Making Headway on Trackside

The renovation of buildings trackside at Ford's Dearborn proving grounds is full steam ahead. Work began in May with demolition of the 75,000-square-foot Wind Tunnel 2. Now, the foundation is poured and a steel structure is going up for a new, three-story Driving Dynamics Laboratory (DDL) that will reside in its place.

"The new facility will house acoustic labs and garages on the first floor, fabrication shops and engineering lockers on the second, and collaborative work spaces on the third floor," says Roger Gaudette, Ford Land's Director of the Campus Transformation. "By building up, we're gaining 210,000 square feet of valuable real estate trackside, with capacity for 350 people."

The Driving Dynamics Lab will also be home to a state-of-the-art hybrid testing chamber, fondly nicknamed "Frankencell" by the team.

"It's an advanced four-wheel, anechoic chamber that's one of the first of its kind in North America," says Annu Abraham, Ford Land project manager for the trackside transformation. "It will have one of the lowest acoustic cutoffs at 20 hertz, and widest temperature ranges of minus 40 degrees Fahrenheit to 140 degrees Fahrenheit. It's part of Lincoln's quiet ride program, and it's a spectacular room."

The new testing equipment and chamber require a sizable room, which meant the team had to dig down 20 feet to set the foundation for a 16-foot-deep pit basement.

"We have this huge pit that required a concrete slab and walls," says Abraham. "It's pretty massive, and it produced a unique milestone on this project. We poured around 850 cubic yards of concrete in just one day. We're talking 85 trucks that came in on the same day. That's a gigantic concrete pour."

When completed in September 2017, the Driving Dynamics Laboratory will be the first of the new buildings constructed as part of the campus transformation banner. "It's exciting, and we're looking forward to it," says Gaudette.

Along with former Wind Tunnel 2 and the new Driving Dynamics Lab, three other trackside buildings are getting attention in the transformation, including the Safety Innovation Lab, the Experimental Vehicle Building and the Experimental Engine Building.

The historic Experimental Engine Building, located next to the site of the new Driving Dynamics Lab, is also coming down to make way for a new building. Built in the 1920s, it was once the airport passenger lounge. It's now the last original Ford airport building left trackside.

"Like we did with Wind Tunnel 2 – where we were able to save the old fan, blades and wooden roof – we're going to do a walk-through of the experimental engine building with

our historical and salvage crew, looking for items we can save and reuse," says Abraham.

"It's really cool when we uncover things of historical significance and then find ways to incorporate these items into the new designs," says Gaudette.

Abraham says the team will map out the best way to start removing the building in mid-2017. "We're looking to add to the valuable footage trackside to include the increasing presence of our Driver Assistance Program and give them room to grow," she explains.

The Ford Land team is giving the Safety Innovation Lab an extensive refreshing as well, adding new carpet and furniture, updating bathrooms and lighting, and creating additional work space. The old steam heating system is being removed, and a natural gas one will be installed. "We should be finished by the end of 2016," says Abraham, "then we'll do a similar renovation with the Experimental Vehicle Building."

Abraham and her team are looking to have the trackside area complete in 2019. Once all the buildings are up, they want to take a step back and find a way to make the facades aesthetically blend together. Until then, expect this to be a busy area. We'll be sure to bring you updates on the progress.

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