In the first (left) picture below you can see the main roll cage hoop propped up with the framing square and a couple of small blocks under it. You can also see that I have bent the bottom conduit ends upward. I will trim and shape these a little further later.

After welding the roll cage hoop and crossmember as completely as I could with the frame still in the jig, I removed the whole assembly and used the jig again to shape the top rails for the frame from 1/2 inch conduit. Keeping in mind that I am working upside-down now, I bent the front similar to the bottom pieces, but left the ends somewhat longer. With the ends clamped together, I was able to mark where the second bends needed to be and bend the conduit to fit. Finally, I tack-welded the front ends together and tack-welded a temporary crossmember across the conduit a little forward of the "elbow area".

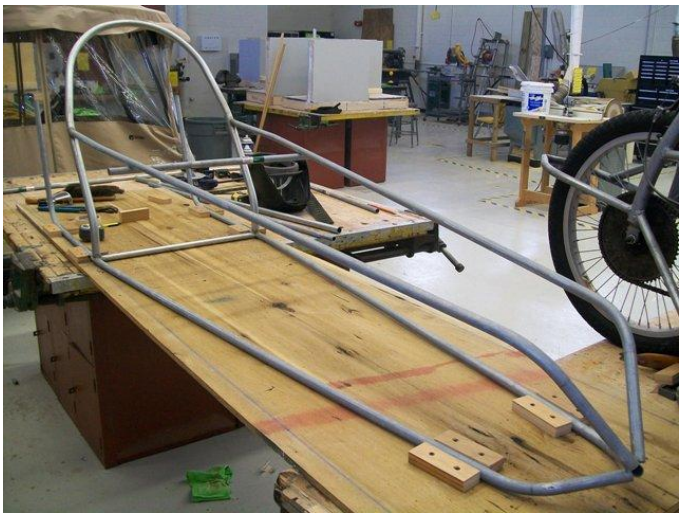
Attached Images

I should have mentioned before that welding galvanized metal can be hazardous to your health if you inhale the fumes. I'm not sure what gasses are generated, but it is my understanding they can make you quite sick and possibly cause nerve damage. I should have warned that welding this material (conduit) has to be done in a well ventilated area. I usually have a fan blowing toward the work to carry the fumes away.

After tack-welding the top frame tubes together at the front and with a temporary crossmember in place, I removed them from the frame jig. I put the bottom frame & roll cage hoop back in place on the jig and now I can fit the top section to the bottom. I set them together so all four frame tubes come together at the front. Then I trimmed the back end of the top tubes so that they intersect with the roll cage hoop 14 inches above the bottom. When I was satisfied with the fit, I tack-welded the ends together at the front and tacked the back of the tubes to the roll cage hoop. The temporary crossmember stays in place on the top tubes for now.

I need to mention that conduit is easily notched or "fish-mouthed" with a pair of aviator tin snips (right pic below).

Attached Images



For the next couple of steps I felt it was necessary to clamp the frame down firmly to the tables so that things would not move while being welded. I was able to clamp the rear of the bottom frame tubes and the frame jig down directly to the edge of the table. Up front, I used a scrap piece of lumber that reached across the table and clamped it at the sides.

The next piece I fabricated was the piece that ties the roll cage hoop to the rear of the frame. I bent a simple half-rectangle from 1/2 inch conduit and fit it behind the roll cage hoop at the same height as the front tubes. I had to bend the rear upright ends inward to make everything come together. The pictures do a better job of explanation than my words... Once satisfied with the fit, I welded it in place.

Attached Images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