Infrastructure
Public-Private Partnerships

A New Tool for an Age-Old Problem

By Sanjiv K. Sinha and Robert D. Pettit

Benefits of a CBP3

• Funding agnostic, so it can utilize public and/or private funding
• Faster implementation reduces risk
• Public partner retains savings
• Achieve large-scale implementation goals
• Performance-based fees drive results
• Significant co-benefits as the framework can be devised to seek community benefits such as workforce training and jobs

Challenges of a CBP3

• “P3” can imply privatization and, while it is not true, it can create confusion in the public discourse.
• One size doesn’t fit all. Projects vary widely in cost, duration, and scope.
• Best suited for complex, longer-term engagements where aggregation of projects can lead to cost savings

Nearly $4 billion more is needed each year—for the next two decades—to simply maintain the current state of Michigan’s roads, bridges, water and sewer systems, and communications infrastructure. That’s a sobering statistic about Michigan’s decaying infrastructure. Not surprisingly, the American Society of Civil Engineers gave the state’s infrastructure a D+ grade in its 2018 report card. And, without that push in funding, it’s only a matter of time before the state falls to the F category.

Public agencies in Michigan and elsewhere are increasingly looking to the private sector as a new way to reduce costs and help pay for underfunded services and infrastructure. New models are needed that allow communities to benefit from the innovation and efficiencies, while appealing to their citizens’ growing interest and knowledge about sustainability, green infrastructure, and a more environmentally friendly way of life.
Public-Private Partnerships

A public-private partnership (P3) is just that, an agreement between one or more public and private sector entities to do something better together than they could accomplish on their own. Structured well, municipalities entering a P3 have a lot to gain: efficient projects, saving the community money, access to private capital, minimizing their debt, and moving a project forward without needing to go through cumbersome processes. Because risks and costs are shared, the partnership is driven by innovation, leading to long-term, efficient solutions.

The transportation sector has used P3s for decades to build new and safer roads and bridges, airports, and marine ports to export and import goods for our economy, and highways and rail tracks for our increasingly mobile population. From 1998 through 2003, more than $21 billion was invested in transportation projects that utilized P3 models. The Gordie Howe International Bridge in Detroit—the largest and most ambitious bi-national infrastructure project along the U.S.-Canada border—is an example of a P3. The two governments better leveraged their public funds, while minimizing their debt, by sharing the burden with private partners to implement innovative technologies throughout the project, saving both time and money.

Various forms of P3s have been used for operating and managing utilities in the wastewater sector as well.

Newer Forms of P3s

In recent years, the community-based P3, or CBP3, has emerged. CBP3s present significant promises to municipalities facing increasing costs from growing storm water and pollution needs and regulations. The traditional model of public procurement is piecemeal, often based on what is available and not what is best for the entire system, littered with cost and system inefficiencies, which further drives up costs and limit implementation.

Because of the scale, using a CBP3 enables municipalities to implement larger, more efficient projects at lower prices. Plus, a key aspect of a CBP3 is its commitment to the community, often in the form of setting robust requirements for hiring locally. This commitment boosts the economy, adds to the labor force’s skill sets, fosters growth and development, and so much more.

Prince George’s County, Maryland, the first municipality to pursue the CBP3 model, selected a private firm, Rhode Island-based Corvias, as its partner to retrofit an initial 2,000 acres of green storm water infrastructure. Their CBP3 is called the Clean Water Partnership (CWP). The private firm is responsible for designing, building, operating, and maintaining Prince George’s County’s storm water management programs for 30 years (signed in 2016), in exchange for innovation, long-term sustainability, flexibility, and if needed, the access to private financing. In their performance-based system, it’s not just about delivering work on time and under budget, they also have socio-economic goals to reach, like community outreach, workforce development, and hiring disadvantaged subcontractors.

Throughout this 30-year, $100 million partnership, Prince George’s County retains control of assets, investments, and prioritization for the full program of work.

Funded by a State Revolving Fund, the $100 million investment has already led to $152 million worth of economic impact in local expenditures in the first two years of the program. The CWP has also met its performance goals for socio-economic and community outreach performance outlined in the partnership agreement for workforce development, community education, and resident and target class business utilization.

The community outreach includes working with schools across the county to install rain barrels, plant rain gardens, and implement other multi-functional practices to help manage storm water and reduce pollution. In other words, it truly is becoming a community event.

Overall, the private partner is executing a “high road infrastructure” where infrastructure is utilized as a platform to achieve greater services and greater outcomes for the community.
New Approaches to Storm Water Infrastructure

Financing P3s are also changing the paradigm of how public infrastructure projects are financed. Environmental impact bonds are a new and promising approach to structured financing based on predefined performance. It shifts the risk away from public entities, which benefit from the solution as soon as it is implemented, and onto private investors.

So far, the D.C. Water and Sewer Authority used it to finance a 20-acre, pilot, green infrastructure project. Essentially, they issued a $25 million bond for designing, building, and maintaining the green infrastructure. But, unlike a normal municipal bond, this one is tied specifically to the green infrastructure’s success in reducing storm water. In early 2018, Baltimore and Atlanta announced plans to use this model to finance their own green infrastructure projects as well.

Can Any of this Work in Michigan?

As a state with the second longest coastline in the U.S., water and its related infrastructure is a key to the success of Michigan’s economy. Unfortunately, Michigan has very few storm water utilities in place that can provide a steady revenue stream for a P3 using private finance. However, as in Prince George’s County, other forms of public funds can be accessed to set up a P3.

P3s, in general, have not been a part of the storm water management conversation in the Great Lakes region at all, but a new initiative is working to change that. Funded by the Great Lakes Protection Fund, P3GreatLakes (www.P3GreatLakes.org) is bridging the knowledge gap and advising communities and agencies to assess if the use of a P3 approach makes sense for them. We welcome readers to review these resources and see if they are useful for your communities.

Sanjiv K. Sinha, Ph.D., P.E., is vice president of Environmental Consulting & Technology, Inc., and leads the P3GreatLakes.Org initiative. You may contact him at 734.272.0859 or ssinha@ectinc.com.

Robert D. Pettit is a project manager at Environmental Consulting & Technology, Inc.