



Matrix New World Engineering follows a special protocol that builds in cost savings and value engineering at every stage of the cleanup.

Expert Cleanup of Contaminated Property

By David Eareckson, PE

Many of the development projects that Matrix is currently working on are being built on contaminated land. A significant portion of the future opportunities developers will have are with contaminated properties because of the direction the administrations and regulators are heading in. With environmentalists safeguarding the natural environment, developers need to and are focusing their efforts on revitalization and expansion of properties that have been exposed to contamina-

tion. Engineering support for development in these cases is not simple; it requires a wide-ranging, combined engineering expertise that is subject to rigorous environmental permitting and oversight.

Within the past year I joined Matrix as president of our newly-created land development division which includes civil, marine and waterfront engineering. Matrix's wide-ranging national experience with cleaning up contaminated sites is eliminating many of the problems engineers have struggled with in the past while working on projects for developers using third-party environmental firms to clean up their sites. Matrix expertly handles all our clients' needs, not only from the development side, but also from the environmental cleanup side. Developers do not have to deal with various consultants with different thought processes, objectives, or goals: we have one

goal and that is to assist with the success of the project. The cleanup is coordinated with the optimal development of the site, which streamlines the process and saves the client money. We have a special protocol that builds in cost savings and value engineering at every stage, including in our initial designs. Many civil engineering firms initially propose a design and then send it out to engineering contractors who come back with alternatives and different ways to approach it; this method results in additional fees, costs, and time delays for developers. We have the expertise to include economic analysis in our initial design; therefore, the entire project is efficient from an economic standpoint.

At Matrix we are working on several projects with combined environmental and civil engineering expertise that offer valuable insights and lessons for developers.

Burlington School

Matrix was retained by MMA Architects to provide civil and environmental engineering services for Burlington City High School which was planned for a \$25 million addition and renovation consisting of a 46,000-square-foot addition and 149,000-square-foot renovation of the entire facility. The remediation and expansion of the school represented the highest level of cleanup comparable to that required for residential housing. Since children inhabit this space State and Federal regulations will not allow any potential environment issues. Matrix's mission was to clean up the site and take care of the contamination while maintaining the original structure and building so that it could be expanded instead of tearing the

entire school down and starting from scratch which is much more costly.

An Environmental Assessment (EA) was conducted by Matrix of the property subject to the requirements of the Department of Environmental Protection. The EA identified materials of concern within the proposed work area. At some point prior to the Burlington Board of Education's acquisition of the property, contaminated soil was placed on the property. To identify such waste materials, Matrix reviews historical records that document different uses of the site, including aerial photography and satellite imagery. Clients who want to purchase property are warned that there is possibly contaminated material on the site and the origin or the extent of it is yet unknown. When a site contains potentially contaminated material often a flag is made in the environmental report. Under current regulations, a deed notice is often written to tell people in the future that contaminated material exists.

At Burlington, Matrix conducted a limited remedial investigation of the work area to identify the limits of this fill material. Fill material was identified across the eastern portion of the property beneath the proposed addition and athletic fields. Matrix supervised the removal of approximately 4,500 cubic yards of contaminated material and the placement of certified clean fill around the newly constructed building addition. Matrix also provided oversight services during the removal of asbestos-containing materials (ACM) from the existing building structures. This engineering expertise is important for developer clients who purchase older buildings as the majority will have

asbestos. On-site project monitors and asbestos safety technicians (ASTs) were provided by Matrix to oversee the asbestos removal operations and ensure conformance with applicable regulations and project specifications. Air samples were collected before, during, and after (clearance) abatement operations and each work area was visually inspected before being released for re-occupancy. Matrix conducted supplemental surveys of the existing structures to locate ACM undiscovered by previous building surveys. Emergency specifications and guidelines for the abatement of newly identified ACM were also prepared.

The project discussed in this article required civil and environmental expertise within a complex regulatory environment. Our proven ability to expertly perform for developers on projects that, in some cases, had languished for years, and bring them in on time and within budget demonstrates that we can handle whatever comes our way. It doesn't matter what challenges you face or issues your company is dealing with, more than likely, a member of our team has dealt with it before, and we can provide an optimal solution to satisfy your needs. We look forward to the opportunity. 

David Eareckson

David Eareckson is president of Matrix New World Land Development, LLC a Division of Matrix New World Engineering, Inc. For 20 years Eareckson has advised large scale developers who have sought out his ability and experience with heavy civil and marine engineering for all kind of renovations, conversions and new constructions -- on the land or on the waterfront. He is particularly knowledgeable of the impact the environment has on development/engineering and its complicated regulatory and approvals process. David can be reached at deareckson@matrixnewworld.com.