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EDISON : Rethinking the Function and Interior of an Airstream 1958 Traveler (4080)

The Way it Was

There it was, secured in the yard. Within the first hour we began the project, demolition. By the end of the day my boys and I had ripped everything out and the debris now resides in the city dump. We never looked back.

After demolition with Mike and Eric

Everyone asks what it looked like when we first bought it. They want to see the before-and-after pictures. I suppose we should have, but at the time there was no compelling reason to honor the interior with a picture; it was disgusting. Any image of a vicious piece of road-kill could summon a similar emotion, and know one would consider taking a picture of that!

The Vintage Airstream Acolytes probably are appalled at what we had just done, so an explanation is in order. Based on our research of the probable trailer type and an analysis of the potential original plan, the debris we had just taken to the dump was barely recognizable as original. After all, the trailer had been “fixed up”, as proudly described by the previous owner. This is what was in it.

7 layers of paint removed

The original toilet was nonexistent. Instead a chemical toilet sitting on the floor, jammed in a closet adjacent to the curbside wheel-well. No window or ventilation. When you sat, your knees would press against the wall. I suppose this feature was well thought out as, this compression fit, kept the toilet from sliding around on the floor. The water tank was also nonexistent, however it did have a kitchen sink! Quite a contraption; from a discolored polypropylene foodservice vessel, a fish tank sized water line connected to the fish tank water pump. With the throw of a toggle switch, water would appear to flow from the flexible copper tubing, dipping towards the ashtray-sized sink. As for the drain, under the sink another discolored polypropylene foodservice vessel.

But it was “fixed-up”! Sleeps four the ad said. At the rear were two single beds, one a bunk. The bottom bed worked, however the top one would only sleep your child until they reached the age of 4 or 5. The front banquette converted into a double bed, with the required addition of a plywood slab, shaped to span across the door and connecting to the modified wall where the heater probably used to be.

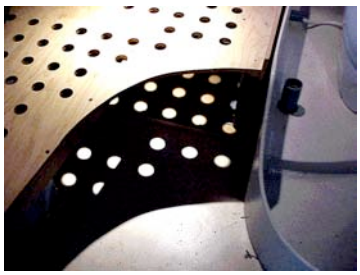
So as you can now visualize, there was no heater, no water heater, no shower nor functioning kitchen. Instead, lots of dresser drawers on both sides of the aisle (floor to ceiling) just in front of the rear double-decker beds. If I recall correctly, 10 to 12 of them. Now these drawers were well built, but a little excessive considering all the other deficiencies of the camper. They had to go. The stove (burners and oven) appeared to be original and the refrigerator (which was not)

seemed to be salvageable. They were removed, thoroughly cleaned and sent to storage.

The electrical system was also “fixed-up”. Under a bench the battery sat. Several floor strewn romex cables and an exposed circuit block were also visible. During demolition these cables were found everywhere. As I pondered the electrical configuration, safety certainly did not come to mind. So, it too was hefted into the truck. We were now proud owners of an empty shell.

All of this may seem a little flippant, however our respect for the inventors and fabricators of the shell is beyond reproach. The exterior of this Airstream was in excellent shape and was the reason we bought it.

Trailering Tao



Bed platform at Shower Pan

We would not have attempted this project without the moral support my good friend Mark Marcinik. The Marcinik's own a 1962 Bambi. Over a two-month period he helped us shop for ours. Many discussions of trailer philosophy occurred during this period and I became enlightened. I had developed the ability to critique and appreciate the trailer through its function and detail. Our goal was to satisfy our needs within the smallest space as possible in order to keep the weight down. We had no interest in purchasing a gas guzzling SUV. Our Volvo Cross County would be the tow vehicle. In studying the many Airstream trailer types, it seemed that the larger they got, the bigger the bathroom was and the more like a house it became. Being like a house was to be avoided at all costs. Our 18-foot Traveler was a little larger than the 1962 Bambi and would do the trick. It was also important that the trailer was as comfortable as possible; this would insure that our travel experiences would not be remembered as backaches.

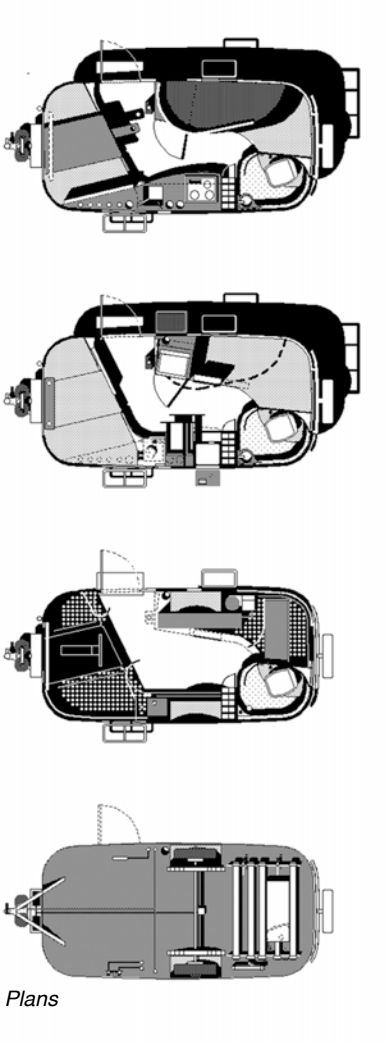
Our use of the trailer bridged both business and family needs. My architectural practice was branching into custom residential work in remote locations. We desperately needed a Job-Site Design Trailer. As for family, our two boys were becoming teenagers and common ground was really desired.

Being a retreat vehicle, some basic family rules needed to be established; pack light and no video games - Boys! Art, literature, music, science and vintage board games - Please! We are going on an adventure. But on the other-hand, when the trailer was used as a Job-site Design Trailer, full technology was required. Mike and Eric ultimately understood.

Everyone in the family had their own impressions of the places we would soon be visiting and what the trailer would ultimately be like. I think Jana sensed something when she named it Edison. We owned it for a year before the trailer type (Traveler) was confirmed. During this period of the unknown, it needed a

proper name, which has stuck. We were anxious and prepared to take on the task of design and construction.

Coupled with our understanding of the 1962 Bambi, our critique, our needs and our vivid daydreams, we formulated the essential performance specifications to match our camping Tao.



Plans

- As much as possible, everything must have two or more uses.
- It must sleep 4 adults - two single beds and one double. At least one single bed must be available for afternoon napping without interfering with cooking / dining activities and must not require any conversions.
- The plan must accommodate ample aisle space free and clear during travel, day and night use. This way, the bathroom could be used at any time.
- The bathroom must have a toilet, hand sink and shower with lots of light.
- It must have a functional and efficient kitchen and pantry. We en joy good food but when it comes to space consumption, sleeping accommodations out-weighed indoor cooking needs.
- Cooking outdoors is an important camping ritual. In order to insure its occurrence, the original temperamental stove/oven was to be replaced with a quality indoor cook-top and an outdoor marine barbecue/oven.
- It must have ample stowage vs. storage space. Storage space is for items that stay in the trailer during normal use. Stowage is for items which are taken out of the trailer during camping use such as chairs and tables and other nonessential things that we may find essential. It was unacceptable to use the isle space for any type of stowage.
- Bedding will be accomplished with sleeping bags and pillows. Appropriate storage must be considered.
- The water tank must be visible so you can monitor its consumption. Electronic monitoring systems are a poor solution to this issue as electricity is a limited resource.
- A small water tank for drinking water, which is not connected to the plumbing system. This was a good idea for two reasons: 1 – If we ever ran out of water and needed to filter some specifically for drinking, we did not want to store it for showers and toilet use. 2 - With this separate water tank we will not take up valuable space in the refrigerator with bottled water.

Interior in Progress

- As we were about to invent something new, all appliances and mechanical /electrical systems are to be current state-of-the-art technology. We did not want to have to depend on something that one could not get the parts for.

- The electrical system must consist of both 120 volt AC and 12 volt DC systems, and its operation must make common sense; more like a Macintosh, less like a PC. A photovoltaic panel, in addition to house power and the cars alternator, must recharge the batteries.

- The banquette would be the office desk when used as a Job-Site Design Trailer. It must be as large as possible and have ready access to the following: Cat-5, Telephone, AC,DC and inverted DC to AC power sources and Cable.

- As an aesthetic, the interior must attempt to reach an ergonomic perfection equal to the sophistication of the aluminum shell.

- Most important, it must be fun and easy to use.

Testing and Experience

This was the hardest and most frightening project I had ever attempted. It occurred over the course of two years. At various points in the design / fabrication process, Edison was taken out for camping spins. This proved to be an invaluable experience. It lead to refined thinking, redesign and elimination of the superfluous.

Hot Days: First Test – 3 Nights, Standard Campground Facilities
June 2000
Tahoe National Forest

Kids listen to Bill Cosby from Edison

At this point, Edison was an electrified metal tent with nothing in it whatsoever. We slept on the floor with our travel gear roped down. Our campsite was in full sun all day and the outside temperature was ± 95 degrees. We were able to keep the trailer cool by running the two ceiling fans all day. The new fans allowed for “in/out” directional flow, so we experimented. The solar panel worked perfectly. By the end of the day, the charge on the battery was the same as in the morning. The sun replaced the electricity drawn by the fans. The trailer remained cool. I even experimented with some evaporative cooling techniques. Close all the windows, turn the fans to the “out” position, and place a wet evaporative cooling filter over the door screen. This really worked; we had air conditioning.

The heat on this trip solidified the methods for providing adequate ventilation space for the refrigerator, which was yet to be installed. Because of the high surface temperature of the trailer skin, it seemed ridiculous to place the lower vent anywhere on it. In the shade, under the trailer was the best location in order to induce a chimney effect within the ventilating cavity for the refrigerator. Now we had to figure out how to build this idea.

Freezing Nights: Second Test – 4 Nights, No Campground Facilities
January 2001 – New Years Eve
Mohave Desert, Trona – BLM Property


Camping at Trona

The refrigerator, toilet and black / grey water systems were functional. There was no hot water and the kitchen, pantry and shower were not installed. We were carrying water for the first time. In planning for this trip, the drain for the exterior Main Water Tank was located for easy access. We connected a hose to the drain valve and this was our faucet. The valve was located prior to the pump. This way we could always get our water without consuming electricity. Not really a big issue, but if the batteries were ever bone dry, we would still have access to the water.

In the morning, the hose was frozen and we had no water. So we learned, all exposed plumbing lines must be insulated. In addition, the exterior hot-and-cold faucet we were going to install needed to have a way to drain all water in the line susceptible to freezing. This meant additional valves on the interior and more to plan for.

The electrical system was really put to the test. This was a four-night trip with short solar days. The solar panel did its best to replenish the battery, but on New Years Eve we really consumed those amps. Our camping group watched “2001 A Space Odyssey” projected onto a white sheet laid over the Bambi. The DVD was played off a Lap-Top and projected with a digital projector. Our friends provided the High Technology and we provided the power. The lamp in the projector was still 120 volt AC and a large wattage. Our battery pack consists of 2 “Yellow Top” Optima deep cycle batteries with a combined rating of 130 amp hours. As I recall, the projector was drawing 12 amps and ran for about 2 and a half hours. We constantly monitored the battery voltage and at the end on the movie it read 11 volts. 10.5 volts was the point of no return and we had survived!

We recognized the need to better restrict our carry-ons. The trailer was a mess. Each family member must be restricted to one carry-on bag. We also needed bags that collapse into the smallest shape as possible. We later found them, small duffels, which fit in your coat pocket when not in use. Storage of sleeping bags and pillows was another dilemma. Jana had the great idea to design some

hollow bolsters, which contain all the bedding. This completely solved our bedding problem and provided the necessary back support through out the trailer. Six bolsters store four sleeping bags and four standard pillows.

Another design necessity discovered during this trip was some type of removable thermal pad on the interior skin around each bed. This way our tongues won't get stuck to the freezing metal at night.

Entertaining: Third Test – 3 Nights, No Campground Facilities
June 2001
Pacific Coast on the San Francisco Peninsula – Private Property


On the edge of the Pacific

Kitchen facilities and hot water heater were installed and working. We had made the transition from camping to trailering and everything was getting simpler. The interior was really working and Jana cooked and served dinner for nine adults, two nights in a row. She loves the kitchen. We had purged all the unnecessary items we previously brought with us and were beginning to move with the shape of the interior. The carry-on bags still remained on the floor at night. But that also changed, four hooks on the ceiling and they were out of the way.

Family Fun: Final Test – 2 weeks, Standard Campground Facilities
October 2001
California / Oregon Camping Extravaganza – Lassen National Volcanic, Newberry Craters, Oregon Dunes, the Redwood Empire and the Napa Valley


Hiding in the Woods

On the official maiden voyage the pantry and shower were finally finished and Edison was complete. Mike and Eric were now fully enlightened to the beauty of our natural environment and had shed their electronic games. We stayed warm, clean, well fed, comfortable, and had great fun - always eager for adventure. We also made a bit of a full circle. We purchased a two-man tent that remains in the trailer. Mike and Eric decided that they like the outdoors and a little privacy. No complaints mixing camping with trailering.

Back Home

When at home, Edison stays in the back yard like a good dog. He is the biggest appliance we own and plugs into the house water, electric, telephone, cable and Internet systems. We use him as a Guest House and have had several European friends spend their first weeks in the USA with us. The best is, Jana and I now have a quiet place to retreat to.

Beyond our expectations this little trailer has become a significant aspect of our family life, and in our own way we have become Airstream Acolytes too.

After-log

Since the completion of Edision we have lived, for a week, in every National Park in California and towed it over 10,000 miles. Numerous awards and recognitions have been received, the most recent being an American Institute of Architects Honor Award for Exceptional Residential Design. As word did get out, we even had the President of Airstream over for dinner. He was considering putting Edison into production. The possibility still exists.

At Home

Paul Welschmeyer, AIA
2002 - 2003