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## Now We Are 4

We're still picking up a lot of work with shipping container structures, so I've had to add another person, Ian Remlinger. Ian is a Civil Engineering major at Kennesaw State University. We've got a number of container projects going on around the country and in Atlanta, Most are multi-family dwellings, for people of low to moderate incomes (workforce housing). While constructing with shipping containers is not cheaper than conventional construction, there are some distinct advantages:

1. A container building can go up fast. You can do a lot of the fabrication off site, which is more efficient, and the actual erection is quick.
2. The buildings are strong. They can resist significant wind and seismic loads.
3. The buildings are durable. They can take a lot of abuse, which is a plus for student housing.
4. They last a long time. Unlike a wood building, you don't get the rotting that always happens in the bathrooms, kitchens and crawl spaces. They don't get infested with termites. At the end of 50 to 60 years you aren't at a tear down stage where the building has become a barely inhabitable slum, it still has a value like a steel frame or concrete building would have (without that high construction cost).

In my opinion, Item 4 is the most important. I have done a lot of work with apartment buildings that were built in Atlanta in the 70's and early 80's, and all of them are in horrible shape. A wood structure in an apartment building doesn't last. You always get extreme damage from rot in the bathrooms from overflowing tubs and toilets, people not using shower curtains, and plumbing leaks. I've run into really awful structural conditions in crawl spaces where either ground water



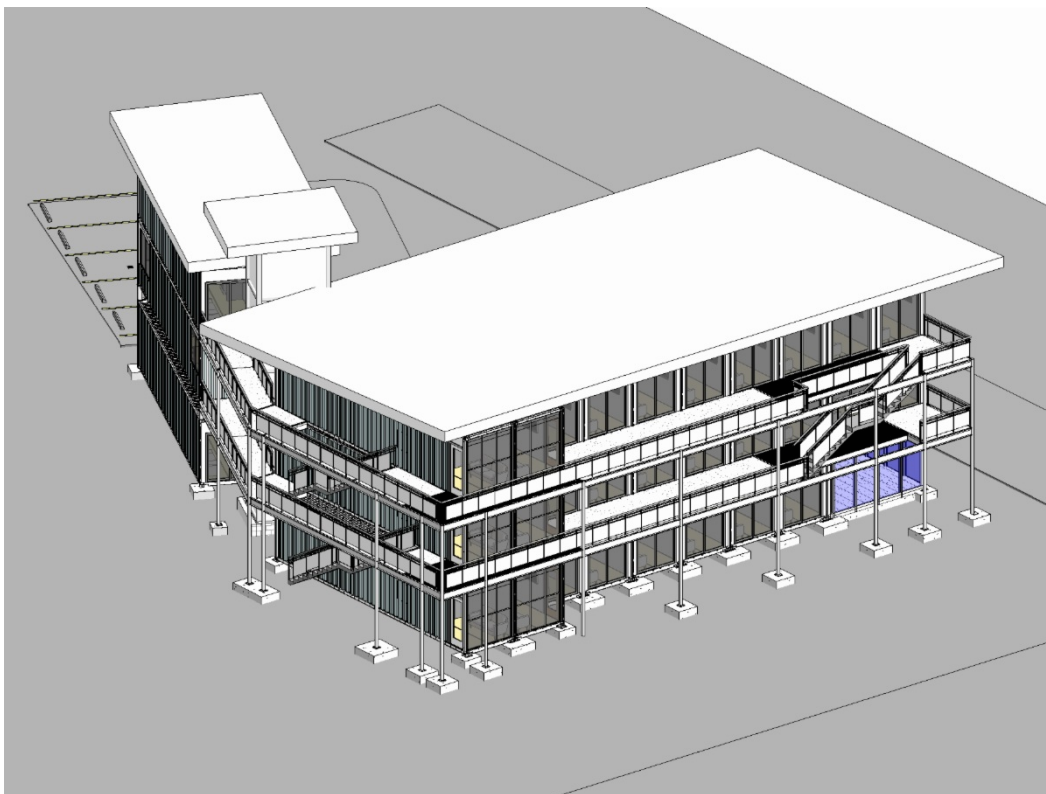
accumulated, or there were sewage leaks, and the wood rotted to extreme extent. These buildings are barely habitable.

With containers, we won't see this issue. Even if they are seriously abused, the structures will stand up to it, and the buildings can be easily repaired without major costs. So, a multi-family apartment complex at it's 70 year life span maintains its value as a building, and doesn't become a slum unfit for human habitation.

In this issue I've done a quick highlight of a project we're designing right now that is exactly what I've been talking about. A more in depth view of the project is on our [You Tube Channel](#).

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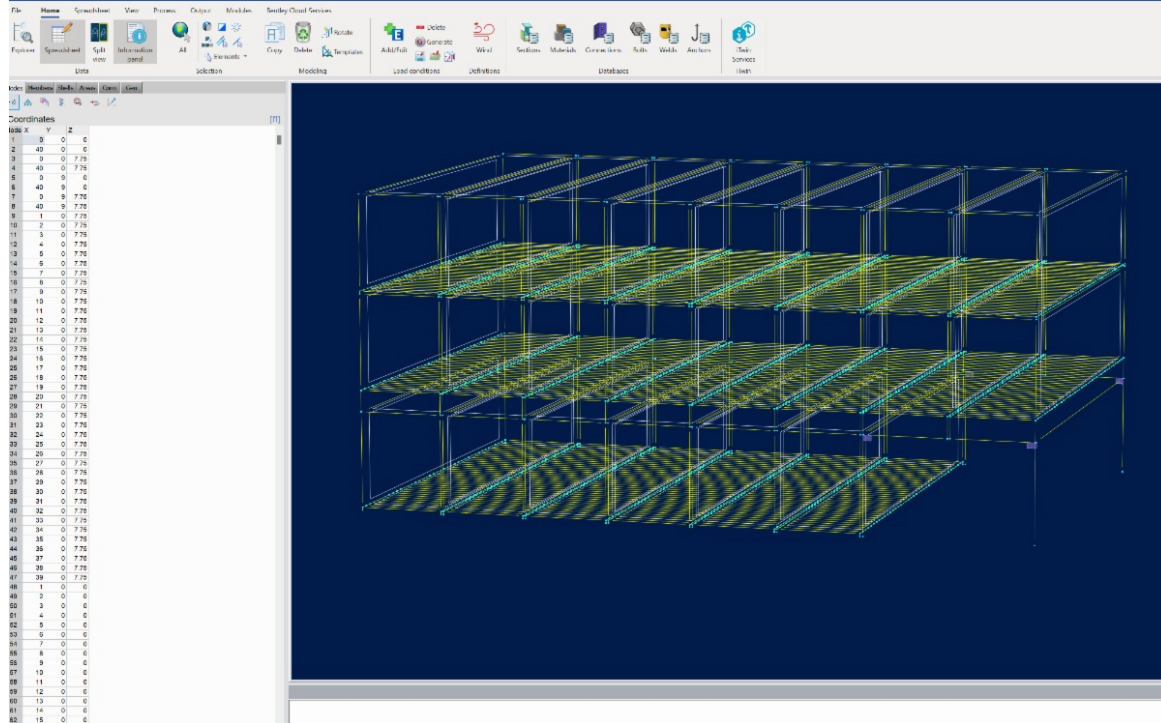
## Our Project in St. Petersburg, FL.



We're almost finished with the design of this [project in St. Petersburg, Florida](#). The Architect is [Carbon Design and Architecture](#). The project is 34 units, and the rent will probably be \$1,500 a month. The units are going to be one container (8' x 40'), will be basically like studio apartments, suitable for couples or individuals that are starting out. My structural model shows they will stand hurricane force winds with no problem. The design wind speed is 145 MPH, but it will take a hit much higher than that.

These buildings are basically setting at grade level, so we don't have a crawl space underneath of them. I did the building design by modeling them in 3 dimension in Bentley Ram Elements software. Here's a screenshot of the model:





The hardest part wasn't the 3d model, that was rather simple. It was all the other calculations that I had to do for the deck around the building, the connections, the foundations, and the elevator tower. These had to be done mostly by hand. The decks were especially hard because of the numerous ways they connect to the structure, the different turns that they take, and that they are made from concrete and steel bar grating.

Anyway, we are due to have this design done in about a week, and we've got about a week and a half of work to do. As usual, it will probably be an all nighter the last day of design. It always seems to be that way when you design projects, and my father told me when I was a young engineer that it's always been that way.

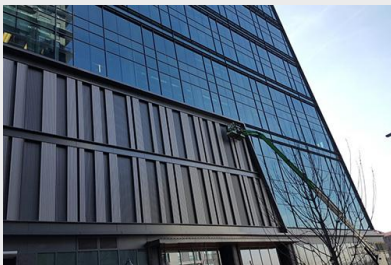


# Structural Engineers

Runkle Consulting was founded in 2000 by George W. Runkle III, PE, SE. We provide structural design for structures fabricated from shipping containers, the structural design for building cladding, and forensic engineering services.

Contact Us

# What We Do



## Building Cladding

We have 15 years of experience in the structural engineering of exterior building panels, store fronts, and curtain walls for commercial and government buildings.

## Shipping Container Buildings

We provide design services for the design of buildings fabricated from repurposed shipping containers. Our services include the complete design package, architectural, structural, and MEP. Depending on the area, we may be able to help you find a fabricator to provide the containers.

## Cold Formed Steel Design

We have extensive experience in cold formed steel design. We can provide structural design services and shop drawings for your project.

## CONTACT US

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