# Crash Analysis Studio – Session 17 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

**Tony Harris:** Okay. Hi everyone. I know people are still filing in, but I am going to go ahead and get us started. I'll move a little bit slowly while we wait for, for more people to join us. So I want to say welcome to the Strong Towns Crash Analysis Studio. We are glad that you're here. My name is Tony Harris and I'm the action team coordinator with strong towns. And in a moment, I will introduce you to the rest of our expert panel. But first, let's talk about why we're here today.

The National Safety Council estimates that over 44,000 people in the United States alone died in automobile crashes throughout 2023 hundreds of thousands more suffer traumatic injuries during these collisions. And despite the best efforts of public safety officials, these crashes are still happening and affecting all of our lives.

Now, there's a prevalent misconception that car crashes are caused solely by mistakes that drivers make. Looking at your phone, changing the radio, drinking alcohol, speeding. When a

crash occurs, the North American response is to send out law enforcement and insurance agencies to assign blame. We ask questions like, who made the mistake that caused this crash? And who can we blame?

The reality though is that crashes are caused by multiple factors, not just driver error. When a traumatic crash occurs, we need to identify all the contributing factors and learn all we can from the experience so that we can reduce the number of deaths and traumatic injuries in our communities. So what you're going to see today is a crash analysis studio session, drawing from the best practices of the medical profession. We've convened a panel to review a crash that happened in State College, Pennsylvania. Now, this was a fatal collision where a motorist struck a pedestrian near the 200 block of East Park Avenue, which runs alongside the Penn State campus.

So today I'll start by introducing you to our panel, then review the facts of the crash, and with our guests, we will assess the design factors that contributed to the collision.

Again, I want to emphasize that our goal is not to assign blame. Rather, our objective is to learn as much as possible about what happened and identify the many factors that contributed to this unfortunate event.

So before we get into the details and speak with our experts, we need to begin with the fact that this tragedy resulted in the death of a student named Lovisa Arnesson-Cronhamre. Please take a moment of silence with me to honor and acknowledge her and the loss of her life.

Okay, thank you.

So I'm now going to introduce our expert panel for today. First, we have Dean Chamberlain, who is the engineering group manager in Toole Design's Minneapolis office. He is experienced in traffic engineering, preliminary design, final design, and construction inspection.

Dean is detailed, focused and strives to provide clients with the highest quality product while demonstrating excellent customer service. Dean rejoined Toole design After seven years in the public sector, most recently serving as the city engineer for a city in the Twin Cities metropolitan area. He is passionate about making places where people of all backgrounds and abilities can thrive using whatever form of transportation they need to access daily activities in a safe and effective manner. So welcome Dean.

Next we have Nick Rizzo, who is a resident of Pittsburgh, Pennsylvania and a 2023 graduate of Penn State University. At Penn State, Nick was a member of Strong Towns Happy Valley, advocating for safer streets and more housing near campus. When the borough of State College sought to demolish local businesses for a parking garage, Nick helped organize a successful effort to reverse that decision.

Next we have Ethan Dean, who is a graduate student in entomology studying Bumblebee colony development and stressor biology. Ethan grew up in Colchester, Vermont, where he then attended the University of Vermont before completing a year of ECO AmeriCorps service in Montpelier. He is interested in strong towns from the perspective of creating better places for people and understanding how better cities can help the environment. Personally, Ethan Bikes to work every day and loves to use biking as a way to better live in and engage with his community.

And then 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. Chuck developed the initial idea for the Crash Analysis studio program.

So now I'm going to walk us through the details of this crash that took place in State College, and I'm gonna share my screen here.

So I would like to start with what we know about this crash. So we know that 25-year-old Penn State student, Lovisa Arnesson-Cronhamre was out jogging westbound along the south sidewalk of East Park Avenue when she was struck by a motorist 20-year-old Penn State student. Ahmed Alqubaisi was driving westbound at an unsafe speed when he lost control of his vehicle. So his BMW crossed into the eastbound lane and traveled up onto the sidewalk. First he hit a standpipe. Next he knocked down a light pole and then he hit Lovisa and finally collided with a tree before coming to a complete stop, he was driving on a learner's permit with no license driver in the car.

Now, media coverage tells us that the collision took place just before 8:00 PM on September 12th, 2023 and weather reports and the affidavit of prob probable cause indicate that it was partly cloudy with some light showers in State College that evening.

Now we know that Lovisa was transported first to Mount Nittany Medical Center and then to University of Pittsburgh Medical Center – Altoona. Lovisa passed away from her injuries around 2:00 AM on the 13th, and Ahmed was arrested and charged with third degree felony homicide by vehicle involuntary manslaughter and recklessly endangering another person.

Media coverage also told us that law enforcement did not believe drugs or alcohol were factors in this collision.

So on this slide you can see the crash location marked by a red pin, and it's right nearby that intersection of McKees Street and East Park Avenue.

And then here we've zoomed into the crash location a little bit closer. So what I've done is I've illustrated Ahmed with this orange rectangle and he is traveling westbound and then Lovisa is illustrated with this yellow square also traveling westbound. And then at some point near the intersection, Ahmed lost control of his vehicle and passed through that eastbound lane and then ended up hitting La Vista on the sidewalk. And I outlined the crash location in red.

So we also know that the speed limit on East Park Avenue at this particular area is 35 miles per hour. And I wanted to note that East Park does widen beyond the crash location on both sides.

We know that Lovisa and Ahmed were both international students. Lovisa came from Sweden and Ahmed from the United Arab Emirates.

Ahmed was released after a $3 million bail was posted. His formal arraignment was scheduled for October 25th, and then we found out that he pled guilty in mid-March to one felony count of accident involving death. And he received a sentence of 33 days to 23 and a half months in prison with five years probation.

So the police criminal complaint that we managed to obtain confirmed the following media sources did correctly report on the charges that were brought against Ahmed and the fact that he was driving on a learner's permit and then in the affidavit, the motorist speed in conjunction with weather and environmental conditions. Those were all listed as contributing factors.

It was also noted that this area is known to have increased vehicle and pedestrian traffic due to its proximity to Penn State.

So a little more on the overall conditions of this crash location.

East Park Avenue has two through traffic lanes. One is for westbound vehicles and the other for eastbound vehicles. And the intersection between East Park and McKee is not signaled.

Now there's a crosswalk that spans East Park Avenue with a pedestrian refuge area. And then there's also a marked crosswalk that spans McKee Street above the East Park Avenue Crosswalk is a cyclist sign, a flashing light and a streetlight. And this area is near student dormitories,

right? So it's frequented by students, professors, and other people with business at the university.

It also seems likely that people could use Park Avenue to access other destinations or major roadways that might be nearby.

So Ethan managed to gather some photos and video footage of the intersection and the surrounding area. And I wanted to share a few of these with you all briefly as we continue to move through this segment of the session. So this first photo shows the crash location. So this is the intersection of Park and McKee, and I believe Lovisa would've been hit on the right hand side of this photo just outside of the crosswalk.

This next photo is from the opposite corner of the intersection where the crash took place. So this would be from the northeast corner looking down at the area where Ahmed lost control of his car and ultimately hit Lovisa.

And then I've included this slide with an image from Google Maps to sort of show what it might be like for a motorist to approach the park and McKee intersection, which is right beyond this truck that's pictured here.

And then the image on this slide also taken from Google Maps is closer to the intersection itself, right? But still from a motorist perspective.

So I'm gonna take us back to some still images that Ethan and his colleagues gathered to try and illustrate what the approach toward that intersection might have been like for Ahmed. So the photo on the left shows Park Avenue from the middle of the road while the photo on the right shows westbound park from the short ledge intersection that I believe is a couple blocks east of where the collision actually occurred. And I wanted to note that the criminal complaint did state Ahmed was driving in the wrong direction originally and corrected his direction at this

intersection with short. So I just felt it would be appropriate to include a shot that illustrated that area.

So these next two photos show a westbound pedestrian perspective as you're approaching the crash location. The one on the left-hand side is a little bit further away from the the intersection, it's closer to the north residence halls that are on park. And then the one on the right is a little bit closer to the intersection itself. You can see the cyclist sign and the flashing lights there.

And then on this last visual slide, I wanted to include a couple photos just to show some of the signage nearby the intersection. So on the left hand side you see a sign that tells motorists, you know, you should expect cyclists here in this area. And then on the right-hand side you see a sign that gives notice that a blind pedestrian might be crossing the road.

And then Ethan also helped get measurements of the intersection or area where the crash took place. Right? So when we're looking at this diagram, we can see the two through travel lanes are each 12 and a half feet wide. There's a parking lane that is nine and three quarters feet wide. And from our perspective here, that's on the right-hand side. And then on either side of the street you're gonna see cross sidewalks, excuse me. And on the left-hand side where westbound traffic would be kind of coming toward us, we see some trees and grass, right?

So this makes the width across the lanes 34 and three quarters feet. And then when you add in those sidewalks in that planter area, that width jumps up to 53 and three quarters feet.

Now the overall development pattern here is sort of situated between some surrounding neighborhoods and then the campus of Penn State, which I would say is a somewhat walkable campus, right? So this to me shows a mix of suburban and urban characteristics.

We know that west of the crash location Park Avenue provides access to North Atherton Street, which is also known as Route 3 22 business. And then I'm gonna pull up a map that illustrates the surrounding area. Just to point out a couple other things.

So east of the crash location, east Park Avenue facilitates access to the Mountain Nittany Expressway, route two 20, and then interstate 99. So those are gonna be up here. And then in the immediate area we have some of these residential neighborhoods. On our left-hand side, on the right hand side are residence halls, and then up, I believe in this green area are the ho Smith botanic gardens.

And then Ethan also managed to conduct a speed study for us. So he conducted this study under typical free flow traffic circumstances, right?

And Ethan tracked 330 cars during this study and found that 52% of drivers were going over that posted 35 mile per hour speed limit.

Six drivers were going 10 or more miles over that limit. So they were going at 45 or higher. And then we calculated that 85% of drivers were traveling at or below 40 miles per hour.

So I'm going to stop sharing my screen now, and I would like to turn to the panel so that we can talk a little bit about factors that might be at work here.

Dean, if you wouldn't mind starting us off, could you tell us what you think might have contributed to this crash? And if, if you have Google Street view up and you wanna screen share or point any specific things out, please feel free.

**Dean Chamberlain:** Great. Yeah, thank you Tony. And thanks for for inviting me to be the part of this panel. I really appreciate it.

I just, I do have Google up here, so I'm gonna share my screen. One second. All right, so first of all, I'm gonna kind of zoom a little bit out. We'll say from the area that the crash happened and kind of, if you can see my mouse, this kind of area over here on East Park Avenue North and east of this area on Park Avenue, as Tony mentioned, it's kind of you, you come into this say residential area from a very different context with the botanical gardens, there's fields that's very open, much more of a rural type setting. I'm just gonna drop my street view guy in here. Just to give a little bit more context here too.

So kind of here's the, the street before you get to the, the area that we're talking about here. And it's also a 35 mile per hour speed limit, very wide open. Definitely has a different context kind of to the area. I bring that up to say that, you know, kind of, there's a big transition point between the different context kind of within this, this area that we're talking about here at the crash location. So you come from kind of rural context, higher probably operating speeds even than the speed study that was just shown right into the middle of a residential area. That is a much different context without much of a say a transition zone at this intersection here.

Flip over to Google here. Now I believe that this might be the box that the guy came off the road and hit the pedestrian here because the, the police report mentioned a standpipe that was hit. This is a standpipe here and there's a light missing with this cone on it. This image was taken in December of 2023. So I, I think this may be the spot, it's a little bit east of the McKee intersection, but I may be wrong about that. But regardless, as kind of mentioned, there's a, the sidewalk that's Lovisa was running on here is not physically separated from a roadway at all, essentially, it essentially goes sidewalk right to roadway even though there is kind of the striped area here.

And actually I was noticing that there's actually no parking signs posted here. So even if it was a parking lane at one point in time, they don't want anybody to be parking there now, at least of December, 2023 when this image was taken. And that, I think lack of buffer space between where somebody could have left the actual roadway and where somebody was walking you

running in this case could be definitely a factor for this area. This area also known too, it sounded like the, the weather conditions were a bit rainy there.

You can see a drainage structure here as well. This is, I think, the only drainage structure I found within like three blocks of the entire area here. And if the roadway does not have sufficient, you know, drainage that also could have contributed. If somebody is driving at a high rate of speed, if you hit a puddle and hydroplane, you can easily lose control and cause something like this to happen.

So those are three of the, the big factors that I wanted to point out that I was seeing. And I'm, I'm really excited to hear kind of everybody else's take on some of the other factors here. Thanks.

**Tony Harris:** Yeah, thank you so much. Could we maybe go to, let's go to maybe Ethan next, if that's okay?

**Ethan Dean:** Yeah. So I'll just start by saying as somebody who frequents this area, that a lot of the things that you had mentioned, I would say are definitely my experience anecdotally at least, especially on East Park Ave as it gets near the botanical gardens.

I would say that what I have observed is that people probably go 10 miles an hour faster in that section just based on that openness there.

I'll also say that it, the design feels very weird walking on that road because of that large blocked off area, even though it's not marked for parking, when I normally go there, there are at least one or two vehicles normally parked there.

And so that either that or construction maintenance stuff. So I don't know if that that plays into the, the problem that even if this isn't parking, you know, having a vehicle there might feel like

it narrows the road or gives protection to the sidewalk, but since that's technically not a parking area, it's just left open most of the time, which inherently, you know, kind of widens the road from that perspective. So as well as I, as somebody who has walked on that road, I have noticed that I think unfortunately the signage, as much as it's there, it, there's not generally yielding happening in that area.

I know for example, somebody in our organization stood there and watched people try to cross that street and they counted the amount of people or amount of vehicles on average that cross before the person is able to cross and it was over six in the lane that they're in. So, and in Pennsylvania, I believe the law is that you need to be actively crossing before a vehicle will yield to you. So that no, though that didn't, that doesn't play into directly this crash. I think that infrastructure and that design mentality in this area might have led to or just leads to this type of design.

Yeah. As well as just wanted to second what you said about there's not really any protection there as the other side has street trees, which does make it much more pleasant as somebody to walk along the road.

Yeah, I'll leave it there.

**Tony Harris:** Great. Yeah. Thank you Ethan. Nick, could we come to you next on factors?

**Nick Rizzio:** Sure. Thanks Tony. And thanks for every, everyone having having me be here today.

I can't, I'm not a, I'm not a design engineer, so I can't necessarily speak to factors, but I can speak to my personal experience of living along this road for the past, I had lived there for several years as a student. So I'm actually gonna just share my screen.

And before we talk about some of the things I actually have noticed on Street View, I'm just gonna go to Google Earth and talk about this from like a top level view. So I lived in the East Halls Residence complex for most of my time at Penn State. I was at Penn State for four and a half years, and I was a resident assistant in this particular building, SPR Hall for about two and a half years. It was six semesters total.

I lived most of the time in this one particular room. And you'll notice that I can actually see, or at least when I lived there at the time, I actually could see a, a decent part of Park Avenue and some of this traffic, traffic light in the intersection there.

Unfortunately, it was a joke amongst the staff of my building about how we live next to the p Park Avenue Speedway. And the reason why the, the reason why that the resident assistants in my building joked about that is because it was the truth. People would race on Park Avenue at night when there was less traffic. People would blow through the light, even if it was, if it was yellow or if it was red, they would just drive as fast as they could because it's a three lane. I mean, look at how much space there is. There's so much space here they can just, they can just do it. The other interesting aspect of this road is that it's in a unusual jurisdictional enclave.

So Penn State University police has exclusive patrol jurisdiction over campus, and then the borough of State College Police Department has exclusive jurisdiction over the non-campus portions of the borough. And you'll notice that if you look at a map, which I unfortunately don't have with me right now, but if you look at the reference map from the Center County Planning Department, you'll notice that Park Avenue is actually a patrol enclave for the borough of State College. Technically, this road is within the jurisdiction of the State College Police Department, even though it is surrounded on both sides of, from both sides with uni, the, you know, Penn State University police jurisdiction.

So that is the one thing I would observe.

The other thing I would point out is that I had an interesting experience visiting the arboretum at Penn State, which many students go to. It's kind of like, I don't wanna say it's a rite of passage, but most students at Penn State know about the Arboretum. They go there to visit one day in the summer of 2022. I was walking along this section of Park Avenue and I noticed some deer that we're actually running around in this little section of the arboretum.

They actually ran up to the road and I was walking toward to the right direction, and I realized that the cars were driving by me so fast that if the deer actually ran into the road, there would be a good chance that the deer would be literally pushed into me if I was standing on the sidewalk. Hmm. So I realized rather quickly that this is a dangerous situation. And so I, I think I walked like into the arboretum to get away from it, but it just occurred to me the contrast between how, you know, this is the, I think the East Halls residence comp has over 4,000 students. It's like the second largest residence complex in the world, other than I believe like Moscow State University.

And people cross the street all the time to get to the arboretum. And yeah, we have people who are routinely speeding along this road.

The last point I'll make is that I actually went on Street View and I noticed that this part of Park Avenue has gone through several iterations. Mm. So this is what it looks like in August, 2018. You'll notice the parking spots here and, and this crosswalk, which isn't really raised, and over time it seems like this has been reconfigured. They've added the pedestrian island in the middle and they've kind of split the lane a little bit. But as you see, there's actually nothing, no physical barrier unless you get to this point. And these are, I guess these are plastic cones. They're really not gonna stop a vehicle.

That's really not the point of them. The point of them is to be visible. But you'll notice in this intersection that here's this white lines that we're talking about, that it's not a physical barrier, it's just instructing you to, you know, not be in that area. I also think the other reason why this

exists may be for ambulance parking. Unfortunately, the Penn State University residence halls have a decent number of calls for service every year from ambulances. So they want to park somewhere close so they can easily access residence halls. So I have seen that on some weekends on occasion, but otherwise, you know, you can see that the road is wide. There's no, there's no barrier. It's just, it's just lines paint.

I mean, look at how it's, it's kind of dim at this point. And this is December, 2023.

So if it was raining out, it would probably be a little bit harder to see this. I mean, not too great light conditions. So this road has changed a lot. But what I would like to see as, and I definitely would echo what Ethan said about cars passing while I'm waiting across here, that has happened to me several times.

I would humbly suggest that it be considered to add a protected pedestrian crossing. A raised crossing, somewhat similar to what is present at the library. If I could find a library, sorry, Google Earth Maps is really not cooperating with me today.

**Tony Harris:** That's okay. Take your time.

**Nick Rizzio:** Come on. And there we go. So this is the main campus CATA bus stop, which is our local public transportation agency in state college. And you'll notice that there is a raised pedestrian crossing here. And so this forces drivers to slow down and stop for pedestrians and kind of says like, this is a pedestrian zone first it is for cars. Second, granted, I know that this road curtain road is actually a little, it seems to be pretty wide as well, which is another conversation. But I do, I do notice how when I was on campus, people would actually speed down this road and then they would stop, they would always stop before they got to this because if they kept speeding, their car would literally go airborne.

So this is the kind of infrastructure improvement that I think we should be considering for a road such as East Park Avenue.

**Tony Harris:** Yeah. Yeah. Thank you Nick. I appreciate that. And I find it's really valuable to look at like how a place has sort of developed over time too. So I'm, I'm glad that you brought that up for us. Great. Chuck, could we turn to you, you next on factors?

**Charles Marohn:** Yeah. This is a strange crash and I, I feel like part of, part of the news reporting and part of the data that's been put together with it gives me a lot of questions that I would want answered if I were the city. It, it, it almost is suggested that the person who was driving was an immigrant who had no idea what they were doing and drove recklessly down here and crashed because maybe they just didn't know the local culture or what have you. And I, I, there's other parts of the reporting that suggest that's not true at all. I mean, the, the person did plead guilty to a felony, it was a felony with kind of a low punishment.

So my guess is that it was plea bargained out and, you know, instead of rolling the dice at a trial.

But it's, it, to me, I feel like this is one of those cases where obviously speeding was part of the issue. And I would like to understand kind of the causal after that. Right? When I, when I look at the street, it is clear from the data that that was collected along with just the design of the street. That speed is an issue. I mean, in, in all the photos that we're showing, the ones from Google, the ones that are taken, you, you, you've got the sign here, which I'm guessing is put into service during periods of time to tell people to slow down, right?

So people are aware that there is speeding out here. We've documented it, the PE authorities out here are aware of that fact.

When I'm thinking of like contributing causes here, let me go back to to Google Maps here for a sec.

You know, as you're coming into the place where there was the crash, you do have as, as Dean said, this kind of long stretch here. That is in a sense, you know, this is a, you've got a three lane idea here.

The, the concept of a third lane is to get the turning traffic out of the way so that the through traffic can kind of speed by unimpeded. The fascinating thing about this design is that there's no place to turn. I mean there's literally like no turn.

You can turn here at the intersection, but no one turns into the arboretum. There's no turn. If you go down, I mean, you, you go the whole length. I mean it's a, it's hundreds of feet. There's no turn, there's no, like why do we have a third lane there? Nick, you're raising your hand as if I I'm missing something obvious.

**Nick Rizzio:** It's, it's okay Chuck. I think the reason why is probably because of Penn State University football traffic. That is most likely the reason for it because during football games, the traffic pattern is altered to c accommodate the tens of thousands of people who drive to Beaver Stadium. And so they will like, literally they will switch the direction of the lane depending on if it's people going into the game or people going out of the game. I think there's even some points where they might actually run all three lanes going out after a football game. I don't wanna, don't quote me on that, but, so

**Charles Marohn:** This is, this is for peak flow Yes. Is what this is designed for. Okay. Right. And I'm assuming during peak flow they turn that sign on, they've also probably got people standing out there with flags waving people around doing all that stuff. Yeah, I mean that, that, that makes a lot of sense. So what you have is you have then a design, something designed for peak

flow that then has to, in a sense tamp down for below peak flow. And I think this is where there's a contradiction here in the design. You've got the, the wide lanes.

You have, you know, this, this, this center turn lane that serves no purpose during normal periods of time. I think what you have here is you have something that is designed for, well let me, let me ask Nick again then.

During game days, are people driving 40, you know, 30, 35, the speed limit is 35. Are people driving 35 miles an hour through here on game days? My guess is that it's stop and go traffic in whatever direction that it's moving. Is that fair?

**Nick Rizzio:** That's absolutely correct. You cannot drive 35 miles per hour on game day. If you were to drive that fast. There is a small RB police officers who would probably give you a ticket for reckless driving because it's bumper to bumper traffic, just as you said.

**Charles Marohn:** So even if there weren't police officers there, just the, the volume of traffic prohibits you from doing that. You just, it's not exactly like this crash could not have occurred on game day in the way that it did because someone would not be able to reach a high level of speed.

**Nick Rizzio:** That's Completely correct - Not in his head.

**Charles Marohn:** So as I analyze this from a design standpoint, it, it, it, it seems like we have designed for speed and volume during peak events.

We only get volume, we don't get speed. But when you take away the peak event, you are left with high speed with no volume. Right. So to me, this is a, this is a a, a clear mismatch for a a college campus. I mean, I get why the emphasis is put there, but you don't need kind of the

wide geometry because you're not having the speed during those, those peak times. Anyway, that explains to me the sign, the, the third lane, the width.

I, I was just gonna note here, and this is a little gratuitous, but I, I do think it's a factor. As you're coming in to the campus, you know, you, you go through in normal flow conditions, not during the, the peak game day.

You, you, you go through this stretch where it does have a very kind of open highway esque feel, a lot of extra space, a lot of extra capacity. When you enter this area then where you're gonna have a higher percentage maybe of students, of people crossing it, it, they have put the, you know, the the, the cross hatch down the double lines. They're trying to indicate like slow down urban area. This side of the street has that urban feel, but the buildings are set way back. And so you don't really get that tightness. You don't really get that signal to slow down. Like this is a more complex place. You do have the trees really close and I think that that probably helps to a degree.

But on this side you have the opposite effect. Everything is pushed back. Everything is almost like at a suburban kind of setback. Again, when you combine these design elements together, it gives this suggestion that I don't have to worry about what's on my left. I don't have to worry about things on the side. And it gives the driver the sense that they can drive faster than prudence would, would otherwise allow.

I I noted the parking stuff too. Like, like if we're not gonna have parking here, then what this, that extra space just gives, you know, more room. It, it gives that optical illusion of having more room to drive fast. And you see that in the speed data that we collected, I mean 50% of people were going over 35. 35 is a lethal speed. You're on a college campus. The reality is, is that every single person that was driving during that period of time when you did the speed study was driving over 22 miles an hour. They were driving, everyone was driving at a lethal speed through a college campus. That is a design that's like incompatible with a college campus.

And then the, the final thing, and maybe I know Dean brought this up, I'll just reiterate it is hard to make an area safe when you have such wide lanes and such fast moving traffic and you have no separation with a sidewalk.

This side is marginally more safe because you do have trees and that and some separation and that will make it marginally more safe.

But the other side is just like crazy unsafe. I mean, you have people walking an arms distance away from vehicles that are going at lethal speeds at their slowest. And when they're not driving slow, they're going at, you know, very, very high speed. I, I know that we said that the person who caused this crash was driving fast.

I wish we had like the crash data from the vehicle that actually kind of said what that speed was. Because I suspect that fast could be anywhere from 30 to, I mean it could be very fast, but it could be as slow as 30, 35 miles an hour, which would be within the speed limit and still be considered for this environment very fast.

That's the, to me those are contributing factors, Tony.

**Tony Harris:** Yeah, absolutely. And I just wanted to note a couple things. I know Ethan and I spoke about the speed at which Ahmed was traveling and how the term unsafe speed was utilized multiple times in the criminal complaint. And then I believe even in some media coverage, that was a term that was used without a number attached to it. And then I also wanted to note sort of in response to what Dean had said toward the beginning of this section was the information that we have about the vehicle traveling through this area, Ed's vehicle traveling through this area in the criminal complaint states that it was moving along the 200 block of East Park Avenue.

And Ethan and I did some guesstimation work to try to figure out exactly where the collision did happen. Right. So even if it hadn't happened exactly outside of that crosswalk, we were thinking it was somewhere in that area. So Dean, thank you for pointing out the standpipe and area that you did because it's possible that we may have been off in our estimation too,

**Dean Chamberlain:** The the cone over the light post kind of trip tick me off to that might be the spot,

**Tony Harris:** Right?

**Charles Marohn:** I do think there, there is this interesting thing effect in the news coverage and in the reports about the crash, when you drive without a license, you are deemed to be reckless. Like regardless of any other factor. When you are driving without a license, you are from, from news reports, from court cases, you're gonna lose a court case, right? Like I can see why someone would plea to a felony even a, a, a minor felony if they were driving without a license and a death occurred. Because right there I feel like it's hard to separate to me, you know, when you prosecute a crime, which driving without a license and then killing someone is a crime.

I mean that, that whole chain of events is a crime when we're looking at this and how do we present, how do we prevent other crashes from happening?

I I get a little, to me it's a little muddied what the other elements were because they kind of feel like prosecutorial, right? Like the police go out and they write up the police report or they, they tell the media what happened and in a sense you've already got a conviction because someone drove without a license and someone is killed and everything else just becomes the ratchet to get the plea. And I don't know, I mean that to me,

that part of the, that that part of the testimony here is it's confusing to me and almost like a red herring when we look at the design and we look at the speed data that we collected out there. I mean the city should be going out there and saying, all right, our, our, we know that it's unsafe for people to speed here what, what is happening? And like clearly people are speeding.

You know, that just to me suggests that even if this person was operating their vehicle within the limits that most people do in this stretch without a license, they would've been deemed reckless just de facto. It's hard to discern what's going on.

**Tony Harris:** Yeah, that's a really helpful elaboration. Go ahead.

**Charles Marohn:** Let me say, let me say it in a different way. Even in the absence of a crash and a death, which is the impetus for us having this conversation, right? And it's why we create the crash analysis studio because if we're gonna have a crash and a death and we don't learn something from it and make things better, what are we doing? But even in the absence of that, you can look at this in a de facto way and say this is really dangerous, just the, the conditions here make this a really dangerous corridor.

**Tony Harris:** Yeah, thank you. Go ahead Ethan.

**Ethan Dean:** I could I just add in quickly, I just wanna say along those lines just that to agree with that and also say that in this, there are obviously this is the most recent of them, but there have been multiple of these incidents around this area historically. So that's part of why I was so interested in this is I believe there's even a professor at the university who had a collision here where they were hit and, and about one one every year or one every other year, something like that. So it is not uncommon

**Nick Rizzio:** I'll jump into on those lines like Chuck, you have a line that where you say nobody should be the second person to die on a dangerous road. Well I know of at least three deaths

that have occurred on this section of road between there and I think it's Atherton Street. And so we can reformulate that statement and say I think that nobody should be the fourth person to die on East Park Avenue. Which is a crazy statement to say out loud. But it is the truth

**Charles Marohn:** That is, that is crazy. That was my colleague Edward Erfurt that came up with that. So proper attribution. But it is a, it is a good insight and it is kind of sickening to, to have to say fourth person to die in this spot. Yeah. Tony, recommendations.

**Tony Harris:** Yeah, if we're good on factors, let's move on to recommendations to make this a, a safer space. Dean, if we can start with you again, that would be great.

**Dean Chamberlain:** Absolutely. So one thing that wasn't mentioned, I was doing some research on kind of the street as well and I believe this may be an unsigned PennDOT state highway as well quadrant route. And so we have that extra layer of jurisdiction and how, I don't know how to put this hardship in getting things done. We'll say maybe for, for changes there, right?

I, yeah, so I just kind of wanted to talk a little bit about some, some small low cost, hopefully quicker implementation stuff and some larger maybe transformative things here. I'm gonna share my screen again.

So back to to the street view here, you know, kind of how to maybe repurpose this space that's essentially being wasted right now with, you know, being kind of sort of no parking and also a no buffer to the sidewalk here.

You know, maybe putting in some things like, like concrete planters or something like that to kind of somehow shrink this roadway cross section a little bit here and provide that buffer space and a vertical separation as well between the people walking and the people driving here.

I'll just say that this roadway absolutely should not be 35 miles per hour speed limit. I think probably preaching to the choir about this, like this is an urban context, tons of people walking, biking, this needs to be assigned 20-25 mile per hour speed limit. I know signs in and of themselves don't change operating speeds very much, but I'm thinking that if that change can happen, that that will also catalyze some physical changes to the roadway to support that speed limit as well. And thus support people actually operating at a speed that is safe to Chuck's point that isn't at a 20 mile per hour operating speed.

That's what this context, context needs in its environment.

A little bit larger scale and larger timeline implementation is this intersection at East Park and Shortlidge is kind of a boundary and we'll say a gateway intersection from the kind of more open feeling East park by the arboretum to the more urban feeling neighborhood over here and then the the resident hall over on this side too. And so that is a prime location for considering something here that's gonna slow people down through this section here too. So some options might be installing a roundabout or a raised crossing or something that's horizontal and or vertical here to, to make that change a lot more apparent and, and kind of as Nick was saying in that race crossing sh on campus, like do that at this intersection, do that and the key street where you have that crosswalk do that all the way up and down the three that people don't have the opportunity to get up the lethal kind of through this whole area.

And then going back to like the drainage thing, like I don't know where the storm sewer is on the street, if there's storm sewer under the street, add in more drainage structures so people aren't gonna hydroplaning on the street as well and that's not, if there's already a storm sewer on the street, like that's not hard to do to add those drain structures in as well.

So, and over like long term, you know, considered permanently shrinking up the roadway here to just two traveling maybe, you know, bring the curb in, plant this space between the sidewalk

and the, and the driveways with trees. If you need an EMS kind of emergency vehicle parking bay here by the residence hall, great.

You can put it in for a little spot and then come back out with the curbs of the, the driveway drive lane.

Just shrink this whole thing up so that it, it compliments a speed that is not going to kill somebody as they're driving through there or, or somebody on the sidewalk if somebody does leave the roadway.

**Tony Harris:** Really well put. Thank you. Maybe Nick, could we come to you next on recommendations?

**Nick Rizzio:** Sure, absolutely. Definitely want to echo a lot of things that Dean said. Thin, thin the road.

I, I can kind of like foresee like the kind of argument back and forth that would happen for this sort of thing because I can imagine the angry hordes of football fans saying, you know, don't make it harder to get into Penn State Football, which goes into larger questions about like, you know, is, is the design of Beaver Stadium a good idea? That's another discussion, but just thin, thin the road, like Chuck said, the peak traffic issue. The other thing I was thinking about is one of the other times that I've seen like the bumper-to-bumper traffic and I usually see it around like rush hour. Like especially when all the people are leaving campus to go home, if they work as, you know, administrative assistance administrators for the university, like I feel most dangerous.

I feel like the situation for crossing the road or being on Park Avenue is most dangerous during off peak times.

And even if we're looking at the Google, Google Earth, I can just pull it up again.

Like it just occurs to me like the, the observation Chuck made regarding the setbacks. I felt like that was very astute. I also am thinking a little bit about like the Court Woods here and if I go to Google Street View course I can't even get it for some reason. Oh, I closed the tab google.com/maps and that's, it's, okay, so Paterno Library, I assume it's not cooperating with me, but

**Charles Marohn:** I think about as a, as a University of Minnesota alum, it is fascinating seeing the, the Penn State campus, which I've never visited, but

**Nick Rizzio:** It's a very beautiful campus and it's very walkable. I I lost several pounds when I was living there and I've gained several pounds since moving to Pittsburgh. And Pittsburgh is also, I live in a very walkable part of Pittsburgh, so it just tells you how much I walked to Penn State.

But yes, the, the part about setbacks, like I thought that was really interesting too, the thing because there are the trees at Court Woods, but I feel like they're not as imposing perhaps maybe not as imposing as some of the trees that are like on the other side. Like some of these are like kind of bigger.

I know one of these, the, the roots were so big I actually tripped on the sidewalk.

Yeah. But like, this is like very open, like this just seems like your impulse is to just speed and like anecdotally, like I didn't have a license until a couple months ago actually, just because I chose not to drive. But even my friends that I've known that have taken me on this road, like we go fast, if there's not much traffic, we go fast. And so, you know, you're zipping right by students who are trying to cross. And even at night, if you walk from the bars, which unfortunately the public transportation service at night is, is decreasing in frequency and, and

in coverage. Some students literally walk all the way from downtown and they cross Park Avenue potentially at that very intersection and they walk pretty far up, up to the North Park by Atherton Street.

So, you know, it's just, I've, I've had this experience walking back and standing here and the cars are just zipping by. So like the thing that, the recommendation that I make is thin the road, like this cannot be a through road. This cannot be a fast road. This has to be treated like it's a neighborhood street where a lot of people, complicated activities are happening where students are going to class or they're walking to and from their home or where professors are walking so they can teach a class or somewhere safe enough that if you have a family with children that you feel safe with them. Even walking along Park Avenue itself, I am a 23-year-old man.

I do not feel safe walking along Park Avenue. What does it say about a child if you have a a five-year-old in kindergarten, there's even a daycare center.

I think it's, I forget exactly where, it's been a little bit since I was on campus, but the, let me actually just find it for illustration Court Woods Daycare. Yeah, here we go.

Of course the, the icon isn't really correct, but there we go. Yeah, right, right here is a daycare where children are, I think we should have daycare like on campus, but like, do you feel safe with your children walking along Park Avenue? And if you don't then what would you do to the road to change it? I would probably thin the road. So that would, that's what I would say would be my recommendations. Great.

**Tony Harris:** Thank you. Yeah, and I think pointing out some of the destinations like daycare centers or schools or any of these other things that kind of speak to treating this as a neighborhood street is a smart idea. Right. I think that can be really helpful to, to recognize. Ethan, would you like to go next?

**Ethan Dean:** Yes, thank you. So I think a lot of my recommendations would probably stem from the fact that I cross this road every day twice a day to get in to campus. And as somebody who does that, I feel pretty unsafe doing this specifically at that McKee crossing.

I'm going to share my screen real quickly here.

**Nick Rizzio:** I'll point out briefly Park Avenue at the street, but I don't -

**Ethan Dean:** If we can see here, but there's this crossing here where most of it, most people cross and this has a cross a flashing, let me just street you here, a flashing light to tell you to yield. But because that flashes all the time, I think people kind of tune it out as, you know, white noise.

But, and, and I know that because I, people don't stop for me when I'm there and sometimes one half of the people will stop, I'll go to cross and then the other people will continue to go, right? And so you have to jump out of the way or something like that. So I think making that either a, a full stop or raised crossing or something where there's an incentive to stop first would be very beneficial. As well as that, I think improving visibility for pedestrians in general is a necessity in Park Ave. And specifically, a lot of the crossings. I wanna second what some people said about making it treated like a, a, you know, an urban street.

But you can see this crosswalk right here has, it just dumps people into the street. And so like you can, and you can't, a lot of these are in these trees, so people are standing behind a tree and then they want to cross. They can't see the road and they jump into the road and people, you know, you're not knowing that they're there. And I have personally been in vehicles where I have seen people sprint across the street at those areas because they need to take, you know, they're like running for their live to cross the street. And I just feel like that is just unacceptable for, for what we should have for infrastructure.

So that type of adding, crossing, walks, changing the kind of thinking as well as I would just like, I guess a little larger scale. And with the planning aspect, I would love a lot of the people managing this, this area to be more systemic with their thinking of how this road is impacted by the, like, other impacts we've talked about today. For example, the interstate, this is used, I've talked to local planners who have said that this road is used by a lot of vehicles that transit or trucks for example, large trucks because it is one minute faster on the GPS to go on Park Ave than it is to go on the interstate or so, and so people will get off of the highway and go here to co across.

And so just those types of impacts cause the throughput that we experience and a lot of usage on a road, which is not necessarily need that high throughput. It's the same with the football games as this whole thing gets chalked up and there's, they're going to build a expansion to that road, to the highway adding a lane on eight miles of it for football weekends. And so that will just induce as we all know, more demand on this, on this road, which will not, you know, that doesn't really have capacity for. And last I'll just say with systemic issues, I'll just bring up an, I'll stop in case I can stop sharing this here.

I, but I'll just bring up the interesting fact that the Penn State in 19, in the nineties it announced that there would be a high-speed, high-speed rail coming to Penn State to fix all the problems with the football weekends and stuff like that. And as, as you can see, that did not happen.

It, it actually, they removed the train station from downtown and so a lot of these problems could really be, be fixed. That's obviously a larger, that's a PennDOT issue, but this is a PennDOT managed road that goes right through downtown. And when they offered, basically our transportation commission had a meeting that was like, what can we do about this? And the PennDOT guy was like, well, you know, we can give you the road and then you'll be able to change it, but this is not a road that has as extreme measures for us to, to revamp or something like that, that the town wanted to see. So it does have that like local versus state management

that kind of holds it in, in that lock and yeah, so that's, that's I guess I would say from, from the smallest of just adding a raised crossing and, and all the way to the large scale there.

**Charles Marohn:** Yeah. I thank you. I'm, I'm always astounded by how much money we will spend on transportation for seven football games instead of like, you know, seven football games a year instead of like modestly inconveniencing people, a tiny bit. It's just really insane, but So be it.

That's not in keeping with the spirit of, of, of the, of the studio. Let me, let me give a few recommendations that, that I have. I think the first one is that if, if, if we are gonna have a larger East Park Avenue to handle the volume of traffic on game day, then we have to do something that would be temporary to deal with the speed issue on non-game days. So there's a reciprocal kind of thing, you know, a lot of times you will say, we do this thing temporarily because we have really high demand, but we don't overdesign for that demand. If we're gonna overdesign for that demand, then we have to do something to compensate that for that.

And I think when you get to East Park Avenue, you're looking at, oh, why are you doing that? You're looking at a thing, oh, my guy does not wanna drop in here.

All right, let me refresh my screen. You're looking at a thing where I, I I think that center lane should be filled with, you know, the big baller, the big orange cones, the big orange barrels, just the whole thing should be, I mean, no one should use it, it should be very clear that you are in a small spot on the side. And we should take that in a sense, extra room visually that drivers have, we should take that away as, you know, for the, I guess it would be 358 days a year when there is no football game. That should be the case because this does create kind of a, a mixed signal, geographic, you know, just geometrically for drivers.

I think that the, the intersections here need to be tightened up a lot. And I wrote down the one that I would start with is the one at, at short, you know, as you're coming into it, you, you do

have that switch that Dean talked about from what feels like a suburban setting to a more urban setting.

I think that you've gotta tighten, tighten this up and by tighten it up, I, I think, you know, okay, maybe this turn lane serves some function for you during peak game days. I don't, I don't know if that's the case 'cause you're not continuing it over here. So I guess that this is probably just a turn lane for the university. My sense is that you could probably do without that. I think having more of a gateway thing here where you're coming into this and it, you've even got some vertical elements on the side that say, Hey, you're entering the Penn State campus. Something that would signal to drivers that this whole thing is tightening up, I think is gonna help there at the other intersections in here.

And I'll just use Google to, to move to them.

Y-you're not talking about, again, a volume issue here. You're talking about a speed issue. In these non-game days, I would make this a, I would put a stop sign right here and I would make this a three-way stop intersection. I would just stop traffic, you know, even talked about Google Maps saying you can save shave one minute by driving through here, put up a stop sign and you're not shaving one minute, driving through here. And it will change the intent of a lot of drivers coming through here. I, I would do the same thing down here and I would do it with more urgency at the next intersection here. The one where you've taken the time to put in a, a, a crossing, you know, midblock in the middle here, I'm sorry, a, a a, a raised area in the middle of this intersection.

I would put a stop sign here too. I would make this just, there's no one who needs to drive through here fast, slow things down. I know it will create an artificial amount of congestion. That congestion is not going to matter on game days because it's stop and go through here anyway, on non-game days, the congestion's actually gonna help you with, with safety and the crossings you in this long stretch between here and the, the, the, well, let me see. Between

here and ledge, I couldn't remember the name of that place. I, I, I think that especially if you're not gonna put stop signs in, I would put the stop signs at home in McKee, but I think you need some speed tables through here.

I think it was Nick that pointed those out earlier. Again, there would be some resistance to that if it's a traffic flow, like a volume and a speed issue simultaneously. But at one point you have a volume issue with low speeds. People aren't even gonna recognize a speed table. It's not gonna be a big deal in the other parts of the, of the time, the other 357 days a year. It's going to be a speed issue and not a volume issue. And that's the perfect application for some type of speed table or at least a speed hump through there.

I i, I, I will go back to the, the openness on that one side here. You can see you've got kind of suburban vegetation through here.

You've got a little bit more urban vegetation on this side. But you know, especially up here further where the homes are set further back, it has a more wide open feel. There's a lot that can be done. Not just planting trees over here, but actually making this more of an urban feeling kind of campus, particularly along here. Vegetation that would be more hedge like kind of connecting that area, I think is just gonna give the signal to the driver that you're not in a wide open, suburban area. It's going to create a little bit more complexity and that will have the, the subtle impact of, of slowing people down at at least a little bit.

And then the final recommendation I've got is through this entire stretch here between, oh, I hit the wrong button, sorry about that. Between McKee and Shortlidge, this whole side, the south side of the street, southeast side of the street, I would line with bollards.

I know engineers hate bollards because they don't like cars running into them.

You've also placed humans in a sidewalk, a a a couple feet from cars driving very fast driving at lethal speeds. That is a place where you should have bollards along the whole thing. If, if you're gonna have students walking there, which you're gonna have a high volume of students walking there, you actually need to physically protect them in the way that we protect lift stations and you know, other traffic devices that we put in that we protect with bollards, protect your humans with bollards in this very sensitive two block area. To me that would be kind of the longer term recommendation.

That's it for me, Tony.

**Tony Harris:** Great. Thank you. Any final thoughts on recommendations before we move to closing out our session?

Okay, perfect. Well, I'm gonna share my screen one more time just as we move into closeout. I wanna offer some acknowledgements and thanks. So I wanna say, you know, thank you to our panelists. So Dean, Nick, Ethan, and Chuck. We really appreciate the time, energy, knowledge that you've brought to the table today. I wanna give a special thanks to Ethan and Nick and their colleagues for gathering information and resources for this session over many weeks. As we are preparing thank you to our sponsor for this event and anonymous donor and thank you to Strong Town Staff who have been helping out as we've been preparing for this session.

So you can find a recording of this session and all of our crash analysis studio sessions online@strongtown.org slash crash studio.

Our next virtual studio session will take place on June 21st and there's more information about that on our website as well. And then on our site, you'll also be able to find links to our free academy course for establishing a crash analysis studio in your own community. And if you're interested in having strong town staff, visit your community to co-host an in-person studio. You can fill out an inquiry form through our site as well. So on behalf of my colleagues and the panel

that we've assembled today, I want to thank you for watching this session of the Crash Analysis Studio and keep doing what you can to build a strong town.

Take care.