

ARCH Austin Resource Center for the Homeless

Austin, Texas



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Connecting to the Street

The word “homeless” provokes a deep and powerful reaction in many people. The homeless dwell on the streets, in parks, under freeway overpasses, in cars, or in cheap motels. Many of the homeless served at the recently completed Austin Resource Center for the Homeless (ARCH) are better described as the “working poor”. These individuals don’t come close to fitting society’s stereotypical homeless person -- dressed in tatters, mumbling under their breath, pushing their possessions around in a shopping cart. The working poor serve us food, clean our offices, and tear our movie tickets. They might make enough money to live in a cheap motel for half the month while the other half they live in their car or on someone’s couch. At some point, many of them will become homeless.

As Austin, Texas has grown, so has its homeless population. In 1999, local homeless advocacy groups proposed constructing a downtown homeless resource center, which could serve as a center for all these groups. ARCH, the cities response to this urban problem, is a sustainable building and will be LEED Silver rated. The building design approaches the problem of homelessness in a positive way, connecting to the city through its open, accessible spaces. Located on a corner downtown site, the building opens to the street through its corner entry courtyard and two-story lobby, which runs the length of Seventh Street. Large windows allow passersby views to the activities occurring inside, from the two-story entry hall, to the art studio to the laundry room.

Much more than an emergency shelter, ARCH helps people transition out of homelessness through its many programs and serves as a meeting place and support center. This 26,820 square foot building is made up of a resource center, clinic and overnight shelter. The resource center consists of a large common-use day room, shower and locker rooms, laundry facilities, computer room, art studio and offices for various community support agencies. The clinic, located on the first floor, provides health services for the homeless. The second floor houses the large commercial kitchen and dining room. Located on the third floor in a pavilion-like structure on the roof is the 100-bed overnight shelter. The sleeping area combines a roof top exterior terrace, which opens up to panoramic views of the city skyline.

Space Structure

The exposed concrete structural frame was built using ‘stack-cast tilt-frame’ construction, an experimental system developed for this project. Frame elements were cast on-site horizontally, one on top of the other, allowing for less formwork and greater finish control. The concrete components were then erected within a two-day period. The structural frames are oriented north-south and provide the central organizing system for the complex program. While most of the interior spaces are oriented between the frames, the main entry courtyard and lobby are an exception. These entry spaces connect through the building east to west and vertically through the floors. The building is

Cover Detail - south elevation with rain water collection tanks. TM 01 Detail - colored glass over entry ML
02 Stack-cast tilt-frames ready for installation. ML 03-06 Stack-cast tilt-frame installation. ML



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07 Exterior view of western elevation. TM

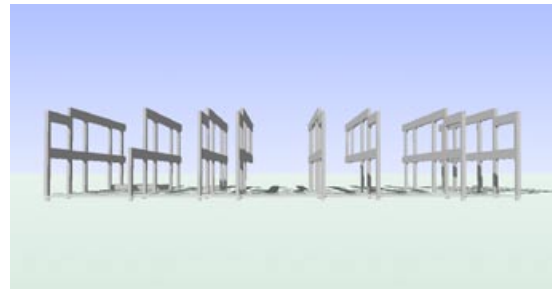
08 Tilt-frames in place. ML 09 Completed exposed frame – southwest corner. ML 10 Computer model tilt-frames. ML



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composed of interpenetrating volumes within that create a variety of exterior spaces and allow light to reach into the interior, which reduces the need for artificial illumination. Wall assemblies fill in the spaces between the planar columns and beams leaving the entire frame exposed. The exterior voids, exposed frame and infilling of the wall elements give the building an open and informal quality.

Project data

Client: City of Austin
Completion: May 2004
Location: Austin, Texas
Size: 26,820 sf
Cost: \$5,000,000



11 Exterior view of north (alley) elevation northeast corner. TM
12 Exterior



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- 14 Exterior view south elevation showing rainwater collection tanks. TM
- 15 Custom exterior light fixture using T5 fluorescent utility fixtures. ML



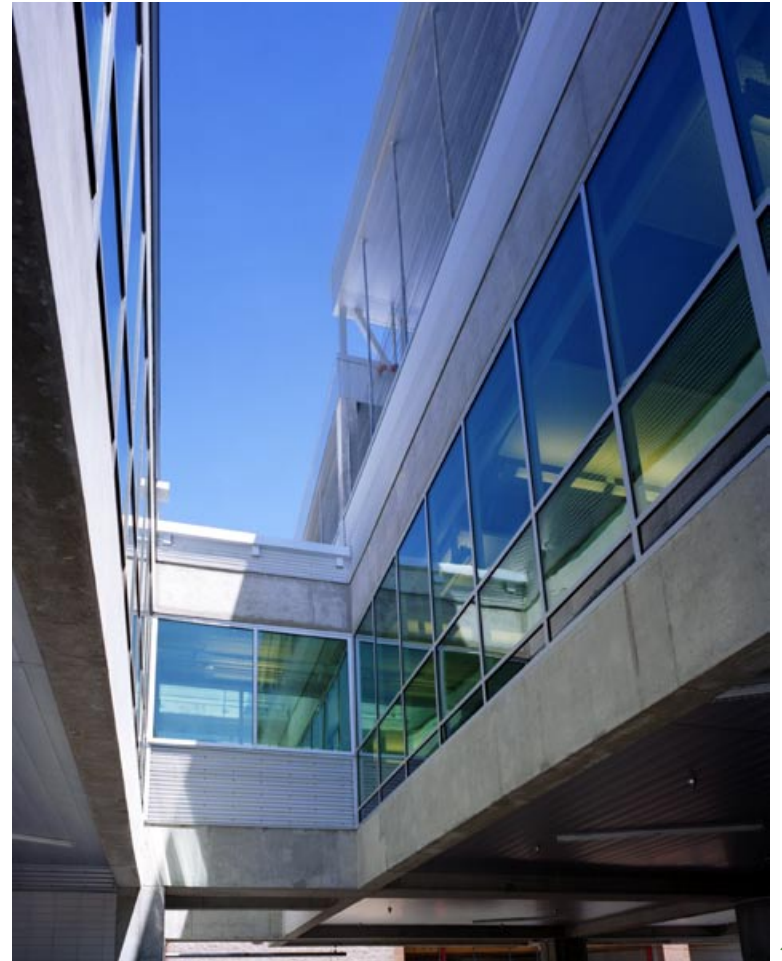
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Light

The central light well, a ten-foot-wide space between the concrete frames, diffuses and reflects natural light into the building. Surfaced in metal panels and glass, it creates enough depth to diffuse the intense direct Texas sunlight. As an unoccupied void within the building, the light well also binds spaces within the building together by allowing visual connections between them. From the parking area you can see through the second floor past the offices to the shelter terrace above, and from the offices you can see through the light well past the corridor to the city beyond. This opening and visual connection creates a greater sense of orientation within the building. Many of the homeless struggle with mental illness -- natural lighting, a sense of orientation and a visual connection to the city help manage some psychological obstacles.

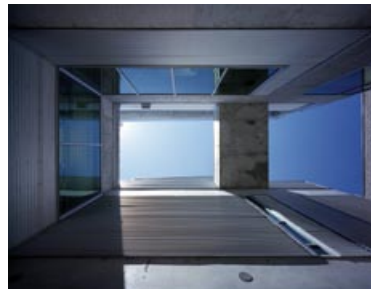
Three different custom lighting fixtures were designed, each utilizing standard 48" T-5 fluorescent utility lamps. Office and conference rooms are illuminated with straw ceiling panels used as bounce cards to create indirect light (19,32). Light columns hang in the entry lobby made of ten-foot long pendants each containing eight utility fixtures (25,34). The exterior of the building is ringed with six-inch diameter steel tubes that cantilever from the building each containing a single T-5 fixture (15). Holes drilled into the sides of these tubes, almost like perforations in notebook paper, create a sparkling effect as one walks down the street toward the building. A wide opening cut into the bottom of each tube creates a soft down light.



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16 Central light well as seen from parking area. TM

17 Central light well looking up to b



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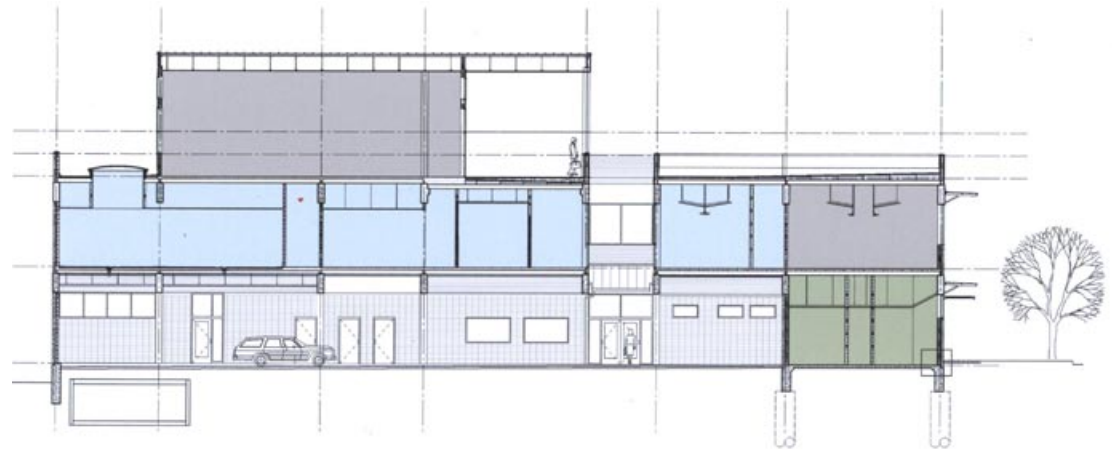
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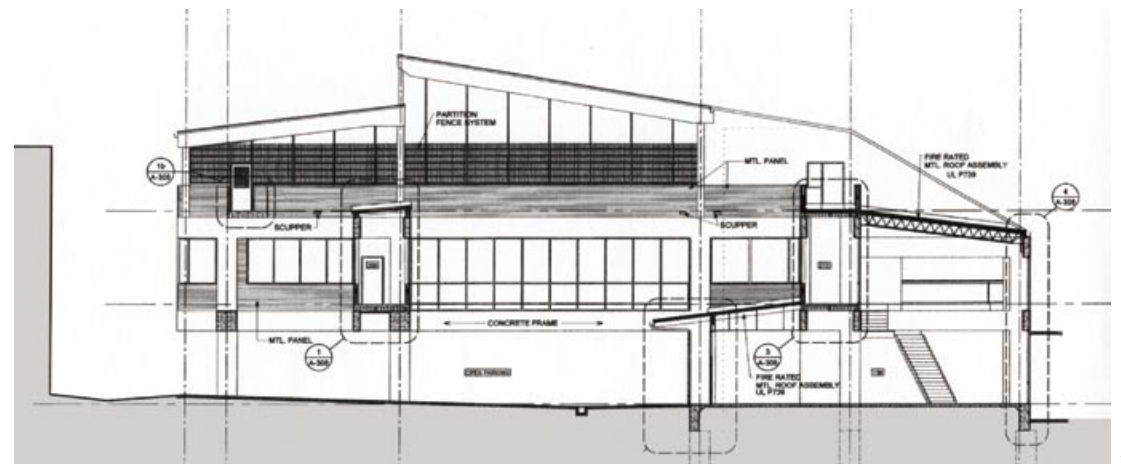
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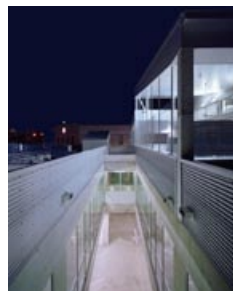


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20 Light well from 2nd floor corridor. ML 21 Section 1 east-west. ML 22 Section 2 north-south through light well. ML
 23 Light well from roof looking down into parking area. TM 24 View from office through light well. TM

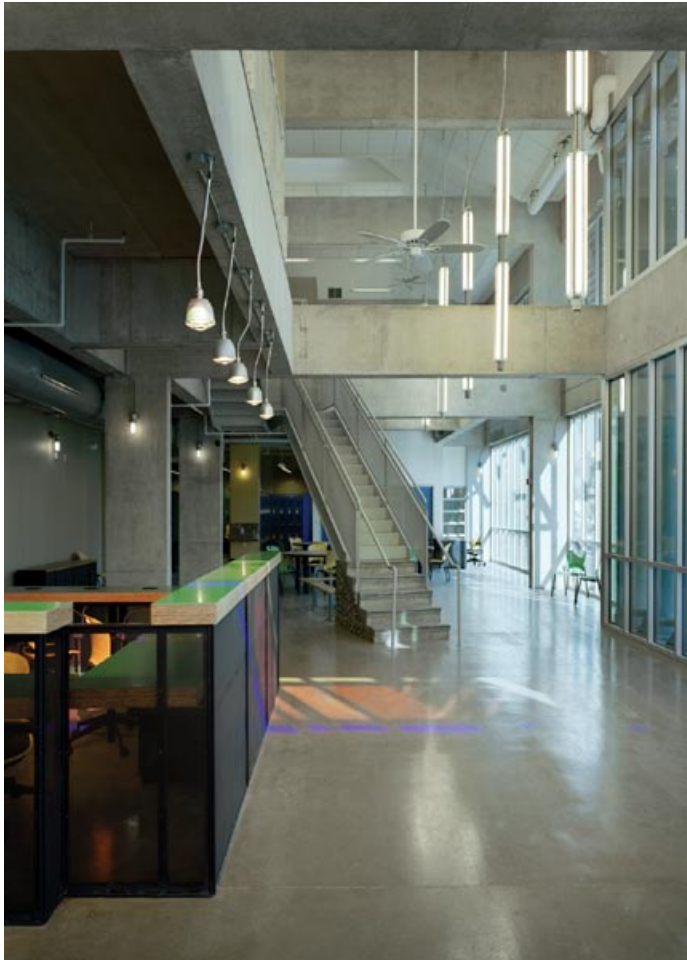


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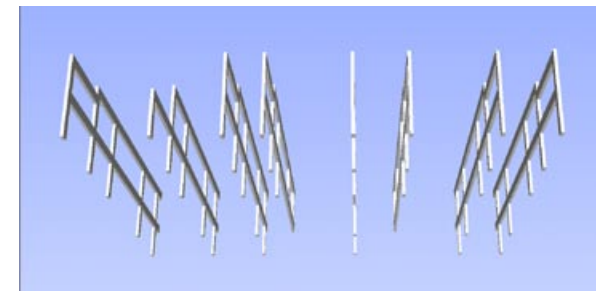
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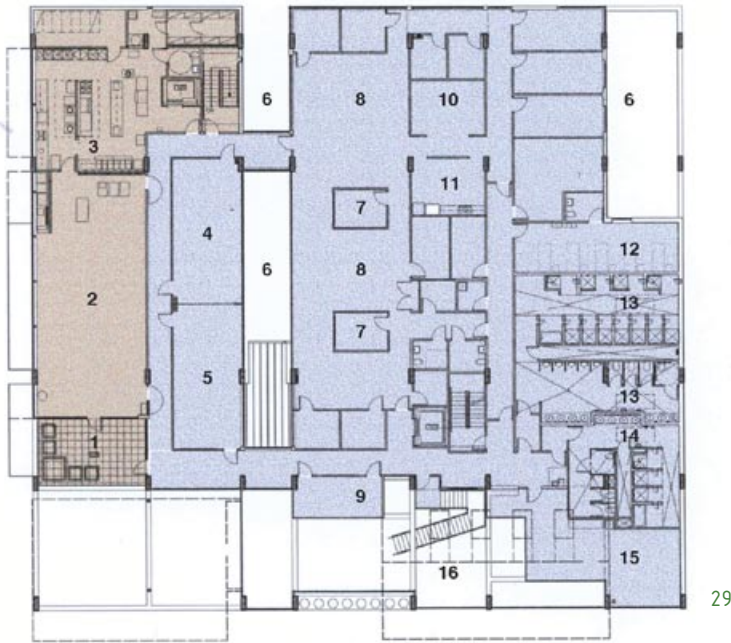
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25 Entry lobby showing custom pendant T5 light fixtures. TM 26 1st floor plan. ML

27 Entry lobby looking toward entry doors. TM 28 Computer model worms-eye view of frames. ML

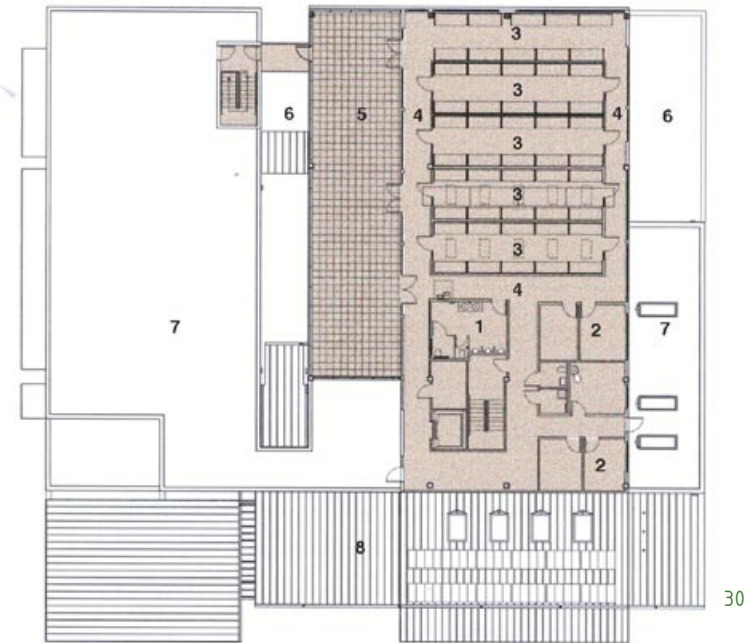




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2nd Floor Plan

- | | | |
|------------------------|-----------------------|---------------------------|
| 1 Outdoor roof terrace | 7 Shared meeting room | 13 Mens shower room |
| 2 Cafeteria | 8 Open office | 14 Womens shower room |
| 3 Kitchen | 9 Balcony | 15 Art/Multi-purpose room |
| 4 Conference room | 10 Office workroom | 16 Open to below |
| 5 Conference room | 11 Office breakroom | |
| 6 Light well | 12 Sickbay | |



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3rd Floor Plan

- | | |
|------------------|------------------------|
| 1 Restroom | 5 Outdoor roof terrace |
| 2 Offices | 6 Light well |
| 3 Sleeping rooms | 7 Flat roof |
| 4 Hallway | 8 Sloped metal roof |

29 2nd floor plan. ML 30 3rd floor plan. ML

31 Entry windows seen □



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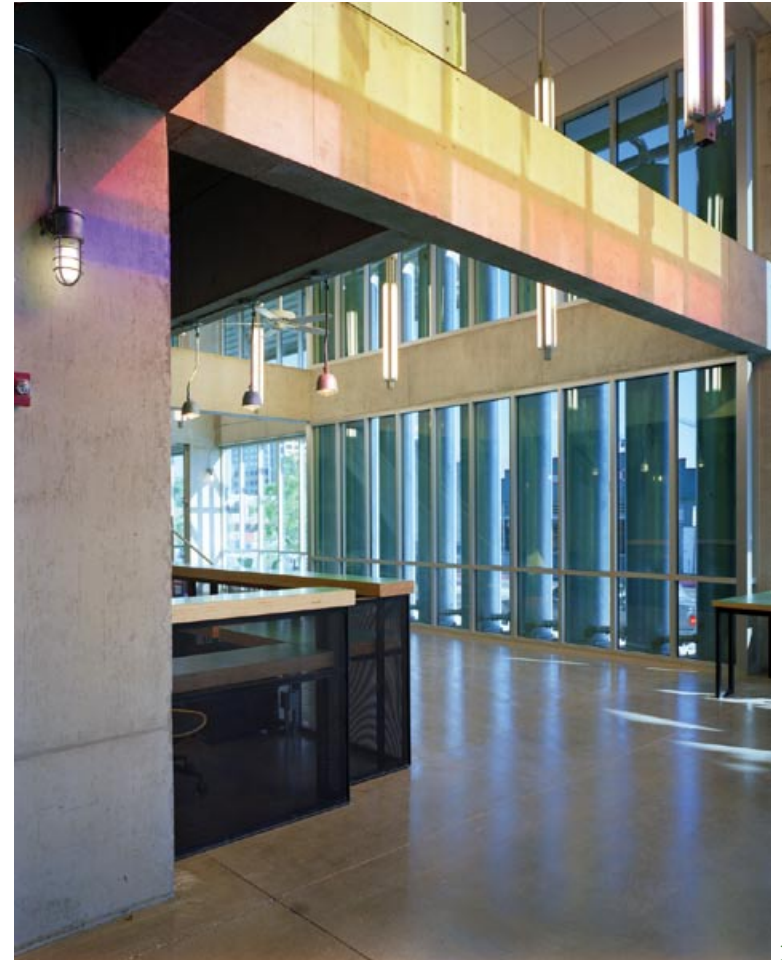
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Sustainability

ARCH is a LEED (Leadership in Energy and Environmental Design) silver rated building implementing many innovative architectural and engineering components, systems and building techniques. A 13,000-gallon rainwater collection system, utilizing a manifold tank system, supplements the buildings non-potable water supply. The column-like above ground collection tanks, visible in the buildings elevation, also act as solar shade. A passive solar hot water system pre-heats water for the showers. Electrical usage is supplemented by a photovoltaic array.

The 'stack-cast tilt-frame' system, developed specifically for this project, reduces the amount of finished materials and formwork used and increases the quality of the exposed concrete finish. Fly ash, a byproduct of industrial processes, was used to replace 45% of the cement. The use of Fly ash ultimately reduces the amount of green house gases released into the atmosphere through cement production. The strong connection between interior and exterior, created through the numerous interpenetrating volumes, allows natural light and views to over 90% of the work spaces. Renewable materials, such as compressed straw, were used for hung ceiling lighting panels (19,32) and recycled crushed glass replaced gravel as drainage medium for the planters.



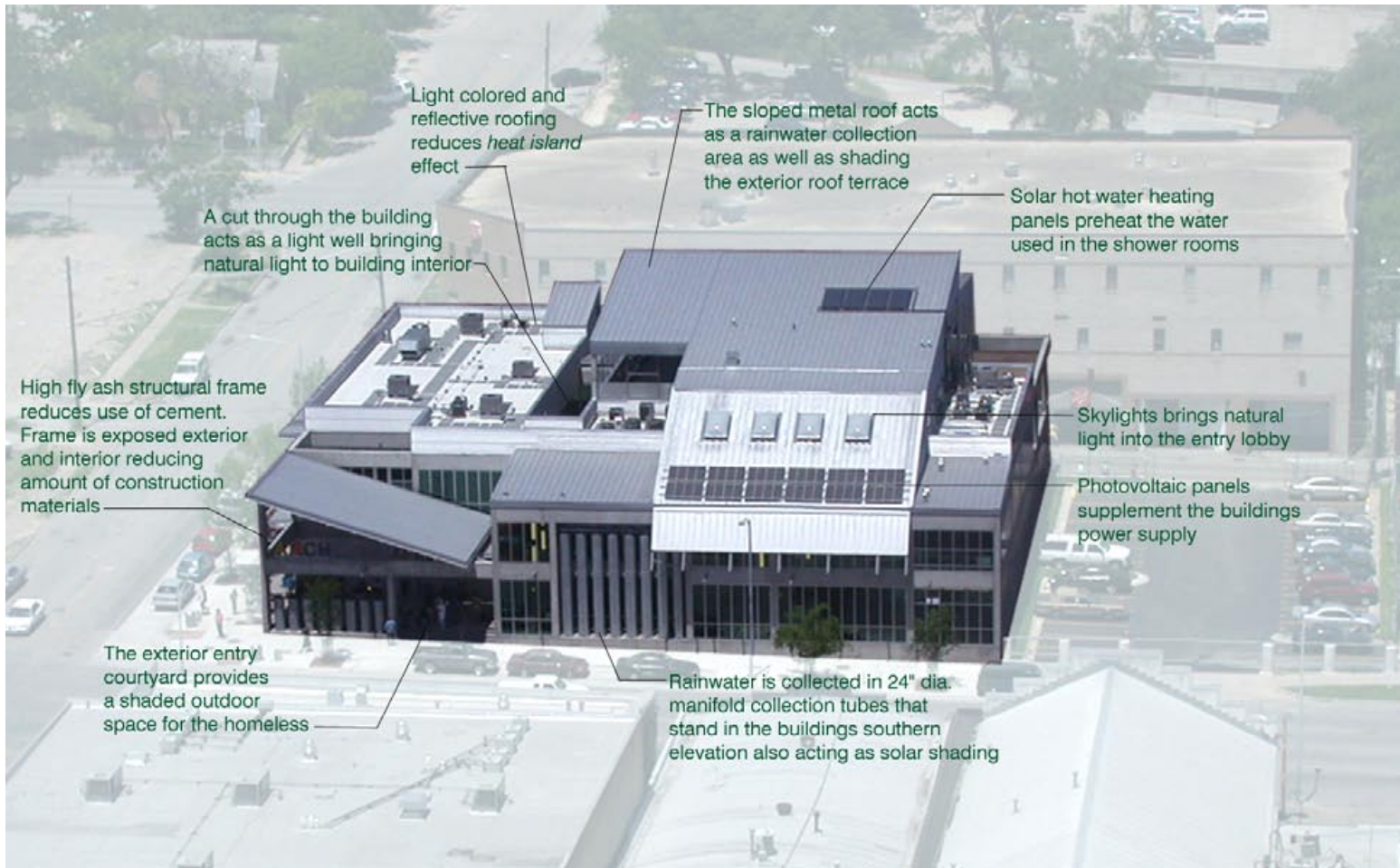
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34 Rain water collection tanks seen from lobby. TM

35 Exterior view of southwest corner. TM



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36 Aerial view indicating sustainable building features. ML 37 Rain water collection tanks. ML 38 Exterior view of north (alley) elevation. TM
39 Read more. Austin American Sta



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