Crash Analysis Studio – Fargo, North Dakota 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: Hi everyone. I know people are still filing in, but I do think I will slowly get us started. So I want to start off by saying thank you for joining us in the middle of your Friday today. And let me welcome you to the Strong Towns Crash Analysis Studio. We're glad that you're here with us today.

My name is Tony Harris and I am the Community Engagement Coordinator at Strong Towns. And in a couple moments 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 died in automobile crashes in the United States throughout 2023 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 calls 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 should we blame? The reality however, is the 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 injuries in our communities.

So what you're going to see today is a crash analysis studio session, an analysis inspired by the best practices of the medical industry to identify contributing factors and root causes of traffic crashes.

Now this marks the 21st crash analysis studio session that has been co-hosted by a city in North America.

And on October 15th, strong towns will release a comprehensive report to share lessons, findings, and recommendations from our first 18 sessions.

So for today, a panel will review a crash that happened in Fargo, North Dakota, and I will start by introducing you to our panelists. And then I will review the facts of the crash. And with our guests, we will assess the design factors that contributed to this collision. Now, I want to emphasize our goal is not to assign blame. Rather, our objective is to learn as much as possible about what happened and identify the factors that contributed to this unfortunate event.

So before we get into the details and speak with our experts, we we need to begin with the fact that this crash resulted in the death of a 68-year-old woman named Deborah Hopper. So please take a moment of silence with me to honor and acknowledge her and the loss of her life.

Thank you. So I'm now going to introduce our expert panel for today, and I'll start with Cody Christensen, who is a transportation project manager with Bolton and MEC and leads their active transportation services group. Cody brings a unique blend of national multimodal design management experience and personal local knowledge to our session. Cody grew up in Fargo and his career has taken him from Alaska to Colorado to Minnesota, and then finally, most recently back to his hometown of Fargo.

Cody's National Pedestrian and bicycle expertise helps build support for improved multimodal infrastructure. And by listening to community input and coordinating with project stakeholders, Cody designs improvements that enhance non-motor safety and address community goals. He uses his experience to create accessible designs that improve a region's transportation system for those who walk, bike or role. So welcome Cody. Next we have Arlette Preston, who holds a master's in community health nursing from Texas Women's University Dallas Arlette worked for a health system in Fargo for 21 years before starting her own business, providing services for seniors in their homes.

Arlette served on the Fargo City Commission from 1992 to 2000, followed by four years on the Board of Education for Fargo Public Schools. She again served on the Fargo City Commission from 2020 to 2024, and she has been a member of strong towns for over five years and was actually one of the originators of strong Towns Fargo, which is our local conversation group in the area. And then next we have Tommy Schmidt, who is a project architect at JLG Architects and serves on the City of Fargo Planning Commission.

Tommy specializes in mixed use and multifamily project types, and his experience includes master planning, commercial and healthcare architecture. Tommy holds a master's of

architecture from North Deca Dakota State University and he's fascinated by design and considers himself and active and concern community member. And then our final panelist for today is Edward Er, who is the director of Community Action at Strong Towns.

Edward is a trained architect and urban designer with over 20 years of public sector and private sector experience. And Edward has a skilled eye when it comes to evaluating the safety issues posed by intersections, roads, and streets like the ones that we're gonna look at today. So now I'm going to go ahead and walk us through the details of this crash in Fargo, and I'm gonna share my screen to do that so you all can see a presentation that I've put together and we're gonna start off with the information that we know, right? So we know that Deborah Hopper was walking north along 13th Avenue Southwest prior to the crash Hopper was headed in the direction of the bus stop that just, it sits at the north west corner of the intersection just north of the westbound lanes on 13th Avenue. And we know that the motorist Abun Gofor was traveling in the middle westbound lane when he hit Hopper.

We know that the crash occurred at 5:47 AM on September 13th, 2023, and weather reports tell us that it was humid, partly cloudy and still dark at the time of the collision.

Now we know that Hopper succumbed to her injuries at the collision and passed away as a result of the crash. The crash report did note that Gofor had a green light. It also noted that Hopper didn't have a walk signal. It stated that the road surface was dry and it also stated that it was unclear if Gofor was distracted. Now we also know that no charges were filed against Gofor. So on this slide you can see the crash location marked by a red pin. We marked that middle westbound through traffic lane where the crosswalk is located on the east side of the intersection.

And then here we've zoomed into the crash location a little bit closer. So I illustrated Hopper as this blue square and directed her moving north along that crosswalk. And then we illustrated

Gofor as the orange rectangle here traveling west in that middle through traffic lane. And then I outlined the approximate area where they collided in red.

Now there were no witnesses to the crash though there was camera footage from an apartment complex that was reviewed and some media sources indicated the following. Gofor did have a green light and it was approximated that that light had been green for about 30 seconds.

Hopper did not have a walk signal and media sources indicated that Gofor was neither speeding nor distracted by his phone.

And we also know the speed limits for 13th Avenue Southwest. The speed limit there is 35 miles per hour, and then that intersecting street 32nd Street South, the speed limit there is 25 miles per hour.

Now we also know that all four legs of the intersection are signalize and you can find bus stops in the Northeast, northwest and Southwest corners of the intersection. And then I also wanted to note that the pedestrian walk signal where Hopper was crossing that signal has a 31 second duration.

So a little more on the overall conditions of this location. On the east side of the intersection, westbound traffic on 13th Avenue, it can occupy four traffic lanes. So one of those westbound lanes is for dedicated left turns, another is a shared lane for right turns and through traffic. And then the remaining two are specifically for through traffic.

Now, eastbound traffic on the east side of the intersection has access to three through traffic lanes. And then when we look at the west side of the intersection, eastbound traffic also has access to a dedicated left turn lane. So you're seeing dedicated left turn lanes on both sides of the intersection.

There are also sidewalks and planters available on all sides of the intersection. And to my knowledge, just based on conversations with our experts, I believe the Southern side pedestrian area might also be used by some cyclists.

Now our nominator Arlette and a few of her colleagues gathered some photos and footage of the crash location. And I'm just going to share some of those with you now briefly just to really give a feel for what this location looks like up close and personal. So this first shot here, this is looking at the southeast corner of the intersection. So this is where Hopper would've been coming from.

Next in this shot we're looking at the northeast corner of the intersection. So this would've been the destination for Hopper, right? This is where she would've been headed to.

Now on this slide you can see the Southwest corner. So this is on the west side of the intersection and likely directly across from where Hopper began crossing 13th Avenue.

And then on this next slide here, you're seeing the northwest corner of the intersection. So you know, if the motorist had cleared the intersection safely, they would've driven past this corner.

Now, since this crash took place in the early morning hours, it was dark out, right? So our lead helped us get a few additional photos to illustrate what this place is like in the dark. So these photos here show a pedestrian. It's a little bit blurred, but you can see the pedestrian crossing part of the intersection during, you know, dark hours. And Arlette noted that the quality of these photographs, both these and then the next one that we're going to look at, may actually make the area look brighter than it was when visiting the site.

And then this last shot here, we've included to sort of illustrate what a wider view of the intersection might look like in the dark.

Okay? And then Arlette also helped pull together some measurements of the intersection where the crash took place. So first I wanna look at the walking distance of the intersection, right? So this is where Hopper would've been crossing. So you can see on either side here that the outer through traffic lanes are 21 feet wide each the inner through traffic lanes and the westbound left turn lane all measure in at 11 feet wide each.

And then there is a median in the center that I believe is nine feet wide. So that's in between these seven lanes of traffic. So that makes the distance across the road itself 106 feet. And then when you add in the planters and the sidewalks on either side, that distance jumps up to 138 feet.

And then we wanted to include this too, when you get past the intersection and you're headed a little bit further east, I believe the extra wide outer lanes, those shrink back up to 11 feet each. So that takes the whole width of the street down by 20 feet, and that means that the distance across the traffic lanes further east would be only 86 feet. And that makes the total distance including sidewalks and planters 118 feet. So a little bit of differentiation from one part of the road to the next. And then when we're looking at the site conditions in the development pattern here, we see some suburban characteristics, right?

There's a mixture of residential properties and commercial businesses. We know that Interstate 29 is accessible about a half mile west of the crash location. And then Interstate 94 is located south of this intersection, but I believe it's a bit further away than Interstate 29 is.

So I'm going to pull up a map of the surrounding area just while I point out a few more observations. So to the south of the intersection, you're going to find a few different neighborhoods. So you see South High here, Prairiewood, you see what looked like a lot of houses and developments here. And then in the immediate area surrounding the collision site, you might've seen this in the the photos that we had pulled up earlier, right? You're gonna find

some apartment complexes. There are fast food restaurants. I think there might've been a Wendy's in one of those photos. Some different service providers.

And what I would, what I would say are small to medium sized businesses.

And then Arlette also conducted a speed study during two hours split between morning and afternoon on August 21st, I believe. And during that time, to my knowledge, there were typical kind of free flow traffic conditions. So here's what we found when we looked at that data and that information. So of the 554 cars tracked, 54% were going over the speed limit. Eight drivers were going more than 10 miles per hour over the limit, right? So they were driving at 46 miles per hour or faster. 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 for now, and I would like to turn to our panel if I could.

And maybe you know, Cody, we could start with you if that's alright. Could you tell us what you think might have contributed to this crash? And if you have, you know, Google, Google Maps or anything you want to screen share to point out specific things, please feel free.

Cody Christianson: Yeah, thanks Tony. Happy to, to be here with you all. Yeah, so it's, it's interesting as I, as I looked at this intersection, you know, obviously growing up in town here I was pretty familiar with 13th Avenue, had to orient myself around exactly where 32nd Street was. But soon came to realize it was over by the Old Shields Hardware store, now a Shields home improvement store.

And so it's, you know, obviously the road is, as you mentioned, it's six lanes, so there's three in each direction, plus you have your dedicated left turn lanes that becomes a fairly large intersection.

And so it was interesting looking through Google Earth and actually I am gonna share my screen if that's showing up, you see in my Google?

Tony Harris: Yep.

Cody Christianson: So as you mentioned, you know, the crossing from the southeast corner to the northeast corner, what's interesting is obviously you can see this intersection was recently reconstructed. The previous design of the intersection actually had this curb ramp a little further east crossing through the median to the north side. So there was, was a bit of a refuge island there.

And so when it was upgraded to become ADA compliant, you know, putting in today's curb ramps and the, the truncated domes and things, those ramps were shifted kind of into the intersection and created kind of this fan ramp. And this median has been reconstructed. This has no longer a refuge. This crosswalk now goes in front of that median all the way across the street.

So by doing that, as you showed in your cross sections, you know, over here to the east, this crossing is more along that, you know, 85 feet. And as you push that crosswalk further west into the, the curve of these intersections, that's where you're increasing those outside lanes to almost feel like they're 21 feet wide versus the, you know, 11 or 12 feet that they are along the rest of the corridor.

So that really contributes to adding that crossing distance of having to leave here and try to get to the other side of the, of the intersection, you know, so what was interesting as I was starting to look through things,

you know, knowing that the, the driver had a green light and it had been green for around 30 seconds, you know, if she left this location and heading this way, it probably took her 30 to 45 seconds to get to where the crash occurred.

You know, somebody that's in their upper sixties ish, you know, they're, they're not walking super fast typically, so it's gonna take a fair amount of time to get to, you know, crossing that it's about an 80 foot distance to get to where the crash occurred. So it is entirely possible that she left before the driver had a green light, and it was green by the time she got to where, where the crash occurred.

You know, the, the other interesting pieces you kind of showed in some your, your night nighttime pictures. You know, while the corridor is pretty well lit as you look down the corridor, there are a lot of bright lights and it is hard to discern what is a light that is just part of a, a building or a streetlight versus what is potentially a headlight coming towards you. And trying to judge three different travel lanes on where those vehicles are and how fast they're going on a street that is signed for 35 miles an hour, but in all actuality, feels like you could drive 55 miles an hour because there are, again, those three lanes, everything's set back from the road.

So as you're driving along, it does feel really wide and traffic volumes at 5 45 in the morning are, are pretty light.

Tony Harris: Yeah, absolutely. Thank you for, for pointing those observations out in regards to, to lighting and moving through this area.

Anything else from you at the moment, Cody?

Cody Christianson: No, I think that kind of covers it for me for now. Cool.

Tony Harris: Awesome. Thank you. Maybe we can come to Arlette next. What are are you seeing in the way of factors here?

And I'm gonna ask you to unmute if you don't mind.

Arlette Preston: Sorry. Thanks.

Tony Harris:
No worries.

Arlette Preston: Thanks Tony. What I was seeing was, it was helpful to hear from Cody first because I hadn't thought about the fact that her, perhaps she had set out before or as the light then turned green for the driver.

So let me, let me just say, I'm gonna look at this and analyze it from really, probably totally the pedestrian perspective. I, I do a lot of walking in the city and actually collecting this data was really eye-opening to me. One of the issues, and Cody explained it very well, was the curvature and the crosswalk on both sides in that with the a DA compliance, the radius of that corner has really gotten, it made the lane much wider and increased the crosswalk by 10 feet on each side. The other thing I noticed, and I'm gonna talk from the perspective of this may not have been an issue necessarily for this particular accident, but more generally for pedestrian safety.

I was standing on that particular intersection, that particular crosswalk, and somebody took a right turn in front of me, scared the daylights outta me because that curve, that radius on that intersection for the right turn is so gradual that that person came up probably was going at least 10, 15 miles an hour around that turn. And it's actually quite scary for a pedestrian standing there waiting for the light to change.

The other thing, and this is total speculation, and it's probably not completely accurate because I don't believe the buses are running at that hour of the morning, but the bus stop was across the street and whether she was going to that bus stop or perhaps going to an employment center, which there's a number of employers in that area, she may have been running a little bit late. The pedestrian light, I timed it actually from the time you hit the pedestrian button to the time where you can actually go and it's close to a minute.

So, and I, I have experienced that myself in a, a number of situations where the pedestrian light really doesn't trigger anything. So taking a look at that might be, you know, an issue perhaps she got impatient, impatient and took off before the light actually changed as well. The other thing is, and I've noticed this a lot in other circumstances as well, is if there's a driver in the middle lane and there's a car on the left turn lane, you don't see the pedestrians coming through.

So that might have been also a con contributing factor.

And then, you know, and this is more of a general observation, and Cody mentioned this as well, there's quite a bit of residential on the south side of this intersection. There's a lot of fast food restaurants on the north side, and when I was collecting the data, I watched two in particular two individuals crossing 13th Avenue and one of them went to a fast food restaurant, another was going to the bus stop.

And both circumstances they were yeah, crossing at times that were a little bit breathtaking and I was like, oh my gosh, I hope they're gonna get, get through or get by. And so the pedestrian traffic generated from the south end or the south side of this intersection, yeah, there's considerable amount of them that are going to the north side so that that interference or that that tension between vehicular traffic and pedestrian traffic is definitely there. One other item and somebody else, I think Tony, you probably mentioned this, the sidewalk on the south side of this intersection is a shared path both bicycles and pedestrians. And I watched a

bicycle navigate that intersection as well. And yeah, I, that person almost, yeah, I mean the bicycle shot out in front of traffic and that was a little bit nerve wracking as well.

So those are the contributing factors I could see that are probably a little bit more generalized than just this accident.

Tony Harris: Great, thank you Arlette, those are really helpful. I noted the fact that you brought up about the pedestrian button and having to, to wait for close to a minute, I think that was something I had thought about earlier, so I appreciate that you brought that back up.

Tommy, could we come to you next in terms of factors?

Tommy Schmidt: Yeah, absolutely. And I'll, I'll share my screen so that we can look at the intersection again as well. So I'm gonna start doing that here. Let me know if you can see this.

Tony Harris: Yep, I can see it.

Tommy Schmidt: Okay, wonderful. Well, I really don't want to repeat or belabor the points that Arlette and Cody made. So the, those two made really great points. So I know Arlette focused a lot on from the pedestrian standpoint. So, so maybe I'll, I'll focus on the, the driver of the vehicle's standpoint and I, I wanna think about this a lot from a place of empathy and sympathy for, for him. I know that that obvi obviously someone lost their life, but he was also involved in the accident as well. Obviously he kinda leaves this physically unscathed, but emotionally, mentally, I'm sure that that's something that is definitely carried with them today.

And the reason I wanted to mention that is that obviously this is a, an extremely well traveled vehicular corridor in Fargo. It's actually only about a mile to the west of where I live. And if I zoom out just a little bit, as Cody mentioned, this building over here is a hardware store and I live in a fixer upper and I'm constantly going to the hardware store.

So I am constantly turning at this intersection pretty often. So I will say that 13th Avenue gets very, very busy at peak times. So your usual times, your morning rush hour in your evening right after work rush hour. But outside of that, this intercept or this almost whole stretch of 13th Avenue is, it's really overbuilt. You have a lot of clearances to your right, your left, depending on which lane you're in. And really, even without, without thinking just subconsciously as a driver, you just feel very comfortable going fast here. So obviously there's speed limits, but I think strong towns has a lot of really great literature and case studies that, you know, how effective are the speed limits when we're given a road that feels like a highway.

So, and I I, I catch myself doing this all the time when I drive down this road, is I'm looking at my speedometer and I'm suddenly going 40, 45 miles an hour.

But that's because I feel comfortable doing it without even thinking about it. There's very little for visual distractions here and especially when the other lanes aren't clogged with traffic. Now during rush hour, I drive probably well below the speed limit just because you kind of have to, the streetlights are changing often traffic is backing up, but traveling at any other time, you can quickly get through this intersection and this whole corridor very, very quickly. So, so there are a lot of factors that influence the drivers to go very fast through this, this whole section and especially this intersection.

And one thing I'll note that ar had mentioned about people making right turns on here, and the reason I wanted to share my screen is when I'm leaving the hardware store to, to go back home, I have to take a right turn right at this intersection.

So something that I've noticed quite often is that this shared use path is quite heavily traveled by cyclists and pedestrians that are coming from all the residential areas to the south. So there's quite a few people that are crossing here.

Now, when you're making a right turn, obviously you're stopping before that crosswalk, but often there's a vehicle, as you can even see on Google Maps here, a vehicle parked here or like in this instance on Google Maps, this person's waiting at the intersection a little bit up here. So if you wanna safely make a turn on red, you need to visually make sure that no one's coming eastbound on 13th Avenue. So inevitably you're inching further and further into the crosswalk so that you can see past any vehicles that are parked just ahead of you on the left side there. So, you know, from a, from a vehicle standpoint, there's quite a few conflict and, and pinch points that make this intersection, this stretch, really kind of a dangerous stretch. I mean, granted, if you're in a vehicle and you're traveling from the east to the west, you feel very comfortable.

And this probably works really, really well for you. You can get things, you can get places very, very quickly, but being a pedestrian in this area is, is definitely not a very pleasant experience. So, and I'll just echo everything else that Cody and Arlette said, they made really great points. So I'll stop sharing my screen now.

Tony Harris: Thank you Tommy. Yeah, empathy for how motorists and how drivers experience this place and thinking about how we navigate these types of areas is, is really important too. Edward, can we come to you for factors?

Edward Erfurt: Yeah, I, I I want to touch on some of the factors that I think everybody has shared with this. I wanna start with something Cody had pointed out, this intersection has been improved.

So there's been a large amount of investment in here to assist with I improving the intersection, enhancing it. When I look at this, my understanding is the enhancement was done to increase accessibility. So this comes from the accessibility board.

Most recently nationally we have adopted pro ag, which is the accessibility application for the streets. When I look at this particular intersection, one of the things that is really put forward in pro ag, when you think about somebody that may need assistance in figuring out where to go across that intersection, I wanna pull up what we have from our slides.

These really wide radii. If I was to go through and outline kind of where the curb lines are, we can see there's wide, a really wide radius here. And I, I'll get to that from that aspect. If I am trying to, I imagine that I have a vision impairment or if I am in a wheeled device or I am in, have a walking assistance device, or even on the trail side and a bicycle, I actually can't go straight.

I actually have to, I have to actually go out into the intersection.

This non-directional curb ramp is one that the new version, the adopted version, it's been guidelines for a long time and now it's been accepted, would tell us that this needs to be a directional crossing. So, and when there's plenty of room, it's not, this is not a constrained intersection. And if we talk about something being directional, it would be more similar to what we saw in the previous intersections.

It would, we would have this, that directional cl clearly identified path taking us through the intersection. Couple of big advantages to that. One, when somebody has to cross the street, especially in an area where there are these right turn lanes, the mobility factor of rotating somebody to cross the street puts you in the direction of travel. It also right now, when you get to the bottom of this ramp to turn around and maneuver, you have to be in the road.

So depending on which light you're in the road for whichever light. So I'm not sure that this is an enhancement at that intersection. When we look at, when we look at from that aspect of an enhancement with accessibility, when I look at the timing to cross the intersection, when I look at the timing of that, the numbers that have been shared, and I think Arlene had e experienced

this too, it takes somebody about 2.2 seconds a foot to cross to to walk. Like that's a, so if you're an average, you know, if you follow all the averages, it takes that much time to cross this intersection and, and not from where the push button is and not from having to get out in the street and around, but just directly across the most direct path, that's a minimum of 48 seconds across this street.

So when I think about a contributing factor and understanding there's a bus stop at every corner, these are folks that are probably familiar with this intersection as a pedestrian and knowing that the light doesn't change, it brings into my question at this traffic light of whether or not to activate the pedestrian, but pedestrian light where you have to press the button and if you press the button and it, you only get halfway across the intersection in one light cycle in your mind, would you really press the button again? So if I'm in a regular pattern, so the light is not long enough for somebody crossing the intersection, you're gonna be halfway through, the light is gonna turn and you're gonna be probably in this area standing right in the middle of the road where de was standing.

From a driver standpoint, if we look at the stopping speeds, well if we just look at the speeds on this particular road, we could begin to see some concerning numbers that come out of this.

One. Drivers are driving faster than they need to drive. When I look at this corridor at seven lanes wide, every road that feeds into this adds it is one lane of traffic into the road.

So if we think about the whole corridor and we look at every single access point that comes in, if I want to enter onto the street, there's only one lane coming through there. Control of traffic lights. So it's one lane of traffic all of a sudden is coming into an area that is seven lanes. I don't know where the additional cars are coming from. What this leads me to believe is that in this particular corridor, because of the development patterns, we are requiring lots of cars to be stopped at the traffic lights. And it's not a throughput movement with all the traffic lanes, all the traffic lanes are to store cars at a stop light.

If I overlap the fact that I'm a pedestrian with two short of a light to cross the street, I driver probably very frustrated that I'm on a super wide road with wide lanes having to stop at traffic lights. It starts to set a recipe up for disaster where pedestrians are going to make decisions to that are gonna be risky. Drivers are gonna make equally risky decisions of driving faster and, and have this inclination when they see a traffic light to hit the gas.

So when we look at, look at those conditions.

So I think the timing at that traffic light is a contributing factor for both the pedestrian and the person in an automobile.

Arlette shared her experience of walking out there. And I, I can't stress that enough, like this is something that I think we all need, need to do. This particular corridor, when we look at the design of it, the accommodation of busing and cycling in a multimodal trail and sidewalks and crosswalks with push buttons and now all of the upgrades to meet ADA, these are characteristics that we would expect in an urban roadway section, but this is a highway sized road. And at sometimes we would describe this type of street road hybrid. As a stroad, it is being asked to do two things at once and it's doing both of them very poorly. As a pedestrian, it's very difficult to cross this street. As a driver, it is very frustrating because I'm expecting to be able to go fast like a roadway that I should be able to go without any hindrance.

Every intersection has really, really wide turning radii. So I can still continue at 35, 40 miles an hour on a right turn into these shopping centers. That's a high speed roadway system merged with a street level characteristic. So that's that street road hybrid we would describe as a stroad. So looking at each of those intersections, these really wide, and again, the enhancement appears to have made it harder, putting pedestrians more at risk, making a farther crossing distance and encouraging higher speed right turns, all the curbing is flush.

So when I look at those images of this intersection of flush curbs, I can, I can, when I look at this, not only do we have in an area where a pedestrian have to go, great, but I can see in these intersections it makes it easy for a car to, to take the corners. We can, we can go and take these corners faster than we need to in, in these conditions on these turns in both ways.

So we're much further away from the intersection. The push buttons are not in an area in this particular one. I doubt that this meets the minimum five foot width, maybe maybe somebody could do a tape measure on it. But in a clear space, if I am in a wheelchair, there's not a flat area that for me to hit this button, I'm gonna be on a slope on the steepest part of the slope trying to reach this. So again, as a pedestrian using this, I may not be pressing the buttons. I may be making decisions when I'm out there and, and trying to to deal with those pieces. When we talk about this being overbuilt, and I think Tommy had had described that understanding that this, the width of this is as wide, it has as many lanes as the freeways in and around Fargo.

This suburban development pattern, when I look at it, actually has fairly good interconnectivity for the type of suburban pattern. There's lots of areas, like every single commercial parcel seems to be interconnected on a block. Each of those blocks have access points on every single side of it. And then there is a network of streets around all of this. So if I wanted to take something another than 13th Avenue to get to the different shops in a car, I could. So that dispersal of of streets, when we look at the, the amount of lanes and the lane widths, these are things that encourage drivers to drive faster, faster.

The the right turn lanes, dedicated turn lanes, encourage that, that prioritizes throughput, that removes the friction. When we look at the stopping distances that we would see on this type of roadway. So I'm in a car driving on a road, the road may be posted at 35 miles per hour, but people are driving 40 miles an hour and over 2% were 10 miles per hour over that. In the speed study that was conducted at 40 miles an hour for my brain to and eyes to see something and to tell my foot to hit the brakes, that is, that is about 1.5 seconds.

It's a split second that I have to respond as a driver, assuming I'm not distracted when I take that time over distance, that's 88 feet of time that I've seen somebody and I have to hit the brakes.

For me to slow my car down at 40 miles an hour, I need another 74 feet.

I don't want to get too deep into the police report, but I seriously doubt the driver was aware that there was a pedestrian in the road until they actually hit the car. Because at that distance, if we were to, if we were to go and measure that, that's a pretty far distance.

This is 88 feet, I'm sorry, this is 88 feet.

So you're somewhere back here before you actually would recognize that there's somebody in the intersection because I don't think driver drivers are not purposely doing this, but it's, it's the over 150 feet of distance that you would need to recognize it. You immediately know that that occurred. Hit the brakes and slow your vehicle at 40 miles an hour. If you're going over than that, it adds exponentially more to that.

The other thing in the pictures that Arlette shared that I thought were really compelling, and I think we should talk about this, it is lighting.

And when I looked at the lighting in these pictures, when I look at this intersection, this road is lit. There's light out there and even in a, in a bright picture. But there's something that I'm starting to see in these pictures crossing the intersection. These shadows, this light is above the mast arms for the intersection. It is flooding the intersection providing ambient light.

It is not providing lighting in the silhouette of a person. So as we look in these intersections, yes, as a pedestrian I'm gonna be able to see that there's a stripe on the ground and where I'm

walking, but as a driver, I am only, the light is only hitting the top of the head of the pedestrian, not the, not the silhouette.

So in that split second and 150 feet of distance, you may not have the time to see somebody with that lighting and with this much ambient light in that intersection, your headlights that may would've may have hit somebody's in their profile, reflected off their tennis shoes or off their clothing would've been washed out with this type of lighting. So the lighting for this well-intentioned to illuminate the intersection. It doesn't illuminate the profile, the pedestrian. So again, compounding on the idea of, of laying this out. So I, there's a lot of, dare I say it, construction that has been done here.

Well-intentioned design work that I think may have made the intersection less safe.

Tony Harris: Yeah, thank you Edward for pointing that out and elaborating a little bit on the lighting and some of the crossing areas too.

Okay, if we're ready we can move on to recommendations.

I'd invite Cody to kick us off on some recommendations on how to make this area safer and maybe address some of the factors that we've been discussing.

Cody Christianson: Yeah, that'd be great. So, you know, thinking on recommendations, you know, immediate short term, what could we go out and do tomorrow or next week?

You know, we've talked about it a bit, you know, signal timing, I mean that's something where we can make modifications in the office, go out to the controller box and, and do a few things and we can, we can work through that in a relatively short timeframe, you know, even to the point of, you know, it's a little more added but you know, talking about adding, you know, like a leading pedestrian interval. So we're adding extra walk time to get the pedestrian out into the

intersection before any vehicle gain. Vehicle lanes get their green light. That can be anywhere from two to six seconds. And while that sounds like a short amount of time, it actually is a vast improvement for pedestrians getting across the street and getting visible.

You know, the other one again, maybe take a little bit more time, but I think could be near, is doing more of a tactical urbanism, taking out the outside lane, put up some paint and post, take it down to a four lane roadway and really decrease those crossing distances as well as getting a feel for how that this roadway could operate, you know, with that reduced capacity and maybe right sizing what has been done in the past, you know, that is fairly quick, fairly cheap, fairly simple to go out and, and do, you know, we do it all the time for construction, you know, through off some barrels and all of a sudden our five lane roadway is down to two.

So I think those are things that can be done in the near term to really provide some big impact. You know, thinking a little further out to kind of that maybe within a year or so, you know, like we talked about, you know, the, the intersection was reconstructed recently, trying to make it more accessible, you know, going back and saying, okay, we can still make this a DA, but again, putting in those directional ramps, like Edward was pointing out, pointing people in the right direction from the ramp itself.

Especially if people that have, you know, low vision or blindness, they rely on those tactile domes, truncated domes to orient them in the right direction to cross the street. So that, that would be a big improvement.

And as well, if we got good feedback and other things on the, the potential lane reduction, you know, we could use that extra width, maybe increase the width of that median to provide a, a good pedestrian refuge spot for those folks that just can't cross that amount of lanes in, you know, the green time for 32nd street. You know, it's not a place where people want to stop, but it does provide people that opportunity that can't cross the street at five feet per second to get

to a safe spot to stop and wait for the next signal or at least a gap in traffic and aren't forced to just keep going.

You know? And then I think long term, and actually Scott, I was gonna share my screen. You know, when I was talking about the post paint post, this is an example. I was down in Minneapolis Highway 55, the Olson Memorial Highway. It was a six lane road again, went through, had some fresh paint and post into a four lane. You know, another example there was, you know, a lot of times we hear, you know, well there's a lot of vehicles on 13th Avenue South, how can we possibly, you know, lose a lane?

You know, I looked at some traffic counts, you know, their traffic counts are pretty high at I 29, you know, up upwards of, you know, 25 to 30,000 vehicles. You know, you get further east over towards 25th street and there may be more in the 15 to 20,000. You know, there was a, I think it was Hennepin County is this county that Minneapolis is in, and they did a study on this Lyndale Avenue that was a four-lane road gets upwards of 30,000 vehicles as you get closer to I 94 down there.

And you know, determined through a study that the, their three lane section worked, you know, yes it gets congested at rush hour, but they can get through and it works, you know, the other 98% of the day.

So lane reductions can work even with those volumes in the, in the 20 to 30,000 range.

You know, and then kind of looking forward, you know, again it's, there's a lot of space on 13th Avenue. If you get rid of a travel lane in each direction, you can really make this street function for those, for everybody that's out trying to get across and through the corridor. You know, so even keeping it as a four to five lane section, you have space to, you know, have a wide median at the intersection with turn lanes, wide boulevards, you know, you could have a 10 foot sidewalk or shared use path on the north side. You could have a wide sidewalk and even a

separated bicycle facility, you know, to help those modes be separated too along 13th Avenue as we, you know, talked about and saw, there's a lot of people out there riding bikes and walking on that south side, you know, so there's opportunities like this or even, and I think we might talk about more later on, you know, making it more transient transit oriented, you know, still being able to have those five lanes but have space for shelters and sidewalks and shared use paths and there's, getting rid of two lanes opens up a wide range of possibilities for doing something on 13th Avenue South that really slows people down because they want to slow down and need to slow down and don't feel like they're driving on I 29.

So those were kind of my thoughts.

Tony Harris: Great, thank you Cody. Yeah, those visuals are always really helpful for me to understand recommendations and what we're looking at, so I appreciate that. Maybe Tommy, could we come to you next on recommendations and, and thoughts for improving safety here?

Tommy Schmidt: Yeah, absolutely. Echoing what, what Cody said, I think that there's a, something we could probably do in, in the short term since you know, the road condition is in fairly good shape. The city did have that investment to reconstruct some of these intersections. And we live in a community here in Fargo where budgets and the amount of money that we spend on some of these upgrades is heavily scrutinized.

And the idea of reconstructing the whole street to be our ideal is probably not going to be something that the city or the community has the appetite for or the budget for, for that matter, for probably quite a bit of time until we can get some federal grants to cover that sort of effort. So if we work within the constraints of what do we have now, you know, what are some ways we can modify the street section right now by using paints, ballards, things like that, that are, you know, super, super easy to do.

So being an architect, I'm a visual thinker, I like to put things on paper. So one exercise that I went through is taking a look just at that. So sharing my screen. Now what I'm showing here is there's a lot of modifications here and I'll definitely zoom in, but what we're looking here at this intersection would be probably the, I'll talk with the lanes first is reducing that travel lane by dedicating the far outside lane as a bus only and a right turn lane. A dedicated right turn lane and bus only lane. As we've mentioned this, this is probably one of the more heavily trafficked transit routes. This is a direct route between our downtown transit center and our transit center at the mall. So we do have buses that run at pretty decent intervals on this stretch and driving down this intersection, you do see a lot of people waiting at the bus stops here.

So you know, how can we make that experience better for them while kind of doing double duty, right? So we're removing a lane. So visually for drivers, you've got more vehicles in the two lanes in the middle. So you know, kind of by default you've got people closer to you, more traffic, so you're slowing down a bit there. And then you're also, I improving that transit access for people. You're doing things like enhancing the bus shelter so that they're not just benches, things like that that kind of add that sense of dignity for people taking transit here. And then, you know, it's hopefully it's one of those snowball effects, right? Where you put in the investment, which isn't much on making this transit corridor better, thus making more people want to use that transit corridor. So you've got more people on the sidewalks, I've got more people using the buses.

So you know, maybe there's a ripple effect where that equals fewer people driving. But a few other pretty easy modifications you can do is increase the straight tree coverage. So obviously in my concept here, we're showing a reconstruction of the median to allow for street trees to be planted in the middle. So again, that's just adding that visual obstruction to you. So subtly making drivers slow down, not feel as comfortable. And that's, that's kind of the goal. You know, they're, they're in a protected vehicle, they're still moving at a pretty good clip, but they are slowing down because of those visual cues. So showing those on the boulevards as well that

we can increase that, that tree coverage here, just looking at this intersection, we can look at reducing the radius of those, those turns here.

So right turns are taking that a little bit slower from the side streets as well, or in this instance, completely removing a right turn lane on these side streets, which really do not need a right turn lane when you have such little traffic on these side streets.

And then zooming out a bit, one of the things that you notice as a driver or pedestrian along this stretch is just how much extra wasted space we have in the surrounding land uses. So even in this Google Earth image here, you can see I'll start in the upper right corner here, there's a strip mall here that's has a large parking lot. And this is pretty reminiscent of how this strip mall's parking needs are 99% of the time, if not a hundred percent of the time. So there's a lot of wasted space out here that could be better used. So maybe this is transit oriented development, maybe it's just additional commercial space, but regardless, we, we do have a lot of excess parking that could be turned into housing and maybe this is housing that the city could work to be that transit oriented.

So thus no parking provided.

Maybe there's vouchers for transit provided, you know, that's kind of ideally thinking of how this could work. But the idea is that get people here that are living in an area that they don't need a vehicle because they've got this enhanced bus lane here. So just kind of zooming out of showing where all these potential spaces could be to increase the density of the surrounding area, rethink our land use policy, and you know, just even locating the buildings closer to that road again kind of makes that visual proportion of the road much more comfortable, much more in the traditional way that we used to plan our cities and build our cities out.

So, you know, this is certainly looking at, if you want to do the, the, probably the cheapest option is making this far lane bus only even that in this community, that's not a, that's not a thing.

There's not a dedicated bus lane in Fargo. And that would probably in itself be a quite a hill to, to climb trying to convince the city and drivers that this is actually the, the right idea to do and for all these good reasons, but they'll probably hear taking away a lane and that might slow them down. So, you know, I, I struggle with that of, you know, what's the communication like to get something like this done. But you know, certainly this is probably the easiest thing you could do is just dedicate a whole lane for transit and right turns while still accommodating the vehicles, but also being really respectful of pedestrians and transit users as well. I will stop sharing my screen.

Tony Harris: Thank you Tommy. I really appreciate that elaboration. Arlette, can we come to you next?

Arlette Preston: Yeah, a lot of what has already been talked about, I would certainly repeat. I think one of the, I get, you know, I guess from my perspective all of this is about traffic calming and Cody mentioned a couple of different items. So did Tommy the trees, enhancing that median to include trees developing a canopy, if at all possible decreasing lane widths, which the city actually just recently has completed a project where the lane widths were, were decreased. I think that helps changing one lane into a bus lane or perhaps a bike lane that's separated either way.

You know, I, I do think probably short term, the easiest and quickest thing we could probably do is enhance those pedestrian lights and that synchronizing of the traffic signals. One thing that I noticed when we were doing the traffic, the speed study was that coming from the west there seemed to be higher speeds. Now I can't remember if that actually panned out in the data

there, Tony, but it, it felt like the speeds coming from the west were higher, there were fewer traffic lights from that side.

But I also noticed that the synchronization of the lights certainly causes some of those higher speeds as well as, you know, hitting the gas when you see the yellow light and I'm, I am seeing a lot of that going on in Fargo. So slowing the traffic down by de synchronizing the traffic lights might be an option as well.

The pedestrian lights though, getting the, you know, those triggers when you hit that pedestrian light, getting them to activate more quickly and decreasing the weight. And granted, I mean, again, I walk a lot so when it's in the middle of the winter, that becomes a real big issue in Fargo.

If you have to wait a minute or two versus being able to, to get across a little more quickly, you know, the traffic orientation, the, the, or I'm sorry, the transit development oriented development that is a longer term but certainly would be a very viable kind of option here as well. Lot of parking lots that are underutilized and we are going into a process of revising the LDC, the land development code in Fargo. So those parking requirements are going to be examined and hopefully long term that might be an option. You know, probably one of the most effective traffic calming exercises is congestion And yeah, I, Cody mentioned it very briefly that just, you know, considering that during probably half hour in the morning and a half hour in the afternoon during our so-called rush rush hour, it's very short and it's very minimal to try to bring the, the speeds down.

However, I do think the speeding and it panned out with a speed study too. The speeding is much worse when the traffic is lighter. So early in the morning it was much worse than later in the, in the afternoon. So just some of my thoughts, most of 'em are longer term, but certainly the traffic light and the pedestrian light changes would be very minimal and very quick to make.

Tony Harris:

Yeah, absolutely. Edward, can we come to you for recommendations?

Edward Erfurt: Yeah, so when I look at 13th Avenue, there are two 13th avenues in Fargo, right? If, if we go and look at 13th Avenue over by the middle school, just east of 25th Street, that is a three lane road with lots of complicated situations, lots of complex things are happening, there's driveways and lots of different intersections that are occurring there.

Somehow all of that changes dramatically as soon as we head west and get closer to the freeway. When I look at the curb cuts on 13th Avenue in this area around this crash, you have fewer curb cuts, fewer levels of complexity as a driver to make decisions along here. So this idea of right sizing the road, i I, and when we look at the numbers that when we're talking about the 15,000 trips or even 20,000 trips, that's a two lane road. Like just to, just to put it out there.

And then when we see the numbers, like if you zoom in and you see there's high numbers in places, that's because we've induced that traffic. We, we've told people to go there and we we've pumped it in even though you have this great network. So let me go through with the things I heard that I thought were, or things that I think address some of the contributing factors here. I think tomorrow, if not this afternoon, the City of Fargo needs to check this traffic light and the signaling, I, I wouldn't wait another minute. The, it is inconsistent with the signaling and this is something that is not difficult to do and I think Cody had had shared that this is not a difficult thing to do, but the signal timing needs to be reviewed and looked at. E especially when you have an intersection with multiple bus stops, like I would start right there and make sure that the pedestrian timing is more than adequate for people to get across the street.

So doing that. The second thing that I would do tomorrow, and Tommy had shared this, all those dedicated right turn lanes on the north south streets, eliminate those with cones that you

know, the sticks and the paint that will not only reduce that dedicated right turn, that high speed condition, it will reduce conflicts. It'll reduce driver decision making. There'll be fewer decisions they have to make at an intersection on those cross streets. It will narrow the cross street crossings.

I would continue the sticks and paint. I would use the most temporary things as possible starting each of these intersections to tighten up the turn radii. So all of the radius, all the curb radius. I would get those up to an area that folks have to go much slower to make their right turns. It's a signaled area, so we can control some of that, but give as much pedestrian refuge as possible in those areas by pushing out and occupying the space to support your trails and pedestrian areas that will get the cars starting to drive the speed the road is designed for.

I would then go in those intersections and there are bumps and curbs and dividers that you can put in intersections to control where people turn.

Testing some of those initially I, I know Fargo is a snowy area and there's plowing, but looking at different areas that you can start to get drivers to drive within the lanes and then pursuing options for optical narrowing and lane reductions. When I look at the Google Earth, I, we have the benefit of a snapshot in time of Google Earth. When construction occurred here, the city was able to use cones and to go down to single lanes. They were able to, in these left turn lanes, they're able to block out full lanes of traffic out here.

I, I would go do that and I would go and try to convert those lanes to something else. The cost it would take to put up the delineators is probably your plowing and salt budget for this road, for this winter.

If you think about this particular roadway, if you have one lane of traffic for the entire length of this section of 13th Avenue, so two, actually two full lanes both east and westbound that you remove from the, because you don't need it, you, you've overbuilt this, the maintenance of that

could help justify the cost. You know, 'cause you're not gonna have to maintain that section of row. You're not gonna have to plow it. You're not gonna have to put salt and aggregate down in those areas. Again, that will narrow up those intersections at all. Those curb ramps start to go out there and do a full evaluation of it today.

Go out there, do a walking audit, meet somebody like Arlette out there. So the city should meet when I've done this before in the city getting, getting technical staff at city hall. So the person's in charge of transportation engineering that would understand road traffic dynamics and understand how the lights work.

Getting a land planner out there so they understand the things that Tommy was showing what the future development could be. Getting a police officer out there. So this is an area where there's speeding. We've seen this, there's lots of people speeding here. So they can put those pieces and then private citizens out there and walk and experience this as a pedestrian and then drive it as a group and look at those observations. But at all those intersections start, when you start to see how those are actually graded out and how the buttons and all those things work, you may need to go back in and start to program out updates and changes to that going forward. It should reduce the amount of roadway.

So it's an opportunity for you to kind of explore that. And you can use temporary things like paint and cones to get there.

When I look at the roadway section, cars are going very fast because they can. And we've got an environment that is very wide. So the reduction of a lane there, not only could that be on the edge conditions that may support transit, it could also occur in the middle. You know, the median is the narrowest of all the, the lane allocations on this roadway. By getting that wider, not only do you get the area of refuge, you get the plantings. The plantings give you optical narrowing and it also addresses ability for you to put lighting in in this area, getting lighting down at a level that will high, that will illuminate folks crossing the street. So getting their

profile into that area the right of way here, the, what I believe and, and somebody with more technical knowledge can analyze this, it looks like, or the reason you would put in all the turn lanes is because you're stacking cars. 'cause you're prioritizing the throughput of vehicles.

Many, many cities across the country are utilizing roundabouts and through float intersections that gets the speed down by design to a speed that allows for continuous movement. So even though the posted speed for a road may be less in an area where maybe you don't have as many pedestrians or as many cross street movements, you actually get through the intersection faster. And, and places have done this where you convert a traffic light to a roundabout and a single lane roundabout can fit in about 120 foot diameter, which you have. So thinking long term of reducing the amount of lanes right sizing this. I'd also look at other things other than traffic lights roundabout, you know, in addition to that throughput roundabout also doesn't have the long-term maintenance that you have with traffic signals.

So you're not paying for power, you're not buying new light bulbs. You have a, a fixture in this area that allows you to, to start to create an identity in those areas.

Thinking through this particular section, the city really like the elected officials really need to think about this corridor and think about what the top priority is for 13th Avenue.

We think about these sorts of things. Right now, the top priority is the throughput of cars. It is the movement of vehicles that is above safety. It's above budget, it's above speed.

So as we're looking at this intersection, we're, and even this corridor safety really should be our top priority. And when we put safety at the top priority, we're willing to go and compromise on throughput. So instead of designing something for a hundred thousand cars a day, we're gonna get something that's right sized for 20,000 cars a day. Instead of building a really big, elaborate illuminated intersection with all the signalization to it. If we want safety, we're gonna design something that physically keeps vehicles down to a speed that is comparable to the driving.

I love the idea that Tommy had shared about infilling along this corridor. You could go anywhere outside of just this little street and there's beautiful neighborhoods carrying that character as a next increment of development. Infilling this, this corridor. Really thinking about that, that's an opportunity to par that development opportunity with the roadways. And if we talk about safety first, there are ways to provide all the fluid movement that you need in a resultant speed that's safe for all users. So really moving through that, make sure I haven't missed anything that all the other panelists have have done.

We've talked about budgets that was brought up again using start with temporary materials. The sad thing is that lots of money, lots of money and lots of time and lots of technical folks worked on upgrading and enhancing these intersections, trying to achieve the right thing.

I'm sure it went through public process.

I'm sure it went through local and state processes that took years to do it. Sat on the shelf waiting for funding to come, waiting for the state or federal government to throw money at this to then actually build it. And then like probably a year's worth of time to build all this stuff out. And we have pointed out today, there have been flaws in that design, looking in approach here that have using temporary low cost, low risk things along the corridor, closing off dedicated right turn lanes with cones, reducing one lane of travel or converting one lane of travel for, for busing or multimodal uses. By doing that with cones and paint are cheap.

We can experiment it. We could look at it and observe how people drive with that. We could do a speed study with all of that, all of that for the amount of time it would take for us to go out and have an engineer do a bunch of calculations.

We can actually do that in the field. And I, I think in the, in the Midwest budget is gonna be something everybody talks about. And really looking at those temporary pieces and pushing that main objective, that safety should be the number one priority of this intersection.

Safety for all users and going through this corridor with those traffic lights, whether the speed is posted at 45 miles an hour or 25 miles an hour. Both can be designed for the safe throughput of vehicles and the same amount of time. But one would reduce the amount of risk for drivers and bicyclists and pedestrians and transit users. And one would increase dangerous for them. And I think moving towards something the safety is a priority would result in a lot of the other positives that the rest of the panelists has shared.

Tony Harris: Great. Thank you, Edward. That's very comprehensive. Okay, I would like to move us toward our closing, if that's all right. I'm gonna go ahead and share my screen one more time.

And I just wanna offer a few acknowledgements as we close this session today. And this may be our last session for a couple of months. So let me just say thank you to our panelists, Tommy Arlette, Cody and Edward. We couldn't have done this session today without you all. And a big thank you to Arlette for nominating this crash in the first place. And a thank you to her colleagues and friends who assisted with information gathering. That's also a really important part of the process. And without that, we could not have gathered here today and talked about this crash and this intersection. I also wanna extend our appreciation to our sponsor for this event and anonymous donor and say thank you to Strong Town staff who have helped prepare and get ready for today.

You can find a recording of this session and all of our crash analysis studio sessions by going online to strong towns.org/crash-studio.

And as a reminder, on October 15th, strong towns will be holding a press conference and we're gonna be publishing a comprehensive report with lessons, findings, and recommendations from the first 18 sessions that we did as part of the Crash Analysis Studio initiative. And if you have questions or need more information about that press conference, please go ahead and reach out to press@strongtowns.org.

And then if you're interested in starting a crash analysis studio in your own community, please visit again our website, strong towns.org/crash-studio. And there you can find links to our free academy course that has all sorts of video resources and guidance for starting your own studio and carrying out activities like the ones Arlette and others described today.

And then if you're interested in having strong town staff visit your community to give a presentation or a training on crash analysis, you can also find an inquiry form through our website online as well. So on behalf of my colleagues and the assembled panel, thank you for watching this crash Analysis studio session today and keep doing what you can to build a strong town. Take care.