

refilling it with clean materials—and propose a plan that pleased all parties.

Mr. Hengel's team also works closely with stakeholders to identify and mitigate safety risks. The team invites the site owner and subcontractors to join a senior site safety committee to ensure everyone is focused on the health and safety project team members. The committee lays out safety objectives, discusses improvements and works together to solve problems.

For example, on one large redevelopment project, one of the subcontractor's managers was not following site safety procedures. The safety committee brought the issue to the attention of the contractor's CEO, who replaced that manager and joined the safety committee to show his team that safety was a priority. If the team hadn't taken a collaborative approach, the issue could have become a much bigger problem, Mr. Hengel says. Instead, it was quickly addressed without creating delays, and the project ended with excellent safety statistics. "This is an example of how good stakeholder management is beneficial to everyone," he says.

FROM ALL ANGLES

Establishing strong relationships with stakeholders is key to success on these types of projects, says Chris McDonald, vice president of process operations at global engineering and consulting firm CH2M, Houston, Texas, USA. "Stakeholders play an integral role in our execution plan. Their input affects every aspect of the project."

To gather that feedback, his team starts by making sure every voice is heard. It identifies all the stakeholders who will have a say in the project and brings them together for a multiday meeting to collaboratively develop a project plan, define roles and responsibilities, and identify risks.

Mr. McDonald's team often develops brownfield sites that have active businesses running on them—extending commercial or industrial operations and adding new infrastructure. In these cases, this process includes the operations and maintenance teams of the current facility, who bring unique insight to the planning process.

"Too often on these projects, you do an execution plan and send it off to engineering without ever get-

"Our project plan includes goals to be carbon neutral, water positive, generate zero waste and enhance the well-being of the community."

—Rhian Greenrod

[CASE STUDY]

A River Runs Next to It

A decade-long project is breathing new life into a U.S. city's central waterway.

A prime chunk of the east bank of the Chicago River, in downtown Chicago, Illinois, USA, has long sat undeveloped, overgrown and littered with garbage.

But soon all that will change. The US\$1.5 billion Riverline development project promises to transform this lucrative stretch of land—and could fundamentally change the way the city engages with the river.

The 14-acre (5.7-hectare) site is part of a 10-year master redevelopment plan that includes the phased construction of eight new buildings that will house 3,600 residences, says Tom Weeks, general manager for Lendlease Americas in Chicago. The organization is co-developing the site with CMK Companies, a Chicago residential developer. The companies broke ground on the first building in September after a year of planning, permitting and demolition work.

One of the project's biggest challenges revolves around a long-vacant railroad terminal on the project site. Clarifying regulatory authority expectations in the planning phase has helped the project team avoid surprises that could alter the plan and increase costs later on, Mr. Weeks says.

"Addressing unique site conditions, such as part of the site having historically been where the Chicago River flowed, required upfront testing and careful oversight and coordination with the City of Chicago and regulatory authorities," Mr. Weeks says. "This is where a lot of preparation and perhaps a bit of luck become important."

Bulking up the planning process makes the job more complicated, but that's part of the deal when you work on brownfield sites, says CMK CEO Colin

ting input from these people," he says. But on-site staff members have intimate knowledge of how the site works, where key equipment is located, what vendors they use and where tie-ins need to happen. "Their input can be instrumental in keeping projects on schedule and avoiding unnecessary delays."

Rendering of the Riverline development project, Chicago, Illinois, USA. Below, a 1920s photo of the site



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Kihnke, also in Chicago. “As with any uncertainties in business, we plan the best we can so that when any issues do arise, we can address it quickly and work towards an immediate resolution.”

CLEAR A PATH

While the project is far from complete, the team already has addressed one of the more complicated early issues. Initial assessments of the property showed that a large homeless population had taken up residence in parts of the abandoned lot. “This was a major challenge for the team, as we wanted to start excavation but couldn’t do it safely with people on the site,” Mr. Weeks says.

Rather than quickly displacing the group, Lendlease and CMK worked closely with the city to find transitional housing for the homeless population. This approach took more time and effort, but it

Mr. McDonald also encourages teams working on brownfield sites to consider risks related to the entire site—not just their piece of it. For example, logistical issues related to bringing in equipment, hauling out hazardous waste or accessing power and utility lines. “These projects have a lot of mov-

ensured people were safely relocated and potentially minimized any negative coverage of the project in those crucial early days.

“Arriving at a workable plan, with cooperation from city agencies, definitely helped allow a timely start to construction while addressing the safety and welfare of those affected,” Mr. Weeks said.

AROUND THE BEND

Working on an abandoned site also offered interesting opportunities for development, particularly related to the river, says Mr. Weeks. In 2016, the City of Chicago laid out specific goals to improve the environment, infrastructure and economic potential of the Chicago, Calumet and Des Plaines rivers through 2040. (The three rivers pass through the metro area.) Riverline’s project plan directly aligns with these goals by dedicating more than 40 percent of the land to public space, including a half-mile (0.8-kilometer) river walk and parks.

While the city didn’t require this open space be part of the project, incorporating it helps ensure forward momentum, Mr. Weeks says. “It helped with our approvals. Everyone who understands our plan understands the benefits of it to the neighborhood and the city as a whole.”

ing pieces, and they all need to work together within scope,” he says.

But the biggest challenge on these projects is a late discovery of contamination on the site. “You need to be diligent,” he says. “Discuss potential challenges early to align expectations.” **PM**

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—Tom Weeks, Lendlease Americas, Chicago, Illinois, USA

