Rinker

MATERIALS®

A QUIKRETE® COMPANY

Collaborative Design

www.rinkerpipe.com

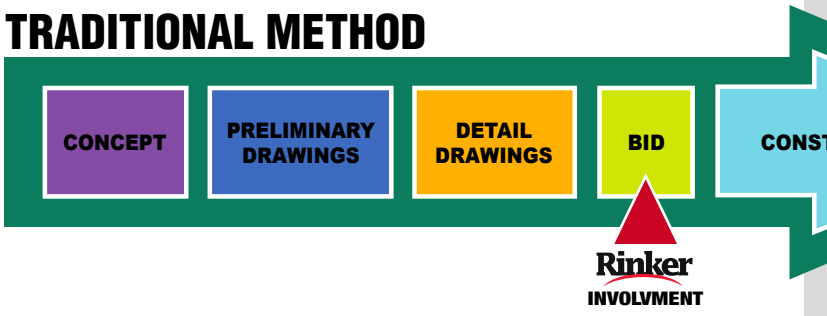
THE RINKER MATERIALS DESIGN-BUILD ADVANTAGE

Built over the past five decades, Rinker Materials owns a reputation for delivering storm water infrastructure projects in collaboration with owners, engineers and contractors based on industry best practices and standards. Today, Rinker Materials serves the marketplace as a go-to design-build partner on residential, commercial, industrial and municipality projects across the country.

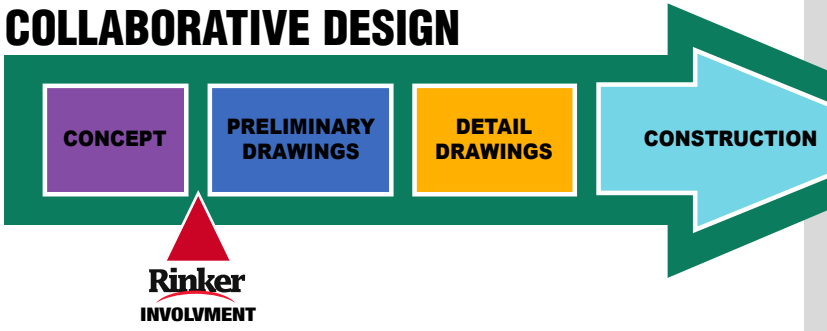
In a design-build relationship, Rinker Materials works under a single contract with a project owner to streamline the design process with the engineer and expedite construction services with the contractor. This simple, but fundamental project delivery saves money and time by transforming the relationship between Rinker Materials, the designers and the contractors into a mutually-beneficial alliance grounded in teamwork.

- ✓ Faster Delivery
- ✓ Cost Savings
- ✓ Better Quality
- ✓ Singular Responsibility
- ✓ Decreased Administrative Burden
- ✓ Reduced Risk
- ✓ Reduced Litigation Claims

TRADITIONAL METHOD



COLLABORATIVE DESIGN



WHY DESIGN-BUILD WITH RINKER MATERIALS

Rinker Materials adds immediate value on design-build projects by providing assistance with the layout, budget estimates, structural and hydraulic design, special fitting design, and joint and gasket design during the Proposal, Technical Submittal, Design Development (DD) and Construction Document (CD) phases.

As the product expert for storm drainage systems and underground detention/retention systems, Rinker Material reinforces the proven benefits of using concrete materials while navigating the design-build team through the proper selection of concrete materials for a project. Rinker Material encourages review of the following attributes during a design-build project.

Less Soil Dependence

Rinker Materials concrete pipe is structurally engineered to accommodate a variety of loading scenarios as verified through testing prior to installation. It contributes as much as 90% of the strength in a typical pipe-soil system making it far less dependent on structural backfill than its flexible counterparts. In addition, as an engineered structure, Rinker Material concrete pipe is less sensitive to geotechnical conditions and handles high-stress loading applications making it a viable long-term water infrastructure solution. Finally, Rinker Material concrete pipe is suited for narrow trench box installations, deep fills and extremely shallow cover, and various construction loading scenarios.

Sustainable and Responsible

Rinker Material concrete pipe ensures the protection of the traveling public, professional liability and is resilient to major environmental impacts.

- Fire: Concrete pipe will not burn or collapse due to fire preventing roadway structure failures and obstructions to emergency evacuation routs.
- Corrosive Environments and Abrasion: Rinker Material concrete pipe is resistant to corrosive environments and the concrete inverts resist abrasive forces from bed load.
- Groundwater and Sea Level Rise: Resilient to buoyancy, hydrostatic buckling, and dynamic soil properties, Rinker Material concrete pipe does not require the minimum cover and embedment width restrictions as alternative products (OPSS 1820, CSA A257.0).

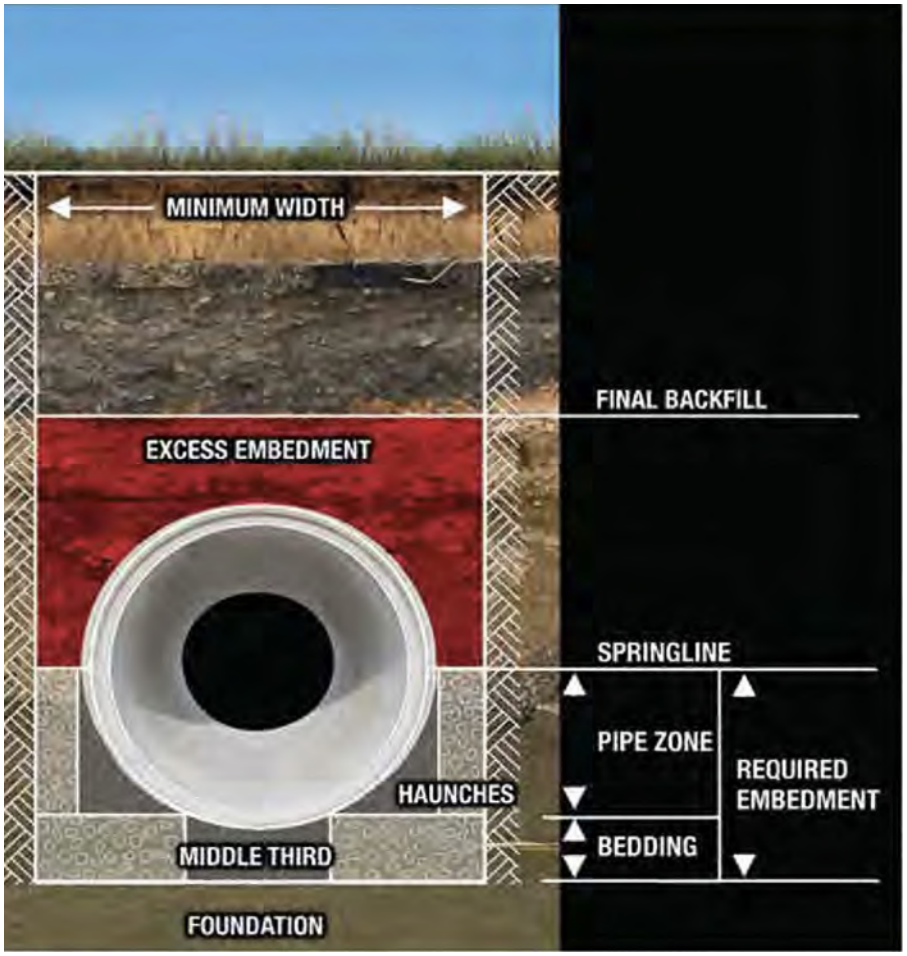
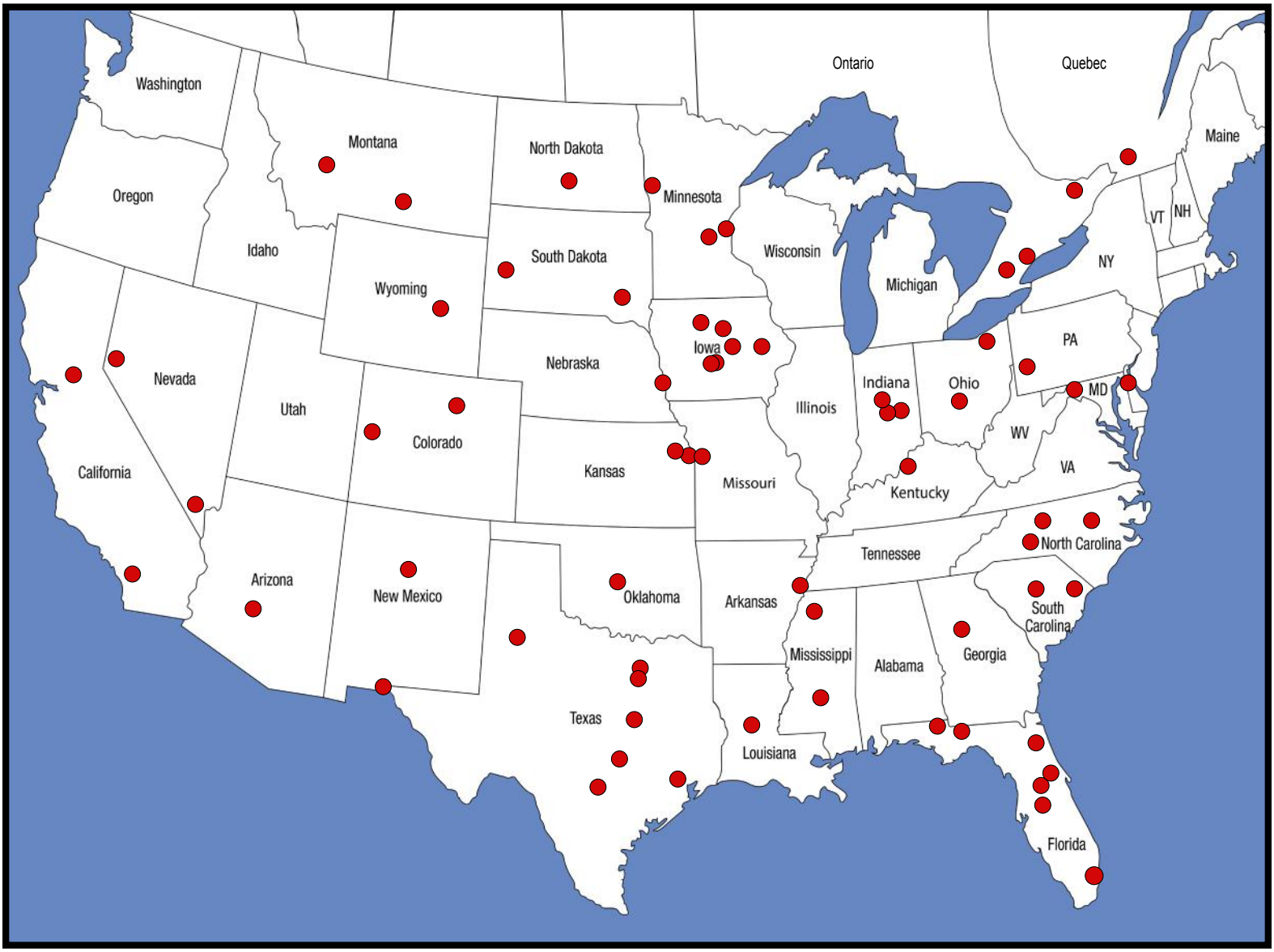


Illustration of backfill when using concrete pipe

RCP Diameter (mm)	Trench Width (m)	Excess Embedment Above Springline (m)	Reduced Structural Backfill (Red Zone) per 100 m of Trench
375	1.219	0.5	18.41
450	1.219	0.53	19.82
600	1.524	0.61	28.32
750	1.524	0.69	31.86
900	1.83	0.76	42.48
1050	2.134	0.84	54.51
1200	2.134	0.91	59.47

Exploring the installation options leveraging various combinations of Rinker Material concrete pipe and backfill materials on a design-build project helps drive greater cost-efficiency without compromising long-term structural performance.



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