

for helping firm up the decision. She pointed out that the name of the game in modified racing was innovation and experimentation. She also continued her argument by letting me know that designing and building a special car was what she thought I wanted to do anyway. So, the decision was made; we build!

I approached Bob on the subject in early October of '68 to see if he wanted to assume the design task as part of his final school project. He warmed up to the idea very quickly and we set out to draw up ground rules and guide lines. Originally I imposed two constraints on the design: 1) we would use the Elva chassis since it was proven to be structurally sound and relatively easy to modify, and 2) the car had to have a "finished" quality to the body work when completed. I remember stating that configuration was not to be a constraint. I wanted the body to be aerodynamically designed and I didn't care if it took a mast sticking in the air or outrigger pontoons as long as the concept worked. Later on a third constraint was imposed: the car could be any color except red. It appeared to me that nearly every car in B/SR during '68 was red, and I was getting very tired with that color selection.

Bob immediately started the research phase of the project by gathering all available information on aircraft aerodynamic designs. It was quite evident from the very beginning of the literature survey that automotive aerodynamic references are almost non-existent. Some of the papers that are available should be viewed with suspicion as our subsequent testing proved. Most of the useful data was obtained from Aircraft design books and some ballistics manuals and, more recently, some NASA papers.

The conceptual design went through three major iterations before the final envelop was determined. The first design was completed in mid December and some flow visualization checks were made on this configuration. However, Bob concluded that this particular shape was a lifting body and would tend to "fly" at higher speeds. Wind tunnel tests performed in early March confirmed this fact and the tunnel test data really determined the final body shape. Test data clearly indicated the advantages of the wedge shape and determined the validity of