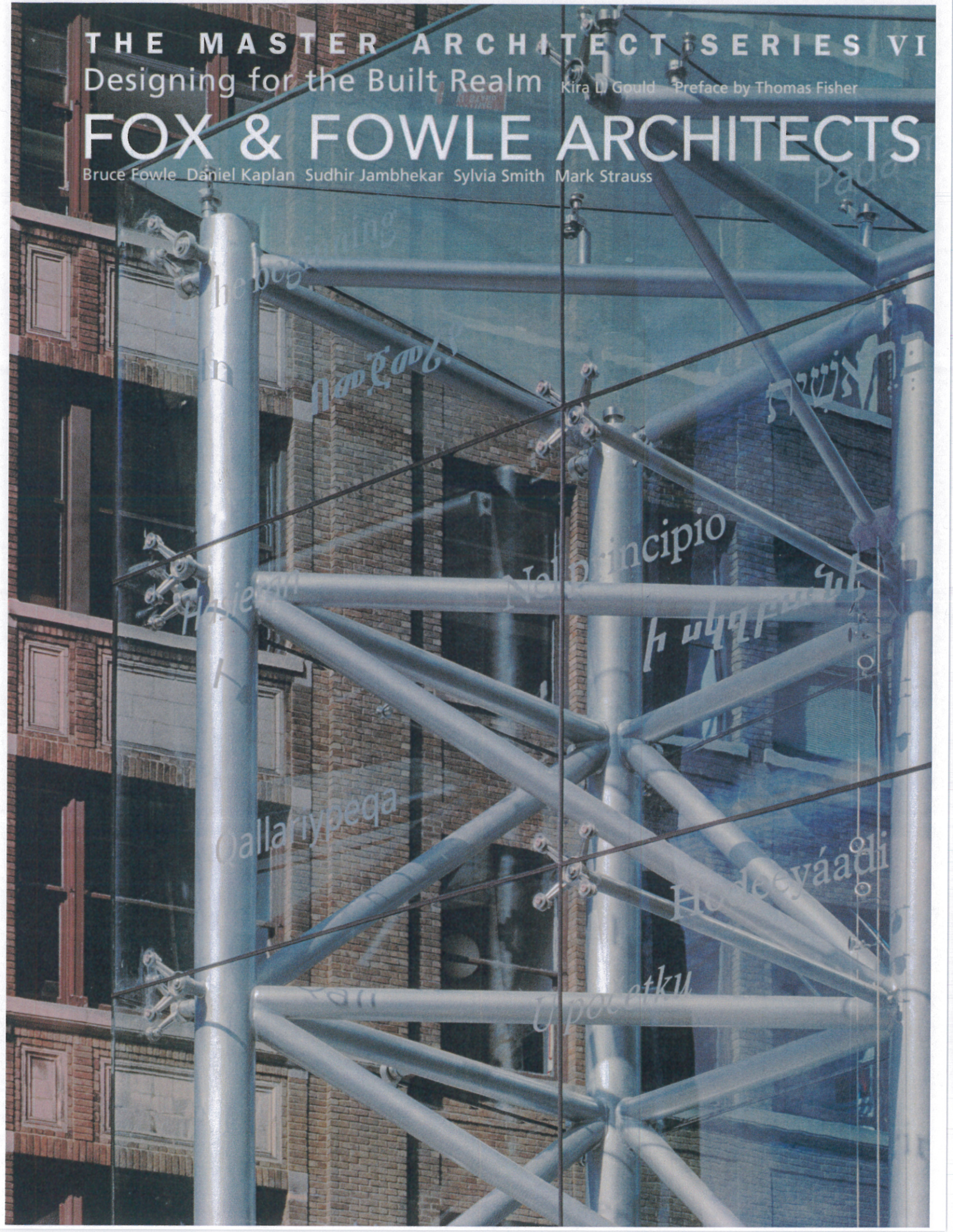


THE MASTER ARCHITECT SERIES VI

Designing for the Built Realm Kira D. Gould Preface by Thomas Fisher

FOX & FOWLE ARCHITECTS

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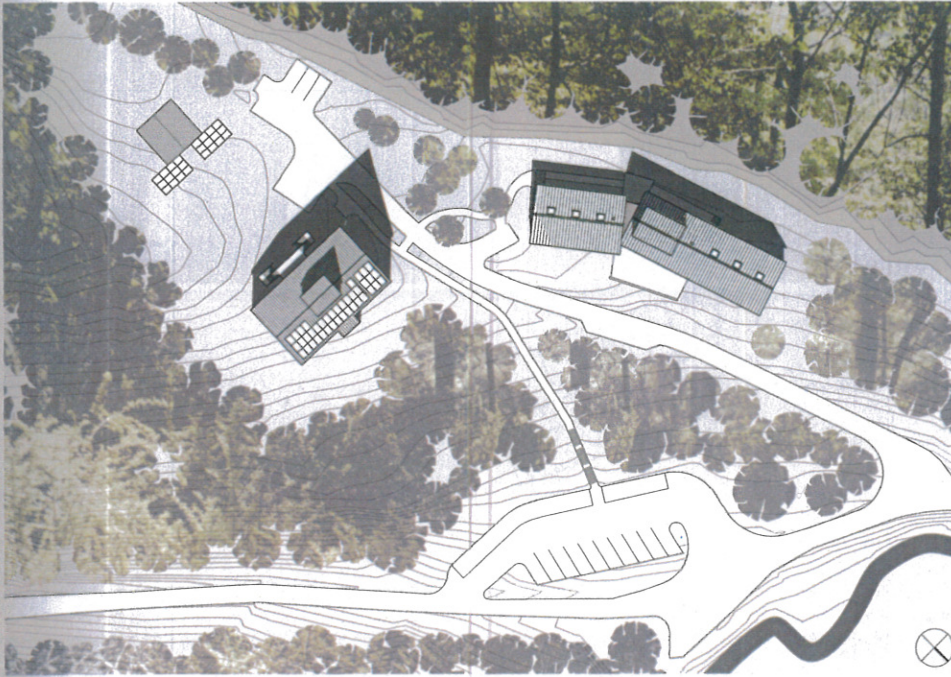
- 1 Location map
- 2 The Center—southeast view
- 3 Site plan
- 4 The Center—detail



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Black Rock Forest Center



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After the completion of a comprehensive master plan, Fox & Fowle Architects designed the first phase of the Black Rock Forest Center for Science and Education. This modern research and educational facility is located at the Black Rock Forest Consortium's field station within the 3,750-acre Black Rock Forest. The Center provides a needed setting for environmental study and research for staff, scientific teams, and student groups ranging in age from kindergarten through graduate school.

The Center's site-sensitive design, building form, material use, and energy consumption management make it a model facility in keeping with the sustainable mission of the academic consortium. The cohesive building form and detailing are influenced by local vernacular gabled structures. The rectangular footprint and east/west orientation maximizes solar exposure while minimizing building mass, and individual southern window overhangs minimize summer heat gain.

A central atrium topped by a roof monitor provides internal visual focus for the building while also

bringing natural light and ventilation to the building's center. It is the metaphorical "clearing in the forest." A highly efficient geothermal heat pump system provides heating and cooling within the well-insulated envelope. A composting toilet system replaces a conventional solid waste system. Building materials such as the stone veneer are from local sources; soil, rock, and trees that were disturbed were reused in the new construction. The columns, which frame the atrium, are trees from the surrounding forest, as is the oak paneling. The fine-tuning of the building design was aided by a computer-modeled energy consumption analysis. The final design consumes 45 percent less energy annually compared to a traditional structure meeting all applicable codes.

Phase II of this project, the Lodge, is incorporated into the natural bench that parallels the roadway to the Center, establishing a campus in the forest with minimal impact on the natural setting. The main floor houses four- and six-person sleeping rooms and support space for student



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stays in the forest. The building is organized around a floor-to-ceiling glazed central gathering space that is framed by near views of the ridge to the northeast and the long views of the forest to the southwest. Natural light and ventilation are also provided from clerestory windows in the raised gable that crowns the communal space. The central hall to each wing of sleeping rooms is punctuated with operable skylights above each grouping of room entries. Natural light animates the building's logical organization.

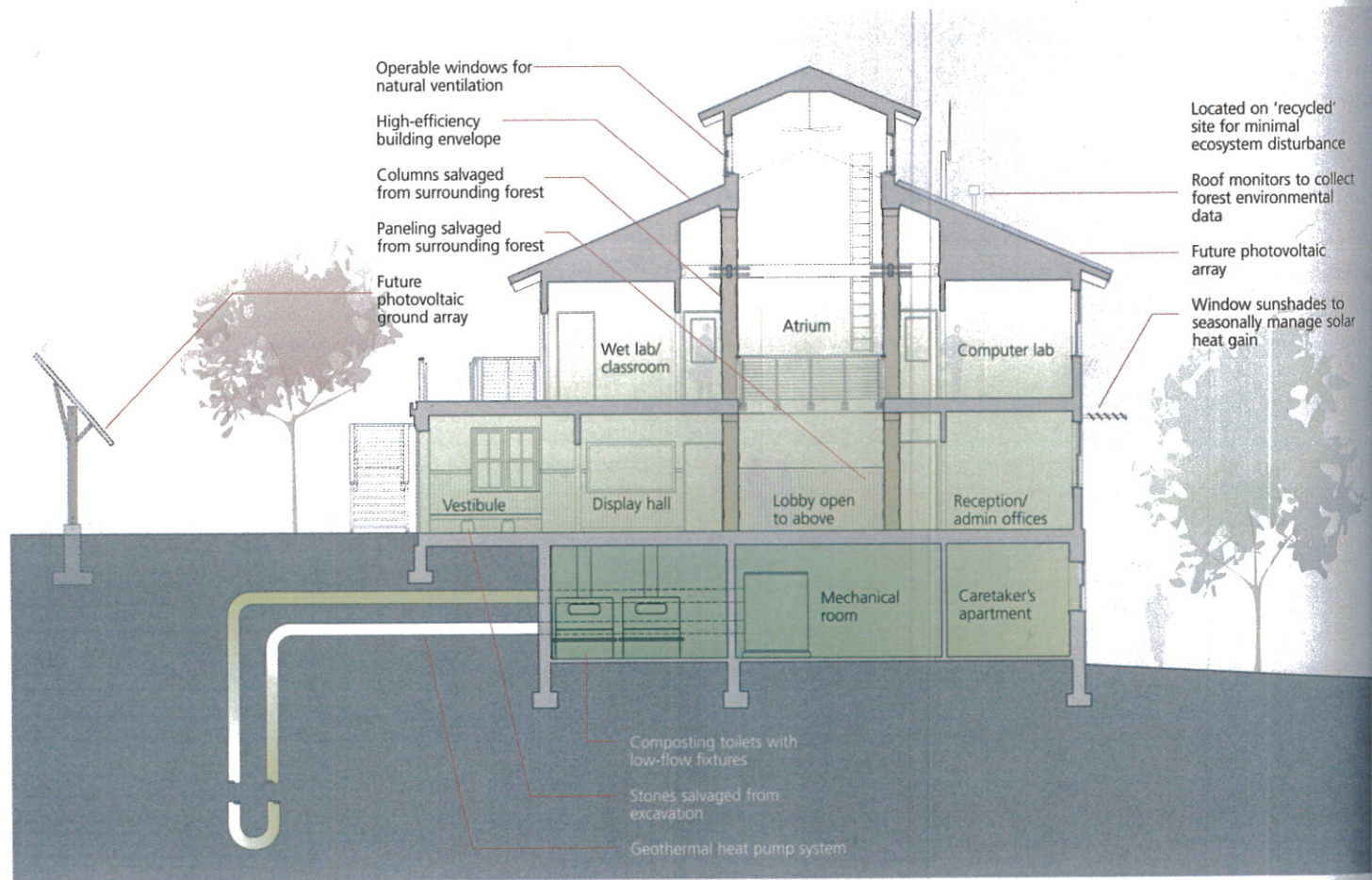
The sustainable strategies of the Center are fine-tuned and extended in the Lodge. The high-performance building envelope utilizes dense-pack cellulose and structural insulated roof panels. A greywater recovery system recycles water for site irrigation. Wood and stone from the forest are featured in the building, including the four hemlock columns and pine wainscot in the gathering space. The Center for Science and Education is an ideal venue from which to manage the Black Rock Forest as an interactive part of a larger natural system.



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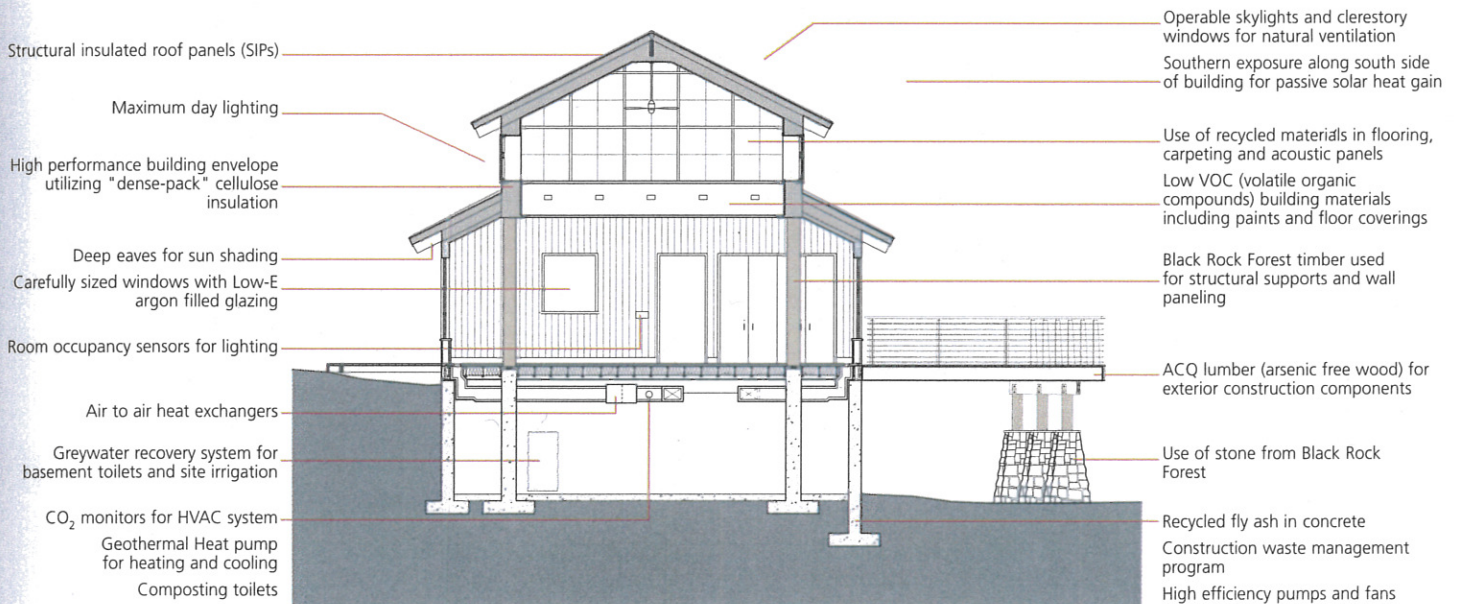


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- 5 The Center—northeast view
- 6 The Center—interior atrium
- 7 The Center—sustainable components
- 8 The Lodge—rendered elevation
- 9 The Lodge—plan: second floor
- 10 The Lodge—plan: ground floor
- 11 The Lodge—sustainable components



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