Crash Analysis Studio – Session 5 Transcript

Introductory Trailer

Chuck Marohn: I want to give you two scenarios. Scenario number one a plane crashes. Scenario number two, two cars collide. In scenario number one, we pull out all the stops – we bring in the NTSB, we try to figure out exactly what went wrong. Scenario number two – we send out the cops, we sweep up the mess, and we go on our way.

John Pattison: If we, collectively – everyone on this call and the broader Strong Towns movement – if we do this right, we're going to save thousands of lives.

Edward Erfurt: Mayors and local council members want to do the right thing. They have the ability to solve it. We're going to help provide those tools for them.

Session

Rachel Quednau: Hello, everyone that's joining us for this Crash Analysis Studio today. We'll just give a minute for our folks to come into the Zoom webinar and we will get started in a moment. Thank you all so much for being here. All right, so thank you for joining us for this Strong Towns Crash Analysis. I'm Rachel Quednau, I am the Program Director at Strong Towns. In a moment, I'm going to introduce you to the rest of our expert panel. But first, let's talk about why we are here today.

Last year, over 40,000 people died in car crashes in the United States. Hundreds of thousands more suffered traumatic injuries and despite the best efforts of public safety officials, these numbers have been increasing. All of our lives are impacted. There's a prevalent misconception that car crashes are caused solely by mistakes that drivers make - looking at your phone, changing the radio, speeding, even drinking alcohol. And when a crash occurs, the American response is to send out law enforcement and insurance agencies to assign blame. Who made the mistake that caused the crash? Who do we blame? But the reality is that crashes are caused

by many factors, not just driver error. When a traumatic crash occurs, we need to identify all the contributing factors and learn all that we can from the experience so that we can reduce the number of deaths and traumatic injuries in our communities. What you're going to see now is a Crash Analysis Studio, drawing from the best practices of the medical profession. We have convened a panel to review a crash in Bradenton, Florida, where a driver hit and killed a pedestrian, crossing the road at an intersection. This crash was submitted to us by our member Danny Williams, who's also on this panel. Danny lives in Sarasota, which is just south of Bradenton. So in a moment, I'm going to introduce you to our panel, then we will review the facts of the crash and assess the design factors that contributed to this crash. Again, our goal is not to assign blame. The objective is to learn as much as possible about what happened and identify what contributed to this unfortunate collision.

Before we get into the particulars and hear from our panel, we need to begin with the fact that this tragedy resulted in the death of a 76-year-old man who lived in Bradenton, his name has not been released by the media yet, but please take a moment with me in silence to honor and acknowledge him and the loss of his life. Thank you.

So I'm now going to introduce our panel for today and everyone can come on camera. Danny Williams is joining us. He is a longtime resident of the Sarasota metropolitan area. He commutes via bike daily through traffic conditions similar to those being examined in this conversation today. Danny has lived in South Sarasota County since 1970 and currently works in IT consulting. He sees family members grappling with safety, accessibility, and financial issues linked to roads and local development patterns on a daily basis.

Lauren Lysen is the general manager of Gold Tree Co-op, which is a resident-owned community adjacent to the intersection where this crashed to place. Loren expressed an intererest in participating to Danny and he's here as a representative of the Gold Tree board today. As someone who commutes to and within this area on a regular basis, he has a lot of experiential knowledge of the streets and roads that we're going to be talking about today.

Also joining us is Carl Jones, a local expert who grew up on Lockwood Ridge Road between Honore Avenue and State Route 70. He lived there for 15 years and is living in that same area today. Carl decided to participate because he is passionate about infrastructure and development patterns. Finally, we have Chuck Marohn, the president and founder of Strong Towns, a civil engineer and author of the book, *Confessions of a Recovering Engineer: Transportation for a Strong Town*. He came up with an initial idea for this Crash Analysis Studio. We may also have Ellen Zavisca joining us? But I'm not sure if she's going to pop in. Tony, do you have a note on that?

Tony Harris: Yeah, so Ellen was having some audio issues. She said that she was going to exit and then rejoin and hopefully it will be worked out from there.

Rachel Quednau: Okay, so I'll just briefly introduce Ellen as well. Hopefully she can join us - a transportation planner with the Knoxville Knox County Planning and Knoxville Regional Transportation Planning Organization since 2005. Her focus has been on safety for all modes, safe routes to school, greenway planning, and health. She has a Master's in Urban Planning from the University of Illinois-Chicago and also some professional connections in the Bradenton and Sarasota area. With that, I'm going hand it over to Chuck to review the details of this crash and inform us about what happened.

Chuck Marohn: And a slight variation from the script we had originally put together. I thought Tony was presenting this. Tony thought I was.

Rachel Quednau: Okay.

Chuck Marohn: I'm going to have Tony do it. Tony presented to me early this week and did a fantastic job. So, I will defer to him and let him go through this initial part.

Tony Harris: Perfect. Thank you. Yes, so I'm going to go ahead and pull up my screen for us and we can go through the details and facts of the crash.

So as we had said, you know, a Bradenton man who was 76 years old was fatally struck by a sedan as he was crossing into the northbound lanes of Lockwood Ridge Road. He had been walking west on 57th Avenue East and the motorist that hit him was traveling in the outer northbound lane of Lockwood Ridge Road. The collision occurred at approximately 9:09 a.m. on January 2nd, 2023. The crash report we have indicates that it was clear weather and that the roadway was dry.

So, the posted speed limit in the crash report and documented by Danny our nominator was 40 miles per hour. As I said, our pedestrian was crossing west without a marked crosswalk from 57th Avenue East to 56th Avenue Terrace East. And the collision occurred in the outer northbound lane as we had said before. The pedestrian was pronounced deceased at the scene of the crash at 9:19 a.m. And his body came to final rest in the right northbound lane of Lockwood Ridge Road. The motorist was 80 years old and suffered minor injuries. And here is a depiction of the intersection with the crash took place. And a depiction of where the pedestrian was crossing in the orange and the red circle and then the motorist direction here in yellow.

So, as we were going through the report, there was no driver's statement included. But the crash report did indicate that impairment tests were not administered. There were two witnesses present at the crash, but statements from them were not included in the crash report document. And media coverage made no mention of charges or citations.

So, a little bit on the overall site conditions, on Lockwood Ridge Road, northbound and southbound. Each direction has two through traffic lanes with one left lane at the 57th Avenue intersection. There are no marked crosswalks and the speed limit is 40 miles per hour. Some areas around this intersection have no sidewalks along the streets since they're kind of neighborhood setup. There is a stop sign present on the north side of 57th Avenue East and the

south side of 56th Avenue Terrace East. And there's two-way traffic on both avenues - to my knowledge. And then I just wanted to note that three weeks after this crash, another serious collision happened about two blocks north near 55th Avenue and Lockwood Ridge. And again, this is the intersection that we're looking at.

And we're going to move into some visuals that Danny pulled together for us from the crash site as he visited there to gather information. So, this is the northbound view on Lockwood Ridge Road. So, this would have been the direction that the motorist was facing. And this is a little bit further up, I believe, 750 feet south of the intersection. This is a motorist kind of vantage point approaching the intersection with 57th Avenue that we pulled from Google. And again, this is a little bit closer into the intersection as you're coming up on to 57th. And then Danny managed to gather some footage - I believe using a dash cam. So, this is kind of from the northbound motorist point of view at the intersection with 57th Avenue East. And here is perspective from 57th Avenue East kind of looking westbound, if you were - I guess a motorist or a pedestrian could be located here. And here we have a vantage point from a pedestrian that's facing southwest across the intersection. And we included a diagram that was in the crash report here to illustrate the direction that the motorist was traveling, where the collision happened and then where the final resting place was. And you can see that there are measurements for the travel lanes, the turn lanes and the bike lanes up here as well.

And then Danny pulled together measurements of the other side of the intersection that weren't included in that diagram for again bike lanes, through traffic lanes, the turning lane and you can see the full 72 feet from one side to the other of Lockwood Ridge Road. And I thought this was a really interesting useful piece of information. So, the nearest east to west crosswalks are a little bit over 1,400 feet to the north and almost 4,000 feet to the south. So what that means is you've got about a mile of distance, right, in-between crosswalks on Lockwood Ridge Road. And then the nearest signalized intersections that we were able to find using Google Maps and, kind of, in conversation with Ellen – again - are that 1465 feet to the north and then approximately 4,224 feet to the south. Again, this is the intersection from the southeast, excuse

me, looking northwest. And the pedestrian point of view facing west across the intersection. So this would have been, what the pedestrian was looking at as they were kind of moving toward the intersection.

And when we're thinking about overall site conditions, you know, we see a suburban development pattern, primarily residential, with some retail use. So there's proximity to Publix, Walmart, Aldi, Wawa and as I believe Rachel stated, toward the beginning of our session, the crash location is adjacent to Gold Tree, which is a resident-owned community Co-op. The street blocks are surrounded by major roadways on three sides. So, there's I-75, state road 70, and then state road 301. And as I mentioned with the crosswalks visual, you know, the significant distance between one marked crosswalk to the next on Lockwood Ridge. Danny was kind enough to put together a speed study for us and he had the help of another volunteer by the name of Brian Toone, in gathering the data that was necessary for the speed study here.

So, when we're looking at the processed information as we have said, the speed limit was 40 miles per hour. And what we found was that over half the drivers exceeded the speed limit. And nearly 8% of drivers were going 10 miles per hour or more over the speed limit. So that would be a 50 miles per hour or more travel speed and when we're looking at the 85th percentile speed, what we found was 85% of drivers were traveling at 46 miles per hour or less. I'm going to stop sharing and hand it over to Rachel.

Rachel Quednau: Thanks Tony. So now we're going to go around our panel of experts and hear from them about what they see as the design factors that might have contributed to this crash. I'd like to start with Danny, could you tell us a little bit about what you see as the factors that contributed to this crash and Ellen, we'll hear from you next.

Danny Williams: Sure, what I've what I noticed being out there gathering data in the day that I spent out there on the side of that road is it's a very busy road. It's very hard to cross that road - even I'm a little more spritely than 70 whatever years old, but it still took a long time to cross

that road. There are not a lot of gaps in that traffic. It's also the patchwork pavement looking to the south makes it - it's a very long straight wide road with lots of patchy pavement. And that was a low gray car without daytime running lights. The 2012 Chrysler 200 didn't have those stock. And I don't know whether it you know, it would have been an add-on to this car. That certainly seems a possible factor with 78 year old eyes and patchwork low car and no daytime running lights. There's a lot of traffic coming out of 57th Avenue East. Vendor trucks lots of those rolling through in the time that I was there. I was there on a weekday, same as the incident. And it's just then - it's as you pointed out before it's a long way to get to anywhere, any other way to cross that road. And if I'm walking at one meter per second that's a long time. So I might try to chance it across that road too. Which obviously isn't a great idea.

Rachel Quednau: Okay, thank you. Yes, with some observations from being in that spot and noticing there's no breaks in the traffic. Very hard to find a small moment of time to cross and particularly if you're perhaps a little slower, limited mobility as an elderly person. Also pointing out that it might have been hard for that person crossing the street to see the car coming to. Thank you.

Danny Williams: I have one other one other thing I noticed in the. The Chrysler 200 has a long low wide A-pillar so the thing that holds the surrounds the windshield. And I went to actually went to a car show in order to look at the A-pillars of older cars versus newer cars and found that all of the newer cars they stick way out in front because I was - that's one of the things that drew me to this in the first place was how could the driver have a 12 second clear view of the pedestrian and not do anything about it or see them. And now I wonder if that's not a contributing factor too. They could well have been hiding behind that A-pillar for at least the tail end of that.

Rachel Quednau: Yeah, okay. Thank you. Ellen, let's hear from you. What factors do you see as potentially contributing to this crash?

Ellen Zavisca: Sure, well, thank you so much for having me with you today and thank you to Danny for bringing this crash to our attention. There's a lot of things I saw when I read the news recounts and looked at the crash report. The introduction has talked about many of them, Danny's talked about some of them. Just the you know, Danny talked about, “why would the driver not have seen this person?” and mentioned some of the things of vehicle design and roadway design. Just the speed of the roadway. There's a lot of research into how drivers peripheral vision changes depending on how fast they're going. You’ve probably experienced this as a driver in a slow speed context it’s so much easier to be aware of person at the edge of the roadway, a cyclist at the edge of the roadway, somebody who might be trying to cross the street or is partway across the street. In this sort of context when the speed limit is 40, as you saw, so many drivers are going over that speed limit, drivers tend to get tunnel vision, and that’s not to excuse the driver’s behavior, that’s just you know you’re going so fast, you need to be watching for those brake lights ahead of you or something directly in front of you. It's really hard to see anything to this side. And that's certainly a contributing factor to this tragedy.

The lane widths just alone and the roadway width contributes to that. Again, it's a feeling of it's just wide open. Why shouldn’t I go? Why shouldn’t I go as fast as the rest of the traffic is going, as fast as it feels comfortable. That's just one of the - one of the many flaws in current roadway design practice is designing for a higher speed than we expect people to safely drive. I mean, 40 is not a safe speed in this context for human beings, but the roadway was probably designed to accommodate 45 or 50. And that's how the drivers are operating.

There are - there are bike lanes. They're pretty - but just because it's just paint. So in a way that contributes to the roadway feeling wider. If they were protected in some way with the vertical elements, they could potentially narrow. Some trees could narrow …. some things could make this roadway feel narrower and encourage drivers to operate at a safer speed. But those things are largely absent. Then we talked about the distance to the signalized intersections. Those signalized intersections, just when I looked at them on Google mMps do not look like comfortable places to cross either. You know, they were just these wide, they get intersections

with, you know, six lanes coming in from each direction. Yeah, this person could have gone way out of their way. 10, 15 minutes out of their way to get to one of those signalized intersections. You know, we rarely ask drivers to go 10 or 15 minutes out of their way without context, but we asked that if people walk you do that all the time. But he may not have been better off. I, as someone who studies a lot of crash data, especially data involving people walking and cycling - getting hit at those mega intersections, even being seriously injured or killed at these mega intersections is a really common thing. So it's an unrealistic expectation of the pedestrian. And it's also not really a safer move anyway.

And then I don't know if we've talked a lot about the driver in this crash. I believe she was in her 80s. And she may be an excellent driver. She may not. Given this context. You know, she probably felt unwilling to give up for driver's license. I know a lot of people who, you know, maybe they passed the time where they should be driving or, you know, they just have other capacity issues where they shouldn't be driving. But in context like this, again, not to excuse the driver's behavior, but it's very common to be incredibly reluctant to give up driving because it tends to marginalize people. And leave them feeling isolated… leaving them actually isolated. So again, you have this context where the driver may have felt like she needed to be driving. So many of you may not have been able to drive safely. But it's doing it anyway because of our car culture. And this tragedy resulted. So those are a few of the things that I've seen. Let us try to understand.

Rachel Quednau: Thank you, Ellen. Yeah, so just noting that the road is completely designed for very high speeds with wide lanes. Nothing really on the side of the roads to cue you to slow down or to even make you look at the side of the road and notice that somebody is waiting to cross. And thanks for pointing out and investigating the actual existing crosswalks, which is very unrealistic to expect that somebody would walk that far out of the way. But pointing out that even if they did, they might not be better off. I certainly experienced that in my life just because there's a signalized crowwalk, doesn't mean, the drivers are paying any more attention to

someone crossing. Loren, let's now go to you and hear about the factors that you've observed at this intersection that might have contributed to this crash.

Loren Lysen: Thank you, first of all, for allowing me to serve on the panel, it's something that I really see a need for, so thank you. I think that Ellen and Danny did an excellent job covering all the technical aspects of what it's like out there. I can speak, just primarily from a daily commute. And of course, everybody has pointed out that there are no pedestrian walkways to cross Lockwood. And that of course is problematic and it's a huge danger, especially for our residents, which is a 55 and over community. So, the challenge is there, but yet many - as you, it's been pointed out that the commercial properties to the north of us, the complex having Publix and Walmart - very popular with our residents. Many, most of them do take their cars there, but you'll have the occasional walker, but most of them will have the sense to stay on the side of the road to the get up to the stoplight. And it's a very bad experience, I shouldn't say, a bad experience, but a challenge every day. I leave here about four o'clock. And it's gotten to the point and this is pre- onstruction, okay, we all know that they're resurfacing out there, but pre-construction - it's just, it's a crap shoot, most of the time I will go right to go back south, I my commute takes me from Honore north to go to […] 57th street. And then home is crossing over to the southbound lane, which is a challenge.

And of course, there between Honore and 70, there's several community entrances and none of them have a stop light. Nothing. Most of them do have a turning lane, but that's serving both sides and it's - it's a challenge, but throwing up the pedestrians into the mixes. I just don't see a resolution other than a stop light with a designated crosswalk for that, but that's the daily by here and again, since the accident, I just happened to be coming in on January 2nd since we are off the first for,, I was celebrated that was a Monday correct.

Tony Harris: I believe so…?

Rachel Quednau: Oh yeah, the New year's holiday –

Loren Lysen: So we were celebrating the New Year's holiday that Monday, but I did come into the office just around those little I said maybe 930 so the activities were still going on and word had traveled through the community and it was a very sad day and it could have been avoided. Thank you.

Rachel Quednau: Yeah, thanks for speaking to that both the challenges of driving in that area safely and trying to walk and pointing out that yeah, there's all those businesses that residents of course would be frequenting. So the idea that they couldn't safely walk to those very close-by businesses is really frustrating and, yeah, clearly contributed to this situation so thanks for sharing that very on-the-ground perspective. Carl, let's go to you and hear about any additional factors that you think might have contributed to this crash.

Carl Jones: Thank you for having me on by the way, I appreciate it. It's a pleasure to be a part of this panel. I'm not sure as much additional new information as opposed to just expanding upon the information that's already kind of been given. When I looked at the material, I noticed apart from a lot of the technical aspects that we've gone over such as the speed limit and the lack of a crosswalk in that intersection. I've noticed perhaps the age of both the victim and the driver as we talked about previously that might have been a factor. Doing some research onto the speed of the roadway, I looked through older Google maps pictures and the speed limit had been 45 somewhere in between 2011 and 2016, but the 2014 Google image of the south side before that intersection and I've lived there my whole life - So I actually lived in Braden Crossings which is the neighborhood above where the incident happened, this where I grew up and I lived there even before Lockwood Ridge went through to Tallevast. I was like I could have sworn I remember it was 45 and there you know, I drove it all the time, but it's not it's 40, but it did used to be 45 so they actually brought it back down. And so there was that.

Also I found it interesting in the crash report and there wasn't a whole lot to go on in my opinion from the crash report, other than a very brief synopsis, although the officer who did the homicide investigation, which it wasn't a homicide, but that's what it's called because someone

passed away. And perhaps there was more details in his subsequent supplemental report versus just a crash report, but I have the - because of my job, I have a little bit of a unique opportunity to be able to know a little bit about the troopers, and in this case it was a trooper who did the crash investigation. And for my experience, if you're at fault in a fatality accident, you have a mandatory court appearance. So the fact and I wasn't able to look up the court case because I didn't know the driver's names because it was a redacted – and for good reason, but I was wasn't able to. I don't know whether or not that person had a traffic hearing for a fatality, which would indicate that that person was at fault. So that's a little bit telling, that would have been a little bit telling I suppose. The trooper who did the actual crash report was a very experienced trooper. She was a trooper for I think 25 to 30 years or perhaps more retired and then came back and then that's when this happened. I think not too long after she came back. So experienced trooper. The fact that there were no or no criminal site, not criminal, but civil traffic citations seems to indicate that the driver was not at fault in the situation just objectively looking at everything that happened. So other than that, like I said, I've lived in that area for a long time. I used to walk from Mandalay, which is south of - closer to Honore back to my house when I went to Braden River High School and used to walk that road every day, getting off at the bus. I'd walk a mile home north on Lockwood Ridge. And even back then 15 years ago when I was in high school, it was a busy road.

It's the first artery north and south - west of the interstate. So you get off the interstate and that's the only road that's the first road that takes you from State Road 70 down to university. So it stands to reason that it would be a busier arterial vein of traffic in that section. It's not a fun road to cross and I knew that even back in high school, fortunately I did not have to, but it's been it's been a busy road for a long time. But fortunately, there, you no longer, have to go all the way to 70 to cross at the nearest crosswalk. There is a - it's not too much shorter, but it's about 500 feet less now there's a smaller shopping Plaza intersection that only has Lockwood Ridge traffic and shopping Plaza traffic that you need to cross. And it's right there at the Plaza so you can either get to Publix on the west side or Walmart on the east side without having to backtrack like you would otherwise. And I think that's about all I have. So thank you.

Rachel Quednau: Yeah, thank you Carl and adding that historical context to the speed limit used to be higher obviously 40 or 45 is both you know, incompatible with being close to people crossing the street. But yeah, thank you. And for that addition about the other crosswalk too Chuck let's go to you now to hear any other factors that you might want to speak about before we get into recommendations at the end.

Chuck Marohn: Thank you Rachel. Yeah, I looked at this and it's interesting because other studios that we've done - there have been clear design flaws inherent with the intersection - things that were either not up to standard or what have you. This is one of those examples where I don't think there are any design flaws in terms of like the design being properly executed. There's a couple things and I'll point them out as I go. But I feel like it's really important here to note that 40 miles an hour is the speed that they want people to drive. That's fatal speed for people if they're hit by a vehicle. The reality is that people are driving faster than that the 85th percentile speed I mean almost everybody is driving faster than the speed limit. That has to be clear to everybody who ever interacts with this road. It certainly would be clear to the designer of the road. It certainly would be clear to law enforcement and everybody else. I mean this is a known factor. This is a known thing to everybody. There is driving at lethal speeds and let me just be clear every single person, I mean the lowest speed we recorded here was what like 26 I mean everybody is driving at a speed that is fatal. If they hit someone who's not in a vehicle and if they hit someone in a vehicle almost all the speeds are fatal or traumatic injury speeds.

And so, when I look at this what to me sticks out is that they have chosen a design approach incompatible with the neighborhood itself. They've actually said this is a neighborhood we can step back and look at it. In fact, all I'll share my screen really quick because this is exactly what I did when I'm looking at this, we can look at this neighborhood and say what's going on here lots of people lots of people living. We're going to run a very high speed, very dangerous roadway right through the middle of all those people - that is a design choice. And I feel like the

consequences of that design choice are not acknowledged anywhere in the design. So we make this very dangerous speed roadway and adjacent to it we put sidewalks. So we expect people to be walking here. We don't you know that this is an expectation we're like everybody who comes and goes will be in an automobile. Just given the demographics of the city and given the demographics with this area that would be absurd in and of itself. But you know, let's pretend that everybody here is young working age, affluent, owns cars. Your design says nobody should walk anywhere near this place. But then your design puts bike lanes adjacent to the driving lanes, put sidewalks adjacent to the driving lanes runs those sidewalks right up to intersections where people would naturally cross. This is a road designed with like dangerous suppositions like the premise of this design is wrong.

Look at the intersection where we're talking about here there's two turn lanes is a northbound turn lane and a southbound turn lane. What is the role of a turn lane in this type of an environment? The role of the turn lane is to get the turning traffic out of the way so that the through traffic does not have to slow down. So again, another instance where the emphasis of this design is on moving vehicles very, very quickly. I want to point out something else in the design before we talk about things from like the human perspective, the perspective of the person trying to cross in this place. This is a long roadway. A long stretch between signals. It is a very wide generous forgiving lanes there's no - there's nothing in this section that would signal to a driver that anything is different from 500 feet back to 500 feet forward it's just kind of a same highway-esque kind of landscape that you're driving through. We've talked here at strong towns many times about how driving is a system one activity, it's an activity that your brain does passively and this environment the way it's designed, heightens that, or lowers that level of interaction – it makes us even more passive because there's nothing here that engages the brain and makes it more active. Meaning that – a normal, […] median-age driver, which is the median age in Bradenton is higher than the national average significantly. But let's take a younger driver who maybe from an alert standpoint is more engaged when they're driving or has the capacity [for] a rapid engagement. That person is going to be lulled into a false sense of security through this design, because there's nothing prompting them out of system one or

making them aware of any type of potential crossing interaction, be it pedestrian or be it someone by motor vehicle.

Now put a demographic that has a high proportion of elderly people who, you know, just from a time reaction standpoint. As you age and this is not, and I'm not saying something to be ageist, I'm saying something that has a physical reality of human existence. As you age, your reaction time slows and, you know, putting people in an environment that requires fast reaction times and heightened awareness and then designing an environment to dampen their awareness and kind of depend on that fast reaction time when you have a population that trends to not having it. It's a mismatch of, it's an overall mismatch of design. The four lanes that you have here, so two lanes in each direction plus the two turning lanes, plus the shoulder, I know it's marked for a bike lane, but my goodness, it is… the idea that this would be a bike lane is absurd. I mean, no one can safely bike next to traffic that is going, you know, over 40 miles an hour, let alone having people going much, much faster than that periodically. What that does is it creates for the pedestrian approaching this, a huge amount of gap that you would need to cross, that you would need to make judgments on. Let's again go to a younger person who can make this kind of judgment in a different way. What you are asking them to do is to judge not just one lane of traffic and like can I cross it, not two lanes of traffic, but four. What happens is that cognitively we're often able to judge one, maybe two, but then people get kind of stuck in this no-man's land where they're stuck in the middle trying to judge like a next gap. It's a very difficult thing to do on foot. It's very difficult to do on bike. It's very difficult to do by automobile. This intersection heightens that danger by making people make judgments that humans are not good at.

Now, take an older demographic and this has been studied very, very thoroughly by the civil engineering profession. There's a recognition that again, as you get older that gap judgment becomes harder to do, as a gap judgment requires you to do two things simultaneously. It requires you to judge how fast there are oncoming vehicles coming and then how quickly you can actually move to get beyond that. Doing that again in one lane is very, very difficult. It's

very hard, particularly as you get older. Doing it in two lanes in each direction is really, really, really difficult. So what we've done here is we've created for people walking, people biking, the most dangerous kind of intersection you [can] have. One that requires multiple people to make multiple judgments as we've lulled drivers to sleep as they're traveling through here. By car, this is also very, very dangerous, but in a car you'd be a little bit more protected because you have that padding and that armor that comes with you. I did the calculations here as we were talking. I think someone walking at like a normal human pace would be exposed - in a sense naked to the traffic - for 27 seconds to get from one side of this to the other. That is a long period of time to be walking out in the middle of traffic. Again, I think it just highlights the fact that this design - it was just not - has people walking and biking as an afterthought. They have intentionally designed people walking and biking in a place that is extremely dangerous from a traffic standpoint. 27 seconds to be exposed to traffic and two lanes is an obscene amount.

When I look at this neighborhood, again, this gets a little bit to the, I think mindset that goes into the design. I mean, clearly here, the design was to move vehicles at speed through this neighborhood. I mean, that's the design objective and everything else is a secondary consideration. I'm going to question that design objective again because when we look - these neighborhoods are all single-family zoning neighborhoods, or at the most duplex zoning neighborhoods, that they are not mixed-use neighborhoods, they are residential-only neighborhoods. So everybody in every one of these neighborhoods has to go somewhere outside of their core neighborhood in order to get groceries, in order to get their haircut, in order to go to see a doctor or whatever you would need to do. It's obvious that is happening and it's obvious that a lot of that is happening by people on foot. So when you're thinking about the design for an environment like this, you would generally start with like the people you have and the layout design you have and the neighborhood you have, not with the speed of the motor vehicles you want to reach. If people are going to get to the Publix and people are going to get to the grocery store, which is the only place nearby that you can go to food - get food - they're going to have to walk in a really, really dangerous situation or they're going to have to drive in a situation that is likewise very dangerous.

My last note that I had here is just about that demographic situation. I recognize that this style of development is ubiquitous throughout Florida. We're looking at a place here in Bradenton that a very specific crash happened, but I think a lot of people in Florida who are watching this can see their own designs and their own neighborhoods look like this. Florida is one of these states that not only has attracted a disproportionate number of elderly people, people who likely because of where they're at in their life should not be driving or should be driving less or maybe would naturally drive less, would enjoy walking more. But it's also a climate that is very contemporary. It's a - Florida is a very nice place to walk. You can walk year round. You can bike year round. It's not a stressful thing to do. I realize it is very hot in the summer but biking and walking as opposed to like Colorado or Utah or someplace with high elevation and high degree of - Florida is just a flat, warm state. You can bike, you can walk. It makes no sense to me looking at this intersection that the design features you would choose to emphasize is high speed motor vehicle travel through the middle of a neighborhood. When you have a demographic and a condition that lends itself naturally to other modes of transportation. When you do try to in a sense accommodate those modes of transportation, you do so in a way that doesn't give at all on that primary objective of moving vehicles quickly through the middle of a neighborhood. It creates a situation that is like a game of roulette. Randomly, someone's going to get hit at this intersection. It's just a matter of how many iterations does it take for that to happen. It's almost a foregone conclusion because you have people trying to judge high speed traffic in a very open and naked intersection in a way that humans will eventually make mistakes doing. Thank you. That's what I had.

I'm frustrated because I feel like this, if you ask the designer about this intersection, they'll say it's designed perfectly. I do think it's designed perfectly from that perspective. I think it's the wrong design. We've done something really bad here with how we've chosen to approach this from a design standpoint.

Rachel Quednau: It's prioritizing high speed, moving of cars, and then this afterthought of the sidewalk and at bike lane, when clearly a ton of people live here would be walking to school, grocery store, as you said earlier, the premise is just wrong.

Let's move now to recommendations. I'd like to hear from everyone about any recommendations that you might have that would potentially improve the safety of this intersection and avoid further crashes like this from happening. Ellen, let's start with you. What recommendations would you offer?

Ellen Zavisca: Well, ultimately, you've got to bring traffic speeds down. There's no other way to do it. There's a lot of different approaches. I mean, obviously, it would be a road diet so that you had only one lane of traffic in each direction. Of course, the first thing, I don't know what the average daily traffic of this corridor is, that's of course where traffic engineers can start. Even if it causes traffic congestion, it causes some traffic to detour towards other roadways. You just can't cross safely in this context with the speed of the cars and the number of lanes you have to cope with. If you have one lane in each direction, it's that much, that much less to judge. It's that much less distance to cross. It eliminates that multiple threat crash, which arises when you've got more - one or more lanes, you've got more than one lane in a given direction. One driver does take this time to stop or yield and then that person continues crossing and say if I the next driver can't see because the one vehicle was stopped, the driver and then the pedestrian and that second driver can't see each other. Anytime you've got multiple lanes in each direction, it just creates a capacity for higher speed, right? Because in a one lane context, if I happen to be going the speed limit, the person behind me has no choice but to go to the speed limit as well, or a prudent speed, I should say. Whereas anytime we've got more than one lane, traveling in the same direction, if I'm driving safely, the person behind me can just go around me. So there's a whole host of reasons why it would be better to have just one lane in each direction. That would take the political will to say there might be more traffic congestion.

We'll just have to live with that and I don't know what other North-South routes are available. But one thing we know is that sometimes when you take away capacity, oftentimes when you take away roadway capacity, it doesn't necessarily shift to other locations we've seen that in road diets where I work. Sometimes people shift to other roadways. Sometimes they shift to another mode of transportation. They recognize, okay, I can walk someplace, I can catch the bus some place, I don't need to get in my car for every trip now - I can feel safe doing that. And maybe those trips don't go somewhere, maybe they shift to a different mode.

You know, barring that, there are ways to cross more safely. There are pedestrian beacons. That's probably a better choice than just having flashing lights or something like that. A pedestrian beacon actually gives drivers a red light when someone pushes a button. They have to stop right at it just like, hey, here's an awareness thing because awareness at that speed is hard to come by. As we said, there's sidewalks here, there's bike lanes here, someone clearly thought, oh, we need to follow this there's probably a complete street standard for that state or for that region or that city. And someone said, “Oh, well, this is a complete street, we’ve got sidewalks and bike lanes” but the thing that's so often omitted in the complete street - complete street mindset - is a safe crossing. A survivable crossing. And that's a little lacking here. So there's lots of things that could be done if there was genuine interest in doing it.

Rachel Quednau: Yeah, thank you. So definitely just prioritizing slowing traffic, ideally - cut down the one lane in each direction. Your recommendation for pedestrian beacons specifically where a driver has to stop at a red light for somebody to cross that makes a lot of sense. Danny, let's hear from you next. Would you have any recommendations that would improve the safety of this intersection?

Danny Williams: In addition to the speed that Ellen mentioned, I'd like, I think having alternatives is big, it could be a big step in all this, both in modes and in routes. We don't have a bus system here that you can count on to get places on time. The headways are on the order of

an hour. It's hard to count on it to get any place. And the other feature we have is, I can share my screen. If I can figure out how to do that. And I can't. so

Tony Harris: Should be a green button at the bottom of the window just to share it. Sure, you got it. Cool.

Danny Williams: All these colorful blocks are entrances and exits to the neighborhoods around Lockwood Ridge, which is down the middle. It's a common development practice around here. You see I've tagged each entrance into each neighborhood with a little stub. The pink older neighborhood in the upper left has four entrances, but they're all from Lockwood Ridge. The only way you get in and out of that neighborhood is Lockwood Ridge. That's on a bike, whether you're walking, I was looking at this with the idea of if I wanted to walk somewhere. The blue one in the lower left has what I'd like to see more. It's not a gated community. It's got entrances on each face of the community. So if I want to bike and I've paid attention to the map, I can cut through there, not causing car traffic in the neighborhood, but also staying off the big road and get to where I want to be on my bike or on foot. That seems to be the exception.

On the right side of this is more the common thing. The green, the purple and the yellow are all gated communities, so it doesn't really matter how many entrances and exits to how I can't go through there unless I live there. So it forces me on my bike or on foot, out to Lockwood Ridge, down to Honore and doing all the things we've been talking about. So that's a point in this area and it's a point in the whole area. I don't like the walling off of every route. Let the guy take a route through the teal neighborhood up to Wawa. Don't make him go out to Lockwood Ridge or… so that's how gated communities are and building with no exits. It seems like it would be very simple to put between two lots at the back of the development, put a bollard walkway and let people get through there. Don't make everybody go a million miles around.

I'd also like to see the transit service around here improved. I don't know that we have the density. That's the initial story I'm getting is we don't have the density between - in this MPO -

to justify more transit than we have. And I of course I fall back on the chicken and egg. If you build it, they'll use it. If you don't build it, it'll get used less and when it gets used less, they shut it down more. That is a struggle and I think that is something that would help this driver. If we had better transit, better options. You need options. The way things are built, there's not much option - other than driving - without great effort. The low friction method is getting in your car as long as you can possibly lift your leg into the seat and start the car to do that. I think it was Loren, mentioned people will drive their cars to Publix. Even though it's about a half a mile away, it's not very far. I've talked to other people wherever I go. I will ask someone, especially if I've ridden my bike there and we start talking about bikes because you're on your bike, you're all colorful and all that people tend to talk to you. “How come you didn't ride your bike here?” “I would never ride on that road.” Over and over again, even though it's very close by, we do find it's extreme sports to go somewhere that I want to be rather than just riding up and down the rail trail for exercise, to go get a haircut, to go to the hardware store. The place is built, hostilely towards that. Most of the places we only have the distracted driver buffers zones or painted bike lanes. They really don't feel like much of a bike lane. They’re our trash collectors and they are a place for a driver who's not paying attention to weave over a little without clipping their tire on the curb.

Mid-block crossings would be a great help here, at least it would be a first step of the help here. RRFBs, they're rapidly repeating flashing beacons. They seem to be popular around here. My use of them, it's 50% to 2/3rds of drivers ignore them. You push the button, you're standing there and you have to let two or three cars go by while the thing's blinking before someone will stop. When one stops, they'll all stop, but there's usually the first two or three will go through them both directions and you only get 20 seconds to cross. So you've used up most of your time waiting for the cars. The HAWK signals are better. Drivers see those two red lights and think, oh that looks like a stop sign, I better stop. Or it looks like a thing I'm used to seeing, but they're more expensive so the county is not eager to put those out without the restriction to putting those out. And Ellen's point about crosswalks and intersections are not - they're not a force field - is absolutely right. And I can't, it seems to be a hard point to get across. There's three

ways to die at a crosswalk, even if everybody's doing everything right. And there's five ways to die if somebody runs a light. If you're crossing mid-block as a person on foot, I've at least only got to look one way at a time. I don't have to look three ways at a time. We have right on reds here in Florida. We do not have any pedestrian prioritized signaling as far as I've ever seen. Everything lights up all at the same time. So when I get that walk signal, look over my left shoulder, look over my right shoulder, watch the guy trying to make a left turn coming at me. It's always unpleasant. I do wish we would prioritize pedestrian signaling and put in some cross - some mid-block crossings would help this, in addition to certainly everything that can be done to lower the speeds. And I'd like to see lowering speeds on -

Why do all the roads have to be always for cars all the time as fast as they can go? OK, I understand we need the big super blocks to move cars around cars have to get places. Does every single block in between have to be 40 miles an hour? Can we make Lockwood ridge be 20 miles an hour with one lane each way? And a two lane bike lane on each side that will draw people there and they will use that. Let Honore be the big road or let 301 be the big road or whichever roads you know, some - or so - filter the cars that way. Let people not in cars have somewhere to be because we don't really have a lot of that around here. So there are speeds and yeah, let me, I really am working to grasp the logic of, well, I guess the obvious logic of a gated neighborhoods and blocked off neighborhoods. I see that as a low hanging fruit, other than the political will to open up, you know, a 20-foot-wide gap between two lots of the back of the property to let people walk through. And as a person who owns a house in that property, they're using the water, they're using the roads outside, they're using the amenities of the area and causing wear and tear on roads and tearing it all up, let people, let people use it. Don't be a wall.

Rachel Quednau: Yeah. Yeah, thank you. Appreciate all those recommendations, especially opening up those communities. The person walking could have a much more pleasant walk just walking through some neighborhood streets than having to be funneled onto this main road. And funneling all the traffic onto that road obviously just increases the amount of vehicles

going through there too. Let's now hear from Loren, what recommendations would you have to increase the safety of this intersection?

Loren Lysen: Well, again, following Danny and Ellen, they've gone over and above - the wonderful corrective activities that you could do. I can only say from our standpoint here, we just have 57th street that's our only entrance and exit onto Lockwood. We have no other ways out so that itself is problematic. I think most of the older communities are probably like that, so that's a problem that we have to overcome with a lot of design with - and cooperation with the neighboring communities. I think immediately, as far as a relief goes, definitely a reduction in the speed limit. I mean, it certainly would be nice to have some sort of traffic light control with a pedestrian walkway. I know we're not going to get outside our street, but some sort of middle ground. But really, that is all I can think of immediately.

Rachel Quednau: Yeah, thank you. Carl, let's hear any recommendations that you might add.

Carl Jones: I'm not sure. I think that going back to what Chuck said in his initial response, that it's easy and I'm not sure where everyone is located, but as someone who's lived in the area, all their lives, this road existed long before all those neighborhoods did. It's not like they built the road in between the neighborhoods. They built the neighborhoods around the road. This road went through farmland for it's entire stretch when this road first existed. And I currently live in a neighborhood that's only been in for the past, I don't know, a couple of years or so. And it became an artery, so to speak, between University, which is a major road in the Sarasota-Bradenton area and State Road 70, which is also growing up massively. Now that they've connected Honore – Honore goes all the way down into Venice now. At least I think it does, Danny would be able to correct me if it doesn't. And so you have all of this funneling, but because of the Braden river, because of Ward Lake and everything like that, it's very difficult to, at least I would imagine for road planners to have any sort of, any sort of escape, so to speak, other than 301, which already gets very congested. And I know I'm speaking, you know, other languages to people who don't live in the area, but point made is that I think that traffic in all

this is kind of a fluent flowing thing, and it's kind of boomed very quickly, especially in this area that has grown up a lot.

So when they first made the road, the sidewalk and the bike lane, I'm sure it was more than sufficient for people traveling through the area, because it was all very sparse. But since they've made these neighborhoods, it's got very, very dense. I don't know as far as recommendations go, because like Chuck said, it's from the satellite view. It's a decent intersection. It's got the bike lanes, it's got the sidewalks. It has even, even for members coming out of that community, and I'm not sure if the Gold Tree has a sidewalk even coming out of the community connecting to the existing sidewalks. I think it might just be a road there, but I'm not sure. But the sidewalks do allow you to get to the northern, um, Walmart, and Publix, and everything like that, without having to cross a road, at least not right there. And also, as a family member or as a family man myself, trying to, while I, while I think it would be great, and admirable - and then I would love to get me some exercise, which I desperately need - to ride my bike to Publix to pick up groceries for the family, unfortunately, it's just not something that's feasible for me, because I can't fit ‘em all on a bike or even a bike trail, or I'd have to. I have to drive, I have to drive my car, and I feel like a lot of the members of Barrington Ridge, that large neighborhood that Danny was talking about, and some of the other neighborhoods, like, um, Arbor Reserve, and some of those other gated neighborhoods, like, Silver Leaf, have members who are just in the same exact position that I am in.

Um, I think that actually one of the best things we can do, and we're doing it right now, which is why I like to be part of this panel so much, is, um, simply get the word out, and have, in my opinion, the best thing, the best thing for drivers to do, coming from the standpoint of a driver, is awareness of bikes. If you're aware of bikes, then you'll be more careful of them. You will be able to share the road. I know there's a lot of drivers who get frustrated with bicyclists. I know that Danny probably gets that all the time, honks, all kinds of fun gestures from people who have to share the road with him. I can imagine it's very frustrating. Um, and pedestrians as well. And focus on driver safety, and in the situations where it's not feasible to cut down, say,

Lockwood Ridge to one lane. I, I think, and I think in, in this case, in particular, cutting down Lockwood Ridge to one lane while, um, admirable in spirit, Lockwood Ridge already, um, gets extremely congested, even with two lanes, and it has a, it has a unique position of being one of the only available arteries other, you know, for drivers to take in the area going north and south. Maybe […] pedestrian… I don't know how you can say, advisories… warning pedestrians or bicyclists maybe not to cross here or to cross, maybe somewhere else where it would be safer to cross.

Um, I think one of the, one, maybe, perhaps maybe one of the elephants in the room is, is that, um, if the pedestrian in this specific situation was following all the pre-determined safety laws that had been spelled out by the county and the powers that be who make the laws, this tragedy wouldn't have happened. And I don't mean to dis, I don't mean to, um, minimize what happened at all, my sympathies go out with everyone in this situation. But I also feel that, you know, when you take from one area, and you give to another, you have to measure, you have to equally measure. And I think that one of the best ways, at least in the interim, till we find out a more permanent solution is to do things like this and get the awareness out there for people. And, and at the very least, say, people like Danny saying, “hey, we pedestrians are out here. We bicyclists are out here. We deserve the road and we deserve the sidewalks and we deserve to be able to travel on the way that we travel just as much as you do and we, basically, want you guys look out for us.” I think that's a really good thing to do.

Rachel Quednau: Thanks, Carl. Chuck, um, let's hear any final thoughts from you on recommendations that might have heard the safety of this area.

Chuck Marohn: I feel like there’s two ways that things can go here. Um, and I'm going to give you the first one, even though I think it's absurd. Um, but I think it's, it is consistent with their approach or the way that this has been designed up to this point. If we're going to design a corridor where we're going to have high speed traffic, so high speed is the design parameter, then having humans crossing that space on foot, on bike, even in motor vehicles, is not safe.

Like there's no way to design that to be safe. And so what needs to be done is that we actually need to put some kind of a fence or a barrier up on the side of the road to keep people off. We should have nobody crossing there. We should have nobody walking across in any way, because at 40 plus miles an hour, you just can't do it safely. Uh, the crossovers should go away. I mean, they should be right crossovers. If anything, right in right out, no cross traffic, no turning left to cross traffic. These things are all like insanely dangerous at these speeds. If we're going to be insistent that the speed has to be high, then I think the only thing, responsible thing we can do to reach a safe design is to keep conflict to a minimum. I find that absurd, given what has gone on in this area. And I guess I want to kind of go back to a couple of things that Carl said, you know, Carl mentioned that the road came first and then the development. And I, my guess is that, that is true. Like I, I think that that is, is almost certainly what happened. It's interesting to me that engineers had the capacity or we as a system, have the capacity to design - um - in anticipation of traffic, but not in anticipation of human conflict. And I just want to point that out because we've made some choices here, um, that are having these ramifications. They're not outside of our control. They're not like spooky forces. We decided to anticipate a bunch of traffic. We then built all the homes to create that traffic, uh, homes, bring people, bring people walking, bring people on bikes. This is all very, very predictable. And I don't think we should feel hamstrung by that.

Um, the other thing that that Carl brought up was that in this situation when everybody follows the, the rules was we still have crashes that will happen. We'll still have people that will die. We'll still have people that will get ran over. And for me, I feel like the design can't accept that, right? Like if we accept that, like again, we're going back to the roulette game. We're back to the Russian roulette. Like, you know, eventually someone's going to die here. It's just a matter of iterations. If we put up a fence, if we keep all the people out, if we keep all the crossings out and just let this be high speed traffic corridor, the design they have will work. I don't think that works with the way they have developed the area.

So let me give a second, uh, scenario. And, and I'm going to go back to what Ellen said, I agree with her completely. I think that this needs to be two lanes, one lane in each direction. Um, specifically at the intersections in here, it needs to be one lane. I would at this specific intersection, uh, think about having some traffic circle put in here, that would have more of a continuous flow at very low speeds. At very low speeds, we have drivers making eye contact with people walking, people on bikes, uh, any crashes that do happen are at low velocity, low trauma crashes. Um, and so what you're doing is you're, you're increasing your margin for error. And you're ensuring that whatever happens is going to happen in a less traumatic kind of way. In order to get to this, I would like to see, uh, us go out here in this specific place with bollards, with cones, with paint, uh, and reconfigure this so that there is a narrowing down to two lanes and, and let's figure out how that works. Our design parameters should be we're trying to reach an 85th percentile speed of 20 miles an hour or lower at this intersection. And we can do that temporarily and figure out what works. And then we can come back and put it in permanently. We want the area that people are crossing to be narrow, where they can get across in a few seconds. They don't have to judge large gaps and they can easily get across. And we want the, the through speed in those places to be at non-lethal speeds. So if there is a mistake in judgment, the mistake in judgment does not end up being fatal.

I also just, yeah, I have one little note in here that I forgot to bring up. I think if we are going to stick with the high-speed road option, this is a high speed road. We're going to build a fence. We're going to keep everybody off. We're going to not going to have crossings. I don't like that option. If you're going to go with the high-speed road, you've got to do something like that. You need to, you need to go with what Danny was talking about with transit. Um, you're, you're assuming by having it be high speed that everybody's going to drive. Everybody's clearly not driving, is not even capable of driving. And so you're going to have to invest in a high degree of transit service to these neighborhoods, if that's the route that you're going to take. I also want to point out just one last thing with the design that that I think they should do and the, the two lanes that Ellen is suggesting, you are going to have congestion. I have no doubt that you will have moments in time where traffic is highly congested. I think with continuous speed,

especially with a continuous flow intersection, I don't think you're actually going to have increased travel times. They're not significantly increased travel times. As I think you'll also take some stress off of your regional network. What you've done right now here, Lockwood runs north and south. You've got Highway 70. You've got 301. These are your high volume, high-capacity roadways. Um, right now those are also being utilized in a stroad kind of way with a lot of access and things that are slowing them down. If we can get rid of those accesses there, improve the traffic flow on that, you don't need the redundant, like, junky road on the side that is, you know, essentially what we've done throughout this entire region is say, nothing's going to get you anywhere very fast during congested hours. You're going to go really slow on this dangerous road or you're going to go really fast on this dangerous street. But both of them wind up to be this kind of moderate speed and it's that moderate speed that is causing the city to spend a lot of money on transportation, get not very much in return and have it be very dangerous at the end of the day. So one lane in each direction, narrow it up, make it continuous flow, do it temporarily with cones and bollards to see how it works, iterate, figure it out, and then make it permanent. That's - that would be my recommendation.

Rachel Quednau: All right, well, we'll sign off and close out here. I want to express some thanks first to Danny who nominated this crash for our discussion today and helped with gathering resources, also special thanks to Brian Toone who helped assist with that and thanks to Tony for helping to walk us through the crash and doing a lot of the planning behind the scenes too. Thank you to other, Bradenton and Sarasota community members who've been involved in this planning. Particularly want to say thank you to our guest panelists today. Ellen, Danny, Lauren, Carl. We really appreciate you taking your time to explore what happened with this crash and give your insights. Thank you to our sponsor for this Crash Analysis Studio who's an anonymous donor. And you can find a recording of this session and all of our other Crash Analysis Studio sessions by going to strongtowns.org/crash-studio. And you'll also find resources soon for establishing your own Crash Analysis Studio in your community for when situations like this happen. We really want to see this movement spread. Our next studio session is going to be on June 30th and you can find information about that on our website. We'll also email that out to

everybody who's in attendance afterwards. On behalf of my colleagues and the panel, thank you so much for watching this session of the Crash Analysis Studio and keep doing what you can to build a strong town. Take care everyone.