



Public Works and Safety Committee
Standing Committee Meeting Agenda
Monday, June 18, 2018
5:00 PM

Location:

Municipal Office Building
701 N 7th Street
Kansas City, Kansas 66101
5th Floor Conference Room (Suite 515)

Name

Absent

Commissioner Melissa Bynum, Chair

☐

Commissioner Harold Johnson

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Commissioner Mike Kane

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Commissioner Angela Markley

☐

Commissioner Jane Philbrook

☐

Tom Groneman, BPU Board Member

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- I.** **Call to Order/Roll Call**
- II.** **Revisions to June 18, 2018 Agenda**
- III.** **Approval of standing committee minutes from April 23, 2018.**
- IV.** **Committee Agenda**

Item No. 1 - RESOLUTIONS: PUMP STATION 61 FORCE MAIN IMPROVEMENTS

Synopsis: A resolution declaring that this project is a necessary and valid improvement project, submitted by Ken Moore, Chief Counsel. This project will run from Donahoo & 123rd St. north along N. 123rd St. before cutting over to N. 123rd Terrace and ending at Wingfoot Drive. This Resolution directs the Chief Counsel to cause a survey and description of such parcels to be undertaken and prepared by a licensed land surveyor or a professional engineer to identify and describe the property to be acquired for this project, and to submit an Ordinance authorizing the exercise of eminent domain and to undertake all other necessary actions to complete the acquisition of such parcels.

Tracking #: 18290

**Item No. 2 - RESOLUTION: HUTTON ROAD SANITARY SEWER MAIN
EXTENSION - CMIP 6001**

Synopsis: A resolution declaring that this project is necessary and valid improvement project, submitted by Ken Moore, Chief Counsel This project is from Hutton Road

Sanitary Sewer Main Extension. This Resolution directs the Chief Counsel to cause a survey and description of such parcels to be undertaken and prepared by a licensed land surveyor or a professional engineer to identify and describe the property to be acquired for this project, and to submit an Ordinance authorizing the exercise of eminent domain and to undertake all other necessary actions to complete the acquisition of such parcels.

Tracking #: 18292

Item No. 3 - UPDATE: FIBER NETWORK

Synopsis: Update on the buildout of the fiber network, submitted by Alan Howze, Chief Knowledge Officer.

For information only.

Tracking #: 18261

Item No. 4 - FOLLOW-UP: ROADSIDE MEMORIAL

Synopsis: A follow-up to the roadside memorial presentation on May 21, 2018, submitted by Brent Thompson, Director of Engineering/County Surveyor.

For information only.

Tracking #: 18288

Item No. 5 - PRESENTATION: TRAFFIC MANAGEMENT GUIDE

Synopsis: Presentation to highlight content within the draft Traffic Management Guide that Commissioners commonly get questions from constituents, submitted by Lideana Laboy, City Traffic Engineer. The initial presentation was provided on April 23, 2018.

For information only.

Tracking #: 18289

V. Public Agenda

VI. Adjourn

**PUBLIC WORKS AND SAFETY
STANDING COMMITTEE MINUTES
Monday, April 23, 2018**

The meeting of the Public Works and Safety Standing Committee was held on Monday, April 23, 2018 at 5:00 p.m., in the 5th Floor Conference Room of the Municipal Office Building. The following members were present: Commissioner Bynum, Chairman; Commissioners Philbrook, Markley, Kane, Commissioner McKiernan was present on behalf of Commissioner Johnson, and BPU Board Member Groneman. The following officials were also in attendance: Gordon Criswell and Melissa Sieben, Assistant County Administrators; Misty Brown, Deputy Chief Counsel; Ryan Haga, Assistant Counsel; Crystal Sprague, Municipal Court Administrator; Jon Stephens, Economic Development Director; Wilba Miller, Community Development Director; Robin Richardson, Director of Planning; Reginald Lindsey, Budget Director; Tim Nick, Public Works Dept.; Kathleen VonAchen, Chief Financial Officer; and Master Patrolman II David Hopkins, Sergeant-at-Arms.

Chairman Bynum called the meeting to order. Roll call was taken and all members were present as shown above.

Approval of standing committee minutes from February 26, 2018. **On motion of Commissioner Kane, seconded by Commissioner Philbrook, the minutes were approved.** Motion carried unanimously.

Committee Agenda:

Item No. 1 – 18205...PRESENTATION/IMPLEMENTATION: TRASH & RECYCLING SERVICES PILOT PROGRAM

Synopsis: Presentation on a proposed pilot program to modernize trash and recycling services, submitted by Jeff Fisher, Executive Director of Public Works. Staff requests authorization to implement the pilot program.

Chairman Bynum said the first item on our agenda tonight is a presentation from staff and Waste Management and a request to implement a pilot program for trash and recycling. We have several people here to present. I want to introduce Deputy County Administrator Melissa Sieben and Public Works Director Jeff Fisher. If you introduce everyone else and we'll launch into your presentation. I will say we have technical difficulties at the screen in front of us, but the screen in the audience area is working and we have hard copies of this presentation.

Pilot Program to Modernize Trash and Recycling Services



Melissa Sieben, Assistant County Administrator, said I am here tonight just to introduce the folks that are here sitting next to me. Then, also to kind of tee up the conversation before we go into the presentation that they're working currently to get up on the screen has in front of us. Tim Nick will be leading the presentation on behalf of the Public Works Department. John Blessing is here from Waste Management, and he will be answering questions in more detail should you have questions as we go through the presentation. Jeff, I'm sure you have a role of helping clarify anything else, correct? That's why Jeff, our Public Works Director, is here.

I just want to lay a little history of sort of where we're at and why we're before you tonight. The Unified Government has a long-term waste filling contract with—was Deffenbaugh, is now Waste Management. When I began working for the Unified Government about three years ago we started looking at what ended up becoming the SOAR initiative. Part of the track with the SOAR initiative was actually looking at why we have so much litter, debris about the county and what we can do about it.

One of the things that was identified was our system of trash removal is not up to modern standards. Because of that, we don't have some of the protections that residents in other

communities will have against debris blowing about, especially our recycling. As most of you know, if you have recycling, a lot of you are doing bins that have no lids and you have to find some method or means to actually weigh down the items so they don't blow all over your neighborhood.

On the other side, when we were going back through some issues in 2016 with Waste Management, one of the things that Jeff and his team started looking at is the contract and started asking some questions of Waste Management about some of our recycling rates. We have some of the lowest recycling rates, for certain, lowest in the metro. If we looked at ourselves nationally, we're well below national averages. These two things actually collided. The two conversations around the issue with the SOAR program and the issue with us not having higher recycling rates and the fact that we could actually be getting money back if we recycled at a higher rate.

Henceforth, after we've worked through some of the issues we had with pickups with transition to Waste Management, we're here today because we feel that it's the time to discuss a pilot program where in which moved to the cart system. I'm going to go ahead now and turn it over to Tim Nick.

Why?

- Reduce blowing trash/debris and improve appearance of the community
- Increase recycling, reduce trash volumes and streamline collection services
- Reduce the number of trucks on the streets – improving safety
- Improve overall quality of service and efficiency

Tim Nick, Public Works Department, said, Commissioners, what we have here, second slide, and a little bit of this Melissa's touched on here, the why: to reduce the blowing, the trash, debris and the overall appearance of our community to try to clean it up a bit. To increase recycling, and hopefully with the bigger bins, those that don't recycle or don't recycle as much, will be increasing their volumes to streamline the collection services.

In the long run, hopefully, to reduce trucks. Jeff talks about it all the time about the number of heavy vehicles that we have on our roads and that'll reduce that. Improve the overall quality of the service as Melissa touched on. Last couple of years have been a little tough with Waste Management. Hopefully, this will improve the overall service.

What We Are Proposing

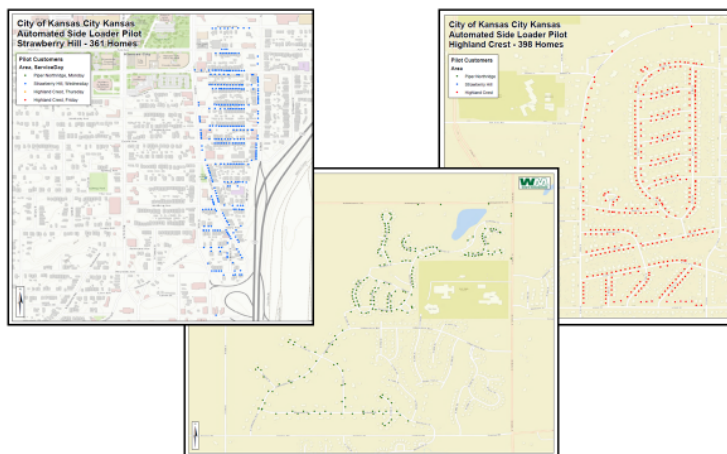
- Three selected pilot areas:
 - Strawberry Hill – 361 Homes
 - North Ridge/Piper Estates – 252 Homes
 - Highland Crest – 398 Homes
- Six month test period
- Evaluate results and make decisions
- Pilot program cost to UG – \$79,000 (negotiating)

What we're proposing—in your packets to—there are maps in there for the three areas. We tried to get—Waste Management wanted to do a thousand houses or close to a thousand houses for these areas. What we try to do is pick three different areas that lead to different challenges as far as the infrastructure. So, what we've selected, and these aren't in stone, we've got these. They could be tweaked just a little bit, but we like to say we want to keep it around a thousand houses total. We've selected an area in Strawberry Hill, an area in Northridge of Piper Estates, and an area over in Turner in the Highland Crest area.

The pilot program, if approved, would be a—we're shooting for like a six-month period. We're hoping to possibly get that kicked off around July 1st. If we ran it a six-month period until the end of the year, we want to try to—John talked about getting different seasons in there. Hopefully, you know with the fall and the winter to see what the challenges are there.

At the end of the pilot program, we would evaluate the results and make any decisions moving forward on how we—if we want to test this. If the test is right, go citywide. The cost to the UG at this point is \$79,000. However, we do have some credits with Waste Management that we believe we can use those to cover almost completely all the cost. This would be pretty much minimal if we can do that.

Pilot Areas



Again, here, the three pilot areas. In the back of your packet there's a bigger map where you'll see a little bit better.

Pilot Guidelines

- Pilot areas only will receive two 95 gallon carts
- Trash service picked up weekly
- Unlimited recycling service every other week
- No additional cost for basic service during the pilot
- Cart volume limit on trash (includes yard waste)
- Additional stickers available at a cost
- Bulky item pickup the first week of the month at no additional cost, by appointment
- Additional trash carts can be ordered for \$5/month



The pilot guidelines. What we do, the residents, in these pilot pro areas would all receive two, 95-gallon carts, both with lids. One would be a little different color for the recycling. The trash service will be picked up weekly as it is now. There would be unlimited recycling, but the recycling at this point would be picked up every other week. What Waste Management will do is they will provide a schedule at the beginning of the pilot program for all residents to have to know what weeks they put their recycling out, which weeks they don't.

There's no additional cost for the basic service during this pilot program. However, there is a cart volume limit on the trash. Which includes yard waste. If you've got a bag of grass

April 23, 2018

clippings that needs to go into you 96-gallon cart. There are additional stickers that you can buy. You can buy stickers there. They are a dollar and a quarter apiece. If you have more trash that goes in your 96-gallon thing, you just have to put the sticker on it so Waste Management knows to pick it up.

We had discussed this during some of our meetings about providing the stickers at no cost however, if we're going to get the true reading of what the pilot program is and if it's going to work we need to have it be as much as real life of how it's going to work in the end, that's why we built the stickers.

Bulky items would be—we would do a pick up the first week of each month at no additional cost. We would have to make an appointment with Deffenbaugh, they don't want to just have trucks running around the city not picking up anything because it will be an additional new truck out there for that.

Finally, if any resident thinks that they're going to have more than 96-gallons worth of stuff they can order an additional cart for \$5 a month that they're charged.

Phase One

- Develop pilot address list for pre-determined areas
- Determine Phase Two execution date
- Formulate cart delivery process and dates
- Develop joint invitation/mailer to inform residents and encourage participation
- Develop list of FAQ's for Customer Service Team
- Host Open House events in each pilot area

This will be a three-phased program in the pilot program. We picked the addresses that will be on the list. Determine the execution date which we say we're shooting for July 1st. Working with Waste Management, they would decide how they're going to deliver the carts and the dates that they'll get those carts out to the people.

They'll be providing a joint invitation mailer to all the residents within the pilot program. We did talk about also getting communications out to everyone in the city letting them know that

the pilot programs out there: Why we chose certain areas, why I'm not included, why I am included and those type of things.

We're going to develop a list of FAQs' for the Waste Management customer service team and our 311 team, to work together. Address any situations that come up during the pilot program. Then, we'll be hosting along with Waste Management Open Houses. One for each pilot area before the start of the program. Residents can come, have any questions or concerns that they are going to face, you can address those at that time.

Phase Two

- Deliver carts according to pre-determined plan
- Execute Pilot Program for participating residents (approximately six months)
- Train Customer Service Team to track resident calls to capture topic, number and resolution
- Schedule "check-in" performance calls between WM and UG for evaluation and data share
- Create reminder communication for residents regarding conclusion and cart collection
- Opportunity to include post-survey email address/link
- Door-hanger with post-survey email address during cart collection

Phase Two will be the delivery of the cards by Waste Management. The six-month program will be training their customer service team as well as Waste Management tracking—training there customer service team. Track all resident's calls, complaints that come in, tracking phone number, addresses and resolution. We'll also be having our solid waste staff, will be in the field, checking on any complaints following their staff around. We'll have scheduled check in performances we call them with Waste Management and our staff, every couple of weeks, determined how the data—share the data and evaluate how things are going on.

They will create a reminder communication for each residence regarding when the program ends and what we'll do as far as cart collection. That's going to be something on the cart collection that we don't know what we will do at the end right now because if we think that possible this program could go city wide we don't want to have the cost of having to go pick the carts up. Pick them back up and then take them back out again, that's the thing we'll work on. We'll include a post survey email address and link for those residents in the pilot program to go

online. We'll also have a door-hanger with that post survey information on it during the cart collection.

Phase Three

- Develop and open on-line post-survey for participating pilot residents
- Send joint WM/UG communication to participating residents at conclusion of pilot
- Close out on-line survey 2 weeks after communication and process results for presentation to UG staff

Finally, in Phase Three we'll develop the post-line survey for all the participating residents. Waste Management and the UG will send an end of the program communication for any questions and surveys, and then we'll give it two weeks for them to close out the survey and any communication for our staff. We use all the evaluation then and determine, come back to you guys and see how we want to move forward or if we want to stay the way we are.

Chairman Bynum said is there any member of our Standing Committee that has questions on the pilot program. **Commissioner McKiernan**, I have a couple. I'm glad to hear that there might be an alternative to having us pay for the trash cans because that was one thing that I was concerned about, where we're going to come up with \$80,000 for a pilot program. How will this reduce the number of trucks on the street?

Mr. Nick said the current vehicles in use are, let me rephrase that, the vehicles we'll be putting into use with the pilot, and possibly citywide, can collect more houses than the current trucks we have today. The current system we have today where we've got helpers on the back of the truck and they have to jump off and go get the materials and bring them in, with the automated services, we can service the houses a lot faster. We don't need as many to get the volume. I think we had 15 trucks on average that we service the UG with today. We believe we can shed three to four trucks by using the newer vehicles because they can take larger volume. You're controlling your volume to a certain degree with the carts, so it's a little bit more manageable.

Commissioner McKiernan said I have a question about that as well. You've got fewer trucks, but they're bigger trucks. **Mr. Nick** said correct. **Commissioner McKiernan** asked what's the implication of that for narrow streets. For example, right here in Strawberry Hill where we have a narrow street to begin with and cars parked on both sides of the street? Does that have any implications? **Mr. Nick** said not necessarily. The trucks are larger, but not by much. The capacity is larger in the vehicle. The rear load vehicles that we're using today, a large portion of that truck is used up with the rear load function.

With the automated truck, the way that it collects the cans with the automatic arm, allows for more capacity in the bed of the truck, if that makes sense. Yes, the trucks are a little bit larger than the current vehicles you have today, but the capacity, volume that those trucks can take is quite a bit larger than the trucks you have today. Does that clarify it?

Commissioner McKiernan asked does the automated arm come out to the side or to the back. **Mr. Nick** said there's two different kinds. There's the side and then there's also what we call a curotto, which has a bucket on the front that has a side-grabbing arm. That's a little more maneuverable.

Commissioner McKiernan said, again, I'm interested to learn how on these very narrow streets with cars parked on both sides, any side loading apparatus is going to fit. **Mr. Nick** said that's part of why we're doing the program. Part of our solution to that where we're going to start, for example, in Strawberry Hill, we're going to retrofit a rear load with a cart tipper. Although we'll be able to reduce some of the labor, we recognize that there are certain areas that although we can improve marginally, we're not going to be able to put a full auto truck in there.

We will be able to go to a rear load that has cart tipper, so we can reduce one of the guys on the back of the truck and it automatically tips the cart as long as they bring the cart to the back of the truck.

Commissioner McKiernan said this is more of a question for staff. What are we going to do about those people that live on a big, high terrace and say you know what, I choose not to haul these 96 gallon cans up and down the steps? I'm just going to leave them sitting on the sidewalk. Do you have a strategy for that?

John Blessing, Waste Management, said we're going to have to work through it, Commissioner. They've done this in other areas and that's why they are the professionals and we're going to leave it to them. We had that meeting not too long ago and talked about that.

Commissioner McKiernan said a \$1.25 for a sticker for an extra bag. I will say, as I drive around on Wednesday morning in my neighborhood, some houses put out an astonishing volume of trash. Where do they get those extra stickers? They buy them from us? **Mr. Nick** said that's to be determined. Waste Management sells them. We also partner with some of our other municipalities and they sell them through the city hall. We actually partner with some of the local grocery stores and sell them to those retail outlets, so there's a lot of options there.

Commissioner McKiernan said so what do we do when somebody either choses not to buy the extra sticker or doesn't know they have to and flings out a whole bunch of bags in addition to their can. Do you pick that up? **Ms. Sieben** said I believe they have a pretty robust communications plan. I think you can go into of how they give notice to individuals who don't follow protocol.

Mr. Nick said typically, what we would do is in reality, our driver would just take those bags and would tag the can. It would be a warning system that says hey, here's what you need to do and here is how you can get information on the sticker program. It would have a phone number probably to our customer service department, so they could call and we could educate that resident, here's what you need to do, here's the numbers that you can call or where you can go to get these stickers, and here's the purpose of the stickers.

Hopefully, as Melissa said, we would solve all of those problems without initial communication that talks about the limits and the stickers that are required. To your point, not everybody might digest that.

Commissioner McKiernan said we wouldn't necessarily have Streets going out and sweeping up after Waste Management. **Ms. Sieben** said we should never be doing that. **Commissioner McKiernan** said I totally agree. **Ms. Sieben** said that's the goal, to educate and use their systems they use elsewhere; to get exactly where they are in other communities, which is, Public Works does not go out in other communities picking up trash. **Commissioner McKiernan** said I like it.

Commissioner McKiernan said our Kansas sign per structure, or per living unit within a structure. Here's what I'm thinking. I've got a single-family home that gets two cans. I have several single-family homes that have been somewhere in the past split up into two or three living units. It's a single family and its zoned R-1, but historically, there's two living units. Does that get two cans for the structure or four cans because there are two families living in there? **Mr.**

Nick said typically we go by structure; we go by the address. That's open to debate. I guess if you got four families living in one single family home and they all want their own carts, they would be getting four separate service bills. Typically, it's per address, per structure.

Commissioner McKiernan asked what does unlimited recycling mean, glass? **Ms. Sieben** said no. **Mr. Blessing** said it doesn't include glass, Commissioner, but anything, you've got your volume limit. If you have more, if you have a second barrel, if you recycle, you can put another container out of your own if you'd like; whereas on the trash, its limited to with the sticker. If you fill your 96-gallon container in recycling, you have another barrel with more recycling, they'll take as much recycling as you want. **Commissioner McKiernan** said but not glass, still no glass. **Mr. Blessing** said glass can be taken to the recycling center. **Commissioner McKiernan** said right now we get one large item per week, per household, right? This would cut that down? **Mr. Blessing** said I believe it's three items at this point.

Commissioner McKiernan said let's just go for one, so we get one a week. Now I'm limited to one week a month where I can put out large items. **Mr. Blessing** said correct. **Ms. Sieben** said its by appointment as we're recommending. Generally, it's by appointment only anywhere else. This is still a much more generous program for disposal. One of the things that I have noticed, and I'm sure you noticed more than I notice it. **Commissioner McKiernan** said you've gotten pictures of when I noticed it. **Ms. Sieben** said yes, exactly. A lot of our rental properties that doesn't seem to be managed very well when people move out. I think that's probably where we're going to see some opportunities for us to communicate better with our landlords.

Commissioner Kane said first of all, if it's a pilot program, we're going to save them money. We shouldn't give them a dime. They're going to save manpower. We're going to give them money. I don't think so. We shouldn't have to use any of our credits either because this is for them, not for us. To piggyback Mr. McKiernan's question, my mother and father are 85 plus years old and they keep their trash around the back. They're going to have to drag it up all the way up the driveway, which is a gravel driveway, in the winter when there is snow. How's that going to happen?

Let's say this is my neighborhood, Northridge, of course, what are the people across from the high school going to say when you know that we're having a hard time getting ambulances down those roads? Now we're going to tag on a big truck. As far as the barrels go, there has

been trash going around, no doubt about it. If it's stuff like what you got here, it would be less trash blown around.

What you're going to do is when—in a pilot program, if it works, let's say, the only place it works is my neighborhood. All the other ones say it doesn't work now, they are ready to go and they say now you took it away from us. We already have issues with people from the east side of town that don't like what's going on, on the west side of town because they feel like—in fact, we know it's called the pearl.

All I want you guys to do, and I don't know what your name is, I just want you to do your job. I get a phone call at least once a week on stuff where you guys have missed where we have to call back and say hey, you missed this one again. Some of you missed two or three times. I can understand once in a while. Some of these houses are on dead end streets. I get it. They still pay their taxes. They still want their trash picked up. Deffenbaugh picked them up ,and I don't know why you guys wouldn't pick them up. I would like to have a conversation with you at a different date over these issues.

Commissioner Philbrook said yes, Mike, and yes, Commissioner, all of those things. I definitely agree with the comment about not spending and I want to say spending. You guys called them credits. They're not credits, that's what they owe us for not doing their job. No, it's okay. I'm not getting on you. I'm just saying that, that's money they owe us because they weren't doing their job. As far as I'm concerned, they probably owe us a lot more.

Another issue that I have with this whole thing goes along with the areas, Mike, like you were saying. I have had several complaints that nicer areas, if a bag bust or something they're picking up, they pick that up when there's an issue. If it's not in as nice of an area, they just let it blow. It happens all the time in Stony Point. They do that all the time in Stony Point. The people are getting really naughty and not happy there about some of that stuff that's going on through there.

The other thing is, is that I drive through Johnson County all the time because I'm working over there now. I would tell you most of the places that I see those wonderful, those wonderful containers are mostly on the flat areas. I don't see as many on the hills when I'm driving around over there. It's great for flat areas because even us old folks can get them out there, roll it out there. If you have a driveway that's down or up, and that's a lot of our areas, and

asking people to get it out there; it is not going to be as easy as what it might look. Might have to have your grandkids come over to move your trash out. That's not fair.

When you have a smaller--what they'd end up having to do, as I look at, is put the trash bin out there and then carry individually every sack out there and put it in there. No, that's not much different but then on the other hand, I don't know. I guess I kind of have an attitude about this particular thing because of the fact that kind of feels like in other things around here. We start stuff and we pay for it and then we don't finish up and initiate it or tell everybody why we're doing what we're doing.

We supposedly are to be more transparent in what we're doing. I appreciate you guys coming forward because that's a lot more transparent than what we usually do. Yes, you're seeing me with my face turning red. I'm not yelling and screaming, but I am inside. When you say that you're going to have a meeting with each group, what time of day is that meeting going to be? Is that going to be during the day when most people are working? Is that going to be in the evening? People can't always just make themselves available for us. I think that could be a problem too. Let's see, what else did I write down that I want to gripe about? I'm on the gripe mode. I am sure that we mean well. I just don't know that it's going to be well.

Commissioner Markley said I hear all of the concerns and I understand the concerns. I think what staff is saying is some of those concerns we're not going to know whether its going to work or not until we try it. That's why they are proposing we try it before we try rolling it out to the whole city and find out it doesn't work. I would rather roll it out to a small group and find out that it doesn't work than roll it out to a large group and have it be a complete failure.

This is our opportunity to have that smaller test group to see whether it is viable or what changes would have to be made before we go countywide. I think one thing we should have staff address, almost all communities are already on the system. The reality is probably that at some point in the future we're going to have to go in this direction because the other option isn't going to be available. We're sort of living in what was the old-time option and the new option is coming whether we like it or not. If its okay with Commissioner Bynum, I would just ask staff to address certain realities of where we are in terms of the rest of the world in our trash pickup.

Chairman Bynum said I would like to hold that thought to give you a chance to come back around to a number of the issues that have been brought forward by us. I think we have

BPU Board Member Groneman and Commissioner McKiernan yet with more questions and I have a couple of questions.

BPU Board Member Groneman said in our neighborhood, and in particular, at my household, my wife does a lot of yard work and gardening in the springtime. I think that there will need to be a lot of education for the residents of Wyandotte County, UG, and also for the Waste Management people. Over the last month, over a two-week period my wife set out some yard clippings and brush bagged up in bags. Waste Management drove by and picked it up. The next week she sets out another four or five bags. They drive by and they don't pick it up. She calls and they say well, we don't—it has to be in paper bags. If it's not in a paper bag, we won't pick it up.

Paper bags, as I understand in Johnson County and other places, they have to go to Home Depot and buy these paper bags and put the yard waste in the paper bags. That's not the way it's done or has been done in Wyandotte County or the Unified Government. They said that they would send the driver back out to pick it up. The driver comes back out, drives by, looks at the bags and drives off again and leaves them there. There just needs to some education if this is going to work at all. Not only educate the customers, but also your people are going to need to be educated as to what is permissible in the Unified Government, what isn't. It was quite a mess.

Ms. Sieben asked can I go ahead and address that specifically. **Chairman Bynum** said sure. **Ms. Sieben** said part of the way the pilot would work is that they'll actually have a dedicated truck that is for the pilot and a dedicated driver for that area that will not be part of the bigger route that the driver would have or drivers or the system would have typically taken in. It's a micro portion of a route; it's not a full route. That's why we're able to kind of do that more intensive education because the person or persons that are working those routes will have the time to do that. They will know this very specifically.

I do think getting back to kind of what Commissioner Markley was talking about, part of the problems we do experience here is because we do have such a unique setup that is so vastly different from everyone else in the metro. That's not to say that it's good or right that there are these issues, but it does play in. If they pull a driver off relief from another part of the city, we do have a completely different system. If we can just all recognize that and understand that creates problems for us, that doesn't mean that its right on their customer service end, but it does create

problems. **BPU Board Member Groneman** said I also think there will be a great pushback on the stickers.

Commissioner McKiernan said I totally agree with Commissioner Markley. We can't say this is the way it used to be and stay in the past. We are going to have to evolve overtime. I think that the pilot program is a great way to do it. A lot of the questions that I ask are borne out of the fact that I've taken a lot of phone calls with concerns and complaints and repeated concerns and complaints. Maybe I'm a little sensitive to the fact, wait a minute, we're not doing the base-line up to everyone's satisfaction. We're going to change it. Maybe we're going to change it for the better.

I'm going to actually possibly set up some of what Commissioner Bynum is going to ask. You all are a big company. You're in lots of communities. You're in communities that I would guess are as geographically diverse as we are. You undoubtedly encountered a lot of these challenges. I'm going to guess that you've successfully overcome them in other communities. I just want you to talk a little bit about how you've done that and the confidence that you bring to this table saying we'll have a couple of bumps and bruises, but we're confident we can make this work.

Chairman Bynum said fair enough. Just a couple of comments and then I'm going to let you sort of respond to all that you've heard. We also still have members of the public, I think, that would like to speak so just to kind of keep moving through this.

I had mentioned to a couple of you before that I went to Seattle in the year 2000, which was 18 years ago, and they were doing this. I remember thinking how unique and wonderful that was. It is not lost on me that 18years later in my hometown we are still not doing it. I want you to understand that I have a level of interest and support for starting somewhere.

This pilot program is the opportunity to start somewhere. There will be ups-and-downs and you've heard many of them from us tonight. I would like it if you could address the issue that popped right into my head when the agenda item was first put on and that is my 88-year-old mother. I would just like you to address this because I think you have some options for it. First thing that pops in my head, is that person who cannot get their 95-gallon cart to the curb.

I will also say, that truth be told, my daughter and I have been taking her trash to the curb for the last 2 ½ years already. I understand that there will be neighbors and family members who

will be part of the solution of getting a 95-gallon cart to the curb because I already do that every single Monday. I'd like you to address it.

My last actual question is, the additional trash carts ordered for \$5 a month as proposed in the program. If my cart just gets taken and it's gone, is that \$5 to get another one? Then, I'm going to let you address all that you've heard us say. Then again, we still need to allow time for the public.

Mr. Blessing said thank you. There's quite a bit to respond to. I'm going to kind of jump around here, going a little bit in reverse order. Commissioner, with the elderly or disabled, there are a lot of options, and a little bit to Commissioner McKiernan's point. We've done a lot of different things in a lot of different communities. The options that we will present would be up for city staff and the Commission to decide. Of those options, there are certain services that we've rolled out in other communities. Again, they've selected these and we rolled them out.

For the elderly, and it's called the house line service. The elderly resident, or those that might have a disability, could put their trash cart at and the garage line, we call it the house line. You don't have to bring it on down the driveway. Our driver will go up and get that. There's pros and cons to that. The pro being, you're providing a service for the elderly or the disabled so they don't have to move that cart down.

It's going to erode some of the efficiency of having an automated service because in these areas, you're going to have to have the driver get out, go on up and get the cart and bring it down. Although those options are available, they will impact ultimately your cost control, which I think is kind of what we are looking at long term. How do you control costs for the disposal in the years to come? If that's a menu option that staff decides is necessary and,, again we'll probably be able to extrapolate some of that from our pilot. Then that's certainly an option we would have available. Again, up to the Commission to ultimately decide what they want to do.

There's also smaller cart sizes. We experimented with—Let me back up. The pilot rolls out 96 gallons because just the nature of the trash in Wyandotte County today, it's a large volume. We're erring on the side of providing the largest cart. If there are residents who would prefer a smaller cart, we have a 65 gallon for both trash and recycling that are more manageable for maybe those that think they won't be able to manage the larger cart. We don't go much smaller than that because they fall into the truck, just quite honestly.

I'll touch to—kind of jumping maybe to those open house meetings that we talked about. Nine times out of ten the fears are satisfied in the open house. I've been to a couple where we even had some ramps crafted where residents could push the cart up an incline or down a decline a little bit, just to get an idea of what it is and how it works. Most of those fears are soft when they're able to get their hands on it and move it around. Not all, some will still say this cart is too big and maybe then a smaller cart is sufficient for them or a house line service should that service be chosen by city staff.

Talking a little bit about what Commissioner Markley said, and I think it's been touched on elsewhere too, is eventually this is going to come to a head for Wyandotte County. Right now, the current contract with Waste Management expires in 2032. We are content with the way it works today. We don't think it is the best system and we can see down the road where it is going to go. But again, if the decision is to remain, that's okay with us. But, we've got 15 years, to kind of the example I gave was, to slowly turn a ship because Wyandotte County's a big ship. You've got 15-years to incrementally make these changes. If you wait until the end of that contract, these options, to Commissioner Markley's point, may not even be available.

Most metropolitan areas, we're not seeing uncartered, take whatever you want services. If you do, they're three times what you're paying today simply because, as the service provider, there's no way to control our costs to provide that service. When you have the cartered system, the modern system as we're calling it with carts and limits, the biggest challenge is behavior change, right? That is the biggest challenge that you'll see with your population.

I think it was touched on, again, from a couple of different commissioners. That just takes time. People will be surprised. It's very wise for us to kind of peel the onion here and say, will some people were just never going to do it this way. In this part of town, I can just never see it changing. But honestly, we've seen the exact same situation in other communities with people that said the exact same things and ultimately it changes. People realize how much more they can recycle once they're encouraged to recycle so we watch those volumes go down.

When you manage the large item collection, you address a lot of the renters' situations, which really are the lion's share of having an entire household at the curb for collection on that day.

As you slowly kind of change the behavior, and that only comes through education—you've got to let the people know why you're doing what you're doing. This isn't some kind of, we just want to change it because we can or a money grab. Let them know that you've got 15

years to get your future cost under control because after that contract expires, these options may not be available. There's a lot of education that goes through that. I think the test pilot program is one of the ways. I'm hoping that when we get that survey feedback, we can put a lot of these fears to rest. The people at the very beginning of the program—there's no way I'm going to adhere to this. This will never satisfy my needs. You'll see the majority of those people, again, hopefully come back in the survey and say you know what, I had to change a few things. I had to manage my waste a little more responsibly. I was educated on what I could and couldn't recycle and this works.

Yes, there's going to be Christmas or somebody's birthday where I have a couple of extra bags and I have to pay the \$1.25 for an extra bag. If they're traditionally or routinely having those costs, then it's more efficient to rent an extra cart. That's only \$5. If you're using five stickers every week, that's more than \$5. There's a lot of education that comes with that.

I think I touched on most of what I was given. I was taking notes as it went. Did I miss specific concerns?

Commissioner Philbrook said the \$5 charge. **Mr. Blessing** said for the carts, right. We maintain the warranty on all of the carts. A lid breaks, a wheel pops off, a mysterious hole shows up, we would simply just need a phone call and we will come and replace that cart free of charge. That being said, if the same address has a cart that gets melted every week, we're probably going to engage in a conversation with city staff. Something needs to happen there. We see wear and tear on the carts. Our automatic arms squeeze them and ultimately, they will crack. We'll replace those carts free of charge even the one that is rented in addition to that.

Commissioner Philbrook said I guess my question would be also, for those folks who decide to usurp somebody else's cart so they have two, is it set up so every location you automatically know whether they have two or not. **Mr. Blessing** said that's correct. Right now, even, we've got an account for every address in the Unified Government. On that account, we can assign how many carts they have and vice versa. We'll ultimately get feedback from our drivers that say one house has no carts and another house has two carts. What that will lead to is a call to city staff. **Commissioner Philbrook** said I know that might appear a little picky, but what can I tell you. Things happen. I was just trying to understand to the extent that you have control over what you do. I appreciate that a lot.

Commissioner Philbrook said basic services, as you say, one cart for recycle and one cart for regular trash. Correct? Okay. **Mr. Blessing** said how that unlimited recycling goes, it's simply because we want to help the UG increase their recycling rates. As previously mentioned, there's a clause in the current contract that triggers rebates at certain volumes that the UG just has not gotten close to. If we can increase all the recycling possible—and we've got our own motivation there because everything that we can divert out of the landfill helps us. The life of that landfill is expiring, and that's going to be a change for all of the Kansas City metropolitan area.

Diversion is something that we want to support. What we often say is if you notice—and the pilot too being every other week, we may gather data that says it needs to be weekly. That's why we're doing the pilot. We may gather data that says it needs to be monthly. I doubt that. Some of this is a learning curve through the pilot. That secondary cart, most cities that go to a carted system, we just tell the residents to repurpose any cart that they currently have, that they're currently using, write recycling on it and now you can fill up two carts if need be.

Commissioner Philbrook said I have one other thing. It's a bulky item that's been pushed back on and that, of course, is mattresses. You're dealing with rental properties. A lot of times a mattress goes out by the curb and it's not the person that owns the rental property; it's the person that's moving out. They don't always let you know when they're moving out. Sometimes they just move out. Only picking up once a month, that leaves all the junk around and you want to rent your property. It's kind of a catch 22. Can you address that a little bit?

Mr. Blessing said yes, and I'll be as gentle as possible. That is really a change in how that renter and landlord need to do business. There needs to be some type of control factor there. It almost seems like addressing the symptom and not the disease. There needs to be some education there between landlord and renter. Yes, there's deposits.

Back when I rented, you had deposits that hopefully kept you from some of those “run out the door” abuses that you're referring to. There's going to be those situations. Ultimately, I think in a worst-case scenario, the landlord—that's a cost to doing business as a landlord. If you've got a renter that splits out on you and leaves a mess, hopefully you've got a deposit. Hopefully, you've got some kind of method of obtaining that. It shouldn't necessarily just be oh well, we'll just put it all out and hope the trash people figure it out. That is one of those behavior changes and learning curves that we kind of mentioned that is really kind of more of a deeper issue than just the trash collection.

Commissioner Philbrook said and we do need to figure that one out big time. I guess that probably falls into the lap of oops and SOAR. **Mr. Blessing** said if I can reference, we recently made this change to the City of Osawatomie down in Miami County. For one month, they had a problem where people just refused to listen to the rules and said, what happens if I just don't pay attention and I just put more than I'm supposed to out there. I put four or five items. We gave them a grace period. Took all the items, as an earlier example, took all the items and left them a tag and said hey, you're not supposed to do this. Here are the rules. The next time we contacted City Code Enforcement and City Code Enforcement went out and wrote a ticket. They had about a month where they wrote some tickets and then that magically started to stop. **Commissioner Philbrook** said okay. I appreciate you addressing that.

Commissioner Kane said my mother and father-in-law's garage is in the back. How are you going to address that? **Mr. Blessing** said I would say today, we're not going in the back to pick up the trash. There is some method currently in process where that trash is coming to the curb today.

Commissioner Kane said in our survey that we passed out, I don't remember this being something that everybody was going nuts about. Maybe I'm wrong. You missed the big one about if you'd been doing your job in the first place—I didn't have any complaints until you guys took over. Then it was a long time. I know it was a learning curve for you guys, but I'm still getting complaints. When we pay for this service, we want it done properly; not have to call somebody and say hey, you missed another trash thing. There's no way that we should pay for any pilot program, and like I said, and not use the credits because it's saving you money. It's not saving us money. I'm not sure that—I would rather see this at a 5:00 meeting where all the commissioners are here than just us. This is bigger than just us. That's my thought process.

Shirley Carter Ikerd, 804 S. 89th St., said I'm here because this really doesn't sound like the public has been made aware of this. I think we need to be more transparent than this. I would like to know, number one, who picked the areas where the pilot is going to be? Who picked that? **Chairman Bynum** said we'll take it down and answer it.

Ms. Ikerd said the other thing is, if we're going to pick certain areas in Wyandotte County or if we're including the Unified Government, I don't think we should be able to

handpick anything. We handpicked everything out west and nothing came east. We are still cherry-picking what we want to do. That is not what I call transparency.

I would like to know who asked this company to come in here to tell us what we needed for trash. Whose idea was that? If it wasn't brought up here, I would like to know the name of the company; why they thought they could come in and tell us what to do.

Chairman Bynum said, Ms. Ikerd, this is Waste Management, which purchased Deffenbaugh. It is the company with which we have a current trash pickup contract that is in place all the way through the year 2032. The company name has changed, but it's actually been a merger, if you will, of the company Deffenbaugh that we have had a waste contract with for as far as I know decades and decades. Mr. Nick, you may know better than anybody how long we've been doing business. But just to stop there, it's not a new company. It's just the current company that we currently use looking for solutions.

Ms. Ikerd asked how much are we paying them to do this grandiose pilot. **Chairman Bynum** said it's all negotiable at this point. If there is a cost to do it, the question will be ultimately how much will we pay them.

Ms. Ikerd said before my time runs out, I would like to say to the council people, commissioners who are here tonight, that this needs to be tabled. The public needs to have a chance for a big meeting to let every councilmen's district say what they think about this. My councilperson is here tonight. I have not heard nothing about this. To me, that's kind of embarrassing because there is no transparency when you get a group together like this that's going to tell us what they're going to do and we have nothing to say about it. I would like to ask the commissioners here tonight to table this until more thought is put into it and it comes to the public.

Sheryl Becker, 9306 Kansas Avenue, said I have rental property so I am a landlord. I have rental property at about 70th & State Avenue. My rental property is in a townhome area so it has a very high density. I've actually been involved with that rental property over the last 40 years. I've watched the way trash was handled there and at my own house, a couple of different places in the city.

The reason I'm here is that I did email Waste Management on Friday and I copied my councilman and I was notified of this meeting. My complaint did deal with trash that's not

getting picked up repeatedly in these townhome areas. It is a dense area of rental property. There is a lot of transition. I'm not here—I know that's not what this meeting is about, but that is why I'm here to listen. I know there are policies in place to address some of the problems that aren't being addressed right now.

My husband has coveted these large trash cans that you're proposing. He's wanted one for a long time. Our children live in other communities that use these. We think they're very valuable at times. We always have more recycling than we have trash at our home. I would speak to that's a great idea. I think there is an intrinsic problem with the way our trash is being handled here in the city, and it's been addressed by many of the councilmen.

Chairman Bynum said a couple of items. We had a question from the public which was how were the areas selected. If we want to address that. Then if you want to address any other aspects of what we're talking about. We're going to need to come to a decision.

I did want to say quickly, I'm not opposed to a 5:00 pm special session, but we don't vote at those. This is an action item that we're asking for a motion and a vote on so I'd like to kind of point that over to legal counsel for a moment. **Misty Brown, Deputy Chief Counsel**, said since the item is up for vote tonight, you could, of course: vote to move it forward, you could vote it down, or you could entertain a motion to send it back to staff and table it for the time being.

Chairman Bynum said if we were to bring it forward at a 5:00 session for all the commissioners to hear, we would not vote in such a session. **Ms. Brown** said that's correct, Commissioner.

Commissioner Markley said couldn't we just send it forward to full commission and request that a presentation occur at the full commission meeting. Whether it's unanimous or not, we could request that a presentation occur at the full commission meeting. I mean, we could have a 5:00, but sometimes it takes a while to get on the agenda.

Commissioner Kane said I think the idea of going out to the public—this hasn't been—I didn't pick where this was at and this is my neighborhood, which is fine. I would have picked the ones that were the hardest ones of all to see if it worked or not instead of cherry-picking some of the other ones. I just think the overall situation is not a good idea.

Chairman Bynum said I would like us to go ahead and answer the question about how we picked the neighborhoods. Then, I think we might be coming to at least an agreement to bring it forward to full commission for a presentation.

Mr. Nick said we got together with Waste Management, our Public Works staff, and we threw out ideas. To touch on Commissioner Kane, we tried to pick one area, Strawberry Hill, that's probably going to be the most challenging with the on-street parking, the terraces, and that. We tried to pick an area that was, I would say, that Northridge area, they're an easy area. The Highland Crest area is the middle ground where there's a little bit of challenge from both areas. We didn't want to go all—if we went—because that way you're not going to get a good feel for how the pilot program works. If we went all hard, hard, hard, we wouldn't go from there. It was a combination between our staff and Waste Management. Like I said, they wanted to keep it right around a thousand so that's why we had to adjust some areas.

Commissioner Philbrook asked if we move this forward, does that mean we're agreeing to pay \$79,000 for a pilot program. Is that what that means? **Chairman Bynum** said I would say that we can make any motion that we like including a motion that would require that we re-negotiate the fee and that a pilot wouldn't start until we hear from staff and Waste Management what, if any, fee would be and when a start date would occur. I think we can make any motion here that we like. Maybe we like some of what they said, but not other parts. I see people nodding.

Commissioner Philbrook said I don't—now I'm feeling almost like I'm doing cherry-picking because now I'm picking this apart, but then on the other hand, a lot of the complaints that I've gotten address some of these things like where we're going ahead and where are we stopping. I don't want to stop the whole concept. I do understand that we need to change how we do things.

My biggest concern is around taking care of, eventually, if we should adopt this across the board, about all of the communities being treated equally. That's not happening right now with Waste Management. I'm just wondering why we think that would change other than the fact that everything is in a container. You understand what I'm saying?

Ms. Sieben said, Commissioner, this is the first I've heard your concern tonight. That does trouble myself. If we can talk to John afterwards, that would be great, and anyone else who has a concern. That's why he's here tonight. We certainly want to look at that.

Containerizing isn't a perfect solution. You've heard tonight, we're trying to figure out how that's going to look and how do we address the issues from the elderly and the disabled to some of our extreme topography? One of the concerns I had, why we looked at Highland Crest was I wanted to see places that didn't have basements, that had single car garages that were smaller, how would they handle that. That's why we really looked at trying to have a good geographic representation of all the challenges we would face. Hopefully, based on the feedback we received in our resident survey that we just sent out, I believe you guys are getting the links. We finally have all the completed data now. This was very positively viewed by the community. That was across every district.

I think there are a lot of residents, as we did hear from one of them here, that finds this very interesting. I know personally, I've used these in every place I've lived but here and not had any significant challenges. I did not live in Strawberry Hill, which is my biggest concern is how we're going to handle that there. I know that Waste Management is in almost every major metropolitan area across the United States. If they've done this in Seattle, they can handle it in Kansas City, Kansas.

Commissioner Philbrook said just to express something before I vote, because I want people to understand that I do have concerns on the basic level of across-the-board care for our community. That's number one.

Number two, I want to have assurances from not Waste Management, but from our staff that we'll have more than one conversation in each area for this. I don't want just one cattle call because we need to give people a little bit more options to come in and talk. I understand a lot of times you end up with crickets; nobody shows up. I've done these things and I know, but if we don't give people the option, then we haven't done our job. If they choose not to partake, then that's their choice. I think it's our job to give them the option. Those are my two major concerns along with the additional \$79,000.

Ms. Sieben said that's why when that came back to us—I'll echo the Commission's comments, that did not make me happy either. As Waste Management John walked us through sort of the fact that this is an off, kind of a one off. It's not just taking a route and changing it so there are some initial costs. If we don't decide to go forward with it, they have some costs. That being said, I wasn't that compelled by that argument knowing that we have the money that they

owe back to us. This is an opportunity to use it for something that could ultimately drive benefit for our community. That's why we brought that forward.

Commissioner Philbrook said I'd rather see them put that money into something beyond something that makes it lucrative for them as well. I don't care if it's picking up the park. You understand what I'm saying? That's all I have to say on that.

Action: **Commissioner Markley made a motion, seconded by Commissioner McKiernan, to move this forward to full commission for presentation and a vote at that time. At that time, we would see the presentation and a negotiated fee as well. We wouldn't decide that tonight under my motion.**

BPU Board Member Groneman said I was just concerned if we approve the pilot, was it then going to go back to the full board before it was finally approved or not. **Chairman Bynum** said correct. **BPU Board Member Groneman** said this motion takes care of that.

Commissioner Kane said if staff has talked to anybody in District 5 about the trash issue, I would like the name and a contact number.

Roll call was taken on the motion and there were five "Ayes," Groneman, Philbrook, Markley, McKiernan, Bynum; and one "No," Kane.

Item No. 2 – 18209...TRANSPORTATION MANAGEMENT GUIDE

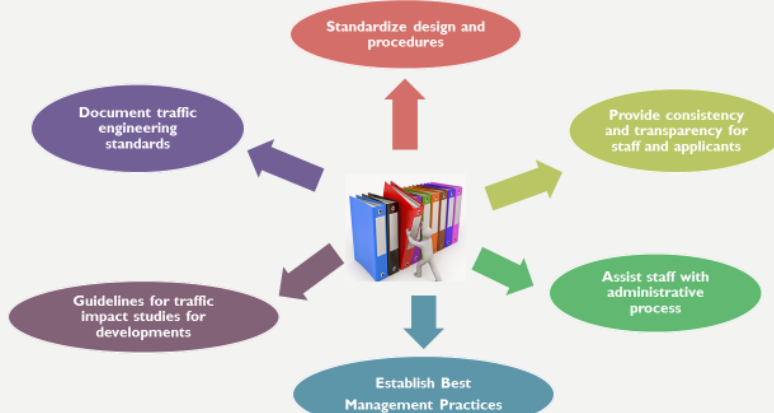
Synopsis: Discuss topics to be included in the Transportation Management Guide, submitted by Lideana Laboy, Public Works. This is the first of a three-part series to discuss the engineering guidelines.

TRANSPORTATION MANAGEMENT GUIDE



Troy Shaw, County Engineer, said what we have, and we're going to kind of keep this quick for you—a major theme of our Public Works Strategic Plan was to improve the transparency and consistency, which we've already talked about a little bit tonight. That's what this Transportation Management Guide is geared to do from the transportation perspective. Lideana is going to go over that with you and kind of what we're looking at. This is an initial kickoff meeting for what we're planning on doing. I think there was an outline of this given to you with the initial RFA that kind of has our original outline of what we're looking at. We're kind of here for your feedback and to let us know if there's anything else you want us to improve and add to that item.

PURPOSE OF THE GUIDE



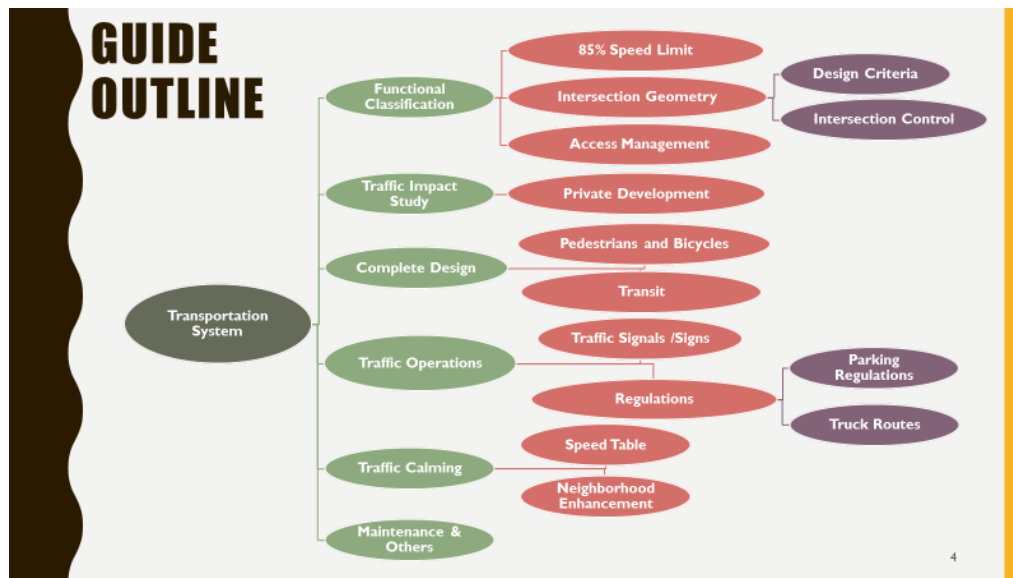
April 23, 2018

Lideana Laboy, City Traffic Engineer, said today we're going to talk about what is the purpose to bring this; just a brief introduction of what this is. What we want to do is just standardize our process and be transparent with everybody that does business with the Unified Government.

This document is going to: document our traffic standards, it's going to help and be uniformed across lines and departments, and it will help as a location tool for the general public and those that come to work with us. In essence, what we're doing is trying to establish what are our best practices to manage the transportation system.



Who will be using this guide? Everybody that does business with us will be using it from commissioners, directors, the general public, engineers, inspectors, and consultants. All of us will be using this document. It's going to be published on the website and it will be online in a way that—it will be a technical document, but it will still be easy to manage as we're going to break it out in sections so that it's easy to manage and people will be able to access it just straight to what their questions and answers are.



You'll receive an outline of the document. It's also attached to your presentation today. I just put this diagram here to kind of put it all together in contents. We're talking about our transportation system. This document will define: what is our transportation system, what is the functional classification and what is related to that and how we establish speed limits, how do we define geometry, and risk management. Those are kind of engineering aspects of this.

We are also addressing private development, traffic impact study. We're going to have a big section there and define when do we need a traffic study, how do we use it, who's going to need or required to do so.

Complete street design—how do we address pedestrians, bicycles, and transit. Also, we're going to have a section about how we operate our system: traffic operations, how we do our traffic signals, signs, and how we set up regulations, how we change regulations. We'll also have common practice; common things people are concerned about like traffic calming. How do I get a speed bump? How do I enhance my neighborhood? These are things that concern me. All those questions that we deal with on a daily basis, we would like to address them in this document to help answer questions and improve transparency.

Mr. Shaw said I just want to add a couple of things real quick. We also provided you an 85% document that I think is from the Louisiana Highway Patrol. Those are the type of questions that this document is going to help answer. That's just an example out there for how you do certain things. We're going to be able to use the document such as that and have sections of this. It will have that. Very easy answers to questions that we hear all the time or that you may have, the

public has to provide those answers so they're out there. That's just an example of kind of what we're looking to do here.

OPEN DISCUSSION

- **What additional transportation related topics would you like to see included in the document?**
- **Which of these topics concern you or the citizens in your districts the most?**




Ms. Laboy said the purpose of the meeting today is to try to let you know what we're doing and a first glance of what is coming, and also to gather information from you. We, in general, have put two questions together, but we are open for any comments that you have.

What additional transportation related topics would you like to see in this document?

Which of these topics are you concerned with or you have more concerns about that are related to the public?

Chairman Bynum said if I could say back to you what I think we're doing is, part of Public Works' overall planning process, part of it is transportation management. The items that you brought forward here are some of, but perhaps not all, the topics that could be included in almost a user guide, if you will, that is going to be a part of your final document when you're done with the entire strategic plan. Is that a fair way to say what you're doing? **Mr. Shaw** said that's correct.

Commissioner Markley said I would just say, and you addressed this in the outline format, the most common questions I get from constituents are: How do I get a speed limit sign? How do I get a stop sign? How do I get a speed bump? Those are the common ones that I receive. Having a format and a system for how those questions get answered would be fabulous.

Ms. Laboy said that was our purpose. It's going to be a full document that is a technical document, and we'll publish the entire document. On the website, it is our intention that we will set it up, break it down in simple questions that people have commonly.

Commissioner Kane said I've had extremely good luck with the speed bumps and stuff like that. They bring out the documentation, set the stuff down, check the speed, and they've done it really good. Now, I didn't get them everywhere I wanted, but the test showed we didn't need it. I've had really good luck with these folks, and I appreciate the work they've done.

Chairman Bynum said I appreciate hearing that very much. I would say to that comment, it might be helpful for, as part of the document, folks to understand that when we request something as a citizen, there are things we do ahead of that to prepare for and analyze and track data and whatnot. That may or may not be helpful in a document like this. I think when we explain to the public why something might be taking longer than they think it should, but we explain to them that there are technical and engineering reasons why, they're willing to accept that. That could be helpful.

Commissioner McKiernan said I really appreciate this. All of the topics that we've talked about in the past are really all included in your guide outline, like traffic calming and parking regulations. Really, it looks like everything that I hear about most frequently is already in your outline.

Chairman Bynum said this won't be the last time we see them. We know you'll be back. We really appreciate the information that you're bringing us. We'll wait for round 2.

Action: **Information only.**

Chairman Bynum adjourned the meeting at 6:18 p.m.

mbb/cg



Staff Request for Commission Action

Tracking No. 18290

Full Commission Meeting Date: 6/28/18

Committee: Public Works & Safety

Date of Standing Committee Action: 6/18/18

(If none, please explain):

Publication Required: No

Date:	Contact Name:	Contact Phone:	Contact Email:	Department/Division:
06/06/2018	Ken Moore	x5070	kjmoore@wycokck.org	Legal

Item Description:

Project Name: Pump Station 61 Force Main Improvements – CMIP #6303

This Resolution declares that this project is a necessary and valid improvement project. This project will run from Donahoo & 123rd St. North along N. 123rd St. before cutting over to N. 123rd Terrace and ending at Wingfoot Drive. These upgrades include both increasing the pumping capacity and constructing a new force main capable of carrying the proposed increased flows. This Resolution directs the Chief Counsel to cause a survey and description of such parcels to be undertaken and prepared by a licensed land surveyor or a professional engineer to identify and describe the property to be acquired for this project, and to submit an Ordinance authorizing the exercise of eminent domain and to undertake all other necessary actions to complete the acquisition of such parcels.

Action Requested:

To adopt the resolution.

Budget Impact: (if applicable)

Amount:

Source:

Included In Budget:

Other (explain):

Attachments List:

1 Resolution.Pump Station 61, Map 1

(Published _____)

RESOLUTION NO._____

A RESOLUTION declaring the necessity and authorizing a survey and descriptions of lands necessary to be condemned for the construction, maintenance, operation, use and repair of the **Pump Station 61 Force Main Improvements (CMIP 6303)**, the construction of a new force main to replace the existing undersized line, all in Wyandotte County, Kansas.

**BE IT RESOLVED BY THE COMMISSIONERS OF THE
UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS**

SECTION 1. It is hereby found and determined necessary that certain lands be condemned for public use providing for land necessary for construction, maintenance, operation, use and repair of the **Pump Station 61 Force Main Improvements (CMIP 6303)**. The project will run from Donahoo & N 123rd Street before cutting over to N 123rd Terrace and ending at Wingfoot Drive. This project is all in Wyandotte County, Kansas.

SECTION 2. The Board of Commissioners hereby directs and authorizes its Chief Counsel to cause a survey and description of such parcels to be undertaken and filed with the Clerk of Wyandotte County/Kansas City, Kansas; to thereafter prepare and submit to the Board of Commissioners an ordinance authorizing the exercise of eminent domain with respect to such parcels; and upon approval of the same by the Board of Commissioners to initiate eminent domain proceedings in the District Court of Wyandotte County, and to undertake all other necessary actions to complete acquisition of such parcels.

SECTION 3. This resolution shall be published once in the official County, newspaper, The Wyandotte Echo.

**ADOPTED BY THE COMMISSIONERS OF THE UNIFIED GOVERNMENT
OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS**

THIS _____ DAY OF _____, 2018.

UNIFIED GOVERNMENT CLERK

APPROVED AS TO FORM:

Ryan Haga
Assistant Counsel

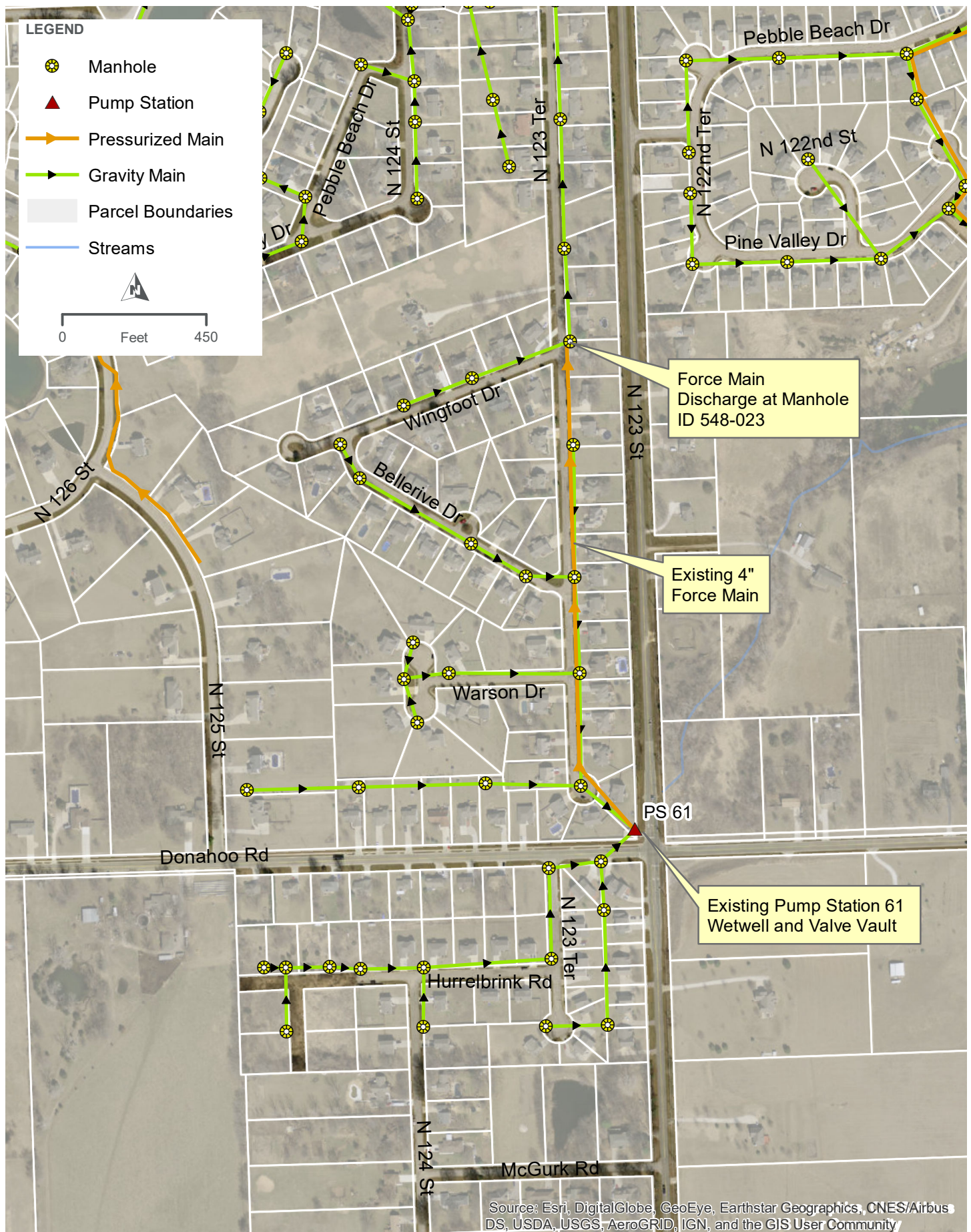


FIGURE 1 - PROJECT LOCATION MAP

PS 61



Staff Request for Commission Action

Tracking No. 18292

Full Commission Meeting Date: 6/28/18

Committee: Public Works & Safety

Date of Standing Committee Action: 6/18/18

(If none, please explain):

Publication Required: No

Date:	Contact Name:	Contact Phone:	Contact Email:	Department/Division:
06/07/2018	Ken Moore	x5070	kjmoore@wycokck.org	Legal

Item Description:

Project Name: Hutton Road Sanitary Sewer Main Extension – CMIP #6001

This Resolution declares that this project is a necessary and valid improvement project. This project is from Hutton Road Sanitary Sewer Main Extension. The project will extend the sewer main to allow development on the East side of Hutton Road. This Resolution directs the Chief Counsel to cause a survey and description of such parcels to be undertaken and prepared by a licensed land surveyor or a professional engineer to identify and describe the property to be acquired for this project, and to submit an Ordinance authorizing the exercise of eminent domain and to undertake all other necessary actions to complete the acquisition of such parcels.

Action Requested:

To adopt the Resolution.

Budget Impact: (if applicable)

Amount:

Source:

Included In Budget:

Other (explain):

Attachments List:

1 Resolution.Hutton Rd SS, Hutton Rd map

(Published _____)

RESOLUTION NO._____

A RESOLUTION declaring the necessity and authorizing a survey and descriptions of lands necessary to be condemned for the construction, maintenance, operation, use and repair of the **Hutton Road Sanitary Sewer Main Extension (CMIP 6001)**, the construction of a sewer main extension for development on east side of Hutton Road, all in Wyandotte County, Kansas.

**BE IT RESOLVED BY THE COMMISSIONERS OF THE
UNIFIED GOVERNMENT OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS**

SECTION 1. It is hereby found and determined necessary that certain lands be condemned for public use providing for land necessary for construction, maintenance, operation, use and repair of the **Hutton Road Sanitary Sewer Main Extension (CMIP 6001)**. The project is located at Hutton Road between Kimball Avenue and Leavenworth Road. This project is all in Wyandotte County, Kansas.

SECTION 2. The Board of Commissioners hereby directs and authorizes its Chief Counsel to cause a survey and description of such parcels to be undertaken and filed with the Clerk of Wyandotte County/Kansas City, Kansas; to thereafter prepare and submit to the Board of Commissioners an ordinance authorizing the exercise of eminent domain with respect to such parcels; and upon approval of the same by the Board of Commissioners to initiate eminent domain proceedings in the District Court of Wyandotte County, and to undertake all other necessary actions to complete acquisition of such parcels.

SECTION 3. This resolution shall be published once in the official County, newspaper, The Wyandotte Echo.

**ADOPTED BY THE COMMISSIONERS OF THE UNIFIED GOVERNMENT
OF WYANDOTTE COUNTY/KANSAS CITY, KANSAS**

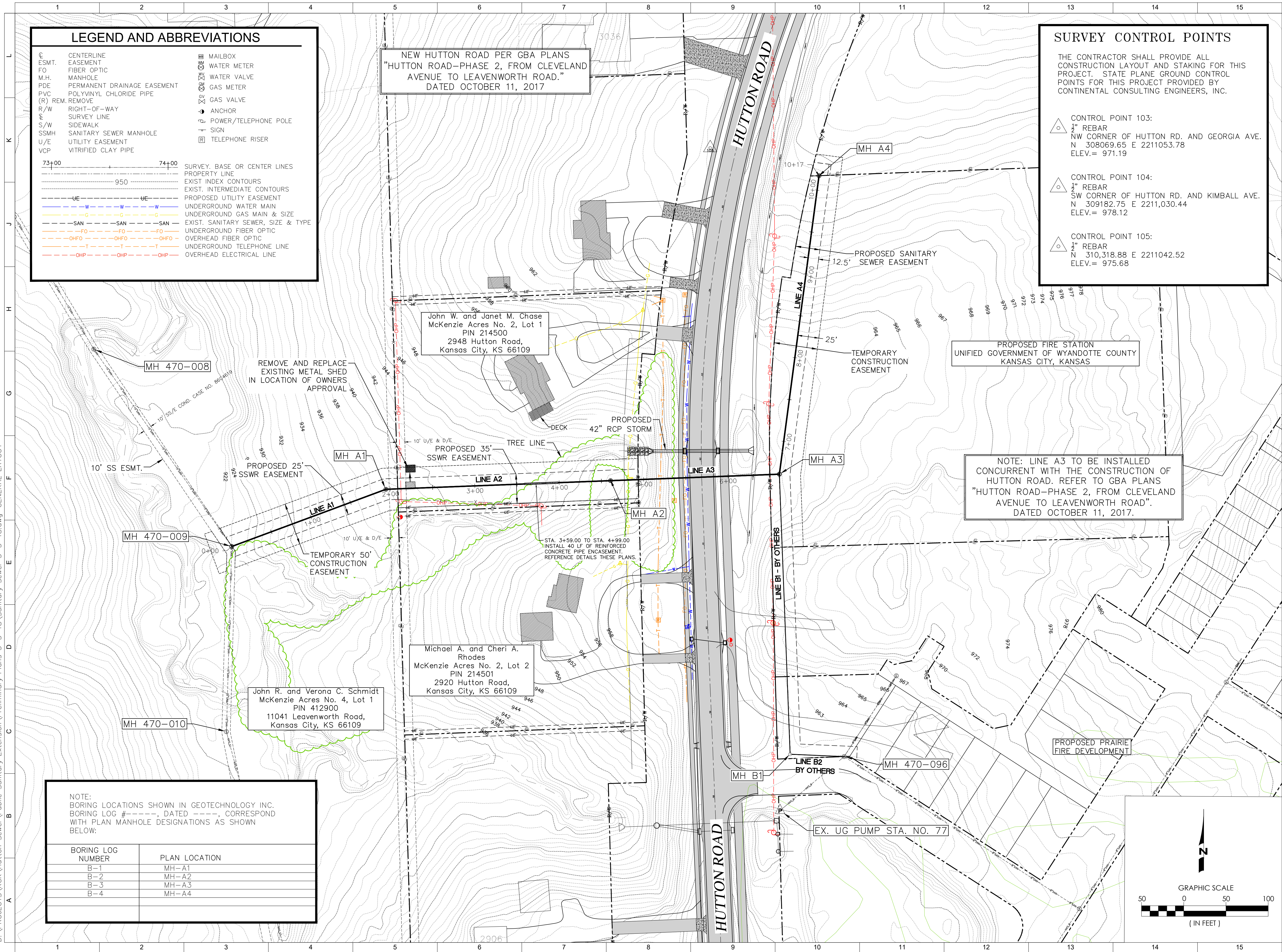
THIS _____ DAY OF _____, 2018.

UNIFIED GOVERNMENT CLERK

APPROVED AS TO FORM:

Ryan Haga
Assistant Counsel

4/6/2018 8:40 AM
D:\PROJECTS\KCK\Hutton Sewer\Public Sanitary Extension\ Preliminary Plans 3-5-18\Sanitary Sewer 3-5-18.dwg - GENERAL LAYOUT



SURVEY CONTROL POINTS

THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION LAYOUT AND STAKING FOR THIS PROJECT. STATE PLANE GROUND CONTROL POINTS FOR THIS PROJECT PROVIDED BY CONTINENTAL CONSULTING ENGINEERS, INC.

CONTROL POINT 103:
1/2" REBAR
NW CORNER OF HUTTON RD. AND GEORGIA AVE.
N 308069.65 E 2211053.78
ELEV.= 971.19

CONTROL POINT 104:
1/2" REBAR
SW CORNER OF HUTTON RD. AND KIMBALL AVE.
N 309182.75 E 2211030.44
ELEV.= 978.12

CONTROL POINT 105:
1/2" REBAR
N 310,318.88 E 2211042.52
ELEV.= 975.68



9000 STATE LINE ROAD
LEAWOOD, KANSAS 66206
11006 PARALLEL PARKWAY
KANSAS CITY, KANSAS 66109
TEL (913) 642-8642
FAX (913) 642-6941
www.ccengineers.com

Unified Government
Wyandotte County, Kansas City, Kansas
PUBLIC SANITARY SEWER EXTENSION

PRELIMINARY

REVISIONS



SEAL

PROJECT NO: 1708-20
DATE: April 12, 2018
DRAWN BY: AT

SHEET TITLE
2 of 8
GENERAL LAYOUT

C101

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Staff Request for Commission Action

Tracking No. 18261

Full Commission Meeting Date: NA

Committee: Public Works & Safety

Date of Standing Committee Action: 6/18/18

(If none, please explain):

Publication Required: No

<u>Date:</u> 05/10/2018	<u>Contact Name:</u> Alan Howze	<u>Contact Phone:</u> x8951	<u>Contact Email:</u> ahowze@wycokck.org	<u>Department/Division:</u> Knowledge
<u>Item Description:</u> Information update on the buildout of the fiber network. Update will include progress in connecting police department locations, City Hall, and other UG locations.				
<u>Action Requested:</u> For information only				
<u>Budget Impact: (if applicable)</u> Amount: Source: Included In Budget: Other (explain):				
<u>Attachments List:</u>				



Staff Request for Commission Action

Tracking No. 18288

Full Commission Meeting Date: N/A

Committee: Public Works & Safety

Date of Standing Committee Action: 6/18/18

(If none, please explain):

Publication Required: No

<u>Date:</u>	<u>Contact Name:</u>	<u>Contact Phone:</u>	<u>Contact Email:</u>	<u>Department/Division:</u>
06/05/2018	Brent Thompson	x5710	bthompson@wycokck.org	Public Works

Item Description:

This is a follow up to the Roadside Memorial presentation on 5/21/2018. We will be looking to get feedback on the following;

Informal memorials – timeframe?

Long Term memorials – timeframe?

Anniversary memorials – timeframe?

Sign – Standard or allow for options?

Sign expense – require a fee or not?

Handouts will be provided at the meeting.

Action Requested:

Budget Impact: (if applicable)

Amount:

Source:

Included In Budget:

Other (explain):

Attachments List:

Roadway Policy, Roadside Memorial Application

**Unified Government of Kansas City,
Wyandotte County, Kansas.**
Public Works Roadside Memorial Policy
May 29, 2018

A. Purpose

1. The purpose of the Memorial Sign Program is to:
 - a. Provide families of persons fatally injured in crashes a way to memorialize their loved one and raise awareness for safe driving;
 - b. Ensure that memorial signs are located and installed in a safe and consistent manner; and
 - c. Increase the public's awareness of the need to drive safely.

B. Definitions

1. Deceased: Any person who was fatally injured in a vehicle crash.
2. Immediate family member: A spouse, domestic partner, child, stepchild, brother, stepbrother, sister, stepsister, mother, stepmother, father, stepfather, grandparent, or step grandparent of the deceased.
3. Single crash site: The site of all vehicle crashes that occur within 1,000 feet from each other, regardless of when they occur.

C. Short-term memorials and anniversary memorials

1. The placement of short-term memorials shall be allowed in the right-of-way for up to ?? days after an accident with the following conditions: (recommend 14 days)
 - a. The memorial does not exceed three feet in height, up to nine square feet in surface area and is contained in the right-of-way.
 - b. The memorial does not cause unsafe conditions for passing motorists, pedestrians or bicyclists or for people who are maintaining or visiting the memorial. At the sole discretion of the City, items may be rearranged or removed to improve safety.
 - c. Those visiting and/or maintaining the memorial comply with all other applicable laws.
 - d. No memorials placed on City Bridges.
 - e. The Public Works ROW Manager must be notified in advance and provided with contact information. Contact 913-573-5700 or email??
2. At the end of the ??-day period, the City will contact the family prior to removing any items from the memorial site.
3. The placement of an anniversary memorial shall be allowed in the right-of-way for up to ?? days (recommend 7 days) after each anniversary of the vehicle crash, for up to ? years (recommend 3 years). At the end of the ??-day period, the City may remove any items from the memorial site.
4. Candles shall not be allowed at memorial sites and will be immediately removed by the City.
5. The City, at its sole discretion, can remove a memorial immediately in response to a threat to public safety.

D. Long-term memorial application procedure

1. An immediate family member may apply to sponsor a sign memorializing the deceased.
2. The applicant must complete and return a memorial sign application form found on the City's website or can be picked up at the Public Works business office on the 7th floor of City Hall. The documentation provided (accident report) by applicant must establish that the deceased died because of a vehicle crash at a specific location in the City of Kansas City, Kansas.
3. In the absence of the accident report, the applicant may produce other information or documents as requested by the Right-of-Way Manager.
4. Sign applications will not be accepted for private streets.
5. The sign should not be installed in front of developed / residential property unless the adjacent property owner has given written permission to the requester for a specific period.
6. A person may file an application under this policy to memorialize a fatality in a crash that occurred not more than six months prior to the application date.

E. City review of long-term memorial sign application

1. The City shall review all applications to ensure they are complete and accurate (additional documentation may be necessary).
2. The City can deny any application that does not meet the criteria set forth in this Policy or does not contain the information required in this Policy or in the application.
3. Within 15 working days after the City receives a **correctly completed** application submitted pursuant to this policy, the City shall complete its review of the application, inspect the proposed site for the memorial sign and send a written decision to the applicant indicating approval or denial of the application. At this time, the City will indicate the proposed location of the memorial sign.

F. Location, placement, and ownership of long-term memorial signs

1. Once an application has been approved, the applicant must pay the fee set forth in the City of KCK Public Works fee schedule to cover the cost of administration, fabrication, installation, and maintenance of the memorial sign.
2. The City will select, purchase, install, remove, and retain ownership of memorial signs.
3. **?" by ?" (size of sign)** signs will be installed in accordance with applicable City policies and Manual of Uniform Traffic Devices (MUTCD) standards for signs. This includes posts, hardware, materials, vertical, longitudinal, and lateral positioning. **?" by ?" (size of plaque)** name plaques shall be installed directly below the sign.
4. Memorial signs shall be placed only in a City right-of-way, on the right side of the roadway, facing oncoming traffic. Signs will not be installed in the median of any City roadway.
5. Memorial signs will be placed near the accident location or where the City determines it is safe and practical to do so.
6. Only one sign will be installed per intersection or per 1,000 feet of roadway for each direction of traffic. A sign will not be placed in a location where the memorial sign obstructs the visibility of an existing traffic sign, or traffic signal or impairs sight distance less than the adopted City standards. Signs will not be placed on city owned bridges, or where these signs cause any concern or obstruction to any public structure.

7. The City will not replace the sign should it be vandalized, damaged, or found missing; however, the applicant may apply for a new sign under the requirements of this policy, including payment of the fee set forth in the City of KCK Public Works fee schedule.
8. Unless it is determined that public safety requires the sign to be removed, the City of KCK will allow the sign to remain in the right-of-way ? (recommended 10) years after its placement, or until the City determines that the condition of the sign has deteriorated to a point where it is no longer serviceable, whichever occurs first. The City shall remove and retain ownership of the sign after removal. The City may properly dispose of the sign unless applicant has requested, in writing on the application, possession of the sign after its removal. The applicant shall be responsible for promptly obtaining the sign from the City after its removal. Any signs left unclaimed will be disposed of. The request to take possession of the sign is incumbent on the applicant.
9. There will be no additions to the sign at any time, not limited to balloons, bows, ribbons, teddy bears, candles, pictures, tied to or located near the sign.

G. Wording on long-term memorial signs

1. One of the following six messages, related to the cause of the crash, is available for standard memorial sign installation. The City, in its discretion, shall determine whether the requested message is related to the cause of the crash:
 - a. *Don't drink and drive.*
 - b. *Drive safely.*
 - c. *Seat belts save lives.*
 - d. *Watch for pedestrians.*
 - e. *Watch for bicyclists.*
 - f. *Watch for motorcyclists.*
2. A secondary plaque displays the message *In Memory Of*, together with the victim's name (See Attachment A).

H. Multiple long term memorial sign applications

1. Only one sign will be installed per single crash site. Should a sign already exist, an additional name plaque may be added to an existing sign upon City approval. Multiple deceased names may appear on one sign.
2. The City may approve applications for an additional memorial sign at an existing crash site under the following circumstances:
 - a. Additional name plaques can't be attached to the existing sign installation; or
 - b. A second memorial sign can be installed across the roadway from the first sign installation so that the second sign installation faces the traffic approaching from the opposite direction.
 - c. site allows for two signs

	ROADSIDE MEMORIAL MARKER APPLICATION	Please return completed form to: Unified Government of Wyandotte/KCK Public Works Dept - ROW 701 N. 7th St. Ste 712 Kansas City, KS 66101
Application Criteria: -Any person that has died in a moto vehicle, pedestrian or bicycle accident on roadways within KCK city limits is eligible to have a memorial sign in his or her honor -Requests must be made by an immediate family member -Memorial markers will be allowed to remain in place for ## years after installation unless earlier removal is necessitated by construction or safety concerns. -Memorial markers will be designed, constructed and installed by the UG Street Department. Applicant will be responsible for all costs of the sign.		
Location of Crash: 		
Date of Crash: 	Name of Deceased: 	
Safety Message requested on Sign (Pick One): ☐ Seat Belts Save Lives ☐ Don't Drink & Drive ☐ Drive Safely ☐ Watch For Pedestrians ☐ Watch For Bicycles ☐ Watch for Motorcycles		
Name of Person Requesting Sign: 	Relationship to Deceased: 	
Street Address: 	City: 	State:
Daytime Phone Number: 	Evening Phone Number: 	E-mail Address:
Signature of person requesting sign: 		Date Requested:

*By completing and signing this form you confirm, that you have read and agreed to the **Public Works Roadside Memorial Policy** attached to this form*

Office Use Only					
Sign Location in Residential Area?	Yes	No	Abutting Resident's Approval Obtained?	Yes	No
	Signature		Date		
\$ ## Fee Collected					
Application Approved					
Sign Posted					
Sign Removed					



Staff Request for Commission Action

Tracking No. 18289

Full Commission Meeting Date: N/A

Committee: Public Works & Safety

Date of Standing Committee Action: 6/18/18

(If none, please explain):

Publication Required: No

<u>Date:</u>	<u>Contact Name:</u>	<u>Contact Phone:</u>	<u>Contact Email:</u>	<u>Department/Division:</u>
06/06/2018	Lideana Laboy	x5771	llaboy@wycokck.org	Public Works

Item Description:

This meeting is to highlight content within the (draft) Traffic Management Guide that Commissioners commonly get questions from constituents.

85% percentile speed limit

Traffic Calming

Special Signs

Handouts will be provided at the meeting.

Action Requested:

For information only

Budget Impact: (if applicable)

Amount:

Source:

Included In Budget:

Other (explain):

Attachments List:

UG Traffic Policy final working file_06_06_2018

PUBLIC WORKS ENGINEERING

TRANSPORTATION MANAGEMENT GUIDE

(DRAFT DOCUMENT)



Introduction

The Unified Government Public Works Strategic Plan includes a comprehensive review of standards, practices, and application of all aspect of engineering processes. To supplement this effort, UG Public Works Engineering team has developed a Transportation Management Guide that will be used by engineers, designers, consultants, private development, and public for the application of engineering practices. This document outlines the general guidelines for the planning, design, operation and maintenance of the transportation network within the city limits of Kansas City, KS in Wyandotte County. The purpose of this guideline is to help in the communication and coordination between all parties who conduct business with the Unified Government. This document provides the following objectives:

- Standardized design criteria consistently with the KC region
- Define best practice and consistency on engineering applications
- Outline general procedures for engineering evaluation and application
- Define guidelines to identify and address public concerns
- Serve as an educational tool to understand engineering principles and practices

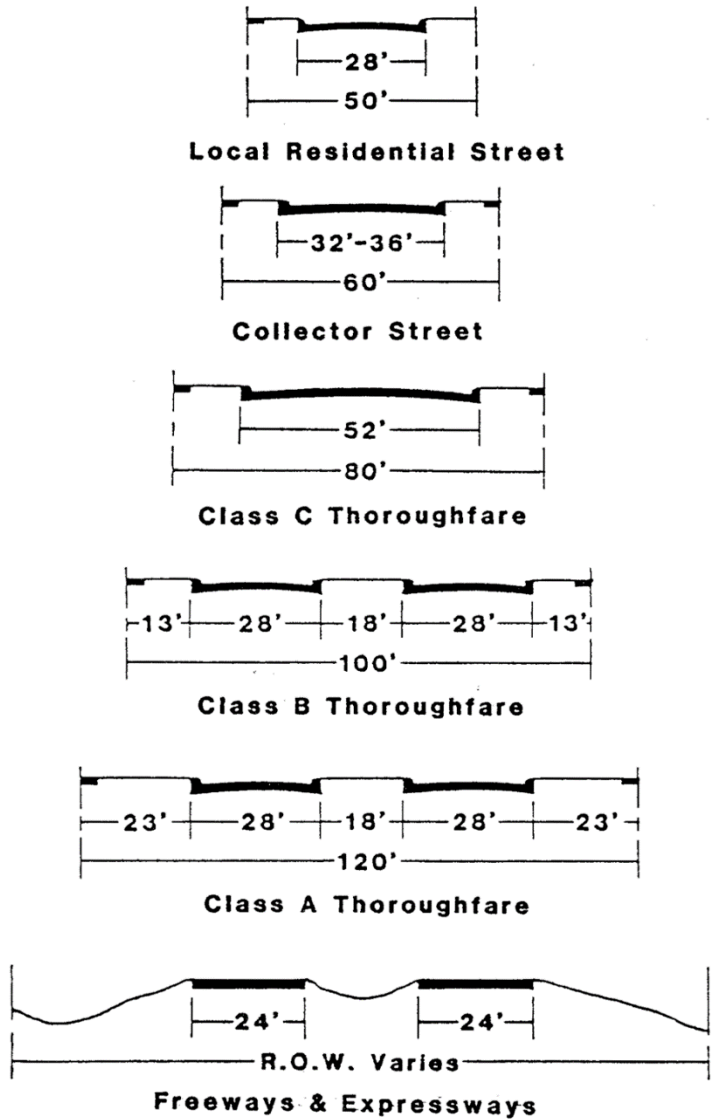
I. FUNCTIONAL CLASSIFICATION OF ROADWAYS

Generally. The classification of highways into different operational systems, functional classes, or geometric types is necessary for communication among engineers, administrators, and general public. Different classifications schemes have been applied for different purposes in different rural and urban areas. Classification of highways by design types based on the major geometric features (e.g. freeways, main arterial, collectors or local streets) is the most helpful for highway location, design, maintenance and operation procedures. The components of the major street system in the Unified Government of Wyandotte County and Kansas City, Kansas are divided into five classifications with corresponding right-of-way widths. The five main classifications are:

- **Freeways and expressways** - A freeway or expressway is a limited access, high speed highway with grade separated interchanges. Freeways are of regional significance and the interchanges may have a significant impact on land use due to their desirability as locations for commerce and industry. They may, however, create barriers to cross vehicular and pedestrian traffic except where such crossings are provided for. Freeways are included in the major street system but are generally controlled entirely by higher government jurisdictions, and their right-of-way width shall be set by those jurisdictions.
Example: I-70, I-635, I-435 etc.
- **Class A thoroughfares** - The proposed right-of-way of a class A thoroughfare is 120 feet. These are thoroughfares having up to six lanes with a traffic handling capacity of up to 40,000 vehicles per day. Medians may be required, and such streets may be selectively developed as parkways.
Examples: Kansas Avenue, Parallel Parkway, State Avenue
- **Class B thoroughfares** - The proposed right-of-way of a class B thoroughfare is 100 feet. These are thoroughfares having up to four lanes. Medians may be required, and such streets may include on-street parking in the older commercial areas of the city.
Examples: Central Avenue, James Street, Fairfax
- **Class C thoroughfares** - The proposed right-of-way of a class C thoroughfare is 80 feet. These are thoroughfares having up to four lanes.
- **Collector and local streets** - The proposed right-of-way of a collector street is 60 feet. A collector street's primary role is to collect traffic from the local streets it serves and move it to an arterial or thoroughfare. Residential collectors are typically spaced at one-half mile intervals from thoroughfares and provide the bulk of the mileage of streets on the major street plan. A collector street should be a wide two-lane improvement. Local streets connect to collector street and have a proposed right-of-way of 32 ft or less.

The classification of the roadway is an important part in defining the design, maintenance and operation of the street segments. The application of the procedures described in this document are closely related the classification of each road segment. Figure 1 shows the typical sections for each roadway classification.

Figure 1: Typical Section of Roadway Segment per Roadway Classification



II. TRAFFIC CONTROL DEVICES

UG recognizes the Manual on Uniform Traffic Control Devices (MUTCD), the latest revised edition as adopted by the Kansas Department of Transportation (KDOT), as the standard for all traffic control devices on all public roads, and adjacent developments. Traffic control devices are classified as follow:

A. Signs

Regulatory Signs: Signs used to regulate traffic, and by law, drivers are expected to obey.

Examples: Stop, Yield, Speed Limit, No Parking, One Way

Warning Signs: Sign used to indicate a hazard ahead.

Examples: Dead End, Stop Ahead, Curve Ahead

Guide Signs: Signs used to guide motorists.

Examples: street name signs, route markers, destination and distance

B. Pavement Markings

C. Traffic Signals

D. Traffic Control Devices in School Areas

Examples: School signs, flashing school zone assembly

E. Temporary Traffic Control Devices - used to manage traffic through construction zones, utility work, other temporary conditions

Examples: orange cones, orange warning signs, temporary intersection control, flaggers

Installation of Traffic Control Devices

All requests for the installation for new traffic control devices shall be directed to the City Traffic Engineer. Request are accepted either at the Public Works Engineering Office in person, by phone, or in writing in the form of a letter, email or online services. All requests will be reviewed in order of priority based on the validity, feasibility, and necessity in accordance with the MUTCD and applicable engineering standards.

Multiple processes detailed below may be required to review, analyze and warrant the installation of any traffic control device.

- Field visit, observation of concern, data collection
- Review of MUTCD guidance and application
- Review of accident history reports
- Warrant Analysis
- Safety Analysis
- Capacity Analysis
- Public Hearing

III. MUTCD WARRANTS FOR INTERSECTION TRAFFIC CONTROL DEVICES

A. STOP or YIELD Control

Minor street (lower ADT) approaches may be considered for STOP or YIELD control upon one or more of the following conditions:

- The sight distance or road geometry is deemed insufficient to permit drivers to pass through without a STOP or YIELD in compliance with the normal right-of-way rule.
- The major street is listed in Appendix B, Table 2 as a Through Street.
- The number of crashes deemed correctable by the installation of a STOP or YIELD sign, exceeds two in four years.
- The total volume entering the intersection exceeds 1000 vehicles per day.
- The posted speed limit on the major street exceeds 25 mph.
- The STOP control guidance of MUTCD 2B.06 is applicable.
- The YIELD control guidance of MUTCD 2B.09 is applicable.
- The intersection is at or near a school and pedestrian/bicycle crossings are expected to exceed 25 per hour during any consecutive two hours of the day.

B. Multi-Way STOP control

Multi-way stop control signs are a safety measure at an intersection if certain traffic conditions exist. Multi-way stop control signs are used in locations where the intersection approach traffic volumes are approximately equal. An engineering study should be completed to determine if the multi-way stop control should be installed at an intersection. The City Traffic Engineer may consider the installation of a multi-way stop control if one or more of the following conditions apply as defined in the MUTCD, Section 2B.07:

- After stopping at the appropriate location, road users cannot see conflicting traffic and are not able to negotiate the intersection unless conflicting cross traffic is also required to stop.
- The intersection is at or near a school and pedestrian/bicycle crossings are expected to exceed 50 per hour during any consecutive two hours of the day.
- The intersection control guidance and options of MUTCD 2B.07 are applicable per warrant analysis for Multi-Way Stop Control as outlined below:
 - Where traffic control signals are justified, multi-way is an interim measure that can be installed quickly to control traffic while arrangements are being made for installation of the traffic control signal.
 - Five or more reported crashes in a 12-month period that are corrected by a multi-way stop installation. Such crashes include right-turn and left-turn collisions as well as right-angle collisions.
 - Minimum volumes:

- The vehicular volume entering the intersection from the major street approaches (total of both approaches) average at least 300 vehicles per hour (vph) for any 8 hours of an average day; and
 - The combined vehicular, pedestrian, and bicycle volume entering the intersection from the minor street approaches (total of both approaches) averages at least 200 units per hour or vph for the same 8 hours, with an average delay to the minor-street vehicular traffic of at least 30 seconds per vehicle during the highest hour; but
 - If the 85th percentile approach speed of the major-street traffic exceeds 40 mph, the minimum vehicular volume warrants are 70 percent of the value provided in Items 1 and 2.
- Where no single criterion is satisfied, but Criteria B, C.1, and C.2 are all satisfied to 80 percent of the minimum values.
Additional criteria listed in MUTCD Section 2B.07 is considered in the engineering study to justify the use of multi-lane stop sign control.

C. Traffic Signal Control Warrant Analysis

An engineering study of traffic conditions, pedestrian characteristics, and physical characteristics of the location shall be performed to determine whether installation of a traffic control signal is justified at a particular location. The investigation of the need for a traffic control signal shall include an analysis of the applicable factors contained in the following traffic signal warrants and other factors related to existing operation and safety at the study location:

- Warrant 1, Eight-Hour Vehicular Volume
- Warrant 2, Four-Hour Vehicular Volume
- Warrant 3, Peak Hour
- Warrant 4, Pedestrian Volume
- Warrant 5, School Crossing
- Warrant 6, Coordinated Signal System
- Warrant 7, Crash Experience
- Warrant 8, Roadway Network

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal. For more information, refer to Section 4C.01 – Studies and Factors for Justifying Traffic Control Signals, in the Manual on Uniform Traffic Control Devices (MUTCD).

D. Other Intersection Geometry Used to Manage Capacity and Safety at Intersections

In addition to three or four leg intersections, various innovated intersection configuration may be considered to manage the operation, capacity, and safety at roadway intersection. An engineering study must be performed in other to identify the effectiveness of the proposed modifications. Examples of intersection geometry configuration commonly used at intersection are:

- Roundabouts
- Continuous Traffic Flow
- Diverging Diamond
- R-CUTS
- Others

IV. TRAFFIC REGULATIONS

A. Speed Limit

Speed zoning is the establishment of reasonable and safe speed limits based on roadway design or an engineering study. The basis intent of speed zoning is to identify a speed limit that reflects the safe speed as determined by a large majority of the drivers. The most widely acceptable method to establish speed zoning is to set the limit based on the 85-percentile speed for a given road section.

Note: Speed limit on all streets in KCK are 25mph unless posted otherwise.

The **85th Percentile Speed** is the speed at or below which 85 percent of all vehicles are observed to travel under free-flowing conditions past a nominated point. Research has shown that the 85th percentile speed is the speed where accident involvement is the lowest, as it is the pace adopted by reasonable people, according to each road environment. While most people are trying to reach their destination as fast as possible, studies show that most people drive at a reasonable and prudent speed appropriate for the normal traffic, weather, and roadway conditions.

The important elements that impact speed include:

- Lane and shoulder configurations and widths
- Presence of vertical and horizontal curves
- Sight distance and obstructions (i.e.; ROW trees and bushes, parked cars, etc.)
- Presence and proximity of buildings.

Therefore, when the maximum speed limit is set to the 85th percentile speed, it is known that at 85 percent of drivers will be driving within the law, whereas under conventional lower speed limits, typically less than half of the drivers obey the speed limit. It leads to safer travel a more effective allocation of enforcement and better management of resources.

Inappropriately low speed zones lead to conflicts in the objective for a *steady flow of traffic*. Motorists become frustrated which leads to unsafe practices. Contrary to popular belief or perception, speed is not a primary cause of accidents; variations in actual speed of motorists leads to uncertainty for those navigating the street and potential conflicts. Therefore the 85th percentile +/- 5mph is the best standard.

The City Traffic Engineer in coordination with law enforcement will identify adjustment to existing maximum speed limit based on the engineering analysis of the speed data, conditions of the road, safety of the people and prevailing traffic flow.

B. Advisory Speed Limit Signs

Advisory speed limit signs (yellow signs) may be installed on streets under the jurisdiction of the UG as directed by the City Traffic Engineer or approved designee and in accordance with the MUTCD.

C. Designation of School Zone Areas

Placement of school speed zones, school pedestrian crossings, and other traffic control devices are designated by the City Traffic Engineer in compliance with the MUTCD Part 7 – Traffic Control For School Areas. The City Traffic Engineer may designate and post appropriate speeds in school zones any time

between the hours of 7:00am and 4:00pm on school days in coordination with school districts and school activities. Continuous coordination with the school districts shall be provided during the planning, designation, installation, or modifications of school zone areas and corresponding traffic control devices.

D. Special Regulatory, Warning, or Guidance Signs

All regulatory, warning, or guidance signs are installed according to MUTCD compliance.

Examples of special signs often requested by citizen but not supported by MUTCD include but not limited to ***Deaf Child Area, Blind Person Area, or other special conditions.***

These signs are not supported by MUTCD because they give motorists and pedestrians a false sense of security. The street is not a playground and should be navigated per speed limit, good driving practices and responsible use of designated crossings.



E. Alley Stop Signs

The UG does not install or maintain traffic control devices in alleys.

F. Railroad Crossing Signs and Markings

Railroad crossing signs and markings within the UG are owned and maintained by railroad authority. UG is responsible for the signs and pavement markings in advance of the railroad crossing. Design standards shall meet the MUTCD part 8 and shall be approved by the City Traffic Engineer.

G. Pavement Markings

Pavement markings are installed under the direction of the City Traffic Engineer or approved in accordance with part 3 of the MUTCD. The City has a pavement marking program consisting of both construction and maintenance elements in order to provide acceptable levels of markings on streets within the network. It is not feasible to maintain pavement marking minimum retroreflectivity levels for all markings at all times. Winter operations and maintenance activities can damage and even obliterate markings such that pavement markings in the winter and spring may have little or no measurable retroreflectivity. In addition, during wet conditions the performance of conventional pavement markings is typically much less effective than during dry conditions. Also, pavement marking replacement periods are limited to seasonal cycles (dry pavements and pavement temperatures above 50 degrees Fahrenheit) making it impractical to perform pavement marking maintenance activities during winter months. In order to utilize the funds effectively, pavement markings shall not be replaced prior to any planned overlay, crack sealing or asphalt work.

H. Pavement Marking Maintenance

The maintenance element of the pavement marking program consists of an annual visual assessment of in-place markings to identify the segments of the UG's transportation network that will be refurbished in any given year. The visual assessment will consist of street division staff conducting a nighttime inspection of all marked city streets and recording their determinations relative to whether or not the markings meet the adopted performance measures. The annual program for refurbishing the pavement markings will then be developed based on addressing those facilities where the markings have been determined to no longer

meet the adopted performance measures. Edge and centerline markings will be refurbished utilizing latex paint. Latex paint is a water based paint that is typically most cost-effective. A 4" line has a life expectancy of 2 years on low volume streets (less than 1,500 vehicles per day) and 1 year on higher volume streets (greater than 1,500 vehicles per day).

I. New Construction and Development Projects Pavement Markings

See UG Engineering Standards

J. Pavement Markings on Residential Streets

It is not necessary nor best practice to utilize pavement markings on residential streets. If markings are placed on residential street, they will be consistent with required passing/no passing markings and comply with part 3 of the MUTCD.

K. Pedestrian and School Crosswalk Pavement Markings

The City encourages for safe pedestrian crossings of public streets by installing and maintaining marked crosswalks at locations where there is substantial conflict between vehicle and pedestrian movements, significant pedestrian concentrations, where pedestrians would not otherwise recognize the proper place to cross, and where traffic movements are controlled.

A "marked crosswalk" is any crosswalk that is delineated by painted markings placed on the pavement for the purpose of directing pedestrians to use a particular location to cross the street. Crosswalks may be marked at intersections controlled by traffic signals or stop/yield signs ("controlled crossings"), or at locations where traffic is not controlled by signals or stop/yield signs ("uncontrolled crossings").

Marked crosswalks are viewed widely as "safety devices," and most municipalities give the pedestrian the right-of-way when within them. However, there is strong evidence that these facts prompt many pedestrians to feel overly secure when using a marked crosswalk. As a result, pedestrians often place themselves in a hazardous position by believing that motorists can and will stop in all cases, even when it may be impossible to do so. It is not unusual for this type of aggressive pedestrian behavior to contribute to a higher incidence of pedestrian accidents and causes a greater number of rear-end collisions. In contrast, a pedestrian crossing outside marked areas generally feels less secure and less certain that the motorist will stop and thereby exercise more caution and waiting for safe gaps in the traffic stream before crossing.

Despite the above safety issues, a marked crosswalk is a useful traffic device for helping pedestrians across complex intersections, channelizing pedestrians to safe crossing locations, and minimizing their exposure to vehicular conflicts, as long as sound information and engineering judgment is exercised in their location and design. Crosswalk lines should not be used indiscriminately at mid-block locations away from traffic signals or stop signs. Crosswalks may be marked at mid-block locations, however, if an engineering evaluation determines it is safe to do so, and their presence is necessary to concentrate pedestrian crossing activity at a specific location. A mid-block crosswalk is not likely to be effective if it occurs at random locations within a block and if vehicle volumes are high (adequate gaps are available).

When a mid-block crosswalk is marked, the crosswalk must comply with MUTCD 2B.11, 2B.12, 3B.16 and 3B.18. The crosswalk must contain yield lines with Yield Here to Pedestrian (R1-5) signs.

Crosswalks should also not be marked on 2-lane roadways with ADT greater than 9,000 vehicles per day, or 4-lane roadways with ADT greater than 12,000 vehicles per day, unless other special treatments - such as raised median refuges, curb extensions, overhead lighting, pedestrian-activated signals or warning lights - are provided, and an engineering study concludes that pedestrian safety will be ensured by the special treatments.

L. Unsignalized Intersection Crosswalks

At unsignalized intersections, crosswalks shall typically remain unmarked, Unsignalized intersections may be marked for the following reasons:

- At or near a school where it is determined that a crosswalk should be marked per MUTCD Part 7.
- At an intersection approach with STOP or YIELD control in place, where the pedestrian crossing path is unclear, or where a preferred pedestrian pathway exists based on intersection geometry, ADT, speed limit, and other safety considerations.
- At a roundabout intersection per MUTCD 3C.05.
- As determined necessary to improve the safety of an existing condition.

Marked intersection crosswalks shall consist of solid white lines not less than six inches or greater than 24 inches in width. Installation should consider additional guidance in MUTCD 3B.18.

M. Stop Line and Yield Line Pavement Markings

Stop and Yield lines are not installed unless warranted based upon the judgment of the City Traffic Engineer. Stop lines are typically installed at STOP intersections with marked crosswalks and where it is necessary to define the point of stopping at an intersection or railroad grade crossing to ensure motorist and pedestrian safety. When used with a crosswalk, stop lines are placed a minimum of four feet in advance of the nearest crosswalk line. Stop lines must be 12 to 24 inches wide and follow standards and guidance per MUTCD 3B.16.

v. TRAFFIC CALMING

A. Introduction to Traffic Calming

Traffic calming is an integrated approach to traffic planning that seeks to create a more livable urban environment by reducing the undesirable impacts that traffic can have on neighborhoods.

Traffic calming policies have been developed to preserve an environment where people can live and work without being threatened by traffic related problems. The most common traffic problems on local streets and residential collectors are associated with the following elements:

- 1.Excessive speeds

2. Cut through traffic
3. Inadequate pedestrian facilities

Engineering tools include a variety of traffic calming devices that can reduce speed, decrease passenger car volumes, and improve safety on local streets and residential collectors.

B. Criteria for Consideration of Placement of Citizen Initiated Traffic Calming Devices – Local Streets and Residential Collectors

Note: all streets in KCK are 25mph unless otherwise posted.

C. Eligibility criteria for calming devices to reduce speeds:

1. The street must be classified as a local street or residential collector and
2. The 85th percentile speed observed is 5 M.P.H. over the posted speed limit and
3. 24-hour volume is more than 500 vehicles for local streets and 1,500 for collectors and
4. Available funds and
5. The neighborhood must support the project as evidence by the submission of the petition of interest in the format of Exhibit A.

D. Eligibility criteria for calming devices to reduce the volume of cut through traffic:

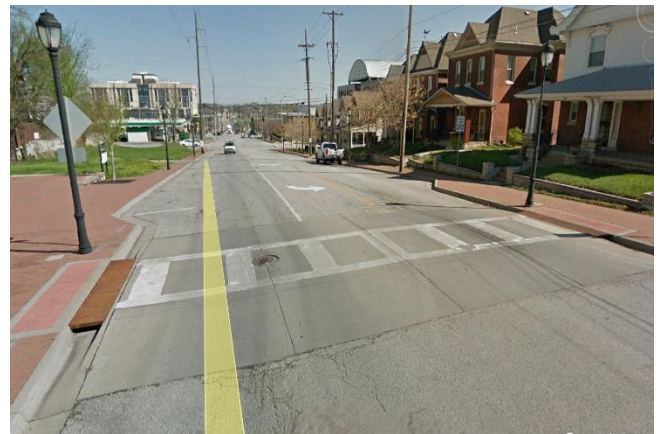
1. The street must be classified as a local street or collector and
2. The typical weekday traffic volume must exceed 500 vehicles per day for local streets and 1,500 vehicles per day for collectors. Alternative actions should be considered when traffic volumes on the study street exceed 3,000 vehicles per day. Many streets in the community are favored by drivers because of convenience, although the original intent may have been for only local use, altering the path of vehicles would likely bring negative impacts to the community as a whole. A system analysis may be necessary to thoroughly examine potential result in improvements on the major routes that would provide the needed capacity. A project of this type would need to be budgeted and handled as a major improvement project if feasible and
3. Other arterial and collector facilities are available to accommodate diverted traffic and
4. Fund availability and
5. The neighborhood must support the project as evidence by the submission of the petition of interest in the format of Exhibit A.

E. Types of Calming Methods

- **Speed Humps:** A section of pavement rising to a maximum height of 3 inches to 4 inches at the center, usually extending the width of the roadway. The number of speed humps installed on a street depends on the length of the street. For speed humps to be effective, they must be installed in a series, approximately 250 to 600 feet apart. Speed humps must be located a minimum distance of 150 feet from the intersection. Speed humps must be installed at least 15-20 feet away from the driveways and alleys. The street segment under consideration must be at least 550 feet.



- **Speed Tables:** A flat topped section of pavement between 7 and 10 feet wide that is raised between 3 and 6 inches and usually extends the width of the roadway. Speed tables are similar in function to speed humps and have the same application standards. However, speed tables are to be used at crosswalks as well as speed reducers. One major benefit of speed tables is that people cross at the point where drivers decrease speed.



- **Raised Intersection:** Raised intersections are flat raised areas covering an entire intersection with ramps on all approaches and often with brick or other textured materials on the flat section. By adjusting the level of the convergence, the crosswalks will probably be seen as “pedestrian territory”.



- **Raised Crosswalk:** Raised Crosswalks are Speed Tables equipped with crosswalk markings and signage to direct pedestrian crossings, providing a level street crossing. By raising the level in which the pedestrians cross they become more visible to approaching motorists.



- **Bulbouts:** With bulbouts in place, the driving lane is successfully narrowed to a proper size. Bulbouts are typically placed at the intersections of cross-streets, which also allows the device to act as a pedestrian haven. Bulbouts help protect the parked vehicles from traffic.



- **Roundabouts:** Circular intersections with specific design and traffic control features. These features include yield control of all entering traffic, channelized approaches, and appropriate geometric curvature to ensure that travel speeds on the circulatory roadway are typically less than 30 mph. Thus, roundabouts are a subset of a wide range of circular intersection forms.



- **Semi Diverter:** Semi-diverter is a curb extension or barrier that restricts movement into a street. The semi-diverter is constructed at approximately the center of the street, effectively obstructing one direction of traffic. The semi diverter creates a one-way segment at the intersection while maintaining two-way traffic for the rest of the block typically used to deter traffic from cutting through a residential neighborhood from a congested arterial street. This form of traffic calming is a physical reinforcement to the regulatory “Do Not Enter” and turn prohibition signs on the crossing street.



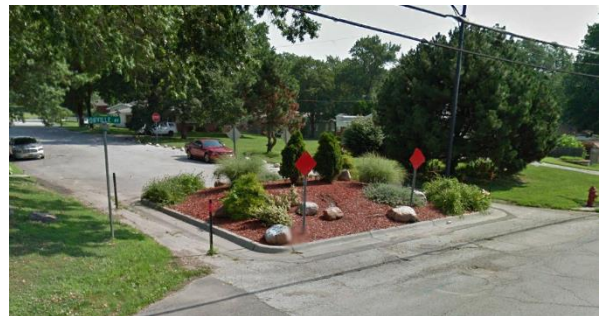
- **Diagonal Diverters:** A diagonal diverter converts an intersection into two unconnected streets by placing a barrier diagonally through the intersection. This prevents direct uninterrupted movement through the neighborhood by forcing a turn at the barrier. The violation rate is low, landscaping potential exists, and adverse safety impacts are minimized through proper design, advance signing, and pavement markings. It is important that the installation of the diagonal diverter be a part of a system of neighborhood traffic control devices that considers the needs of the neighborhood, not just one street.



- **Center Island Narrowing:** A center island narrowing is a raised island located along the center line of a street used to narrow the travel lanes in that location. Center islands are often landscaped to provide a visual comfort. They are also called as gate way islands, placed at the entrance to a neighborhood and often combined with textured pavement.



- **Full closure:** Full closures are barriers placed across the street to completely close it off to through traffic; usually leaving the sidewalks open to pedestrians.



- **Chicanes**: Chicanes are curb extensions alternating from one side of the street to the other forming S-shaped curves. The curvilinear alignment requires additional maneuvering and shortens drivers' sight-lines, resulting in lower overall speeds.



- **Chokers**: Chokers are curb extensions, usually at mid-block locations that narrow a street by widening the sidewalks or planting areas. They can sometimes be marked as crosswalks and offer pedestrians a shorter crossing distance.



- **Radar trailer & Driver feedback signs**: Radar Trailers and Driver Feedback Signs are utilized to help drivers to remember their speed contrasted with what the posted speed constrain is. They are successful in making drivers more mindful of their speed and in this way ordinarily make the driver back off to the posted speed confine.



- **Neighborhood Traffic Circles**: Traffic circles are raised circular medians that direct traffic counterclockwise within an intersection. Vehicles must alter their course of movement to move around the circle.



- **Median Barriers:** Medians are raised islands in the center of the roadway that separate traffic directions. Medians are used on wide streets to narrow the travel lanes and ease pedestrian crossings.



- **Lane Striping:** Lane striping can be used to narrow travel lanes (encouraging drivers to reduce their speed), create formal bicycle lanes and designate on street parking areas.



Table 1 summarizes all the traffic calming methods that can be used in different criteria along, it also lists the positive and negative effects of each of them.

TABLE 1: TRAFFIC CALMING METHODS SUMMARY

No	Type of Traffic Calming Method	Criteria for use	Advantages	Disadvantages
1.	Speed Hump	Good for locations where very low Speeds are desired	Inexpensive, Speed reduction	Negative impact on emergency vehicles
2.	Speed Tables	Ideal for locations where low Speeds are desired and smooth ride is necessary for larger vehicles.	Easier for larger vehicles to cross.	Textured materials are expensive
3.	Raised Intersection	For intersections with substantial pedestrian movement.	Safety for both vehicles and pedestrians, Add aesthetic value to the intersection	Costly, less effective in reducing traffic speed
4.	Raised crosswalk	Ideal for locations where pedestrian crossings occur at haphazard locations and vehicular speeds are excessive.	Improve safety for both vehicles and pedestrians, Add aesthetic value to the intersection	If used, textured material can become expensive
5.	Bulbouts	- Suitable for locations to reduce speed - Commonly used when on-street parking is an issue.	Aesthetic value, Reduce crossing distance for pedestrians	Not effective in reducing speed
6.	Roundabouts	- Preferable for locations with history of frequent accidents - Inexpensive to operate	Safety, Aesthetic value	Restrict turning movements by large vehicles, Expensive

No	Type of Traffic Calming Method	Criteria for use	Advantages	Disadvantages
7.	Neighborhood traffic circles	Calming intersections where Speed, Volume and Safety are major issues.	Very effective in moderating speeds, Better aesthetic appearance.	Likely impacts large vehicular movement, possible driver confusion after yielding to traffic already in circle.
8.	Semi Diverters	For streets which experience lot of cut through traffic	Semi-diverters have the advantage of providing minimal impediment to emergency vehicles, reduce crossing distance, reduce cut through traffic	May Divert traffic to parallel streets without traffic calming measure, maintenance responsibility
9.	Diagonal Diverters	Good for inner neighborhood locations with non-local traffic volume problems	street more accessible to emergency vehicles, Reduce traffic volumes, full access to pedestrians and bicyclists	Costly to construct, Non-local traffic must traverse a longer distance through the neighborhood, accident problem because of a 90-degree curve
10.	Central Islands	Good for entrances to residential neighborhoods where pedestrians need to cross	Aesthetic value, Traffic Calming measures also serve as gateway to neighborhood	Speed reduction effect is limited as vehicles do not have to alter their path, may eliminate on-street parking
11.	Median Barriers	Good for local street connections to main streets where through traffic along the continuing local street is a problem	Narrowed travel lanes can slow vehicle speeds, Provides shorter distance for pedestrians to cross travel lanes	Likely loss of parking, High cost to construct and maintain

No	Type of Traffic Calming Method	Criteria for use	Advantages	Disadvantages
12.	Full closure	Ideal for local streets with major cut-through concerns where an emergency vehicle response route does not exist	Effective speed and volume control method, improves aesthetic quality of the street	Costly to implement, may increase trip length for local drivers
13.	Chicanes	Can be applied to any street where speed control is desired, street needs to be wide enough to accommodate the curvilinear design.	May slow down traffic and reduce cut-through traffic, makes the street more aesthetically pleasing	May require partial or total removal of street parking, Requires extensive design and extensive implementation
14.	Chokers	Suitable for areas with substantial speed problems and no on-street parking shortage.	Reduce both speed and volume, can add aesthetic value to streets	May require elimination of on-street parking, speed reduction effect is somewhat limited
15.	Radar trailer & Driver feedback signs	Can be utilized on most roads where a speed study affirms that 25% of drivers are driving at 85th percentile speed.	Less expensive, does not impede movement of trucks, buses and emergency vehicles	Duration of effectiveness is limited, temporary loss of parking
16.	Lane striping	Used to dedicate a narrow lane for bicyclists, create auxiliary lanes such as left turn lanes.	Less expensive, shorter design time	Doesn't significantly reduce traffic speed, may increase traffic congestion.

Table 2; acts as a matrix guide to clearly present the traffic calming methods and their effect on reducing speed, volume reduction and safety improvement accordingly.

The symbols which are used in this table are clearly defined below. The check mark indicates that the traffic calming method is applicable to that particular classification of road. The range of cost for each traffic calming measure is also listed.

TABLE 2 – Traffic Calming Methods and Corresponding Effects

Measures	Effectiveness			Road Classification			Cost per Measure
	Speed reduction	Volume reduction	Safety	Local	Collector	Arterial	
Speed Humps	▲	◆	◆	✓			\$
Speed Tables	▲	◆	◆	✓			\$
Raised Intersections	▲	◆	◆	✓			\$\$
Raised Crosswalks	▲	◆	◆	✓			\$
Bulb outs	▲	◆	◆	✓	✓	✓	\$\$
Roundabouts	◆	◆	▲		✓	✓	\$\$\$
Neighborhood Traffic Circles	▲	◆	▲	✓			\$\$
Semi Diverters	△	▲	◆	✓			\$
Diagonal Diverters	▲	▲	◆	✓			\$\$
Central Islands	▲	△	◆	✓	✓	✓	\$
Median Barriers	△	▲	▲	✓	✓	✓	\$
Full closure	▲	▲	▲	✓			\$\$\$
Chicanes	▲	◆	△	✓			\$\$
Choker	▲	△	◆	✓			\$
Radar trailer & Driver feedback signs	▲	△	◆	✓	✓	✓	\$
Lane stripping	▲	◆	◆		✓	✓	\$

▲ Strongly appropriate Local Streets =<3,000 cars/day \$=\$1,000-\$10,000

◆ Moderately appropriate Collector streets= 3,000-10,000 cars/day \$\$=\$10,000-\$50,000

△ Not at all appropriate Arterial Streets= >10,000 cars/day \$\$\$=\$50,000+

F. Eligibility Criteria for calming devices to restrict one or more possible movements:

1. The street must be classified as a local street.
2. The typical weekday traffic must exceed 500 vehicles per day and be less than 3,000 vehicles per day.
3. The segment that is closed should be no greater than one block in length.
4. The Police and Fire Departments must both approve the proposed closure.
5. The street segment proposed for closure must not be used by public transit.
6. A suitable alternative route must be available.
7. Petition must be signed by at least 75% of the residents on the street segment requesting traffic calming.
8. Fund availability.

G. Steps for Neighborhood Request for Traffic Calming

To initiate the process for considering the installation of a traffic-calming device or project the citizen or neighborhood association must contact the Engineering Division of the Public Works Department. Typically, the Engineering Division will mail to the individual or the neighborhood association information on the process, along with a petition form, attached as exhibit A, for a significant portion of the neighborhood to sign. A neighborhood contact person should be identified on the petition. Petitioner must include an explanation of the observed problem.

Upon receipt of the petition and verification by UG staff of the reported problems, the City Traffic Engineer may collect traffic volume and speed data. Data collection and analysis typically takes 2-3 months to complete. If reported problems correlate with schools being in session, traffic data collection may be suspended until school opening.

United Government staff may contact the petitioning group through letter or phone communication and explain its findings and suggestions. If necessary, UG staff may attend a neighborhood meeting to present findings and explain the participation requirements. The United Government staff may continue to serve as a resource person at future meetings, but developing consensus and arranging meetings is the responsibility of the neighborhood association or representative. If the traffic study shows that the area in question meets United Government criteria and a traffic-calming device is justified, United Government staff will prepare a preliminary design as funds allow.

Following to the completion of the design, and prior to any temporary or permanent traffic calming installation, the engineering department will consult with the District and at Large Commissioners to discuss the proposed installations.

A 6-9-month trial installation is typical and the devices or closings are implemented on a trial basis. After the end of this period, the UG may schedule a meeting with the neighborhood group to receive additional feedback.

Other departments, such as Police and Fire, will also be asked to comment on the traffic calming devices. The decision to permanently install traffic calming is at the discretion of the UG.

If permanent installation is determined and the cost of this installation is estimated to be greater than available funds the United Government typically requires a benefit district to be formed in the neighborhood. All projects that are to be entirely or partially funded by the United Government shall be based on the availability of funds.

H. Responsible Unified Government Official

The Unified Government Commission authorizes the Director of Public Works to administer this policy and establish procedures as necessary to effectively and fairly carry out this policy.

Unified Government Traffic Calming - Neighborhood Request Form

Please submit the completed Neighborhood Request Form to:

Unified Government

Public Works Department

Attn: Lideana Laboy

701 N 7th Street Suite 712

Kansas City, KS. 66101

Email: llaboy@wycokck.org

FAX: (913) 573-5727

Neighborhood: _____

Contact Name: _____

Address: _____

Phone: _____ Daytime Phone: _____

Email: _____

- Do you belong to a Neighborhood or Homeowner's Association or are you aware of one in your area?

Yes ☐ No ☐

If yes, which one?

- Describe the location of your traffic concern:

- Describe your neighborhood's traffic concern in detail:

The attached petition should be circulated to only and all residents directly affected and returned to the Unified Government. Properties without signatures will be counted as “negative responses.”

Neighborhood Traffic Calming Request Petition

Location: _____

Please submit this petition signed by at least 75% of the property owners (one per household) residing on the street segment along with the Neighborhood Request Form.

PLEASE PRINT

Name _____ Please circle one: Homeowner Tenant
Address _____
Signature _____ Date _____

Name _____ Please circle one: Homeowner Tenant
Address _____
Signature _____ Date _____

Name _____ Please circle one: Homeowner Tenant
Address _____
Signature _____ Date _____

Name _____ Please circle one: Homeowner Tenant
Address _____
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Name _____ Please circle one: Homeowner Tenant
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Signature _____ Date _____

Name _____ Please circle one: Homeowner Tenant
Address _____
Signature _____ Date _____

Name _____ Please circle one: Homeowner Tenant
Address _____
Signature _____ Date _____

Name _____ Please circle one: Homeowner Tenant
Address _____
Signature _____ Date _____

Complaints/Requests

Traffic Related Complaints / Requests

The complaints, concerns or requests generated from traffic conditions, traffic control devices or signals shall be directed to the City Traffic Engineer or approved designee to be reviewed. Requests can be received via written correspondence, United Government website, phone or e-mail and shall be handled as follows:

Written correspondence shall be submitted to the City Traffic Engineer

Attn: City Traffic Engineer
United Government Public Works
Department
701 N 7th St, Suite 712
Kansas City, KS 66101

- Complaints via the United Government Website
 - Go to www.wycokck.org/PW
 - Select "Submit Service Request"
 - Select concern from list under Public Works
 - If an account has not been established, you must establish a login and password
 - Complete form
 - Form will then be directed to the appropriate staff member
 - Correspondence will be conducted through the request tracker
- Complaints via phone or email should be directed to the City Traffic Engineer or approved designee.

To initiate action, citizens should provide the following information. *Note: incomplete submittals could lengthen the time for response.*

- A. Full Name
- B. Address
- C. Phone Number
- D. Alternate Phone Number (if applicable)
- E. E-mail address (if applicable)
- F. Detailed description of complaint, concern or request.

VI. TRAFFIC IMPACT STUDY GUIDELINES

The scope of the Traffic Impact Study (TIS) for a proposed development is determined by the amount of new automobile traffic trips the development, redevelopment, or expansion is expected to add to the roadway system. This document establishes three levels of TIS, depending on the magnitude of traffic generated – as shown in **Table 1**. The review agency can request a TIS and/or modify the scope requirements of a TIS based on local conditions and knowledge.

Table 1: Traffic Impact Study Requirements

Traffic Impact Study Levels	Level 1	Level 2	Level 3
Projected New Peak Hour Site-Generated Automobile Trips by Project (Latest Edition ITE Trip Generation Manual)	0-99	100-499	> 500
Traffic Impact Study Requirements			
Location Description	X	X	X
Land Use - Existing and Proposed	X	X	X
Connectivity and Circulation Review	X	X	X
Trip Generation Estimate	X	X	X
Existing Parking	X	X	X
Parking – Proposed Parking Demand	X	X	X
Evaluate Parking Demand vs Planned		X	X
Access Management Review	X	X	X
Adjacent Access Spacing - Upstream and Downstream	X	X	X
Existing Street Functional Classification	X	X	X
Posted Speed Limit	X	X	X
Intersection Sight Distance	X	X	X
Existing Traffic Volumes	X	X	X
24hrs Traffic Counts	X	X	X
Peak Hour Volumes		X	X
Traffic Operation Evaluation Scenarios		X	X
Existing Condition (no development)		X	X
Existing plus Site-Generated Traffic (Full Built)		X	
Existing plus Site-Generated Traffic (Phases to Full Built)			X
Existing plus Site-Generated and Future Background Volumes (Full Built)		X	X
Truck Volumes & Circulation (Existing and Proposed if Commercial or Industrial)	X	X	X

Pedestrian and Bicycle accommodations	X	X	X
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Scoping Meeting. The City Traffic Engineer must approve the scope of work and technical approach. At the outset of the TIS, the applicant (or authorized representative) should hold a scoping meeting to determine the scope of work. Items included as part of the TIS should be discussed, and other study specifics (study intersection list, existing traffic volume data and age of counts, peak hours, clarifications, what data the review agency or other agencies can provide, etc.).

Horizon Years. Study horizon years are associated with each TIS Level in **Table 1**. Projected future volumes can be derived using historic growth rates, future volumes from MARC, or a combination of background traffic growth along with the additional of site-generated traffic from known planned or platted developments.

Phased Development Projects. If a large developments (expected to generate more than 500 peak-hour automobile trips) is phased, the opening day for each major phase should be studied as well as the build-out. For later-year phases, an updated TIS will be required if the original study is more than two years old; unless the applicant can demonstrate that the nature of the proposed development, and the near-term and long-term forecasted background transportation conditions, have not changed substantially, with concurrence from the review agency.

Study Area. For Level 1 studies, the study area contains the site and its bounding transportation infrastructure (streets, trails, etc.). For all other Levels: at a minimum, the study area should contain roadways extending in all directions from the site to the nearest arterial or collector intersection. As a rule of thumb, all intersections experiencing an increase of 50 or more vehicles during any peak hour because of the development project should be studied – within a reasonable distance of the development. City Traffic Engineer will make final determination of the study area.

Data Collection. The applicant is responsible for collecting all the required transportation data unless the UG has current data to offer. Intersection where traffic counts over two years old, new intersection turning movements will be required to be completed.

Responsibility and Qualifications. It is the applicant’s responsibility to prepare the TIS. The individual preparing a Level 2 or Level 3 TIS must be a registered engineer in the state of Kansas, a certified Professional Traffic Operations Engineer (PTOE), and must sign and seal the traffic impact study report and include copy of PTOE certification with the study.

Submittal Requirements. TIS reports should generally follow a consistent outline. Alternate formats must be approved by the City Traffic Engineer prior to submittal. A minimum of two copies of a draft report should be submitted for final approval. After the applicant receives the City Traffic Engineer’s comments, a minimum of two copies of a final report should be submitted to the review agency. The report should contain, in Appendices, detailed calculations supporting the main body of the report, such as intersection LOS analysis.

2.0 TIS Report Outline

The TIS should be prepared according to generally acceptable professional practice and should address the study elements listed below. The reviewing agency must approve all major assumptions. The TIS should provide sufficient text, maps, graphics, and tables to describe the study findings and recommendations.

Introduction and Study Scope: This section should explain the context of the TIS and the scope of the work.

Existing Conditions: The TIS should document existing transportation conditions covering infrastructure/service inventory, existing demand/usage, safety issues, and operational performance.

Development Project Description: This section should provide the following information:

- Proposed site location, layout, access (motorized and non-motorized), land-uses, and development phasing
- Existing site access (motorized and non-motorized), land-uses (types, intensities, building arrangement), and parking
- Information on nearby parcels' access and land-use, and their relationship to the proposed development project
- Trip Generation using the latest ITE Trip Generation Handbook and ITE Trip Generation procedures

Existing Conditions (No Development Project): The TIS should present the background transportation conditions on the assumed opening day. This includes any changes in transportation infrastructure, service, demand, safety, or operational performance anticipated to take place between the existing conditions and opening day. If opening day is within one year of existing conditions, and no substantial changes are expected during that time-frame, existing conditions can be used for Opening Day.

Existing Conditions (Baseline): This section should present the opening day conditions with the proposed development project added. If the development will cause traffic operation issues to the existing street network, mitigation measures should be identified, and their effect on the performance of the relevant mode should be identified. Acceptable levels of service are defined in **Section 5.0 Existing Plus Development Conditions**.

Existing Conditions Plus Phased Development Plan: For Level 3 development projects, a proposed project phasing should be included in the TIS. Depending on the number phases, additional phased conditions may need to be developed for the TIS. City Traffic Engineer will determine the number of phases.

Long-Term (Future) Conditions (with development project): This section is only required for Level 2 and 3 studies. The goal of this analysis is to provide the Unified Government with a clear picture of how the proposed development affects the City's existing street network. Operations not meeting the acceptable levels of service will need to be mitigated.

Long-Term (Future) Conditions (without development project): This section is only required for Level 3 studies. The goal of this analysis is to provide a base scenario against which to compare "with development project"

conditions against, in cases where the development is large and represents a land-use change from the Comprehensive Land-Use Plan. For large developments (more than 500 peak-hour trips), the applicant should develop a forecasting methodology subject to approval by the City Traffic Engineer.

Recommendations: This section should summarize the mitigation measures and other recommendations developed in the TIS.

3.0 Technical Details

Technical details that should be included in the TIS report.

- **Study Area:** The geographic area to be included in the TIS. It is selected to contain the site boundaries and all study intersections, study non-motorized crossings, and study transit stops.
- **Study Roadways:** Define the existing street network and include the FHWA functional classification. Study roadway descriptions shall include all collectors and arterials in the study area, and any local street that connects directly to the development site.
- **Study Intersections:** At a minimum, all intersection directly impacted by the proposed development should be included in the study area. **The upstream and downstream traffic signals, beyond the development project limits, could be included in the TIS if study intersection experience an increase of 50 or more vehicles during any peak hour as a result of the development should be studied.** Key unsignalized intersections, at which the development affects side-street movements, should also be considered. City Traffic Engineer should make the final determination of what study intersection list is reasonable.
- **Study Non-Motorized Crossings:** Includes all existing mid-block pedestrian crossings of study roadways, and off- street bicycle path intersections with study roadways, if they have the potential to either (1) be crossed by automobile traffic generated by the proposed site or (2) be used by pedestrian or bicycle trips generated by the proposed site.
- **Pedestrian Access:** Identify any pedestrian access in the form of sidewalks or trails that run through the study area in the TIS.
- **Study Transit Routes:** Identify any fixed-route transit route that runs through the study area in the TIS.
- **Study Transit Stops:** Includes any fixed-route transit stops within one-quarter mile of the development site.
- **Study Railroad Crossings:** Includes any at-grade railroad crossing of a study roadway.
- **Safety Focus Areas:** Includes any areas, within the study area, identified as a safety concern (for any transportation mode) by the review agency.
- **Freight Generator:** Any proposed site that is anticipated to generate 100 or more truck trips per day, or more than 10 trucks during any peak hour.
- **Impact Threshold:** A value above which a study element (intersection, pedestrian crossing, etc.) is considered to be operating unacceptably.
- **Mitigation Measures:** Infrastructure modifications required to address the identified impacts. Modifications could be on- or off-site. Typical mitigation measures include the addition of turn lanes,

installation of signals (if warranted), provision of sidewalk connections, or other such improvement

4.0 Existing and No-Development Conditions

TIS should document the current conditions located with the study area. Key components that should be included are listed below:

Pedestrians: The TIS should clearly describe the locations of existing sidewalks, trails and paths in the study area, including widths and surface type. **Gaps should be noted.** Study intersections with missing crossings should be noted. The type of crossing control used at each study pedestrian crossing should be described (crosswalk markings, pedestrian signalization, countdown signals, detection, etc.).

- ***Green Spaces:*** Identify trails and parks or the potential use of access to trails and parks.

Bicycles: The TIS should clearly describe the locations of existing on-street and off-street bicycle facilities, including widths and surface type. Gaps should be noted. The TIS should also note existing bicycle parking locations within the study area. The type of crossing control used at each study bicycle crossing should be described (extended markings, bike signalization, detection, etc.).

Transit: The TIS should clearly describe the locations of existing fixed-route transit routes, stops, and park-and-ride facilities in the study area. For study transit stops, the TIS should also identify the general endpoints and major destinations served, operating hours, and time-of-day headways / service frequencies for the transit route(s) serving the stop(s) or park-and-ride facility(ies). The TIS should also describe existing passenger amenities (signing, benches, shelters, etc.) or special infrastructure provisions (such as bus turnouts) at these locations.

Automobiles: The TIS should clearly describe the locations of all study roadways, as well as number of lanes, posted speeds, and functional class. Any existing local streets that are proposed to be directly connected to the site should be similarly described. The existing traffic control type (signal, two-way stop, four-way stop, roundabout, etc.) at each of the study intersections should be identified. Traffic signal timing information for study intersections should be obtained from the City, if available, at this stage.

- ***Automobile Parking:*** The TIS should clearly describe the locations of existing on-street parking in the study area. If any existing off-street parking area is relevant to the site under study (either an adjacent use for which parking could potentially be shared, or a public parking lot that could potentially be used by automobiles generated by the proposed site), the TIS should clearly describe its location as well. For any existing automobile parking that may be used by the proposed development, the TIS should also document the parking capacity, time/usage restrictions, and pricing characteristics (if any).

Trucks: The TIS should clearly describe the locations of any existing truck routes on the study roadways.

Rail: The TIS should clearly describe the locations of study grade crossings, including the type of control (gated,

flashers, etc.) and number of train tracks at each.

5.0 Existing Plus-Development Conditions

The purpose of the Existing Plus Development Condition analysis should be completed is to identify potential impacts the proposed development may have on the existing and proposed street network.

Trip Generation: UG uses the most current edition of the ITE Trip Generation Handbook and ITE Trip Generation Manual for procedures applicable to a TIS. The TIS must specify whether the peak-hour of generator or the peak-hour of adjacent highway is used. The peak hour of the generator should be used in most cases. On the occasion when the peak hour of the generator is not likely to occur during the same period as the peak hour of the highway, for example a school with a 3:00PM dismissal or a factory with a 2:30PM shift change, the peak hour of the highway may be used. If the peak hour of generator creates a larger traffic impact to the system than during the peak of the adjacent street, this time period should be analyzed as well. For example, the highest traffic on the system may occur during a shift change instead of the peak of the adjacent street. Provide justification for using the peak hour of adjacent street instead of the peak hour of generator.

Trip Distribution: The site-generated traffic should be assigned to the existing and proposed street network. The trip distribution percentages should be documented in the TIS to allow the reviewer to track the assignment of the site-generated traffic.

Traffic Volumes:

ADT Volumes: The TIS should identify existing Average Daily Traffic (ADT) volumes on study roadways for which information is available. The City Traffic Engineer, may require new ADT counts to be conducted on specific study roadways (preferably for 48 continuous hours in 15-minute increments) if available counts are outdated (over two years old or substantial development has occurred) or if no counts are available.

Intersection Turning Movement Volumes: The TIS also should identify existing peak-hour automobile turning movements at each study intersection. Typically, both the a.m. (7-9) and p.m. (4-6) peak hours should be studied. If it can be demonstrated that the development will not generate traffic during one of the peak hours (for example, a restaurant that is only open for lunch and dinner), the City may waive the requirement to analyze that period. Mid-day and weekend counts may also be required, based on the nature of the proposed development, at the discretion of the review agency. Where current agency-approved turning-movement counts (no more than two years old) are not available, new counts must be conducted (and should be provided in 15-minute increments). As mentioned in other areas, the counts should include (and identify) bicycles, pedestrians, and heavy vehicles.

Any new peak-hour and daily counts should be conducted on a Tuesday, Wednesday, or Thursday while school is in session (except for special studies when weekends or Monday/Friday counts are needed).

Trucks: The vehicular peak-hour turning-movement counts at all study intersections and non-motorized crossings should include heavy vehicles, to support the accuracy of operational calculations. For a TIS involving a freight generator, the vehicular ADT counts should also break out heavy vehicles separately.

Access for Pedestrians/Multimodal:

Automobile Parking: If any existing on- or off-street automobile parking areas may be used by the proposed development project, the analysis should include counts to identify peak peaking occupancies in these areas.

Rail: For study railroad crossings, the TIS should identify daily train volumes and automobile volumes. Unless otherwise directed by the review agency, this data can be obtained from the FRA railroad crossing inventory.

Capacity Analysis:

The capacity analysis will be completed using the criteria defined below:

Level of Service (LOS): The TIS should include computation of Level of Service (LOS) for the study intersections using the methods described in the Highway Capacity Manual (HCM). The traffic analysis should be completed using approved traffic engineering software.

Approved Traffic Engineering Software:

- Synchro/Sim Traffic Suite, version 10 or newer
- Highway Capacity Software
- Others as Approved

Highway Capacity Manual (HCM). LOS should be reported for each movement (or lane group) at the intersection. If required by the City Traffic Engineer, traffic simulation will be conducted for closely spaced intersections, improvements relying on signal timing/phasing, or complex traffic conditions. The impact thresholds for overall intersection LOS are:

- LOS A – D acceptable on all arterials and collectors
- LOS A – C acceptable on all other roadways (the highest class of road defines an intersection)

Individual turning movements shall operate with LOS E or better for signalized intersections. If LOS F, then additional information or explanation should be provided (i.e. vehicle queue length, signal warrant, etc.). Individual turning movements shall operate with a LOS ____ or better for unsignalized intersections.

- *Vehicle Queuing:* The TIS should provide 95th percentile queue length for the individual turning movements. This information is beneficial in determining appropriate turn lane lengths or issues of driveways/street being block by the traffic from the study intersection.
- *Residential Traffic:* The TIS should identify whether traffic volumes on any study roadways that are local residential streets exceed acceptable thresholds. Residential volumes are typically 350 to 500 vehicles per day and traffic “cutting through” residential neighborhoods should be determined. The impact threshold

for local residential streets is 1,000 vehicles per day.

- **Automobile Parking:** Identify potential users, either new traffic or pass-by trips, of the new development. If automobile parking demand will be studied under Proposed Conditions, and potential on- or off-street areas to share site-generated parking were identified as part of the Infrastructure/Service Inventory, the TIS should include the ratio of peak parking demand to capacity at the existing parking locations. The impact threshold for automobile parking is a peak occupancy of 85 percent. Document the utilization and impacts that an increase in traffic and automobile parking will have on the existing network. **See Section 8.0 for Site Plan Connectivity and Circulation Review.**

Traffic Control: TIS should identify the appropriate traffic control for the study intersections. **See Section 14.0 for MUTCD Traffic Control Warrants.**

6.0 Safety Review

The purpose of the safety review is to identify current safety issues (primarily crash patterns) that could affect, or be affected by, the proposed development project. Safety review would not be required for a Level 1 study, and are only included in other TIS Levels if very specific safety issues have been identified in the study area by the relevant agencies.

If a safety concern has been identified within the study area by the City, the TIS will include analysis of the most recent available five-year record of crashes related to that mode in the safety focus area(s) identified for that mode, to determine if a crash pattern exists.

Additional elements to be included is documenting the amount of available intersection distance at the study intersections or proposed development site access points. **AASHTO Intersection sight distance guidelines are explained in Section 13.**

7.0 Future plus-Development Traffic Operations

Providing an analysis of the future conditions of the street network will be required Level 2 and 3 studies. The purpose of the Future Traffic Analysis is to identify how well the existing or planned transportation infrastructure will operate with the proposed development and growth from the surrounding area. These items are not required for Level 1 studies.

Future Background Traffic: The existing background traffic volumes should be grown to provide the future condition of how the existing street network would operate with proposed development and growth from the surrounding area. The future volumes can be developed using the following methods:

1. Review available **historic traffic volumes**, if available from the City or KDOT traffic volume maps. A

review of the past twenty years is recommended to identify any past trends of growth in the area. The volumes used to develop the historic growth rates should be derived from nearby arterial roadways.

2. Contact UG Planning Staff to determine any approved or **planned developments** in the area. This can include potential redevelopment projects. Site traffic from previous traffic studies, if available, from these development areas should be assigned to the study intersections. If no traffic studies have been completed, an estimate of traffic should be developed for the proposed plan or land use. The site-generated traffic volumes should be developed using the latest edition of the ITE Trip Generation Handbook.
3. If future volumes from Mid America Regional Council or a Travel Demand Model are available for the arterial street a growth rate can be developed using the base year volumes and projected future volumes, which is a requirement for major arterials and interchanges.

Capacity Analysis:

The capacity analysis will be completed using the criteria defined below:

Level of Service (LOS): The TIS should include computation of Level of Service (LOS) for the study intersections using the methods described in the Highway Capacity Manual (HCM). The traffic analysis should be completed using approved traffic engineering software.

Approved Traffic Engineering Software:

- Synchro/Sim Traffic Suite, version 10 or newer
- Highway Capacity Software
- Others as Approved

Highway Capacity Manual (HCM). LOS should be reported for each movement (or lane group) at the intersection. If required by the City Traffic Engineer, traffic simulation will be conducted for closely spaced intersections, improvements relying on signal timing/phasing, or complex traffic conditions. The impact thresholds for overall intersection LOS are:

- LOS A – D acceptable on all arterials and collectors
- LOS A – C acceptable on all other roadways (the highest class of road defines an intersection)

Individual turning movements shall operate with LOS E or better for signalized intersections. If LOS F, then additional information or explanation should be provided (i.e. vehicle queue length, signal warrant, etc.). Individual turning movements shall operate with LOS ____ or better for unsignalized intersections.

- *Vehicle Queuing:* The TIS should provide 95th percentile queue length for the individual turning movements. This information is beneficial in determining appropriate turn lane lengths or issues of driveways/street being blocked by the traffic from the study intersection.
- *Residential Traffic:* The TIS should identify whether traffic volumes on any study roadways that are local residential streets exceed acceptable thresholds. Residential traffic volumes are typically between 350 to

500 vehicles per day and traffic “cutting through” residential neighborhoods should be determined. The impact threshold for local residential streets is 1,000 vehicles per day.

- *Automobile Parking:* If automobile parking demand will be studied under Proposed Conditions, and potential on- or off-street areas to share site-generated parking were identified as part of the Infrastructure/Service Inventory, the TIS should include the ratio of peak parking demand to capacity at the existing parking locations. The impact threshold for automobile parking is a peak occupancy of 85 percent.

Rail: For any study railroad crossings at which the peak-hour automobile volume exceeds 200 vehicles per hour and the conflicting hourly train volume (determined by dividing the daily train volume by 24) exceeds 2 trains per hour, the TIS should analyze automobile delay at the crossing. This delay should be converted to an LOS using the HCM signalized intersection scale, and the impact thresholds are the same as for intersections.

Traffic Control: TIS should identify the appropriate traffic control for the study intersections. **See Section 14.0 for MUTCD Traffic Control Warrants.**

8.0 Site Plan Connectivity and Circulation Review

The purpose of the Connectivity and Circulation review is to determine whether the development provides necessary internal connectivity and circulation for all modes of travel, as well as necessary connectivity to the existing transportation system. **Connectivity analyses are conducted for all study Levels (1-3).**

Vehicular Traffic: Review of the proposed development plan should be included in the TIS. The study should identify any driveway/access road alignment issues. For example, driveways that create an interlocking left-turn condition should be documented.

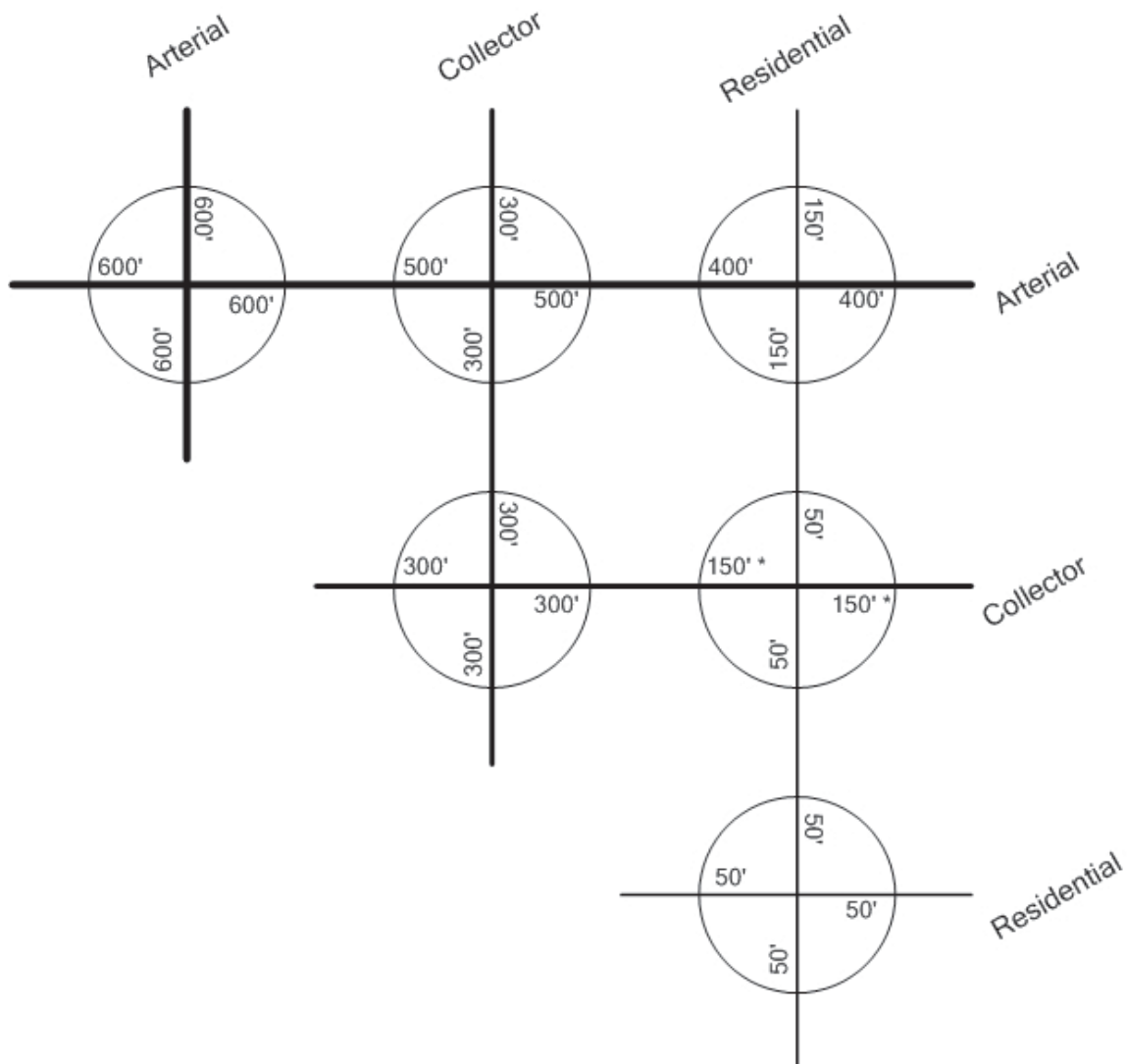
Major categories to be evaluated:

- *Connectivity:* If the site has an internal street system, the TIS should evaluate the connectivity goals, which are designed to promote multi-modal connectivity while discouraging “through” traffic:
 - Average intersection spacing for local streets: around 300-400 feet; maximum: 600 feet.
 - Maximum block size: around 5-12 acres.
 - Percent streets that are cul-de-sacs: 20 percent. Maximum length of cul-de-sac: 200 to 400 feet.
 - Minimum Roadway Connectivity Index: 1.4. The Roadway Connectivity Index is calculated as the ratio of the number of links (roads between intersections) to the number of nodes (intersections).
 - Provide multiple access connections between a development and arterial streets.
 - *Access Driveway Throat Distance:* The main access onto the adjacent street should provide the adequate throat distance to accommodate vehicle storage shown in **Exhibit 2**. Vehicle storage should be confirmed from the capacity analysis.
- *Site Plan Review:* The TIS should evaluate and comment on the on-site circulation. Items discussed should include an assessment of on-site intersections and driveways/roadways with respect to operations and safety (including driveway widths, vehicle turning radii, sight distance, queueing, emergency access, etc.).

Shared access and cross-parcel traffic flows should also be considered.

- *Access Management Review*: The TIS should compare the **Access Management Guidelines identified in Section 10.0** as well as other applicable design standards and guidelines, and comment on the plan's consistency with the guidelines.

Exhibit 1 – Influence Area at Various Intersections



All distances are measured from centerline to centerline

* 300' for a Non-Residential Collector

Pedestrians: The TIS should identify whether the internal site plan provides adequate sidewalks and pedestrian connections as required by the relevant regulations and standards of the review agency. This also includes pedestrian connections between abutting cul-de-sacs, intermittent pedestrian connections to adjacent collectors/arterials, and consistency with Safe Routes to School principles. If the site abuts or includes collector/arterial roadways that have been identified as pedestrian gaps by the review agency, the TIS should address the ways in which the development will address these gaps. Similarly, if the site abuts or includes uncompleted portions of the planned trail system, the TIS should address the development's role in their completion.

Bicycles: The TIS should identify whether the internal site plan provides any impediments to bicycle travel, as well as the steps needed relieve those impediments. As with the pedestrian analysis, this also includes bicycle connections between abutting cul-de-sacs, intermittent bicycle connections to adjacent collectors/arterials, and consistency with Safe Routes to School principles. If the site abuts or includes roadways or connections that have been shown as future (on- or off-street) bikeways on the Bicycle Master Plan, the TIS should address the development's role in completing these bikeways. If the site presents an opportunity to add to the bicycle network in a previously unplanned or unforeseen way, the TIS should address this as well.

Pedestrian Crossing: The TIS should identify whether pedestrian crossing is needed for the development and where a pedestrian crossing should be located. Mid-block crossings are discouraged by UG and will only be allowed if approved by the City Traffic Engineer.

Transit: If the site abuts or includes any roadways or areas identified as future transit stops in applicable transit agency plans, the TIS should address the development's role in the provisions of the stop(s). For Level 3 projects, or development projects that are known destinations for transit (high-intensity retail, medical uses, or other activity centers), the TIS should evaluate whether fixed-route transit service is recommended near or on the site.

Trucks: If the site is identified as a freight generator, the TIS should discuss the site's proximity and connectivity to the truck route system and any truck connectivity issues raised by the site design or location. The TIS should also evaluate the site plan from a truck standpoint – items such as on-site truck circulation, truck loading area dimensions, truck parking, truck queueing etc.

Loading Zone: If the site requires a loading zone for trucks, the TIS should identify where the loading docks will be located. Truck turning diagrams, site circulation plans, and external circulation plans should be included to illustrate how the trucks will be able to enter and exit the loading zone. Trucks backing into the street should be avoided.

Rail: If travel ways to/from or within the site involve an at-grade railroad crossing(s), the TIS should identify the alternative routes that may be available if the railroad tracks are blocked for unexpected lengthy periods of time.

9.0 Redevelopment or Rezoning of Approved Development Projects

For redevelopment or rezoning projects, the applicant should calculate both the total projected trip generation and the net difference between the proposed development project and the existing use. **If operational analysis is required, the trip generation assumptions and calculations must be approved by the review agency prior to initiation of the operational analysis.**

- **Automobile Trip Distribution and Assignment:** This step is not required for Level 1 studies. For Level 2 and above, The TIS should clearly present and support the assumed trip distribution throughout the study area for the previously identified peak hours (including development project driveways for developments that are not single-family residential). Similarly, the major assignment assumptions will be presented and explained. For redevelopment or rezoning projects, the applicant will need to determine whether the distribution of the proposed development differs from that of the existing or previously approved/zoned use, because the assignment will need to represent the net difference. **If operational analysis is required, the trip distribution assumptions must be approved by the review agency prior to initiation of the operational analysis.**
- **Automobile Parking:** The TIS should discuss the proposed site's parking provisions in relationship to the review agency's required parking ratios, and confirm that both the ratios and the proposed parking are reasonable. When a use does not fit into the categories identified by the parking ratio requirements, or it is more specialized in a way that could affect parking ratios, ITE's *Parking Generation* should be consulted as a source for determining potential parking demand. If a use is not covered by *Parking Generation* or the parking ratio requirements, actual field studies of similar uses should be conducted to verify expected demand. In the case of mixed-use developments, or projects that are proposing to share parking with other uses, the TIS should include a shared parking analysis that accounts for the time-of-day variations in on-site demand in order to prevent inefficient, oversized parking provisions. The TIS should also discuss the site's provisions of accessible parking in relation to review agency policies and ADA requirements.

VII. ACCESS MANAGEMENT GUIDELINES

The following guidelines reflect criteria applicable to the location and design of streets and driveways. It is important to note that more than one criterion will apply to any condition. All applicable criteria need to be satisfied. Any variance from the criteria requires reasoning to be provided to UG and must be approved by the City Traffic Engineer.

Unless stated otherwise, distances between streets and/or driveways are measured from centerline to centerline.

These standards are applicable to new development. Existing properties that have an approved site plan by the Planning Commission and/or an approved plat by the City Council will not be required to comply with this plan. However, any existing property that applies for a new site plan or re-plat after the adoption of this plan by the City Council shall be required to comply with the criteria in the plan to the greatest extent possible.

Street Spacing

- No street will be allowed within 1,500 feet of an interchange.
- No street will be allowed within an intersection influence area. The hierarchy of intersections for establishing priority is arterial/arterial, arterial/collector, collector/collector, arterial/local, and collector/local.
- 500 feet minimum on arterial streets.
- 300 feet minimum on collector streets (as specified in the Technical Specifications and Design Criteria).

Intersection Influence Areas

- No street or driveway shall intersect a street within its intersection influence area as shown in **Exhibit 1**.

Traffic Signal Spacing

- One-half mile (2,640 feet) on expressways
- One-quarter mile (1,320 feet) to one-third mile (1,760 feet) on arterial streets

Median Break Spacing on Arterial Street

- No median break within 1,000 feet of an interchange.
- No median break within an intersection influence area.
- Must accommodate left-turn lanes and tapers along arterial street. Successive left-turn lanes must be separated by at least 150 feet (measured between the beginning of the taper for each turn lane).
- Full median break access allowed where traffic signals, if installed at some time in the future, would be adequately spaced from adjacent traffic signals.
- Partial access allowed at other median breaks.
- Temporary median breaks may be allowed if adequate left-turn lanes and tapers can be developed for near-term conditions and ultimate location of median breaks along arterial street are assured.

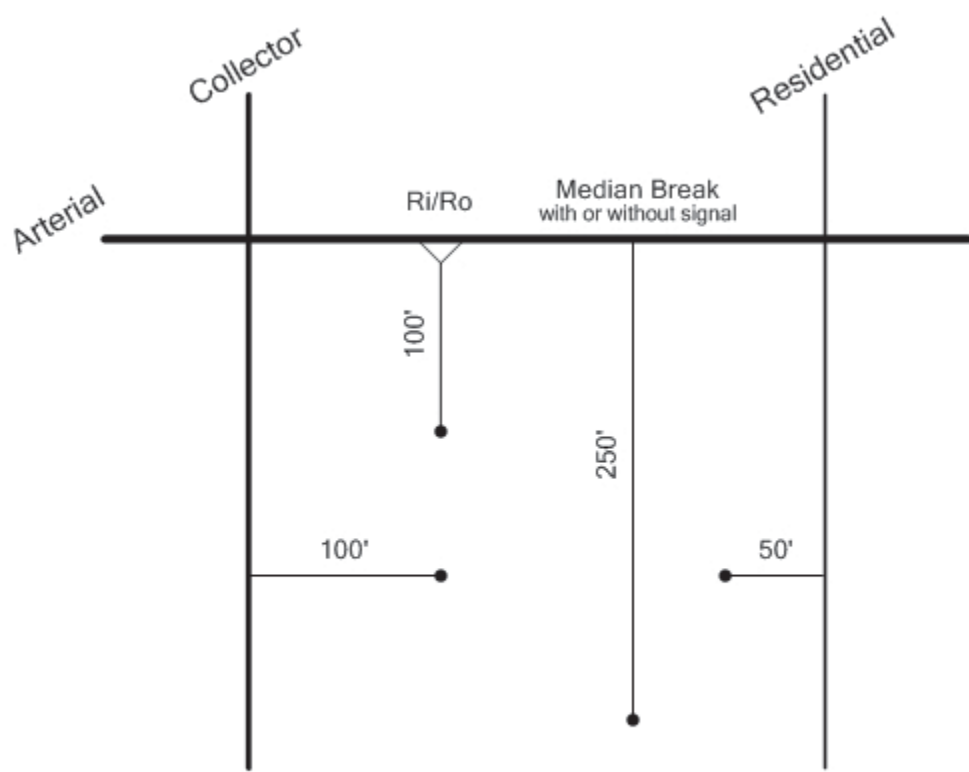
Median Break Spacing on Expressway

- No median break within 1,000 feet of an interchange.
- One-half mile (2,640 feet) spacing.

Private Driveways

- No driveway will be allowed within 1,000 feet of an interchange.
- No driveway shall intersect an expressway.
- No driveway will be allowed within an intersection influence area.
- No driveway shall be allowed within the taper or storage area of a turn lane.
- No single-family residential driveway shall intersect an arterial or collector street.
- Internal drives and parking stalls must be at least 100 feet from a collector street. This distance is measured from the near edge of the public street (based on its ultimate configuration) to the near edge of the internal drive or parking stall.
- Internal drives and parking stalls must be at least 100 feet from an arterial street where access from the driveway is limited to right turns at the arterial street. This distance is measured from the near edge of the public street (based on its ultimate configuration) to the near edge of the internal drive or parking stall.
- Internal drives and parking stalls must be at least 250 feet from an arterial street where a full median break is provided on the arterial street. This distance is measured from the near edge of the public street (based on its ultimate configuration) to the near edge of the internal drive or parking stall.
- Internal drives and parking stalls must be at least 50 feet from a residential street. This distance is measured from the near edge of the public street (based on its ultimate configuration) to the near edge of the internal drive or parking stall.
- Internal drives and parking stalls for industrial sites in industrial areas could be shorter than 100 feet.
- Minimum distance between commercial driveways is ____.
- Offset intersection

Exhibit 2 – Private Driveway Throat Distances



All distances are measured from the edge of pavement to edge of pavement

Left-Turn Lane Guidelines

- The AASHTO guide for left-turn lanes on a two-lane highway can be seen in **Table 2**.
- Required on arterial streets at all partial and full median breaks. Minimum length shall be 250 feet plus the taper at the intersection with another arterial street and 200 feet plus the taper at other locations.
- Required on street or driveway intersecting arterial street at full median break. Minimum distance shall be 150 feet plus the taper.
- Required on collector streets in non-residential areas at the intersection with any side street or driveway serving non-residential development. A continuous left-turn lane should be provided where successive left-turn lanes are required. Minimum length shall be 100 feet plus the taper.
- The length of the left-turn lane shall be increased as necessary to accommodate estimated queue length. The minimum length shall be exceeded based on the estimated queue length determined for future traffic volume projections. The queue length shall be estimated using analysis procedures outlined in the latest edition of the Highway Capacity Manual published by the Transportation Research Board. Where the analysis is based on traffic signal control, the minimum cycle length used in the analysis shall be 120 seconds. The queue length shall be for a 95 percent confidence level.
- Left-turn lane lengths cover the full-width segment between the taper and the end of the lane at an intersection with a public street or driveway. The end of the lane at the intersection shall be determined as the point of curvature for the turning radius used for design of the particular intersection. On an arterial street, the turning radius shall be no less than 50 feet. On a collector street, the turning radius shall be no less than 30 feet. Where double left-turn lanes are used, the minimum inside turning radius shall be no less than 75 feet.
- The introductory taper shall be a reverse curve using 150-foot radii for a single left-turn lane and 300-foot radii for a double left-turn lane. This reverse curve does not define the redirection taper required where a left-turn lane is introduced.

Table 2: AASHTO Guide for Left-Turn Lanes on Two-Lane Highways

Opposing Volume	Advancing Volume			
	5% Left Turns	10% Left Turns	20% Left Turns	30% Left Turns
40-mph Operating Speed				
800	330	240	180	160
600	410	305	225	200
400	510	330	275	245
200	640	470	350	305
100	720	515	390	340
50-mph Operating Speed				
800	280	210	165	135
600	350	260	195	170
400	430	320	240	210
200	550	400	300	270
100	615	445	335	295

60-mph Operating Speed				
800	230	170	125	115
600	290	210	160	140
400	365	270	200	175
200	450	330	250	215
100	505	370	275	240

Right-Turn Lane Guidelines

Auxiliary lane warrants—right-turn lanes and deceleration taper

To determine if a right-turn lane is warranted the operating speed for a specific highway (in mph) and *directional design hourly volumes* (DDHV) on the highway are needed. The highway operating speed is considered the posted speed limit or the 85th percentile speed if varying from the posted speed limit. The DDHV is the number of vehicles traveling on the highway in the peak hour in the same direction as the right-turning vehicle. The design hourly right-turn volumes are the estimated number of right-turns made at the access during the same peak hour. If the number of right turns exceeds the design hourly right-turn volume thresholds in the cell corresponding to a specific highway operating speed and DDHV, a right-turn lane is warranted at the access.

Right-turn treatment guidelines for two-lane roadways:

The values in **Table 3** shows the minimum turning volume needed to *warrant* a turn lane or a deceleration taper on a two-lane highway.

Table 3: Right-turn treatment guidelines for two-lane highways (KDOT)

Highway DDHV (vph)	Highway Operating Speed (mph)					
	40	45	50	55	60	65
	Right-Turn Lane					
200	-	-	73	35	20	15
300	-	120	41	24	15	12
400	200	52	30	19	12	11
600	50	26	20	14	10	9
800	25	16	15	11	9	8
1000	14	12	11	9	8	7
1200	10	9	9	8	7	7

Source: "Guidelines for right-turn treatments at unsignalized intersections and driveways," K-Tran: KSU-95-5, Kansas Department of Transportation, Kansas State University, Tanweer Hasan, Dr. Robert W. Stokes

- Turning speed is 15 mph (right-turn)
- The values presented in this table represent minimum right-turn design hour volumes (vph) required to warrant right-turn lane
- DDHV = directional design hourly volumes

Two-lane highway example—A new development along US-50 (two-lane highway) in Reno County east of Hutchinson, Kansas, has requested an access point to the north. It is estimated that during the peak hour,

approximately 25 vehicles will be turning right into the new access from the east soon after the facility opens. The 2011 *average daily traffic* (ADT) is shown to be 4,370 vpd and the posted speed limit is 65 mph. Is a right-turn lane warranted?

The *directional design hourly volume* (DDHV) is equal to the ADT divided by two (assuming half the traffic is traveling westbound and half eastbound on US-50) and multiplied by 10 percent (assumed peak hour volume).

$$\text{DDHV} = (\text{ADT}/2) \times 0.10$$

$$\text{DDHV} = (4,370/2) \times 0.10 = 219 \text{ vph (westbound on US-50)}$$

Looking at **Table 3**, it can be seen that the DDHV is over 200 vph, the highway operating speed is 65 mph and, therefore, the design hourly right-turn threshold is 15 vph. The estimated number of right turns westbound during the peak hour is 25 vph (greater than 15 vph) and, therefore, a right- turn lane is warranted.

Right-turn treatment guidelines for four-lane roadways

The values in **Table 4** shows the minimum turning volume needed to warrant a turn lane or a deceleration taper on a four-lane highway.

Table 4: Right-turn treatment guidelines for four-lane highways (KDOT)

Highway DDHV (vph)	Highway Operating Speed (mph)					
	40	45	50	55	60	65
	Lane					
300	-	-	-	75	19	19
400	-	145	75	40	16	15
500	-	95	57	32	14	13
600	160	65	42	26	12	12
800	70	37	28	19	11	11
1200	25	20	18	14	8	8
1600	15	14	13	10	7	7
2000	10	9	9	8	6	6

Source: "Guidelines for right-turn treatments at unsignalized intersections and driveways," K-Tran: KSU-95-5, Kansas Department of Transportation, Kansas State University, Tanweer Hasan, Dr. Robert W. Stokes

- Turning speed is 15 mph (right-turn)
- The values presented in this table represent minimum right-turn design hour volumes (vph) required to warrant right-turn treatments (lane or taper)
- DDHV = directional design hourly volumes

Four-lane highway example—A new development along US-24 (four-lane highway) has requested an access point off an existing county road intersection to the north. It is estimated that during the peak hour, approximately 30 vehicles will be turning right on to the county road to access this new facility. The 2011 ADT is shown to be 10,400 vpd and the posted speed limit is 70 mph. Is a right-turn lane warranted?

The DDHV is equal to the ADT divided by two (assuming half the traffic is traveling westbound and half eastbound on US-24) and multiplied by 10 percent (assumed peak hour volume).

$$\text{DDHV} = (\text{ADT}/2) \times 0.10$$

$$\text{DDHV} = (10,400/2) \times 0.10 = 520 \text{ vph (westbound on US-24)}$$

Looking at **Table 4**, note that the DDHV is over 500 vph, the highway operating speed above 65 mph and, therefore, the design hourly right-turn threshold is 13 vph. The estimated number of right turns westbound during the peak hour is 30 vph (greater than 13 vph) and, therefore, a right- turn lane is warranted.

UG follows the right-turn treatment guidelines in **Table 3** (two-lane highways) and **Table 4** (four-lane highways) when determining if right-turn lanes or deceleration tapers are warranted; however, meeting the warrant does not require the installation of right-turn lanes.

UG Traffic Policy References:

Manhattan Traffic Impact Study Guidelines:

- 1.0 TIS Scope
- 2.0 TIS Report Outline
- 3.0 Technical Details
- 4.0 Existing and No-Development Conditions
- 5.0 Existing Plus-Development Conditions
- 6.0 Safety Review
- 7.0 Future Plus-Development Traffic Operations
- 8.0 Site Plan Connectivity and Circulation Review
- 9.0 Redevelopment or Rezoning of Approved Development Projects

Olathe Access Management Plan:

- Exhibit 1 – Influence Area at Various Intersections
- 10.0 Access Management Guidelines
- Exhibit 2 – Private Driveway Throat Distances

KDOT Access Management Policy

- 11.0 Left-Turn Guidelines
- 12.0 Right-Turn Guidelines

MUTCD

- 13.0 Intersection Sight Distance

United Government – Section 1300

- 14.0 Traffic Control

AASHTO Greenbook

- 15.0 MUTCD Traffic Control Warrants
- Table 5 – Design Intersection Sight Distance – Case B1
- Table 6 – Design Intersection Sight Distance – Case B2 & B3

Belton

- 16.0 Traffic Control Devices
- 19.0 Complaints/Requests

United Government – Section 6100 & Section 6150

- 17.0 Pavement Markings

United Government Traffic Calming Criteria

- 18.0 Traffic Calming