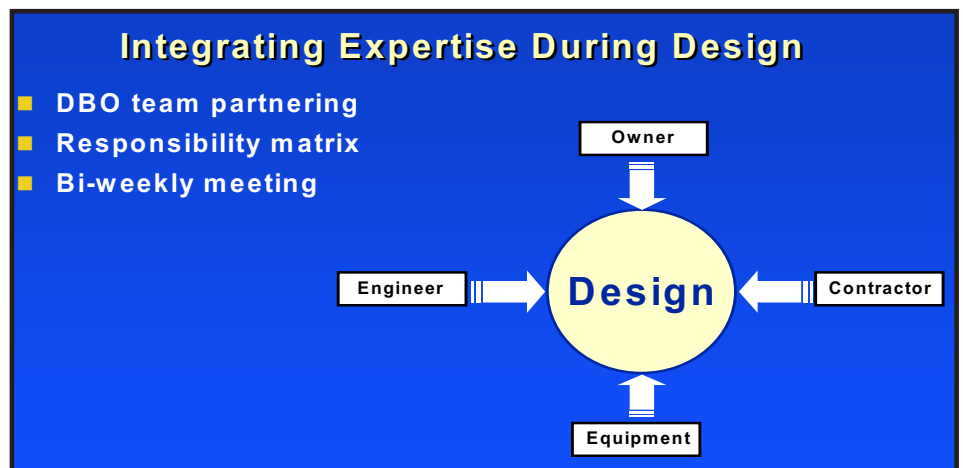
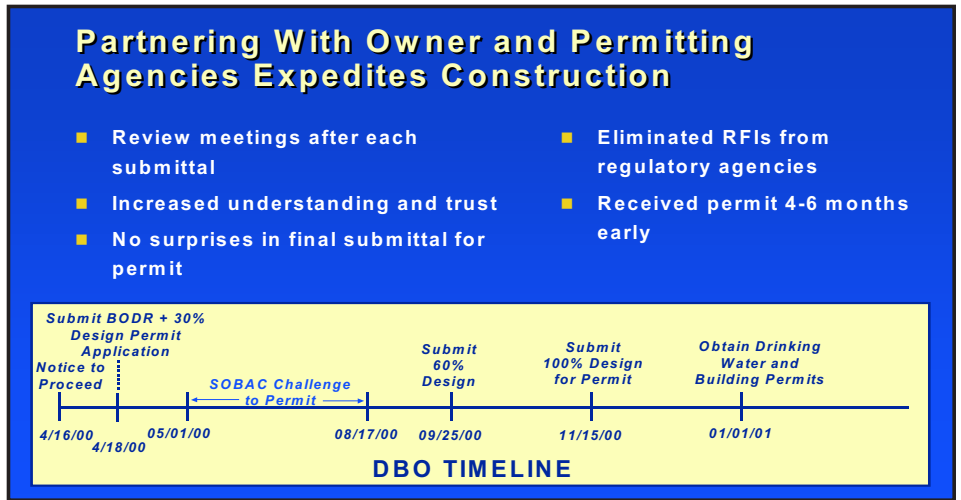


Figure 4



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Summary

Partnering at various levels and among various parties has benefits in expediting DBO projects.

- Within the DBO team
 - Integrates expertise during design
 - Contractor’s schedule addressed in design and procurement
- Between the DBO team and owner
 - Permitting responsibilities assigned prior to contract
 - Pro-active owner involvement
 - Shared responsibility and risks
 - Allows permitting to start early (before RFP)
- Among the DBO team, the owner, and regulatory agencies
 - Increased comfort level for regulators

- Fewer RFIs
- Increased ownership and buy-in by all parties
- Reduced permitting schedule

Conclusions

- Alternate project delivery systems such as DBO require creativity, cooperation, and communication.
- Permitting may be on the schedule critical path, especially if design and construction activities overlap.
- Finding ways to work with regulators is critical to success – early involvement and no surprises.
- Avoid adversarial positions – they lead to delays.
- Pro-active owner is a key to success.
- Partnering helped the DBO team meet the scheduled start-up by September 2002. 