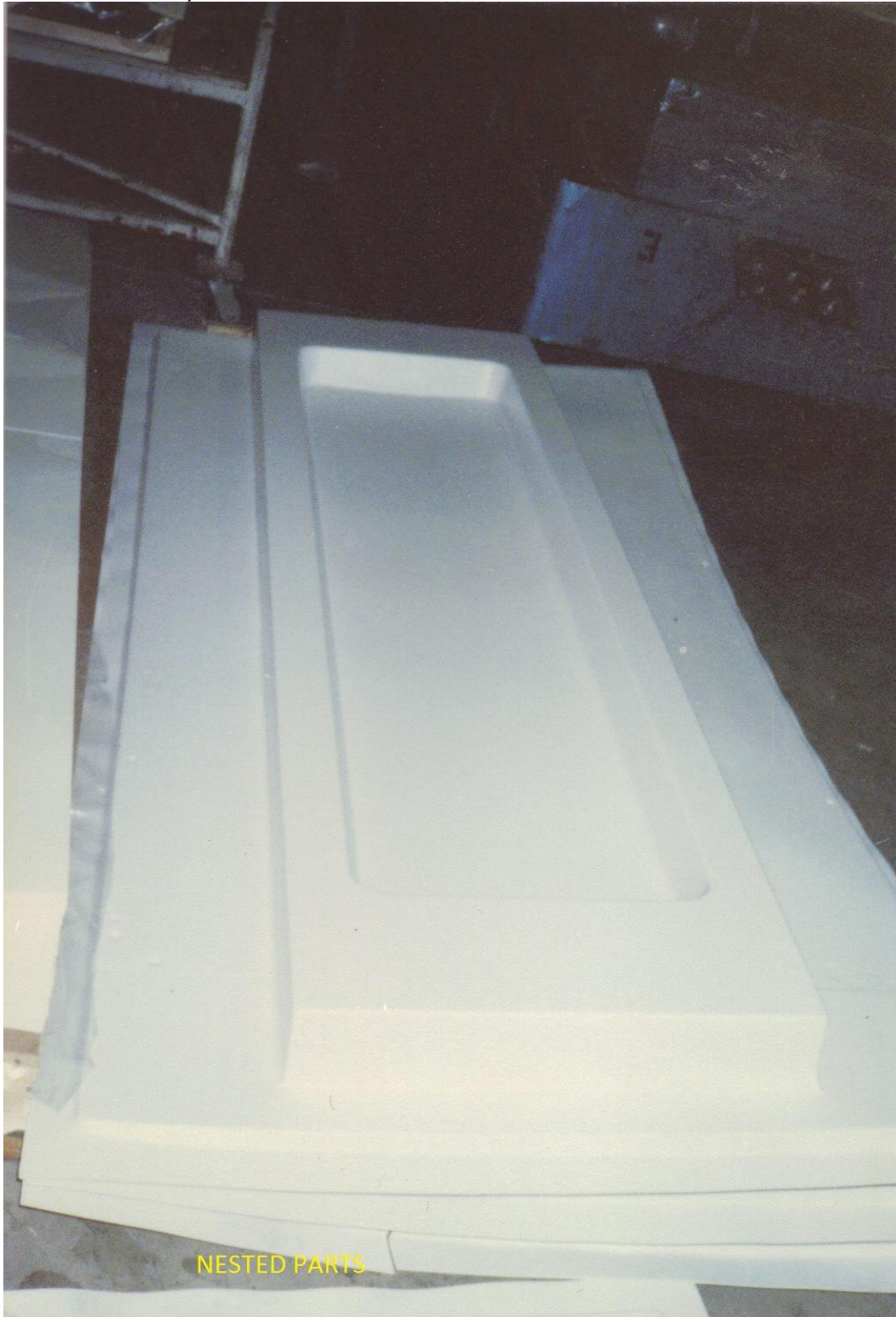
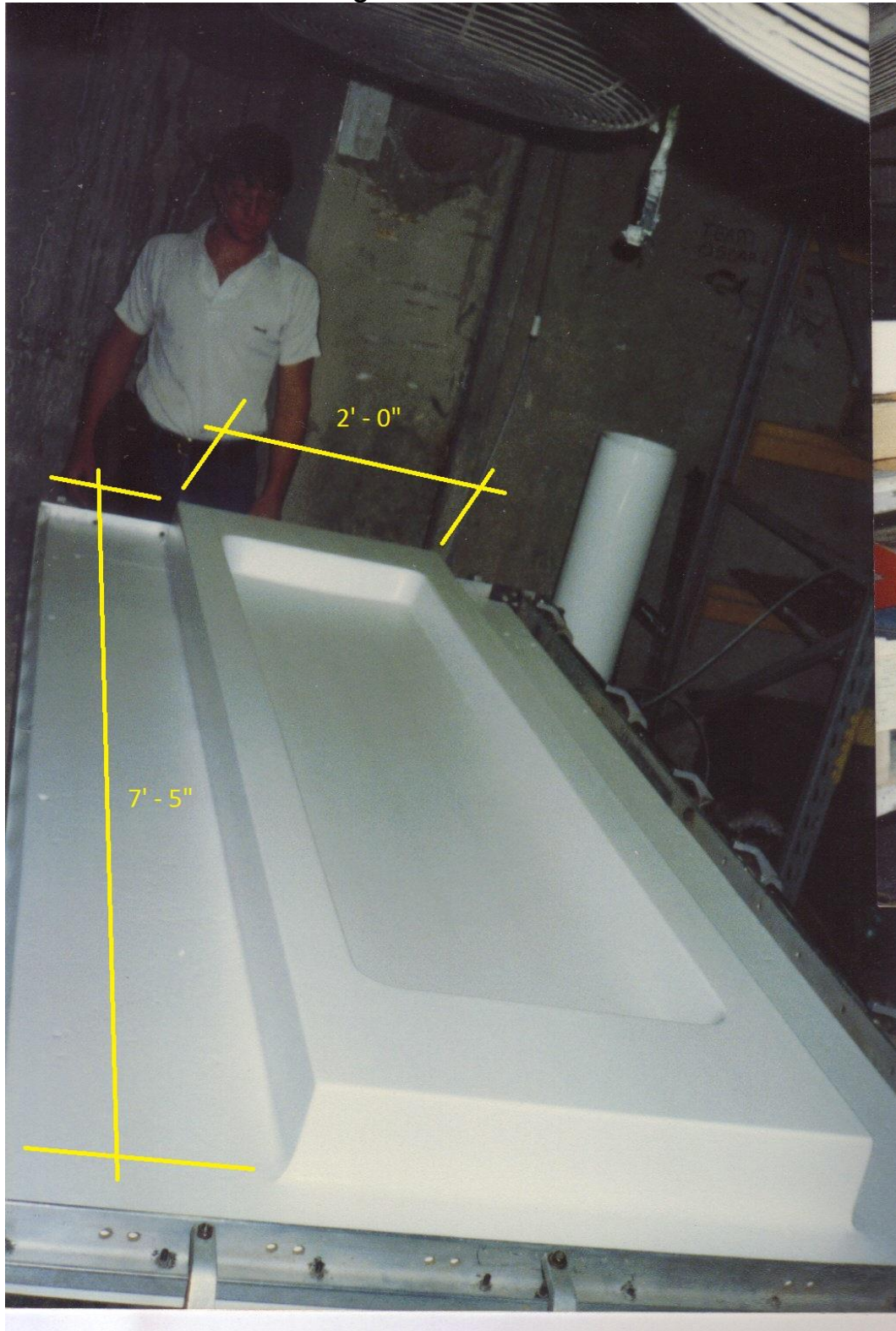


Hart Closet sectional plugs – vacuum forming – 1991 R&D shell designs  
Nested parts allow for approximately 1,500 five foot wide closets (most common size) to be loaded into a 40' container or 40' truck trailer



2'-0" shell before trimming



Corner part before trimming



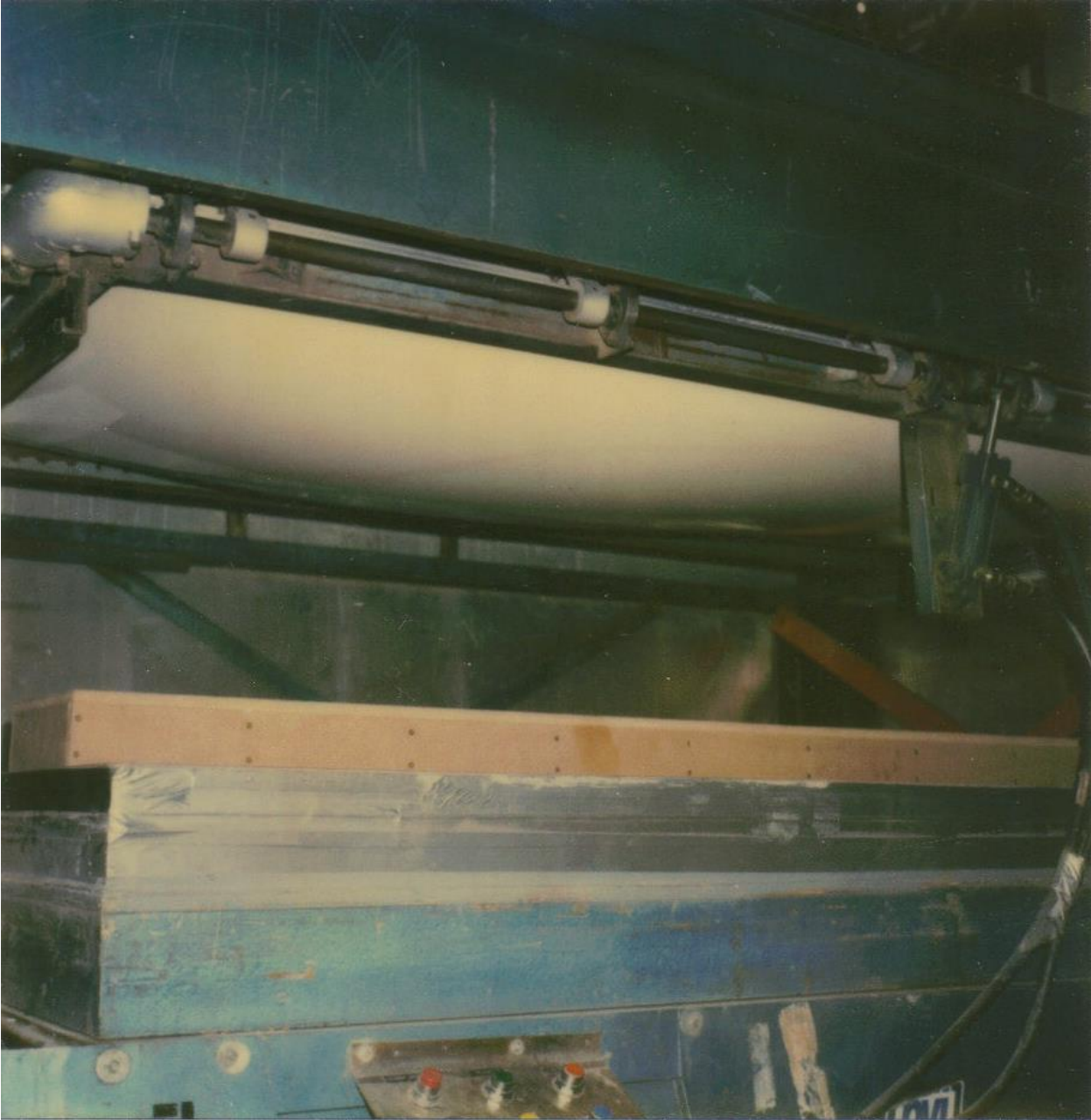
Plastic sheet



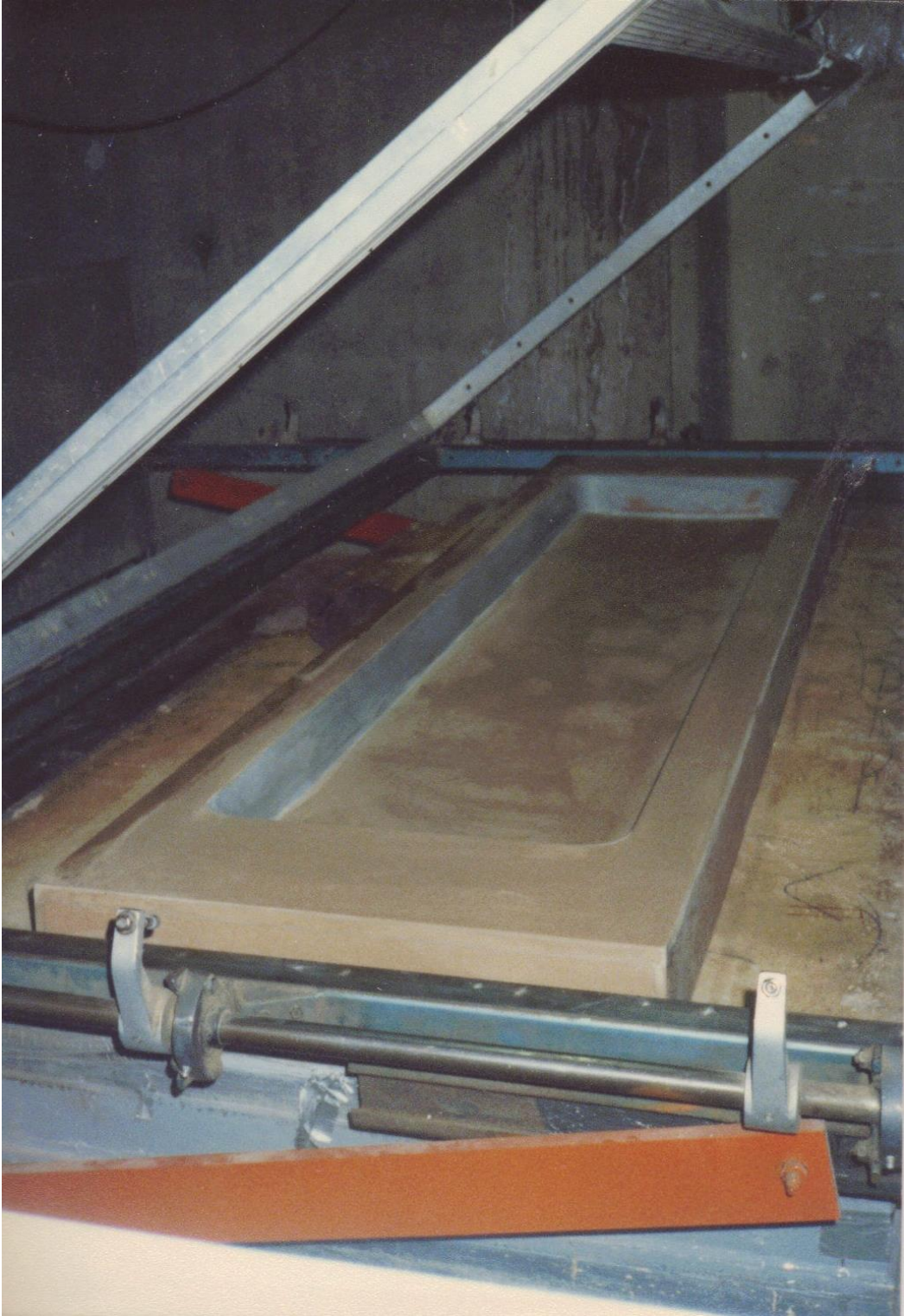
Vacuum former



Plastic sheet heated and ready to form shell part



2'-0" plug for shell part



2'-0" shell part before trimming

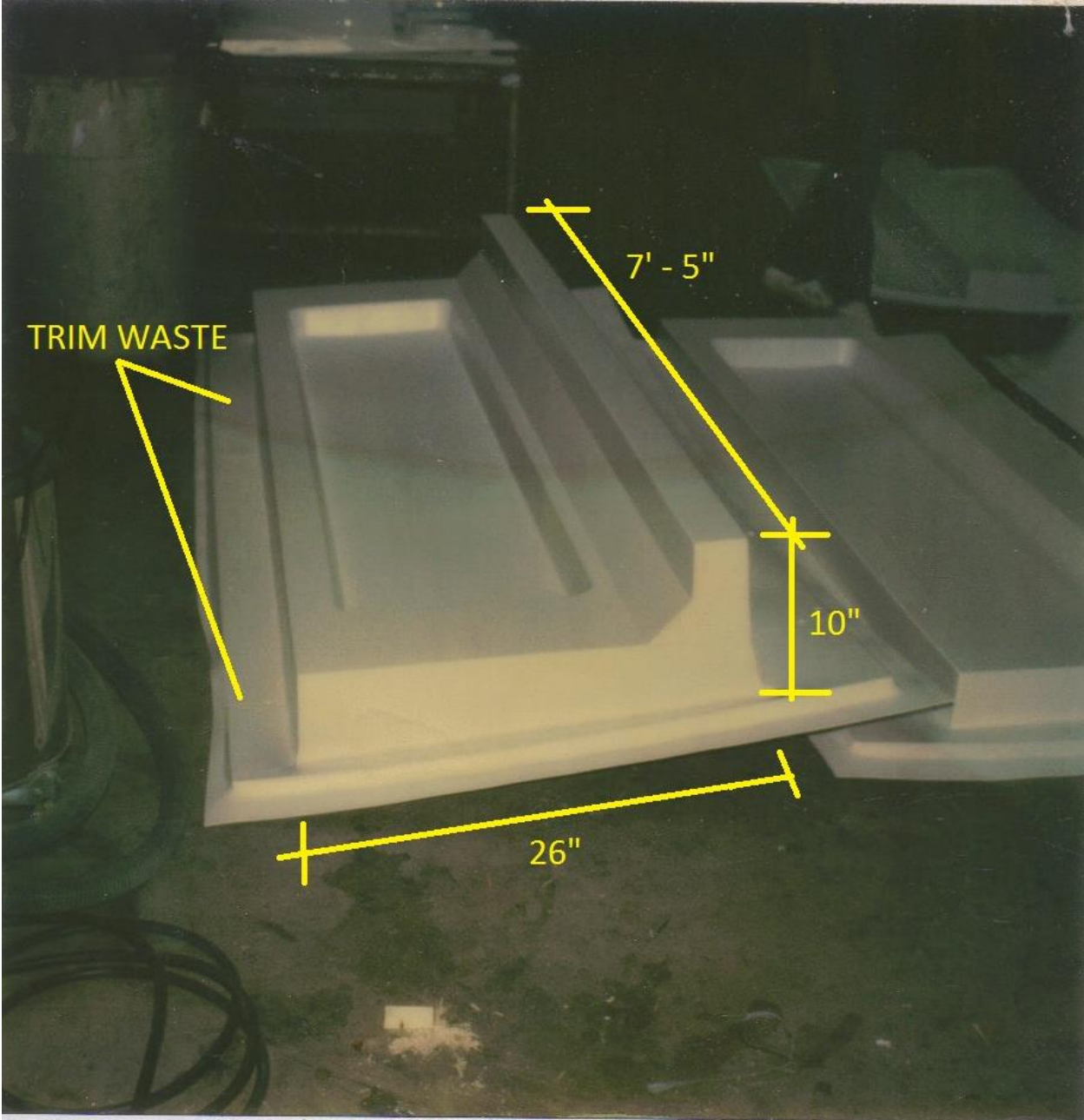


Vacuum former





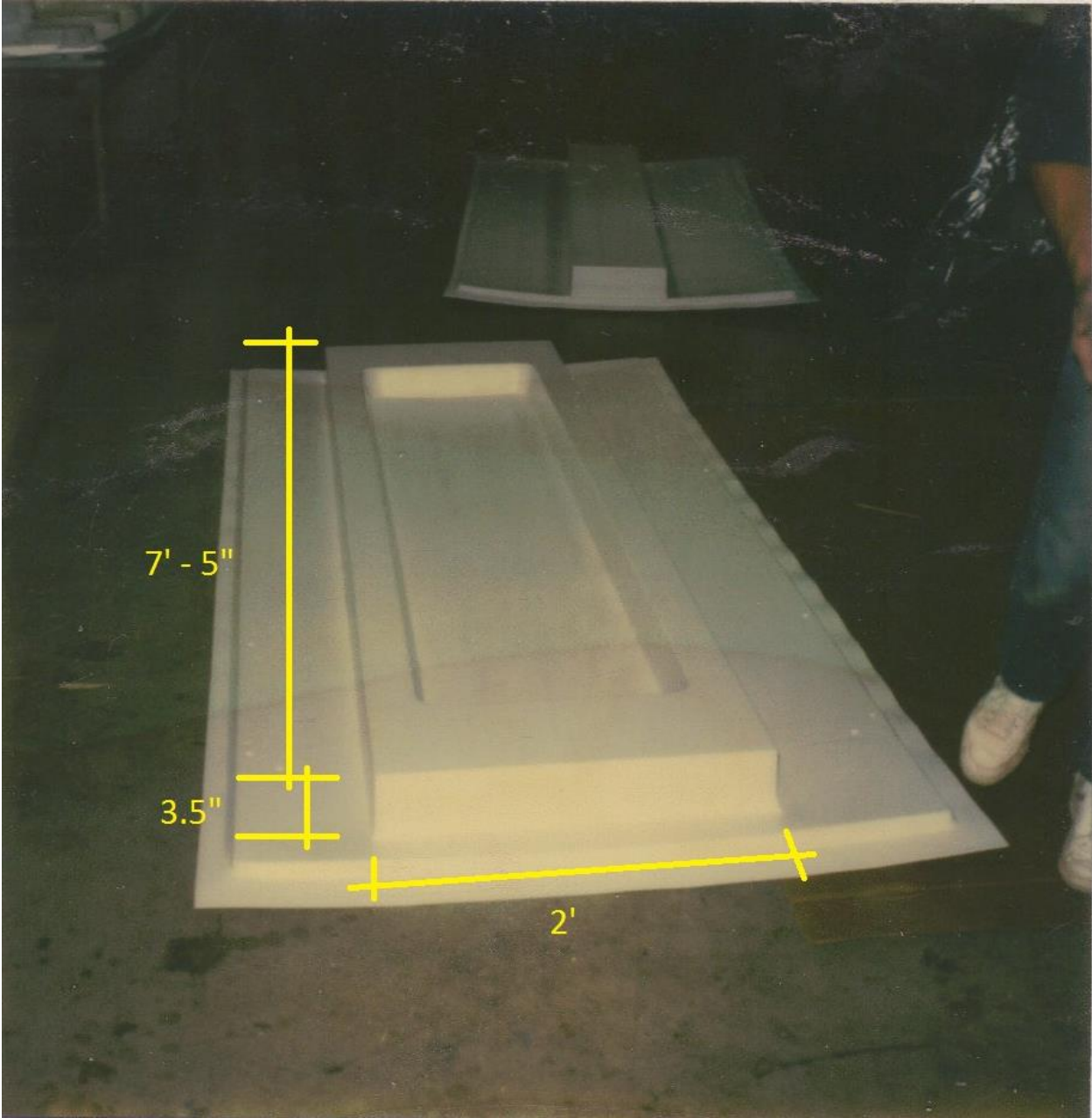
Corner shell before trimming



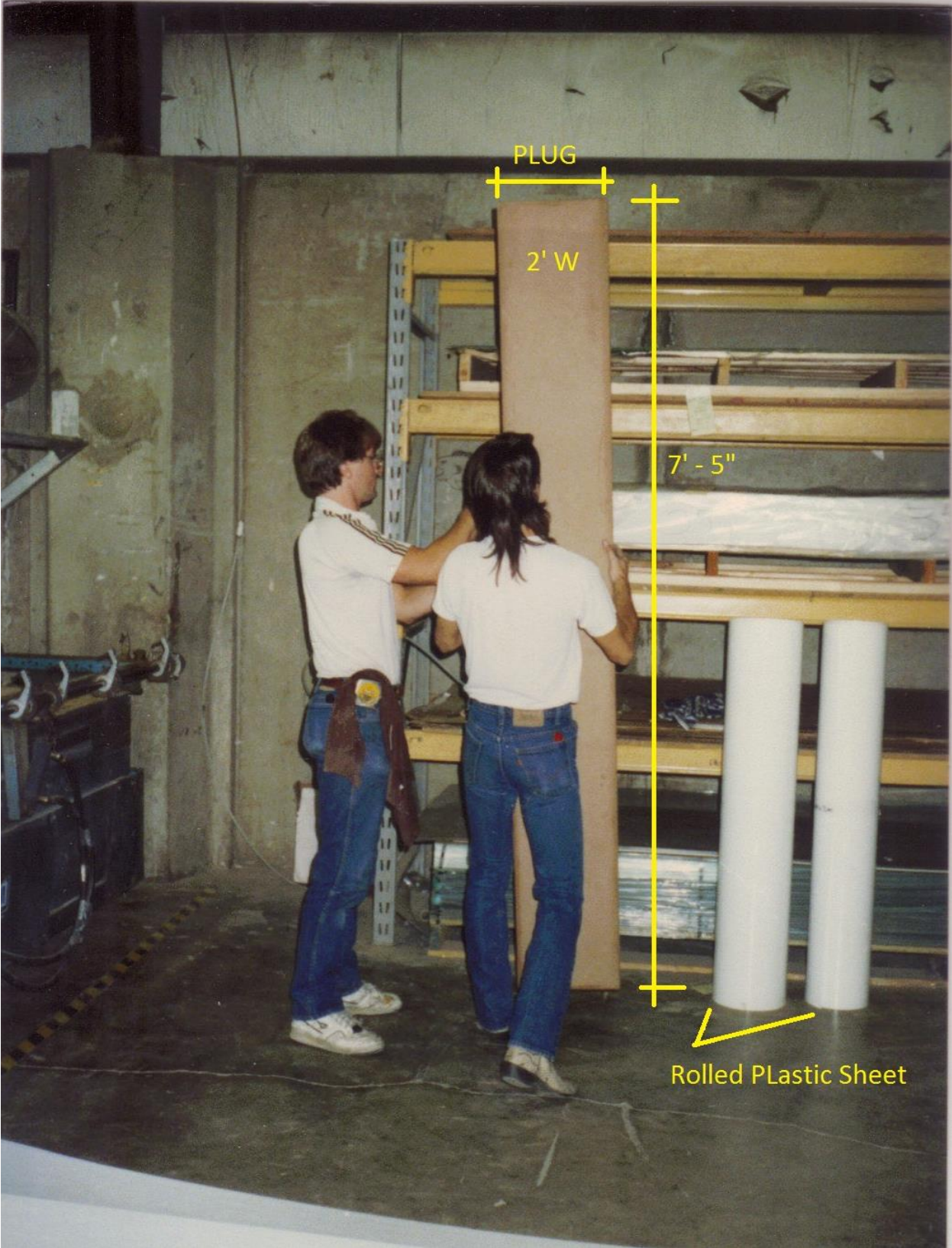
Plug for corner shell



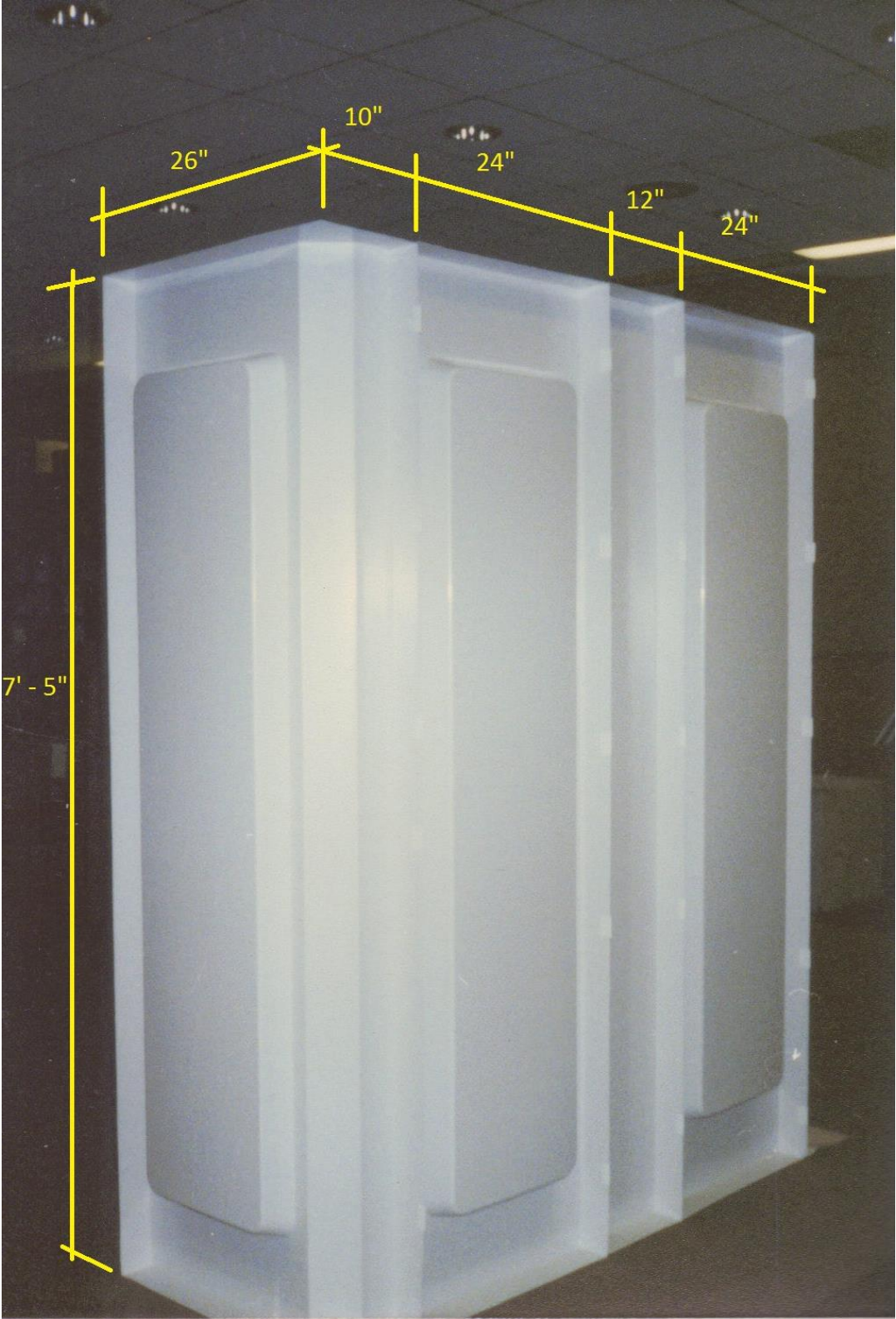
2'-0" shell before trimming



1'-0" plug



HC shells assembled = exterior before studs/plates assembled



HC shells assembled = interior



Shells assembled showing height of closet/s



Johns-Manville R&D folks





JM & HC sectional HC model display – Denver, CO HQ



Shell parts ready to assemble



HC corner framing to accept shell part



HC corner shell part fastened to framing



HC assembly



HC backside of model showing drywall, plumbing and electrical



HC fastened to plywood subfloor showing detail



HC ceiling shell assembly



HC model showing assembly





HC model front view with simulated subfloor and drywall

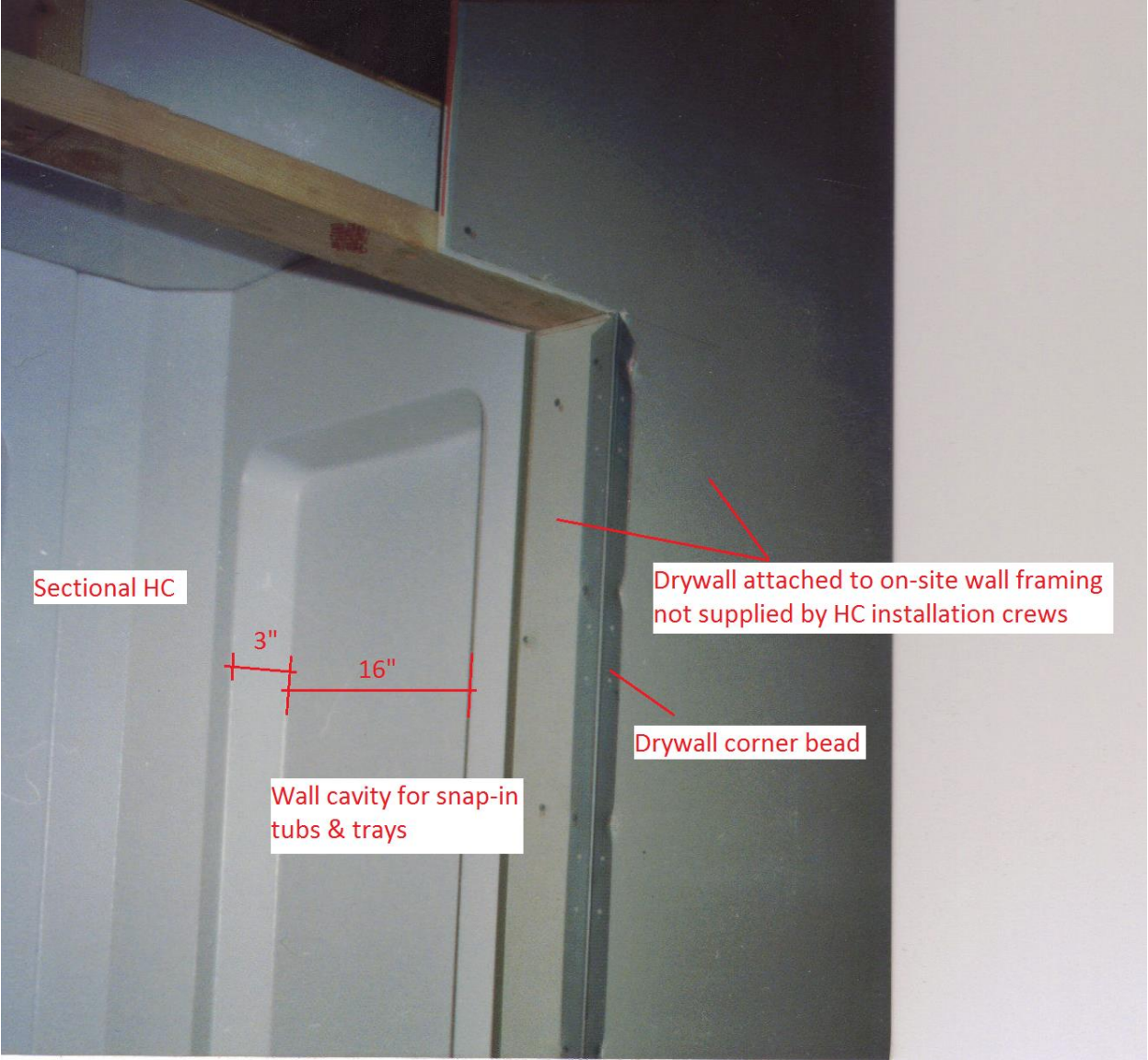


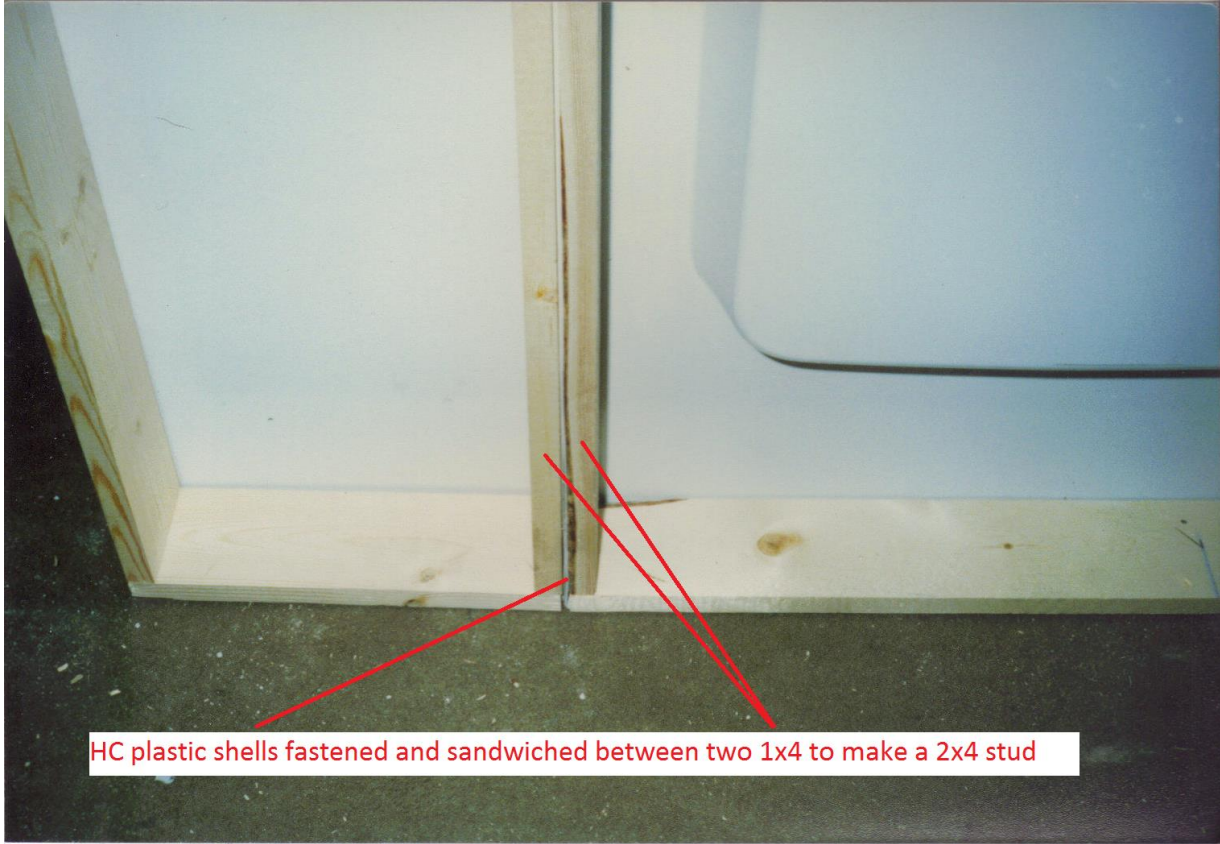
HC shell assembly with wall framing in front

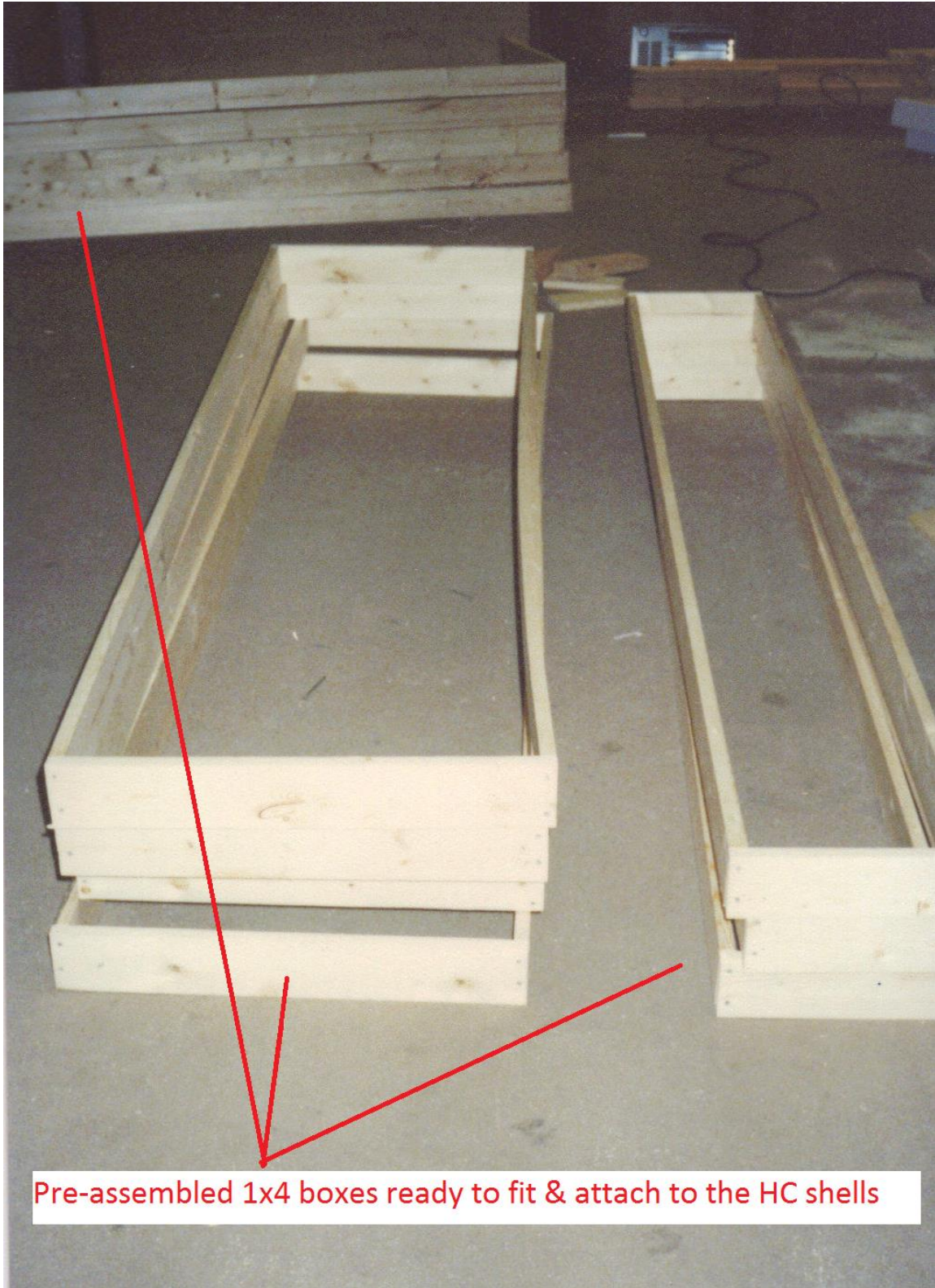


HC shell assembly sandwiched between double 1x4 to create 2x4 studs







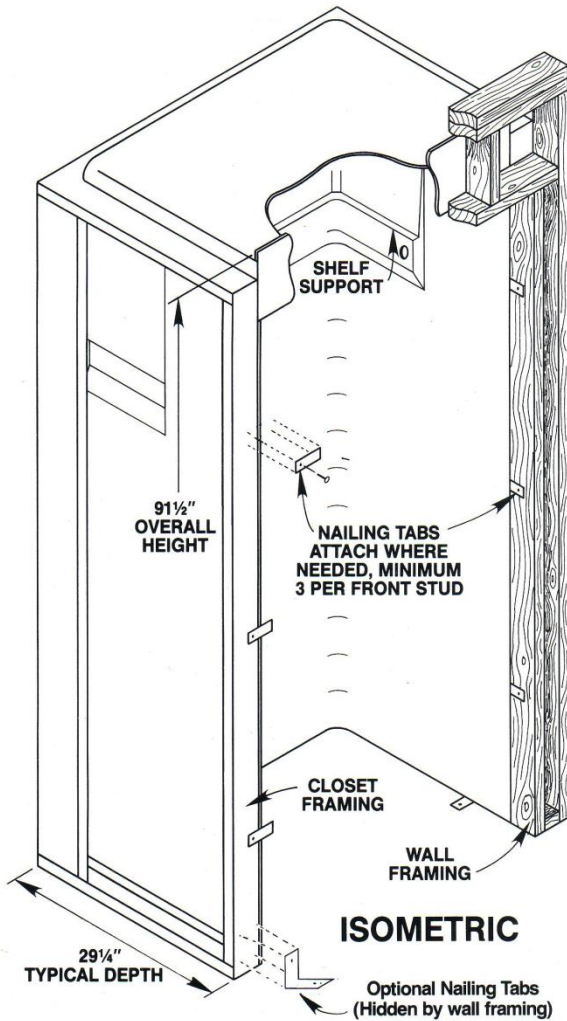


Pre-assembled 1x4 boxes ready to fit & attach to the HC shells

# Fiberglass "One-Piece" Hart Closet information



## CLOSET INSTALLATION INSTRUCTIONS



### 1 HANDLING

- CAUTION:** Metal and fiberglass edges can be very sharp. Use care in handling closets.
- Do not remove packing and shipping boards until closet is being positioned for final installation.
- When handling with lift trucks, set closet on side across forks, distribute load evenly and secure before moving.
- If lifting from above is necessary, connect lift lines to **upper punchouts in all four** corner studs.

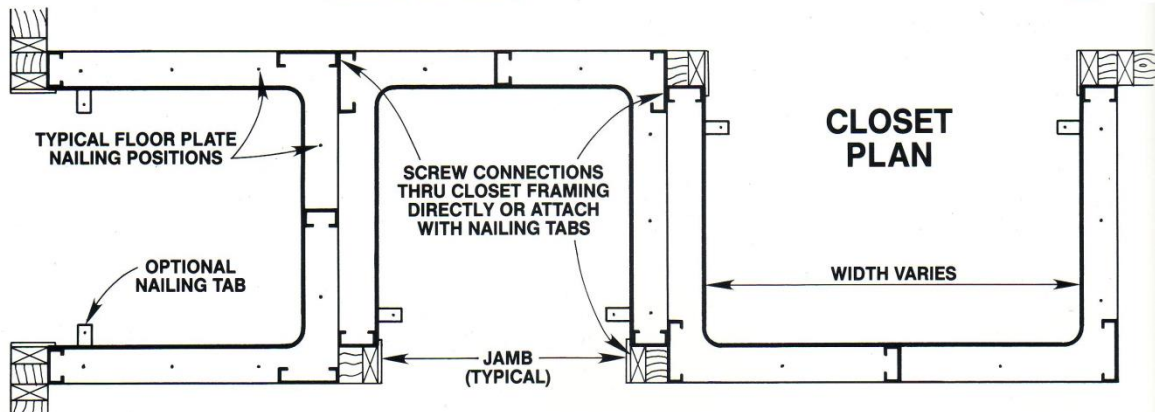
### 2 PREPARATION

- Before framing interior walls:** Position closet in room in close proximity to its planned final location.
- Frame walls, but leave opening for closet in its planned final location.
- Move closet into final position. Remove packing boards and attach nailing tabs as required for installation.

### 3 INSTALLATION

- Attach closet's bottom plate directly to floor or utilize optional nailing tabs. Secure with nails, screws or powder actuated fasteners.
- Nail or screw closet studs to wall framing and/or studs of adjacent closet(s) using direct connections or nailing tabs.
- Install shelf and closet rod.









Patent



## Fiberglass HC information

### Hart Closet Dimensions and Weights

The Hart Closet is available in the seven standard sizes depicted. All closets have an outside height of 91.5 inches and an inside height of 90.0 inches; an outside depth of 29.25 inches and an inside depth of 25.5 inches.

Model	Width	Weight	Model	Width	Weight
	<i>Inside</i> 25.5 inches <i>Outside</i> 32.87 inches	94 lbs.		<i>Inside</i> 61.5 inches <i>Outside</i> 68.87 inches	130 lbs.
	<i>Inside</i> 31.5 inches <i>Outside</i> 38.87 inches	99lbs.		<i>Inside</i> 73.5 inches <i>Outside</i> 80.87 inches	140 lbs.
	<i>Inside</i> 37.5 inches <i>Outside</i> 44.87 inches	107 lbs.		<i>Inside</i> 97.5 inches <i>Outside</i> 104.87 inches	160 lbs.
	<i>Inside</i> 49.5 inches <i>Outside</i> 56.87 inches	120 lbs.		7-Foot/ 10-Foot	Custom Sizes Available

Note: 8-Foot closets will be shipped in two sections. Each section will measure 29.25 inches x 54.25 inches x 91.5 inches and each section will weigh about 80 lbs.

### The Hart Closet Advantage

Speed of Installation	No Labor Down Time or Slowdowns	Earlier Start of Next Project
Reduced Use and Need of Trades	Labor or Apprentice Installation	Surface will not Support Mildew or any Organic Growth
Increased Speed to Trades Performance	Simplification of Product by Standard Sizes	Consumer Acceptance (considered upgrade)
Elimination of Touch-Up at Job End	Fits Most Construction of Buildings	Installation Ease and Speed of Organizers
True Installation of Doors, Jambs & Trim	Reliable Standard Sizes of Closets	Various Colors
Flame Retardent	Aesthetics	Upgrade to Finished Product
Light Weight Product -Dead Load on Joist	Selling Tool for Sales People	Better Product Against Competition
No more Cracking of Interior Finish	Earlier Turn-Key Project	Sheer Strength on all Wall Areas
No Moisture Contribution at Sheetrock Stage	Earlier Sale of Product	Future Hart Accessories for Customers
Easy Repair if Damaged	Earlier Payback of Finance/Less Interest Paid on Money	Hart Service and Warranty
Less Material and Labor Waste		










PATENT



## Fiberglass HC information

### Hart Closet Weights And Dimensions

The Hart Closet is available in the seven standard sizes depicted. All closets have an outside height of 91.5 inches and an inside height of 90.0 inches; an outside depth of 29.25 inches and an inside depth of 25.5 inches.

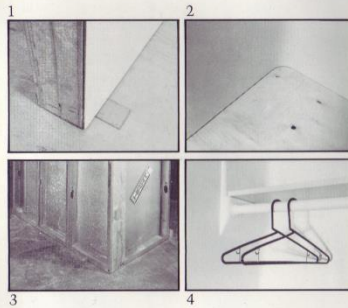
Model	Width	Weight
	Inside 25.5 inches Outside 32.87 inches	94 lbs.
	Inside 31.5 inches Outside 38.87 inches	99 lbs.
	Inside 37.5 inches Outside 44.87 inches	107 lbs.
	Inside 49.5 inches Outside 56.87 inches	120 lbs.
	Inside 61.5 inches Outside 68.87 inches	137 lbs.
	Inside 73.5 inches Outside 80.87 inches	152 lbs.
	Inside 97.5 inches Outside 108.5 inches	175 lbs.

**NOTE:** 8-Foot closets will be shipped in two sections.  
Each section will measure:  
29.25" x 54.25" x 91.5"  
Each section will weigh about 137 lbs.

### Hart's Attention To Detail Saves Time & Effort

The Hart Closet is designed to save time and effort in both the construction stage and in long term maintenance. Its tough, resilient surface resists scuffing and scraping and can be cleaned quickly with a soft cloth, soap and water.

Pictured below are a variety of other design advantages; (1) nailing tabs for quick and easy installation of each Hart Closet; (2) rounded interior corners to simplify the painting or cleaning of wall surfaces and vacuuming or sweeping of floors; (3) steel studs provide rigidity without excessive weight and make installation of the closet a snap; (4) shelf and hanger rod supports are molded into the closet wall. It takes just a few seconds to pop the shelf and hanger rod into position for a completely finished closet interior.



For further information on the Hart Closet, contact:

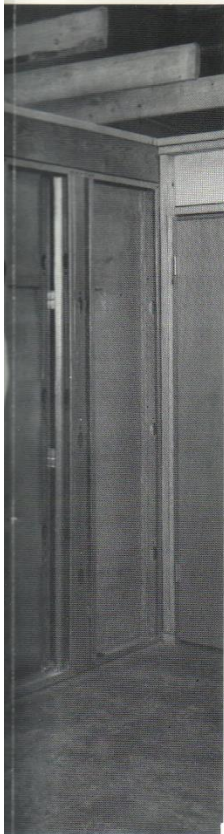
**HART**™

**HART**™

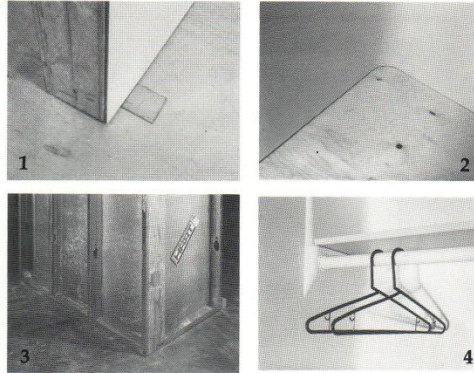
COMPLETE ♥ FINISHED  
**CLOSETS**

**Installation Time:  
12 minutes or less**





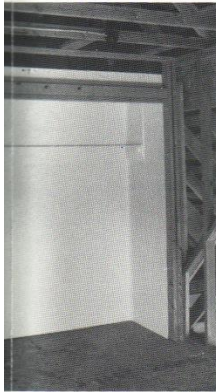
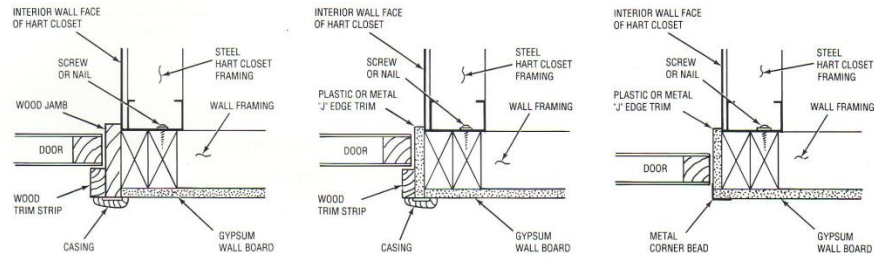
## Hart's Attention To Detail Saves Time & Effort



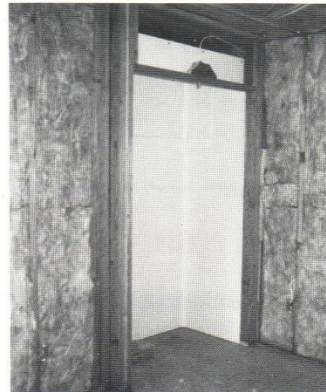
The Hart Closet is designed to save time and effort in both the construction stage and in long term maintenance. It's tough, resilient surface resists scuffing and scraping, can easily be repaired, will not support mildew or any organic growth and can be cleaned quickly with a soft cloth, soap and water.

Pictured to the left are a variety of other design advantages; (1) nailing tabs for quick and easy installation of each Hart closet; (2) rounded interior corners to simplify the cleaning of wall surfaces and vacuuming or sweeping of floors; (3) steel studs provide rigidity without excessive weight and make installation of the closet a snap; (4) shelf and hanger rod supports are molded into the closet wall. It takes just a few seconds to pop the shelf and hanger rod into position for a completely finished closet interior.

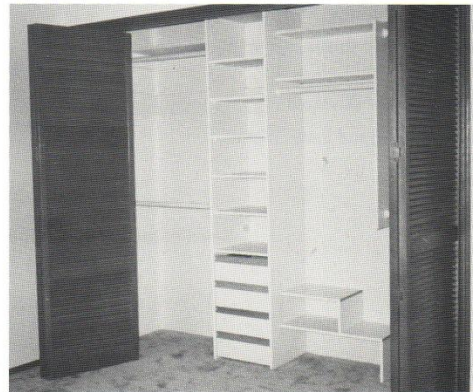
## Typical Finishing Details



set is completely framed es.



Insulate, wire for a light and room is ready for wall and door treatment.



A completely installed 8 foot Hart Closet, with builder supplied doors, trim and closet organizers.

### A Better Finished Product With Reduced On-Site Labor

The Hart Closet is a pre-manufactured one piece unit made of a filled polyester/fiberglass laminate supported by steel studs.

A Hart Closet can be installed on-site in 15 minutes or less because it requires none of the labor intensive functions of lumber framing, dry-walling and finishing essential to the construction of conventional stick-built closets.

The materials used in the Hart closet are flame retardant, and their hard, impervious surface resists construction site damage far better than traditional dry wall materials.

Further, Hart Closets require no sawing and only minimal nailing. Their installation is a quicker, safer process requiring less "down time" for clean-up or injury on site.

And finally, the use of Hart Closets will accelerate the construction process overall, resulting in quicker payback of construction loans and reduced interest payments for the contractor.

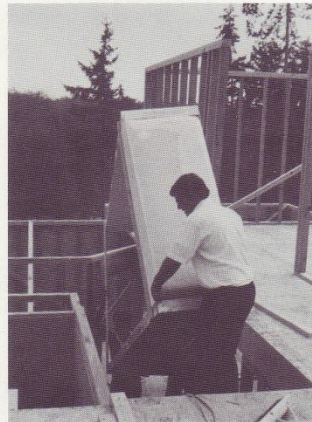
*The photo to the right shows a complete closet wall installed in less than 45 minutes! The closet wall incorporates three closets, two 4-foot closets side by side and a 2-foot end closet. All three closets, the entire wall, were positioned, nailed in place and ready for trim and door installation in less than 45 minutes.*



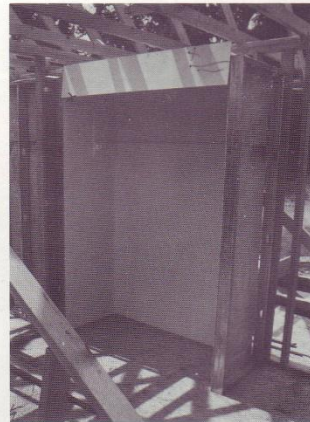
### Typical Installation Sequence of Hart Closets



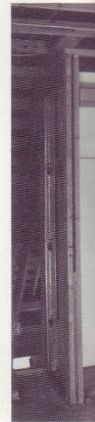
Hart Closet ready to be delivered from factory.



Hart Closet easily handled at work-site for positioning.



Hart Closet installed in position and ready for framing.



Hart Closet in minute

1987 prices of the fiberglass HC

**HART**<sup>TM</sup>

## CLOSET PRICE LIST

<u>CLOSET MODEL</u>	<u>UNIT PRICE</u>
2-Foot	\$329.00
2½-Foot	\$349.00
3-Foot	\$369.00
4-Foot	\$399.00
5-Foot	\$439.00
6-Foot	\$489.00
8-Foot	\$589.00

Patent Pending

FOB our plant with freight prepaid  
on shipment within Puget Sound area.

**Terms of Payment:** 2% 10 Days, Net 30;  
1½% interest per month will be charged  
on overdue accounts.

---

**Hart International, Inc.**  
#303 - 1112 S. 344th Street  
Federal Way, Washington U.S.A. 98003  
Tel. (206) 838-3445



**HART CLOSETS, INC.**  
P.O. Box 2555,  
Costa Mesa, CA  
U.S.A. 92628 - 2555

**Model Number**

**Options:**

**Color**

**Care & Cleaning**

Your storage unit has a gelcoat surface and is resistant to most household chemicals. To clean, you can use most liquid cleaners such as 409, Fantastic, Mr. Clean, etc. Caution: Abrasives may harm the finish.

**Warranty Information**

This storage unit carries a limited lifetime warranty on materials and workmanship. Hart will repair or replace, exclusive of installation, any defective product.

This storage unit is produced with fire retardant fiberglass and meets most local fire codes.

Final Inspection By \_\_\_\_\_

Greg's first HC office 1986

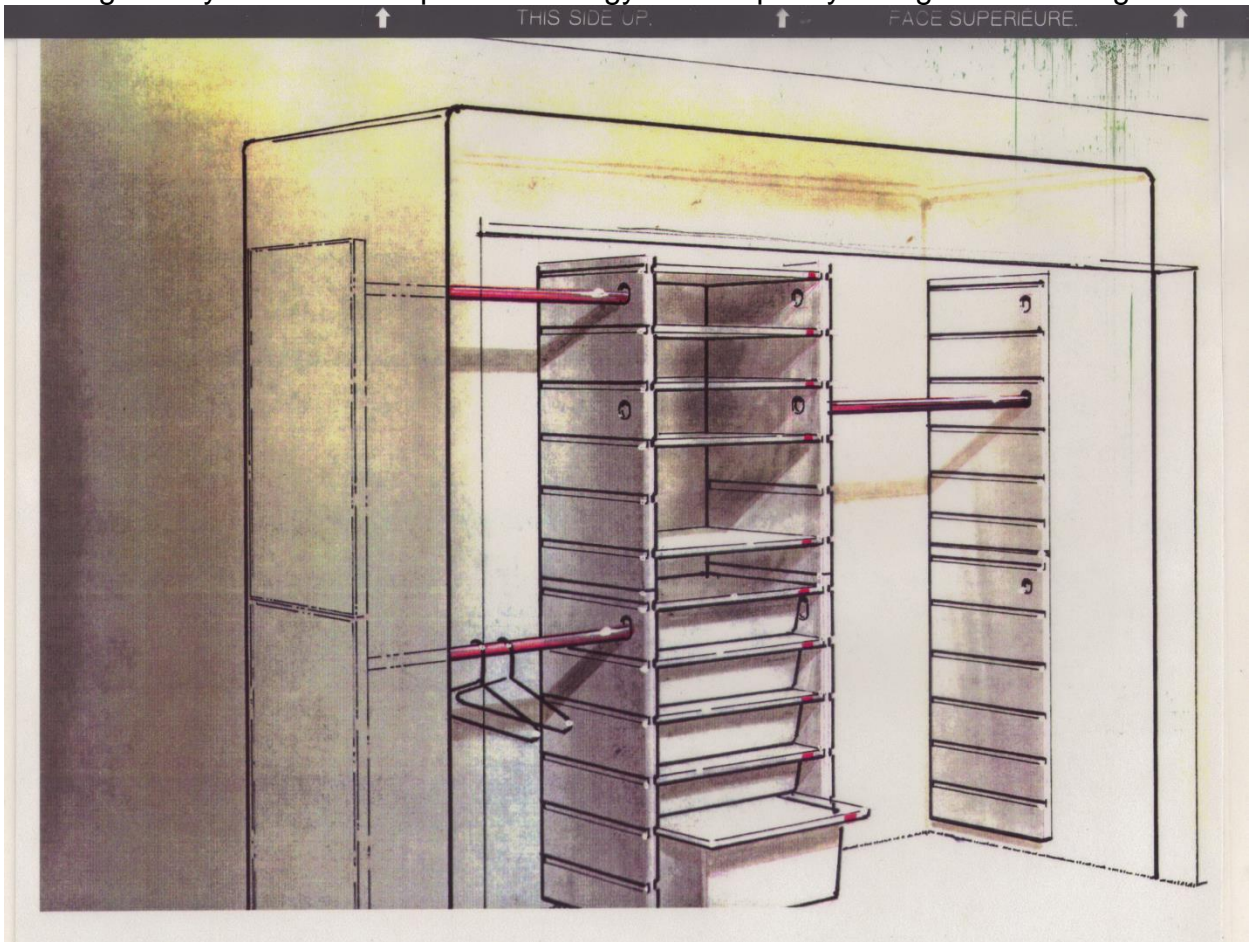


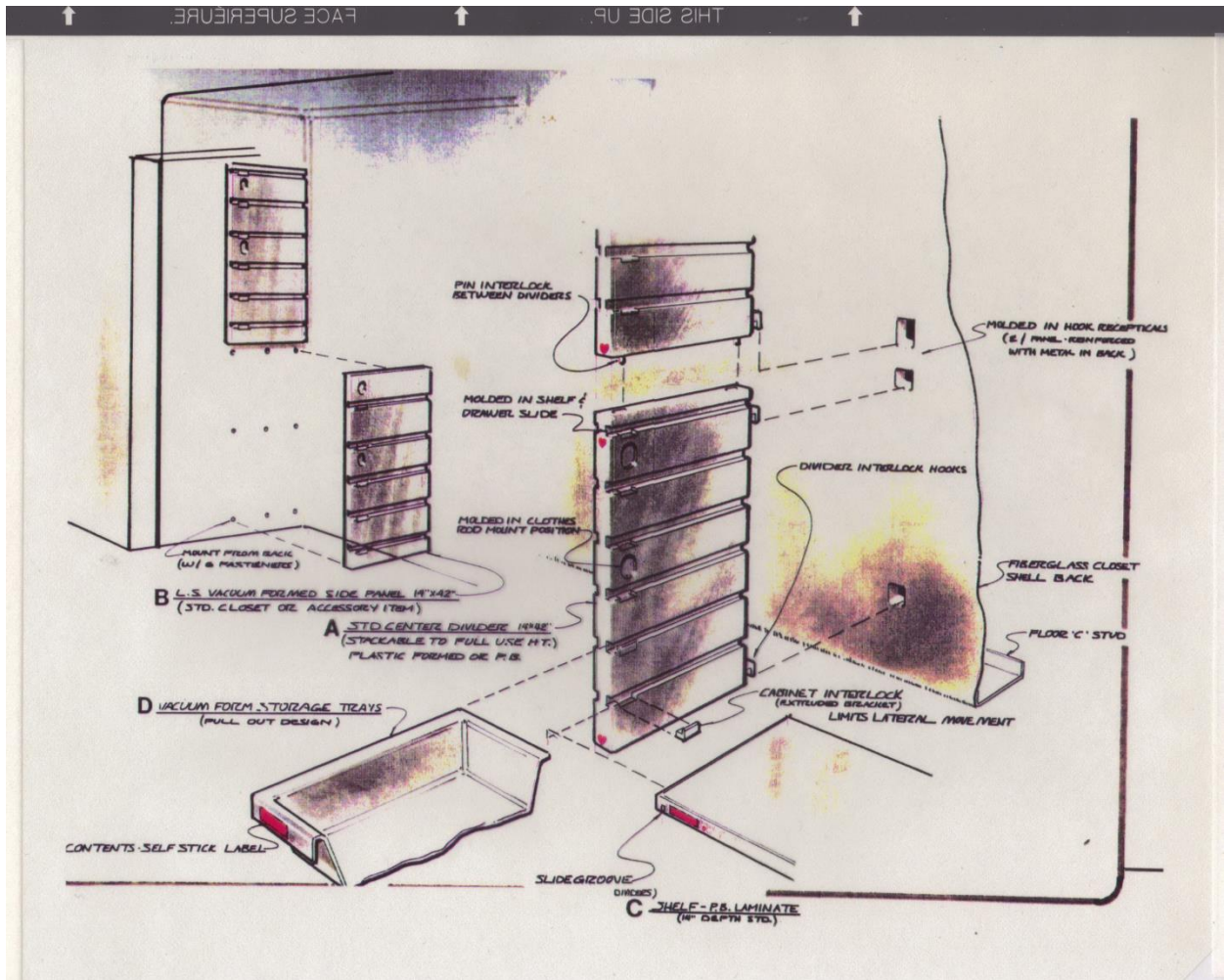
Landlord eviction when late rent



## Hart Closet pre-molded 3 organizer concepts – Circa 1987

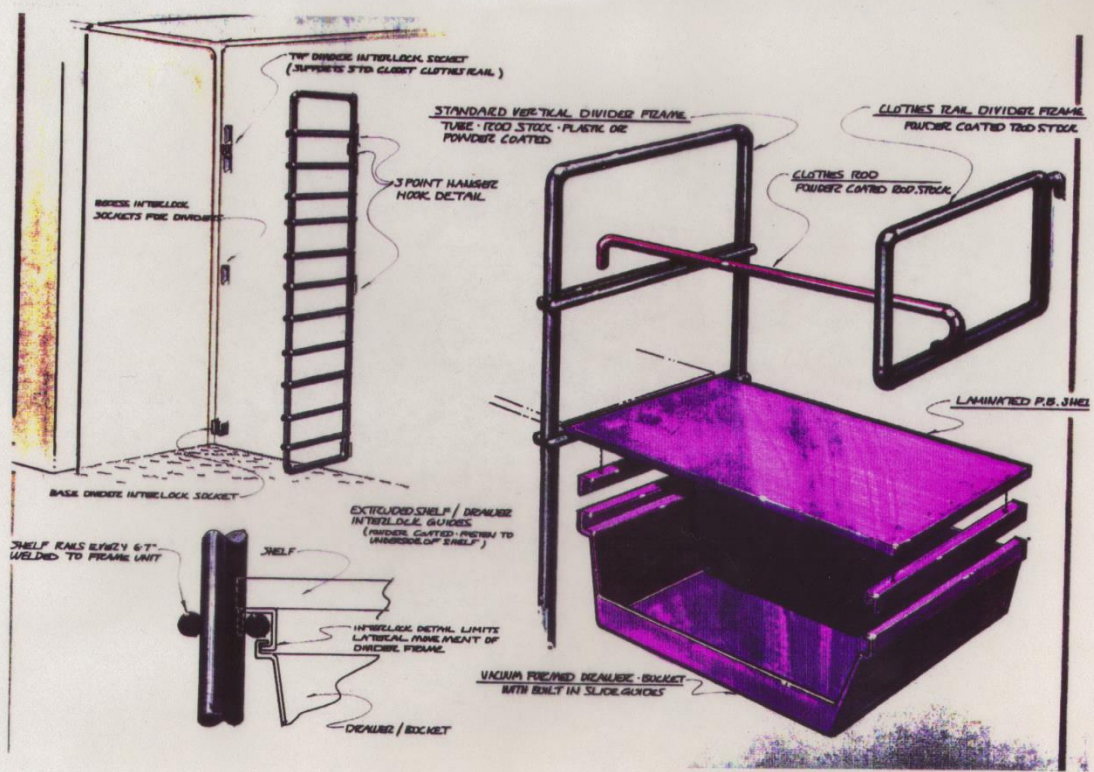
Manufacturing methods include; Wire - Vacuum Forming - Blow Molding & Injection Molding. All systems are snap-in technology. Concepts by Designhaus & Greg Hart

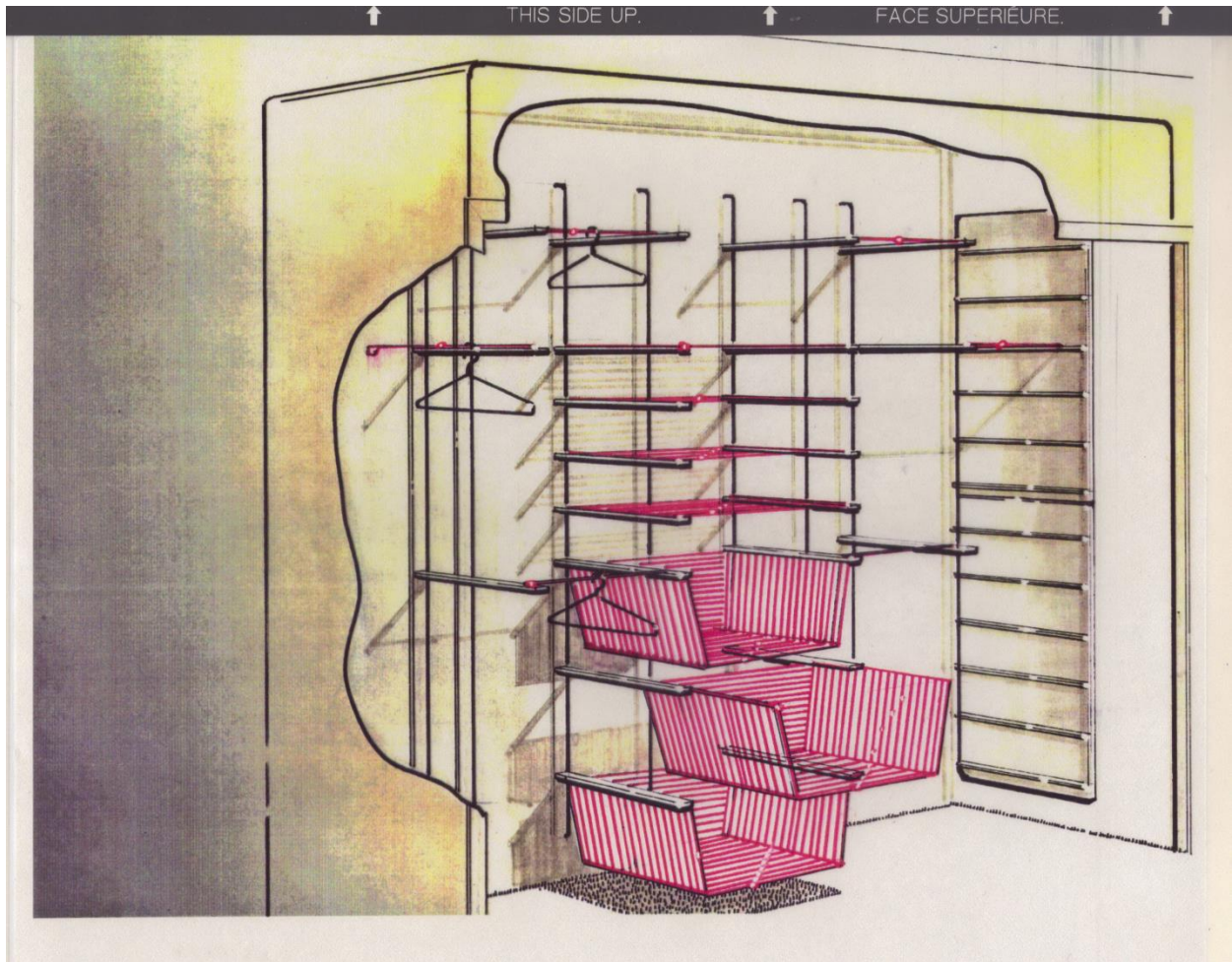


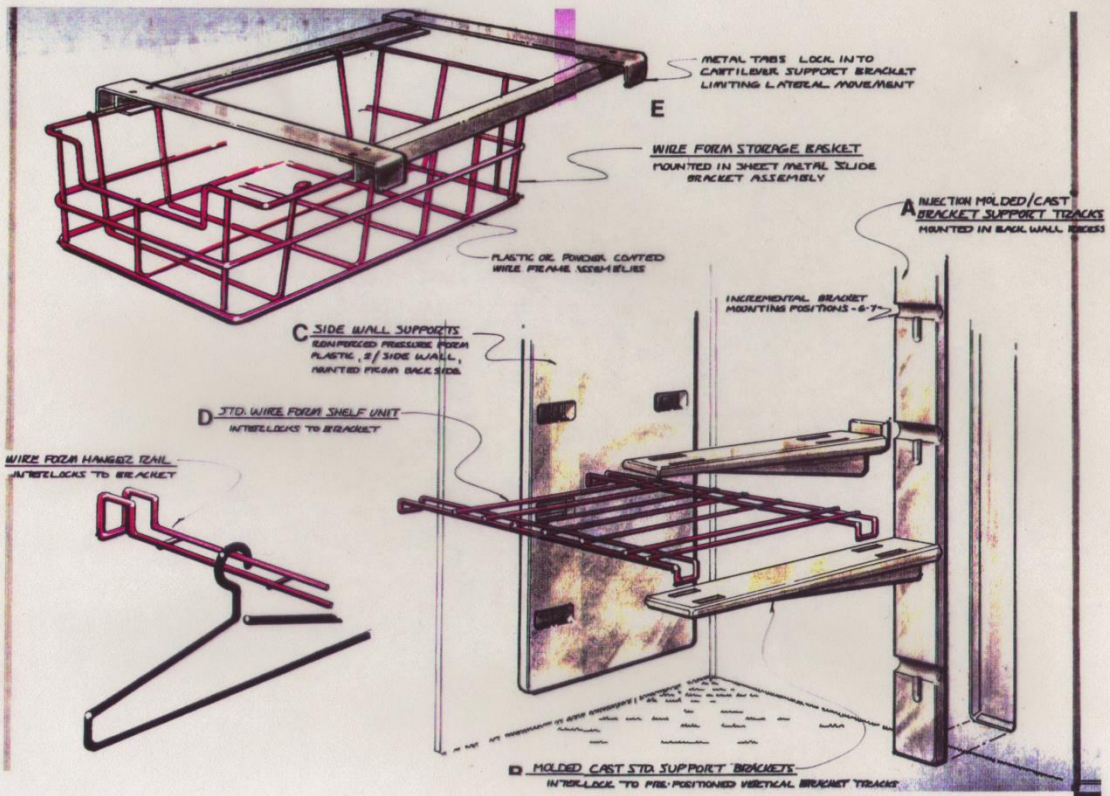




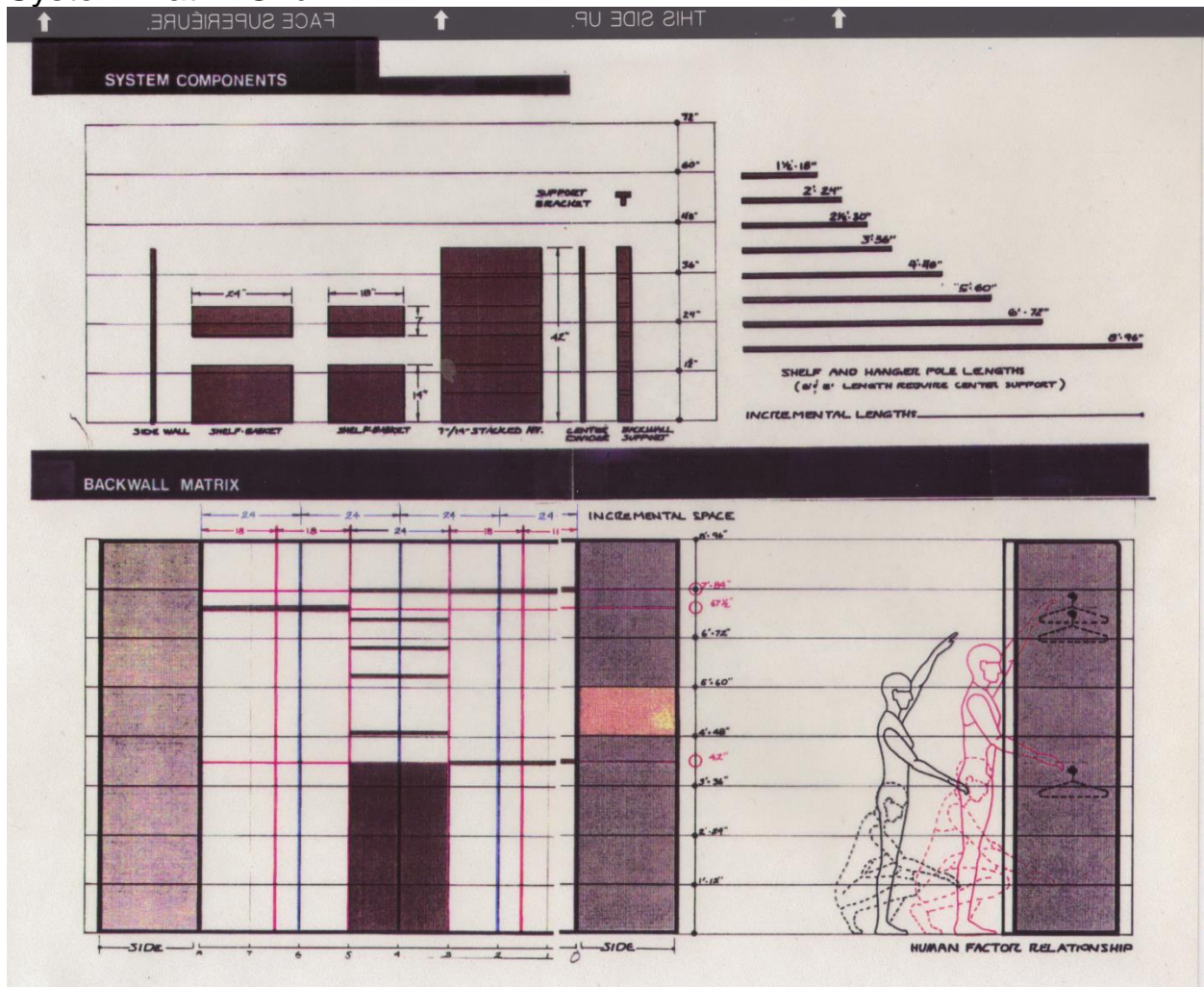


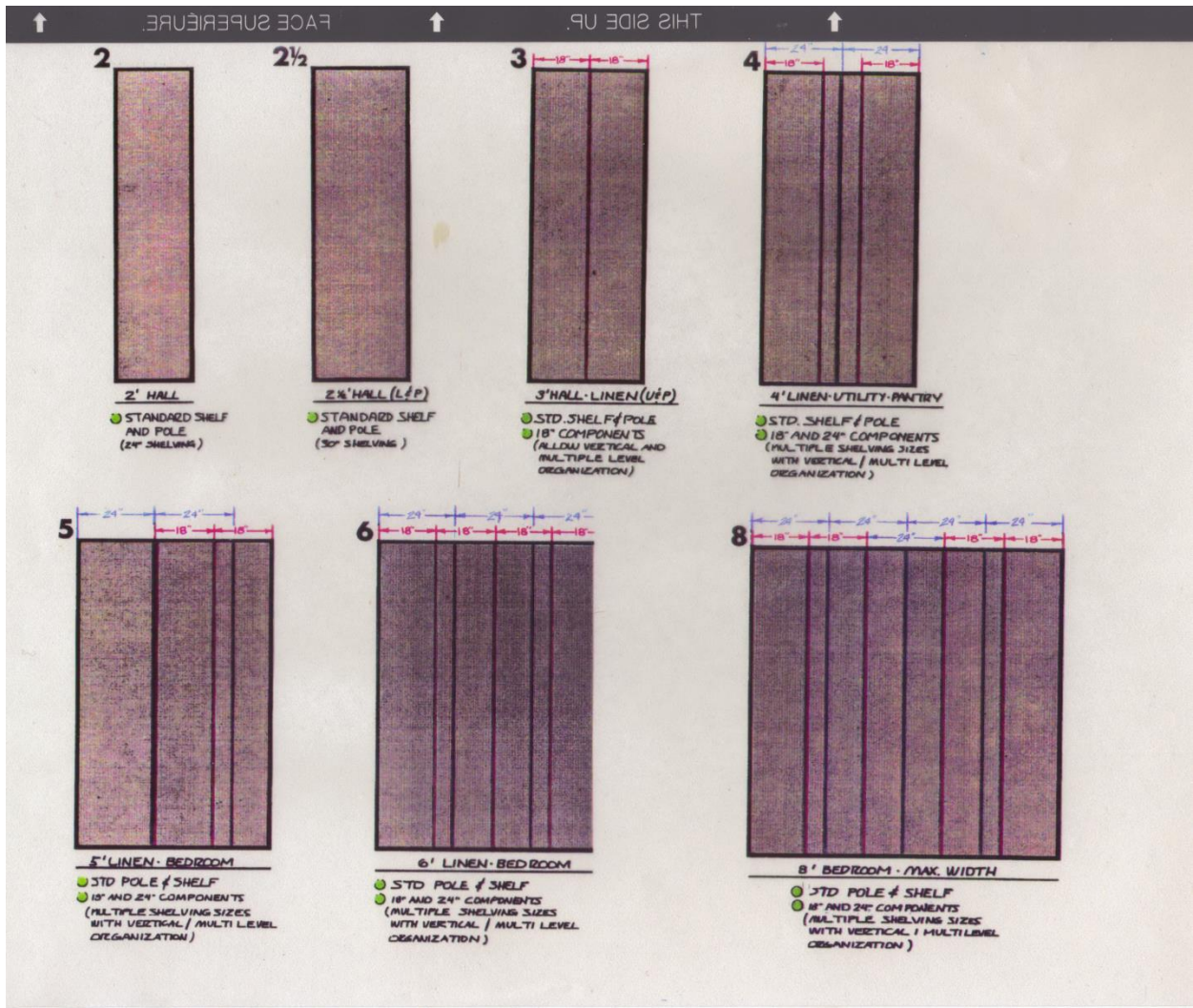






# System Matrix Grid





Greg always selling...



Typical HC pilot site sale in California

"HART CLOSET" QUOTE

Date: February 14, 1989 SITE NO.  
COMPANY: Pacific Scene, Inc. SITE LOCATION:  
 2505 Congress St.,  
 San Diego, CA., 92110 POWAY CONDOS  
Attention: Mr. Tony Cassolato (619) 299-5100  
 Project Manager  
 Dear Tony:

Thank you for the opportunity to quote our NEW "HART CLOSETS" for installation in your construction site. Our "HART CLOSET" quote is as follows:

A) Re: 6 condo units.

HART QTY. PER UNIT	HART QTY. TOTAL	HART SIZE	HART COST EA.	HART TOTAL
2	12	2'-0"	\$198.64	\$ 2,383.68
6	36	3'-0"	\$209.29	7,534.44
8	48	6'-0"	\$262.54	12,601.92
			S.T.	\$22,520.04

B) Re: 1 townhouse unit.

2	2	2'-0"	\$198.64	\$ 397.28
2	2	3'-0"	\$209.29	418.58
4	4	6'-0"	\$262.54	1,050.16
			S.T.	\$ 1,866.02

The combined total cost to you of A and B is: \$24,386.06  
OUR PAYMENT TERMS ARE NET 30 DAYS.

Based on average working man hours, installation time for your NEW "HART CLOSETS" is at 15 minutes per closet.

Your NEW HART CLOSETS estimated installation time is at 26 HOURS! NOW THAT'S FAST!

Please be advised, your framing carpenters should install the Hart Closets at wall erection to effect maximum speed.

E.S.O.E.

HC delivery at CA jobsite. This one-piece fiberglass design does not nest.



The Vancouver Sun article on 9-09-1989



y, 3, in closet NICK DIDLICK

## Out of the old closet and into fibreglass

As times change, so do home construction methods.

Where crews once fashioned rafters on the job site from raw lumber, they now install factory-built roof trusses. Kitchen cabinets, windows and tub and shower enclosures, at one time laboriously custom built, now are generally pre-fabricated.

And if Port Moody inventor Greg Hart has his way, the humble closet will soon undergo a similar transformation — from a small room framed, drywalled and painted on site to a sleek, pre-moulded fibreglass shell mass produced and fastened in place.

Hart, who previously worked as a carpenter, says he came up with the closet idea in 1984 after several years spent inventing a string of

children's toys, notably a hot-selling yo-yo designed to look like a car wheel. He returned to the construction business and "began looking around at what I could do in a house that had never been done."

The closet idea seemed like a natural. "Every building in the world has closets," Hart says.

The Hart Closet base design is a one-piece fibreglass unit with built-in ledge supports. It comes in lengths up to seven feet, with larger models built in sections for ease of handling. Steel studs on the back improve rigidity and allow installation in 15 minutes or less, Hart says.

He lists an impressive array of features. "It won't mildew or attract insects, has rounded corners and is

easy to clean and won't crack," he says. "There are tremendous savings for the big builder: speed of installation, less labor costs, fewer trades needed, and they cost about 15 per cent less than a drywall closet. They are flame retardant, lightweight and easy to repair... the color possibilities are endless."

But inventing a closet is one thing, selling it is another. Loco home builder Vern Sparks, Hart's friend and former employer, liked the idea and provided some seed capital so Hart could get his invention off the ground.

When Hart finally got his moulds built and had some closets ready, Sparks mentioned them to Neil Stewart, for whom he was building a retirement house on the loco water-

front.

The 4,500-square-foot house needed lots of closets — 19, to be exact — to accommodate frequent visits by children and grandchildren, so the Stewarts agreed to give the Hart Closet a try.

Stewart likes them — says they look good, are easy to clean and cost effective if installed at the framing stage. But his is still the only house in Canada with Hart's closets.

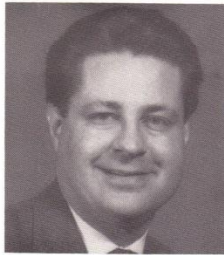
In the past couple of years Hart has concentrated his marketing efforts in the U.S. He estimates production will require an initial \$10-million in funding, but he feels he is on the brink of consummating a production deal with at least one of two major fibreglass manufacturers.

— Nick Rebaliski

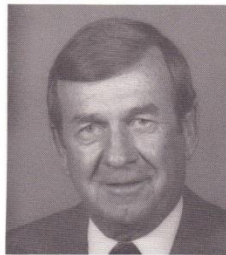


Some of the executives at JohnsManville directly involved in the HC project

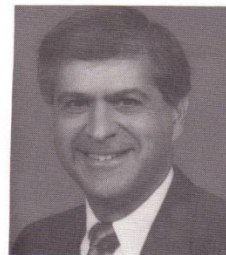
**DENVER  
STAFF**



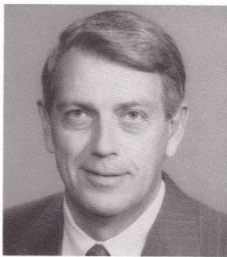
**Larry Blanford**  
Director, Retail  
Business



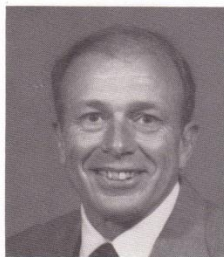
**Bob Bruntrager**  
Director, Sales



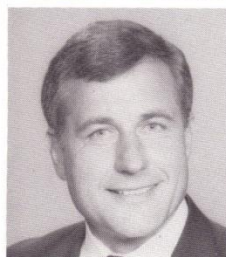
**Don Forte**  
Director, Business  
Development



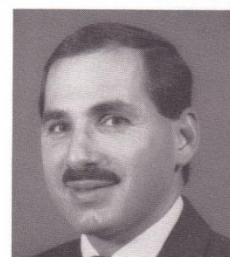
**Ron Mathewson**  
General Manager



**Lou Hemerda**  
Director, Finance &  
Administration



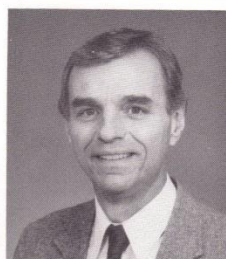
**Dick Lee**  
Director, Commercial/  
Industrial Businesses



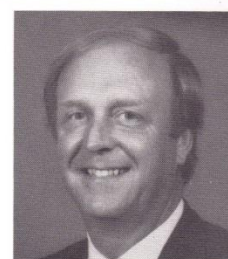
**John Monark**  
Manager, Human  
Resources



**Les Renck**  
Director, Production



**Don Shisler**  
Director, Technology

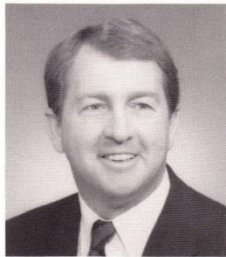


**Don Steinle**  
Director, Marketing

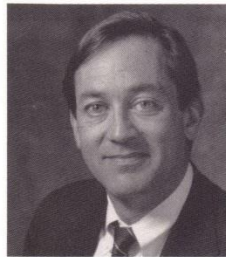
The 3 Johns-Manville executives who signed the Licensing to introduce the HC to Johns-Manville in August 1989



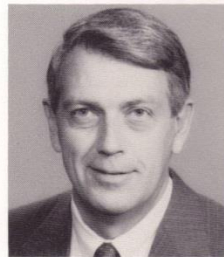
**MANVILLE**



**Tom Stephens**  
President and Chief  
Executive Officer  
Manville Corporation



**John Roach**  
Executive Vice  
President,  
Manville Corporation  
President,  
Manville Sales  
Corporation



**Ron Mathewson**  
Vice President,  
Manville Sales  
Corporation  
General Manager,  
Manville Insulations  
Division

# KIRO RADIO NEWS FAX

**TUESDAY MAY 6, 1997**

## **BUSINESS BRIEFS**

- The Johns-Manville name returned to the stock exchange trading floor yesterday, less than two years after the company became known as Schuller Corp. to distance itself from a costly association with asbestos. The company was known as Johns-Manville Corp. for 80 years before changing its name to Manville Corp. in 1981.

Rental truck used as “Showroom on Wheels” to demonstrate closets to builders in California – circa 1988 - 1989



HC showroom on wheels California



HC showroom on wheels used to introduce the HC to onsite builders between 1988 and 1989

Entry ladder

Interior of the HC showroom on wheels showing fiberglass closets



HC jobsite display model with wheels





HC display model in transit to jobsite to demonstrate to builders

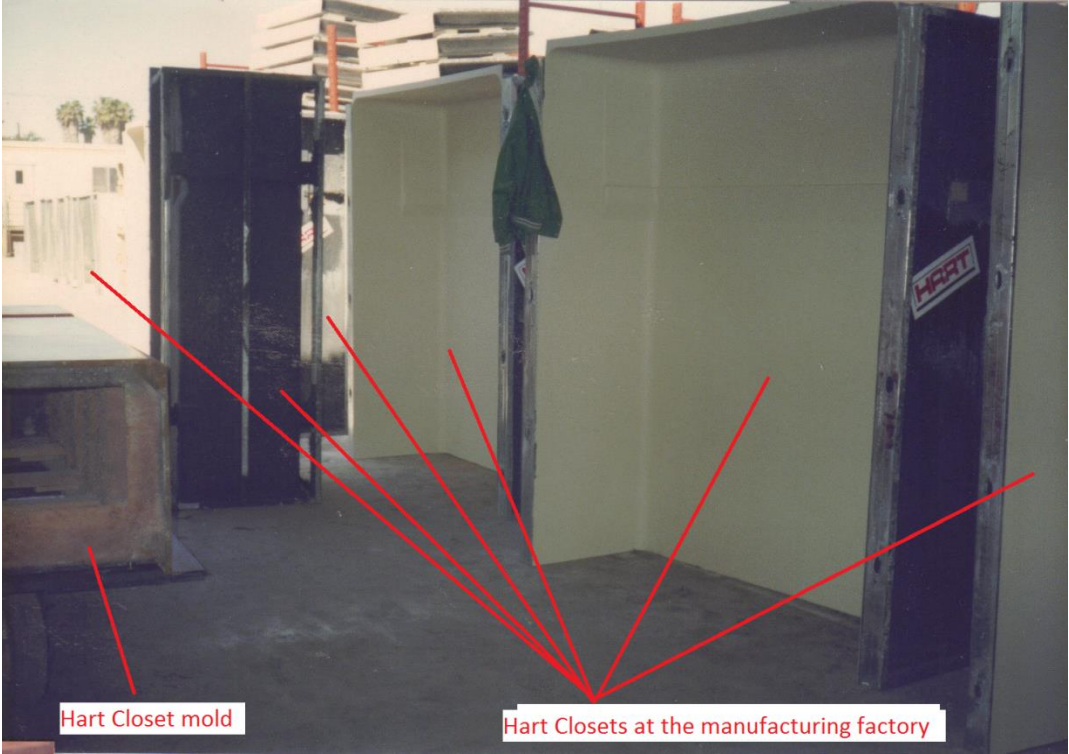


Greg's cards with Manville during the sectional Hart closet R&D 1989-1991





Hart Closet installation examples – Fiberglass one piece units



Hart Closets ready for delivery to jobsites



Hart Closets delivered to jobsite. More than 3,000 installed in California.



# HC installations





HC positioned at layout  
before framing of walls



HC after framing has been installed around it



A 6' Fiberglass one-piece Hart Closet with its attached steel studs, is installed at the framing stage of the construction process

HC positioned for interior framing after the exterior walls are framed and installed



HC positioned and ready to join with interior framing









Framing in front of HC



HC ease of simple handling on jobsite



Framing completed around HC



HC positioned & framing around it is completed









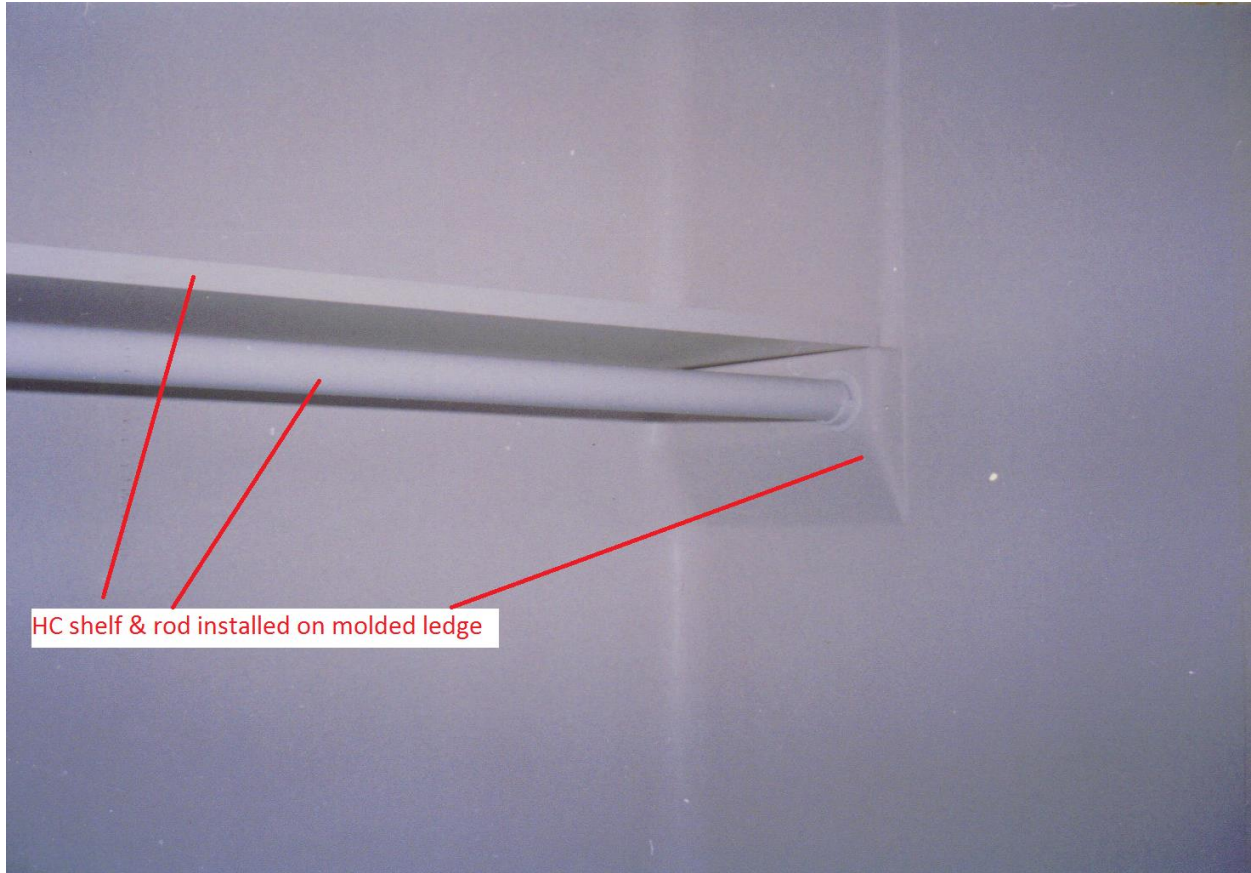


HC pantry









HC shelf & rod installed on molded ledge



Custom organizers  
being installed





Finished HC ready for door installation







No more working in tight restricted areas.  
Our Hart Closets eliminate that problem.



Our Hart Closet does not require framing, drywall, mudding, mudding drying-times, sanding, painting and finishing carpentry. A Hart Closet is installed in 15 minutes, saving our customers a lot of time and money. Does your home have a Hart?

To learn more, please view a Hart Closet jobsite installation video and download PDF documents that were authored and generated by the folks at Johns-Manville between 1990-1991. Through their eyes, you will see the value they saw in my invention for prefabricating and mass producing controlled-size closets.

**Every building in the world has a closet, but not every building has a Hart.**

**Thank you sincerely** for your interest in my pre-fabricated and massed produced Hart Closet invention.

Cheerio,  
*Gregory Hart*