City of Hays
Office of the City Manager

Memo

To: City Commission

From: Toby Dougherty, City Manager

Date: 1-11-13

Re: January 17, 2013 Work Session

Please find the attached agenda and supporting documentation for the January 17, 2013 Work Session.

Item 2 – Request from Ellis County – Support for Sales Tax Legislation

Please refer to the attached letter from Ellis County Administrator Greg Sund. The County wishes to proceed with a sales tax question regarding funding of the Rural Fire/EMS facility as well as a new jail. It is my understanding that the County has its sight set on a June election by which there will be two separate questions on a ballot. Typically, when a countywide sales tax is enacted, the cities within the county receive a portion of the tax proceeds. Therefore, if the County were to ask the voters to approve a sales tax, and that sales tax were approved, the City of Hays would get over 50% of the tax proceeds. State law does allow counties to ask the State Legislature for special legislation that allows the county government to receive all of the sales tax proceeds collected. This is the avenue that Ellis County is pursuing.

To my knowledge, Ellis County is not asking the City Commission for support or to weigh in on the specifics of the individual projects. The County is asking the City Commission for a letter of support that can be given to the State Legislature in support of the necessary legislation allowing the County to keep all of the sales tax proceeds. It will still be up to Ellis County to demonstrate the need to the voters. Greg Sund will be in attendance at the work session to give you more detail on the matter.

Item 3 – Restriping of 27th Street between Plum & Hall

This is a carry-over item from the January 3, 2013 Work Session. It was requested that City staff give a more elaborate presentation on the issue; therefore, Public Works Director I.D. Creech and Chief of Police Don Scheibler will be presenting the issue to the Commission. The agenda materials are the same as was in the January 3rd Work Session packet.

Item 4 – Bike Plan

As you know, City staff has been working with RDG to put together a comprehensive bike plan for the City of Hays. This was at the request of the City Commission in 2012. In 2012, the City Commission also set aside funds to pay for the program once it is developed. Assistant City Manager Paul Briseno has been in charge of this project and will be presenting the bike plan to the City Commission.

Item 5 – Transportation Enhancement Grant Application – Hike and Bike

The following agenda item deals with the bike plan as well. In putting the bike plan together, City staff and RDG developed a plan to be implemented in different phases. City staff found out a few months back that KDOT was funding a very comprehensive Transportation Enhancement Grant Program. One of the items that traditionally receives funding through this program is multi-use paths in association with hike and bike plans. Therefore, City staff is requesting permission of the Commission to apply for a Transportation Enhancement Grant to pay for a portion of the bicycle plan as well as a large scope of Phase I. As previously mentioned, Assistant City Manager Paul Briseno will have a lot more information at the work session.

Item 6 – Developer Agreement – Wheatland Lots

This item is self-explanatory.

Item 7 – Engineering Agreement – Waterline Design

Please refer to the attached memorandum from Bernie Kitten, Director of Utilities, regarding the engineering agreement for the waterline design. The City is about to begin another round of waterline upgrade and replacement in the older section of town. To expedite this process, we are suggesting an engineering agreement be enacted with Kaw Valley Engineering. This will allow for consistency via use of the same engineer for design of all of the waterlines in the next two phases of waterline upgrade and replacement.

Item 8 – City Commission Term Limits

Please refer to the attached memorandum from City Attorney John Bird on the subject of City Commissioner term limits. Commissioner Mellick asked that this item be placed on an upcoming work session agenda. In short, the City Attorney has advised that term limits are legal and provided an example of another city in Kansas that has enacted term limits on its governing body.

aw

CITY OF HAYS
CITY COMMISSION WORK SESSION
THURSDAY, JANUARY 17, 2013 – 6:30 P.M.
AGENDA

1. **ITEM FOR REVIEW: January 3, 2013 Work Session Notes** (PAGE 1)
   DEPARTMENT HEAD RESPONSIBLE: Kim Rupp, Director of Finance

2. **ITEM FOR REVIEW: Request from Ellis County – Support for Sales Tax Legislation** (PAGE 5)
   PERSON RESPONSIBLE: Greg Sund, Ellis County Administrator

3. **ITEM FOR REVIEW: Restriping of 27th Street Between Plum & Hall** (PAGE 7)
   PERSON RESPONSIBLE: Commissioner Schwaller

4. **ITEM FOR REVIEW: Bike Hays Master Plan** (PAGE 25)
   PERSON RESPONSIBLE: Paul Briseno, Assistant City Manager

5. **ITEM FOR REVIEW: Transportation Enhancement Grant Application – Hike and Bike**
   PERSON RESPONSIBLE: Paul Briseno, Assistant City Manager

6. **ITEM FOR REVIEW: Developer Agreement – Wheatland Lots** (PAGE 111)
   DEPARTMENT HEAD RESPONSIBLE: I.D. Creech, Director of Public Works

7. **ITEM FOR REVIEW: Engineering Agreement – Waterline Design** (PAGE 117)
   DEPARTMENT HEAD RESPONSIBLE: Bernie Kitten, Director of Utilities

8. **ITEM FOR REVIEW: City Commission Term Limits** (PAGE 157)
   PERSON RESPONSIBLE: Commissioner Mellick

9. **OTHER ITEMS FOR DISCUSSION**

10. **EXECUTIVE SESSION (IF REQUIRED)**

11. **ADJOURNMENT**

ANY PERSON WITH A DISABILITY NEEDING SPECIAL ACCOMMODATIONS TO ATTEND THIS MEETING SHOULD CONTACT THE CITY MANAGER'S OFFICE 48 HOURS PRIOR TO THE SCHEDULED MEETING TIME. EVERY ATTEMPT WILL BE MADE TO ACCOMMODATE ANY REQUESTS FOR ASSISTANCE.

City of Hays

City Commission

Work Session Notes

January 3, 2013

5:00 P.M.

Present: Troy Hickman, Kent Steward, Henry Schwaller, Ron Mellick, Eber Phelps, John Bird, Toby Dougherty

Swearing In of Commissioner

Eber Phelps was sworn in as City Commissioner. He was appointed to fill the seat vacated by Barbara Wasinger who has been elected to the Ellis County Commission.

27th & Indian Trail Intersection Signalization

At the request of Commissioner Schwaller, signalization of the intersection at 27th & Indian Trail was discussed. This issue was previously discussed in 2006.

27th Street between Vine and Canterbury is a four-lane street that has periodic times of high traffic flow. There are no dedicated turning lanes. The only break in flow along this stretch of 27th is a four-way stop at Indian Trail, which was installed many years ago to provide controlled access across 27th Street for north and south bound traffic.

City Manager Toby Dougherty reported that while traffic counts are slightly higher than in past years, they are nowhere near the volume that would necessitate the installation of a traffic signal. It would cost about $180,000 to install a traffic signal. Another option for consideration would be the installation of a roundabout at this intersection, with an estimated cost of $900,000 to $1,200,000. At this time, the current four-way stop sign arrangement is functioning adequately, and the City Manager feels that a traffic signal is not warranted.

Term Limits and Possible Disbandment of Advisory Committees

There are several committees that are currently serving the City of Hays. Some of these committees are required by State Statute and the City appoints members to the committee. Some of the committees are the creation of the City Commission. All committees are eligible for the imposition of term limits. At this time, there are only two committees that have term limits, the Building Trades Board and the Hays Public Library Board. This is a restriction placed by State Statute.

City Manager Toby Dougherty presented information about the following existing committees/boards and the usefulness/need for these committees: Airport Advisory Committee, Fort Hays Municipal Golf Course Advisory Board, Building Trades Board, CARE Council, Hays Beautification Board, Sister Cities Advisory Board and the Neighborhood Revitalization/Downtown Development Review Board.

After discussion, it was the consensus of the Commissioners to disband the Neighborhood Revitalization/Downtown Development Review Board. It was determined that due to the many vacancies on the board and the difficulty in finding qualified, or any, members to serve on the board, the procedural details of the board could be reviewed by staff with input from the City Commission. A resolution will be prepared authorizing the Commission to disband the committee and will be presented for approval at the January 10, 2013 Commission meeting. The Sister Cities Advisory Board will be invited to appear before the Commission at a future work session before any decision is made to disband that committee

Term limits were discussed but no decision was reached. Commissioner Mellick suggested that a discussion be held at a future work session about City Commission term limits.

City Commission Term on Ellis County Coalition for Economic Development

Barbara Wasinger was the representative for the City of Hays on the Ellis County Coalition Board of Directors. Due to her election as an Ellis County Commissioner, it is necessary to appoint a different representative. Commissioner Steward volunteered to be appointed to the board. The Commissioners will be requested to approve the appointment at the January 10, 2013 Commission meeting.

Configuration of 27th Street Between Fort & Hall

At the October 18, 2012 work session, staff was asked to consider the issues regarding a proposal to eliminate on-street parking and restripe 27th Street to a 3-lane configuration from Hall to Plum. This change was recommended by the 2004 City Wide Traffic Study and considered by the City Commission in 2008; however, the proposed change was not approved. Staff has updated traffic counts, reviewed crash data, and contacted adjacent property owners. The recommendation is to proceed with eliminating on-street parking and restriping 27th Street to 3-lanes.

City Manager Toby Dougherty reported that there have been 50 accidents on this stretch of 27th since 2007 with indications that 40% of the accidents could have been prevented if on-street parking had been eliminated and a center opposing left turn lane added. Parking on the north side of the street is prohibited; only the south side has parking.

Public Works Director I. D. Creech presented a visual showing the current configuration of 27th Street. The street starts as a 5-lane at Vine, turns into a 4-lane, then a 3-lane, then a 2-lane and again to a 4-lane west of Hall. Traffic counts taken in August 2012 show the peak hour is between 3:00 – 4:00 p.m. with nearly 1,000 vehicles during that time. 85% of the vehicles traveling on this

stretch of 27th were traveling at or below 34 mph. The speed limit along this section is 30 mph.

The following residents spoke against re-striping: Dominic Pinalto, Dale Haselhorst, Megan Skeen, Donna Hansen, Lawrence Younger, Lana Hardman, Janae Kraus, and Gary Simon. It is felt that parking is needed since there is no parking on the north side of the street, property values will go down, it would be expensive for residents to install off-street parking, traffic speeds most likely will increase, and there will be a higher danger to pedestrians since sidewalks are right next to the street.

This issue will be on the January 17, 2013 work session agenda for further discussion.

The work session was adjourned at 6:25 p.m.

Submitted by:_____

Doris Wing – City Clerk

1/11/2013

Greg Sund
Ellis County, Kansas
1204 Fort St./PO Box 720
Hays, KS 67601

Hays City Commission
PO Box 490
Hays, KS 67601

Hays City Commissioners:

On behalf of the Ellis County Commission, I am writing to request your support for the County's efforts to achieve a dedicated one-half percent sales tax that will provide us the means to pay debt service on two building projects we are planning. By seeking a dedicated sales tax as opposed to the one authorized for counties in state law, we would be able to retire the debt on our projects in less than one-half the time. In order to get authority to seek a dedicated sales tax, a bill must be passed by the Legislature amending KSA 12-187 b (2).

As discussed with the Hays City Commission and officials in other cities in Ellis County about a year ago, we are planning to construct a new EMS/Rural Fire Building on the corner of 22nd St and General Hays in Hays. Our current EMS operation is in the same building it was when the service started as a county function in 1991. Since that time, we have expanded the operation in Hays and extended it to Victoria and Ellis. There are many challenges in the current building including the fact it does not permit us to separate the sleeping rooms of male and female employees. The Rural Fire District #1 Company 5 building is a garage located at 1208 Cedar in Hays that does not provide sufficient space for equipment, volunteers, meetings, or offices.

Our current jail facility is considerably undersized for the number of prisoners held in our jail system. The jail has a capacity of 30, but the average daily count is 50 – 60. Because the number of prisoners exceeds jail capacity, we have arrangements with jails in other counties to house prisoners. The Sheriff's Department then transports them back and forth for court appearances and trials. Not only is it expensive to house prisoners out of County, it requires a lot of driving. Last year, our transport officers drove over 60,000 miles transporting prisoners. In addition to size issues, the current jail is insufficient in many prisoner housing standards

today that the County must address. Because enhancing security is a big part of the Jail/Courthouse renovation project, in many ways it is difficult to separate them. At present, when prisoners are moved from the jail to the Courthouse for appearances and trials, they are taken through public hallways. Our hope is to create a method of moving prisoners from the jail to the Courthouse without need to pass by the public. We also need to enhance security for jailers, court staff, judges, and the public.

The County plans to sunset the sales tax when the debt service is satisfied on these projects. By achieving a dedicated sales tax, we believe that time frame could be as little as 5 – 6 years.

We are hoping you will support our efforts to achieve a dedicated one-half percent sales tax with a letter to our Legislators.

Sincerely,

Greg Sund
County Administrator
Ellis County, Kansas

Commission Work Session Agenda Memo

From: John Braun, Assistant Director of Public Works

Work Session: January 3, 2013

Subject: 27th Street – Restripe to 3-lane consideration

Person(s) Responsible: Toby Dougherty, City Manager
I.D. Creech, Director of Public Works

Summary

At the October 18, 2012 work session, staff was asked to consider the issues regarding a proposal to eliminate on-street parking and restripe 27th Street to a 3-lane configuration from Hall to Plum. This change was recommended by the 2004 City Wide Traffic Study, and considered by the City Commission in 2008; however, the proposed change was not approved. Staff has updated traffic counts, reviewed crash data, and contacted adjacent property owners. The recommendation is to proceed with eliminating on-street parking and restriping to 3-lanes.

Background

27th Street is an arterial street running east and west across the city and is, with the exception of Vine Street, the most traveled street in Hays. **Exhibit A** shows the traffic counts of various arterial streets in Hays. 27th Street between Hall and Plum is only two lanes, but carries 11,000 vehicles per day (vpd). The most traffic any other two-lane street carries is 7,000 vpd on 8th Street and 13th Street in the downtown areas.

This issue was addressed in the 2004 City Wide Traffic Study conducted by HWS Consultants. The report looked at the entire 27th Street corridor and how it changes from 5-lanes at Vine Street down to 2-lanes west of Plum, then back to 4 lanes west of Hall. The report recommended restriping the corridor to a consistent 3-lane section from Fort to Englewood.

In September 2008, the City Commission considered restriping 27th Street to a three-lane configuration from Hall to Plum. At that time, there were several adjacent residents opposed to the restriping and a motion to restripe failed 3-2. Excerpts from that meeting are attached in **Exhibit B**.

At the October 18, 2012 City Commission Work Session, staff was asked to relook at the situation and contact adjacent property owners for comment. A considerable amount of

information regarding the issue was included in the agenda packet for the October 18th work session and is available for review on the City of Hays website.

Discussion

Traffic patterns, traffic volume, accidents, and environment have changed little since 2008.

	2008	2012
Traffic Count	9,500-11,000 vpd	10,700 vpd
Accident Data:	9 per year	11 per year

Traffic Counts – Traffic counts taken in August 2012 showed the peak hour between 3:00 pm to 4:00 pm with nearly 1000 vehicles per hour during that time. In addition to counting vehicles, the data collected by City staff indicated an 85th percentile speed of 34 mph, which means that 85% of the vehicles travelling on this stretch of 27th Street were traveling at or below 34 mph. The speed limit on this section of 27th Street is 30 mph.

Level of Service and Safety– While the traffic volume on 27th Street is higher than any other two lane road in the city, it does have adequate capacity and provides an acceptable level of service. However, the inconsistency of the 4-lane to 3-lane to 2-lane back to 4-lane configuration combined with many access points and turning movements causes safety issues, which are evident in the type and number of crashes.

Staff's review of 50 accidents on this stretch of 27th Street since 2007 indicated that 20 (40%) may have been prevented if on-street parking had been eliminated and a center opposing left turn lane added. A diagram showing accident locations is attached in **Exhibit C**.

The sample letter in **Exhibit D** was mailed to 47 property owners and/or residents along 27th Street from Ash to Hall. All were invited to attend the January 3rd work session, or contact staff to express their opinions or concerns. Only two inquiries were received by staff. They are detailed in **Exhibit E**.

Legal Consideration

There are no legal obstacles to proceeding as recommended by City Staff.

Financial Consideration

The estimated cost to restripe 27th Street to a 3-lane configuration from Plum to Hall is $20,000 (contract work) or $6,000 (in-house). In-house funding of the cost could be absorbed into the current operational budget. If accomplished by contract work, the $20,000 cost may need to come from City Commission Financial Policy Projects.

Options

1. Direct staff to remove on-street parking and restripe 27th Street to 3-lane from Hall to Plum Street using in-house labor at an approximate material cost of $6,000.

2. Direct staff to remove on-street parking and hire contractor to restripe 27th Street to 3-lane from Hall to Plum at an estimated cost of $20,000.
3. Provide other direction to staff
4. Make no change.

Recommendation

City Staff recommends restriping the section to a 3-lane configuration.

Action Requested

Consider removing on-street parking and restriping 27th Street to a 3-lane configuration from Hall to Plum.

Supporting Documentation

Exhibit A – Traffic Count Map
Exhibit B – Excerpts of September 11, 2008 City Commission Meeting Minutes
Exhibit C – Accident Locations Map
Exhibit D – Sample Letter to Residents
Exhibit E – Public Comment from Residents

Traffic Counts

Exhibit A

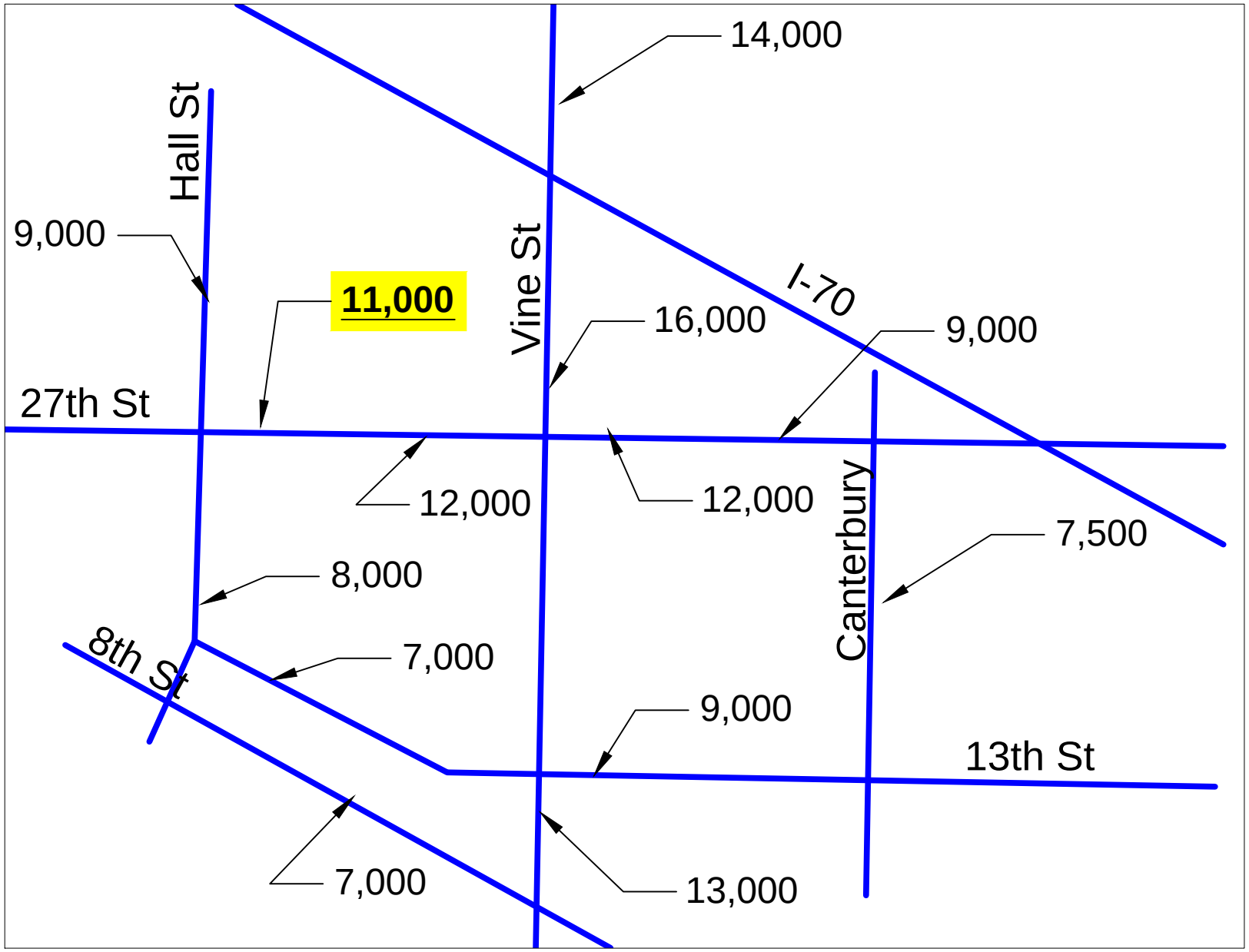


Exhibit B

Excerpts from
MINUTES OF A MEETING
OF THE GOVERNING BODY OF
THE CITY OF HAYS, KANSAS
HELD ON SEPTEMBER 11, 2008

14. PROPOSAL TO RESTRIPE 27TH STREET TO THREE LANES FROM PLUM TO HALL: City staff was requested to look at the issues related to restriping 27th Street from Plum to Hall from a two-lane to a three-lane configuration. Traffic counts, accident data, and public input was gathered and presented to the Commission for consideration. The 2004 City Wide Traffic Study recommended the proposed changes as well. The estimated cost to re-stripe is $20,108.

Ron Mellick moved, Allan Lytton seconded, that funds be authorized to re-stripe 27th Street to a three-lane configuration from Plum to Hall Street.

Commissioner Channell stated he saw no need to re-stripe that section of 27th Street.

Chairperson Wasinger stated that after driving the area, she does not think the street should be re-striped. The houses in that area that face 27th Street do not have any parking on one side of the street already. She does not want to take away the other side too. She does not see a problem that needs fixing.

Commissioner Mellick cited other areas of town where people have lost their parking and in some cases, property, in order to make traffic flow better and be consistent with the rest of the town. The 2nd busiest street in Hays should be consistent and have a three-lane configuration. Plum to Hall is the only section of 27th that is two-lane.

Dominic Pianalto, 330 West 27th Street, stated that not everyone in that area has access to a side street for parking; therefore, it is often necessary to park in front of other homes inconveniencing those homeowners. A realtor has informed him that if street parking is taken away, the value of his property would

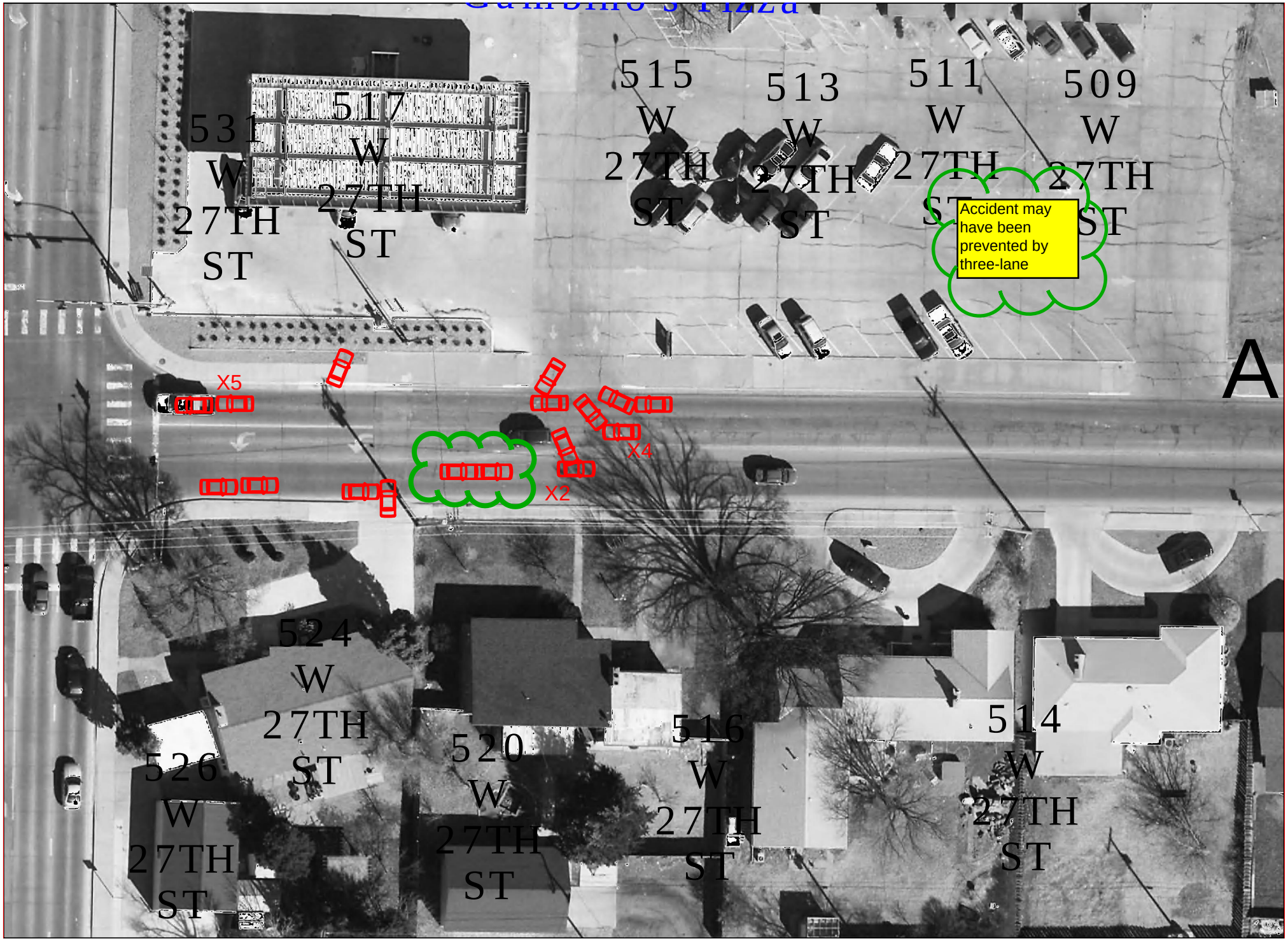
be significantly reduced. He requested the street not be re-striped to a three-lane configuration.

Donna Hansen, 322 West 27th Street, is concerned that if parking in front of her home is removed, it would be harder to back out of her driveway. Also a three-lane street would put pedestrians closer to traffic.

Gary Simon, 324 West 27th Street, stated that the area only experiences high traffic flows for just a few minutes two times a day, at 8:00 a.m. and 5:00 p.m. He does not feel it is justified to change to a three-lane configuration because there is not a problem any other time of the day. There are several cars in his family and he would have no other place to park the vehicles.

Vote: Ayes: Ron Mellick
Allan Lytton
No: Barbara Wasinger
Christopher Channell
Troy Hickman

Exhibit C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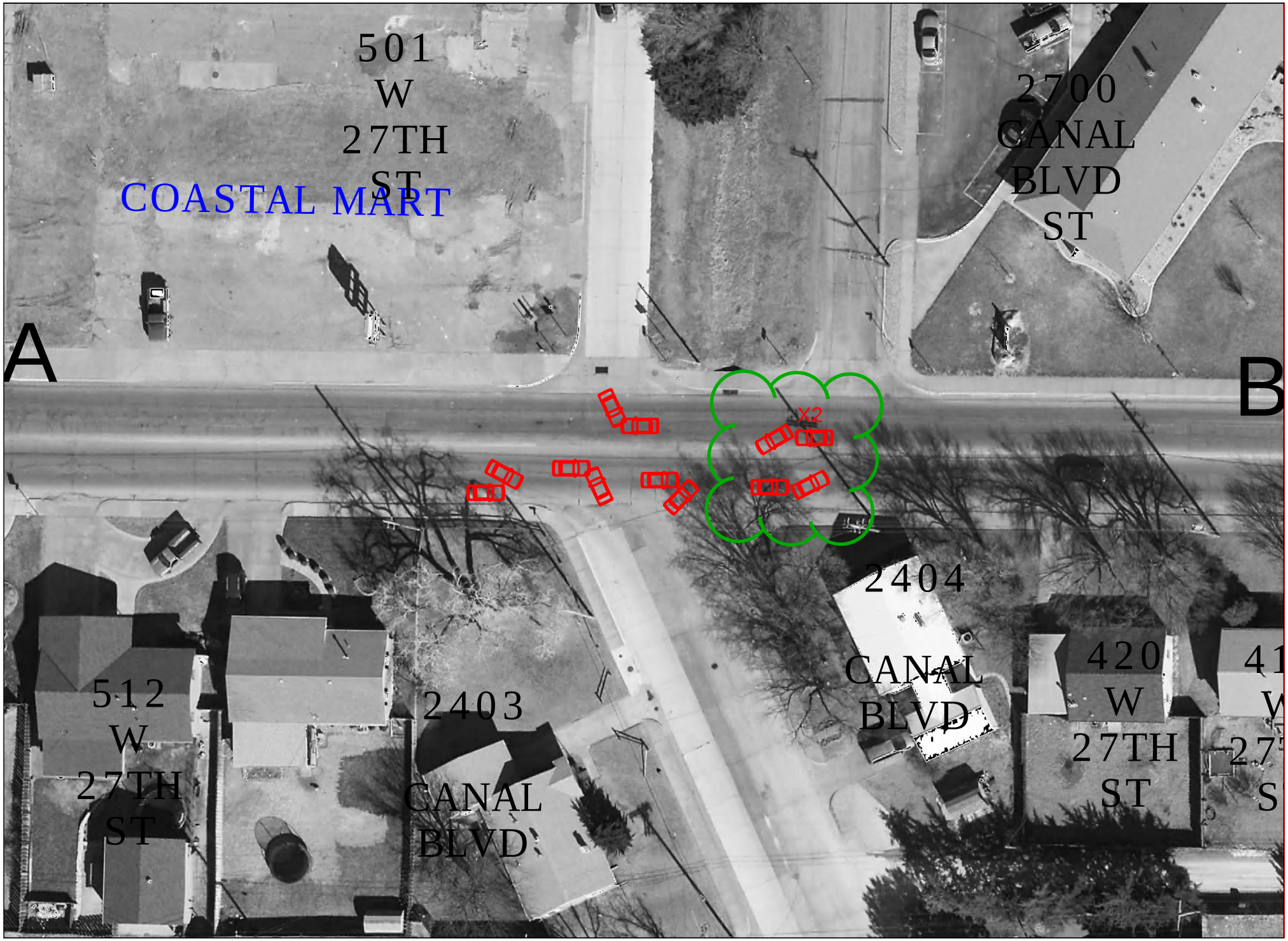
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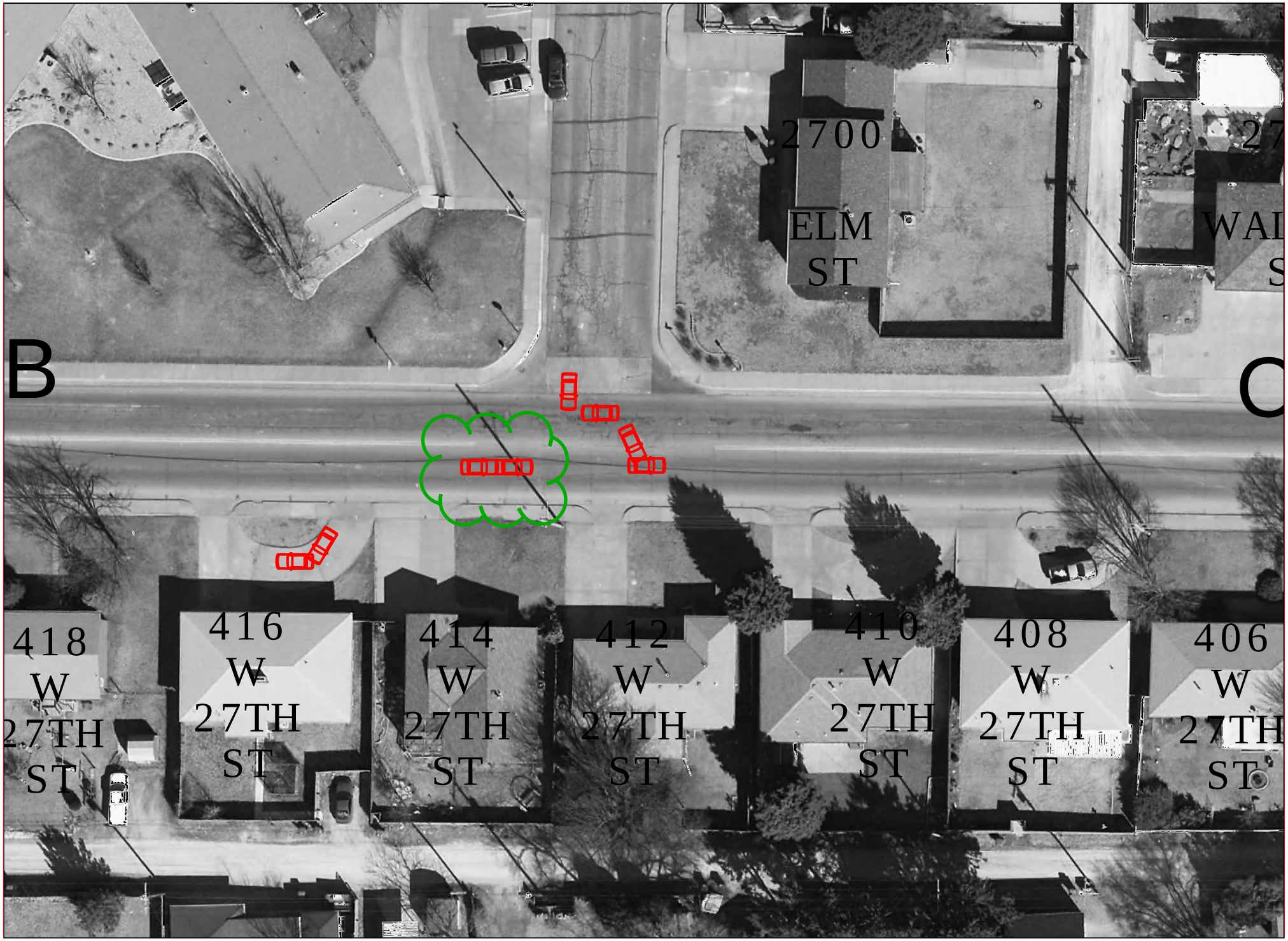
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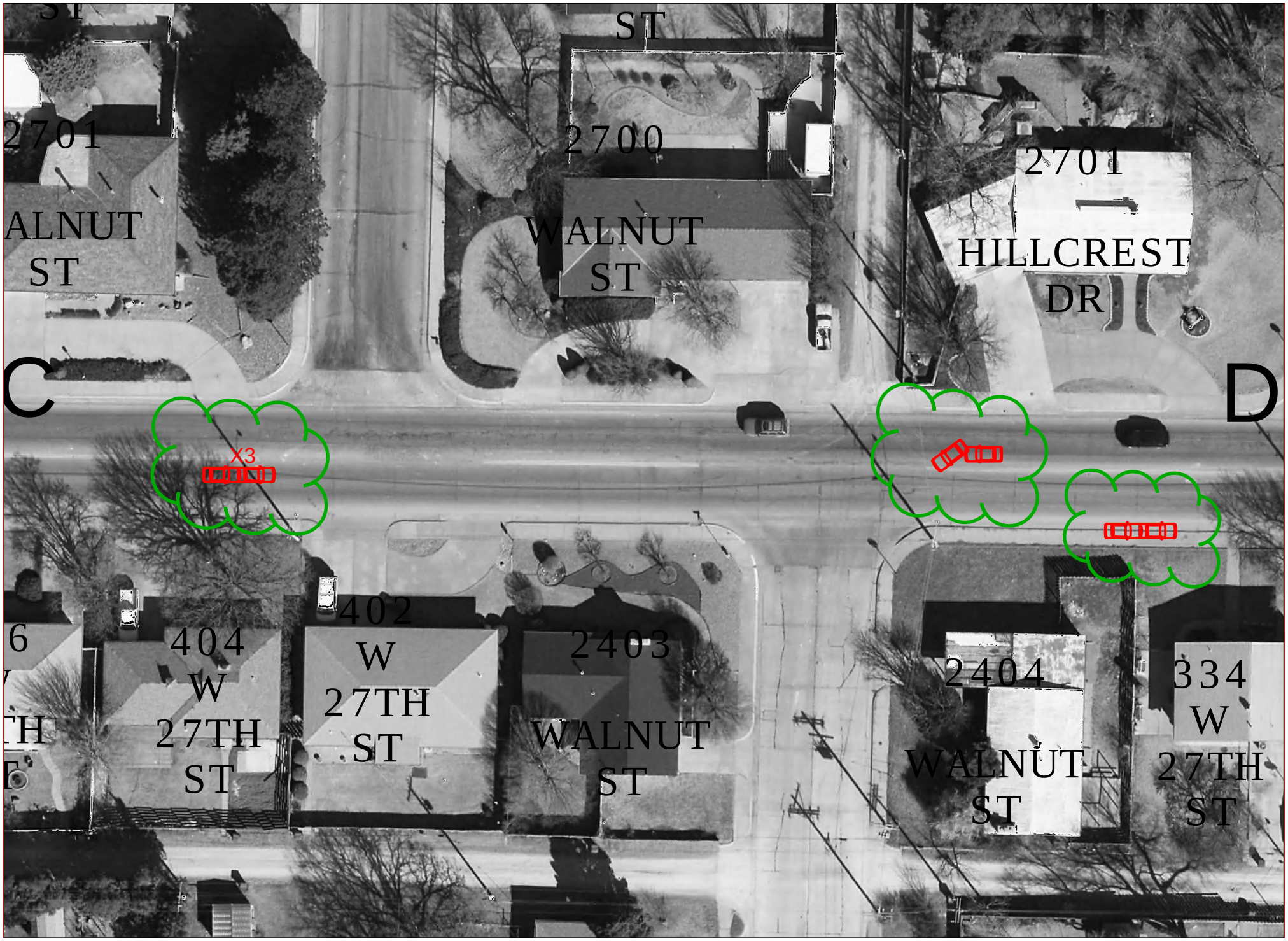
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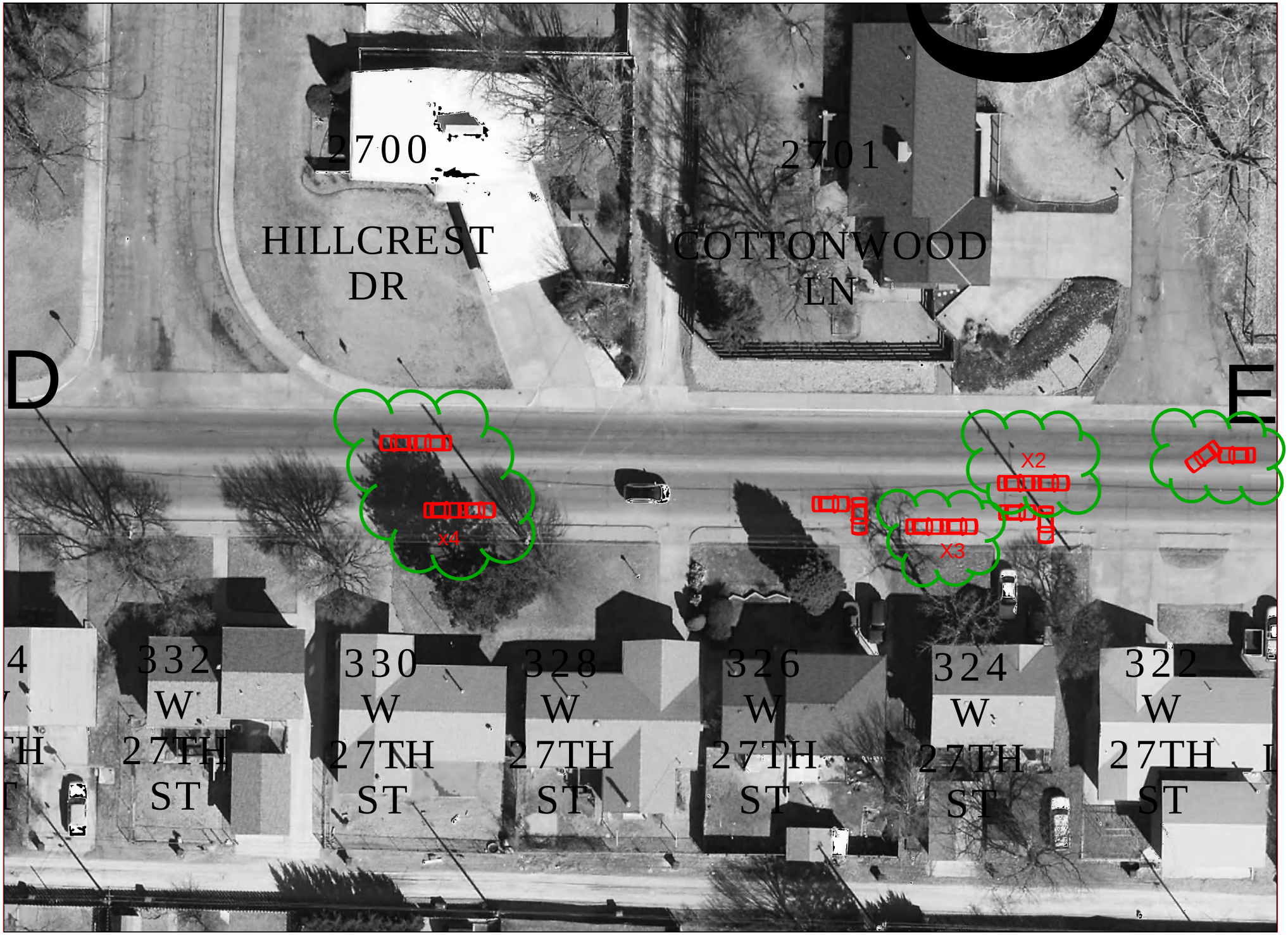
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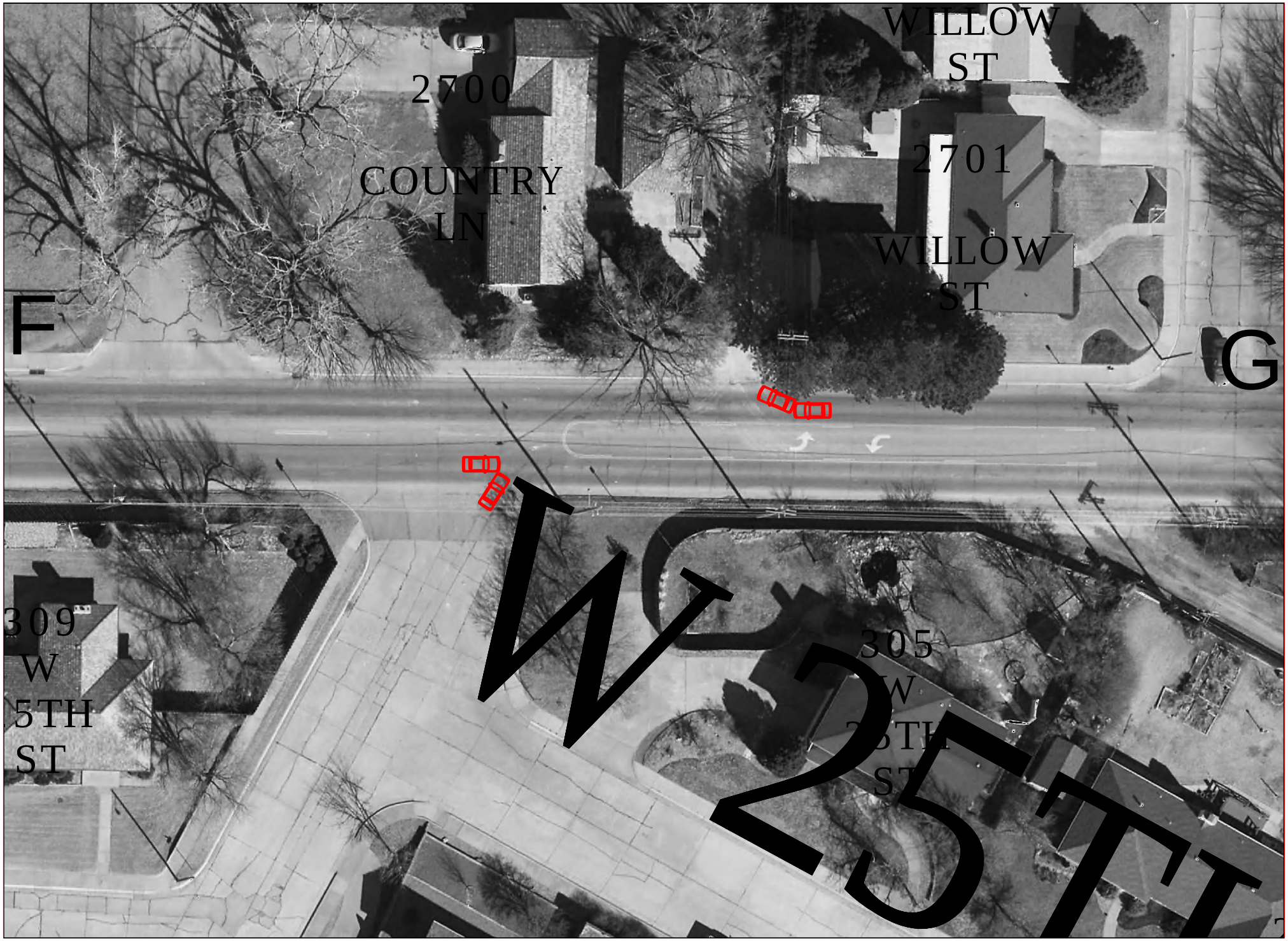
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Exhibit D

December 3, 2012

(Name)
(Address)
HAYS KS 67601

Re: **City Commission Work Session to discuss restriping 27th Street to three lanes from Plum to Hall – Property affected at 526 W 27TH ST**

Dear (Name):

The City of Hays City Commission is considering a plan to restripe 27th Street to a three-lane configuration from Plum to Hall Street. This plan would require the elimination of on-street parking along the south side of 27th Street. As a resident or property owner along this stretch of 27th Street, your comments and concerns are important to us. Therefore, you are invited to attend the City Commission work session to discuss the proposed changes.

The meeting will be held at 6:30 pm on Thursday, January 3, 2013, in the City Commission Chambers at City Hall, 1507 Main Street.

You will be given the opportunity to express your comments or concerns regarding this issue prior to the City Commission making a decision on the matter.

If you are unable to attend the January 3rd meeting and would like to express your comments, please contact me at 628-7350; send written correspondence to 1002 Vine Street, Hays, KS 67601; or e-mail johnbraun@haysusa.com.

Sincerely,
City of Hays

John Braun
Assistant Public Works Director

CC: Resident (if applicable)

SAMPLE

Exhibit E

Public Comment Exhibit E

12/05/2012 526 W 27th Chita Espino-Bravo

E-mail comment from Resident " Is spending that money really necessary? It seems to me that the street works perfectly well the way it is now, and I would use that money where it is really needed, fixing streets and sidewalks that are in bad condition in Hays, or in this area. Having 3 lanes on 27th is really not necessary...the streets works perfectly well the way it is now. To me, it looks like the City is spending money where it is not needed." See full content of e-mail on next page.

12/13/2012 313 W 25th Rebecca Speier

Summary of Phone Call – The rear yard of this lot faces 27th Street. Mrs. Speier does not park on 27th Street. She is not opposed to the restriping.

John Braun

From: chita espino-bravo <chitaespino@yahoo.com>
Sent: Wednesday, December 05, 2012 4:28 PM
To: John Braun
Subject: RE: Restriping 27th street

I see. Thank you for your response. I did not know there were accidents on 27th street by Hall. I would still consider using that money for fixing sidewalks and streets in bad condition in Hays. May be if the City puts signs on 27th that make cars slow down a bit (20 miles per hour instead of 30), we could avoid those accidents? People drive way too fast on 27th. I wonder if this would be a cheaper and better solution. Thanks for considering my opinion. Will we know what is decided on this topic? Thanks again.

Chita Espino

--- On Wed, 12/5/12, John Braun <johnbraun@haysusa.com> wrote:

> From: John Braun <johnbraun@haysusa.com>
> Subject: RE: Restriping 27th street
> To: "chita espino-bravo" <chitaespino@yahoo.com>
> Cc: "I.D. Creech" <idcreech@haysusa.com>
> Date: Wednesday, December 5, 2012, 4:52 PM Thank you for your
> comments.
> They will be included in the packet of information given to the City
> Commissioners when considering this issue.
>
> In response to your questions:
>
> 1). The restriping would simply involve removing the existing
> centerline striping and painting on new stripes delineating the new
> lanes. It would have no effect on the sidewalks and should not cause
> any new cracks or the worsening of existing cracks.
>
> 2). The City Commission will make the decision as to whether the
> benefits of restriping justify the cost to restripe. Much of the
> benefit would be in the reduction of accidents currently occurring on
> 27th Street.
>
> John Braun
> Assistant Director of Public Works
> 1002 Vine St.
> Hays, KS 67601
> 785-628-7350
> 785-628-7352 (Fax)
> johnbraun@haysusa.com
>
> City of Hays Website: www.haysusa.com
>
> -----Original Message-----
> From: chita espino-bravo [mailto:chitaespino@yahoo.com]

>
> Sent: Wednesday, December 05, 2012 12:00 PM
> To: John Braun
> Subject: Restriping 27th street
>
> Good morning dear Mr. Braun,
> I will not be able to attend the meeting on January 2, 2013, because I
> will not be in Hays. However I have some comments and questions for
> you:
>
> 1) Will restriping affect any of the sidewalks next to our properties?
> (I have just noticed that when the gas station was built at Dillon's
> on Hall and 27th, the workers did not fix the cracks they made on the
> sidewalks....they only fixed the bigger areas that were destroyed, but
> there are cracks on the sidewalk now that were not there before. The
> same happened on the back alley when the gas company worked on some
> gas lines in the back alley this past summer....my concrete has cracks
> now that were not there before they started. I would not want more
> cracks on the sidewalks.
>
> 2) Is spending that money really necessary? It seems to me that the
> street works perfectly well the way it is now, and I would use that
> money where it is really needed, fixing streets and sidewalks that are
> in bad condition in Hays, or in this area. Having 3 lanes on 27th is
> really not necessary...the streets works perfectly well the way it is
> now. To me, it looks like the City is spending money where it is not
> needed. I look forward to hearing from you. Thanks you very much for
> your time.
>
>
> Chita Espino-Bravo
> 526 W 27th
>

Commission Work Session Agenda Memo

From: Paul M. Briseno, Assistant City Manager

Work Session: January 17, 2013

Subject: Bike Hays Master Plan Request & Transportation Enhancement Grant Application

Person(s) Responsible: Paul M. Briseno, Assistant City Manager
Toby Dougherty, City Manager

Summary

In 2012, the Commission requested further study of bike lanes. The Hays Bike Master Plan was developed by RDG through the 2012 Comprehensive Plan process. The system connects key community attributes providing a convenient and accessible means of mobility for various purposes. The base plan, 1a phase, is estimated to cost $272,900. Commission budgeted adequate funds in 2013 Special Parks for this project. An opportunity for state funding is now available and staff requests approval to submit an application utilizing budgeted funds as a match for phase 1b to maximize the system's potential.

Staff is requesting approval of the Hays Bike Master Plan. Furthermore, a resolution to apply for Transportation Enhancement Program funds is requested. Additionally $100,000 from Stormwater is requested as a match for the Big Creek Levee cap. Should state funding be denied staff will implement phase 1a if approved by Commission.

Background

The community of Hays has long desired healthier alternative modes of safe transportation. Over the past 18 years the city has studied various hike and bike trail opportunities originating from the 1994 Comprehensive Plan. The 2007 Hike and Bike plan consisted of 32 miles of concrete paths and estimated at $11 million. Throughout this process a more efficient plan has emerged that enhances the current transportation system and community amenities while providing a sustainable alternative to automobile use.

Discussion

The Bike Hays Master Plan was created as a response to a community desire identified in the Comprehensive Plan process and previous studies. The bike plan incorporates nearly every educational unit, park, medical facilities, historical attractions, commercial centers,

employment concentrations, nature trails, and open space features. For a fraction of the cost of traditional hike and bike paths, the Bike Hays Master Plan can be implemented. The complete network of phase 1a ($272,900) and 1b ($538,770) consists of 26 miles and estimated to cost $811,670.

Section 1a connects a majority of schools, parks and other destination points but not all. Section 1b enhances section 1a with additional bike facilities and multi-use pathways that draw neighborhoods into the system, give direct access to major destinations, and link sections to complete the community network. Section 1b also includes a multiuse pathway.

Much of the system is comprised for two users, the avid rider or adult commuter whose desire is to get from point A to point B efficiently and leisure riders that travel at slower speeds. The avid rider or adult commuter will primarily use arterial bike routes to maneuver to specific destinations. The traffic flows on these streets are higher than those of neighborhoods. However safety devices and national design standards ensure all necessary measures are taken for both the bicyclist and driver. The second users of the system are leisure riders. These users will take advantage of neighborhood collectors and parkways which direct riders through streets that have less traffic and operate at slower speeds. These sections allow the user to enjoy the many community nuances and environmental amenities.

Preliminary data from the Big Creek assessment indicates a need for a concrete cap to secure the levee. This section of the levee is used by many citizens and students as a natural walking trail. Therefore $100,000 of Stormwater funds is requested as a match to attain offsetting funds from KDOT.

A funding request from Kansas Department of Transportation Enhancement Funds of $431,670 is requested to construct the entire system. If additional funds are not attained it will take many years to acquire enough funds to finalize the plan and adequately provide a system to the entire community.

Legal Consideration

There are no known legal obstacles to proceeding as recommended by City Staff.

Financial Consideration

Development of the bike plan cost $7,500. The Bike Hays Master Plan 1a phase is budgeted in 2013 Special Parks Fund and noted within Capital Projects. $20,000 is set aside for proper marketing and education. This fund receives revenue through special alcohol tax and is to be utilized for quality of life amenities. Maintenance cost of the system is estimated at $75,000 annually for painting. Staff recommends a portion of the alcohol tax be committed to this maintenance. An additional $100,000 is requested from Stormwater as a match for the Big Creek Levee cap. If approved the city will pay $400,000 for a $811,670 system.

Options

The City Commission has the following options:

1. Approve the Bike Hays Master Plan, $100,000 matching stormwater funds and a Resolution for the Transportation Enhancement Program.
2. Approve only phase 1a of the Bike Hays Master Plan for implementation.
3. Move this item to a future work session.
4. Do nothing.

Recommendation

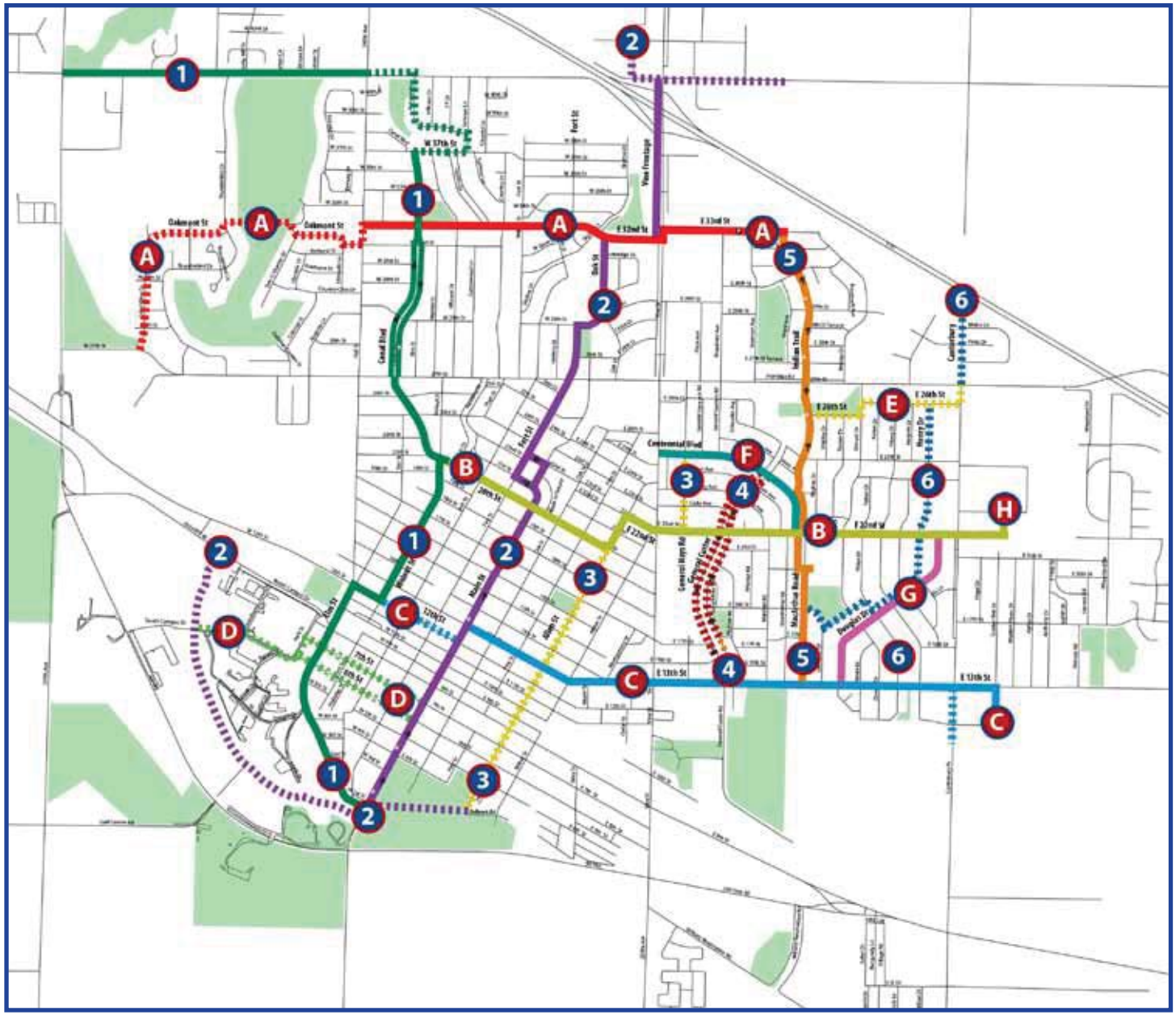
Staff recommends approval of the Hays Bike Master Plan including a resolution to apply for Transportation Enhancement Program funds. Additionally $100,000 from Stormwater as a match for the Big Creek Levee cap.

Action Requested

Approve the Hays Bike Master Plan including a resolution to apply for Transportation Enhancement Program funds and additional match of $100,000 from the Stormwater fund.

Supporting Documentation

System Maps
The Bike Hays Master Plan
KDOT Transportation Enhancement Application Information
Resolution



Map 6

Initial BikeHays System: Sequencing

- Phase 1a Segments
- Phase 1b Segments
- 1 North-south designations
- C East-west designations

THE BIKE HAYS MASTER PLAN

RDg PLANNING • DESIGN

Hays

THE
BIKE HAYS
MASTER PLAN

CONTENTS

Introduction 5
Chapter 1: Context and Opportunities 9
Chapter 2: The Bikeway Network: Principles and Structure 17
Chapter 3: Infrastructure Design Concepts 29
Chapter 4: Implementation 53
Chapter 5: Support Systems 73

MAPS

1. Destinations 11
2. Street Contexts 13
3. Network Opportunities 15
4. BikeHays System by Phase 26
5. BikeHays System by Infrastructure Type 27
6. Initial System Sequencing 57

INTRODUCTION

The City of Hays is ideally positioned to make this wonder vehicle an important part of its transportation picture. The city is compact, so most trips are relatively short. It has a network of wide, relatively quiet streets that connect parks, schools, and activity centers. Hays has a vital downtown, distinctive park and recreation resources, historic and cultural attractions with appeal to both visitors and residents, fine neighborhoods, a boulevard system, and a great university campus. Its flat topography makes bicycling in Hays both a pleasure and highly accessible to most people.

Bicycles and Hays are made for each other, and cycling can play an important role in the city's transportation system. This plan is dedicated to encouraging Hays' citizens to use this healthy, low-impact, and pleasurable form of transportation as part of their daily routines. Bicycling in Hays can be a useful and convenient form of transportation for many purposes that are part of daily life: work, school, visiting friends, parks and recreation, shopping, and many others. But it is profoundly satisfying to reach our destinations under our own power and to experience the city and its people in new and more personal ways.

We know that bicycling for transportation does not meet everyone's needs and that most trips in Hays will continue to be made by car. But people should have choices, including the option to feel safe and comfortable using the healthy, sustainable, and socially satisfying means of mobility that the bicycle offers.

Why a Bikeway Plan? Goals of this Master Plan

People in Hays have a strong interest in health and active transportation. In 2007, the city developed a plan for trails with many good ideas that with unlimited funds would give the city a great pathway network. However, trails are very expensive, often costing as much as $300,000 per mile. The proposed system, while excellent, was simply unaffordable to the city. Furthermore, the new federal transportation bill – MAP-21 – has significantly reduced funding for transportation alternatives, and the State of Kansas is one of only two states to opt out of the Recreational Trails Program (RTP), electing to reprogram its share of funds for roads.

This plan takes a different direction, based on developing an affordable network of bicycle facilities. This concept makes maximum use of the city's largest infrastructure investment: its street system. It uses trails and exclusive pathways to fill gaps in the system. Trails remain a major part of an ultimate system, but the immediate need is to get people into the habit of using bicycles for routine trips.

A BikeHays bicycle infrastructure system, then, is guided by the following goals:

Goal One: Increase the number of people who use the bicycle for transportation as well as recreation. A measurement of the success of this plan will be significantly increasing the percentage of trips for a variety of purposes.

Goal Two: Improve bicycle access to key community destinations. A bicycle transportation system should get people comfortably and safely to where

they want to go. Bicycles are used most often for recreational trips, and these trips to parks, ball games, and recreation centers are important contributors to overall travel in the city. Therefore, the system serves all of the city's parks, and links them into a unified green network. But it also serves important community destinations and sources of travel, such as the FHSU campus, Downtown, and other retail centers.

Goal Three: Use bicycling as part of an effort make Hays more sustainable at three levels: global, community, and individual. Trips made by bicycle promote community sustainability in three ways:

- **Global sustainability.** Bicycle transportation reduces fossil fuel use and greenhouse gas emissions, helping the city reduce its impact on the global environment. The Hays system is especially suited to short trips, for which cars are both least efficient and most polluting. A bikeable Hays will not save the planet. But as a great sage said about 2,000 years ago, "It's not your job to finish the task, but you are not free to walk away from it."

- **Community sustainability.** A good and heavily used bicycle transportation system can help reduce the cost of government by marginally reducing the need for more expensive projects. Also, on a social level, bicycling enhances the quality of civic life, helping us interact with each other as people. Places that lead in bicycle transportation also tend to attract people because of their community quality.

- **Individual sustainability.** Incorporating physical activity into the normal routine of daily life for everyone from kids to seniors makes all of us healthier, and reduces overweight and obesity rates and improves wellness and lowers overall health care costs.

Goal Four: Increase safety on the road for motorists, bicyclists, and pedestrians. Improved safety is a critical goal for any transportation improvement, and good infrastructure can reduce crashes and increase comfort for all users of Hays' transportation network.

The Measures of Success: Guiding Criteria for an Effective Bicycle Transportation Network

The design of any bicycle transportation system should be guided by criteria that can be used to evaluate individual components and the effectiveness of the entire network. The Netherlands' Centre for Research and Contract Standardization in Civil and Traffic Engineering (C.R.O.W.), one of the world's leading authorities in the design of bicycle-friendly infrastructure, has developed especially useful requirements to help determine the design of bicycle systems. Drawing on C.R.O.W.'s work in its excellent design manual, *Sign Up for the Bike,* an urban bicycle network should generally fulfill six basic requirements:

- **Integrity** (or, in C.R.O.W.'s term, Coherence): Hays' bikeway network at all points in its evolution forms a coherent system that links starting points with destinations. The network is understandable to its users and fulfills a responsibility to convey them continuously on their paths.

- **Directness:** The bikeway network should offer cyclists as direct a route as possible, with mini-

mum detours or misdirections.

• Safety: The bikeway network should maximize the safety of using the bicycle for transportation, minimize or improve hazardous conditions and barriers, and in the process improve safety for pedestrians and motorists.

• **Comfort:** Most bicyclists should view the network as being within their capabilities and not imposing unusual mental or physical stress. As the system grow, more types of users will find that it meets their needs comfortably.

• **Experience:** The bicycle network should offer its users a pleasant and positive experience that capitalizes on the city's built and natural environments.

• **Feasibility:** The bicycle network should provide a high ratio of benefits to costs and should be viewed as a wise investment of resources. It is capable of being developed in phases and growing over time.

These criteria and the system design principles that logically follow from them are discussed in detail in Chapter Two.

Organization of the Plan

The Bike Hays Master Plan presents its analysis and recommendations in the following chapters:

Chapter One: Hays' Bicycling Environment. This chapter examines existing conditions in the city that pertain to bicycling, including resources that help determine a future bikeway system such as destinations, existing facilities, and opportunities.

Chapter Two: The Bikeway Network: Principles and Structure. This chapter establishes overall principles that guide the proposed network. It presents a complete conceptual system of on-street bikeways, paths, and multi-use trails.

Chapter Three: Facility Design Guidelines. This chapter presents the vocabulary of facilities and street adaptations proposed for the Hays network, based on the city's specific street characteristics and environmental features. It concludes by applying the infrastructure types to the conceptual bikeway network and its various routes.

Chapter Four: Implementation. This section establishes criteria that determine the sequence of development and proposes an initial network, based on serving all parts of town and early feasibility.

Chapter Five: Support Programs. The League of American Bicyclists describes five "E's" as components of a bicycle-friendly community (BFC) program and judges BFC applications accordingly. These program categories are Engineering, Education, Encouragement, Enforcement, and Evaluation.

Chapters One through Four largely address the Engineering component; Chapter Five recommends initiatives that support these infrastructure investments to achieve bicycle transportation's full potential as part of the Hays access environment.

CHAPTER 1

CONTEXT AND OPPORTUNITIES

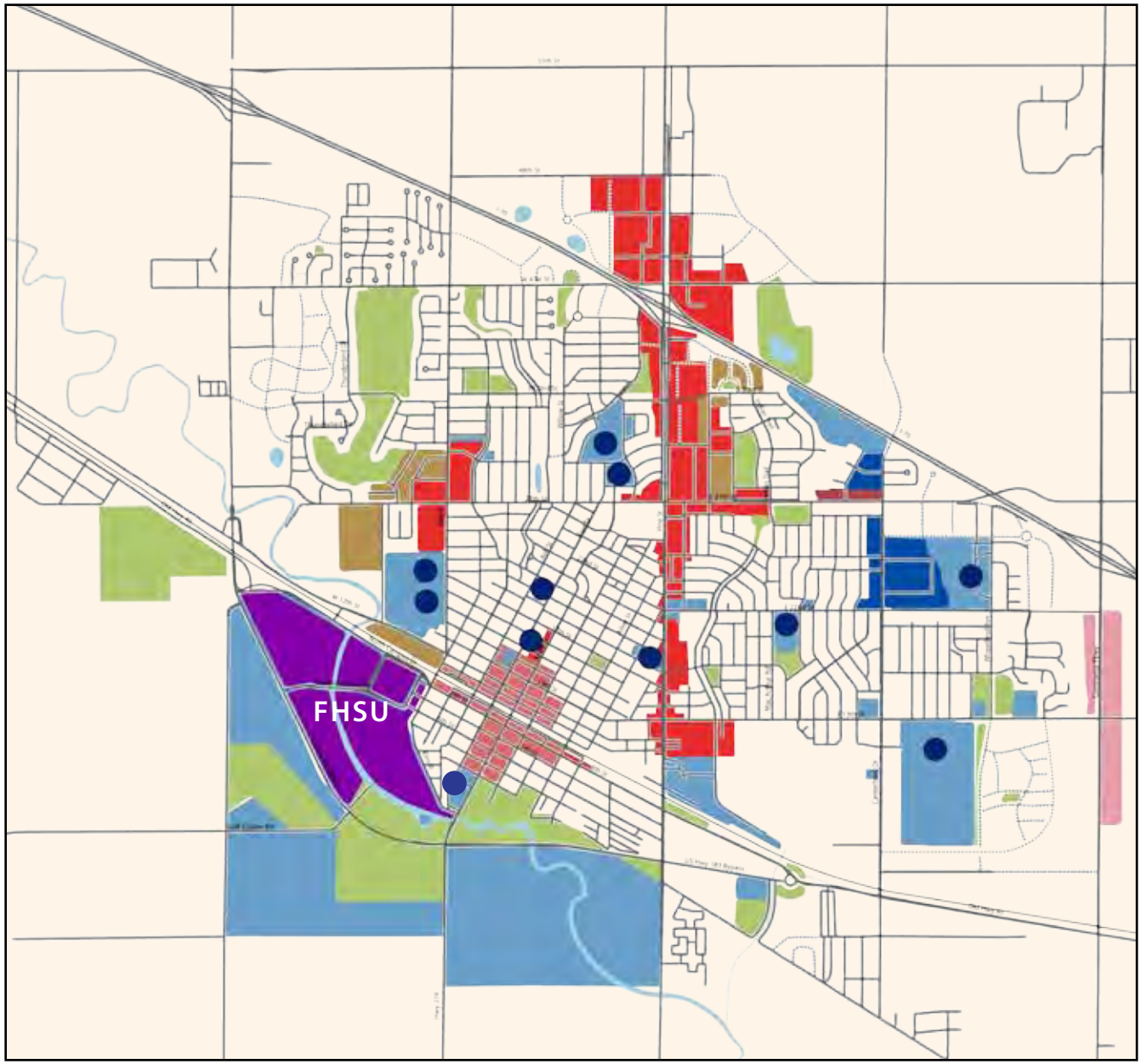
This chapter describes key characteristics and features that affect the design of Hays bikeways network, including:

- **Destinations**
- **Street Connectivity and Types**
- **Network Opportunities**

Destinations (Map 1)

Residential, commercial, office, and civic land use patterns all influence bicycle network design, but major destinations, the places that attract people for learning, recreation, employment, civic or cultural life, shopping, entertainment, or other activities – should be directly served by the system. Figure 1.1 displays the deployment of many of these significant destination points in Hays, including:

- **Educational facilities,** including elementary and secondary schools as well as Fort Hays State University.
- **Major park and recreation facilities,** including large multi-purpose parks, among which are the new Bickle-Schmidt Sports Complex, Municipal Park, and Frontier Park; the city's excellent system of neighborhood parks; the Hays Recreation Center; and the existing undeveloped Hiking Trail.
- **Hospitals and medical facilities,** including the Hays Medical Center campus and surrounding facilities.
- **Key public destinations and museums,** including the Hays Public Library, the Sternberg Museum, the Ellis County Museum, City Hall, and Historic Fort Hays.
- **Commercial centers adaptable to bicycle transportation,** including the Chestnut Street District, the Mall and other major commercial uses on North Vine, and the 27th and Hall district.
- **Major employment concentrations,** including office clusters, downtown, and the Commerce Parkway corridor as feasible.
- **Environmental and Open Space Features,** such as the Big Creek corridor.
- **High Density Residential.** Apartment districts tend to generate high concentrations of potential users. In Hays, these areas are likely to have significant off-campus student populations, who will find bicycles to be a convenient way to travel to classes.



Map 1:
Destinations

- High Density Resadential
- Commercial Districts
- FHSU
- Civic Facilities
- Schools
- Downtown
- Business Parks
- Medical Facilities
- Parks

Street Connectivity and Types (Map 2)

Like many Midwestern and Great Plains cities, Hays' arterial street system is built on the section-line grid that dates back to the surveys and land divisions of the Homestead Act. Within that grid, the Hays street system adjusted to geographic features that add significant character. For example, the grid is rotated in the original town south of 27th Street and west of Vine to align with the railroad. On other quadrants, drainageways influenced land development patterns. In general, street patterns in Hays have several attributes that lend themselves to bikeway development. These include:

- **Good local street continuity.** Within the grid created by through arterials, Hays' secondary streets connect to each other, creating an internal system that is relatively easy to navigate through. These streets generally have low traffic volumes, making them comfortable for most prospective cyclists. However, this continuity tends to be broken at section lines, and particularly by the cross axes of Vine Street and 27th Street. Additional safe connections from north to south and east to west across these corridors would improve a bicycle facility network.

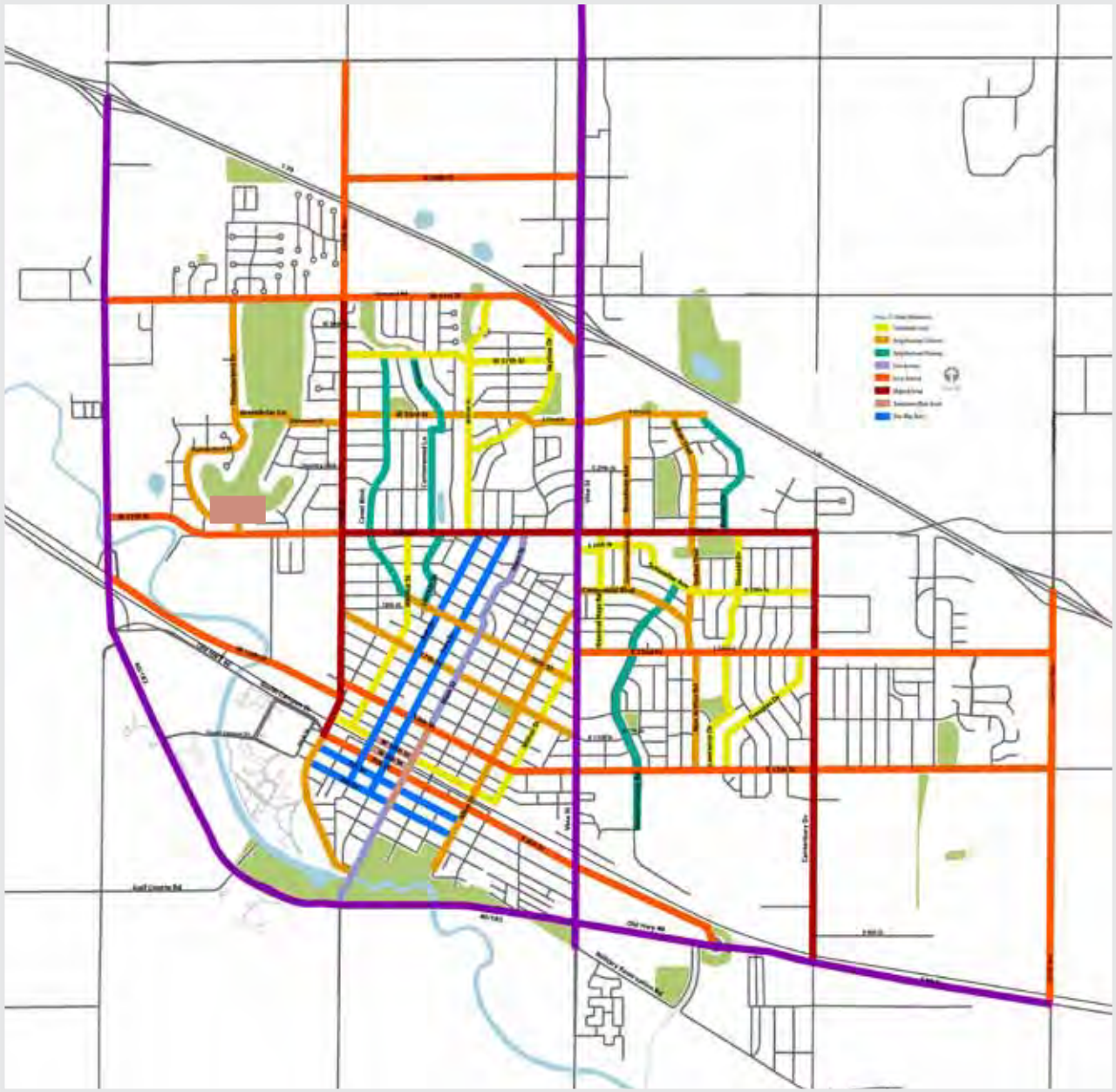
- **Street width.** Hays' wide streets provide generous space that allow motorists and bicyclists to share the road comfortably. In many cases, bicycle facilities will tend to reduce excessive speed on local streets.

- **Parkways.** Hays' divided parkways along drainage corridors, established by Canal Boulevard, Lincoln Drive/Cottonwood Avenue, and General Custer Road, create attractive bike and pedestrian corridors.

Table 1: *Street Contexts*

Street Type	Lanes	ADT	Street Width (ft)	Speed (mph)	Continuous length (miles)	Other Features	Examples
Continuous Local	2	Under 1,000	26-40	25	0.5-1.0		Haney Drive
Continuous Neighborhood Collector	2	Under 3,000	30-44	25	0.5-2.0	Traffic control at major intersections, residential and commercial contexts	Indian Trail, 33rd Street
Neighborhood Parkway	1 with median	Under 3,000	Over 100 in ROW	25	1.0-2.0	Drainageway in median, may have traffic control at major intersections.	Canal Blvd, General Custer
Civic Avenue	2	Under 5,000	32-55	25-30	1.0-2.0	Traffic control at major intersections, mixed uses, street oriented houses	Main Street
Local Arterial	4	4,000- 8,000	36-45	30-35	1.5-4.0	Traffic controls, major local traffic carriers	13th St, 22nd St.
Major Arterial	3-5	7,000-12,000	42-50	35	1.5-4.0	Traffic control at major intersections, mixed uses	27th St, Hall St
Regional Arterial	5	Over 12,000	Over 48	35-50	2.0-6.0	Major highway corridors, substantial commercial use	Vine St, 183 Bypass
Urban One-Way Pairs	1-2	2,000-4,000	24-32	30	Over 2.0	Traffic control at major intersections; mixed uses with commercial, office, residential; on-street parking	Fort/Ash
Downtown Main Street	2-3	3,000-7,000	50-60	25-30	Downtown	Traffic control at major intersections; mixed uses; on-street diagonal parking	8th Street, Main Street

Table 1 below describes specific street contexts within the Hays street network. These are different from traditional street categories because they relate to character, land use, and actual function as well as width and traffic volume. Map 2 illustrates how these street contexts relate to Hays street system. The width and traffic characteristics each street type will generate different treatments to adapt them for bicycle transportation. Of these, streets that most effectively satisfy the six measures of success identified in the Introduction – integrity, directness, safety, comfort, experience, and feasibility – are streets with relatively low traffic volumes, high continuity, and adequate width for mixed traffic.



Map 2:
Street Contexts

- Continuous Local
- Neighborhood Collector
- Neighborhood Parkway
- Civic Avenue
- Local Arterial
- Major Arterial
- Downtown Main Street
- One-Way Pairs

North

Other Network Opportunities (Map 3)

In addition to its low-volume continuous streets, Hays provides other opportunities that can help to build a system that satisfies the six performance criteria. These features can accommodate facilities physically separated from travel lanes such as separated pathways adjacent to streets, multi-use trails, or street modifications. They include:

• **Potential complete streets and road diets.** These are streets (often local arterials) that could be converted to a different lane configuration. For example, 13th Street and Hall Street north of 27th both have four-lane sections with traffic volumes well within the capacity of a three-lane street section. Most traffic engineers agree that a three-lane street with a separated left-turn lane is preferable to a four-lane street without left-turn facilities for both operations and safety. A reduction of these streets from four to three lanes will provide adequate space for bicycle lanes/shoulders.

• **Major open spaces or institutional uses with long continuous street frontages, preferably at least 1/4 mile.** These include parks, cemeteries, school campuses, golf courses, roadways with limited access and wide right-of-ways, and large public uses. Off-street paths parallel to streets can be located along these relatively uninterrupted frontages.

• **Parks and campuses capable of accommodating trails.** These uses and site plans enable trails to cross through their interiors without compromising their use. Examples are Municipal and Frontier Park, and the Sports Complex.

• **Linear corridors that accommodate significant new trail facilities that serve transportation purposes and/or fill gaps in the existing system.** Examples are:

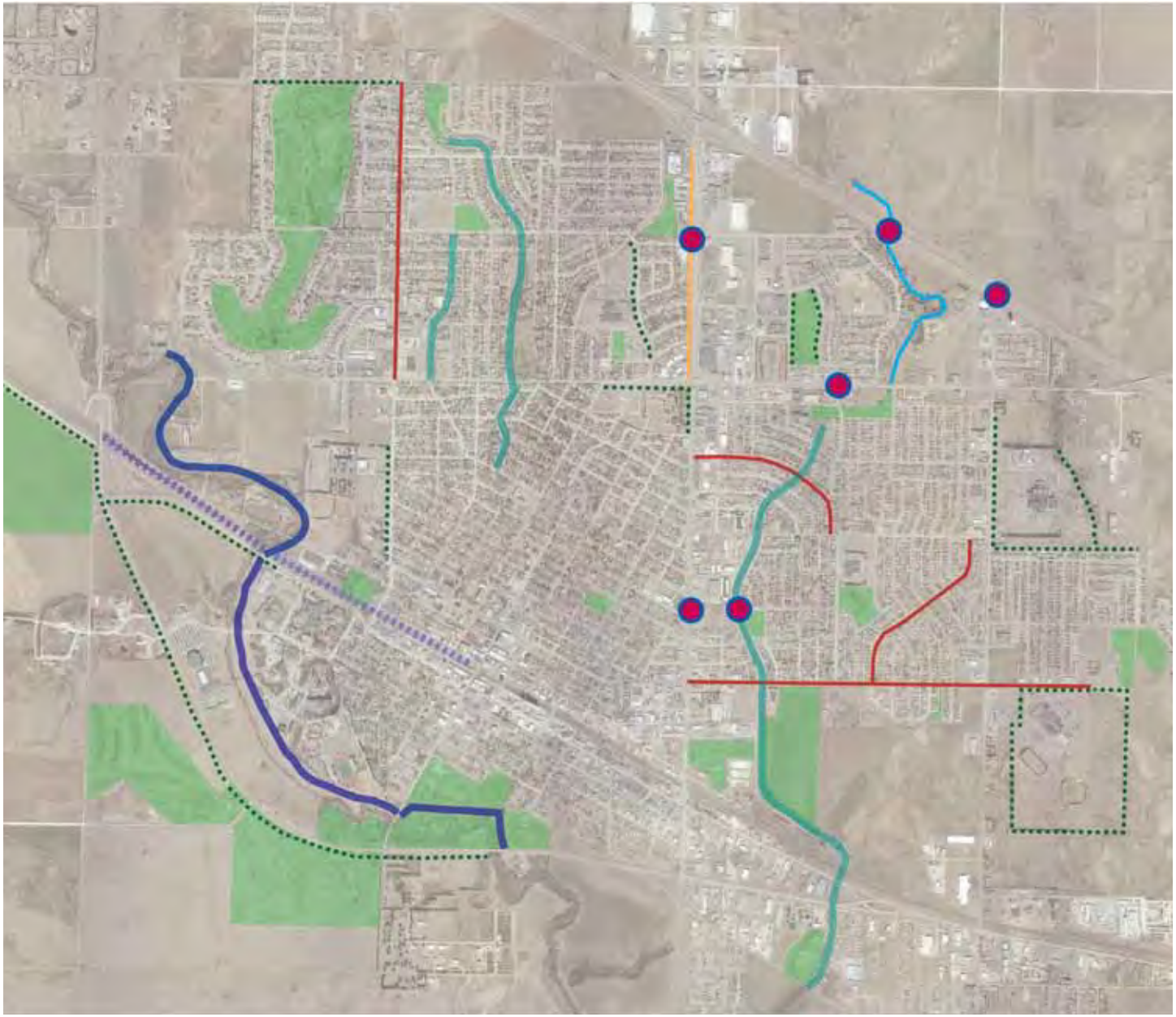
- Drainageways and watercourses with banks and sufficient adjacent public or common land to accommodate pathways. The city's parkways are highly adaptable as bikeway and pedestrian facilities.

- Levees along watercourses, most notably Big Creek.

- Railroad corridors, where possibilities for rail with trail development exist.

- Green spaces that are proposed in the comprehensive plan, such as the possible repurposing of the west frontage road along Vine Street between 27th and Interstate 70.

- New grade separations or drainageway crossings of I-70.



Map 3: Network Opportunities

- Big Creek Levee
- Secondary Waterway
- Parkways
- Uninterrupted Edges
- Lane Reconfigurations
- Roadway Repurposing
- Railroad/Road Corridors
- Connectivity Improvement
- Parks

CHAPTER 2

THE BIKEWAY NETWORK PRINCIPLES AND CONCEPT

This chapter starts with the principles that govern the design of the Bike Hays bikeway network. It uses these principles and the structure of destinations, contexts, and opportunities presented in Chapter One to generate the overall system concept.

The introductory section identified six guiding requirements for an effective bicycle network, adapted from work completed by the Netherlands Centre for Research and Contract Standardization in Civil and Traffic Engineering:

Integrity: The ability of a system to link starting points continuously to destinations, and to be easily and clearly understand by users.

Directness: The capacity to provide direct routes with minimum misdirection or unnecessary distance.

Safety: The ability to minimize hazards and improve safety for users of all transportation modes.

Comfort: Consistency with the capacities of users and avoidance of mental or physical stress.

Experience: The quality of offering users a pleasant and positive experience.

Feasibility: The ability to maximize benefits and minimize costs, including financial cost, inconvenience, and potential opposition.

These six requirements express the general attributes of a good system, but must have specific criteria and even measurements that both guide the system's design and evaluate how well it works. Tables 2 through 7 describe performance criteria to guide implementation of the network over time and evaluate its effectiveness.

Attributes of the Network

Based on this development of the six requirements presented in the tables, the Hays system design follows the following major attributes:

Destination-Based. The Hays network serves important destinations in the community. Since the majority of bicycle trips are recreational, the system design began with servicing and connecting the city's parks and recreational facilities. It then expanded to address other important destinations appropriate for non-motorized transportation, including schools, the university, downtown, and retail destinations. More than a grid of bicycle-friendly streets or recreational trails, Bike Hays is intended to be a transportation system that takes people to specific places.

Transit Model. The Hays system considers a grid of destination-based routes analogous to a road or transit system. This idea guides bicyclists to destinations with minimum consultation of support materials and emphasizes the interconnection of routes. Thus, cyclists heading to a specific destination will know the combination of designated routes that take them where they want to go.

Incremental Integrity. Incremental integrity – the ability of the network to provide a system of value at each step of completion – is an important attribute. The first step in completion should be valuable and increase bicycle access even if nothing else is done. Each subsequent phase of completion follows the same principle of leaving something of clear value and integrity, even if it were the ultimate stage of completion.

Evolution. The system is designed to evolve and improve over time. For example, a relatively low-cost project or design element can establish a pattern of use that supports something better in the future. To use a cliche, the perfect should not be the enemy of the good. For example, much of the path along Big Creek's levee is suitable for the majority of users with relatively inexpensive upgrades short of full pavement. Similarly, comprehensive plan recommendations for North Vine and Downtown will result in major street and pathway improvements, but inexpensive, interim solutions can create a better cycling environment in the short-term. Rather than trying to accumulate funds to pave that trail, we should build an initial network that

uses what we have and provides a foundation for future improvements.

Conflict Avoidance. Few important actions are completely without controversy, but successful development of a bicycle transportation system should avoid unnecessary discord and impact on neighborhoods. For example, when parking in neighborhoods or desirable street operation should not be sacrificed to accommodate bike lanes. In many cases, however, bike lanes can help reduce other problems, such as speeding on streets that have too much lane capacity. On local streets, shared routes and signs that

Table 2: ***Development of the INTEGRITY requirement.***

Performance Factor	Measures	Performance Standard
Comprehensiveness	Number of connected destinations on system	Major destination types, including parks, the Sports Complex schools, FHSU, the Technical College, the hospital, Downtown, and major retail concentrations should be served by the ultimate network. New destinations as developed should be developed along the network or served by extensions.
Continuity	Number of discontinuities along individual routes	Users headed on a route to a destination must not be dropped at a terminus without route or directional information. Even at incremental levels, route endings must make functional sense. Transitions between facility types must be clear to users and well-defined. Transitions from one type of infrastructure to another along the same route should avoid leading cyclists of different capabilities into uncomfortable settings or beyond their capacities. Infrastructure should be recognizable and its features (pavement markings, design conventions) consistent throughout the system
Wayfinding/directional information	Completeness and clarity of signage Economy and efficiency of graphics Complaints from users	Signs must keep users informed and oriented at all points Sign system should avoid ambiguities that cause users to feel lost or require them to carry unnecessary support materials. Signs should be clear, simple, consistent, and readable, and should be consistent with the MUTCD. Use of the Clearview font is recommended.
Route choice	Number of alternative routes of approximately equal distance	Ultimate system provides most users with a minimum of two alternatives of approximately equal distance. Minimum distance between alternative routes should be about 500 feet
Consistency	Percentage of typical reported trips accommodated by the ultimate network.	Typically, a minimum of 50-70% of most trips to identified destinations should be accommodated by the bikeways network.

do not disturb the neighborhood routine can provide an adequate facility that focuses on the positive and minimizes divisive conflicts.

Use of Existing Facilities. Existing features like the Big Creek levee path, the access under I-70 along North Vine, the hospital's health walk system, and the planned sidepath along 41st Street Trails are integral to a bikeway system and should not be taken for granted.

Fill Gaps. In some cases, the most important parts of a network involve small projects that make connections rather than long distance components. Often, these short links knit longer street or trail segments together into longer routes or provide access to important destinations. These gaps may include a short trail segment that connects two continuous streets together, or an intersection improvement that bridges a barrier The development of the overall network is strategic, using manageable initiatives to create a comprehensive system.

Table 3: ***Development of the DIRECTNESS requirement.***

Performance Factor	Measures	Performance Standard
Access	Coverage Access to all parts of the city	The network should provide convenient access to all parts of the city. As a standard, all urban residential areas should be within one-quarter to one-half mile from one of the system's routes, and should be connected to those routes by a relatively direct local street connection.
Bicycling speed	Design and average speed of system	The network should permit relatively consistent operation at a steady speed without excessive delays. System should be able to deliver an average point to point speed between 12 and 15 mph for users. Through portion of routes should permit operation in a 15 to 20 mph range.
Diversions and misdirections	Maximum range of detours or diversions from a straight line between destinations. "Detour ratio:" Ratio of actual versus direct distance between two points.	Routes should connect points with a minimum amount of misdirections. Users should perceive that the route is always taking them in the desired direction, without making them reverse themselves or go out of their way to an unreasonable degree. Maximum diversion of a straight line connecting two key points on a route should not exceed 0.25 miles on either side of the line. Detour ratio (distance between two points/shortest possible distance) should not exceed 1.2 over long distances and 1.4 over short distances.
Delays	Amount of time spent not moving per mile	Routes should minimize unnecessary or frustrating delays, including excessive numbers of stop signs, and delays at uncontrolled intersections waiting for gaps in cross traffic. Routes should maximize use of existing signalized crossings. Target design should limit maximum delays to about 30 seconds per mile over long distances and 45 seconds per mile over short distances.
Intersections	Bicycle direction through intersections	Bicyclists should be able to continue through intersections as vehicles. Situations that force cyclists to become pedestrians in order to negotiate intersections should be avoided.

Table 4: ***Development of the SAFETY requirement.***

Performance Factor	Measures	Performance Standard
Reduced number and fear of crash incidents	Number of incidents Reactions/perceptions of users	Bikeways system users should feel that the system protects their physical safety, as measured by both use of routes and survey instruments. A particular area of concern in Hays are close frontage roads along arterials (Vine, 27th, Canterbury)
Appropriate routing: mixing versus separation of traffic	Average daily traffic (ADT) criteria for mixed traffic Traffic speed criteria for mixed traffic	System design should avoid encounters between bicyclists and incompatible motor traffic streams (high volumes and/or high speeds). Separation and protection of vulnerable users should increase as incompatibilities increase.
Infrastructure, visibility, signage	Pairing of context and infrastructure solutions Mutual visibility and awareness of bicycle and motor vehicles	Infrastructure should be designed for utility by at least 80% of the potential market. Infrastructure applications should be matched with appropriate contexts. Warning signage directed to motorists should be sufficient to alert them to the presence of cyclists along the travel route. Surfaces and markings should be clearly visible to all users. Obstructions, such as landscaping, road geometry, and vertical elements, should not block routine visibility of cyclists and motorists. Trail and pathway geometries should avoid sharp turns and alignments that hide cyclists operating in opposing directions. Where these conditions are unavoidable, devices such as mirrors and advisory signs should be used to reduce hazards.
Door hazards and parking conflicts	Number of incidents Parking configurations Location of bicycle tracking guides	Component design should track bicycles outside of the door hazard zone. Back-out hazards of head-in parking should be avoided or mitigated when diagonal parking is used along streets.
Intersection conflicts	Location and types of pavement markings Number of intersections or crossings per mile	Intersections should provide a clearly defined and visible track through them for cyclists As a rule, sidepaths should be used on continuous segments with a minimum number of interruptions.
Complaints	Number of complaints per facility type	Complaints should be recorded by type of infrastructure and location of facility, to set priorities for remedial action.

Table 5: ***Development of the COMFORT requirement.***

Performance Factor	Measures	Performance Standard
Road surface	Quality and type of road surface Materials Incidence of longitudinal cracking and expansion joints	The network's components should provide a reasonably smooth surface with a minimum of potholes and areas of paving deterioration. Roads should be free of hazardous conditions such as settlement and longitudinal cracks and pavement separation. All routes in the urban system should be hard-surfaced, unless specifically designated for limited use.
Hills	Number and length of hills and inclines Maximum grades on component for both long and short distances	Hills and grades are generally not a factor within Hays. Grades are most significant at separations over or under roads and railroads. As a general rule, routes should avoid more than one incline over 5% for each mile of travel Maximum average design grades should not exceed 7% over a hill not to exceed 400 feet in length; or 5% over the course of a mile. When street width restricts bike lanes to one side of the street only, facilities should generally be placed on the upgrade side. Off-road climbing facilities should be provided where slow-moving bike traffic can obstruct motor vehicles and increase motorist conflict.
Traffic stress	Average daily traffic (ADT) Average traffic speed Volume of truck traffic	Generally, the network should choose paths of lower resistance/incompatibility wherever possible and when DIRECTNESS standards can be reasonably complied with. The network should avoid mixed traffic situations when average daily traffic (ADT) exceeds 5,000 vehicles per day when alternatives exist. Alternatives can include bike lanes, separations, or alternative right-of-way.
Stops that interrupt rhythm and continuity	Number of stop signs/ segment	Network routes should avoid or redirect frequent stop sign controls. The number of stops between endpoints should not exceed three (1 per quarter mile average) per mile segment.

Table 6: ***Development of the EXPERIENCE requirement.***

Performance Factor	Measures	Performance Standard
Surrounding land use	Neighborhood setting Adjacent residential or open space use, including institutional campuses Adjacent street-oriented commercial	Surrounding land use should provide the network user with an attractive adjacent urban environment. Routes should provide access to commercial and personal support services, such as food service, convenience stores, and restrooms.
Landscape	Location and extent of parks or maintained open space	Network should maximize exposure of or use right-of-ways along or through public parks and open spaces. Environmental contexts to be maximized include parks, waterways and lakes, and landscaped settings.
Social safety	Residential development patterns Observability: Presence of windows or visible uses along the route Population density or number of users	The network should provide routes with a high degree of observability – street oriented uses, residential frontages, buildings that provide vantage points that provide security to system users. Areas that seem insecure, including industrial precincts, areas with few street-oriented businesses, or areas with little use or visible maintenance should generally be avoided, except where necessary to make connections.
Furnishings and design	On-trail landscaping, supporting furnishings	Network routes should include landscaping, street furnishings, lighting, rest stops, graphics, and other elements that promote the overall experience. These features are particularly important along trails.

Table 6: ***Development of the FEASIBILITY requirement.***

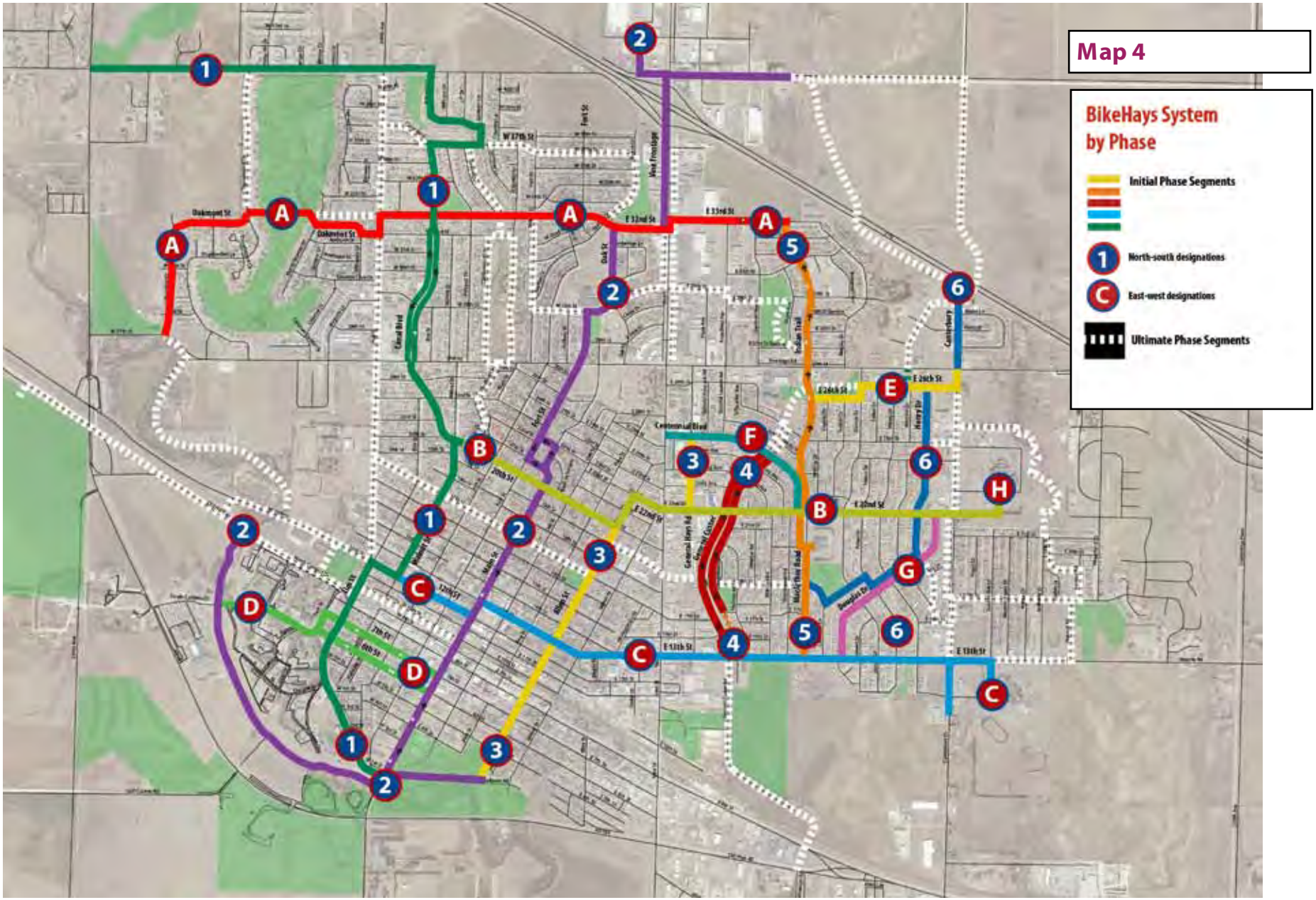
Performance Factor	Measures	Performance Standard
Cost effectiveness	Route cost Maximum use of low-cost components Population/destination density	The network should generate maximum benefit at minimum cost. Where possible, selected routes should favor segments that can be adapted to bicycle use with economical features rather than requiring major capital investments. Initial routes should be located in areas with a high probability of use intensity: substantial population density and/or incidence of destinations. Initial investments should integrate existing assets, extending their reach into other neighborhoods and increasing access to them. Major off-street investments should concentrate on closing gaps in an on-street system.
Phasing and incremental integrity	Self-contained value Ability to evolve	The network should provide value and integrity at all stages of completion. A first stage should increase bicycle access and use in ways that make future phases logical. The network should be incremental, capable of building on an initial foundation in gradual phases. Phases should be affordable, fitting within a modest annual allocation by the city, and complemented by major capital investments incorporating other sources.
Neighborhood relationships and friction	Parking patterns Development and circulation patterns	The network should avoid conflict situations, where a route is likely to encounter intense local opposition. Initial design should avoid impact on potentially controversial areas, such as parking, without neighborhood assent. Involuntary acquisition of right-of-way should be avoided wherever possible. Detailed planning processes to implement specific routes should include local area or stakeholder participation.

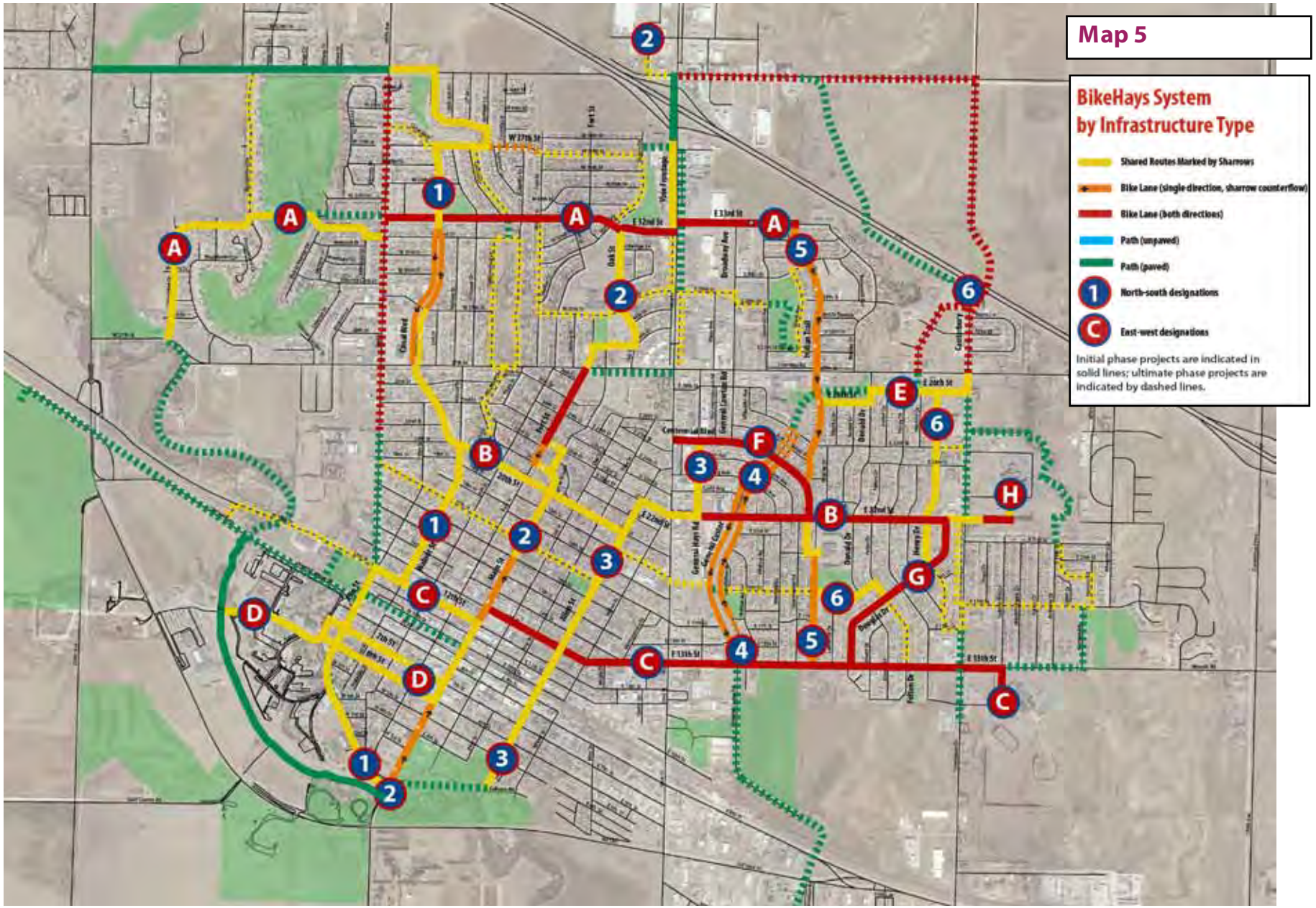
The Hays Bikeway System

Figures 4 and 5 displays the proposed Bike Hays system, based on the requirements and principles described previously in this chapter. The proposed system includes:

- **An Initial Phase.** This first phase proposes route segments identified by associated color and number, requiring an identification system that would be adapted to the city environment. Some shorter segments are identified for phasing and cost calculation purposes. For the most part, the initial phase utilizes existing streets and pathways, using pavement markings, lane diets, and graphics to identify them as part of a citywide network.
- **Later Phases.** These segments would be added to the initial system, and include both additional street segments and multi-use trails. They extend the initial phase into new areas, including a major east-west link to the Sports Complex; paving of the Big Creek Trail; and other on- and off-street system expansions. Big Creek Trail paving should be advanced if funds are available. It also includes pedestrian and bicycle facilities proposed as parts of capital projects for Downtown, North Vine, and the transportation system by the comprehensive plan.

Figure 4 displays the overall bikeway system, indicating both the initial and ultimate phases. Initial segments are numbered (for north-south routes) and lettered (for east-west routes) and identified by color. Later phases are designated by white dashed lines. Figure 5 shows the type of infrastructure improvement proposed for each segment in the system. The design guidelines elements for each of these segments and their contexts are presented in Chapter Three.

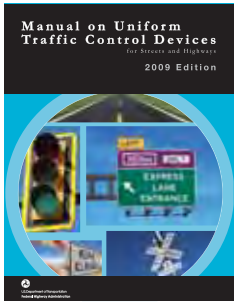

Map 4
BikeHays System by Phase
Initial Phase Segments
North-south designations
East-west designations
Ultimate Phase Segments


Map 5
BikeHays System by Infrastructure Type
Shared Routes Marked by Sharrows
Bike Lane (single direction, sharrow counterflow)
Bike Lane (both directions)
Path (unpaved)
Path (paved)
North-south designations
East-west designations
Initial phase projects are indicated in solid lines; ultimate phase projects are indicated by dashed lines.

CHAPTER 3

INFRASTRUCTURE DESIGN GUIDELINES

This chapter presents the infrastructure of the BikeHays network, including facility types and design guidelines appropriate to the city's various street types. These facility types form the building blocks of the network, and become the individual design components of the system's routes.



Sources. Sources that establish detailed standards for the design of bicycle facilities include the recent Urban Bikeway Design Guide (National Association of City Transportation Officials, 2011), the Manual of Uniform Traffic Control Devices (Federal Highway Administration, 2009), and the draft AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities (American Association of State Highway and Transportation Officials, 2010). Designers of facilities should use these primary sources. The guidelines and standards included in this plan are intended to provide guidance that augments these authoritative standards to specific situations within a Hays bikeways network.

The complete BikeHays network will be realized on the ground by a variety of features: pavement markings, signs, capital projects like paths and trails, and supporting improvements. Each of these is designed to increase the comfort and safety of cyclists traveling along the system, and to encourage citizens of Hays to consider using bicycles for at least some of their routine trips. These concepts are adapted to the characteristics of the city's streets as described in Chapter One. Figure Five in the previous chapter shows the type of infrastructure used for each segment of the system, while this chapter presents guidelines for their design. It is important to note that individual segments may still require specific design adaptations of these guidelines.

Facility Types

In general, the Hays network will use the following types of facilities:

Shared streets, in which bicyclists and motor vehicles operate in common right-of-way. These streets usually have relatively low volumes and adequate continuity to be useful parts of the system. In most cases, they have on-street parking, but in many cases are wide enough to accommodate motorists and bicyclists comfortably.

Bike lanes, in which bicyclists share the street right-of-way but operate within marked lanes reserved for their use. Bike lanes always provide for one-way movement, in most cases moving in the same direction as motor vehicles. Bicycle lanes are appropriate on streets that can comfortably accommodate bicyclists, but have higher traffic volumes than shared streets; provide adequate width in their current channels for both motor vehicles and bicycles; or as part of new street construction projects that integrate pedestrians, bicycles, and transit into their design (complete streets). Where streets are not wide enough for bike lanes on both sides, the system proposes bike lanes on one side of the street, with a shared lane on the opposite side.

Sidepaths. Sidepaths are bicycle paths located within a street right of way but fully separated from travel lanes. These facilities are popular in Europe and are frequently used in the United States, but have been controversial, largely because of potential bicycle-motor vehicle conflicts at intersections of streets and driveways. These facilities are especially useful along the street frontages of major campuses, parks, open spaces, and limited entry developments with long distances and few interruptions. A sidepath is planned as part of the 41st Street improvement project between Hall Street and US 183.

Cycle tracks, defined one- or two-way paths within street channels buffered from moving traffic by parked cars or separated by buffers, have gained popularity in many cities.

Multi-use trails. Currently, trails in Hays are limited to the existing unpaved path along Big Creek. Trails following waterways, levees, railroads, campuses, and utility lines are part of the longer range BikeHays network.

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Facility Types with Hays Applications

1 Shared street with sharrow, Omaha, NE
2 Bike lane on existing street, Boston, MA
3 Complete street conversion, Green Bay, WI
4 Sidepath, Lawrence, KS
5 Cycle track, Cambridge, MA
6 **Paved** Multi-use trail, Shunga Trail, Topeka
7 Multi-use trail, Lake Shawnee Trail, Topeka

Local Shared Streets

Shared, low-volume streets will make up the majority of on-street mileage in the Hays bikeway system. On these streets, bicycles and motor vehicles operate within the same area.

Shared streets will be marked by shared lane markings, or sharrows, a pavement marking now recognized within the Manual of Uniform Traffic Control Devices (MUTCD). Sharrows, made up of a bicycle symbol and a directional chevron, fill three primary functions:

- They provide route continuity for cyclists. The sharrow helps assure riders that they are on the bikeway system and moving along a street that is intended for bicycle use..
- Along with other signage, they increase motorist awareness of bicycles on the street.
- Properly placed, they help bicyclists position themselves safely on a street away from the "door zone" of adjacent parked cars.

Application to Street Contexts in Hays

Characteristics of streets in the Hays system that adapt to shared use include:

- *Low traffic volumes.* Streets with average daily traffic (ADT) below 2,000 vpd are most appropriate for shared use. As volumes increase, the number of potential cyclists comfortable riding in the shared street environment will decrease.

- *Relatively low speeds.* The MUTCD recommends that sharrows not be placed on roadways with speed limits over 35 mph. A better maximum speed limit for streets with sharrows for Hays is 25-30 mph.

- *On-street parking.* Low-volume streets in Hays do not restrct on-street parallel parking. The sharrow is useful in helping bicyclists position themselves away from the hazards of opening car doors.

- *Inadequate space for bike lanes.* Bike lanes, providing reserved space in the street channel for bicyclists, are often desirable, but many streets in Hays are not wide enough to accommodate bike lanes, travel lanes, and on-street parking. Providing all of these features typically requires a 44-46 feet minimum curb to curb width.

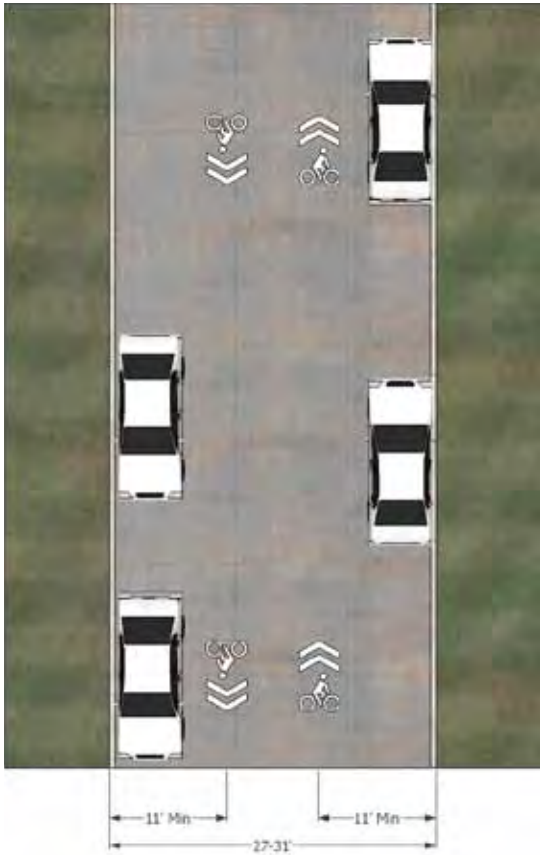
These conditions are typically found in the following street types:

- Continuous local streets
- Continuous neighborhood collectors
- Neighborhood parkways

Sharrows may be used on streets with somewhat higher volumes and speeds up to 35 mph where necessary to provide system continuity or to fill short gaps in the network. However, these routes will not be comfortable for all riders.

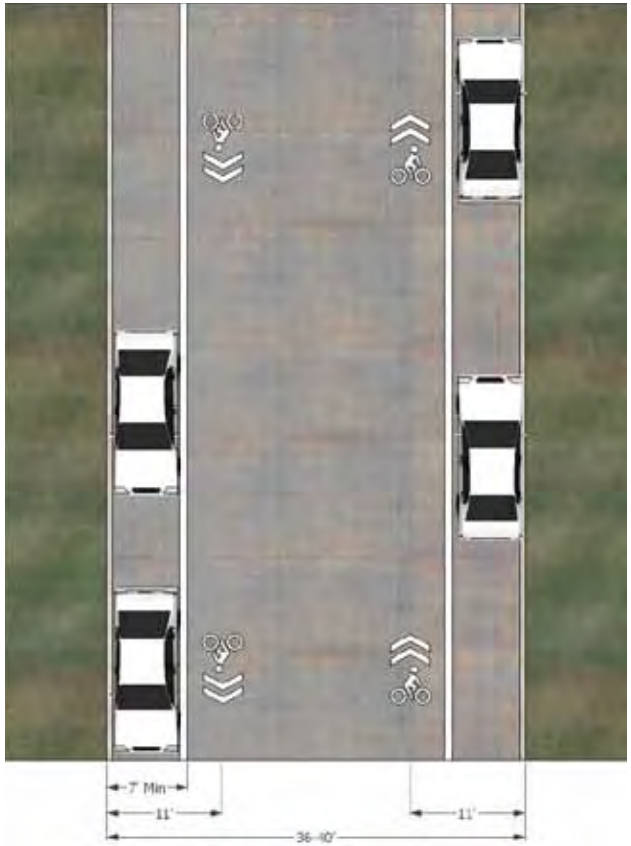
Design Contexts

In Hays, shared streets will typically range from 25 to 40 feet wide, with parallel parking on both sides.



TYPE 1

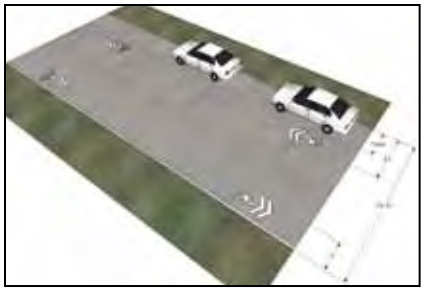
Local or neighborhood collector shared street in older parts of Hays south of 22nd Street. Street channels typically range from 24 to 30 feet. Sharrows (a standard marking using a bicycle symbol and chevron) are painted a minimum of 11 feet on center from the face of the curb. This keeps cyclists safely away from the door swing of parked cars.



TYPE 2

Local or neighborhood collector shared street in parts of Hays with wider streets. In these areas, pavement markings in Hays' wide streets can both improve bicycle visibility and slow traffic to appropriate speeds by seeming to narrow the street. THis is done by painting a line to define the parking lane, typically 7 to 8 feet from the face of the curb, and using a sharrow painted at 11 feet minimum from the face of the curb.

Table 7: ***Design Guidelines for Shared Route Markings***



Design Condition	Pavement Marking and Signage	Typical Street Type	Comments
Two-sided parking, 25-31 foot width	Sharrows with center of chevron a minimum of 11 feet from the face of the curb.	Continuous local, continuous neighborhood collector, neighborhood parkway without median	
One-sided parking, 25-29 foot width	Sharrows with center of chevron a minimum of 11 feet from the face of curb on the parking side, minimum of 3 feet from face of curb on the no parking side	Continuous local, continuous neighborhood collector, neighborhood parkway	
One-sided parking, 29-32 foot width	Sharrows with center of chevron a minimum of 11 feet from the face of curb on the parking side, minimum of 3 feet from face of curb on the no parking side. Painted white line to define parking lane, with outside edge 8 feet from face of curb	Neighborhood collector, neighborhood parkway, neighborhood avenue	White line should be used when the remainder of the street channel is at least 21 feet wide. Parking line helps define parking area and aids in bicyclists positioning themselves safely away from parked cars. In addition, when curbside parking is lightly utilized, the parking lane can serve as an informal bike lane for some cyclists.
Two-sided parking, 36-40 foot width	Sharrows with center of chevron a minimum of 11 feet from the face of curb on the parking side, minimum of 3 feet from face of curb on the no parking side. Painted white line to define parking lanes, with outside edge 8 feet from face of curb.	Neighborhood avenue	White line should be used when the remainder of the street channel is at least 21 feet wide. Parking line helps define parking area and aids in bicyclists positioning themselves safely away from parked cars. In addition, when curbside parking is lightly utilized, the parking lane can serve as an informal bike lane for some cyclists.

Bike Lanes

Bike lanes provide reserved (but not always exclusive) space for bicyclists operating within the street channel. Because they delineate a specific area for bicyclists, bike lanes provide an on-street environment both safer and more comfortable for cyclists on higher volume and/or higher speed roads than shared streets.

In Hays, bike lanes are proposed in four situations:

- *Retrofits of existing streets.* These streets are wide enough to accommodate bike lanes without affecting the existing number of lanes. Broadway from 27th to 33rd is an example of such a street. In some cases, width and parking conditions require a hybrid solution: a bike lane in one direction, with a shared lane on the opposite side. The bike lane should be placed in the direction where bicyclists are most likely to delay motor vehicles. Main Street is an example.

- *"Lane diets."* These are typically older four lane streets that can serve their traffic volumes more safely if converted to three lanes with a left-turn lane. This then provides enough space for bike lanes on strategic corridors. Examples are 13th Street and Hall Street north of 27th Street.

- *Parkways.* These streets are usually dual streets with a drainageway in the median. Examples include Canal Boulevard or General Custer Road.

- *New streets or street widenings.* These major investments are proposed by the comprehensive plan to meet future traffic demands or create new corridors. These would be developed as multi-modal or "complete streets," designed to accommodate all modes of travel. Examples are continuations of Canterbury Drive across and north of I-70 or 41st Street east to a Canterbury extension.

Application to Street Contexts in Hays

Characteristics of streets in the Hays system that adapt to bike lanes include:

- *Higher traffic volumes.* Bike lanes become more necessary as volumes increase, applying to streets with average daily traffic above 2,000-4,000 vehicles per day. These higher volumes require greater degrees of separation to maintain comfort for a maximum number of cyclists.

- *Medium speeds.* Speed differentials are generally more important than traffic volume in determining the application of bike lanes. However, lanes are most appropriately utilized on streets with typical speeds between 30 and 45 miles per hour. Above 45 mph, margins for error and, consequently, user comfort and safety decline.

- *On-street parking.* Some candidate streets for bike lanes also provide on-street parking. Adequate space must be provided to avoid hazards from opening car doors. Bike lanes should be avoided behind head-in diagonal parking stalls unless separated by a buffer of at least five feet.

These conditions are typically found in the following Hays street types:

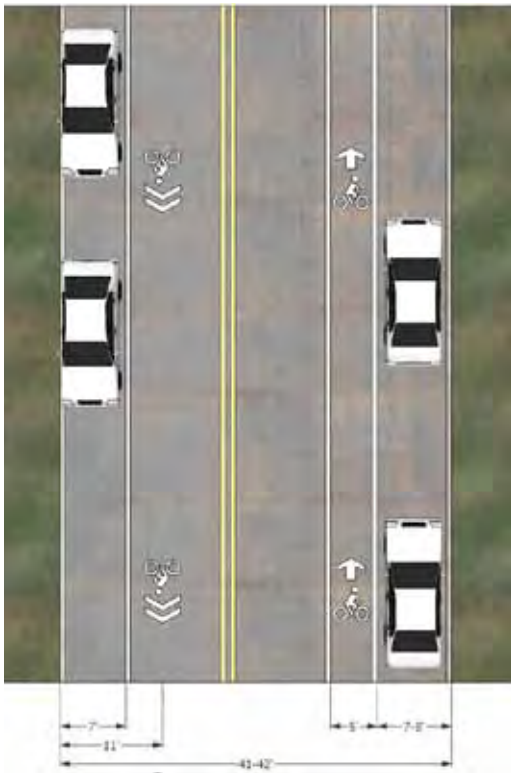
- Civic avenues (Main Street)
- Collectors
- Local arterial
- Major arterial

Overall Design Guidelines

In the Hays system, streets with bike lanes may vary in width from about 40-42 (for one side bike lanes) to 60 feet. General design principles include the following:

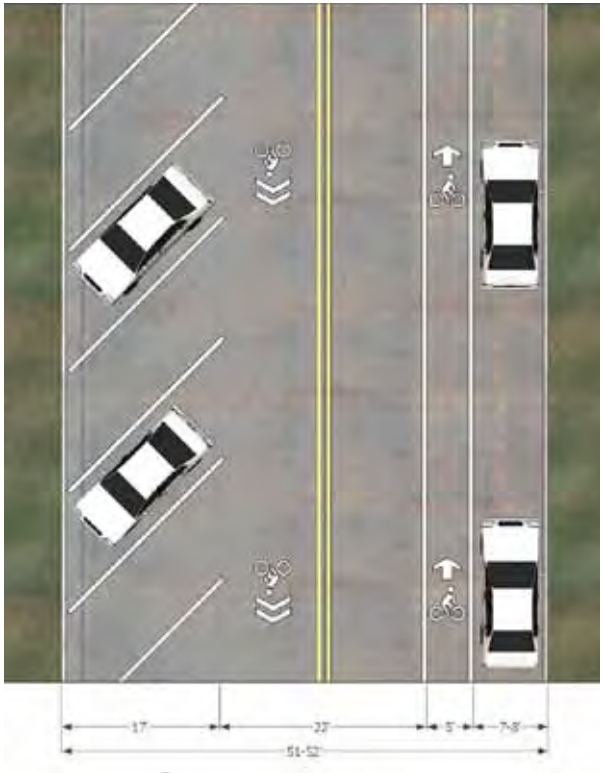
- Bike lanes must always operate in a single direction, flowing with traffic.

- Bike lanes will typically be provided on both sides of two-way streets. In situations where bike lanes are needed but right-of-way only accommodates a single directional lane, a sharrow should be used in the opposite direction. The bike lane should be provided in the direction most likely to slow or create conflicts with other traffic, such as an uphill grade.



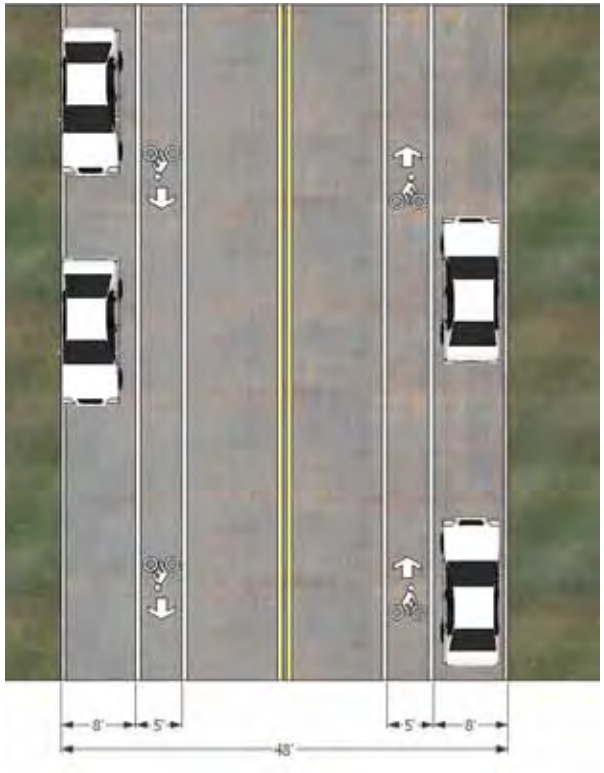
TYPE 3

Single direction bike lane with parallel parking and opposing shared lane. Street channels require a minimum of 42 feet from face of curbs with two-sided parking. Minimum width drops to about 35 feet with single-sided parking. The bike lane should be placed on the side of the street where cyclists in a shared lane would be most likely to delay traffic (such as an uphill or rising grade).



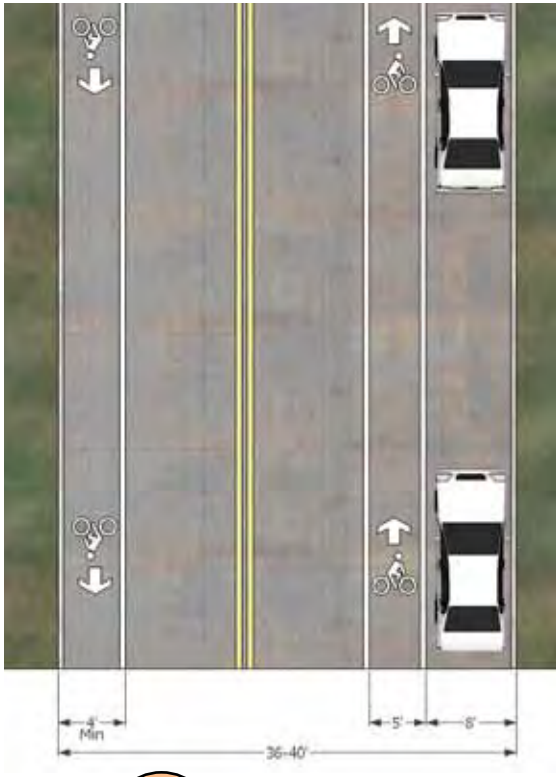
TYPE 4

Single direction bike lane with opposing shared lane and diagonal parking. This is a variation of Type 3, with diagonal parking on one side, a condition found on parts of Main Street and 10th Street. Street channel requires a minimum of about 52 feet from face of curbs. The bike lane should be placed on the side of the street with parallel parking if conventional head-in diagonal parking is used.



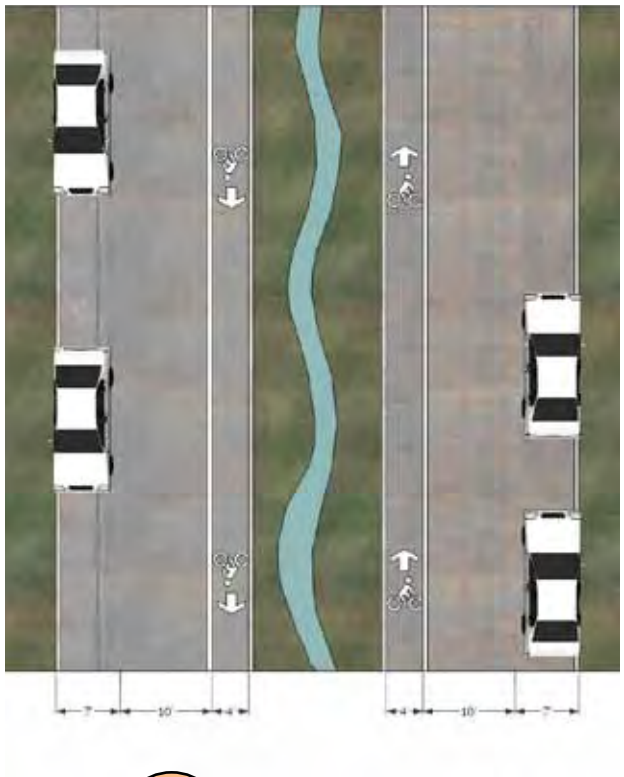
TYPE 5

Two direction bike lanes with two-sided parallel parking. Desirable minimum curb to curb width is 48 feet, although this can be reduced to 46 feet by narrowing the parking lane.



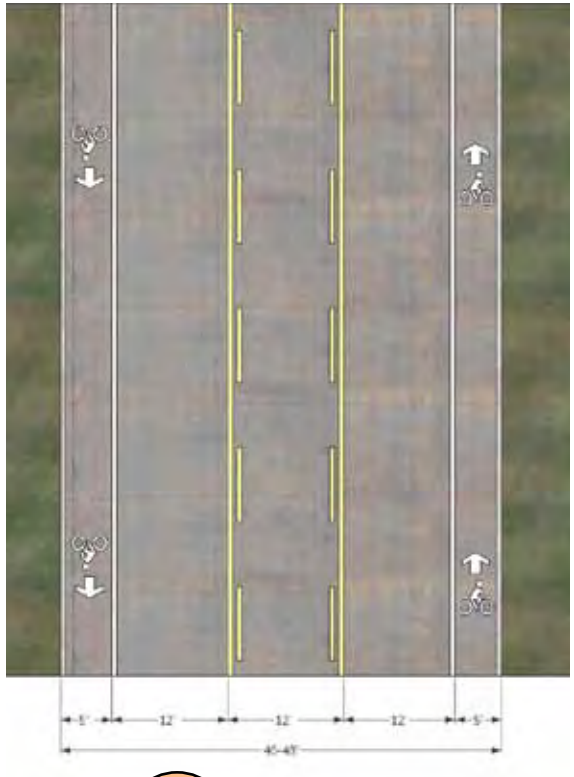
TYPE 6

Two direction bike lanes with one-sided parallel parking. Desirable minimum curb to curb width is 40 feet, although this can be reduced to 38 feet by narrowing the parking lane and bike lane on the side of the street without parking.



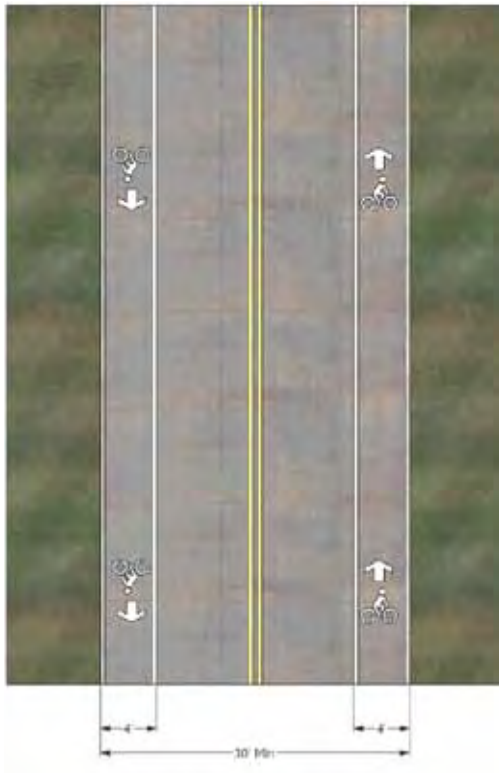
TYPE 7

Parkway with dual single-lane street channels and one-sided parking. Drainageways are located in median, with bike lane on the left side of the one-way roadway and adjacent to the median. Minimum width of roadway is 22 feet on each side. Because of low traffic, moving cars can encroach slightly on the bike lane. Left side location eliminates door zone hazards,



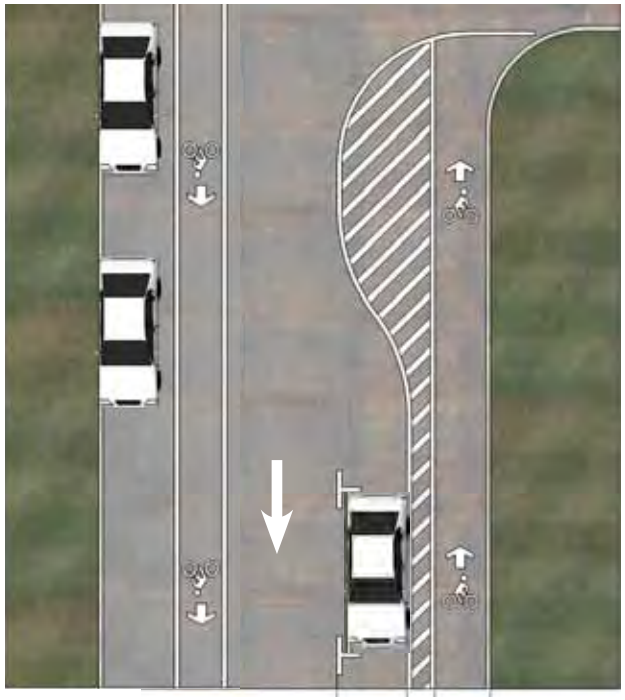
TYPE 8

Four to three lane arterial road diet. Required minimum width is 46 feet. Arterials do not permit parking.



TYPE 9

Two direction bike lanes with no parking. Minimum curb to curb width is 32-34 feet. This situation does not occur on the proposed Hays system, but could be used for new roads or on rural sections.



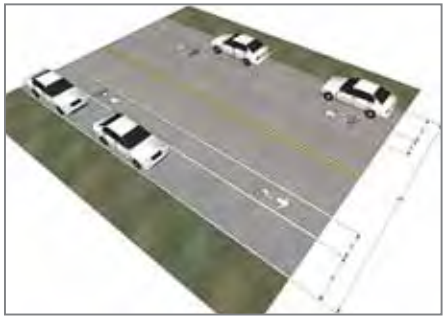
TYPE 10

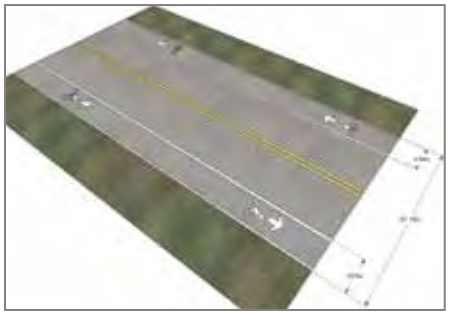
Two direction bike lanes with counterflow buffered cycle track. This design is unique to Fort Street between 22nd and 27th Streets, with a single southbound traffic lane and parking on both sides of the street. The concept features a buffered counterflow bike lane along the east curb, with parking in the direction of travel permitted between the buffer and the southbound travel lane.

Canal Boulevard. Hays' drainageway parkways are especially adaptable to innovative bikeway development.

Buffered cycle track. This two-way cycle track in Brooklyn is somewhat more complicated to use than the one-way counterflow lane proposed in Fort Street, but illustrates the concept.

Table 8: ***Design Guidelines for Shared Bike Lane Markings***





Design Condition	Bike Lane, Parking Lane, and Total Street Width	Typical Street Type	Comments
Two-Way Traffic , two-sided parking	Standard of 8 foot parking lanes with 5 foot bike lanes. In constrained settings, a 12 foot combined parking/bike lane may be considered. Total minimum street width (face to face of curb: 46-48 feet for two-lane plus 11 feet for each additional travel lane.	Civic avenues, local arterial	Supporting information should advise cyclists to ride in the left-hand part of the bike lane. Four foot bike lanes are acceptable in constrained situations with a minimum 8 foot parking lane.
Two-Way Traffic, one-sided parking	Standard of 8 foot parking lanes with 5 foot bike lane on parking side. In constrained settings, a 12 foot combined parking/bike lane may be considered. Four foot bike lane is minimum on the non-parking side, excluding gutter pans. Total minimum street width (face to face of curb: 39 feet for two-lane plus 11 feet for each additional travel lane.	Local arterial	Supporting information should advise cyclists to ride in the left-hand part of the bike lane. Four foot bike lanes are acceptable in constrained situations with a minimum 8 foot parking lane or on side of the street without parking.
Two-Way Traffic, no parking	Four-foot minimum bike lanes, excluding gutter pan. On major streets with higher volume and speed, bike lane width should increase to 5- to 7-feet, depending on street character and speed limits. Total minimum street width (face to face of curb: 30-32 feet for two-lane plus 11 feet for each additional travel lane.	Local arterial	

General Notes:
1. Typical recommended placement of standard bike lane pavement markings is at the entrance and departure from each intersection.
2. Standard bike lane sign (R3-17) may be placed with an AHEAD plaque at the approach to the lane and with an END plaque at the terminus of the lane. Pavement markings should be used more frequently than signs and marking locations should be coincident where possible.

Intersection Design

Intersection design is important to the safe operation of on-street facilities. Consistent practices should address conflicts between turning traffic and bicyclists proceeding straight ahead. In urban bicycling situations, bicyclists are advised to position themselves in the right-hand third of the lane that serves their destination. While this maximizes safety, many cyclists tend to move to the extreme right of an intersection, placing them in a position to be hit by turning motor vehicles.

Intersection solutions for on-street bicycle facilities include:

- Typical pavement markings.
- Right-Turn Pockets
- Bike Boxes for Left Turns

Typical Intersection Markings

Figures on the opposite page illustrate typical pavement markings in various situations including intersections. Problems have emerged with bike lane installations that maintain solid lines up to the intersection. This encourages some cyclists to consider the bike lane to be inviolate, and opens them to the possibility of being hit by right-turning traffic. In response, current practice is to replace the solid white line with a dashed line, suggesting that the lane alignment should not be rigidly followed. This also encourages cyclists to behave like other traffic by leaving the right-hand bike lane to make left turns.

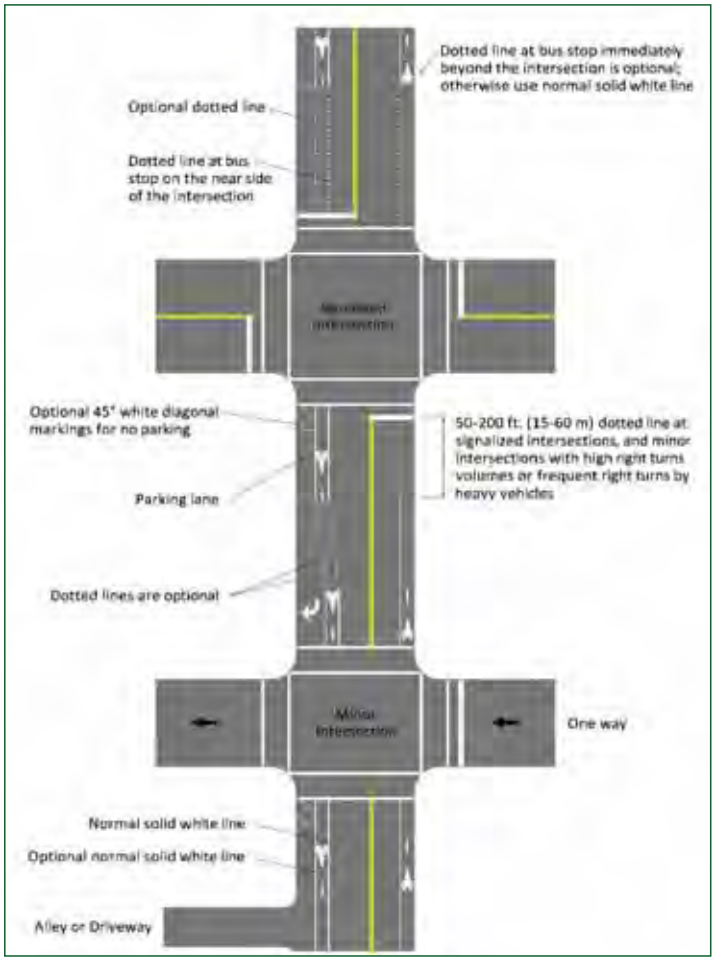
Right-Turn Pockets

Some major intersections include right-turn only lanes to allow right turns on red signals or otherwise separate right turning movements from the direct flow of traffic. This creates a potential issue for bicyclists who are used to positioning themselves "as far to the right as practicable" in the language of many state laws, again exposing themselves to collision with right-turning motor vehicles. Recommended pavement markings position the bicyclists continuing straight ahead to the left of the RTO lane, providing a dashed stripe through the conflict zone. The solid stripe resumes on the other side of this conflict zone. Many cities are coloring the surface of this zone to increase motorist awareness of a potential collision hazard, A standard sign, advising motorists to yield to bikes on a direct route (R4-4) should also be installed.

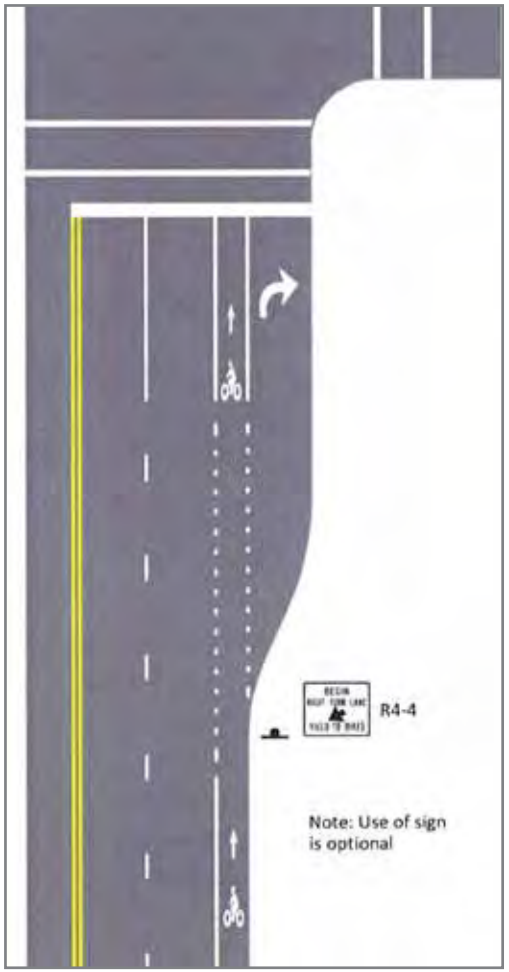
Bicycle Boxes for Left Turns

Bicycle boxes are used at signalized intersections to extend a bike lane to the front of a traffic queue. The box sets the stop bar for motor vehicles behind the stopped bicycles. They provide clear visibility for bicyclists, minimize the problem of cyclists hugging the right-hand curb, and expedite left-turning bicycle movements. The boxes are defined by stripes and may be colored for greater visibility. Recommended depth of the box is 14 feet from the edge of the crosswalk.

Recommended Lane Markings at Typical Intersections



Source: AASHTO Guide for the Planning, Design, and Operation of Bicycle Facilities, February, 2010 Draft



Bicycle box on Commonwealth Avenue in Boston. Bike lanes here are on the left side of the street channel, adjacent to the median.

Sidepaths

Sidepaths are paths separated from the stream of traffic but within the right-of-way of a street or road. They are popular among roadway designers, but are controversial among bike facility designers and urban bicyclists. They present significant challenges at intersections but allow cyclists to operate comfortably on direct major routes. Hays is developing a sidepath as part of its 41st Street project and the current widened sidewalk on North Vine under I-70 demonstrates both the uses and problems with this kind of facility.

Objections to the use of cycle tracks or sidepaths (these terms will be used interchangeably here) in this country are based on conflicts with dominant motor vehicle traffic and include:

- Hazardous intersections. On two-way paths, motorists do not expect, and often do not see, bicyclists in the counterflow direction. Right-turning motorists in many cases ignore path users moving straight ahead, creating the possibility of a crash. This always places path users on the defensive.
- Right-of-way ambiguities at driveways and intersections. Usually, cyclists on a sidepath along a major street are forced to yield to intersecting traffic. Cyclists traveling on streets, on the other hand, have the same right of way rights as motorists.
- Path blockages. Cross traffic on driveways and intersecting streets frequently blocks the sidepath by stopping across it.

As a result, experienced cyclists usually prefer on-road facilities to roadside facilities. Yet, sidepaths, despite their shortcomings, are used frequently and remain popular with many users. Sidepath images were also rated highly for level of comfort by participants in the Hays Bikeways Survey. Many cyclists justifiably fear rear-end (or overtaking)crashes or distracted drivers wandering into even a well-designed bicycle lane. Sidepaths accommodate pedestrians and other wheeled users who cannot use streets. Also, auto-era development replaced the traditional grid of local streets with cul-de-sacs and short curvilinear streets, causing through connections to depend solely on the arterial system. Sidepaths along major streets provide continuity where other alternatives, including trails or parallel local streets, are not available.

These facilities are an important part of the national bicycle system of the Netherlands, one of the world's premier cycling countries, and work because of careful design and motorist respect and acceptance of bicyclists. While research on American sidepath safety is scarce, a recent Harvard University study based on the Montreal system compared crash rates on sidepaths to on-street facilities. It suggested that sidepaths had higher crash rates at intersections and lower rates along their main line, producing about the same overall crash rates as on-street facilities. Since crashes at speed in mid-block areas have a higher probability of fatality than lower speed crashes at intersections, the study indicated that these facilities should not be excluded from urban bicycle systems in this country.

Application to the Hays System

- Conventional multi-use sidepaths, typically wide paths parallel to arterial streets, should in most cases complement rather than replace on-road facilities if on-road facilities are feasible. Their primary purpose is to provide continuity where alternatives that meet the six performance requirements do not exist.
- Complete streets should include both on-street facilities and paths for pedestrians and bicyclists who are uncomfortable with riding even in protected, on-street bike lanes. Innovative concepts, like one-way cycle tracks on new or existing streets, can combine the safety benefits of off-road riding between intersections and vehicular cycling through intersections.
- The objective of sidepath design guidelines should be to make these facilities as safe as possible, specifically by addressing their greatest weakness: road and driveway intersections.
- Sidepaths are safest when driveway and cross-street interruptions are fewest. Therefore, they work best along arterial streets that have long stretches of relatively uninterrupted frontage, like parks, campuses,

and cemeteries.

Design Guidelines for Cycle Tracks/Sidepaths

Pathway Standards

Cycle tracks and sidepaths may be developed as two- or one-way facilities. Most US applications of off-road sidepaths are two-way facilities, adhering to a standard ten-foot width, typical of other multi-use trails. A one-way cycle track combined with a sidewalk should separate territory allocated to bicyclists and pedestrians, and include directional markings for bicyclists. These territories can be defined by paint or changes in pavement color. Minimum width for a one-way cycle track is four feet (five feet recommended) with an adjacent pedestrian path of similar width. Structure and materials for sidepaths should follow standards for multi-use trails on separated right-of-way.

Pathway Setbacks

Research conducted for the Florida Department of Transportation indicates that, to maximize safety, separation of the sidepath from a roadway should increase as road speeds increase. The Florida data suggest that at lower adjacent road speeds, a smaller separation produces crash rates lower than those of the adjacent road, while that threshold is reached at greater separations for high speed facilities. AASHTO 2010 recommends a minimum separation of five feet without a physical barrier. Table 9 displays recommended separations for sidepaths based on the Florida findings.

Access Management

Access management makes sidepaths safer. There is no one clear standard for frequency of access points. Reasonable guidance is provided by the Idaho Department of Transportation, recommending a maximum of eight crossings per mile, with a preferred maximum of five crossings per mile. This access management policy should apply to the primarily arterial streets proposed for these three corridors.

Sidepath Concepts and Adjacent Roadway Character

As mentioned earlier, two-way sidepaths, in common use in American road design as "bike paths," set up an unexpected counterflow direction that creates the possibility of crashes. Florida DOT research indicates that two-way sidepaths appear safer along 2- and 3-lane roadways and less safe along multi-lane roads with 2 or more lanes in each direction. In addition to the higher speeds typical of wider roads, this phenomenon can be explained by:

- The field of vision of motorists opposite the sidepath. On wider roadways, motorists cannot see or are less aware of a sidepath on the opposite side, creating a particular crash hazard between path users and left-turning traffic.

- Motorists exiting intersecting driveways or streets are looking for oncoming traffic at a shallower angle because of the greater street width, directing attention away from the already unexpected sidepath traffic to their right.

Table 9: ***Separation for Sidepaths from Street Channel***

Adjacent Road Speed Limit (mph)	Recommended Sidepath Separation (feet)
35	5-8
45	12-14
55	20-24

Sidepath (cycle track) sections. Sidepath width and construction standards are similar to those for multi-use trails. Top: Two-way sidepath along an arterial, a typical accommodation on contemporary streets. Above: One-way cycle track concept separates pedestrian from bicycle traffic. Bicycles move in the direction of traffic.

Sidepaths and Cycle Tracks. Top: Two-way sidepath typical of US multi-modal projects, US 40 in Lawrence. Middle: Broadway in Boulder, CO, defining pedestrian and bicycle domains along a roadside trail. Lower: One-way cycle track and pedestrian path in Amsterdam.

The previously discussed Harvard study on the Montreal system also suggests that sidepaths are safer than on-street operation between intersections, but more hazardous at street crossings. The one-way cycle track, in combination with bicycle lanes or shoulders on the adjacent road, addresses these issues. Before reaching a major intersection, the cycle track is directed to and merges into the bicycle lane which, at major intersections, is located to the left of a right-turn only (RTO) lane. Inexperienced bicyclists have the option of becoming pedestrians and using the crosswalk. Thus, one-way sidepath concept combines the relative mid-block security of the sidepath to many users with the safer options of behaving like other vehicles or as pedestrians at street intersections.

The one-way sidepath should be considered:

- Along multi-lane corridors with local street accesses.
- When a sidepath is recommended but, for various reasons, access cannot be closely managed.

Design of In-line Crossings at Driveways and Streets

Cycle tracks/sidepaths and multi-use trails share design characteristics at intersections. Guidelines for multi-use trails are presented later in this section. However, roadside facilities have special problems not experienced by the largely grade-separated trail system. Recommendations for the special conditions presented by sidepath crossings are presented here.

Ramp Design

- Curb/intersection cuts or ramps must be logical and in the direct travel line of bicyclists. We suggest avoiding the common practice of placing the ramp on a diagonal at the corner, tending to direct users into the middle of the intersection rather than to a crossing.
- A design that places a curb in the direct travel line of bicyclists is hazardous. The intersection area must be free of obstructions, such as poles for traffic signal mast arms or lighting standards.

Separation Distance

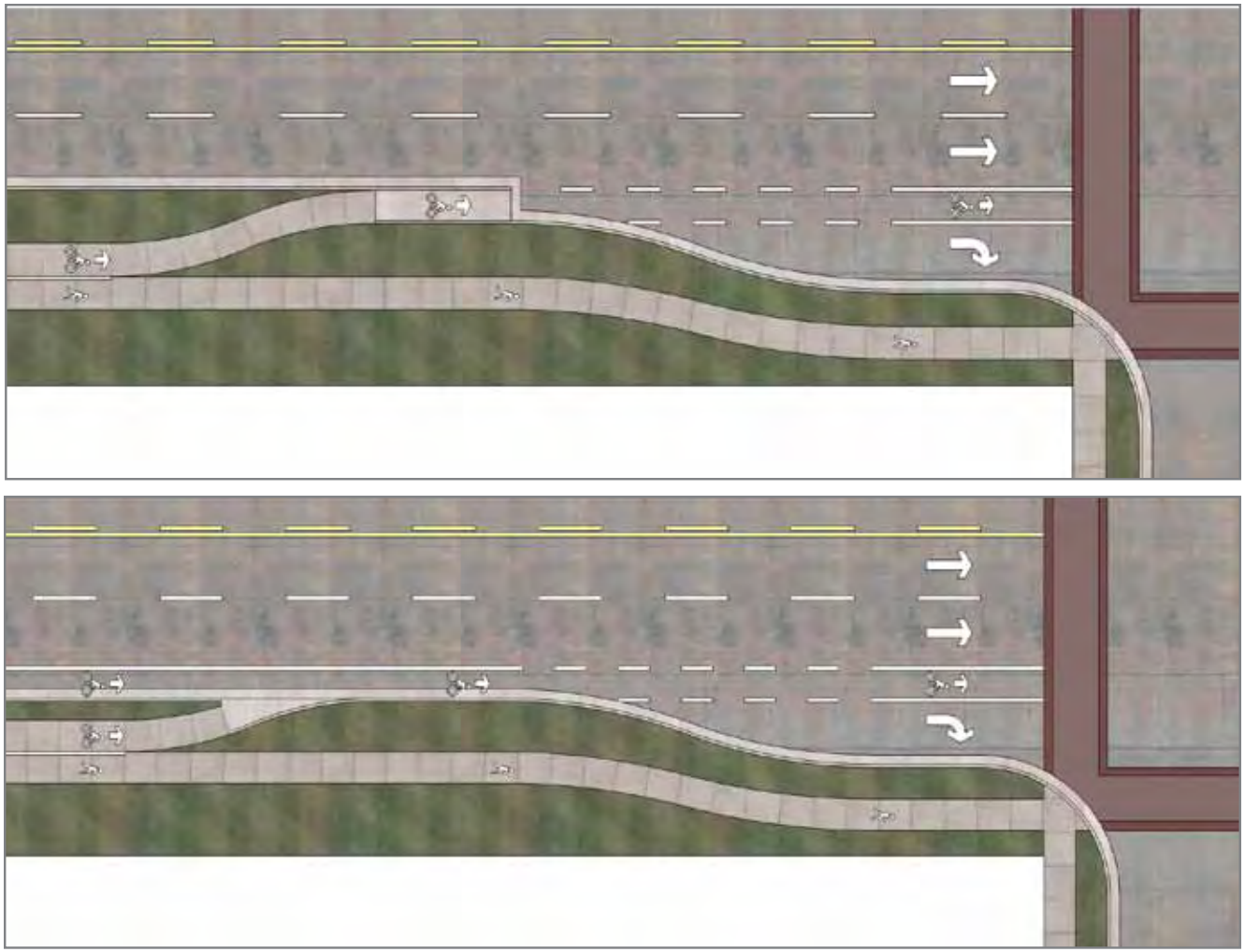
The separation of the trail crossing from the edge of the roadway is a troublesome issue. Some sidepath designs put users in serious jeopardy by placement that either provides poor visibility or inadequate reaction time. Based on specifications in Finland and the Netherlands, where sidepaths are prevalent, the Florida DOT's path intersection design manual proposes three discreet and mutually exclusive separation distance categories:

- 1-2 meters
- 5-10 meters
- more than 30 meters

These distances are based on the interaction of five variables: motor vehicle turning speed, stacking distance, driver and/or pathway user awareness, and chance of pathway right-of-way priority. These categories are designed to prevent awkward conditions that may impair visibility and not give either the trail user or motorist opportunity to respond. Figure 4.11 summarizes the relative performance of each placement for these variables.

Defining Crossings

- All crossings across streets and major driveways should be clearly defined. Street intersection markings should utilize standard zebra or ladder markings incorporated at mid-block crossings and other major intersections. Colored concrete or asphalt surface treatments may also be used. A simpler dashed crosswalk boundary may be used as a convention at driveway crossings.
- At intersections controlled by stop signs or signals, stop



One-Way Sidepath Concept. A system of paired one-way sidepaths can minimize some of the operating hazards of two-way paths in certain settings. The one-way sidepath concept can be used both on streets both without (top) and with bike lanes. Without bike lanes, the cycle track is the street's bicycle facility, but becomes a bike lane as it enters the intersections. If bike lanes are provided along the street, the cycle track merges into the bike lane. Left: Merger from street to one-way cycle track at Vassar Street cycle track on the MIT campus in Cambridge.

Poor Sidepath Intersection Design. Top: Ramps are narrow and located off line from a bicyclists normal path, creating a potential hazard. Above: The base of a signal mast arm obstructs the logical path through the ramp.

bars should be provided for motor vehicles ahead of the crosswalk to discourage motorists from obstructing the path. Surface triangles that indicate a motorist yield may be used in place of stop bars. Unfortunately, many American motorists do not understand this marking.

Signage

Use warning signs along roads with sidepaths similar to advisories for parallel railroad tracks. This provides motorists with a background awareness of the parallel sidepath.

Right-of-Way Assignment

Ideally, pathway users paralleling a street with right-of-way priority should share that priority. However, sidepath users must be advised to ride defensively, and assume that they will often be forced to yield the right-of-way.

Overly frequent stop signs will cause many path users to ignore the traffic control entirely. The Florida manual states that path users may be intolerant to delay, wish to maintain momentum, or have limited traffic knowledge. When stop signs are installed on a path at extremely low volume intersections or even driveways, path users tend to disregard them. The wheeled user cyclist or skater is, in effect, being taught this dangerous behavior by these "crying wolf" signs since he or she thinks there is little chance of cross traffic.

Intersection Geometrics

In addition to crossing visibility and access management techniques, the 2010 AASHTO draft advises the following design measures to address intersection and driveway crossing safety:

- Intersection and driveway design to reduce speed and heighten driver awareness of path users through tighter corner radii, avoidance of high-speed free flow movements, median refuge islands, and good sight lines.
- Design measures to reduce pathway user speed at intersection approaches, being certain that designs do

Table 10: ***Separation for Sidepaths from Street at Intersections***

Parameter	1-2m 0-6.56 feet	5-10m 16.4-32.8 feet	over 30m over 98.4 feet
Motor vehicle turning speed	Lowest	Higher	Highest
Motor vehicle stacking space	None	Yes, better at higher separation	Yes
Driver awareness of path user	Higher	Lower	High or Low
Path user awareness of driver	Higher	Lower	Highest
Chance of pathway ROW priority	Higher	Lower	Lowest

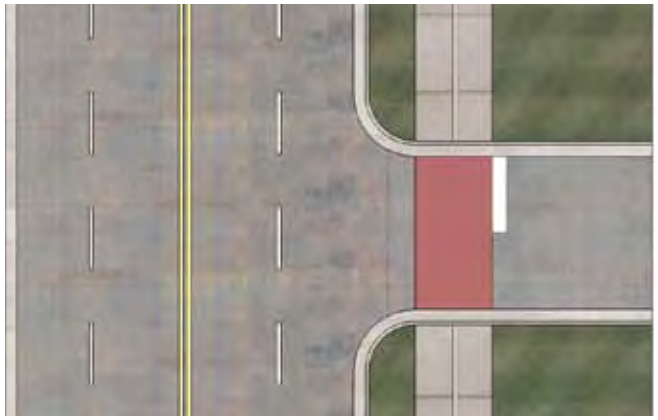
Source: *Intersection Design Manual, Florida Department of Transportation*

not create hazards.

- Calming traffic speeds on the adjacent roadway.
- Designs that encourage good cyclist access between roadway and sidepaths at intersections.
- Keep approaches to sidepaths clear of obstructions, including stopped motor vehicles, through stopbars and yield markings.

Signal Cycles

- Avoid permissive left turns on busy parallel roads and sidepath crossings. Use a protected left-turn cycle with a sidepath-oriented bicycle/pedestrian signal, giving a red signal to the sidepath user when left turns are permitted.
- Prohibit right turns on red at intersections with a major sidepath crossing.



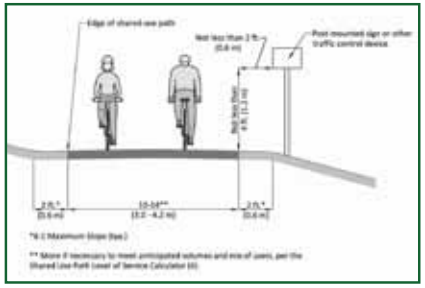
Crossing Definition. Sidepath/cycle track crossings should be defined for maximum visibility. Colored or textured surfaces can be effective in these situations. A clear stop bar should also be used with advisory signage, to discourage motorists from blocking the track.

Sidepath Advisory Sign. Variation of the MUTCD's Railroad Advance Warning Sign, modified as a sidepath advisory. This sign should be used on both sides of a road with sidepaths. This installation is on Speer Boulevard in Denver, advising of the parallel Cherry Creek Trail. Florida DOT advises a similar sign.

Crossing Definition Treatments. From left: StreetPrint, an imprint and coloring applied to heated asphalt paving on the New Berlin Trail near Waukesha, Wisconsin.; Colored concrete on Military Avenue in Green Bay.

Multi-Use Trails

Multi-use trails are not in common use in Hays today but are part of the recommended long-range network. Trail-related projects include improvements to the Big Creek Trail and development of new trails with demonstrable transportation benefits.



The BikeHays system will ultimately use multi-use trails on separated rights-of-way. Anticipated trail projects fit within three categories:

- Improvements to existing trails, most notably the Big Creek Trail. This trail can serve many needs with minor improvements, but should eventually be both extended and paved.
- New trail segments to connect on-street routes . These relatively short, strategic links tie the system together.

Individual trail projects are discussed in detail in the route by route analysis in the following chapter.

Design Guidelines for Multi-Use Trails

ADA/AASHTO Compliance

Trails should comply with American Association of Street and Highway Transportation Officials (AASHTO) standards and Uniform Federal Accessibility Standards and the "Americans with Disabilities Act Accessibility Guidelines."

Materials

Table 11 reviews attributes of various trail surface materials. Asphalt provides an excellent surface when new and is somewhat less expensive than concrete. Concrete provides a more durable, longer-lived surface, particularly in climates with freeze-thaw cycles, and can be replaced panel by panel if necessary. Without prescribing specific regional standards, AASHTO 2010 recommends a six inch minimum depth, including both surface and base courses, over a compacted subgrade. A stable sub-base is especially important to the durability of both materials. This is especially important around drainageways, where stream banks tend to slough off and produce serious cracking and deterioration. Expansion joints on concrete trails should be saw-cut to provide room for movement.

Trail Width and Clearances

- The accepted minimum width for two-way trails is 10 feet. Eight feet may be adequate for secondary segments in areas with severe right-of-way limits. However, eight feet width does not safely accommodate passing of or by users who require greater width than narrow profile road bicycles, including in-line skaters, bicyclists with child trailers, and recumbents.
- A two-foot minimum shoulder (3-5 feet is more desirable) with a maximum 6:1 cross-slope should be provided as a recovery zone adjacent to trails.
- Signs or other traffic control or information devices should be at least two feet from the edge of the trail surface. The bottom edge of any sign should be at least 4 feet from the grade of the trail surface.
- A soft surfaced two-foot extension to a paved trail can improve conditions for walkers and runners because

of its resilience and lower impact.

- Minimum vertical clearance for trails is 8 feet; 10 feet is recommended unless clearance is limited. When conditions, like the height of a culvert or bottom of a bridge structure, further limits clearance, cyclists must be advised to walk bicycles.

Grades and Grade Changes

Recommended maximum grades for multi-use trails are 5% for any distance, 8.3% for distances up to 200 feet, and 10% for distances up to 30 feet (bicycles only).

- Grades over 5% must include landings and handrails compliant with the Americans with Disabilities Act.
- Ramps, bridges, and landings adjacent to abrupt grade changes must include 42-inch handrails, designed to meet AASHTO recommendations. Ramp surfaces should be slip-resistant.
- When underpasses require slopes over 5%, consider an alternate accessible route with reduced grades if possible, even if this route requires a grade crossing.
- Warning signs for trail users should be used on grades approaching 5% and greater.
- AASHTO 2010 recommends avoiding grades less than 0.5% because of ponding problems.

Subsurface and Drainage

- Typically 4 to 8-inch compacted, smooth, and level. Individual conditions may require special design.
- Trail cross-section should provide adequate cross-drainage and minimize debris deposited by runoff. Typically, this involves a cross slope between 1% and 2%.

Table 11: ***Attributes of Trail Surfaces***

Surface	Advantages	Disadvantages
Soil Cement	Natural materials, more durable than soil, low cost, relatively smooth surface	Uneven wear, erodible, difficulty in achieving correct mix.
Granular Stone	Natural material, firm and smooth surface, moderate cost, multiple use	Erodible in storms, needs regular maintenance to maintain surface, discourages on-line skaters and some wheeled users
Asphalt	Hard surface, smooth with low resistance, stable, low maintenance when properly installed, multiple use	Relatively high installation cost, requires periodic resurfacing, freeze/thaw vulnerability, petroleum based material, construction access and impact
Concrete	Hardest surface, easy to form, lowest maintenance, best cold weather surface, freeze-thaw resistance	Highest installation and repair cost, construction access and impact
Native Soil	Natural material, very low cost, low maintenance, easy for volunteers to build and maintain	Dusty, ruts, limited use, unsightly if not maintained, not accessible
Wood Chips	Natural material, good walking surface, moderate cost	Decomposes when wet, requires regular maintenance and replenishment, not accessible
Recycled Materials	Good use of materials, surface can be adequate	High cost, uncertain performance

- When trails are adjacent to or cut into a bank, design should catch drainage on the uphill side of the trail to prevent slope erosion and deposits of mud or dirt across the trail.

Intersection Design

- Design speed of 20 mph, with horizontal and vertical geometrics and stopping sight distances consistent with AASHTO 2010 standards, as published.
- In most cases, trail traffic will be subordinate to motor vehicles on intersecting roads. Figure 4.15 illustrates crossing treatments at mid-block intersections.
- Align or widen trail at railroad intersections to permit

perpendicular crossing of tracks.

Crosswalk Delineation

- The crossing surface should clearly delineate the trail right-of-way.
- Trail crossings should be delineated with standard pavement markings, such as the "ladder" or "zebra" patterns. Another option is providing a contrasting surface that clearly defines the trail domain. These may include the use of stamped concrete, colored concrete, or pavement marking or patterning products such as StreetPrint or others.
- At midblock crossings of multi-lane roads, refuge medians should be used to reduce the distance that trail users must negotiate at one time.

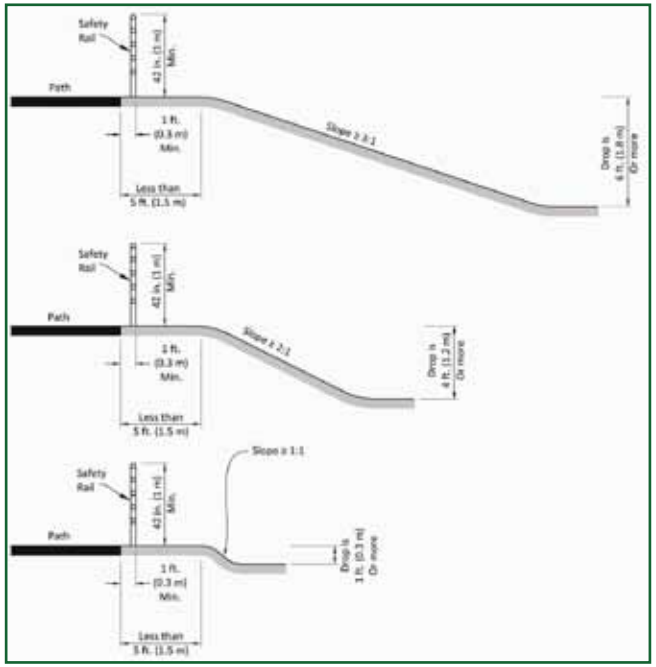
<u>Curb Cuts and Trail Access Points</u>

- Avoid the use of bollards or obstacles at grade-level intersections unless operations prove they are needed. If necessary, use entrances with a median separating directional movements in place of bollards. Medians should be placed about 25 feet in from the edge of the roadway to permit space for cyclists to clear the intersection before slowing.
- When bollards or gateway barriers are used, provide a minimum opening of five feet, adequate to permit adequate clearance for all bicycles. Avoid poorly marked cross barriers that can create hazards for entering bicyclists, particularly in conditions of darkness.
- At midblock crossings of multi-lane roads, refuge medians should be used to reduce the distance that trail users must negotiate at one time.
- The bottom of the curb cut should match the gutter grade and have a minimal lip or bump at the seam. Truncated domes should be used to alert visually impaired users to the street crossing.
- The bottom width of the curb cut should be full width of the intersecting trail.

Signage

- Provide regulatory and warning signs consistent with the 2009 Edition of the Manual of Uniform Traffic Control Devices (MUTCD).
- Standard trail crossings signs, typically a bicycle in a diamond, should always be used to alert motorists of

Railings and Trail Separations from Adjacent Slopes



Source: *AASHTO 2010*

the trail crossing. See Figure 7.3 for suggested sign placement.

Traffic Control

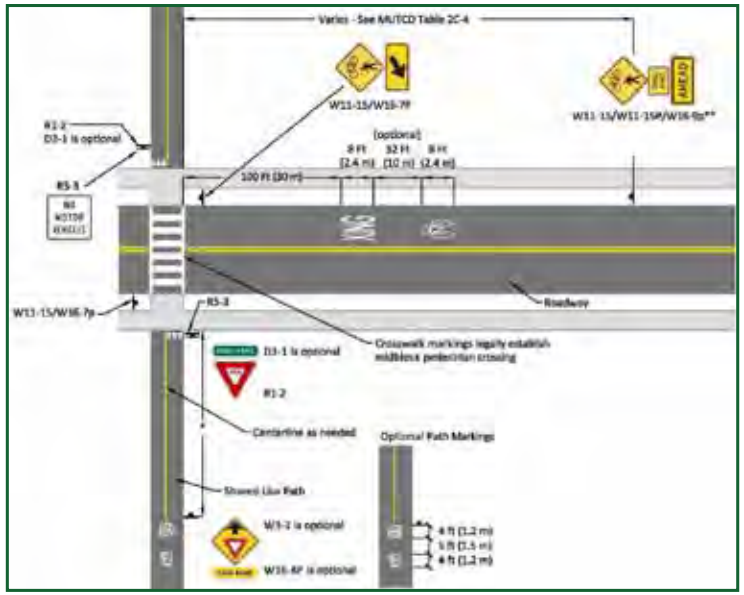
- Right-of-way should be clearly established. Ordinarily, the trail will be stopped with right-of-way preference given defensively to the motorist.
- Controls for pedestrian signals should be easily accessible to trail users and should not require cyclists to dismount or move out of their normal path.
- New crossing technologies such as the hybrid beacon apply well to trail crossings.

Design for Maintenance

- Provide adequate turning radii and trailhead access to maintenance and emergency vehicles.

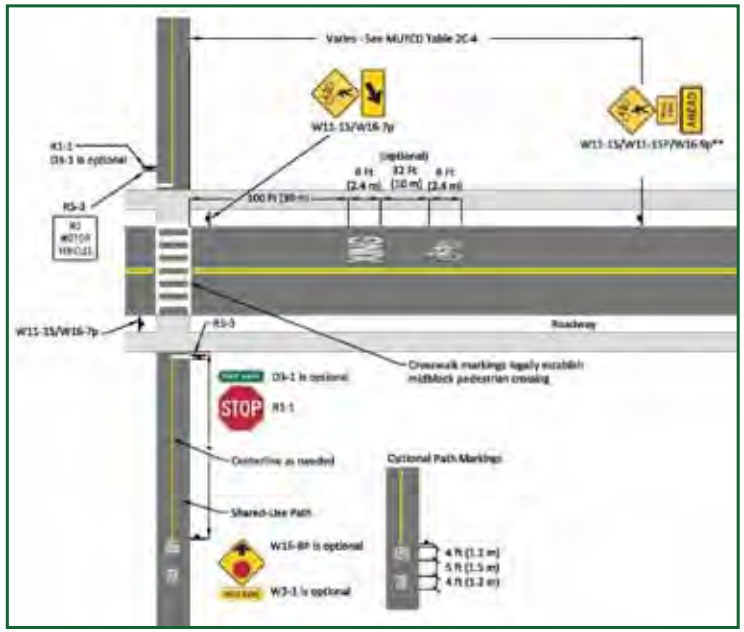
Information and Support Facilities

- Establish a consistent informational sign system that includes a BikeHays logo, an identifying trail name, trail maps at regular intervals, mileage markers for reference and locating emergency situations, directional signage to destinations, and safety rules and advisories.
- Provide periodic minor rest stops, including benches, shaded areas, picnic areas, and informational signing. Ensure reasonable access to water, restrooms, and shelter.



* Advance warning signs and solid centerline striping should be placed at the required stopping sight distance from the roadway edge but not less than 50 feet (15m).

**W11 series sign is required, supplemental plaques are optional

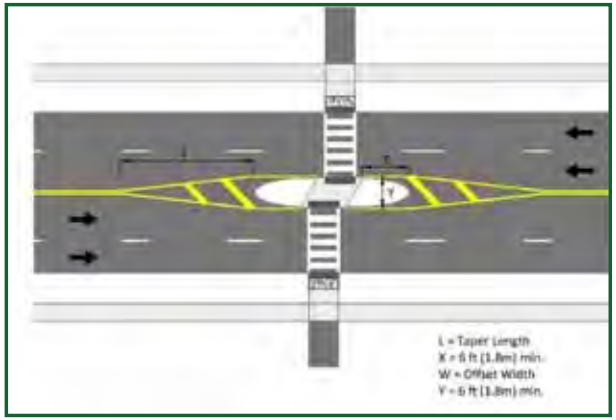


* Advance warning signs and solid centerline striping should be placed at the required stopping sight distance from the roadway edge but not less than 50 feet (15m).

**W11 series sign is required, supplemental plaques are optional

Intersection Conditions for Midblock Trail/Road Intersections: Yield and Stop Controlled
Source: *AASHTO 2010*

Trail Crossing Features



Midblock Refuge Medians. A crossing median provides refuge to trail users at mid-block crossings, reducing the distance that pedestrians and cyclists are exposed to traffic.

Contemporary trail crossing. This crossing of a major arterial near Waukesha, Wisconsin includes a refuge median, defined crosswalk, effective warning signage, and the consultant's bike.

Hybrid Beacon. This signal type, pioneered in Tucson, functions somewhat like school bus warning signals. It is dark when not in use. When actuated by a pedestrian, a flashing and then solid yellow light warns motorists to slow; a solid red light paired with a walk signal stops traffic and gives the right-of-way to the pedestrian. Users report a high degree of motorist compliance and a positive effect on pedestrian safety.

CHAPTER 4 IMPLEMENTATION

This chapter establishes an implementation program based on executing an initial 20 mile bikeway system for Hays. It includes a general description of the initial components and opinions of probable cost.

Priorities and Implementation

The proposed Hays bikeways network will be implemented in phases, and will almost certainly evolve over time. In Chapter Two, this plan presented an initial phase to guide development during the next five years, and later phases that complete an overall bicycle transportation system. The initial phase was based on the following priority criteria:

- **Response to demands.** The initial system should address existing demand patterns, and serve destinations that are valuable to users and appropriate endpoints for bicycle transportation.
- **Route integrity.** High priority routes and projects should provide continuity between valid endpoints such as parks and major activity centers.
- **Extensions of existing facilities.** Projects that make use of and extend the reach of key existing facilities such as the Big Creek Trail, should have a significant priority.
- **Gaps.** Small projects that fill gaps in current facilities or tie relatively remote neighborhoods to the overall system can be especially useful at early stages n the system's development.
- **Opportunities.** The implementation sequence should take advantage of opportunities such as street projects such as the 41st Street project or the resurfacing of 33rd Street programmed for 2012.
- **Relative ease of development.** It is important that the a useful system be established relatively quickly and at comparatively low cost. Routes that require major capital cost or controversy should be deferred to later phases, when precedents are established and the network becomes part of the Hays urban landscape.
- **Ability to serve the entire city.** The initial system should serve all areas of Hays, and work effectively to connect them together.

Funding and Sequencing

In late 2012, the Commission allocated approximately $280,000 toward implementation of the initial phase of the Bike Hays network and an additional $20,000 for signage and marketing. This major step requires a sequencing plan that produces a sound initial project that will both evolve into full implementation of the initial system and a match that can be used toward subsequent grant awards.

The following section considers the cost, physical character, and sequencing of segments that together make up the initial system described in Chapter Two. It includes:

- A locator map for each of these identified components.
- A brief description of the character of these components and the types of facilities that they include.
- A table breaking these components (or routes) into individual segments with lengths, infrastructure types, and opinions of probable cost.

Cost opinions are based on the following estimates, displayed in Table 12. Infrastructure types refer to those presented in Chapter Three.

Within these tables, sequencing and funding is divided into a Phase 1a and Phase 1b. Phase 1a establishes a basic system that can be completed with the available 2013 funding of $280,000. Key criteria of this system include:

- A priority on routes that incorporate bike lanes. Bike lanes provide a facility that will be most comfortable

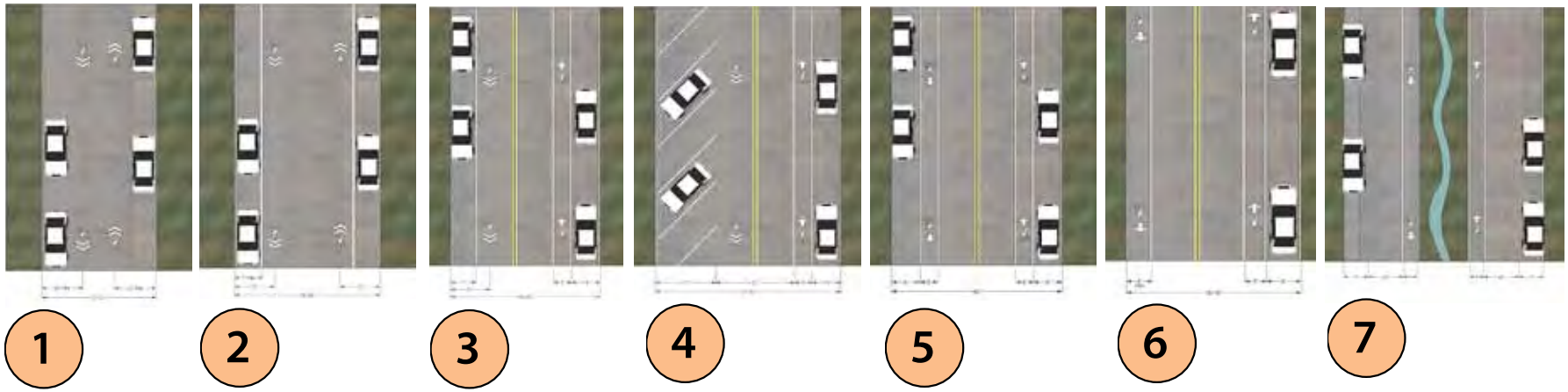
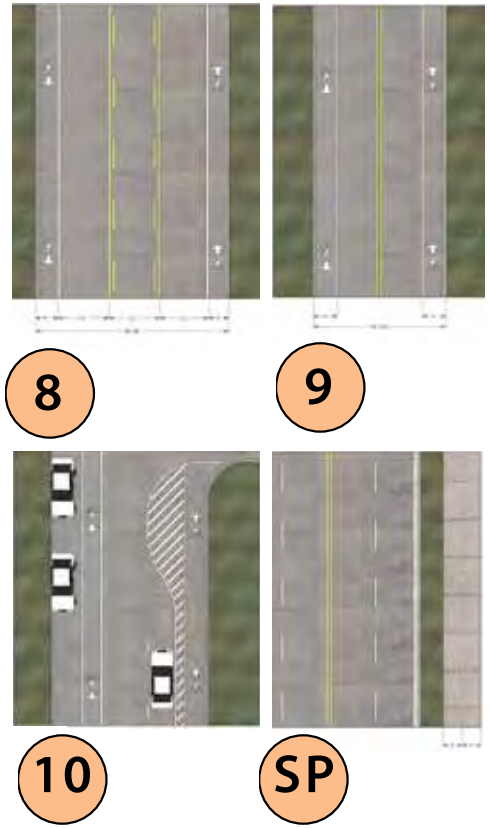


Table 12: *Estimated Cost per Mile by Facility Type*

Facility Type	Description	Cost/Unit
1	Sharrows	$9,000/mile
2	Sharrows with striped parking lane	$12,000/mile
3	Single-direction bike lane with sharrows and striped parking lane	$16,500/mile
4	Single-direction bike lane with sharrows and diagonal parking	$20,000/mile
5	Two-direction bike lanes with two-side parallel parking	$20,000/mile
6	Two-direction bike lanes with one-side parallel parking	$18,000/mile
7	Parkway with dual single-lane street channels and one-sided parking	$15,000/mile
8	Four to three-lane road diet with two-side bike lanes	$60,000/mile
9	Two-side bike lanes or shoulders with no parking	$18,000/mile
10	Two-side bike lanes with buffered cycle track	$22,000/mile
SP	Sidepath: 10 foot concrete	$150,000/mile
MUP	Multi-use Pathway: 10 foot concrete	$250,000/mile

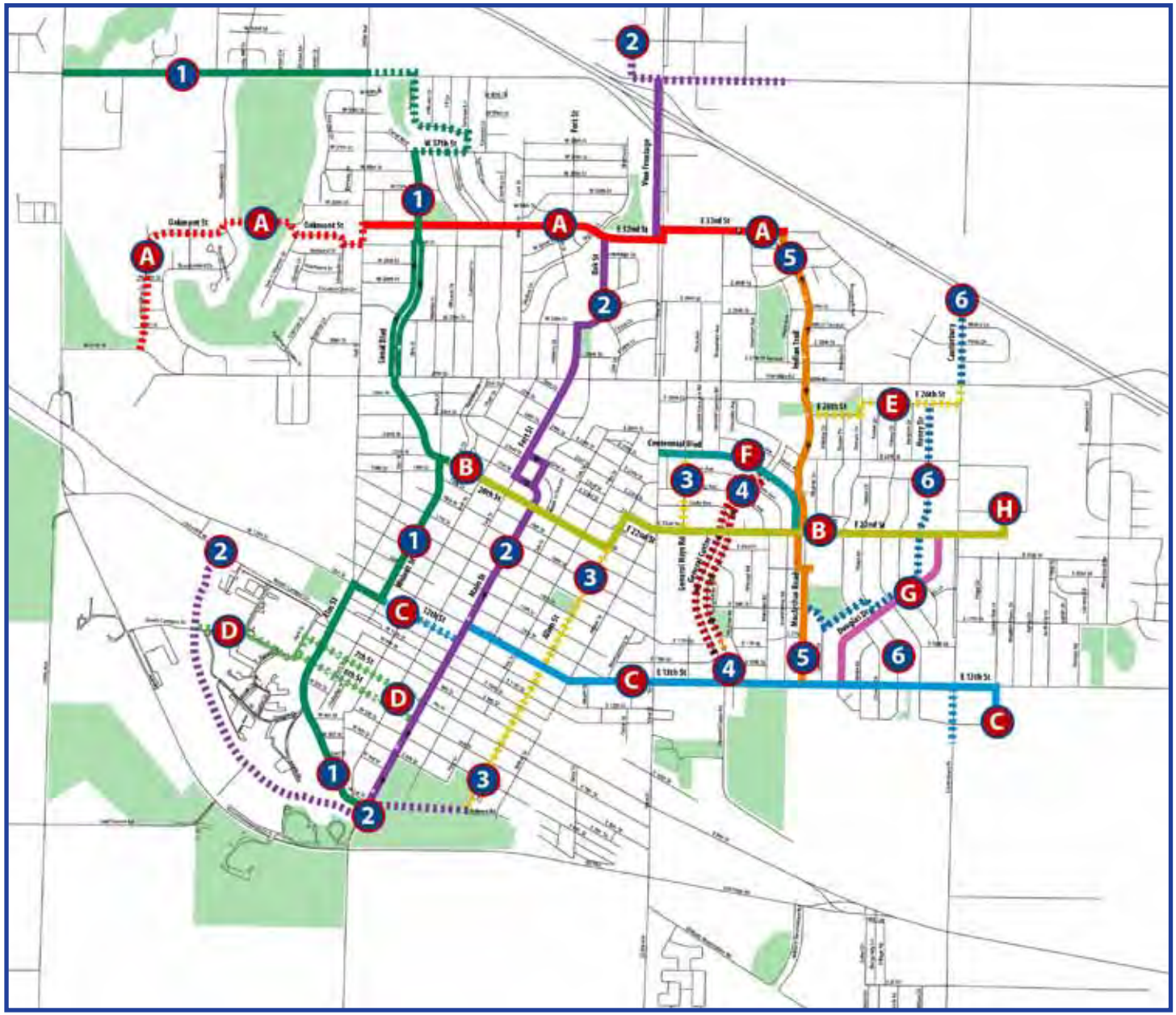


for the greatest number of potential users.

- Routes that together form a system that satisfies the Integrity performance standard, connecting all parts of Hays that avoids discontinuities.

Phase 1b emphasizes shared routes and bike lanes that complete the initial system concept and support the phase 1a network. It also includes upgrading the Big Creek Trail between Main Street and Old Highway 40 on the southwest side of Hays.

The phasing concept assumes that the 41st Street improvement project includes funding of a sidepath between the US 183 Bypass and Hall Street. Therefore, this sidepath project is not included in the Bike Hays funding plan.

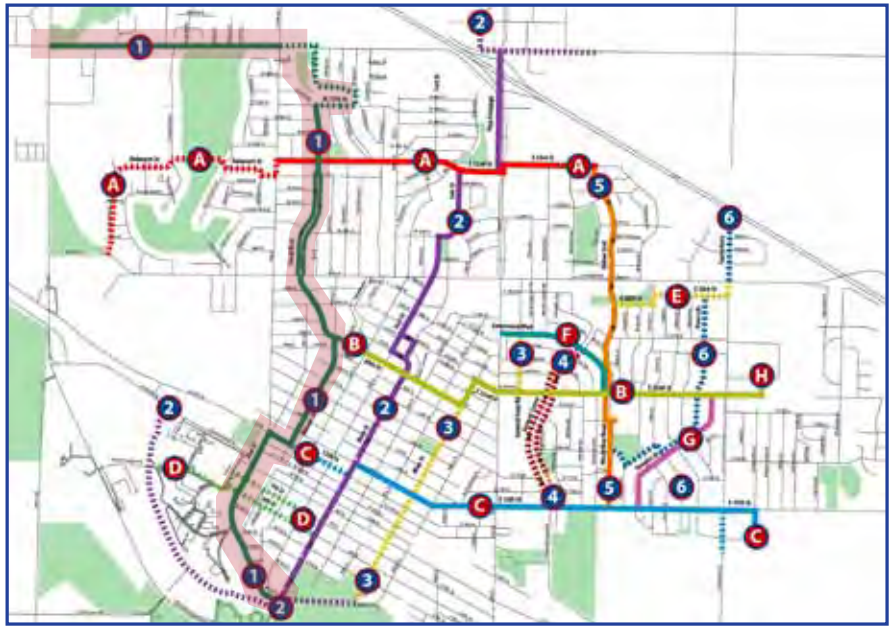


Map 6

Initial BikeHays System: Sequencing

- Phase 1a Segments
- Phase 1b Segments
- 1 North-south designations
- C East-west designations

1 WESTSIDE

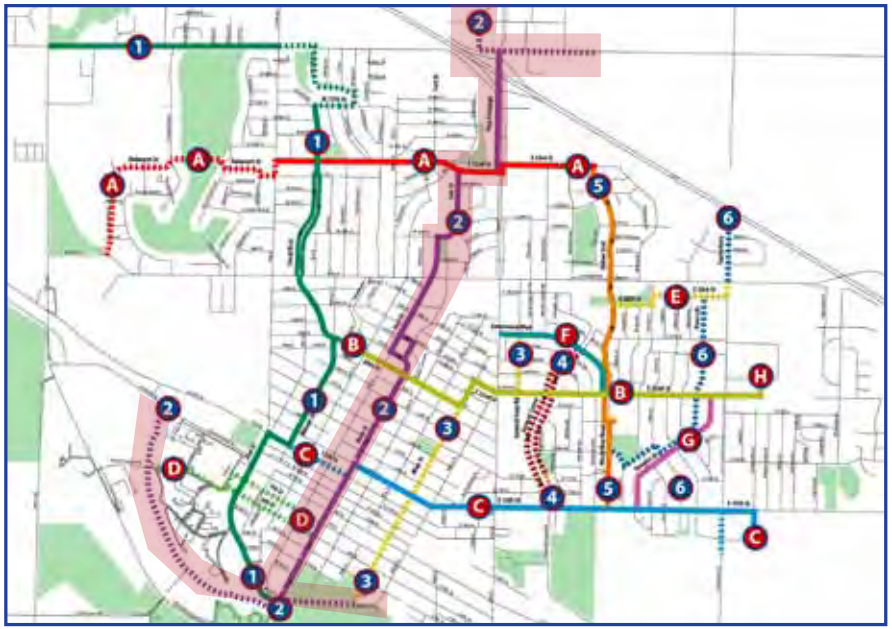


This major north-south route on the west side of Hays incorporates a planned sidepath along 41st Street as part of a street improvement project. The route uses Canal Boulevard and Walnut Street to link the FHSU campus to the 27th and Hall business district and the northwest part of the city. With the exception of the 41st Street sidepath and a future path through Rolling Hills Park, it involves low cost adaptations of existing streets. Related long-term projects may include a lane diet along Hall Street, providing a three-lane facility with a left-turn lane and bike lanes.

Phase 1a segments are highlighted in table.

	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/Mile	Phase 1a Cost	Phase 1b Cost	Comments
1	41st Street, US 183 to Hall	1.00	Sidepath	$150,000	NA		Current street project
	41st Street, Hall to Autumn	0.16	Type 1: sharrows	9,000		$1,440	
	Autumn/Summer Dr, 41st to 37th	0.39	Type 2: sharrows/parking lanes	12,000		4,680	
	37th, Summer to Canal	0.17	Type 2: sharrows/parking lanes	12,000		2,040	
	Canal Blvd, 37-33	0.28	Type 2: sharrows/parking lanes	12,000	$3,360		
	Canal Blvd, 33-27	0.56	Type 7: blvd, left side bike lanes	15,000	8,400		Includes both street channels.
	Canal Blvd, 27-20	0.32	Type 2: sharrows/parking lanes	12,000	3,840		
	Walnut, 20-17	0.2	Type 2: sharrows/parking lanes	12,000	2,400		
	Walnut, 17-12	0.32	Type 1: sharrows	9,000	2,880		
	12th, Walnut-Elm	0.1	Type 2: sharrows/parking lanes	12,000	1,200		
	Elm, 12-Main	0.85	Type 1: sharrows	9,000	7,650		
	Total	4.35			$29,730	$8,160	

2 MAIN

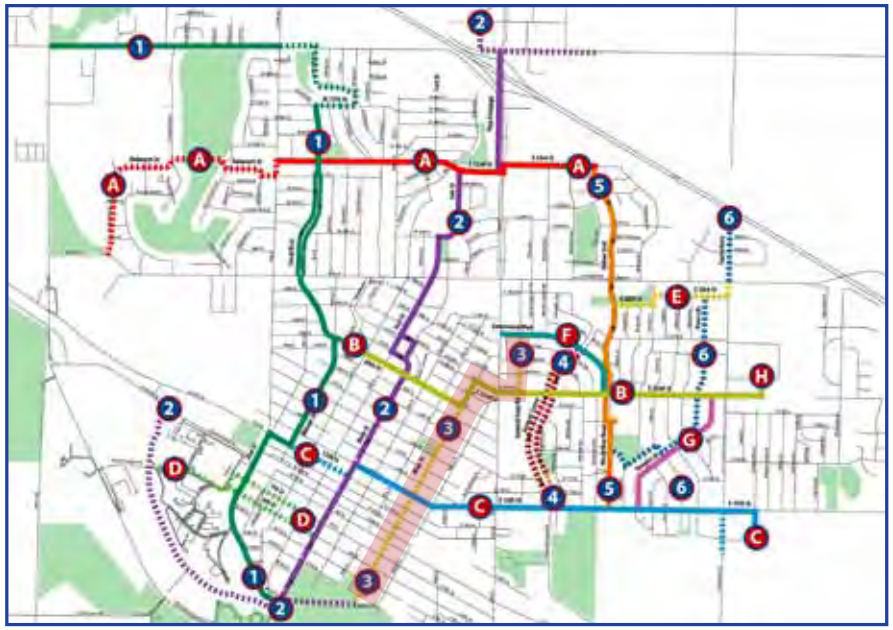


This component connects the north and south parts of central Hays, largely adapting the Main and Fort Street corridors to connect Municipal Park, the Big Creek Trail with Downtown, Wilson Pool, Felton Middle School, and the developing commercial area north of I-70. Bike lanes are used on portions of Main and Fort Streets wide enough to accommodate them. The route crosses 27th Street at the Fort Street intersection and introduces a counterflow northbound bike lane to take advantage of this crossing. The route includes a paving the Big Creek Trail to 8th Street in Phase 1b. It will be further improved with implementation of the North Vine access concept proposed by the comprehensive plan.

Phase 1a segments are highlighted in table.

	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/Mile	Phase 1a Cost	Phase 1b Cost	Comments
2	Vine Street, 37-Mopar	0.24	Existing sidepath under I-70		NA		
	Vine Frontage, 37-32	0.28	Type 1: sharrows	$9,000		$2,520	Explore access to Skyline Dr. as an alternative to Vine St frontage
	Oak/28th/Fort, 32-27	0.59	Type 2: sharrows/parking lanes	12,000	$7,080		
	Fort, 27-22	0.28	Type 10: two-side bike lanes, with counterflow buffered cycle track	22,000	6,160		NB counterflow bike lane
	21 and 22, Main to Fort	0.20	Type 1: sharrows	9,000	1,800		Single direction sharrows, with NB route on 22nd, SB on 21st
	Main, 22-16	0.42	Type 1: sharrow	9,000	3,780		
	Main, 16-13	0.2	Type 4: one side bike lane, diagonal parking	20,000	4,000		
	Main, 13-6	0.36	Type 1: sharrow	9,000	3,240		
	Main, 6-Trail	0.33	Type 3: one side bike lane	16,500	5,445		
	Big Creek Trail, Main-8	1.50	Paved multi-use pathway	250,000		375,000	
	Total	4.40			$31,505	$377,520	

3 ALLEN

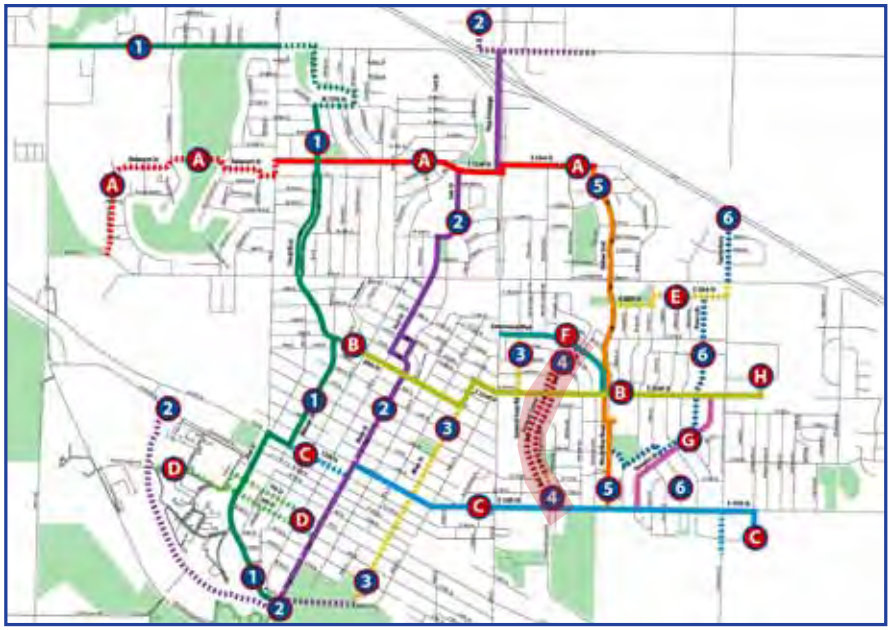


This relatively short connection provides a short route from the east side of Hays to Downtown and Municipal Park via Allen Street. The route crosses Vine Street at the signalized 22nd Street intersection, coinciding with the east-west crosstown Line B. It will eventually link to an improved Big Creek Trail, serving westside community features.

Phase 1a segments are highlighted in table.

	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/ Mile	Phase 1a Cost	Phase 1b Cost	Comments
3	General Hays, Centennial to 22nd	0.25	Type 2: sharrows, parking lanes	$12,000		$3,000	
	Allen, 20 to Ballpark Road	1.14	Type 1: sharrows	9,000		10,260	
	Total	1.39				$13,260	

4 GENERAL CUSTER

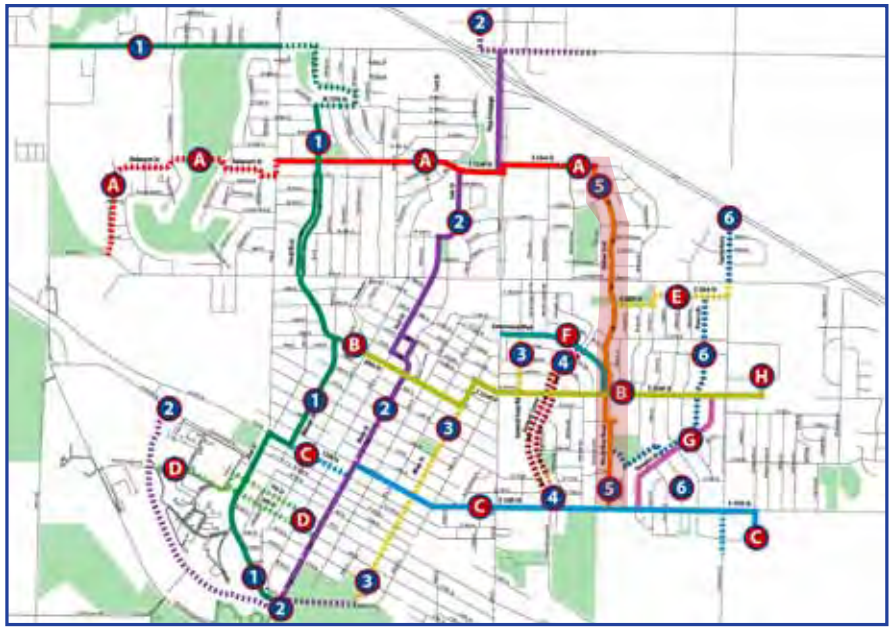


This important eastside connection parallels Vine Street along the General Custer parkway corridor. It serves Hickok and Polly Parks and is part of a system that connects to North Vine and the Mall area. Facilities along this corridor make extensive use of bike lanes. A future connection of 19th Street across Vine would also increase the utility of this route, easily linking the west side to east side parks and attractions, as would a pedestrian bridge across Chetolah Creek between 22nd and 13th Street. These improvements are not included in the phase one projects, however.

Phase 1a segments are highlighted in table.

	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/ Mile	Phase 1a Cost	Phase 1b Cost	Comments
4	General Custer, Centennial-13th	1.58	Type 7: blvd, left side bike lanes	$15,000		$23,700	Includes both street channels. NB is unpaved between 13th and 17th.
	Total	1.58				$23,700	

5 INDIAN TRAIL

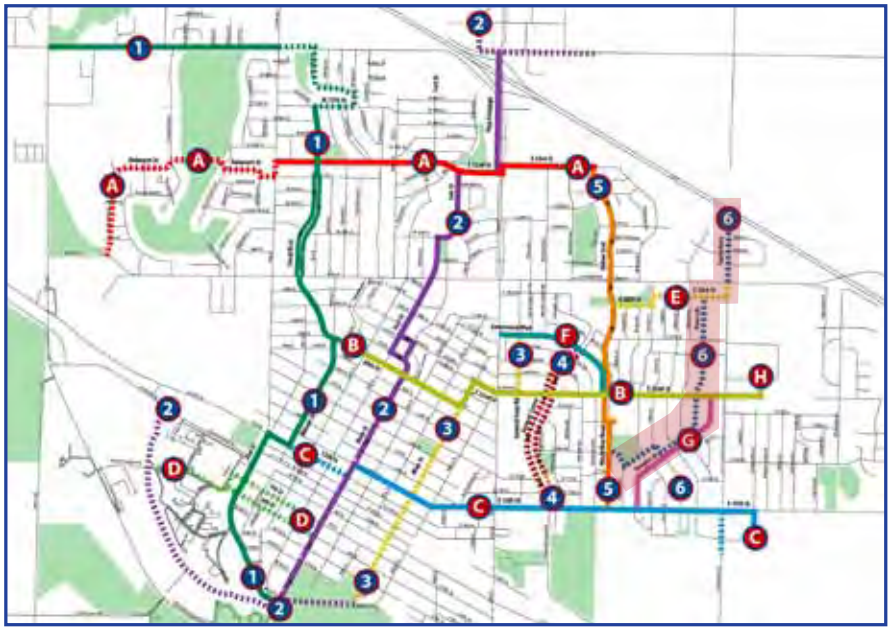


This key route uses Indian Trail as a connection through the center of the east side of town, serving Roosevelt School and Sunrise Park. It continues south along MacArthur to the proposed 13th Street crosstown bikeway (Line C). Indian Trail crosses 27th Street at a four-way stop, helping to connect the north and south sides of Hays safely.

Phase 1a segments are highlighted in table.

	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/ Mile	Phase 1a Cost	Phase 1b Cost	Comments
5	Indian Trail, 33 to Centennial	1.00	Type 3: one side bike lane	$16,500	$16,500	NA	
	Alley, Centennial to 20	0.11	Use alley as is	$-	$-		
	20, Alley to MacArthur	0.05	Type 1: sharrow	9,000	450		
	MacArthur, 20 to 13	0.35	Type 3: one side bike lane	16,500	5,775		
	Total	1.51			$22,725	NA	

6 HENRY DRIVE



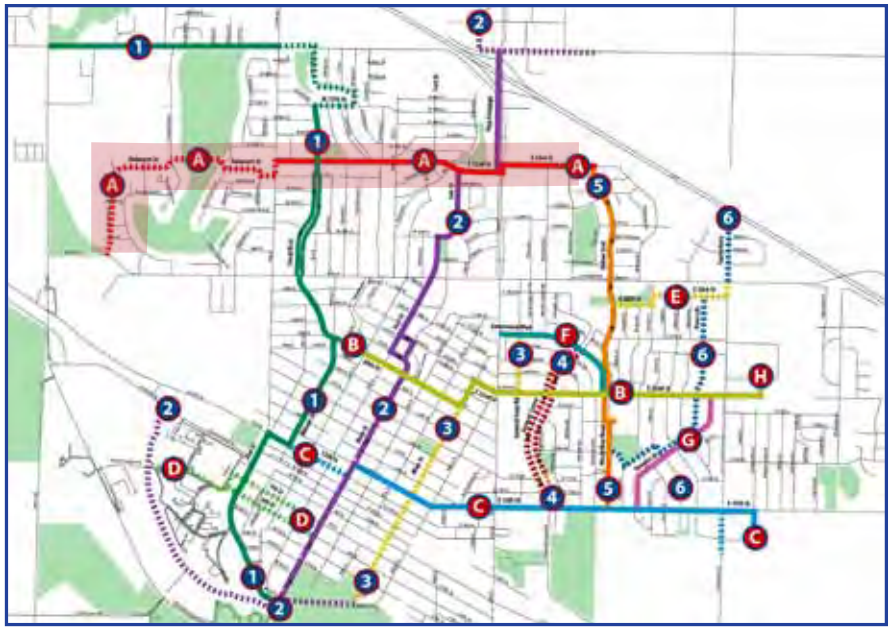
This line provides a north-south connection on the east side of Hays, generally parallel to Canterbury Drive. It begins at the Sternberg Museum and follows Henry Drive, one block west of Canterbury and providing access to mediacl offices and the hospital along that corridor. The line uses the Douglas Drive route (Line G) and other streets to connect to Sunrise park and Felten Middle School.

Phase 1a segments are highlighted in table.

	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/ Mile	Phase 1a Cost	Phase 1b Cost	Comments
6	Canterbury, Museum-27th	0.28	Type 5, 2-side bike lanes	$20,000	NA	$5,600	
	Canterbury, 27-26	0.1	Type 1, sharrows	9,000		900	
	Henry, 26-Douglas	0.60	Type 2, sharrows/parking lanes	12,000		7,200	
	Felten/Lawrence/19th, Douglas TO MacArthur	0.33	Type 2, sharrows/parking lanes	12,000		4,000	
	Total	1.43			NA	$17,700	

A

33RD/ CROSSTOWN

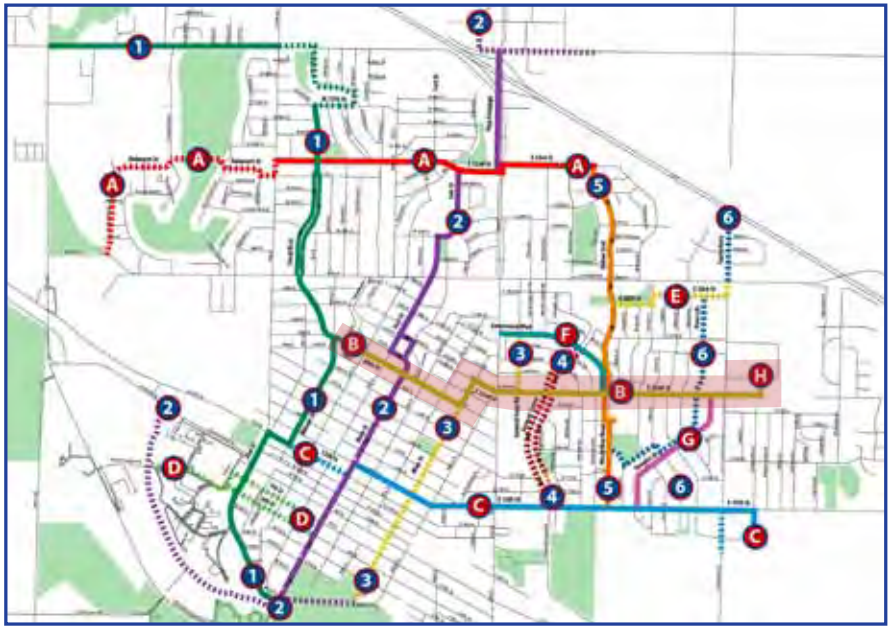


This important east-west line uses 33rd Street across the city, crossing Vine at a major commercial intersection near the Mall. Realignment of this intersection is proposed in the comprehensive plan. At its west end, the route would intersect a completed Big Creek Trail at 27th Street. Bike lanes are scheduled to be installed along parts of 33rd Street as part of a resurfacing project during 2012. The cost of this segment is included in the table below.

Phase 1a segments are highlighted in table.

Route	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/Mile	Phase 1a Cost	Phase 1b Cost	Comments
A	Columbine, 27th to Oakmont	0.23	Type 1, sharrows	$9,000		$2,070	
	Oakmont/Greenbrier, Columbine to Hall	0.93	Type 2, sharrows/parking lanes	12,000		11,160	
	33, Hall to Vine	1.00	Type 5a, 2-side bike lanes	20,000	$20,000		
	Vine St Crossing Modifications	1.00		40,000	10,000	30,000	
	33, Vine-Indian Trail	0.40	Type 5a, 2-side bike lanes	20,000	8,000		
	Total	3.56			$38,000	$43,230	

B 22ND CROSSTOWN



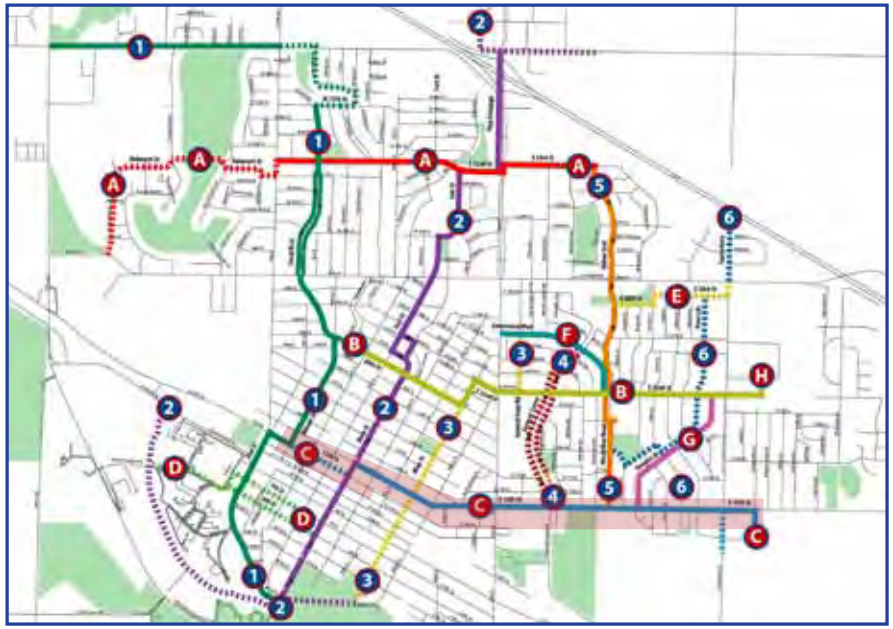
This line provides a major crosstown bike route across central Hays. The route uses 20th Street to link Canal Boulevard and Allen Street, and continues along 22nd Street to connect the medical center with the central part of the city. In this concept, 22nd Street is slightly modified and restriped to include bike lanes. The route connects seven north-south routes and serves a central role in the initial citywide network.

Phase 1a segments are highlighted in table.

Route	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/Mile	Phase 1a Cost	Phase 1b Cost	Comments
B	20th, Walnut-Main	0.35	Type 2, sharrows/parking lanes	$12,000	$4,200	NA	
	20th, Main-Allen	0.30	Type 1, sharrows	9,000	2,700		
	Allen, 20-22	0.12	Type 1, sharrows	9,000	1,800		
	22nd, Allen-Vine	0.10	Type 2, sharrows/parking lanes	12,000	1,200		
	22nd, Vine to Douglas	0.97	Type 9, 2-side bike lanes	18,000	17,460	NA	
	22nd, Douglas to Canterbury	0.10	Type 1, sharrow	9,000	$900		
	22nd, Canterbury to Hospital Entrance	0.18	Type 8, 3-lane with bike lanes	30,000	5,400		Restripe to 12' lanes with bike lanes
	Total	2.12			$32,940	NA	

C

13TH/ SOUTHSIDE



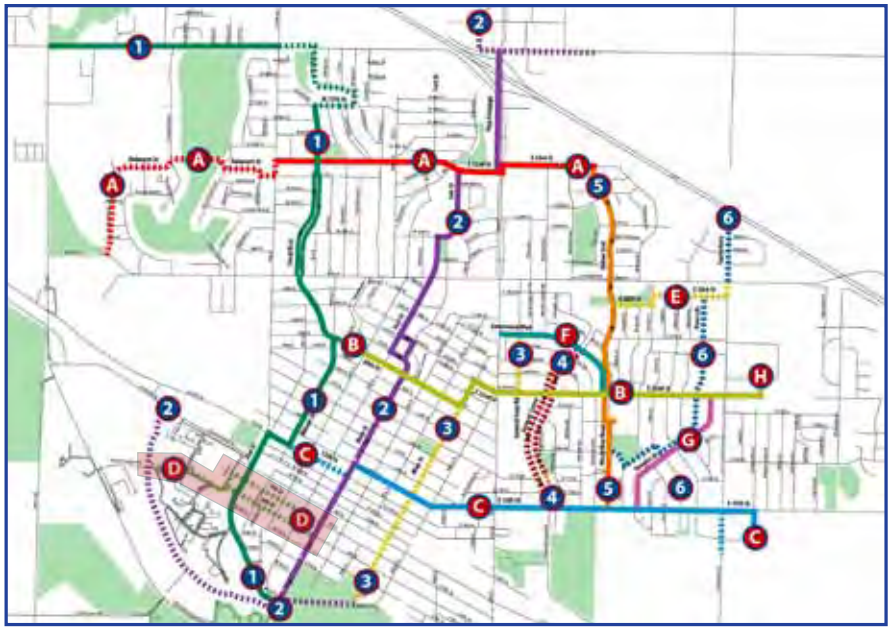
This important east-west line links the south side of Hays using 12th and 13th Streets, and serves the campus area, Downtown, and the high school. A major infrastructure element is a lane reconfiguration of 13th Street, including a reduction from four lanes to a three lane section, including a center left-turn lane. This configuration appears adequate to handle average daily traffic, provides safer left-turn movements, and provides room for bike lanes on this important corridor.

Phase 1a segments are highlighted in table.

Route	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/Mile	Phase 1a Cost	Phase 1b Cost	Comments
A	12th, Elm-Main	0.38	Type 2, sharrows/parking lanes	$12,000		$4,560	
	13th, Main-Milner	0.38	Type 5 bike lanes	20,000	$7,600		
	13th, Milner to Golden Belt	1.42	Type 8, 4 to 3-lane road diet with 2-side bike lanes	60,000	85,200		
	Canterbury, 13-Recreation Center	0.20	Sidepath	150,000	30,000	30,000	
	Total	2.18			$92,800	$34,560	

D

6/7TH



This short connector connects the campus residential area to Downtown with a shared route on the 6th and 7th Street one-way pair. Sharrows are used on the one-way streets, with bike traffic traveling in the same direction as motor vehicles.

Phase 1a segments are highlighted in table.

Route	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/Mile	Phase 1a Cost	Phase 1b Cost	Comments
D	South Campus Drive/Park, US 183 to 7th	0.66	Type 1, sharrow	$9,000	NA	$5,940	
	7th, Park-Main	0.45	Type 1, sharrow	$9,000		$4,050	One-way WB
	6th, Park-Main	0.45	Type 1, sharrow	$9,000		$4,050	One-way EB
		1.56			NA	$14,040	

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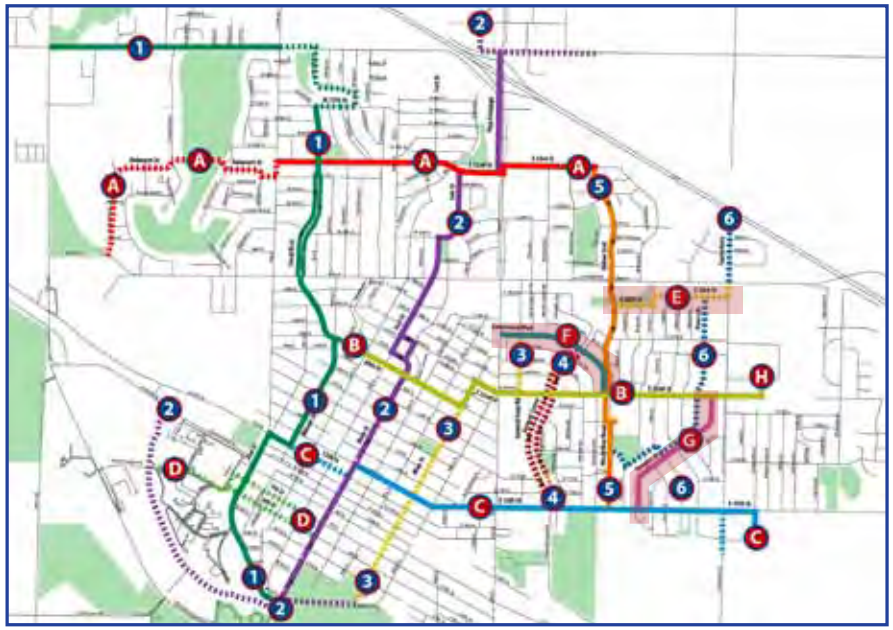


These three short system components connect major north-south routes and take advantage of wide streets like Douglas Drive to provide bike lanes in strategic locations. They provide access from major parts of the initial network to the hospital, Vine Street commercial, and the 13th Street corridor.

Phase 1a segments are highlighted in table.

Route	Segment	Length (Miles)	Bikeway Facility Treatment	Cost/Mile	Phase 1a Cost	Phase 1b Cost	Comments
E	26th, Indian Trail-Canterbury	0.55	Type 2, sharrows/parking lanes	$12,000		$6,600	
F	Centennial, Vine-22	0.61	Type 5, 2-side bike lanes	$20,000	$12,200		
G	Douglas Dr, 22-13	0.65	Type 5, 2-side bike lanes	$20,000	$13,000		
	Total	1.81			$25,200	$6,600	

Recap of Pilot System by Component

Route	Name	Length (Miles)	Total Cost	Phase 1a Cost	Phase 1b Cost
1	Westside	4.35	37,890	29,730	8,160
2	Main/Big Creek	4.40	414,325	31,505	377,520
3	Allen	1.39	13,260	–	13,260
4	General Custer	1.58	23,700	–	23,700
5	Indian Trail	1.51	22,275	22,725	–
6	Henry Drive	1.31	17,700	–	17,700
A	33rd/Crosstown	3.56	81,230	38,000	43,230
B	22nd/Crosstown	2.12	32,940	32,940	–
C	13th/Southside	2.38	127,360	92,800	34,560
D	6th/7th	1.56	14,040	–	14,040
E	26th	0.55	6,600	–	6,600
F	Centennial	0.61	12,200	12,200	–
G	Douglas	0.65	13,000	13,000	–
Total	**Complete Initial System**	**25.97**	**$811,670**	**$272,900**	**$538,770**

North Vine parkway concept (right). The initial system uses the existing sidepath under I-70 and the Vine Street frontage to extend the Main route (Line 2) to the north side of the Interstate. The parkway/rearage road concept of the comprehensive plan would replace the frontage road with a multi-use pathway. In the interim, Skyline Drive could also provide an alternative to safety issues posed by the frontage road. Use of Skyline would require a path connection west from Vine Street.

Probable Initial System Cost

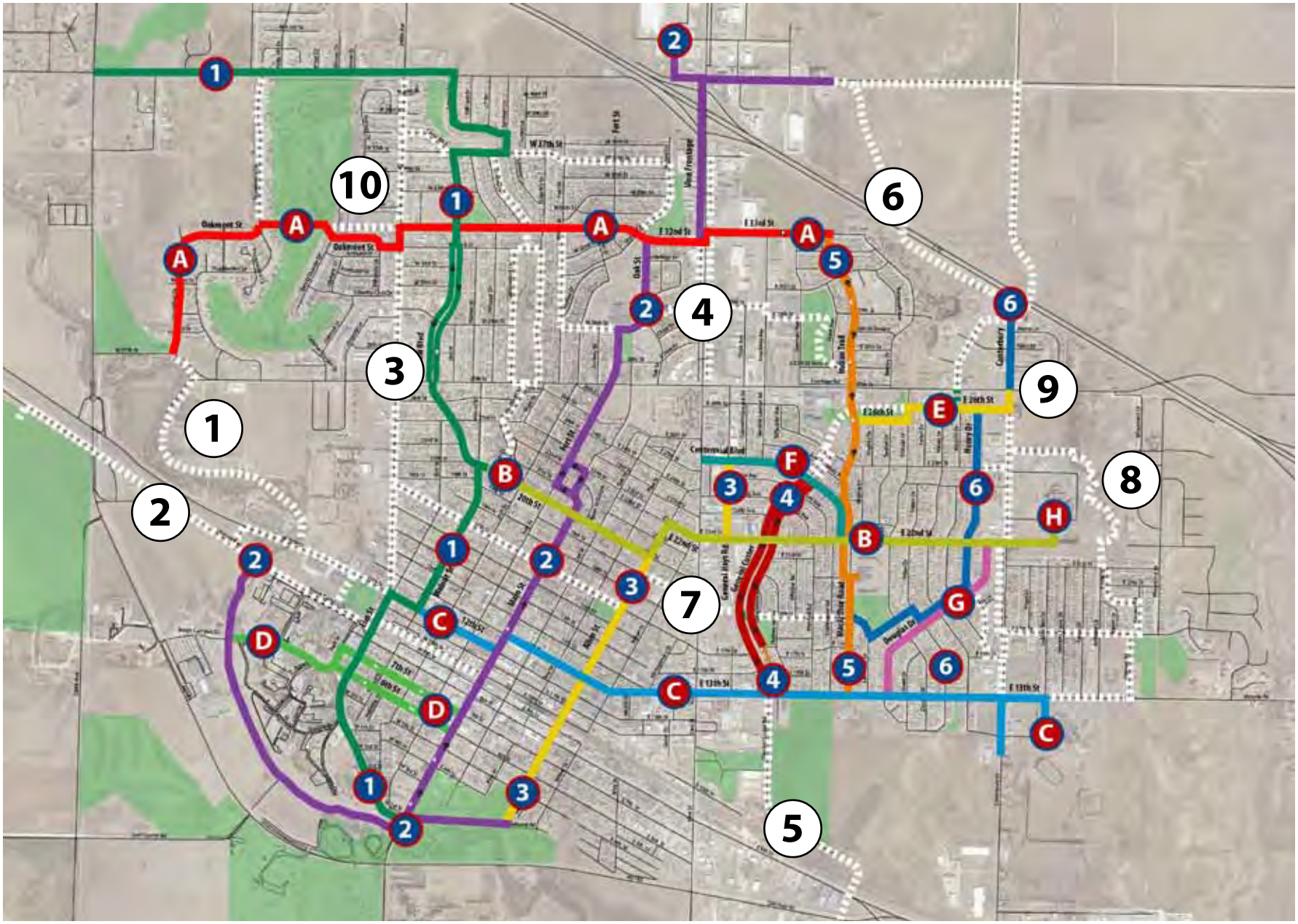
The table at left recaps the costs of the entire, nearly 25 mile initial system. The table includes paving of the existing Big Creek Trail between Main and 8th Street to an 8 to 10 foot width as possible. Street adaptation costs are about $432,000, with initial trail development estimated at an additional $400,000, for a total cost of about $832,000. Implementation of the initial system may occur over a three year period.

The Ultimate BikeHays Network

The ultimate Bike Hays system would be extended largely through additional on-street routes, but also includes a number of substantial future investments. Highlights of the long-range system include the following:

- Paving and extension of the Big Creek Trail between 12th Street and 27th Street. (1)
- A Sports Complex Pathway, connecting the Fort Hays State campus with the Bickle-Schmidt Complex using the north edge of campus and a path along Old US 40. This path would tie into both the 6th and 7th Street route and the bike/pedestrian corridor proposed as part of the campus to downtown development area in the comprehensive plan. (2)
- A four- to three-lane road diet with bike lanes on Hall Street between the 27th and Hall business district and 41st Street. (3)
- The Vine Street parkway between 27th and 41st, proposed in the comprehensive plan. (4)
- A General Custer Trail along Chetolah Creek, from 13th Street under the railroad and US 40 to the Stramel Ball Parks and Reservation Road. (5)
- A Sternberg Trail, from the museum under I-70 to 41st Street. (6)
- Extension of 18th Street across Vine with a new intersection, and a pedestrian/bicycle bridge across Chetolah Creek. (7)
- A Medical Center Trail, upgrading the wellness path through the hospital campus, and integrating it into residential neighborhoods on the eastern edge of town. (8)
- Canterbury Trail, incorporating a path or bicycle lanes along Canterbury Drive that includes the edge of the medical center campus and would extend across I-70 on a future overpass to 41st Street. This route would then continue along 41st Street to North Vine. (9)
- Connection along an easement continuing the alignment of 33rd Street west to Greenbrier. (10)

Future planning should also monitor overall development trends and adapt the BikeHays program into emerging neighborhoods and destinations. For example, paved shoulders on the US 183 Bypass also accommodate bicyclists and may be integrated into westside growth. The Commerce Parkway corridor also may emerge as a desirable destination for bicycle commuters and future development.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CHAPTER 5

SUPPORT SYSTEMS

While previous chapters have focused on the design and character of a BikeHays network, infrastructure by itself does not create an excellent bicycle transportation program. To guide communities, the League of American Bicyclists through its Bicycle Friendly Communities (BFC) program, establishes five components of program design that are used to determine whether a city should be awarded BFC status – the 5 E's of Engineering, Education, Encouragement, Enforcement, and Evaluation. This program applies to communities of all sizes, and many cities the size of Hays have received this status. Indeed, as the home of a notable manufacturer of quality recumbent bicycles, a major university campus, and an active bicycling community, Hays is ideally positioned to be a Bicycle Friendly Community.

According to the LAB, the evaluative elements of the 5E's are:

ENGINEERING evaluating what is on the ground and has been built to promote cycling in the community. Areas of evaluation include:

- Existence and content of a bicycle master plan.
- Accommodation of cyclists on public roads.
- Presence of both well-designed bike lanes and multi-use paths in the community.
- Availability of secure bike parking.
- Condition and connectivity of both the off-road and on-road network.

EDUCATION determining the amount of education available for both cyclists and motorists. Education includes:

- Community programs teaching cyclists of all ages how to ride safely in any area from multi-use paths to congested city streets.
- Education for motorists on how to share the road safely with cyclists.
- Availability of cycling education for adults and children.
- Number of League Cycling Instructors in the community,
- Distribution of safety information is distributed to both cyclists and motorists in the community such as bike maps, tip sheets, and as a part of driver's education manuals and courses.

ENCOURAGEMENT concentrating on promotion and encouragement of bicycling. Areas of evaluation include:

- Programming such as Bike Month and Bike to Work Week events.
- Community bike maps and route finding signage.
- Community bike rides and commuter incentive programs.
- Safe Routes to School programs.
- Promotion of cycling or a cycling culture through off-road facilities, BMX parks, velodromes, and road and mountain bicycling clubs.

ENFORCEMENT addressing connections between the cycling and law enforcement communities, addressing:

- Liaisons between the law enforcement and cycling communities.
- Presence of bicycle divisions of the law enforcement or public safety communities
- Targeted enforcement to encourage cyclists and motorists to share the road safely
- Existence of bicycling related laws such as those requiring helmet or the use of sidepaths.

EVALUATION & PLANNING, considering programs in place to evaluate current programs and plan for the future, including:

- Measuring the amount of cycling taking place in the community
- Tabulation of crash and fatality rates, and ways that the community works to improve these numbers.

- Presence, updating, and implementation of a bicycle plan, and next steps for improvement.

The previous four chapters of this plan address the Engineering aspect of bicycle programming. But the "soft" systems, namely the other four E's, are critical to taking full advantage of infrastructure investments, improving the effectiveness and safety of bicyclist, and making Hays a truly bicycle friendly community. The following discussion provides recommendations for the support systems for bicycling in the city, organized around the LAB's five categories of bicycle friendliness.

Education

Increase the number of league certified instructors (LCI's) in Hays. The League of American bicyclists BikeEd program is recognized a the standard for bicycle safety education, and includes a variety of courses that serve young cyclists, recreational riders, and everyone up to road-hardened commuters. Successful operation of the program is dependent on one critical factor, however - local presence of instructors. Therefore, a critical part of the program is training of instructors through the League Certification process. In this process, cyclists complete both prerequisite courses and a three-day course conducted by a specially trained instructor. Successful completion and passing written and on-road evaluations qualifies individuals as League Certified Instructors (LCI), who are then authorized to provide training to other cyclists. In addition to a cadre of instructors, a successful training program requires marketing and placement to match instructors with demand from schools, corporations, and other organizations. This can most appropriately be done through an advocacy or active living organization with staff to organize the education effort.

Integrate bicycle rules of the road into drivers education programs. Most drivers are unaware of the rights and responsibilities of vulnerable users such as bicyclists (as well as motorcyclists and pedestrians. These factors should be included in drivers education programs for new motorists and decertification testing. In addition, a significant unit on bicycle, pedestrian, and motorcycle laws and behaviors should be included in defensive driving classes for drives who have received citations for moving traffic violations. This often reaches motorists who may be most likely to drive inattentively or aggressively, and may be most likely to endanger cyclists.

Work with major employers to conduct on-site education programs. As part of efforts to encourage better employee health through greater active transportation, major employers often are willing to host BikeEd programs. Outreach and partnerships with companies to offer programs on-site can increase participation in bicycling, and assist employers with establishing an ethos based on healthy living.

Develop and implement bicycle education programs for kids. Young bicyclists perceive the riding environment differently from adults, and obviously have neither the visual perspective nor experiences of older riders. Schools and safety groups often offer "bike rodeos" which may or may not address the skills of riding even on local streets. The LAB's BikeEd program has a specific track that addresses these issues ad skills, and they should be incorporated into these more frequently offered safety events.

Publish and post on-line an engaging and brief guide to safe bicycling. Information on safe urban cycling should be both ubiquitous and appealing to different audiences, including both motors and bicyclists. Poor safety practices are both dangerous and bad for public relations, creating the possibility of backlash against cyclists. New York's Biking Rules program, an on-line guide to practice and law, developed by the advocacy organization Transportation Alternatives, and a brief city DOT publication on safe rid-

Biking Rules. Excerpts from a streetcode to promote responsible urban cycling, developed by New York City's Transportation Alternatives advocacy organization.

ing are excellent examples. Chicago has published a safety booklet specifically targeted toward young cyclists. Hays should develop similar guides, which also successfully avoid portraying bicycling as a hazardous activity.

Encouragement

Expand participation in bicycle transportation through programs that engage corporations in competitions and fun, such as corporate commuter challenges. These programs track participation by numb of trips and miles traveled during a multiple-month period, and give awards to winners at an event at the end of the period. Companies may be classified by size, so that competition is among similarly sized organizations. These challenge programs are successful by encouraging bicycle transportation within companies and in many case produce a bicycle culture as companies compete against each other.

Institute a bike month celebration. Bike month events typically occur during May, and can involve a variety of activities, including short rides led by the mayor or other public officials, clinics on subjects such as riding technique and bicycle repair, special tour events, screenings of bicycle-related movies, and other programs.

Organize special rides that are within the capabilities of a broad range of riders and encourage family participation. On memorial day weekend, the Active Transportation Alliance's Bike the Drive closes Chicago's Lake Shore Drive for exclusive bicycle use for three hours on Sunday morning for cyclists to enjoy. In Madison, seven miles of downtown streets are closed to motor traffic for exclusive use by bicycles and pedestrians in a free event that attracts thousands. Many community rides and benefits have different lengths and routes to appeal to all ages. These events build interest, and make cycling comfortable and attractive to more people. Hays has scheduled similar events in the past to demonstrate the possibilities of bicycle transportation. Cyclovia programs that close a major street or streets in a part of the city have become very popular around the country as a community festival.

Implement a bicycle ambassador program in middle and high schools. Ambassadors are students with a special interest in bicycling who share that interest with their peers. Many cities also have adult ambassador programs, whose goal to to provide safety education and market the many positive aspects of bicycling in the city.

Encourage Hays' businesses and employers to participate in the League of American Bicyclists Bicycle Friendly Business (BFB) program. The program recognizes businesses that encourage their employees to use bicycles for transportation through efforts such as providing secure bicycle parking, sponsoring company rides, offering economic incentives, establishing internal bicycling events and bicycle interest groups, and supporting community bicycle initiatives.

Achieve Bicycle Friendly Community status within three to five years. In addition to recognition as a good bicycling environment, many observers also consider Bicycle Friendly Community status to be an indicator of overall community quality. As such, it is a significant community marketing tool, and reinforces substantial efforts in balanced transportation development.

Engineering (Facilities)

Institute a bicycle parking program, installing facilities at strategic locations across the city. Bicycle parking is a low cost but significant physical improvement that both encourages cycling, provides greater security, and keeps bikes from damaging trees or street furniture, or obstructing pedestrians. The parking program includes several elements:

- **Identifying key locations for facilities.**

- **Standardizing on bike parking equipment that is durable, relatively inexpensive, and unobtrusive.** Many of the bike racks in use today, including the so-called "schoolyard" rack and waves are inefficient, take up a great deal of space, and, in the case of the former, can actually damage bikes. Better in most cases are less obtrusive designs such as the inverted U, hitching post, or the new "theta" design that recently won a bicycle parking design competition for New York City.

- **Develop a funding mechanism and incentive program for bicycle parking installations.** Bike parking on private property may be funded with the assistance of special events. For example, Omaha's Eastern Nebraska Trails Network holds an annual Corporate Challenge ride, which in 2011 attracted a record 4,200 cyclists. A portion of the proceeds are used to purchase inverted U's, some of which are offered to targeted private businesses at reduced cost.

- **Amend zoning ordinances to require a specific amount of bicycle parking for high demand business types.**

Develop and install a unified bikeway network graphic system. While signs and sign clutter should always be minimized, a carefully designed identification and directional graphics system can greatly increase users' comfort and ease of navigating the street system. The graphic system may have individual features, but should generally follow the guidelines of the Manual of Uniform Traffic Control Devices (MUTCD). Types of signs in the system include:

- Route identifier, including a system logo and the number and name of the route. These signs reassure users that they are on the right path and is keyed to numbered routes.

- Intersection signs, indicating the intersection of two or more routes.

- Destination way finders, indicating the direction, distance, and time (using a standard speed, typically 9 miles per hour), to destinations along the route.

- Directional changes, signaling turns along a route.

The graphic system should be modular to provide maximum flexibility and efficiency in fabrication. Signs should also use reflective material for night visibility. The Clearview font is recommended as a standard for text.

Enforcement

Involve a Police Department representative on the advisory committee, bike education efforts, and other aspects of the bicycle transportation program. Police participation adds a critical perspective to facility and safety program planning and implementation.

Enforce bicycle laws for both motorists and bicyclists. All users of the road have responsibilities to each other. Effective enforcement begins with police officers being completely familiar with legal rights and responsibilities of cyclists. But bicyclists must not have free passes to disobey traffic laws, and irresponsible riders often create backlash against all. Enforcement for all users leads to better, safer behavior and greater predictability and cooperation by all.

At the state level, Kansas has made two major statutory steps to become more friendly to bicyclists: a 3-foot separation requirement for motorists passing bicycles, and a Dead Red law, permitting bicyclists and motorcyclists to go through red signals that do not detect their presence.

Encouragement through Events. The largest group bike ride in the country is Bike New York's Five Borough Bike Tour, with 32,000 riders. But much more modest rides also provide fun and support for riders of all abilities.

Evaluation and Planning

Institute an evaluation system that compiles bicycle traffic counts and crash information, and monitors mode split data through the American Community Survey and user surveys. Good evaluation information measures the effectiveness of the program and informs adjustments and improvements. The bicycle/pedestrian coordinator is ultimately responsible for developing and implementing this evaluative program.

Complete periodic surveys of system users, monitoring customer satisfaction and recommendations. The very high response to the survey in chapter two indicates a large and committed constituency that is a great source of information and input. In addition to being an excellent measure of user satisfaction and recommendations for improvement, surveys keep the bicycle community actively engaged in the process of improving bicycle transportation in Hays.

Bicycle Parking. Inverted U's at the University of Nebraska at Omaha, enhanced with the school's mascot.

Bikeways System Graphics. Clockwise from bottom: Destination sign, route intersection sign, and route identifier.

Hays

Recap of Pilot System by Component

Route	Name	Length (Miles)	Total Cost	Phase 1a Cost	Phase 1b Cost
1	Westside	4.35	37,890	29,730	8,160
2	Main/Big Creek	4.40	414,325	31,505	377,520
3	Allen	1.39	13,260	–	13,260
4	General Custer	1.58	23,700	–	23,700
5	Indian Trail	1.51	22,275	22,725	–
6	Henry Drive	1.31	17,700	–	17,700
A	33rd/Crosstown	3.56	81,230	38,000	43,230
B	22nd/Crosstown	2.12	32,940	32,940	–
C	13th/Southside	2.38	127,360	92,800	34,560
D	6th/7th	1.56	14,040	–	14,040
E	26th	0.55	6,600	–	6,600
F	Centennial	0.61	12,200	12,200	–
G	Douglas	0.65	13,000	13,000	–
Total	**Complete Initial System**	**25.97**	**$811,670**	**$272,900**	**$538,770**

North Vine parkway concept (right). The initial system uses the existing sidepath under I-70 and the Vine Street frontage to extend the Main route (Line 2) to the north side of the Interstate. The parkway/rearage road concept of the comprehensive plan would replace the frontage road with a multi-use pathway. In the interim, Skyline Drive could also provide an alternative to safety issues posed by the frontage road. Use of Skyline would require a path connection west from Vine Street.

Probable Initial System Cost

The table at left recaps the costs of the entire, nearly 25 mile initial system. The table includes paving of the existing Big Creek Trail between Main and 8th Street to an 8 to 10 foot width as possible. Street adaptation costs are about $432,000, with initial trail development estimated at an additional $400,000, for a total cost of about $832,000. Implementation of the initial system may occur over a three year period.

RESOLUTION NO. 2013-

A RESOLUTION DECLARING THE ELIGIBILITY OF THE CITY OF HAYS, KANSAS TO SUBMIT AN APPLICATION TO THE KANSAS DEPARTMENT OF TRANSPORTATION FOR USE OF TRANSPORTATION ENHANCEMENT FUNDS SET FORTH BY THE FEDERAL TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY FOR THE HAYS BIKE PROJECT IN HAYS, KANSAS AND AUTHORIZING THE CITY MANAGER OF THE CITY OF HAYS TO SIGN THE APPLICATION.

WHEREAS, the City of Hays, Kansas, has the legal authority to apply for, receive, and administer federal, state, and other monies through Home Rule Power under the Constitution of the State of Kansas and authorized by K.S.A. 12-1662, regarding the expenditure of federal aid to public agencies; and

WHEREAS, the City of Hays, Kansas, desires to submit an application to the Kansas Department of Transportation for transportation enhancement program funds set forth by the Federal Transportation Equity Act for the 21st Century; and

WHEREAS, the City of Hays, Kansas, is participating in the Kansas Department of Transportation's Transportation Enhancement Program set forth by the Federal Transportation Equity Act for the 21st Century; and

WHEREAS, Federal monies are available under a transportation enhancement program set forth by the Federal Transportation Equity Act for the 21st Century, administered by the State of Kansas, Department of Transportation, for the purpose of Historic, Scenic and Environmental, and Pedestrian and Bicycle projects; and

WHEREAS, After appropriate public input and due consideration, the Governing Body of City of Hays, Kansas has recommended that an application be submitted to the State of Kansas for the Bike Hays Plan project.

NOW, THEREFORE, BE IT RESOLVED BY THE GOVERNING BODY OF THE CITY OF HAYS, KANSAS:

SECTION 1. That the City of Hays, Kansas does hereby authorize the City Manager to submit an application to the Kansas Department of Transportation for transportation enhancement program funds set forth by the Federal Transportation Equity Act for the 21st Century on behalf of the citizens of City of Hays, Kansas.

SECTION 2. That the City of Hays, Kansas, hereby assures the Kansas Department of Transportation that sufficient funding for the construction of the Bike Hays project is available.

SECTION 3. That the City of Hays, Kansas, hereby assures the Kansas Department of Transportation that sufficient funding for the operation and maintenance of the Bike Hays project will be available for the life of the project.

SECTION 4. That the City of Hays, Kansas, hereby assures the Kansas Department of Transportation that the City of Hays, Kansas, will have title or permanent easement to the Bike Hays project by the time of project letting.

SECTION 5. That the City Manager of City of Hays, Kansas, is authorized to sign the application to the Kansas Department of Transportation for transportation enhancement program funds set forth by the Federal Transportation Equity Act for the 21st Century on behalf of the citizens of City of Hays, Kansas. The City Manager is also authorized to submit additional information as may be required and act as the official representative of the City of Hays in this and subsequent related activities.

SECTION 6. That the City of Hays, Kansas, hereby assures the Kansas Department of Transportation that the City of Hays, Kansas, is willing and able to, if the Bike Hays project is selected for funding, administer the designing, letting and construction of the Bike Hays project.

ADOPTED AND PASSED by the Governing Body of the City of Hays, Kansas, this 24th day of January, 2013.

_____
RON MELLICK
Mayor

ATTEST:

_____
DORIS WING
City Clerk

(SEAL)

Commission Work Session Agenda Memo

From: John Braun, Assistant Director of Public Works

Work Session: January 17, 2013

Subject: Developer Agreement – Wheatland Lots

Person(s) Responsible: Toby Dougherty, City Manager
I.D. Creech, Director of Public Works

Summary

Darrell Dreher, the owner of six lots along the east side of Wheatland Avenue just south of 22nd Street, is proposing both sanitary sewer and street improvements to serve those lots. A developer agreement has been crafted, which sets forth the conditions for the improvements and allows the City to reimburse the developer for the cost of over sizing in the amount of $22,853.20. Staff recommends entering the agreement with Darrell Dreher to allow the improvements to be constructed.

Background

The northern most 6 lots (Lots 1 -6 , Block D, Tallgrass Second Addition) along the east side of Wheatland Drive just south of 22nd Street were not developed in the mid 1990s along with the rest of Wheatland. Since there was no benefit district to assess the cost of street and utility improvements, a temporary asphalt road connects Wheatland to 22nd Street.

When 22nd Street between Canterbury and Commerce Parkway was constructed in 2009, the waterline was installed and the intersection was built. Since then, the property has changed ownership several times and the north 3 lots were rezoned to R-3 in September 2012. The south 3 lots remain R-1.

Discussion

The current owner of the lots, Darrell Dreher would like to develop the lots and has presented a developer agreement documenting the conditions for the development. The current development policy requires Wheatland to be constructed to Collector Street standard (7" thick pavement with Curb and gutter - 45' wide from back of curb to back of curb). Sanitary sewer also needs to be extended. To accommodate future development, the sanitary sewer needs to be 10" diameter pipe. See **Exhibit A** for a location map.

Mr. Dreher proposes to finance the cost of the improvements without the establishment of a special benefit district. However, the current development policy does allow for the

City to pay for over sizing of the pavement width and thickness from the 40' Residential Street to the 45' Collector Street Standard, and the over sizing of the sanitary sewer from the standard 8" to 10".

The Letter Agreement in **Exhibit B** details the cost of the proposed improvements and the city at-large share of those costs for over sizing. See the Financial Considerations section for a cost summary. In addition, the developer will have all improvements designed to City Standards, secure required permits, provide construction inspection, as-built plans, and a one-year warranty.

Legal Consideration

There are no legal obstacles to proceeding as recommended by City Staff.

Financial Consideration

The cost estimates provided by the developer's engineers are summarized below:

	Total Cost	City Share
Street Construction:	$180,696.00	$16,573.20
Sanitary Sewer	$ 62,000.00	$ 6,280.00
Total	$242,696.00	$22,853.20

The $16,573.20 to oversize Wheatland to Collector Street standard could be funded out of the Capital Projects fund.

The $6,280 to oversize the Sanitary Sewer to 10" could be funded out of Water/Sewer Capital.

Options

The Commission has the following options:
Option 1: Authorize the City Manager to enter the agreement with Darrell Dreher for the construction of the improvements.
Option 2: Provide alternate direction to staff.

Recommendation

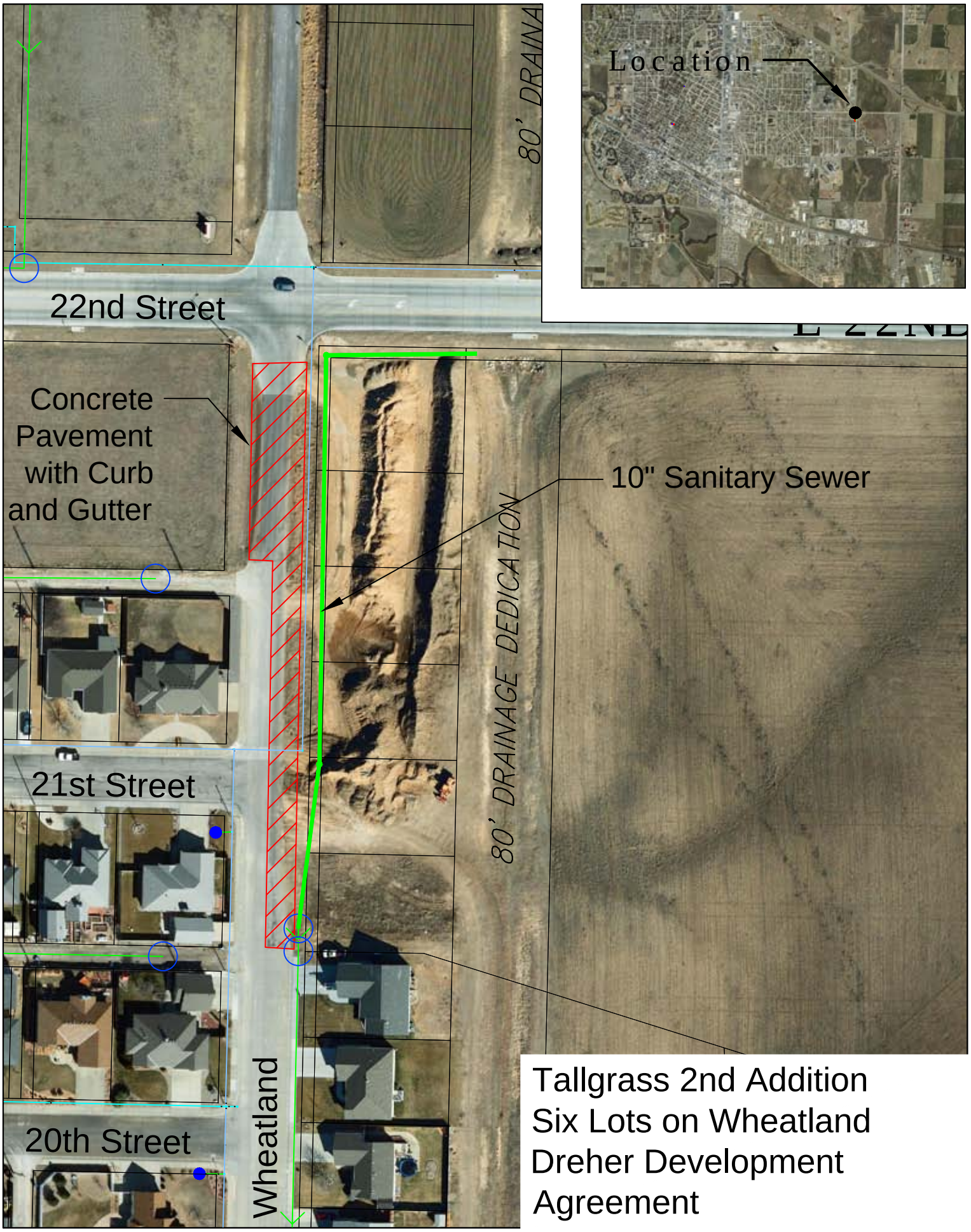
City staff recommends authorizing the City Manager to enter the agreement with Darrell Dreher for the construction of the improvements as detailed in the agreement.

Action Requested

Consider authorizing the City Manager to enter the agreement with Darrell Dreher and taking such actions necessary to comply with the terms of the agreement.

Supporting Documentation

Exhibit A – Location Map
Exhibit B – Letter Agreement



Tallgrass 2nd Addition
Six Lots on Wheatland
Dreher Development Agreement

TOBY DOUGHERTY, CPM, CITY MANAGER
PAUL BRISENO, ASSISTANT CITY MANAGER

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HAYS KANSAS

CITY COMMISSION
TROY HICKMAN, MAYOR
KENT STEWARD
HENRY SCHWALLER, IV
RON MELLICK
EBER PHELPS

Letter Agreement

Darrell Dreher
2200 Henry Dr.
Hays, KS 67601

This Letter Agreement is in regards to the proposed public street, and sanitary sewer improvements to serve Lots 1 to 6, Block D, Tallgrass Second Addition, all to the City of Hays, Ellis County Kansas.

The developer's engineer for street construction, Ruder Engineering, has provided concept plans to the City of Hays Public Works Department for the construction of curb, guttering, paving, grading and drainage for approximately 490 lineal feet of Wheatland Ave immediately south of 22nd Street. Wheatland Ave shall be constructed as a Collector Street, 45' in width from the back of curb to the back of curb, with a minimum pavement thickness of 7" as detailed in the Development Policy Infrastructure Guidelines for New Development dated October 22, 2009.

The developer's engineer for sanitary sewer improvements, Baughman Company, has provided concept plans to the City of Hays Public Works Department for the installation of approximately 628 lineal feet of ten-inch (10") sanitary sewer main, 2 manholes, 6 sanitary sewer taps, and all appurtenances thereto. All proposed improvements shall be located in the public right of way or properly recorded easements.

City water main exists to serve proposed lots. Developer to pay the cost of water taps, meter can assemblies, and service lines in the future as lots are built upon.

The developer's engineers shall submit plans to the City in accordance with the "Standard Details and Specifications for Public Works Construction Projects" dated March 1999 as updated from time to time, and the Development Policy Infrastructure Guidelines for New Development dated October 22, 2009.

The developer has elected to bear the cost of the improvements without petitioning for establishment of a special benefit district. As per the above mentioned Policy, the City of Hays shall pay the cost to oversize Wheatland Ave as a collector street (pavement width and thickness) and to oversize the sanitary sewer main from 8" to 10". The

estimated cost for oversizing Wheatland Avenue to be reimbursed to the developer by the City is **$16,573.20**. The estimated cost to oversize sanitary sewer to 10" to be reimbursed to the developer by the City is **$6,280.00**. Developer shall provide justification of actual costs with invoices or other documentation acceptable to the City, and actual reimbursement will be made based on approved actual costs. The City's share of construction costs shall be reimbursable to the developer after the successful completion of construction to plan according to City standards and acceptance by the City.

The developer(s) shall secure the required KDHE permit for the construction of the proposed sanitary sewer improvement; supply the City with bid tabs and construction documents; provide for construction observation, testing and inspection; participate in the final inspection; provide as-built plans, material submittals, and test results to the city; and provide for a one-year warranty.

The parties agree that is agreement becomes null and void if construction of improvements is not completed within 18 months of the date of execution of this agreement.

The parties further agree that the City shall file this agreement with the Ellis County Register of Deeds within thirty (30) days of execution of this agreement,

THE CITY OF HAYS, KANSAS

Toby Dougherty, date
City Manager

DEVELOPER

Darrell Dreher 1/8/2013

Darrell Dreher date

Attest:

Doris Wing, date
City Clerk

Commission Work Session Agenda Memo

From: John Braun, Assistant Director of Public Works

Work Session: January 17, 2013

Subject: Engineering Agreement – Waterline Design

Person(s) Responsible: Toby Dougherty, City Manager
Bernie Kitten, Director of Utilities

Summary

The Capital Improvement Program includes the replacement of various waterlines in older sections of the City, which have had a disproportionately high frequency of waterline breaks. Staff has solicited engineering services for the design of waterline upgrades and replacements. Kaw Valley Engineering of Junction City submitted the lowest cost proposal in the amount of $46,904 for the design of water and sanitary sewer force main upgrades in ten locations around the City. Staff recommends that the City Commission authorize the City Manager to enter an agreement with Kaw Valley Engineering for design work.

Background

The Capital Improvement Program (CIP) contained within the 2013 budget included waterline upgrades in various locations scheduled for 2014 and 2015; however, repeated failure of the old 4" waterline on Fort Street between 20th and 27th Street has prompted a more timely replacement of that stretch of waterline. Therefore, staff prepared a Request for Proposals (RFP) to solicit engineering services for the design of the waterline replacements originally scheduled for 2014 and 2015 along with the replacement of 2000' of 10" sanitary sewer force main along the US-183 Bi-pass, which has experienced failure in the recent past and has reached the end of its useful life. While all of the improvements proposed for design may not be constructed in 2013, there is efficiency in having them all designed at the same time. The sections of waterline included in the design solicitation are listed below and detailed in the RFP contained in **Exhibit A**.

A. Fort Street from 13th to 20th Street – upgrade 4" to 8"
B. Fort Street from 20th to 27th Street – upgrade 4" to 8" **(includes pavement rehab)**
C. 26th Street from Fort to Ash – upgrade 4" to 6"
D. Oak Street from 20th to 26th Street – upgrade 4" to 8"
E. Hickory Street from 27th to 29th Street – replace 6"
F. Ash Street from 27th to 29th Street – replace 6"

G. 6th Street from Riley to Vine Street – upgrade various to 8”
H. Riley from 6th to 8th Street – upgrade 4” to 8”
I. Elm Street from 1st to 4th Street – new 8” waterline
J. US-183 bypass - 10-inch Sanitary Sewer Force Main Replacement

Discussion

An open solicitation for engineering services resulted in the City receiving proposals from seven (7) engineering firms. Below is a list of the firms that submitted proposals and the subsequent fee:

Kaw Valley Engineering – Junction City	$ 46,904.00
Olsson Associates - Manhattan	$ 47,300.00
Earles Engineering - Liberal	$ 52,931.00
Benesch - Manhattan	$ 62,700.00
Schwab Eaton - Manhattan	$ 65,300.00
CFS - Topeka	$ 74,800.00
PEC - Wichita	$ 187,400.00

Kaw Valley Engineers has prepared an Agreement for Engineering Services, which is contained in **Exhibit B**. The agreement calls for design of the 2013 projects (B and J) to be complete by April 1, 2013 for bidding and construction prior to the end of the year. Design of the remaining projects is to be complete by May 31, 2013.

While the City has not utilized Kaw Valley Engineering directly in the past, they have provided bridge inspection services for Ellis County, and staff has worked with Kaw Valley Engineering in that capacity.

Staff recommends authorizing the City Manager to execute the agreement with Kaw Valley Engineering.

Legal Consideration

There are no legal obstacles to proceeding as recommended by City Staff.

Financial Consideration

The total cost to upgrade the waterline on Fort from 20th to 27th Street is estimated to be $697,200, and the cost to replace the 10” sanitary sewer force main along US-183 is $101,000. Both cost estimates include engineering and would be financed out of the Water/Sewer Capital Fund.

At the December 27, 2012 City Commission meeting, $250,000 from Financial Policy Projects Fund was dedicated to pavement rehabilitation on Fort Street from 20th to 27th Street to be done in conjunction with the waterline replacement.

The current request is to authorize $46,904 out of the Water/Sewer Capital Fund to cover engineering design costs as proposed by Kaw Valley Engineering.

Options

The Commission has the following options:
Option 1: Authorize the City Manager to enter the agreement with Kaw Valley Engineering in the amount of $46,904.
Option 2: Provide alternate direction to staff.

Recommendation

City staff recommends authorizing the City Manager to enter the agreement with Kaw Valley Engineering in the amount of $46,904 for engineering services.

Action Requested

Consider authorizing the City Manager to enter the agreement with Kaw Valley Engineering in the amount of $46,904 for engineering services.

Supporting Documentation

Exhibit A – RFP
Exhibit B – Agreement for Engineering Services

City of Hays
Request for Proposals

COH Project 2012-22
Waterline Upgrades

Date of Issue: November 26, 2012 (Revised Dec. 11, 2012)
Pre-proposal Conference (MANDATORY) December 4, 2012 or December 5, 2012
Proposal Due Date December 19, 2012
Tentative City Commission Approval: January 24, 2012

Revision 1- based on comments from Pre-proposal meetings.

Revision 2 – clarification regarding survey. See Exhibit B, Section 3, page 14.

Table of Contents

1. INTRODUCTION 3
2. RULES OF PREPARATION 3
3. INQUIRIES 3
4. SUBMISSION OF PROPOSALS 3
5. NOTIFICATION OF WITHDRAWL OF PROPOSAL 4
6. MINIMUM SPECIFICATIONS/SCOPE OF SERVICES 4
7. CONTRACTUAL OBLIGATIONS 4
8. RIGHT OF THE CITY OF HAYS TO REJECT PROPOSALS 5
9. EVALUATIONS 5
10. NON-LIMITATIONS TO RFP 5
11. PRE-PROPOSAL CONFERENCE 5
12. INTERPRETATIONS AND ADDENDA 5
13. PROJECTED SCHEDULE OF EVENTS 6
14. PROPOSAL RESPONSE FORMAT 6
15. CONFIDENTIALITY OF DOCUMENTS 6
16. LEGAL NOTICE 7

EXHIBIT A (LOCATION MAPS) 8

EXHIBIT B (PROJECT SCOPE) 12

EXHIBIT C (PROPOSAL FORM) 16

1. Introduction

The City of Hays invites your firm to submit a written proposal to provide Engineering Design Services for future water line upgrades. **Exhibit A** contains a location map. The City is asking for engineering design services for the following projects:

A. waterline upgrade (4" to 8") – Fort Street from 13th to 20th Street

B. waterline upgrade (4" to 8") – Fort Street from 20th to 27th Street

C. waterline upgrade (4" to 6") – 26th Street from Fort to Ash

D. waterline upgrade (4" to 8") – Oak Street from 20th to 26th Street

E. waterline replacement (6") –Hickory Street from 27th to 29th Street

F. waterline replacement (6") –Ash Street from 27th to 29th Street

G. waterline upgrade (various to 8") –6th Street from Riley to Vine Street

H. waterline upgrade (4" to 8") –Riley from 6th to 8th Street

I. 8-inch waterline extension -Elm Street from 1st to 4th Street

J. 10-inch Sanitary Sewer Force Main Replacement – US-183 bypass

These water line upgrades are proposed to be constructed over the next 3 or more years as funding becomes available. Most immediately, Project B. – Fort from 20th to 27th Street and Project J, Sanitary Sewer Force Main are scheduled to bid in April 2013 for construction prior to the end of calendar year 2013. Improvements to the pavement on Fort between 20th and 27th Street are being considered in conjunction with the waterline improvements.

Proposed line sizes (replacements and upgrades) listed in this RFP are estimates only and subject to validation with the City's water distribution model to be performed by others. Ultimate line sizes, confirmed by the City's water model will be provided to the successful firm at or before the kick-off meeting.

The City of Hays is considering the use of HDPE pipe for some or all of the listed projects. The successful firm will assist the City in evaluating the pros and cons of utilizing HDPE pipe, and provide details and specifications to be used by the City if HDPE pipe is pursued.

This written Request for Proposal (RFP) states the scope of the City of Hays requirements and specifies the general rules for preparing the proposal.

The proposal should clearly demonstrate how the firm can best satisfy the requirements of the City of Hays. The City of Hays shall reserve the right to enter an agreement with the firm presenting the proposal that is most advantageous to the City of Hays.

2. Rules of Preparation

The submitted proposals must follow the rules and the format established within this RFP. Adherence to these rules will ensure a fair and objective analysis of all proposals. Failure to comply with any portion of this request may result in rejection of a proposal.

3. Inquiries

The Public Works Department of the City of Hays has prepared this RFP and has designated the Assistant Director of Public Works, John Braun, as project manager. Please direct questions or comments concerning either the administrative or technical requirements of this RFP to:

John Braun, Assistant Director of Public Works

City of Hays Public Works Department

1002 Vine Street
Hays, Kansas 67601
(785) 628-7350 office
(785) 628-7352 fax
johnbraun@haysusa.com

To ensure a timely response, questions requiring a response should be faxed or e-mailed to the Project Manager at the specified number or address above.

No inquiries will be accepted after noon on December 14, 2012. If necessary, the City will issue a revision to the RFP by 8:00 am on December 17, 2012.

4. Submission of Proposals

Please prepare and submit original plus two (2) copies of the proposal. Completed proposals should be sealed and clearly marked "RFP for Waterline Upgrades" and be submitted no later than **3:00 P.M. *December 19, 2012*, to the City Clerk, 1507 Main Street, PO Box 490, Hays, KS 67601.**

Proposals received after the above date and time will be considered late and will not be accepted. Any late proposals will be returned unopened to the firm. Responses will be evaluated objectively based on the firm's responses to the RFP.

The City of Hays will not pay costs incurred in the proposal preparation including the costs for printing, demonstration, negotiation process, etc. All costs for the preparation of the proposal shall be borne by the proposing firm.

5. Notification of Withdrawal of Proposal

Proposals may be modified or withdrawn by an authorized representative of the firm or by formal written notice prior to the final due date and time specified for proposal submission. Submitted proposals will become the property of the City of Hays after the proposal submission deadline.

6. Minimum Specifications/Scope of Services

Proposals should address all engineering services necessary to complete the project. Services required include, but may not be limited to the Scope of Services detailed in **Exhibit B**.

List in detail how you propose to provide the services along with the maximum dollar amount to provide such services.

Each proposal shall include a draft Agreement for Engineering Services. The agreement should include but not be limited to: definition of project scope, scope of services to be provided by the consultant, scope of services to be provided by the City, time schedule, and compensation. For the purpose of evaluating proposals, the Consultant shall complete and sign the proposal sheet in **Exhibit C**.

7. Contractual Obligations

The successful firm will be required to enter an Agreement for Engineering Services with the City of Hays in which the firm will undertake certain obligations. These obligations include, but are not limited to, the following:

Inclusion of Proposal - The proposal submitted in response to this RFP will be incorporated as part of the Agreement for Engineering Services.

Indemnification and Insurance - The successful firm(s) shall indemnify and hold the City of Hays and its officers, agents, employees and assigns, harmless from any liability imposed for injury whether arising before or after completion of work hereunder, or in any manner directly or indirectly caused, occasioned or contributed to, or claimed to be caused, occasioned or contributed to, in whole or in part, by reason of any act or omission, including strict liability or negligence of firm, or of anyone acting under firm's direction or control or on its behalf, in connection with or incident to, or arising out of the performance of this contract. Successful firm shall maintain the following insurance requirements during the time of performance of these services and contract period. An insurance certificate must be on file with the City Clerk's office within four weeks of the signing of the contract by both parties.

a. General Liability Insurance, with a combined single limit of $1,000,000 for each occurrence and $1,000,000 in the aggregate

b. Automobile Liability Insurance, with a combined single limit of $1,000,000 for each person and $1,000,000 for each accident

c. Worker's Compensation insurance in accordance with statutory requirements and Employer's Liability Insurance, with a limit of $500,000 for each occurrence

d. Professional Liability Insurance, with a limit of $1,000,000 annual aggregate

The successful firm shall require all of its subcontractors to maintain general aggregate insurance with limits of not less than $1,000,000 per accident.

Costs - All costs are to be stated in exact amounts. All costs must be detailed specifically in the cost summary section of the proposal; no additional charges (e.g. for sales tax, container packing, installation, training, out-of-pocket expenses, etc.) will be allowed unless so specified in the proposal.

Selection - The final award is subject to the approval of the Hays City Commission.

8. Right of the City of Hays to Reject Proposals

The City of Hays reserves the right to reject any and all proposals or any part of any proposals, to waive minor defects or technicalities, or to solicit new proposals on the same project or on a modified project that may include portions of the originally proposed project as the City of Hays may deem necessary in its best interest. The City also reserves the right to negotiate with any firm, all or part of any proposal that is in the best interest of the City.

9. Evaluations

The committee evaluating the proposals will base the evaluation on the proposal that will best serve the City of Hays at the lowest possible cost.

10. Non-limitations to RFP

The format of the RFP must be followed and all requested information must be submitted as indicated; however, the City of Hays is receptive to any additional suggestions pertaining to services development, additional related capabilities, and any alternative methods for providing related services. Any exceptions to the RFP terms and conditions must be included in writing in the proposal.

11. Pre-proposal Conference

The City will hold pre-proposal conferences on ***December 4, 2012 at 1:00 p.m. and again on December 5, 2012 at 1:00 p.m.*** at the City of Hays Commission Chambers located at 1507 Main Street, Hays, Kansas. **Attendance is mandatory. Proposals will not be accepted from firms not represented at one of the scheduled pre-proposal conferences.**

Those firms in attendance and eligible to submit proposals are: Kaw Valley Engg, Earles Engg, Schwab Eaton, Benesch, CFS Engineers, Olsson Assoc, PEC, Kirkham Michael, and Wilson Company.

12. Interpretations and addenda

No interpretation made to any respondent as to the meaning of the RFP shall be binding on the City of Hays unless repeated in writing and distributed as an addendum by the City of Hays. Interpretations and/or clarification shall be requested in writing from the contact person listed in Section 3.

13. Projected Schedule of Events

Release of RFP Document	***11/26/2012***
Pre-proposal Conference (Mandatory)	***12/4/2012 or 12/5/2012***
Last day to submit proposals	***12/19/2012***
Staff recommendation to City Commission	***1/24/2013***
Tentative Notice to Proceed with Design	***1/28/2013***
Target Final Plans and Bid Documents to City for review	***4/1/2013***
Target Bid Opening for First Phase of Construction	***5/8/2013***

Clarrification: The City of Hays will allow for extension of deadlines for deliverables due to inclement weather restricting survey or other field work. The target date of 4/1/2013 for final plans applies to projects planned to bid for construction in 2013. The final delivery date for all other deliverables is 5/31/2013.

14. Proposal Response Format

In order to facilitate the analysis of responses to this RFP, firms are required to prepare their proposal in accordance with the instructions outlined in section 4.

Proposals should be prepared as simply as possible and provide a straightforward, concise description of the firm's capabilities to satisfy the requirements of the RFP. Expensive bindings, promotional material, etc., are not necessary or desired.

The proposal should be organized into the following major parts:

Executive Summary- A brief and non-technical narrative describing the proposal.

Company Background - Information regarding the firm's stability, length of time in business, past history, future plans, company size, organization.

Responses to Functional Requirements - Responses to the requirements listed in this RFP must be provided. Notes of explanation or clarification must be included with specific reference to the item in question.

Client References - Provide at least three client references that are similar in nature, size or complexity to that described in this RFP.

Contract Terms and Conditions - This section is to contain the firm's sample agreements for Engineering Services. This section is intended to form the basis for the development of an Engineering Service Agreement to be awarded as a result of the RFP.

Fee Quotations – Fees for services to be provided must be itemized and included in this section.

15. Confidentiality of Documents

All responses to the RFP submitted by firms shall be deemed public documents at the time opened by City of Hays. The RFP is not intended to elicit proprietary information from the firm. If proprietary information is submitted as part of the proposal, such information is to be labeled proprietary and be accompanied with a request that the information is to be returned by the City of Hays to the submitter. Any proposal that is submitted with a blanket statement or limitation that would prohibit or limit such public inspection shall be considered non-responsive and shall be rejected.

16. Legal Notice

Required Contractual Provisions

Unless specifically waived in its request for bids or request for proposals, or included as alternate provisions to be bid or proposed, the City of Hays, Kansas, shall not award contracts nor let bids to individuals or entities unless the vendor, contractor or individual agrees to indemnify and hold the City of Hays, Kansas, harmless from any and all losses, damages or expenses of any kind arising out of any and all claims, demands, or causes of action initiated against the City of Hays, Kansas, by competing entities bidding on the project which is the subject of the contract.

Prohibited Contractual Provisions.

Unless specifically waived in its request for bids or request for proposals, or included as alternate provisions to be bid or proposed, the City of Hays, Kansas, shall not award contracts nor let bids to individuals or entities which attempt to do any of the following or include any of the following in the proposed contract:

1) Any diminishment of the common law or statutory standard of care, limitation of liability, or other attempt to reduce responsibility for mistake, error, or negligence of any type on the part of the vendor, contractor or individual.

2) Attempts to limit liability for breach of contract or negligent performance to the amount of the payment to the contractor by the city.

3) Attempt to claim ownership of intellectual property created during the performance of the contract with the city.

4) Arbitration agreements.

5) Provision for damages for breach by owner contrary to common law or statute including, but not limited to, any attempt to provide for attorney fees as part of recoverable damages.

6) Attempt to designate any forum or venue for resolution of disputes other than Ellis County District Court, Kansas.

7) Any other attempted reallocation of risk contrary to common law or statute.

8) Any attempt to eliminate the city's ability to collect consequential, exemplary or punitive damages, or any other measure of damages permitted by law, in an action against the vendor, contractor or individual for breach of contract.

Prohibited Acts.

Unless specifically permitted to do so by the request for bids or request for proposals, no vendor, contractor or individual submitting proposals or bids to the City of Hays, Kansas, shall attempt to insert any of the contractual provisions prohibited by Section 2-577 into any contracts or agreements proposed to the City of Hays, Kansas.

Penalty for Violation of Article.

Any vendor, contractor or individual who, without the express permission of the City Manager of the City of Hays, Kansas, proposes to enter into or enters into a contract with the City of Hays, Kansas, which omits any of the contract provisions required by Section 2-576 of this article or contains any of the contract provisions barred by Section 2-577 of this article, may be found by the City Manager of the City of Hays, Kansas, to be in violation of this article and vendors, contractors or individuals found to be in violation of this article may be barred from bidding on future contracts with the City of Hays, Kansas.

Conflict Between Article and Contract

To the extent any contract entered into by or on behalf of the City of Hays, Kansas omits any of the contract provisions required by Section 2-576 of this article, the article will prevail and the required contract provisions will be read into the contract. To the extent any contract entered into by or on behalf of the City of Hays, Kansas contains any of the contract provisions barred by Section 2-577 of this article, the article will prevail and the offending provisions shall be null and void and shall be unenforceable as to the City of Hays, Kansas.

The City of Hays expects a professional job, done commensurate with the standards and practices of the profession/or business.

All persons awarded and/or entering into purchase orders with the City of Hays shall be subject to and required to comply with all applicable City, State and Federal provisions.

The City of Hays has an affirmative action program. Any firm will be required to include the following statement in any contract with the City of Hays:

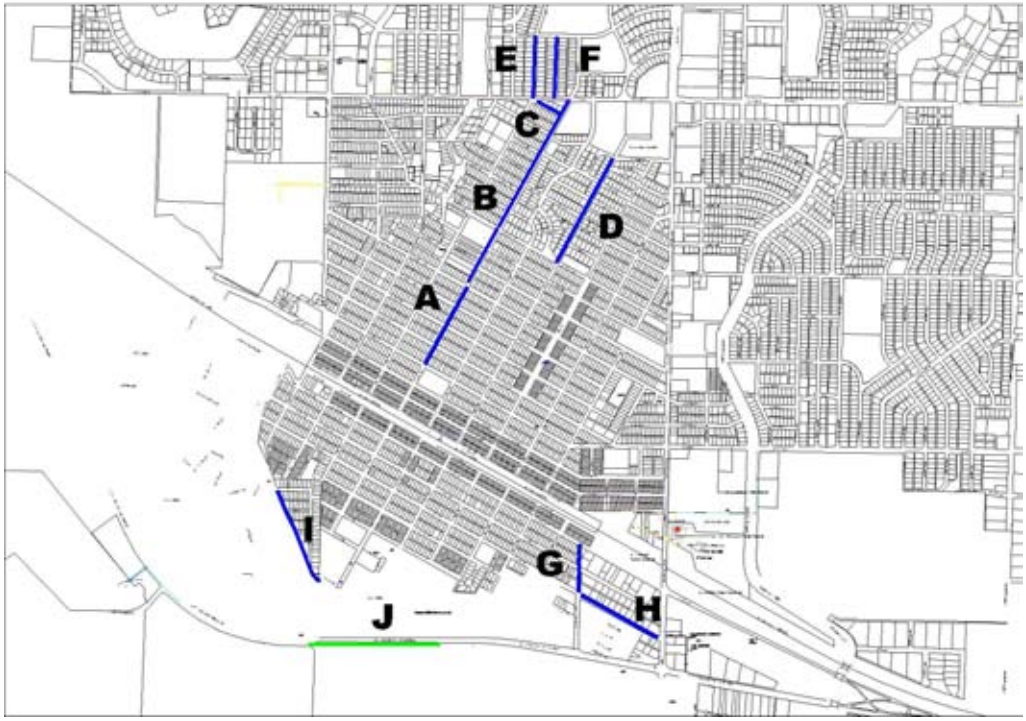
"Contractor shall not discriminate in the employment of persons engaged in the performance of this Agreement on account of race, color, national origin, ancestry, religion, sec, marital status, physical handicap, or medical condition, in violation of any federal or state law. Contractor shall comply with all requirements of the City of Hays pertaining to affirmative action with regard to employment while this Agreement is in effect."

The City will reserve the right to complete any aspect of this project with City Personnel preceding, during or after the study is complete. Those items would be deleted from the Consultants scope of services. At any time, the City may elect to abandon the project. At that time, the consultant would be compensated for all items previously completed.

Rights to intellectual property developed, utilized, or modified in the performance of services shall remain the property of the City of Hays.

Exhibit A

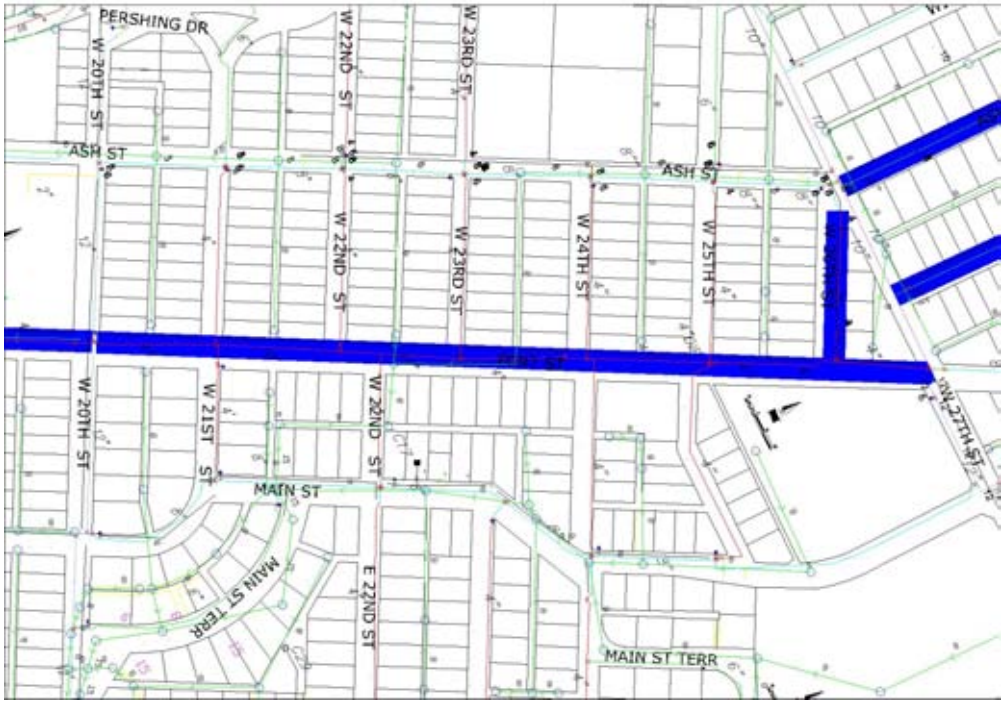
2013 Waterline Projects
All Locations



Waterline Project A
Fort Street from 13th to 20th Street

Waterline Projects B & C

Fort Street from 20th to 27th & 26th from Ash to Fort



Waterline Project D

Oak Street from 20th to 26th Street

Waterline Projects E & F

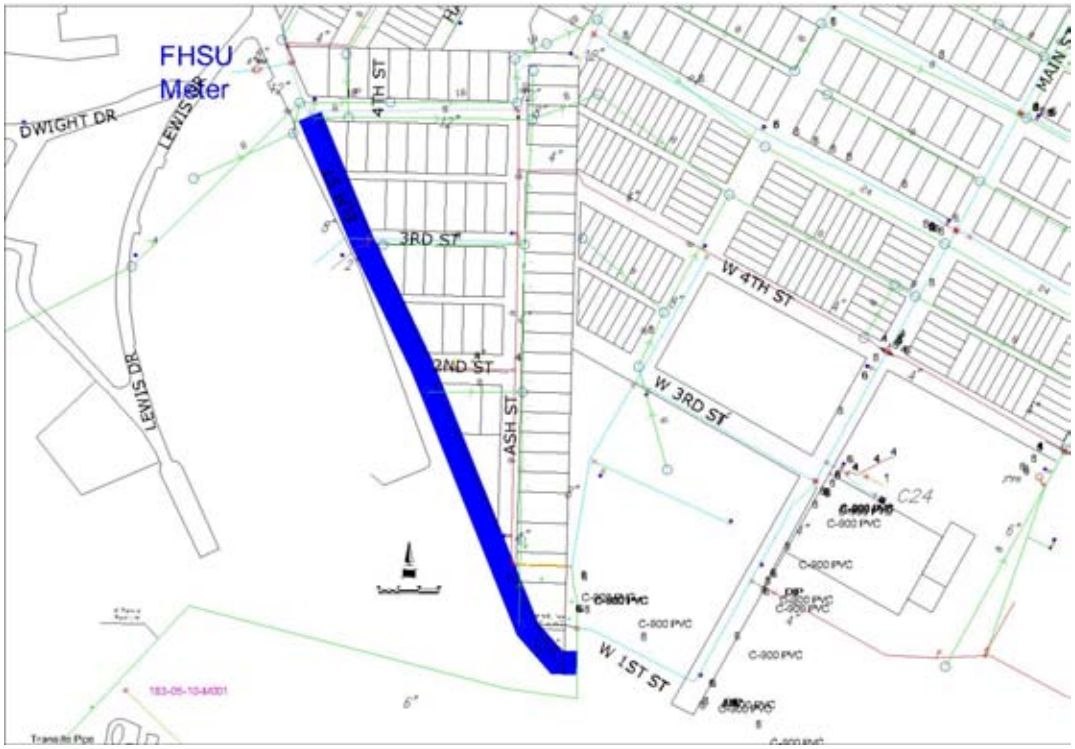
Ash and Hickory from 27th to 29th

Waterline Projects G & H

6th from Riley to Vine & Riley From 6th to 8th

Waterline Project I

Elm Street from 1st to 4th Street



Sewer Force Main Project J

2000' along US-183 By-pass

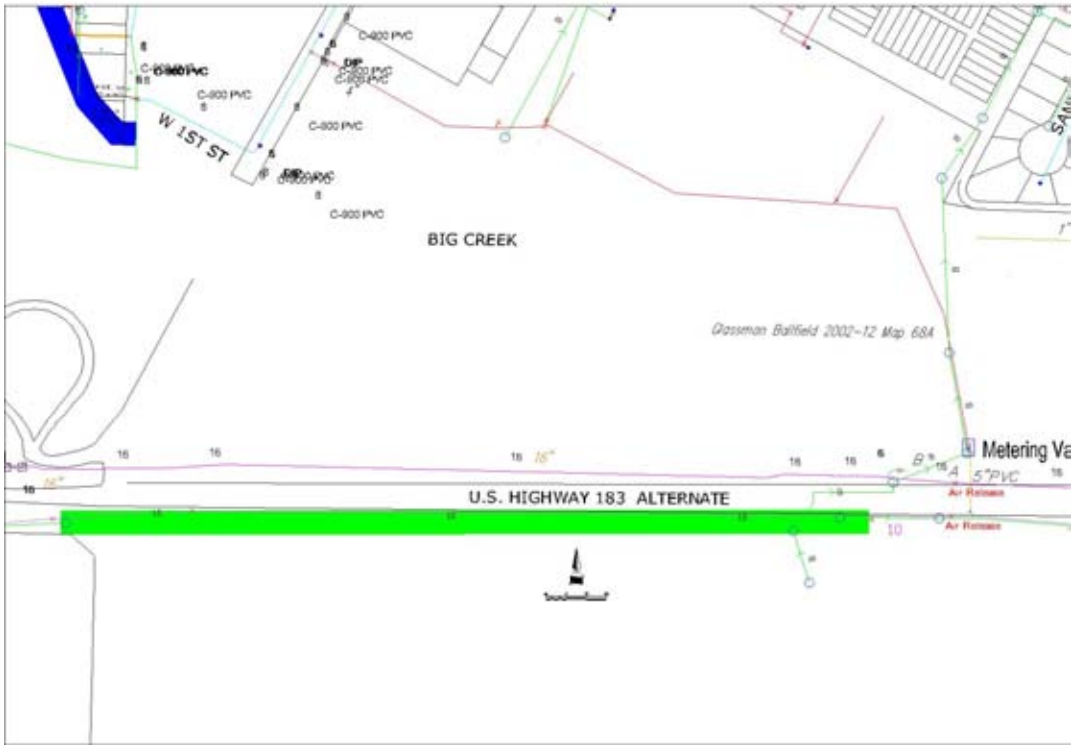


Exhibit B

PROJECT SCOPE

The selected firm shall adhere to the requirements and expectations detailed in the City of Hays Policy "Guidelines and Expectations Policy to Develop Engineering Scope of Services for New Development", revised 11/29/06, as it applies to this project. In case of conflict between the RFP and the Policy, the RFP shall take precedence. The requirements of the selected firm shall include, but not necessarily be limited to:

1. Provide weekly reports to city staff of progress throughout the design stage.
2. Meet with City Staff to review project scope and design strategy
    a. Coordinate with Hays Fire Department Staff for Fire Hydrant Locations.
    b. Coordinate with City Utilities Maintenance Staff for location of existing utilities and proposed alignment of new pipeline.
    c. Coordination with Service Division Superintendent regarding curb and pavement to be replaced.
3. All necessary field survey to complete accurate design plans. Clarification: Right of Way to Right of Way topo survey along the alignment.

    Further Clarification:

    - Current GIS information along with checking block and property corners found will be sufficient to establish right of way. No need to research plats, deeds, etc.
    - Right of Way does not need to be established for each block. A survey baseline down the centerline of the street or back of curb will suffice.
    - Survey needs to be done in state plane coordinates. The City does not have control points or bench marks.
4. Engineering design based on:
    a. City of Hays design standards
    b. Economy of construction
    c. Minimum interruption of water service for customers
    d. Minimum disruption to neighborhoods and traffic
    e. Maximum Fire Protection after completion of project – regarding location/spacing of fire hydrants.
    f. Maximum Fire Protection availability during construction
5. Complete plans, specifications, and bid documents utilizing the City's existing standard specifications and contract documents.

a. The City would like to consider the use of HDPE on this and future waterline projects. In the past, the City has only used Ductile Iron or C-900 PVC. The selected firm will be expected to assist the City in developing or utilizing existing manufacturer specifications for material and installation to be included in the bid documents for this project as well as for use on future projects the City may let utilizing HDPE pipe.

6. Identify any utility relocates necessary for construction.
7. Identify any requirements for additional right of way or easement necessary. Additional services related to property or easement acquisition beyond those specifically identified in the "Project Description" would be negotiated under separate contract.
8. Complete application and all necessary requirements for KDHE permit approval.
9. Prepare Engineer's Estimates for Construction.
10. Provide both reproducible adobe (.pdf) files and original editable digital source files (MS Word and AutoCAD) for all bid documents to allow the City to produce biddable documents and solicit bids in various phases in future years as construction funding becomes available.

Bid Solicitation, Award of Bid, Construction Management and Inspection will be performed by City Staff.

Project Descriptions

A. Waterline upgrade-Fort Street, 13th to 20th Street

a. Abandon in place and remove where feasible the existing 4" waterline and appurtenances.

b. Replace with new 8" waterline and appurtenances. Connect to existing distribution lines and reestablish all service connections with new service lines.

c. Consider installing waterline in park area between curb and sidewalk where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement. Brick Streets are to be restored. Directional drilling may be appropriate.

d. Fort Street is a one-way street southbound and shall remain open to traffic during construction, but may be closed for limited periods of time to allow for street crossings, etc. Local access to driveways should be considered where and when possible.

B. Water line upgrade- Fort Street, 20th to 27th Street

a. Abandon in place and remove where feasible the existing 4" waterline and appurtenance.

b. Replace with new 8" waterline and appurtenances. Connect to existing distribution lines and reestablish all service connections with new service lines.

c. Consider installing waterline in park area between curb and sidewalk where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

d. Fort Street is a one-way street southbound and shall remain open to traffic during construction, but may be closed for limited periods of time to allow for street crossings, etc. Local access to driveways should be considered where and when possible.

C. Water line upgrade- 26th Street from Fort to Ash

a. Abandon in place and remove where feasible the existing 4" waterline and appurtenance.

b. Replace with new 6" waterline and appurtenances. Connect to existing distribution lines and reestablish all service connections with new service lines.

c. Consider installing waterline in park area between curb and sidewalk where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

d. 26th Street may be closed to through traffic during construction, but access to local residences should maintained where practical.

D. Waterline Upgrade – Oak Street, 20th to 26th Street

a. Abandon in place and remove where feasible the existing 4" waterline and appurtenances.

b. Install new 8" waterline and appurtenances.

c. Consider installing waterline in park area between curb and sidewalk where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

d. Oak Street may be closed in 2-3 block sections during construction, but access to local residences should maintained where practical.

E. Waterline Improvement-Hickory Street, 27th to 29th Street

a. Abandon in place and remove where feasible the existing 6" waterline and appurtenances.

b. Install new 6" waterline and appurtenances. Connect to existing distribution lines and reestablish all service connections.

c. Consider installing waterline in right of way behind the curb where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

d. Hickory Street may be closed to through traffic during construction, but access to local residences should maintained where practical.

F. Waterline Improvement-Ash Street, 27th to 29th Street

a. Abandon in place and remove where feasible the existing 6" waterline and appurtenances.

b. Install new 6" waterline and appurtenances. Connect to existing distribution lines and reestablish all service connections.

c. Consider installing waterline in right of way behind the curb where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

d. Ash Street may be closed to through traffic during construction, but access to local residences should maintained where practical.

G. Waterline Improvement – 6th Street, Riley to Vine Street

a. Abandon in place and remove where feasible the existing waterline and appurtenances.

b. Install new 8" waterline and appurtenances.

c. Consider installing waterline in right of way behind curb where allowable. Existing pavement and curb in poor condition adjacent to waterline work should be considered for replacement.

d. 6th Street shall remain open to traffic during construction, but may be closed for limited periods of time if necessary.

H. Waterline Improvement – Riley, from 6th to 8th Street

a. Abandon in place and remove where feasible the existing 4" waterline and appurtenances.

b. Install new 8" waterline and appurtenances.

c. Consider installing waterline in right of way behind curb where allowable. Existing pavement and curb in poor condition adjacent to waterline work should be considered for replacement.

d. Riley Street shall remain open to traffic during construction, but may be closed for limited periods of time if necessary.

I. Water line looping-Elm Street, 1st to 4th Street

a. Install new 8" waterline and appurtenances along Elm Street. Connect to existing water lines at 1st, 2nd, 3rd, and 4th Streets.

b. Consider installing waterline in right of way behind the curb where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

c. Elm Street shall remain open to traffic during construction, but may be closed for limited periods of time if necessary.

J. 10-inch Sanitary Sewer Force Main Replacement, US-183 bypass

a. Rehab/Replace approximately 2000 LF of existing 10-inch ductile iron sanitary sewer force main from the west side of 240th Avenue, east to approximately Big Creek. Install air release valves and other appurtenances as required.

b. Alternative construction methods (pipe bursting, lining, trenchless technologies) shall be considered for this project. Options for maintaining sanitary sewer service throughout construction must be considered.

c. US-183 By-pass shall remain open to traffic during construction of this project.

Addition notes related to all projects:

1. All water mains shall be Ductile Iron, C-900 PVC, or HDPE based on an evaluation process involving the engineer.

2. Replace, relocate, or add fire hydrants to provide improved fire protection capability in the area. City staff will evaluate existing fire hydrants for the feasibility of reuse.

3. Add gate valves as necessary to provide the isolation necessary to complete construction and allow for efficient future maintenance. Consider and balance the costs versus convenience.

4. ~~Provide new poly service lines to existing meter locations and evaluate the existing meter assemblies for replacement.~~ All existing service taps and meter assemblies will be replaced with the City's standard

pre-plumbed meter can assemblies and new poly service lines to the right of way line.

5. Provide for reconnection to all adjacent water lines.
6. Replace pavement, curb and sidewalk necessary for waterline work, and consider the replacement of failed pavement, curb and sidewalk in the vicinity of waterline work.
7. Minimize the necessary removal of healthy trees. Trees whose root structure is damaging to pavement may be considered for removal if no alternative exists.

Deliverables to be provided by the Consultant to the City at no extra cost:

1. Attend on-site kick-off meeting to gather preliminary data and review the project scope.
2. Assist the City in evaluating the use of HDPE pipe in the City's water and sewer systems and the impact that would have on inventory, operations, construction cost, future maintenance, etc. Develop standard details and specification or adapt existing manufacturer specifications for materials and installation on this project and future projects.
3. Preliminary Design Plans and Cost Estimates – two (2) copies full size plans for City staff review. Should include any potential utility conflict or additional right of way/easement required. Attend on-site preliminary design review meeting.
4. Utility Conflict Plans – Provide utility conflict plans for the use of the city in coordinating with franchised utilities for utility clearance.
5. Application and other required submittals to successfully obtain KDHE permits for construction of improvements.
6. Final Draft Design Plans, updated construction cost estimate, and Contract Documents – two (2) copies full size plans for City Staff review. Attend on-site final design plan review meeting. Design Plans shall include Plan and Profile Sheets.
7. Final Plans, Engineers Estimate of Construction Cost, and Bid Documents – two (2) paper copies to City, and reproducible digital files to allow City to provide bid documents to potential bidders.
8. Electronic File of the contract documents and specs – in both MS Word and Adobe PDF format to City
9. Electronic File of the Plan Set – in both AutoCAD and Adobe PDF format to City.
10. Digital files of any legal descriptions, location maps, drawings, Bid Tabulation Forms listing bid items and quantities (in MS Excel format) or any other submittals listed above when requested by the City.

The City will furnish, as required for the project and not at the expense of the Consultant, the following:

1. Water, Sanitary Sewer, and Storm Sewer utility information including size and locations in vicinity of project.
2. Access to previous engineering studies, as-built plans, and other information available to the City to assist the consultant in preparing the design plans.
3. Ortho Imagery and any other GIS data currently maintained by the City.

Exhibit C

PROPOSAL

COH PROJECT NO. 2012-22

Waterline Upgrades

1. The undersigned declares he/she has examined the Request for Proposals and all attached documents, has examined the site of work, and has determined for himself/herself the conditions affecting the work. The Consultant hereby proposes to do the work called for in the RFP and attached documents at the following not-to-exceed prices:

2. The undersigned, in compliance with your Request for Proposals (RFP), dated November 26, 2012, hereby proposes to do the work called for in said RFP at the following price:

Total Dollars ($_____)

~~**Consultant shall provide two copies of a detailed breakout of the cost assigned to each of the various projects associated with this proposal.**~~

3. The Undersigned further agrees that if the proposal is accepted by the City, he/she will commence work within the timeframe set out in Section 13 - Projected Schedule of Events and shall complete the work as specified within the RFP and attached Exhibits; and that he/she shall pay liquidated damages in the amount of Fifty Dollars ($50) for each calendar day, that the work remains uncompleted after expiration of Contract time.

Required Documents Attached	(Yes / No)
Executive Summary-	_____
Company Background -	_____
~~*Responses to Functional Requirements*~~ ~~(if any)~~ Project Approach	_____
Client References -	_____
Contract Terms and Conditions – **(Draft Engineering Service Agreement)**	_____
~~*Detailed Cost Breakout -*~~	~~_____~~
Proof of Insurance	_____
Acknowledgement of Addenda (If Any # ____, # ____, # ____)	_____

List of exceptions to the scope of services:

_____
_____
_____
_____
_____
_____
_____
_____

Dated this _____day of _____, 2012.

Signature of Proposer

_____

By

_____

Title

_____

Firm

Agreement for Engineering Services

2012 Waterline Upgrades
COH Project 2012-22

This "Agreement", made this ____ , day of _____ , 2013, by and between the City of Hays, Kansas (hereinafter "Owner"), and Kaw Valley Engineering, Inc. (hereinafter "Consultant"), for the performance of professional services necessary to complete pavement replacement design for the proposed work on 2012 Waterline Upgrades, COH Project 2012-22 (hereinafter "Project");

WHEREAS, the Owner is responsible for furnishing to the Consultant copies of previous engineering studies and as-built plans related to the Project, available information regarding the size and location of utilities, existing right-of-way and easement data, and the City of Hays' latest digital orthographic imagery in electronic format within the Project's vicinity;

WITNESSETH that for and in consideration of the mutual covenants and promises between the parties hereto, it is hereby agreed that the Consultant shall provide the following services to the Owner as set forth below;

PROJECT SCOPE

The final constructed product intended by this Project is as outlined in "Exhibit B" of the City of Hays' *Request for Proposal* issued on November 26, 2012 with revised versions on December 6, 2012 and December 12, 2012, and included as a part of this Agreement as Attachment I.

SCOPE OF SERVICES

Upon execution of this Agreement, the Consultant shall provide the services and finished deliverable product as outlined in "Exhibit B" of the City of Hays' *Request for Proposal* issued on November 26, 2012 with revised version on December 6, 2012 and December 12, and included as a part of this Agreement as Attachment I. Additionally, the Consultant shall provide to the Owner upon delivery of Final Plans a compact disc containing electronic files of all documents, reports, estimates, photos, renderings, CAD drawings and any other beneficial electronic data produced as a result of this Agreement.

COMPENSATION

For the purposes of this Agreement, the maximum not to exceed amount due to the Consultant upon successful completion of the Scope of Services shall be **$46,904.00**. The basis for incremental payments shall be per the itemized hourly rates outlined in the "Fee Breakdown" included as Attachment II. The Consultant shall not be awarded payments totaling more than 60% of the contract maximum prior to submitting Preliminary Plans, and shall not be awarded payments totaling more than 95% of the contract maximum prior to the submittal of Final Plans & Bid Documents. The Consultant shall invoice the Owner for completed services and encountered direct expenses on a monthly basis. An invoice shall be drafted by the Consultant at the end of each month and submitted to the Owner, with the amount of said invoice being due upon receipt by the Owner and considered past due if not paid within thirty (30) days of the invoice date. In the event that services are requested by the Owner which are considered by both parties to be above and beyond the Scope of Services, those additional services shall be compensated in accordance with the hourly rates indicated within the "Fee Breakdown" included as Attachment II.

TIME SCHEDULE

The Consultant shall begin work on the date of execution of this Agreement and shall complete all work as outlined in the Scope of Services for Project B & Project J by April 1, 2013, with all work on the remaining project areas to be completed by May 31, 2013. Services to be provided under this Agreement do not allow for delays due to abnormal weather, inefficient or non-responsive review by the Owner and/or review agencies, or unforeseen circumstances not under the direct control of the Consultant.

DISPUTE RESOLUTION

All claims, disputes, and other matters of controversy between Owner and Consultant arising out of, or in any way related to, this Agreement or the services performed by Consultant will be submitted to non-binding mediation as a condition precedent to litigation. If a dispute arises from matters related to the services provided under this Agreement and that dispute requires litigation, then the claim shall be brought and tried in a judicial jurisdiction located within Ellis County, Kansas.

TERMINATION BY CAUSE

This Agreement may be terminated by the Owner upon ten (10) days written notice in the event of substantial failure to perform in accordance with the terms set herein, or due to desire by the Owner to abandon the Project. If this Agreement is so terminated, the Consultant shall be paid for any and all work performed through the effective date of termination as per the compensation arrangement set forth in this Agreement.

INDEMNIFICATION

The Consultant shall indemnify and hold the City of Hays and its officers, agents, employees and assigns, harmless from any liability imposed for injury whether arising before or after completion of work hereunder, or in any manner directly or indirectly caused, occasioned or contributed to, or claimed to be caused, occasioned or contributed to, in whole or in part, by reason of any act or omission, including strict liability or negligence of firm, or of anyone acting under firm's direction or control or on its behalf, in connection with or incident to, or arising out of the performance of this Agreement.

CONTRACT PROVISIONS

A. Records and Audits

The Consultant shall maintain accounts and records, including personnel, property, and financial records, adequate to identify and account for all costs pertaining to the Agreement, and such records as may be deemed necessary by the Owner to assure the property accounting for all project funds, both Federal and non-Federal shares. These records will be made available for audit purposes to the Owner or any authorized representative, and will be retained for three years after the expiration of this Agreement, unless permission to destroy them is granted by the Owner. It is understood that all pertinent records shall be accessible to the Kansas Department of Transportation and the Federal Highway Administration.

B. Consultant Compliance with Local, State, and Federal Laws

1. Title VI of the Civil Rights Act of 1964, as amended, no person shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

2. Section 109 of the Housing and Community Development Act of 1974, as amended, and the regulations issued pursuant thereto (24 CFR Section 570.601). No person in the United States shall, on the grounds of race, color, national origin, sex, age or disability be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity funded in whole or in part with Federal Funds.

3. Section 504 of the Rehabilitation Act of 1973 (Pub. L. 83-112) as amended and implementing regulations when published for effect. No otherwise qualified individual shall, solely by reasons of his or her disability, be excluded from participation in (including employment), denied program benefits of or be subjected to discrimination under any program or activity receiving Federal funds.

4. Age Discrimination Act of 1975, as amended, (Pub. L. 94-135), and implementing regulations when published or effect. No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits or, or be subjected to discrimination under any program or activity receiving Federal financial assistance.

5. Fair Housing Amendments Act of 1988, which prohibits discrimination in housing on the basis of race, color, national origin, religion, sex, disability or familial status (including children under the age of 18 living with parents or legal custodians, pregnant women and people securing custody of children under 18).

6. Executive Order 11063, as amended by Executive Order 12259 and implementing regulations as 24 CFR Part 107. No person shall, on the basis of race, color, religion, or national origin, be discriminated against in housing (and related facilities) provided with Federal assistance or lending practices with respect to residential property when such practices are connected with loans issued or guaranteed by the Federal Government.

7. Kansas Act Against Discrimination of 1992. It is declared to be the policy of the State of Kansas to eliminate and prevent the practice or policy of discrimination against individuals in employment relations, in relation to free and public accommodations or in housing by reason of race, religion, color, sex, physical disability, national origin or ancestry.

8. Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 170Iu. Provides that to the greatest extent feasible, opportunities for training and employment shall be given to lower-income persons residing within the project area and the non-metropolitan county in which the project is located and that contracts in connection with the project, be awarded to eligible business concerns located or owned in substantial part, by residents of the project area.

9. Executive Order 11246, as amended by Executive Orders 11375 and 12086 and implementing regulations issued at 41 CFR Chapter 60. A contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex or national origin.

10. Section 912 of the Cranston-Gonzales National Affordable Housing Act of 1990, as amended Section 109(a) of the HCD Act to prohibit discrimination on the basis of religion.

11. Section 503 of the Rehabilitation Act of 1973, as amended, provides for the nondiscrimination in contractor employment.

12. The Consultant will also concede to provide access to project records and will agree to maintain said records for a period of at least three (3) years beyond project completion and shall also follow copyright regulations where appropriate.

13. The Consultant shall not discriminate in the employment of persons engaged in the performance of this Agreement on account of race, color, national origin, ancestry, religion, sex, marital status, physical handicap, or medical condition, in violation of any federal or state law. Contractor shall comply with all requirements of the City of Hays pertaining to affirmative action with regard to employment while this Agreement is in effect.

14. The Consultant will, in all solicitation or advertisements for employees placed by or on behalf of the Consultant, state all qualified applicants will receive consideration for employment without regard to race, creed, color, sex, or national origin.

C. Interest of Members of the Owner

No members of the governing body of the Owner and no other officer, employee, or agent of the Owner who exercises any functions or responsibilities in connection with the planning and carrying out of the program, shall have any personal financial interest, direct or indirect, in this Agreement; and the Consultant shall take appropriate steps to insure compliance.

D. Interest of the Consultant and Employees

The Consultant covenants that it presently has no interest and shall not acquire interest, direct or indirect, in the study area or any parcels therein or any other interest which would conflict in any manner or degree with the performance of its services thereunder. The Consultant further covenants that in the performance of the Agreement, no person having any such interest shall be employed.

IN WITNESS WHEREOF, the Owner and the Consultant have executed this Agreement as of the date first above written.

Consultant:	**Owner:**
KAW VALLEY ENGINEERING, INC.	CITY OF HAYS, KANSAS
By: _____	By: _____
Title: President	Title: City Manager
Date: 12-28-12	Date: _____

Attachment I

See "Exhibit B" of the attached *Request for Proposal* issued on November 26, 2012, with revised version on December 6, 2012 and December 12, by the City of Hays for the Project's Scope of Services:

Exhibit B

PROJECT SCOPE

The selected firm shall adhere to the requirements and expectations detailed in the City of Hays Policy "Guidelines and Expectations Policy to Develop Engineering Scope of Services for New Development", revised 11/29/06, as it applies to this project. In case of conflict between the RFP and the Policy, the RFP shall take precedence. The requirements of the selected firm shall include, but not necessarily be limited to:

1. Provide weekly reports to city staff of progress throughout the design stage.
2. Meet with City Staff to review project scope and design strategy
    a. Coordinate with Hays Fire Department Staff for Fire Hydrant Locations.
    b. Coordinate with City Utilities Maintenance Staff for location of existing utilities and proposed alignment of new pipeline.
    c. Coordination with Service Division Superintendent regarding curb and pavement to be replaced.
3. All necessary field survey to complete accurate design plans. Clarification: Right of Way to Right of Way topo survey along the alignment.

    Further Clarification:

    - Current GIS information along with checking block and property corners found will be sufficient to establish right of way. No need to research plats, deeds, etc.
    - Right of Way does not need to be established for each block. A survey baseline down the centerline of the street or back of curb will suffice.
    - Survey needs to be done in state plane coordinates. The City does not have control points or bench marks.
4. Engineering design based on:
    a. City of Hays design standards
    b. Economy of construction
    c. Minimum interruption of water service for customers
    d. Minimum disruption to neighborhoods and traffic
    e. Maximum Fire Protection after completion of project – regarding location/spacing of fire hydrants.
    f. Maximum Fire Protection availability during construction
5. Complete plans, specifications, and bid documents utilizing the City's existing standard specifications and contract documents.

a. The City would like to consider the use of HDPE on this and future waterline projects. In the past, the City has only used Ductile Iron or C-900 PVC. The selected firm will be expected to assist the City in developing or utilizing existing manufacturer specifications for material and installation to be included in the bid documents for this project as well as for use on future projects the City may let utilizing HDPE pipe.

6. Identify any utility relocates necessary for construction.
7. Identify any requirements for additional right of way or easement necessary. Additional services related to property or easement acquisition beyond those specifically identified in the "Project Description" would be negotiated under separate contract.
8. Complete application and all necessary requirements for KDHE permit approval.
9. Prepare Engineer's Estimates for Construction.
10. Provide both reproducible adobe (.pdf) files and original editable digital source files (MS Word and AutoCAD) for all bid documents to allow the City to produce biddable documents and solicit bids in various phases in future years as construction funding becomes available.

Bid Solicitation, Award of Bid, Construction Management and Inspection will be performed by City Staff.

Project Descriptions

A. Waterline upgrade-Fort Street, 13th to 20th Street

a. Abandon in place and remove where feasible the existing 4" waterline and appurtenances.

b. Replace with new 8" waterline and appurtenances. Connect to existing distribution lines and reestablish all service connections with new service lines.

c. Consider installing waterline in park area between curb and sidewalk where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement. Brick Streets are to be restored. Directional drilling may be appropriate.

d. Fort Street is a one-way street southbound and shall remain open to traffic during construction, but may be closed for limited periods of time to allow for street crossings, etc. Local access to driveways should be considered where and when possible.

B. Water line upgrade- Fort Street, 20th to 27th Street

a. Abandon in place and remove where feasible the existing 4" waterline and appurtenance.

b. Replace with new 8" waterline and appurtenances. Connect to existing distribution lines and reestablish all service connections with new service lines.

c. Consider installing waterline in park area between curb and sidewalk where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

d. Fort Street is a one-way street southbound and shall remain open to traffic during construction, but may be closed for limited periods of time to allow for street crossings, etc. Local access to driveways should be considered where and when possible.

C. Water line upgrade- 26th Street from Fort to Ash

a. Abandon in place and remove where feasible the existing 4" waterline and appurtenance.

b. Replace with new 6" waterline and appurtenances. Connect to existing distribution lines and reestablish all service connections with new service lines.

c. Consider installing waterline in park area between curb and sidewalk where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

d. 26th Street may be closed to through traffic during construction, but access to local residences should maintained where practical.

D. Waterline Upgrade – Oak Street, 20th to 26th Street

a. Abandon in place and remove where feasible the existing 4" waterline and appurtenances.

b. Install new 8" waterline and appurtenances.

c. Consider installing waterline in park area between curb and sidewalk where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

d. Oak Street may be closed in 2-3 block sections during construction, but access to local residences should maintained where practical.

E. Waterline Improvement-Hickory Street, 27th to 29th Street

a. Abandon in place and remove where feasible the existing 6" waterline and appurtenances.

b. Install new 6" waterline and appurtenances. Connect to existing distribution lines and reestablish all service connections.

c. Consider installing waterline in right of way behind the curb where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

d. Hickory Street may be closed to through traffic during construction, but access to local residences should maintained where practical.

F. Waterline Improvement-Ash Street, 27th to 29th Street

a. Abandon in place and remove where feasible the existing 6" waterline and appurtenances.

b. Install new 6" waterline and appurtenances. Connect to existing distribution lines and reestablish all service connections.

c. Consider installing waterline in right of way behind the curb where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

d. Ash Street may be closed to through traffic during construction, but access to local residences should maintained where practical.

G. Waterline Improvement – 6th Street, Riley to Vine Street

a. Abandon in place and remove where feasible the existing waterline and appurtenances.

b. Install new 8" waterline and appurtenances.

c. Consider installing waterline in right of way behind curb where allowable. Existing pavement and curb in poor condition adjacent to waterline work should be considered for replacement.

d. 6th Street shall remain open to traffic during construction, but may be closed for limited periods of time if necessary.

H. Waterline Improvement – Riley, from 6th to 8th Street

a. Abandon in place and remove where feasible the existing 4" waterline and appurtenances.

b. Install new 8" waterline and appurtenances.

c. Consider installing waterline in right of way behind curb where allowable. Existing pavement and curb in poor condition adjacent to waterline work should be considered for replacement.

d. Riley Street shall remain open to traffic during construction, but may be closed for limited periods of time if necessary.

I. Water line looping-Elm Street, 1st to 4th Street

a. Install new 8" waterline and appurtenances along Elm Street. Connect to existing water lines at 1st, 2nd, 3rd, and 4th Streets.

b. Consider installing waterline in right of way behind the curb where allowable. Existing pavement and curb in poor condition should be considered for replacement. All necessary pavement cuts should be full panel (approx.12'x12') replacement.

c. Elm Street shall remain open to traffic during construction, but may be closed for limited periods of time if necessary.

J. 10-inch Sanitary Sewer Force Main Replacement, US-183 bypass

a. Rehab/Replace approximately 2000 LF of existing 10-inch ductile iron sanitary sewer force main from the west side of 240th Avenue, east to approximately Big Creek. Install air release valves and other appurtenances as required.

b. Alternative construction methods (pipe bursting, lining, trenchless technologies) shall be considered for this project. Options for maintaining sanitary sewer service throughout construction must be considered.

c. US-183 By-pass shall remain open to traffic during construction of this project.

Addition notes related to all projects:

1. All water mains shall be Ductile Iron, C-900 PVC, or HDPE based on an evaluation process involving the engineer.

2. Replace, relocate, or add fire hydrants to provide improved fire protection capability in the area. City staff will evaluate existing fire hydrants for the feasibility of reuse.

3. Add gate valves as necessary to provide the isolation necessary to complete construction and allow for efficient future maintenance. Consider and balance the costs versus convenience.

4. ~~Provide new poly service lines to existing meter locations and evaluate the existing meter assemblies for replacement.~~ All existing service taps and meter assemblies will be replaced with the City's standard

pre-plumbed meter can assemblies and new poly service lines to the right of way line.

5. Provide for reconnection to all adjacent water lines.
6. Replace pavement, curb and sidewalk necessary for waterline work, and consider the replacement of failed pavement, curb and sidewalk in the vicinity of waterline work.
7. Minimize the necessary removal of healthy trees. Trees whose root structure is damaging to pavement may be considered for removal if no alternative exists.

Deliverables to be provided by the Consultant to the City at no extra cost:

1. Attend on-site kick-off meeting to gather preliminary data and review the project scope.
2. Assist the City in evaluating the use of HDPE pipe in the City's water and sewer systems and the impact that would have on inventory, operations, construction cost, future maintenance, etc. Develop standard details and specification or adapt existing manufacturer specifications for materials and installation on this project and future projects.
3. Preliminary Design Plans and Cost Estimates – two (2) copies full size plans for City staff review. Should include any potential utility conflict or additional right of way/easement required. Attend on-site preliminary design review meeting.
4. Utility Conflict Plans – Provide utility conflict plans for the use of the city in coordinating with franchised utilities for utility clearance.
5. Application and other required submittals to successfully obtain KDHE permits for construction of improvements.
6. Final Draft Design Plans, updated construction cost estimate, and Contract Documents – two (2) copies full size plans for City Staff review. Attend on-site final design plan review meeting. Design Plans shall include Plan and Profile Sheets.
7. Final Plans, Engineers Estimate of Construction Cost, and Bid Documents – two (2) paper copies to City, and reproducible digital files to allow City to provide bid documents to potential bidders.
8. Electronic File of the contract documents and specs – in both MS Word and Adobe PDF format to City
9. Electronic File of the Plan Set – in both AutoCAD and Adobe PDF format to City.
10. Digital files of any legal descriptions, location maps, drawings, Bid Tabulation Forms listing bid items and quantities (in MS Excel format) or any other submittals listed above when requested by the City.

The City will furnish, as required for the project and not at the expense of the Consultant, the following:

1. Water, Sanitary Sewer, and Storm Sewer utility information including size and locations in vicinity of project.
2. Access to previous engineering studies, as-built plans, and other information available to the City to assist the consultant in preparing the design plans.
3. Ortho Imagery and any other GIS data currently maintained by the City.

Attachment II

Fee Breakdown

2012 Waterline Upgrades
COH Project 2012-22
City of Hays, Kansas

TOTAL FEE BREAKDOWN for PROFESSIONAL ENGINEERING SERVICES

Task:	Employee	Hours	Hourly Rate	Extension
Project Research & Design Survey -	Project Manager	26.0	$104.00	$2,704.00
	Registered Land Surveyor	28.0	72.00	2,016.00
	2-Person Survey Crew	118.0	108.00	12,744.00
	Drafting Technician II	78.0	55.00	4,290.00
				$21,754.00
Preliminary Plans & Cost Estimates -	Project Manager	25.0	$104.00	$2,600.00
	Senior Design Engineer (QA/QC)	5.0	94.00	470.00
	Senior Drafting Technician	56.0	70.00	3,920.00
				$6,990.00
Preliminary Plan Revisions -	Project Manager	10.0	$104.00	$1,040.00
	Senior Drafting Technician	20.0	70.00	1,400.00
				$2,440.00
KDHE Permit Applications -	Project Manager	10.0	$104.00	$1,040.00
	Senior Drafting Technician	20.0	70.00	1,400.00
				$2,440.00
Final Draft Plans, Updated Cost Estimate & Draft Contract Documents -	Project Manager	20.0	$104.00	$2,080.00
	Senior Design Engineer (QA/QC)	10.0	94.00	940.00
	Senior Drafting Technician	40.0	70.00	2,800.00
	Administrative Assitant II	20.0	34.00	680.00
				$6,500.00
Final Plans, Bid Documents & Engineer's Estimate -	Project Manager	20.0	$104.00	$2,080.00
	Senior Design Engineer (QA/QC)	10.0	94.00	940.00
	Senior Drafting Technician	20.0	70.00	1,400.00
	Administrative Assitant II	20.0	34.00	680.00
				$5,100.00
Subtotal =				**$45,224.00**
Direct Expenses -	Survey Truck Mileage (12 trips x 180 mi. @ $0.50/mi.)			$1,080.00
	Delivery/Postage			120.00
	Copying/Printing			480.00
Total =				**$46,904.00**

GLASSMAN BIRD SCHWARTZ & PARK L.L.P.

Partners: Robert F. Glassman *(1922-2005)*
John T. Bird, Gregory A. Schwartz, Carol M. Park
Associate: Curtis Brown

MEMO

DEC 27 2012

DATE: **December 26, 2012**

FROM: **JOHN T. BIRD, City Attorney** JTB

TO: **TOBY DOUGHERTY, City Manager**

RE: **CITY COMMISSION TERM LIMITS**

A City Commissioner has asked for an opinion on whether it is possible to impose term limits upon those holding the office of City Commissioner in the City of Hays, Kansas. The City of Hays is a City of the Second Class, following the Commission-Manager plan. A similar question was addressed by the Attorney General in XXVII Kan. Op. Att'y Gen. 9 (1993), in which the City of Hutchinson sought to enact an ordinance establishing term limitations under its home rule powers. Hutchinson is a city of the first class utilizing a commission-manager plan of government pursuant to K.S.A. 12–1001 et seq. The qualifications for commissioners in a city of the first class are set forth in K.S.A. 13–1801. The Attorney General opined that cities are empowered to determine their local affairs by ordinance subject only to enactments of the legislature applicable uniformly to all cities. There is no statute which addresses term limitations for any city council, commission or mayoral office. However, since there is a statute addressing the qualifications for holding commission office, and term limits is not included in the statute, one must examine whether the city can use its home rule power to add an additional qualification. To use home rule to avoid the application of a state statute, the statute must not apply uniformly to all cities. The Attorney General examined the uniformity of K.S.A. 13-1801, however, the qualifications for office in a city of the second class are governed by K.S.A. 14-1301.

Using the test adopted in *City of Junction City v. Griffith*, 227 Kan. 332 (1980), a statute is non-uniform when one section is not uniformly applicable to all cities. K.S.A. 14-1301 is one of the sections included in L. 1909, ch. 82. It is clearly one of the sections comprising the enactment as the division into chapter, article and section in the Kansas States Annotated does not have the effect of making separate enactments of a single bill passed by the legislature. At least one section of the enactment, Section 8, was not uniformly applicable to all cities, as it required city officers to be nominated at a primary election, except for those in cities of less than 10,000 population. K.S.A. 14–1301 is not uniform under a *Griffith* analysis. The Attorney General further opined that since there would be no conflict between a proposed ordinance and existing law, a city can enact an ordinary ordinance under its home rule power establishing term limitations for its commissioners.

Law Offices: P.O. Box 727 200 West 13th Street Hays, Kansas 67601-0727 Tel (785) 625-6919 Fax (785) 625-2473
email: jtbird@haysamerica.com

The City of Hutchinson appears to have successfully implemented its term limit ordinance in 1994. City of Hutchinson Code of Ordinances, Section 2-201 provides that:

> No person shall be eligible to be elected to or serve as a council member of the City of Hutchinson, Kansas, for more than two (2) consecutive four (4) years terms and no more than three (3) consecutive terms regardless of the length of the terms. After serving the maximum allotted time in office one must remain out of office for a period of at least four (4) years in order to again become eligible to hold their previous office. Service for more than one-half of any term counts as a full term. *(Ord. 7447, Adop. 11/15/94; Charter Ord. 38, Adop. 12/09/94)*

Courts have upheld term limitations for state legislators against First Amendment and equal protection attacks. *Legislature of California v. EV*, 816 P.2d 1309 (Cal.1991). It does not appear the Kansas appellate courts have decided a case involving the application of term limits to city commission members.

The Commissioner has also inquired about the possibility of imposing a limitation on those currently serving on the Commission. Because term limits are related to a person's qualification to take office, any new requirement would be made retroactive to the beginning of the existing commissioner's term, however, there is a presumption that a law applies prospectively only, except when the legislative body has expressed a clear preference for retroactive application. Even if the ordinance were designed to apply retroactively, it would still be open for examination by a court regarding whether retroactive application affected vested or substantive rights. The constitutional guarantees of due process are not overridden by the wording of the ordinance. *In re Hunt*, 32 Kan. App. 2d 344, 362, 82 P.3d 861 (2004). Because the existing commissioners were elected and served portions of their terms under the existing statutory scheme, it is likely that a court would find they had some vested rights in the office, precluding retroactive application of term limits, so no currently serving Commissioner would be affected by any new term limit ordinance.

The Attorney General also considered a question from the City of Lawrence pertaining to an initiative petition involving term limits. Although the petition was ineffective for other reasons, the Attorney General discussed favorably the ability of the City of Lawrence to add term limits to its existing requirements for holding office. XXVIII Kan. Op. Att'y Gen. 45 (1994).

In summary, term limits are allowed, they would not be applicable to any serving Commissioner until he or she hit the limits imposed, starting from the passage date, and this issue is probably subject to the use of initiative, if the populace is so inclined.

JTB/cmp
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