

## SAN MATEO COUNTY HILLCREST JUVENILE DETENTION CENTER DECONSTRUCTION & REUSE OF SURPLUS ASSETS



In early 2010 IRN took a request from San Mateo County (CA) to do deconstruction and salvage in advance of demolition of the County's Hillcrest Youth Services Center. San Mateo County opened a new juvenile facility in 2006, replacing a structure built in the 1940s with additions through the 1990s. The facility was a maze of corridors, offices, kitchens, courtrooms and common areas with no pattern or sense. The building had also been thoroughly scavenged. There wasn't a lot left worthy of deconstruction or salvage. But the County has made a commitment to reuse and recycle aggressively from all County projects, and asked IRN to recover as much as possible.

### Summary

Deconstruction of doors, roof-mounted solar panels, and other built-ins, and reuse of surplus furniture scattered through a 75,000 square foot single story structure.

### Challenges

The history of construction (multiple phases over six decades) and abandonment (extensive scavenging, destruction attendant to use as a fire department training site) made this a very challenging worksite:

- Rambling structure with confused, confusing layout.
- Single access point requiring long internal carries (some >200 yards)
- Building scavenged and used by local fire departments for training, creating a messy and potentially dangerous workplace. No water or electricity.
- Large (4' x 16') roof-mounted solar panels only removable by crane.
- Owner, architect, & contractor inexperienced in deconstruction and reuse.
- Aggressive schedule and limited budget, requiring all deconstruction and removal of surplus to be completed in three days.

### Results

#### Deconstruction & Salvage for Reuse

<i>Item</i>	<i>Quantity</i>
Cabinets, wall-mount, wood	3
Cabinets, laboratory, metal & glass	3
Chalkboards, wall-mount	16
Doors, interior, solid core wood	59
Solar panels, hot water, metal, glass, plastic	7
Kitchen equipment, commercial	4
Condenser; Walk-in freezer w/ refrigeration unit;	
Refrigerator, 3-door, stainless; Dishwashing station w/ triple sink & faucets, stainless	
Chairs	47
Desks	4
Bookcases, wood & metal	7

**Keys to Success:**

- Owner commitment. Strong specification and communication to contractor that deconstruction and reuse were a priority. Owner's dedication of staff and other resources in support of deconstruction & reuse.
- Owner's and architect's flexibility to consider deconstruction and reuse, refrain from micromanagement, and trust IRN's and deconstruction subcontractor's capabilities.
- Scheduling that allowed deconstruction to be carried out as an independent job phase, avoiding conflict with other demolition activities.
- Experienced deconstruction crew equipped with tools and experience to disassemble and remove large bulky fixed assets (solar panels, walk-in freezer, etc.).
- Careful attention to phasing and scheduling for smooth allocation of labor, removal of materials, and loading outbound shipping container.

**Critical Factor:  
Large Fixed  
Assets**

The most difficult items were seven roof-mounted hot water solar panels and a built-in freezer. After evaluating alternatives, IRN and its deconstruction crew brought in a crane to facilitate dismantling and removal of the solar panels, each 4' x 16' and weighing approximately 400 pounds. The crane took the weight of the panels as they were disconnected from plumbing and anchorage connections, and flew them to a staging area to be loaded into a shipping container.



**Dismounting and flying out one of seven roof-installed solar panels.**

The built-in freezer consisted of four insulated wall plus ceiling and floor panels and a swinging insulated door comprising the fourth wall panel, assembled in place. Careful planning was required to dismantle the refrigeration unit, evaluate how the unit was constructed, and disassemble the panels in reverse order to avoid damage that would prevent reuse.

**Project Team**

- Building Owner:** San Mateo County (CA) Probation Department. Project Manager: Michael Ramirez. Web: <http://www.co.sanmateo.ca.us/portal/site/Probation>
- General Contractor:** Staples Construction Co., Inc., Ventura, CA. Project Manager: Brandon Web: [www.staplesconstruction.com](http://www.staplesconstruction.com)
- Deconstruction & Recycling:** IRN - The Recycling Network, Concord, NH 03301. Project Manager: Matt McKinney. Telephone 603-229-1962. Web: [www.WasteMiser.com](http://www.WasteMiser.com).