Belton Trails Master Plan

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PART 1 - INTRODUCTION

The summer of 2008 will long be remembered for the staggering increase in oil and gasoline prices and the strain passed along to the average consumer not only at the pump, but every time those increases are passed along in inflated shipping costs. Thankfully, this summer will also be fondly remembered in the City of Belton as the implementation of the comprehensive Trail Master Plan. In what seems to be a prescient move, the Belton Parks Board has taken the initiative to commission and produce this plan with the ultimate aim of adding legitimate transportation alternatives to the community fabric.

Bicycling, walking and skating have always been popular activities for youth and family recreation where safe and accessible routes are available. Historically, in many suburbanized communities these activities were rarely seen as viable alternatives for vehicle trips due to the short Midwestern "trail season". This perception is now changing as improvements in waterproof clothing and footwear coupled with better bicycle, skate and shoe technology have extended comfortable trail use to nearly year-round in the Midwest. Where weather was not a concern, many communities failed to plan trails as vehicle trips were seen as a quicker method of getting around a community. This is also changing, thanks in large part to the over-dependence upon the car and the resulting congestion in many suburban communities. Where trails exist, door-to-door times for bike riders are nearly identical to drivers for trips under 5 miles.

The Belton Bike Trail will expand upon a conceptual idea first proposed in the Belton Parks Master Plan (2005) which cited a long-range goal of connecting all of Belton's parks with a pedestrian and bicycle trail. The Trail Master Plan will also draw upon the planning initiatives undertaken by the Mid-America Regional Council (MARC) such as the "Metro Green" comprehensive plan, MoDOT's Bicycle and Pedestrian program and other resources that all sprang into existence from the Federal TEA-21 program and its requirements for alternative transportation systems.

Within the Federal TEA-21 program, the Metropolitan Planning process "establishes a cooperative, continuous and comprehensive framework for making transportation investment decisions in metropolitan areas"[1] and this has provided the foundation for MARC's Metro Green Plan. Within the Metro Green plan, Belton and northern Cass County will function as the southern gateway to the entire trail system. By taking the initiative now, Belton will position itself as the model community for Cass County and other surrounding cities will be tasked with connecting to its' trail system. Likewise, the Belton Trail will echo TEA-21's call for Metropolitan Planning Organizations to develop transportation systems that "...Increase the safety and security of the transportation system for motorized and nonmotorized user...protect and enhance the environment, promote energy conservation and improve quality of life, [and] enhance the integration and connectivity of the transportation system...for people..."[2].

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[1] TEA-21 Metropolitan Planning Fact Sheet – http://www.fhwa.dot.gov/TEA21/factsheets/metropln.htm
[2] Ibid.

PART 2 - CURRENT SITUATION

2.1 Nearby Jackson County Trails and Facilities

Longview Lake/Little Blue Trails

This 6-mile trail within Longview Lake Park provides an off-road shared-use[1] route from just north of Missouri Highway 150 to 109th Street and is an integral part of the southern Jackson County portion of the Metro Green system. The connection to this trail closest to Belton is provided through the Little Blue River Trail. This trail is accessible from the intersection of 139th Street and Byars Road. From this location the trail continues south-westerly along the Little Blue River as shown in Photo 1 to a turn-around and trail head at Winchester Road. The trail also continues north-easterly where it eventually links to the Longview Lake Trail.

Photo 1

There is limited parking provided at the trail crossing of Byars Road (shown in Photo 2) and additional parking provided on Winchester Road. From this location, riders and walkers can access the Little Blue River trail which links to the Longview Lake trail. The trail crossing is an at-grade crosswalk with striped markings and caution signs for vehicular traffic. The traffic volume on Byars is relatively light, providing for a relatively safe crossing for bikers and pedestrians.

Photo 2

Photo 3

[1] "Shared Use" for the purpose of this Master Plan shall refer to trails open to all modes of non-motorized transportation which may include (but not limited to) walking, jogging, skating (in-line, blades and boards) and cycling.

2.2 Raymore Linear Parks

The nearby City of Raymore has two Linear Parks at the current time. The Belton Trails Plan will likely not link to these systems, but they are catalogued and mentioned here to serve as example projects and to encourage cooperative trail development with Raymore in the future.

Good Parkway

This is a short (1/4 mile) pathway extending south of Lucy Webb road between Old Paint Road and Fox Ridge Drive. There is no vehicular parking at Lucy Webb Road and no marked crossing, limiting the use of the trail to residents south of Lucy Webb or to bikers/walkers who choose to cross at the signalized intersection of Fox Ridge. A view of the trail from the north side of Lucy Webb Road is shown in Photo 4 at right.

Photo 4

Photo 5

Eagle Glen Park

This linear park and trail extends from Lucy Webb Road north to 58 Highway. This trail provides walking and biking opportunities for many residents who live in the nearby neighborhoods. Signage and well-marked crossings increase the safety for the trail users. The trail is shown in photos 5-7 at right and below.

Photo 7 - MO58 and Fox Ridge

Photo 6

2.3 Nearby Private Trails

Lucy Webb Road and Dean Ave.

There are a number of trails located within nearby housing developments that may have some influence on the final configuration of Belton's overall trail network. The first trail is located at the intersection of N. Dean Avenue and Lucy Webb Road (photos 8-10 at right and below). The trail is approximately ½ mile in length, with the mid-point being at the road intersection. The trail has no destination function at the current time and likely serves as a recreation opportunity for residents in the nearby homes. The trail is in good condition and could function as a primary linkage to the Belton trail system for a number of Raymore residents.

Photo 8

Photo 9

Photo 10

Creekmore Trail

This trail, located in Raymore, was developed alongside N. Fox Ridge Drive and runs nearly a mile from just short of 155th Street southward to the commercial development just north of 58 Highway. The trail at 155th Street is shown in Photo 11 at right.

Photo 11

2.4 Belton Parks Trails and Facilities

Belton currently has a number of mixed use trails within several of its' parks. For the large part, these trails are self-contained to the park and have no connectivity to the surrounding neighborhood. In addition to the existing trails, the Parks Master Plan proposed additional trails and links/extensions to the surrounding sidewalk network at a minimum.

Cimarron Trails

There are no dedicated trails at Cimarron as of the date of writing. The Parks Master Plan, however, proposed a dedicated multi-use trail for the north parcel along the north and south boundaries.

Markey Park

Markey Park features a 5/8-mile lighted walking trail. The surface is asphalt and rest stops are provided at intervals along the route. The trail is a looped around the ball fields and access is provided via the main 'spine' pathway from the parking lot to the concession plaza. The park currently lacks dedicated trail parking and bike racks at the concession area or parking lot.

Memorial Park

Memorial Park features a looped trail in the northern portion that is accessed via the north lot or pool/skate park parking. The trail is approximately 1/4-mile in length, asphalt surfaced without lights. There are no bike racks and parking is shared with multiple uses.

Wallace Park

Wallace Park features a 7/8-mile paved trail looped within the park boundary. Access to the trail is provided at several points and bike racks are located near the main entrance to the community center.

US71 Underpass

Currently in the approval stage, the pedestrian and bike tunnel under US71 will be located just south of Wallace park within the Oil Creek floodplain. This passage will provide a much-needed linkage between the east and west sides of Belton.

Country View Park

The Parks Master Plan proposed a 1/4-mile looped trail within Country View Park that will provide bike and pedestrian opportunities.

Somerset Park

The trail within Somerset Park connects 163rd Street and Bryan Way as it follows the edge of the pond. The trail is paved but lacks any dedicated parking other than on-street opportunities on Bryan Way.

Oil Creek Trail

This trail is currently undeveloped (mulched pathway) but is situated within the Oil Creek floodway just on the east side of Mullen Road adjacent to Wallace Park. This trail was identified during the Community Workshop as an opportunity for development within the Trails Master Plan.

2.5 Trail and Route Design Standards

Since the mid to late 1980's, Federal and State transportation agencies have responded to the need for safe bicycle and pedestrian pathways and trails by creating standards for the integration of these facilities into larger transportation projects (usually roadway construction). TEA-21 specifically states that "Bicycle transportation facilities and pedestrian walkways shall be considered, where appropriate, in conjunction with all new construction and reconstruction of transportation projects, except where bicycle and pedestrian use are not permitted."[2] As a result, the Missouri Department of Transportation has developed standards for these facilities that are based upon two documents produced by the American Association of State Highway and Transportation Officials (AASHTO); "The Guide for Development of Bicycle Facilities" (1999) and the "Guide for the Planning, Design and Operation of Pedestrian Facilities" (2004). The Belton Trail Master Plan will utilize these standards for the creation and designation of the following types of bicycle routes within road rights-of-way:

- Shared Routes – these are roads (without curb and gutter) and streets (with curbs) renovated to accommodate bicycle traffic. The two approaches for shared routes include paved shoulders and wide curb lanes.
    - Paved Shoulders – paved shoulders, at least 4 feet wide, for roads without curbs and gutters
    - Wide Curb Lanes - a 14-foot outside (curb) lane shared by vehicles and bicycles. These wide lanes are appropriate for streets with lower traffic volumes and minimal on-street parking.
- Bike Lanes – striped and marked bike lanes along urban streets, typically 5 feet in width.
- Bicycle Sidepaths – separate bicycle or shared-use path, 8 to 10 feet wide, separated from the street with a 4 to 8 foot boulevard strip. The sidepath will parallel the street and typically be located within the right-of-way.

Pedestrian facilities within roadway rights-of-way shall be provided by sidewalks or sidepaths wherever possible. Where this is not feasible, the use of paved shoulders may be considered.

Bicycle and pedestrian facilities completely independent of vehicle facilities shall be termed 'shared use paths' or trails.

[2] TEA-21, Section 1202

2.6 Current Issues

In March of 2008, the Belton Trail Committee was formed to address the current bicycle and pedestrian issues facing the community. The committee identified several items that could be addressed and corrected through the creation and implementation of a Trail Master Plan. Some of these items include:

- A lack of connection between parks and surrounding neighborhoods
- Congestion on 58 Highway
- Residents have to 'drive' to the parks to walk a trail
- No connection between neighborhoods east of US71 and businesses/historic district to the west
- No safe bicycle routes on any city streets
- A desire to get more people to the Community Center without overwhelming parking
- No linkages (other than roads) between the parks
- General health concerns (childhood obesity, opportunities for seniors to walk, etc.)

These concerns and opportunities formed the basis for the Trail Goal Statement detailed in the following section.

PART 3 - Belton Trail Goals

The Belton Trail Committee formulated the following goal statements in response to the issues and opportunities present in the community. They are as follows:

The Belton Trail System will encourage active lifestyles for families and individuals by:

- *Providing safe and accessible routes.*
- *Linking homes with parks and other important destinations.*
- *Creating trail access points reasonably spaced throughout the community.*

The Belton Trail System will improve the quality of life for residents by:

- *Beautifying the community through preserving, renewing and creating greenspace.*
- *Reducing vehicle trips, thereby reducing congestion and pollution.*
- *Linking diverse neighborhoods, thereby increasing random and planned social activities.*
- *Increasing property values within the City.*

The Belton Trail System will promote and renew the sense of community by:

- *Uniting (through physical linkages) new development with the historic core.*
- *Bridging and connecting different neighborhoods.*
- *Bolster community pride and self-image through completion of a progressive trail system.*

The Belton Trail System will create a legitimate alternative transportation network by:

- *Linking Belton to other metro communities by connecting to the Metro Green trail system.*
- *Linking Belton to the surrounding region by connecting to the Katy Trail.*
- *Creating opportunities for all residents to become independent of car transportation.*

The Belton Trail System will encourage economic development and positively impact the community by:

- *Reducing gas consumption and saving residents money.*
- *Creating new marketing opportunities for Belton businesses.*
- *Creating demand for properties near the trail system.*
- *Providing a plan to guide new development which may become an incentive for progressive developers.*

Within the context of this Master Plan, there are several easily identifiable projects that will advance the goals outlined above. For clarity, these projects are organized by their primary trail type (off-street, paved shoulder, etc.) to provide future parks boards and community groups the maximum flexibility in determining the priority of each project. This approach also provides the greatest clarity for projecting probable construction costs and will allow for easy adjustment to future material and labor prices.

3.1 Off-Street Trails

A. East-West Connection under US 71

Some sort of connection under the US 71 roadbed is desparately needed. Ideally, this connection will utilize a culvert tunnel to provide a safe, off-street crossing for bicyclists and pedestrians. Connecting the east and west sides of Belton currently bisected by US71 is a critical component of the overall Master Plan. In the proposed route below, the new tunnel would be connected to the Wallace Park trail as the park can provide parking and easy access to the trail. Signage noting the trailhead is recommended to be installed in the south parking lot at Wallace Park.

Figure 3.1 – US71 Underpass and Extensions

B. Markey Parkway, US71 Tunnel and Proposed Lake/Park Project

These objectives may already be included in the Markey Parkway and Lake Park projects, but they are included here to ensure the trail components are not overlooked. The lake loop and trailhead in the Park will function as a very important node in the trail system. The components of this objective include:

- 1.0 miles of Bike Lane (striped) on Markey Parkway from Y Highway south to US58/North Ave. This lane is recommended in addition to the planned off-street shared use trail.
- 0.47 miles of off-street trail within the Lake Park.
- Bike racks, directional signage, and trail information kiosk in Lake Park parking lot
- Pedestrian and bike crossings at proposed signal
- Trailhead access to lake trail, Markey Parkway and US71 underpass. This may include minor (less than ¼ mile) connectors to the trail(s).

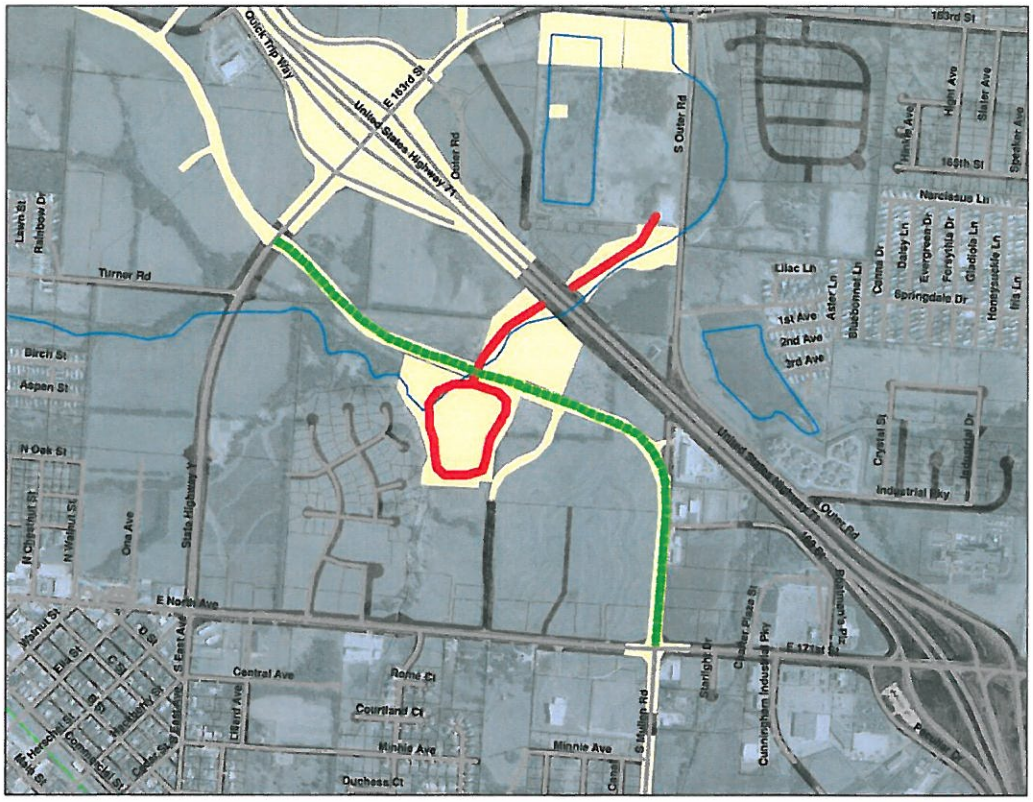

Figure 3.2 – Markey Parkway, US71 Underpass and Wallace Extension

C. Oil Creek Trail from Wallace Park, East to 163rd Street Park.

This off-street trail will connect the new Lake Park and Somerset Park in a green 'necklace' with Wallace Park functioning as the 'jewel' in the center. Until other objectives are completed, this spine will provide a very important east-west route for many residents in the community and should be well-used. The components of this objective include:

- 0.36 miles of Off-Street Sidepath from roughly the southeast corner of Wallace Park following the Oil Creek floodway north to 163rd Street.
- 0.37 miles of sidepath on 163rd Street from the Oil Creek bridge east to Somerset Park. This would comprise a widening of the existing southern sidewalk.

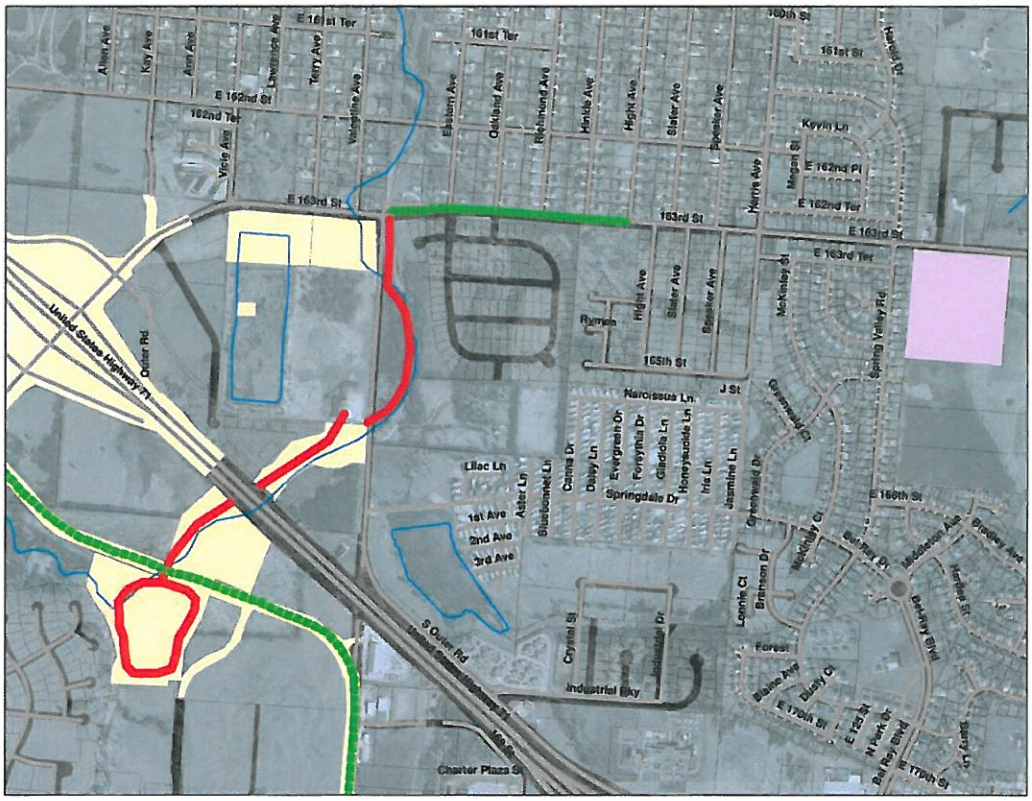

Figure 3.3 – Oil Creek Trail

D. Oil Creek Trail – 163rd Street to 155th Street

This ambitious objective will utilize the Oil Creek floodway to create a dedicated route from 155th to 163rd Street, effectively linking the center of east Belton with its' north boundary. The components included in this objective are:

- 1.12 miles of off-street trail from the 163rd Street bridge north to 155th Street.
- Trailhead facilities at 155th Street including directional and informative signage.
- Additional access at 163rd Street including connection to existing Oil Creek trail and safe crossing of 162nd Street which may require a pedestrian-activated signal.

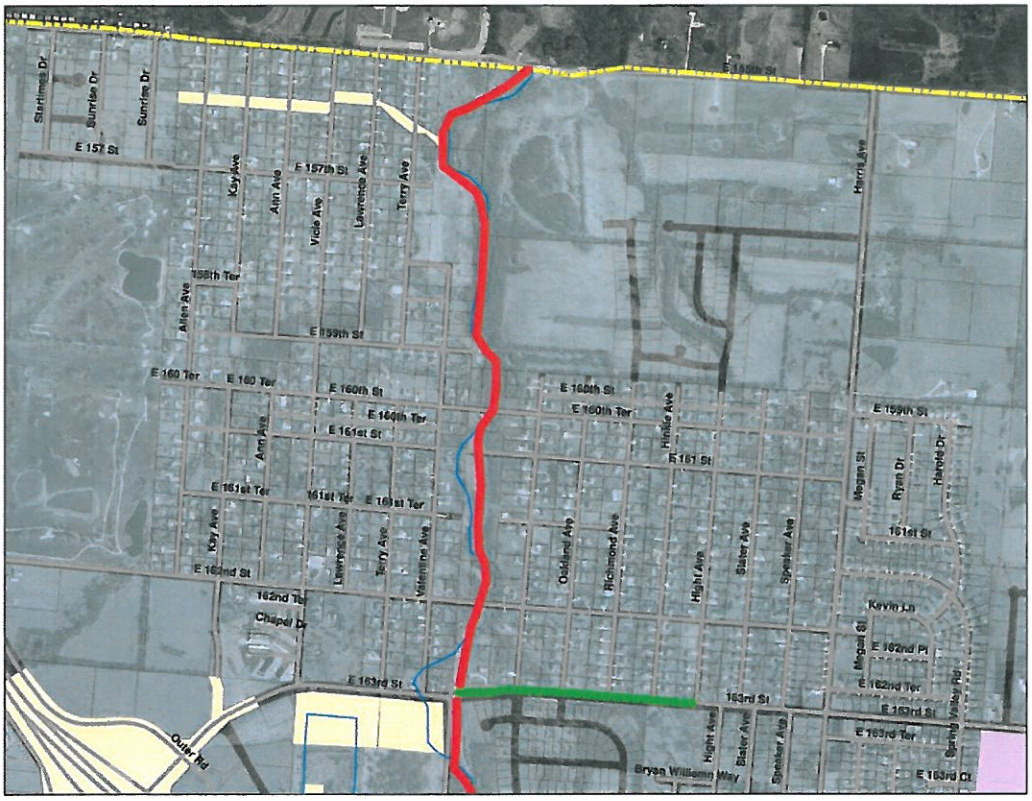

Figure 3.4 – Oil Creek Trail to 155th Street

E. Shared Right-of-Way with Belton, Grandview and Kansas City Railroad

An ambitious objective is the conversion or joint re-development of a portion the Belton, Grandview and Kansas City Railroad right-of-way through Belton to create an off-street shared trail. This trail spine could provide a much safer north-south route through Belton upon its' completion while effectively linking all the major routes on the west side of Belton. There are many potential ways to make this happen including leasing arrangements or joint public-private development initiatives. The exact development framework will require collaboration between the Smokey Hill Railway and Historical Society, the City of Belton, and the Parks and Recreation Department. The components of this objective include:

- 4.73 miles of off-street trail from155th Street south to Cambridge within the BGKCR right-of-way.
- Connection to Memorial Park through the south parking lot.
- Connection to Downtown trailhead created with the Cedar Street route.
- 1.77 miles of paved shoulder on Cambridge Avenue from Cedar Street to the BGKCR intersection and creation of trailhead facilities there.

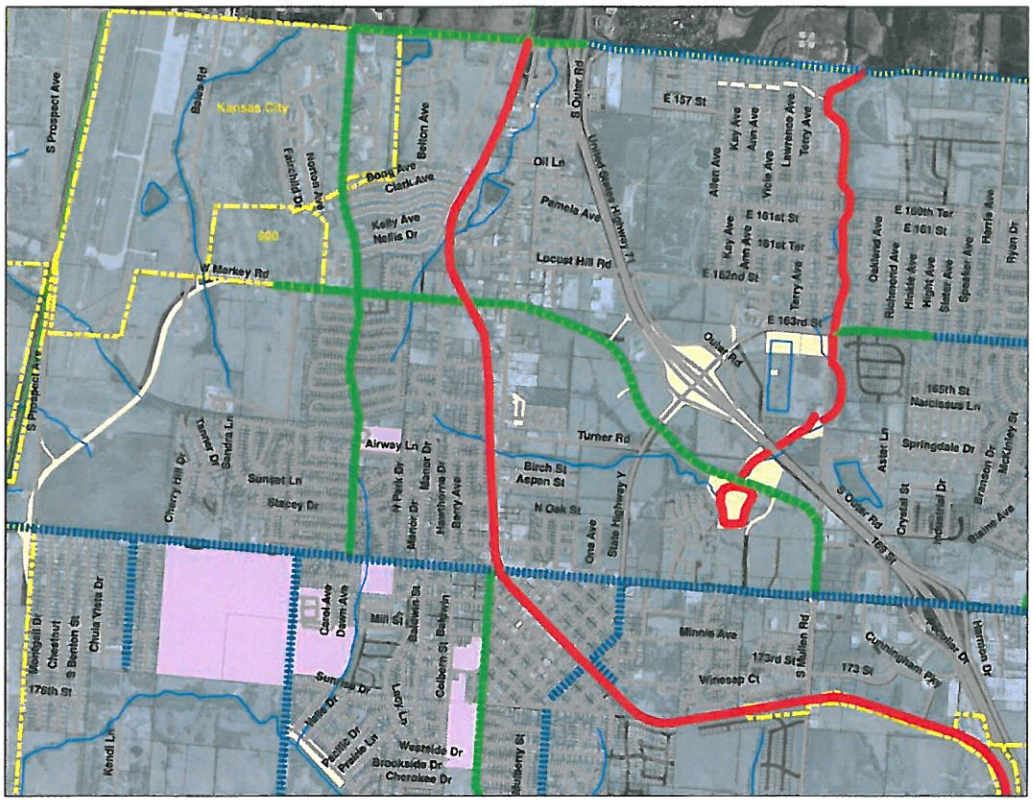

Figure 3.5 – BGKCR Shared Right-of-Way (partial)

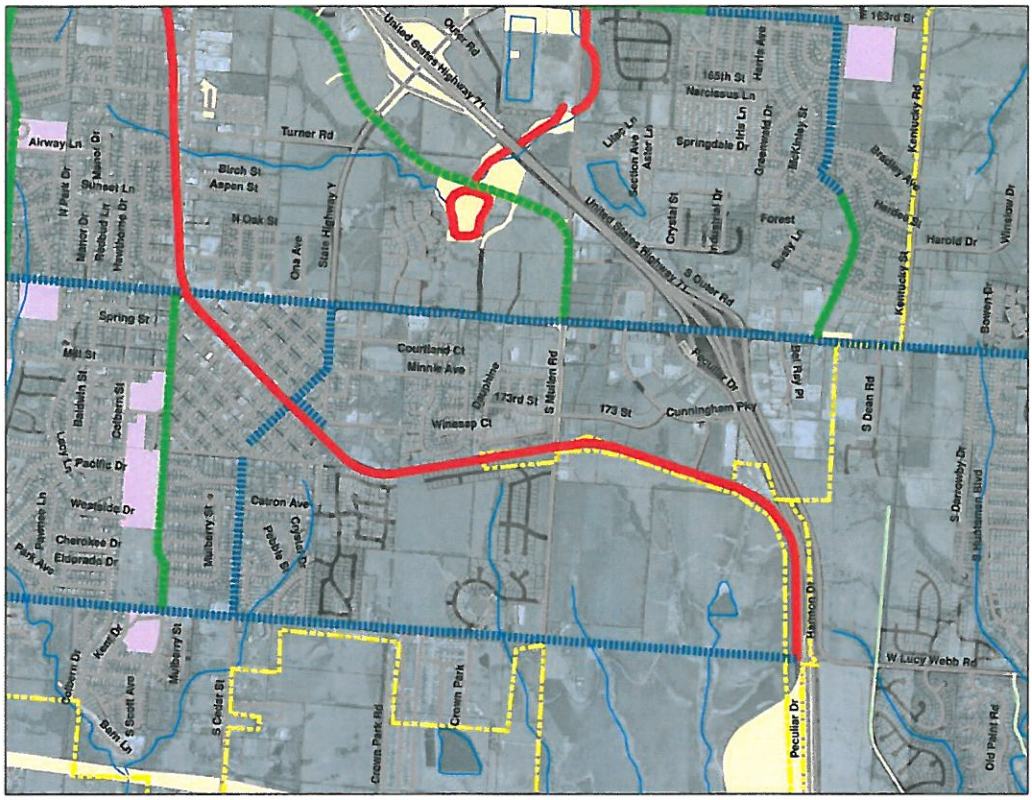

Figure 3.6 – BGKCR Shared Right-of-Way (partial)

F. Oil Creek Trail – Mullen Road Extension

This extension of the Oil Creek Trail to the south east will provide a mostly off-street connection between Bel Rey Drive and Wallace Park. This section of trail will provide direct access to the residents in the neighborhoods bounded by North Avenue, Bel Rey Drive, US71 and Springdale Drive. This trail can also be linked to the existing private trail associated with the hospital. The components of this objective include:

- 0.97 miles of off-street trail from the southern termination of the Oil Creek trail, continuing south and south-east to Bel Rey Drive, paralleling the outer road and Industrial Parkway. At this time it is unclear if the land required could be leased, purchased or condemned.

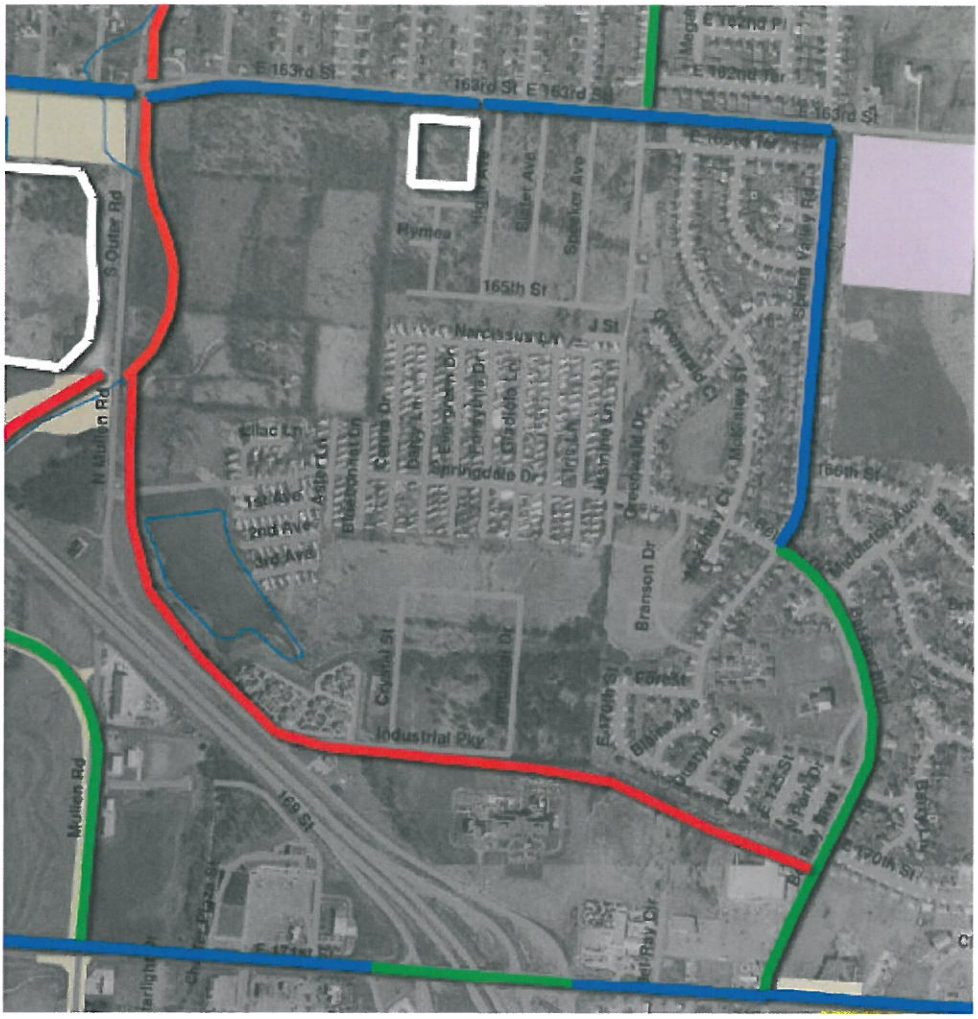

Figure 3.7 – Oil Creek Trail – Mullen Extension

3.2 Paved Shoulder Trails

A. Connections to Regional Trails

An important goal for the Trail system expressed by both the public and the Trail committee is the connection to trails in surrounding communities. This goal also ties Belton's trails into the overall MARC plan for Jackson and Cass counties. The following routes will be established as part of this objective:

- 0.97 miles of paved shoulder on 155th Street from US 71 east to Oil Creek Trail. This route segment will provides bike riders with access to the Little Blue Trail via the East outer road along US71.
- 1.56 miles of paved shoulder on 155th Street from Oil Creek Trail east to Fox Ridge Drive and connecting to that existing trail.
- 1.12 miles of sidepath (sidewalk expansion) on MO58 from Bel Ray Drive east to Fox Ridge, connecting Belton and Raymore. This route may be funded and coordinated through a joint effort between Belton, Raymore and MoDOT.
- 1.02 miles of paved shoulder on North Ave from Prospect Avenue west to Holmes Road; this will allow for eventual connection with Blue River Trail. Explore joint Belton and KCMO development of shared bike route on Holmes Road to connect to other MARC trails.

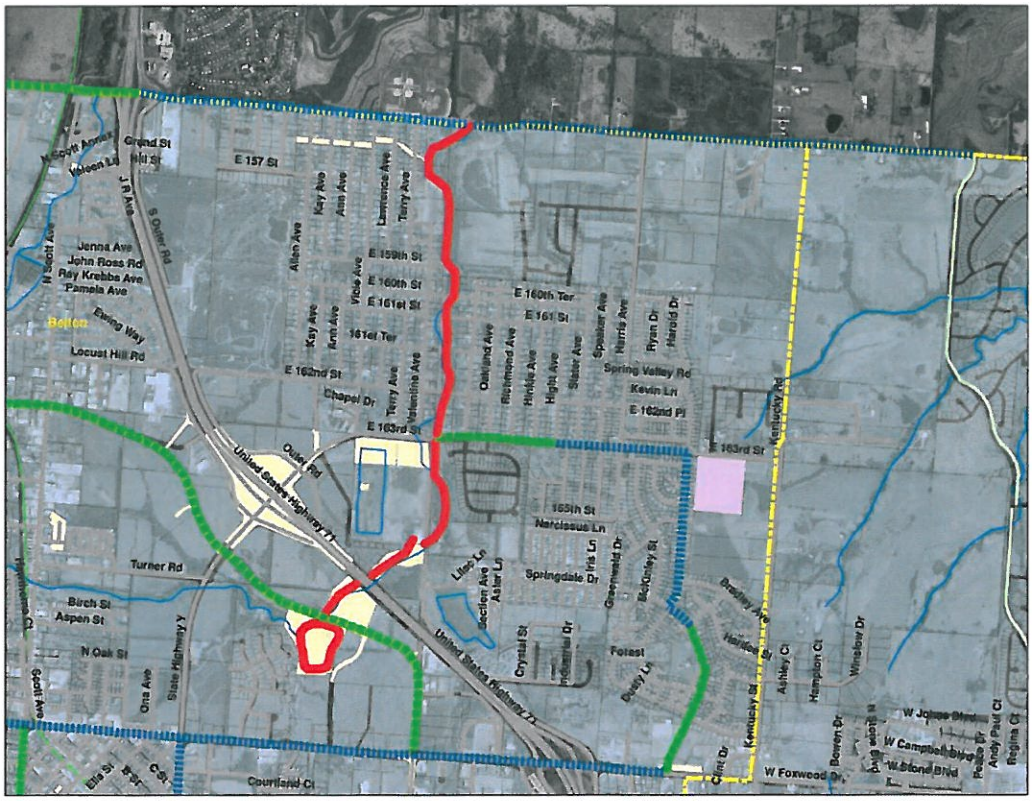

Figure 3.8 - 155th Street Extension

Figure 3.9 - MO58 Extension

Figure 3.10 - North Avenue Extension

B. Neighborhood Infill and Spurs

As development continues in the south-west portion of Belton there will need to be trail connections established with the rest of the overall network. Most of these connections will be short 'spur' trails that provide residents with access points to already established trails. These shorter routes include the following:

- 1.09 miles of off-street trail beginning at a new access point at Pacific and Park and continuing south of Cambridge within the flood way to the City Limits.
- 0.47 mile of striped lane on Harris Avenue from 163rd Street to 159th.
- 0.52 mile of paved shoulder on Harris Avenue from 159th north to 155th Street.
- 0.47 miles of paved shoulder on 162nd Street from the Oil Creek Trail to Allen Road.
- 0.85 miles of paved shoulder on Allen Road from 162nd Street north to 155th.
- 1.61 miles of Floodway spurs south of Cambridge for future development. These would be paid by the developer(s) of those properties.

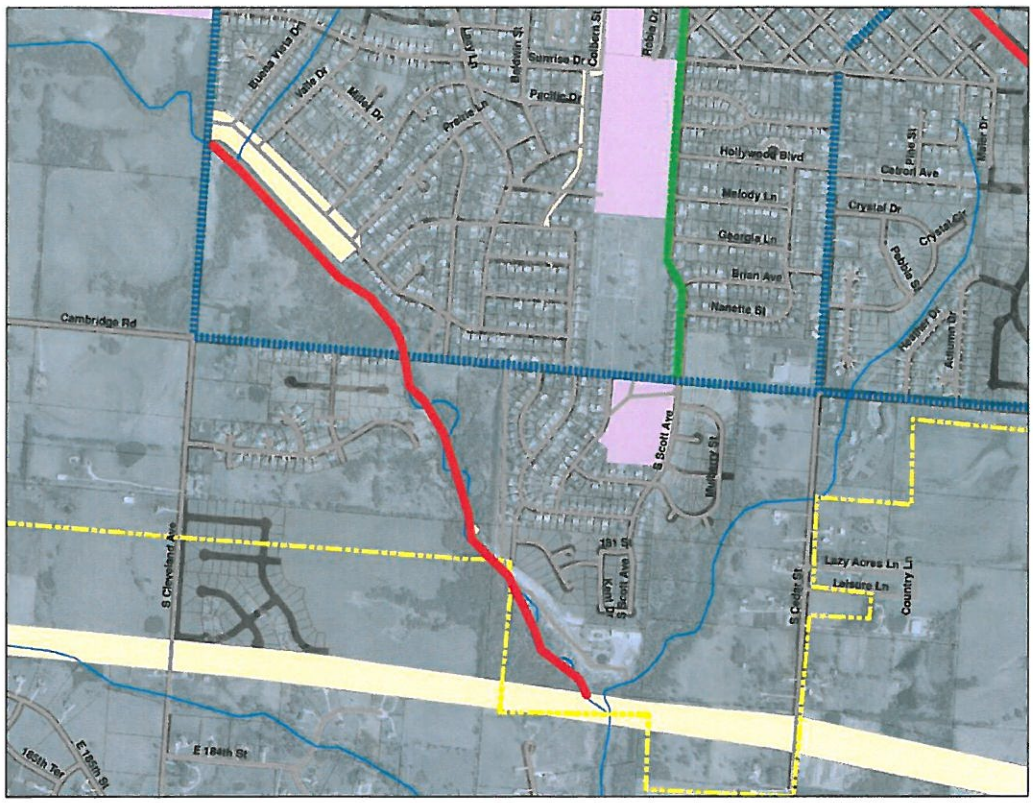

Figure 3.11 - Pacific and Park Floodway Spur

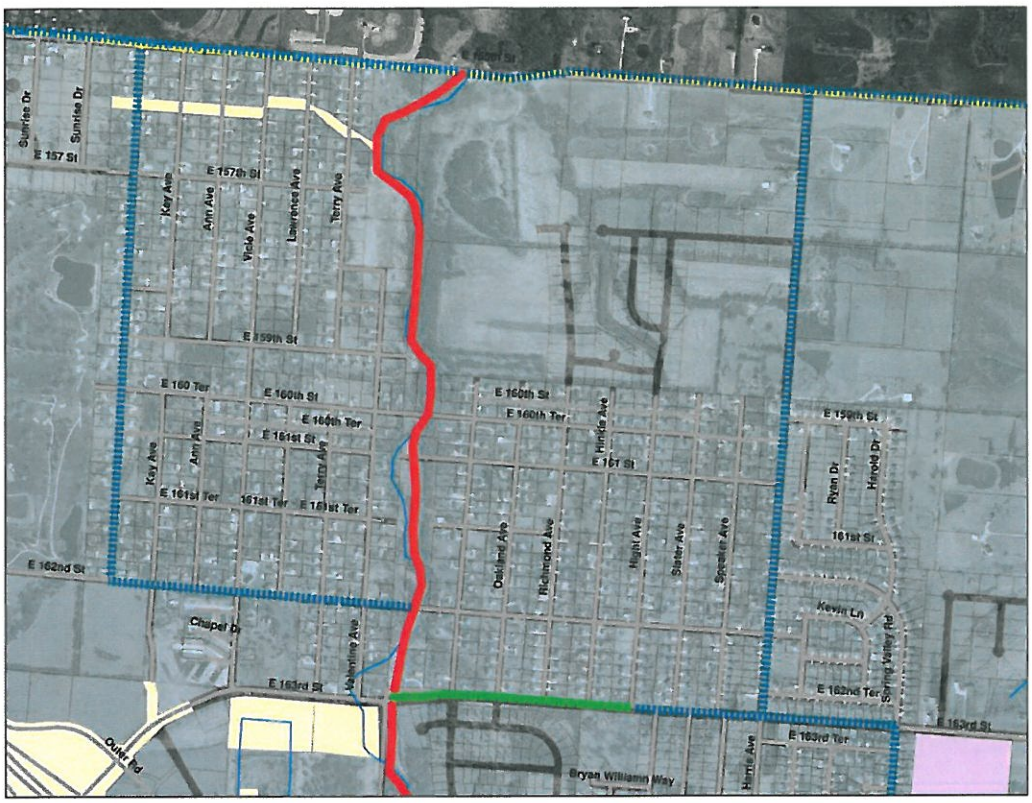

Figure 3.12 - Harris, 162nd and Allen Road Routes

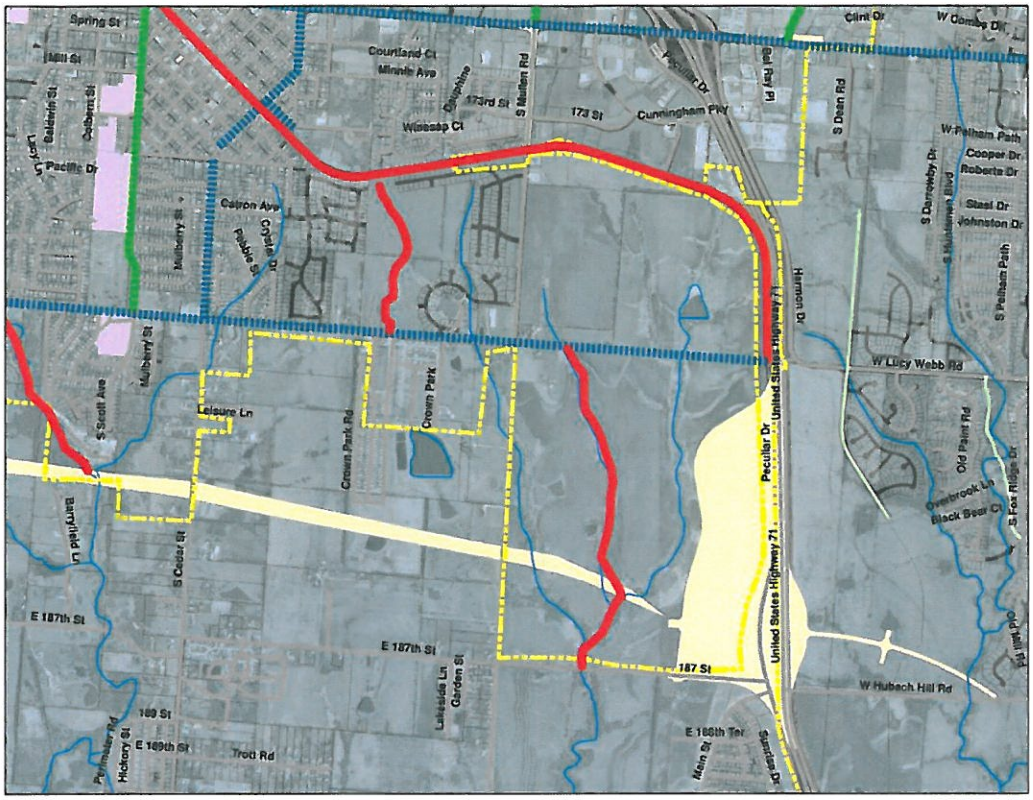

Figure 3.13 - South Floodway Spurs

3.3 Striped Lane Trails

A. North-South Bike Route

As identified during the community workshop, creation of a safe North-South bike route is needed. To complete this goal, a combined shared roadway and marked bike lane route shall be created from Cambridge to 155th Street. The individual parts of this route include:

- 1.0 miles of Striped Bike Lane on S. Scott Ave, beginning at Cambridge and going north to E. North Avenue.
- 0.52 miles of Sidepath on E. North Avenue from Scott going west to Westover Road. This would be an expansion of the existing sidewalk(s) on the south side of North Avenue.
- 2.02 miles of Bike Lane (striped) on Westover Road, beginning at North Avenue going north to 155th Street.
- 0.85 miles of paved shoulder on 155th Street, beginning at Westover and going east to US71.

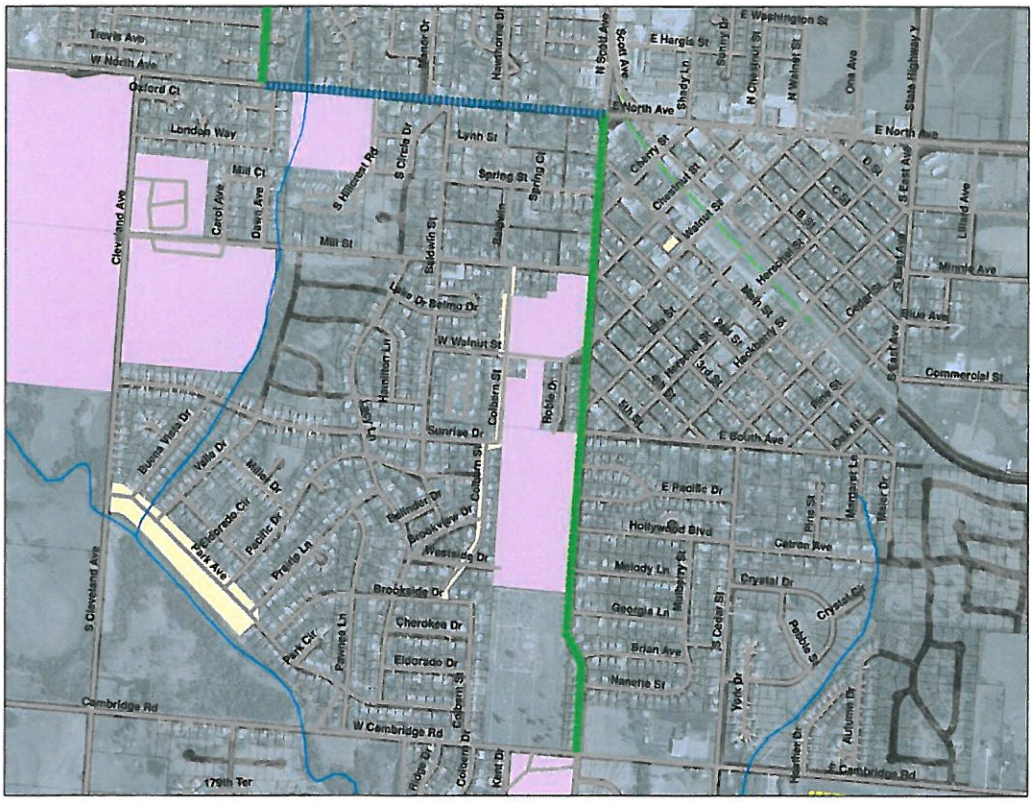

Figure 3.14 - South Scott and North Avenue Routes

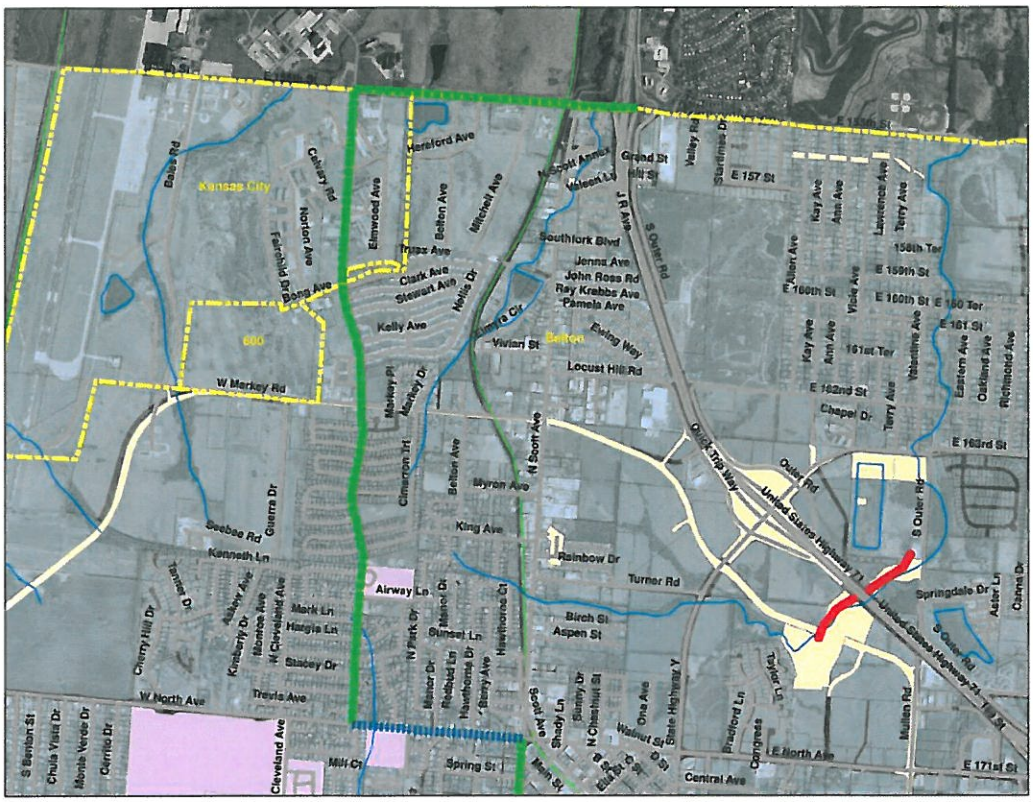

Figure 3.15 - Westover and 155th Street Routes

B. Markey Parkway Route Extension

This objective provides a dedicated route from North Avenue/US58 to Markey Park and will be completed along with the construction of Markey Parkway. Although current road cross-sections show a true sidepath, it will be important to monitor future phases of the road construction to ensure the sidepath isn't eliminated due to budget constraints. This parkway route effectively links retail, recreation and residential neighborhoods at once. The components of this objective include:

- 1.65 miles of Bike Lane (striped) on Markey Parkway from Y Highway north and west to Markey Park.
- Intersection improvements at Westover and Markey including bike/pedestrian crossings and directional signage.
- Trailhead facilities at Markey Park including bike racks, directional and informational signage, etc.

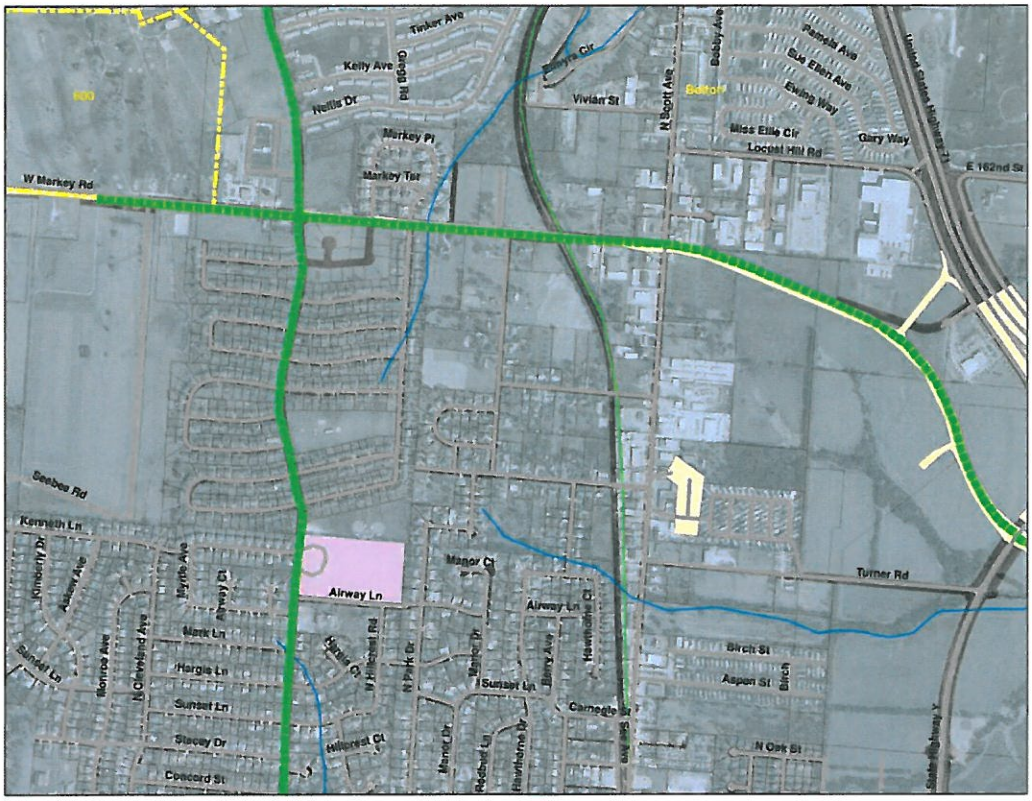

Figure 3.16 - Markey Parkway

C. East Belton Loop

Creating a loop to serve the eastern portion of Belton is an important goal. A combination of striped lanes and sidepaths (expanded sidewalks in most cases) will be used to create the loop that ties into trails created through other objectives. The components of this objective include:

- 0.48 mile of Striped Bike Lane on Bel Ray Drive from North Ave to round-about.
- 0.1 mile of striped lane on Bel Ray Drive from roundabout to Spring Valley Road.
- 0.49 mile of sidepath (sidewalk expansion) on Spring Valley from Bel Ray north to 163rd Street.
- 0.42 mile of sidepath on 163rd from Spring Valley west to Somerset Park (south sidewalk).

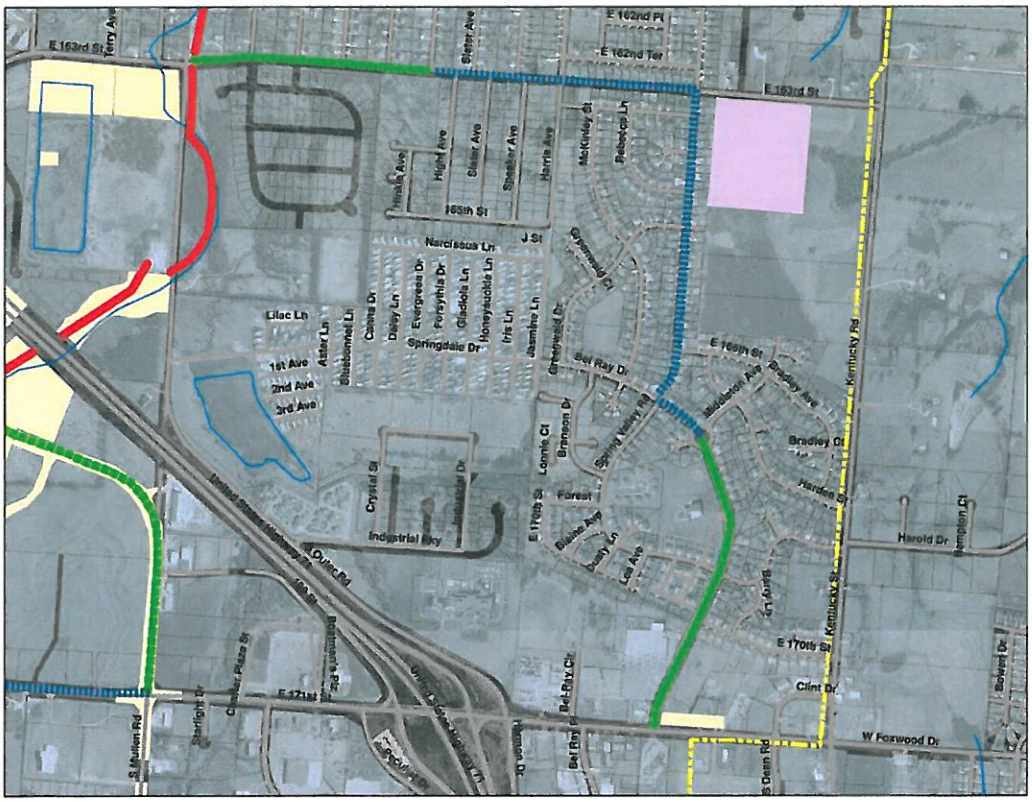

Figure 3.17 - East Belton Loop

3.4 Sidepath Trails

A. School and Park Connections in West Belton

Similar to creating a loop to serve the residents of east Belton, a combination of sidepaths and shared roadways will be used to establish access to the trail network for west Belton residents. The major routes included in this objective are:

- 1.19 miles of sidepath on North Avenue from Westover Road west to Prospect Ave. This would be an expansion of the southern sidewalk.
- 1.21 miles of sidepath on North Avenue from Scott east to Markey Parkway.
- 0.5 mile of paved shoulder on Cleveland Avenue from Cambridge north to Sunrise.
- 0.5 mile of sidepath (sidewalk expansion – west side) on Cleveland Avenue from Sunrise to North Avenue.
- 0.98 mile of paved shoulder on Cambridge from Cleveland east to Cedar (connect to existing bike lane on Scott).
- 1.09 miles of paved shoulder on Cedar from Cambridge north and east to North Avenue. This route will also include a 0.1 mile spur to Memorial Park.
- 0.49 mile of paved shoulder on Monte Verde from North Avenue south to Country View Park.
- Trailhead facilities at Memorial and Country View Parks.
- Trailhead facility in Downtown to be located in a public parking lot.

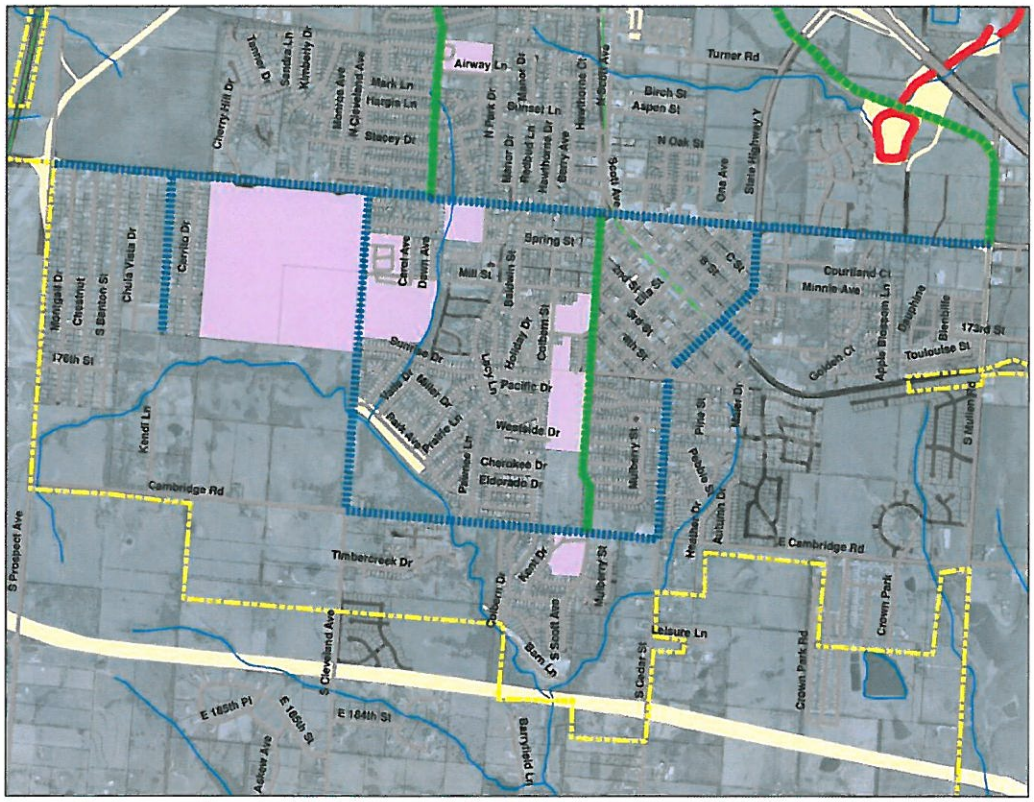

Figure 3.18 - West Belton Routes

B. North Avenue Sidepath

The final component of the East Belton trail system links the east Belton loop with the route along North Avenue/MO58. This will provide a secondary east-west connection (with the primary connection being the US71 underpass). The crossings required at the US71 interchange must be geared to safety for bicycle and pedestrian users.

- 1.06 miles of sidepath on North Avenue from Y Highway east to the US 71 interchange. This would be an expansion of the south sidewalk.
- 0.24 mile of striped bike lane on North Avenue through the US 71 interchange.
- 0.23 mile of sidepath on North Avenue from US 71 to Bel Ray Boulevard.
- Improvements at intersections and the US71 interchange.

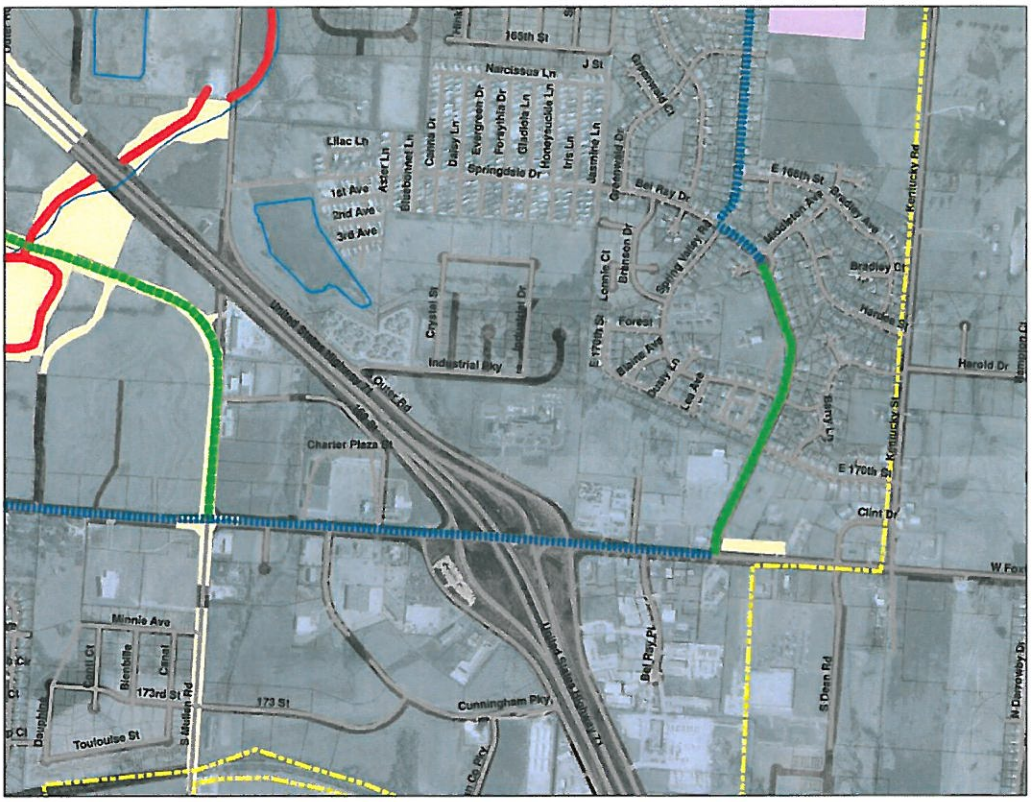

Figure 3.19 - North Avenue Extension

3.5 Summary

At the ultimate completion of these objectives, the City of Belton will have approximately 35 miles of off-street and on-street trails. This network meets and exceeds the goals established by the Trails Committee and will provide a new quality of life for all of the City's residents.

PART 4 - Budget Costs

4.1 Costs for Paved Shoulders

Although several routes described by the master plan may not require actually adding additional shoulder width, but the total cost for shared routes includes it for budgetary planning.

- Clearing/Grubbing and Brush Removal
- Asphalt expansion with sub-base
- Hydroseeding
- Silt Fencing
- Signage
- Re-located or new guard rails
- Rumble strips
- Pavement Markings
- Mobilization, temporary traffic control and contingencies
- Total Budgeting Cost: $115/LF

4.2 Costs for Striped Bike Lanes

Where the pavement width will allow, the master plan recommends re-striping the existing travel lanes to accommodate a dedicated bike lane on one side of the roadway. The following budgetary costs are used:

- Removal of existing markings
- Signage
- New Pavement Markings
- Mobilization, temporary traffic control and contingencies
- Total Budgeting Cost: $30/LF

4.3 Costs for Off-Street Shared-use Trails

The cost for shared-use, off-street trails takes into consideration several individual costs to arrive at a per-foot basis. These costs include:

- Excavation for the trail paving
- Rough grading and light clearing
- 4" gravel base course
- Compaction
- 2-1/2" bituminous sidewalk (8 foot wide)
- Fine grading (to 5' on either side)
- Seeding
- Land Acquisition

The budgeting cost for off-street shared-use trails, based on these assumptions, is $190.00 per linear foot. Costs for off-street sidepaths that involve expansion of existing sidewalks utilize a reduced cost of $65, due in most part to the reduced need for grading and drainage improvements.

4.4 Budget Projections

Budget projections for the various projects are provided on the next two pages.

	Project Designation	Type	Quantity	Unit	Unit Cost	Extended Cost
3.1	**Off-Street Trails**					
	US 71 Underpass					
	West extension	Off-street shared	750	LF	$190.00	$142,500
	East extension	Off-street shared	930	LF	$190.00	$176,700
	Markey Parkway and Lake trail					
	Markey Parkway - Y to North Ave.	Striped Lane	5250	LF	$30.00	$157,500
	Lake trail	Off-street trail	2460	LF	$190.00	$467,400
	Park facilities		1	EA	$7,500.00	$7,500
	Oil Creek and 163rd Street					
	Oil Creek trail - Mullen to 163rd	Off-street trail	1890	LF	$190.00	$359,100
	163rd Street - Oil Creek to Somerset Park	Sidepath (sidewalk exp.)	1970	LF	$65.00	$128,050
	Oil Creek Trail					
	163rd Street to 155th	Off-street shared	5900	LF	$190.00	$1,121,000
	Trailhead at 155th		1	EA	$7,500.00	$7,500
	Access at 162nd		1	EA	$7,500.00	$7,500
	BGKCR Shared Right-of-Way					
	Trail - 155th to Cambridge	Off-street shared	24950	LF	$190.00	$4,740,500
	Memorial Connection		1	EA	$7,500.00	$7,500
	Downtown Connection		1	EA	$7,500.00	$7,500
	Cambridge - Cedar to Rail ROW	Paved Shoulder	9350	LF	$115.00	$1,075,250
	Oil Creek Trail - Mullen Road Extension					
	Off-street trail - Mullen to Bel Rey	Off-street trail	5100	LF	$190.00	$969,000
3.2	**Paved Shoulder Trails**					
	Connections to Existing Trails					
	155th Street - US 71 to Oil Creek Trail	Paved Shoulder	5100	LF	$115.00	$586,500
	155th Street - Oil Creek to Fox Ridge	Paved Shoulder	8200	LF	$115.00	$943,000
	58 Highway - Bel Ray to Fox Ridge	Sidepath (sidewalk exp.)	5900	LF	$65.00	$383,500
	North Ave - Prospect to Holmes	Paved Shoulder	5400	LF	$115.00	$621,000
	Neighborhood infill					
	Pacific and Park	Off-street shared	5750	LF	$190.00	$1,092,500
	Harris Ave					
	162nd to 159th	Striped Lane	2460	LF	$30.00	$73,800
	159th to 155th	Paved Shoulder	2740	LF	$115.00	$315,100
	162nd - Oil Creek to Allen	Paved Shoulder	2500	LF	$115.00	$287,500
	Allen - 162nd to 155th	Paved Shoulder	4500	LF	$115.00	$517,500
	Floodway spur - KC Southern to Cambridge		2700	LF	Developer Paid	
	Floodway spur - Cambridge to 187th		5850	LF	Developer Paid	

	Project Designation	Type	Quantity	Unit	Unit Cost	Extended Cost
3.3	**Striped Lane Trails**					
	North-South Bike Route					
	S. Scott - Cambridge to North Ave	Striped Lane	5290	LF	$30.00	$158,700
	North Ave - Scott to Westover	Sidepath (sidewalk exp.)	2750	LF	$65.00	$178,750
	Westover - North to 155th Street	Striped Lane	10660	LF	$30.00	$319,800
	155th Street - Westover to US 71	Paved Shoulder	4500	LF	$115.00	$517,500
	Markey Parkway Route Extension					
	Y Highway to Markey Park	Striped Lane	8730	LF	$30.00	$261,900
	Intersection Improvements		3	EA	$5,000.00	$15,000
	East Belton Loop					
	Bel Ray - North Ave to round-about	Striped Lane	2550	LF	$30.00	$76,500
	Bel Ray - Roundabout to Spring Valley	Striped Lane	500	LF	$30.00	$15,000
	Spring Valley - Bel Ray to 163rd Street	Sidepath (sidewalk exp.)	2600	LF	$65.00	$169,000
	163rd - Spring Valley to Somerset Park	Sidepath (sidewalk exp.)	2200	LF	$65.00	$143,000
3.4	**Sidepath Trails**					
	School and Park Connections in West Belton					
	North Ave - Westover to Prospect	Sidepath (sidewalk exp.)	6300	LF	$65.00	$409,500
	North Ave - Scott to Markey Parkway	Sidepath (sidewalk exp.)	6400	LF	$65.00	$416,000
	Cleveland - Cambridge to Sunrise	Paved Shoulder	2650	LF	$115.00	$304,750
	Sunrise to North Ave	Sidepath (sidewalk exp.)	2650	LF	$65.00	$172,250
	Cambridge - Cleveland to Cedar	Paved Shoulder	5200	LF	$115.00	$598,000
	Cedar - Cambridge to North Ave	Paved Shoulder	5750	LF	$115.00	$661,250
	Spur to Memorial	Paved Shoulder	600	LF	$115.00	$69,000
	Monte Verde	Paved Shoulder	2600	LF	$115.00	$299,000
	Trailhead in Downtown		1	EA	$7,500.00	$7,500
	Trailhead at Memorial Park		1	EA	$7,500.00	$7,500
	Trailhead at Country View		1	EA	$20,000.00	$20,000
	North Avenue Sidepath					
	North Avenue - Y Highway to Bel Ray					
	Cedar to US71	Sidepath (sidewalk exp.)	5600	LF	$65.00	$364,000
	US 71 overpass/interchange	Striped Lane	1275	LF	$30.00	$38,250
	US 71 to Bel Ray	Sidepath (sidewalk exp.)	1190	LF	$65.00	$77,350
	Intersection Improvements		8	EA	$5,000.00	$40,000
	US 71 Interchange Improvements		1	EA	$50,000.00	$50,000

PART 5 - Funding sources

There are a variety of funding options available to the City of Belton. This section will summarize each and provide additional contact and application information.

5.1 Outdoor Recreation Grants

This program is administered by the Missouri Department of Natural Resources' (DNR) Division of State Parks and provides two different grant programs. The most applicable for the Belton Trail system is the Recreational Trails Program (RTP). This grant program is federally funded through the Federal Highway Administration and administered by the Missouri DNR. The grants are to be used for motorized or non-motorized trail development or renovation and preservation. They require a minimum 20% match for projects up to $100,000. More information can be found at www.mostateparks.com/grantinfo.htm or via telephone at 1.800.334.6946.

5.2 Land and Water Conservation Fund (LWCF) Grants

This federally-funded and state-administered fund has distributed more than $14.4 billion dollars in over 40,000 grants for outdoor recreational projects over the last 40 years. These grants require a 55% match and the projects must be maintained for a period of 25 years. This program is also administered by the Missouri DNR and contact information is provided above.

5.3 MoDOT Enhancement Projects

The Missouri Department of Transportation provides funding for twelve different Transportation Enhancement activities. Of particular note are the following:

- Pedestrian and Bicycle Facilities – funding for new or reconstructed sidewalks, walkways, curb ramps, bike-lane striping, wide paved shoulders, bike parking, bus racks, off-road trails, bike and pedestrian bridges and underpasses.
- Conversion of Abandoned Railway Corridors to Trails – funding for acquiring railroad rights-of-way, planning, designing and constructing multi-use trails; and developing rail-with-trail projects.

Several of the component trails within this masterplan would meet the eligibility requirements to be partially funded through this program. More information can be found at the following link:

http://www.modot.org/services/community/EnhancementFunding.htm

5.4 Missouri Safe Routes to School Grants

This program provides funding for safer biking and walking accommodations for children in grades K-8 and is administered by MoDot's Highway Safety Division and tailors grants to two areas; behavioral (such as public awareness, outreach, traffic education and enforcement) and infrastructure (including engineering and construction). Additional information can be found at the following link:

http://www.modot.mo.gov/safety/SafeRoutestoSchool.htm

5.5 Community Development Block Grants

This program offers funds to small Missouri communities to improve local facilities, address critical health and safety concerns and develop a greater capacity for growth. Many projects in the Master Plan would fall into that category. The program is administered through the Missouri Department of Economic Development and additional information can be found at the following web link:

http://go.missouridevelopment.org/cdbg

PART 6 - Community Involvement and Implementation

6.1 Adoption by Planning

In order for this Master Plan to function as a true planning document, the Parks Board should consider a resolution to officially adopt it (if it meets the expectations and goals of the Board) and forward to the City Council for adoption as well. This will ensure that Planning will incorporate the recommendations into future improvement projects and Capital Improvement budgeting.

6.2 Revised Development Ordinance

Along with adoption by Planning, a revision to the Belton development/subdivision ordinance can also assist in the implementation of the Master Plan's recommendations. The revised ordinance should employ a 'carrot and stick' approach that will provide incentive for progressive/forward-thinking developers along with a fee structure to ensure that all new development contributes to Belton's trail system.

The 'carrot' part of the ordinance should offer developers several different options. For properties away from planned floodway/off-street trails, the new ordinance could allow the developer to establish the bike route through the neighborhood creating a wide curb lane on those streets. The developer would then be allowed to reduce the pavement width for other side streets. Similarly, if the developer wished to create an off-street trail through the neighborhood, he/she should be allowed to eliminate sidewalks along one side of the street. If the development *is* bisected by an off-street trail, the developer would be required to construct that portion of it, but the new ordinance could offer to engage the city in a partnership agreement where the developer would not be responsible for any maintenance after the first year or perhaps the City could offer to clear and grub the trail route (giving the city the ability to plan the route) to help offset the cost to the developer.

If developers choose to ignore trails within their project(s) and would rather choose the 'stick', then the new ordinance should establish a fee structure whereby the City of Belton can receive some income to help fund trails in other locations. This fee should not be excessive to the point where developers choose to build somewhere else, but it should be balanced enough that they would voluntarily choose to build a trail in their project and link to Belton's trails. The basis of the fee should be the number of residents that are anticipated to live in the project (at completion) or, for commercial projects, the number of users/customers that are anticipated. The City should then estimate the number of miles that those residents/users will put on City streets that could have gone on trails instead and establish the maintenance cost (per mile) incurred. That cost would then be charged to the developer if they choose to ignore trails completely.

These approaches would undoubtedly require additional vetting by Development, Engineering, Parks and Recreation and the Board of Aldermen before actually being implemented but they are a good place to begin discussions.

PART 7 - Conclusion

The creation of this Master Plan has been an exciting and challenging project because of the potential contained within it. A project of this scale can affect tens of thousands of individual lives in a positive way. Trails provide so much to a community, giving access and opportunity to all ages of residents. It is thrilling to think that a section of trail may give a retiree an opportunity to bird watch at sunrise, give a young family the opportunity to bike to school together a few hours later, give a youth the ability to stay after school for enrichment programs without being dependent on a ride, and give everyone the chance to enjoy the outdoors in many different ways.

It is our sincere hope that residents of Belton will look back on the summer of 2008 and say 'that's when everything changed' and mean that it changed for the better.