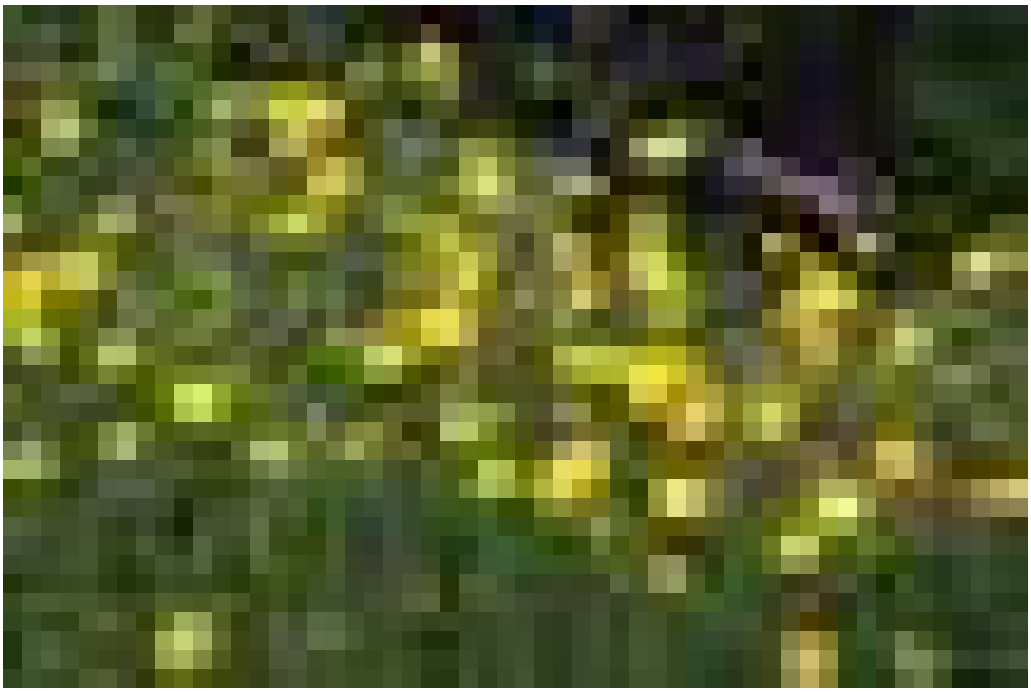
City of Norman

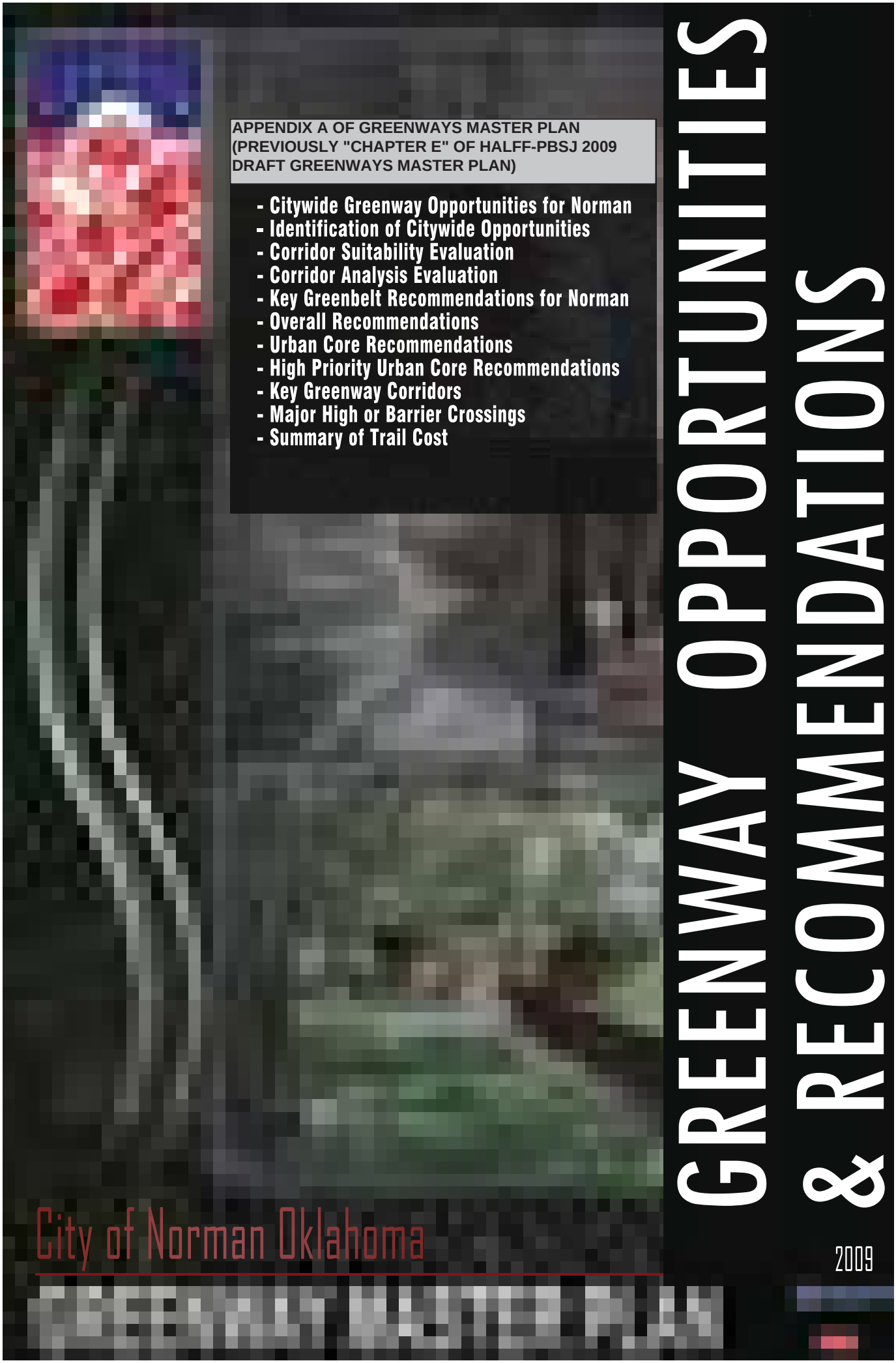
Greenways Master Plan - Appendices



Greenways Into The Future

April 2012

APPENDIX A - IMPLEMENTATION GUIDE OF TRAILS AND OPEN SPACE



APPENDIX A OF GREENWAYS MASTER PLAN
(PREVIOUSLY "CHAPTER E" OF HALFF-PBSJ 2009 DRAFT GREENWAYS MASTER PLAN)

- Citywide Greenway Opportunities for Norman
- Identification of Citywide Opportunities
- Corridor Suitability Evaluation
- Corridor Analysis Evaluation
- Key Greenbelt Recommendations for Norman
- Overall Recommendations
- Urban Core Recommendations
- High Priority Urban Core Recommendations
- Key Greenway Corridors
- Major High or Barrier Crossings
- Summary of Trail Cost

GREENWAY OPPORTUNITIES & RECOMMENDATIONS

City of Norman Oklahoma

2009

> By linking open spaces we can achieve a whole that is better than the sum of the parts.
>
> - William Whyte, The Last Landscape, 1968

Citywide Greenway Opportunities for Norman

Norman has many opportunities for greenways and trails located throughout the city. Over the next two to three decades, it is anticipated that many of those opportunities can be preserved as greenways with the possibility of trails located within these zones. However, the city's efforts should be focused on those corridors that provide the most significant beneficial impact, and that truly begin to create a major citywide network.

This section presents a citywide network of greenways and trails, and helps represent key opportunities within the city. These corridors were then evaluated to see if the conditions were suitable to establish a greenway system. Those key areas were then divided into segment and prioritized. Cost projections were then prepared for each of the recommended segments, allowing for the preparation for greenway implementation.

These corridors were selected to meet the goals established by the planning effort, and to reflect citizen comments and desires received during the extensive public input process.

The immediate focus will be on corridors within the city limits of Norman.

IDENTIFICIATION OF CITYWIDE OPPORTUNITIES

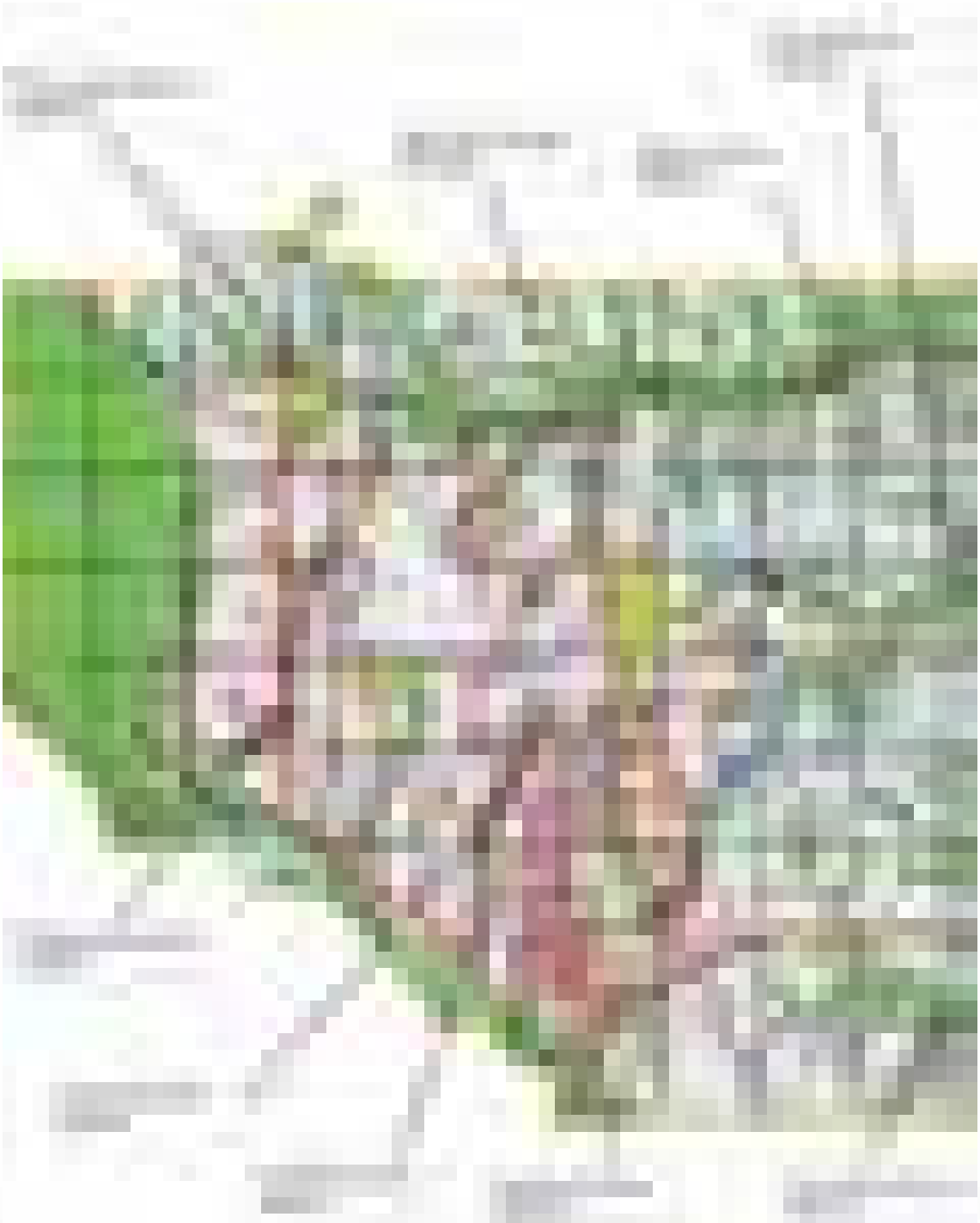
The process of identifying greenway and trail opportunities used these following steps:

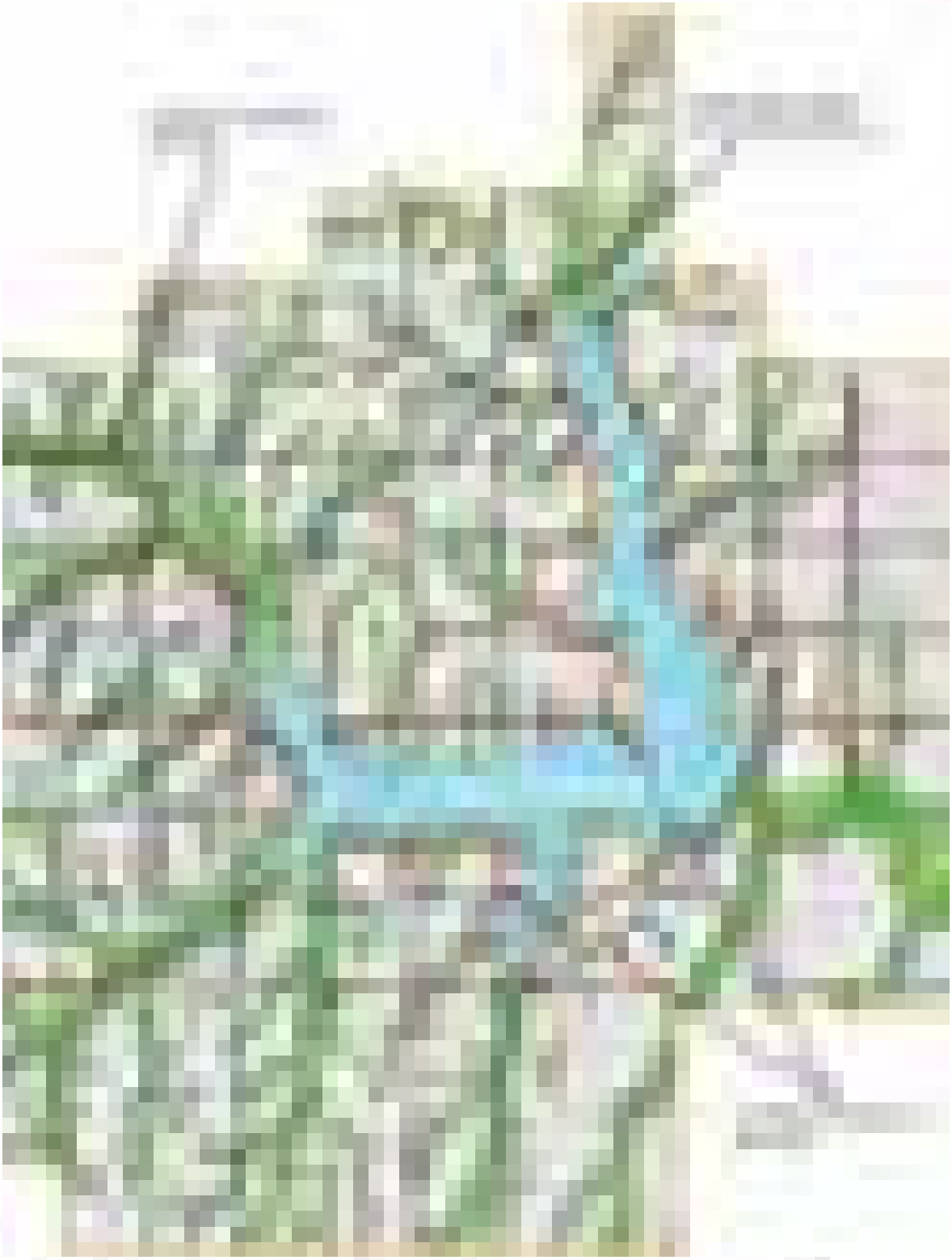
1. Inventory Collection

Collection of inventory included; gathering photos and collecting information of the existing conditions in Norman. Retrieving and utilizing GIS data received from the city.

2. Corridor Suitability Analysis

Each potential corridor was evaluated for its suitability as a greenway and as a trail corridor. The conclusions of the analysis help categorize the potential greenways and trail system shown in the map below.

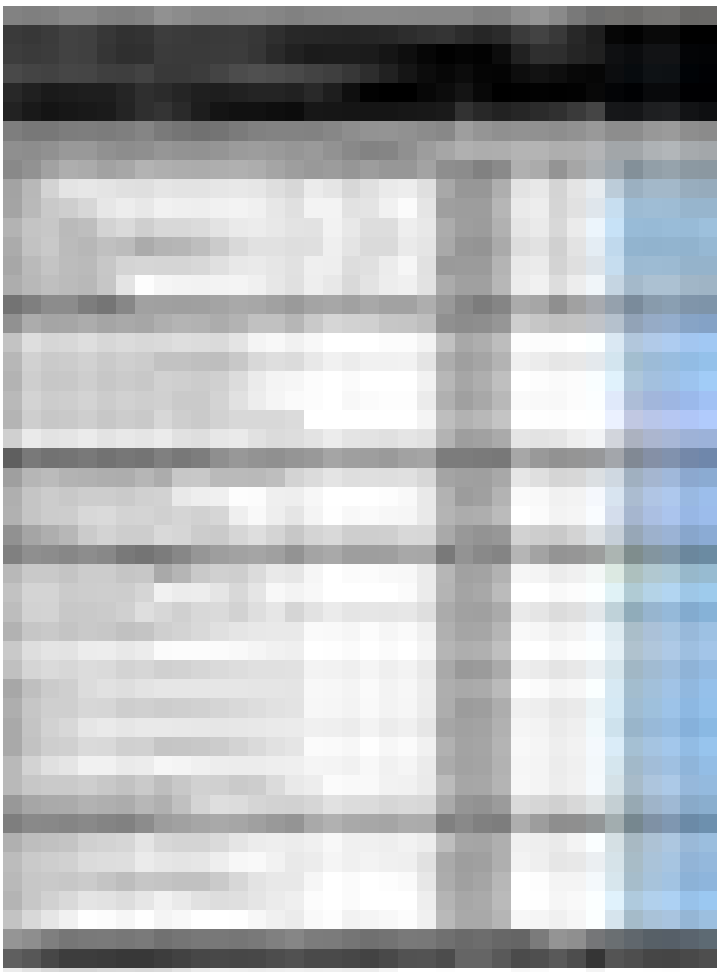




October 2009

CORRIDOR SUITABILITY EVALUATION

The "suitability" of individual corridors was evaluated using a matrix developed with the oversight of the Greenbelt Commission. This greenbelt evaluation looked at connectivity, ownership of the property, compatibility with adjacent land uses, environmental and physical characteristics, and the level of public support for each corridor. *See table below.*



CORRIDOR PRIORITIZATION EVALUATION

SUITABILITY EVALUATION SCORE

While the suitability evaluation does not necessarily eliminate any corridor from consideration, it does indicate which corridors have the greatest potential for use as greenbelts. A score from a high of 5 points to a low of 1 point is given based on the suitability score.

LEVEL OF CONNECTIVITY

Connectivity is measured by the degree to which the project connects to existing greenways, parks, schools, libraries, historic sites, neighborhoods, shopping, or other major destination points, or to on-road bicycle or pedestrian facilities. The greater the connectivity, the higher the priority. Connectivity was ranked from 1 to 5, based on the score from the suitability evaluation, with five being the high score and 1 being the low score.

POTENTIAL LEVEL OF USAGE

Is the proposed trail in a more urban setting or surrounded with more dense development that may generate higher levels of use than other trails? Will it offer a variety of trail use experiences for a significant number of users? The anticipated usage of the facility is based on the anticipated "close to home" usage, based on the number of people residing in the vicinity of the proposed trail.

CONTRIBUTION TO THE GREENWAY/ OPEN SPACE NETWORK

Does the project preserve critical habitat or preserve greenway corridors that could protect native flora and resident and/or migratory fauna. Does the corridor preserve needed green space in that part of the city? Does the trail corridor provide a scenic trail use experience not afforded by other trail corridors? A score of 3 ranked as the high score, and a score of 1 ranked as the low score.

CRITICAL OPPORTUNITY

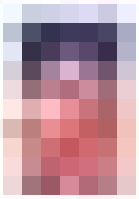
Does this corridor seize an opportunity to secure a corridor for a greenbelt or for a trail that may not be available in the future? Is the corridor going to be developed? Does not acquiring or developing this corridor add significantly more expense in the future as adjacent properties develop or surrounding land uses change? Are there other plans for this area that can be used to expedite trail or greenbelt development? Corridors were ranked from 1 to 5, with a ranking of 5 having the most chances for a greenway opportunity.

INTEGRATION WITH STORM WATER MASTER PLAN

Greenbelt corridors that are part of the existing storm water drainage system in the city, or that are proposed to be acquired and or improved as part of recommendations of the Storm Water Master plan can be integrated into the greenbelt system in a more efficient manner. Corridors were ranked from 1 to 3, with 3 having the most overlap with the Storm Water system

LEVEL OF READINESS

Corridors where acquisition has been completed, where funding sources or partnerships have been identified, or where design, neighborhood input and permitting has occurred or is underway may be candidates for earlier preservation and development as greenbelts. Corridors were ranked from 1 to 4. If the corridor was suitable for design a maximum score of 4 was given to the corridor



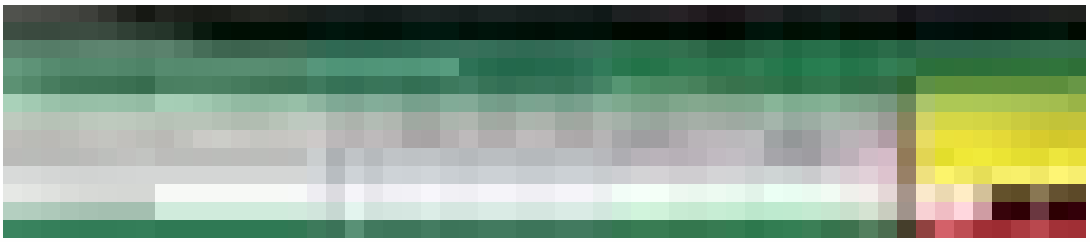
CORRIDOR PRIORITIZATION

SCORING SYSTEM:

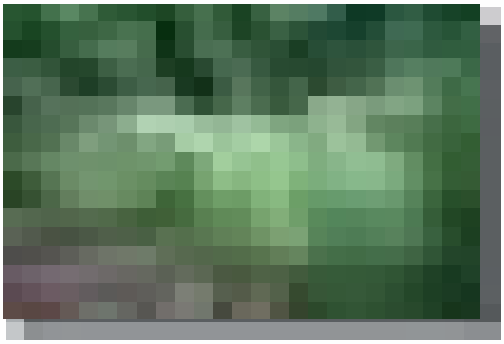
A maximum score of up to 30 points can be achieved using the criteria discussed on the previous page.

Generalized rankings were grouped as follows:

- **High Priority** – score from 21 to 30– indicates a time horizon from one to seven years in length.
- **Medium Term Priority** – score from 11 to 20 – indicates a time frame from 8 to 15 years in length.
- **Long Term or by Non-City entity** – score from 1 to 10 – generally indicates a time frame longer than 15 years, but may also indicate a corridor segment where primary development may be lead by a non-city entity or developer.



KEY GREENBELT RECOMMENDATIONS

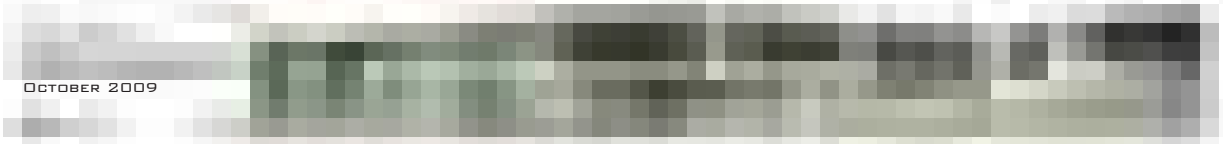


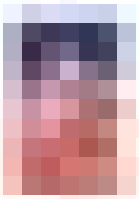
Recommendation #1

1. Include a trail construction component in any proposals for a storm water fee – A fee amount of approximately $1.11 would generate approximately $1,000,000 per year that could be used for greenbelt preservation and/or trail development. Over a 20 year lifespan, that amount could be used to target many of the high priority trail corridors throughout the city. More importantly, that amount could be aggressively leveraged to pursue additional grant funding opportunities as those become available. This would give Norman a significant advantage in competing for meeting the required matching component of many of those grants. Most importantly, it would ensure a consistent and ongoing development of trail corridors, so that citizens could see significant progress year after year.

Recommendation #2

2. Consider bond propositions to help supplement trail development – A trail and greenbelt preservation bond item could also generate a larger amount of funds that could be quickly used to preserve lands or to develop key trail components that have higher construction costs but that are key connectivity needs. For example, these could be used to help create IH 35 crossings, the connection under the railroad corridor at Robinson, or longer segments of trails connecting to key destinations such as the OU campus, the downtown area, or the new Ruby Grant park site.





Recommendation #3

3. Work with the development community to build trail segments – The Greenbelt Plan calls for many trail corridors throughout the city, and may take a significant amount of time to be built if the City of Norman is the only entity involved in their construction. The development community can assist by building trail segments that are in their properties. These are proven to be key features that help generate sales and added value to new developments, but the key attraction may be the connectivity to other parts of the city that will begin to take place as spine trails are built and segments begin to connect. In some neighborhoods, parkland dedication could shift to greenbelt corridors or stream planning corridors, as long as some non-floodplain areas were available for building playgrounds or other major park features. Where development entities are asked to build trails, credits for other fees or requirements should be considered.

Recommendation #4

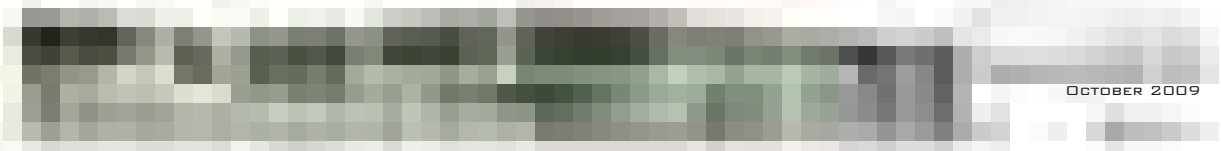
4. Emphasize the preservation of trees and natural vegetation along all greenbelts – Norman has a very healthy urban forest (that is recovering from recent ice storms), but in new developments much of that vegetation may be lost during construction. Greenbelts should be the one area where existing trees or stands of trees are preserved, whether in the drainage corridor or near to it, so that a true park-like environment is preserved.

Recommendation #5

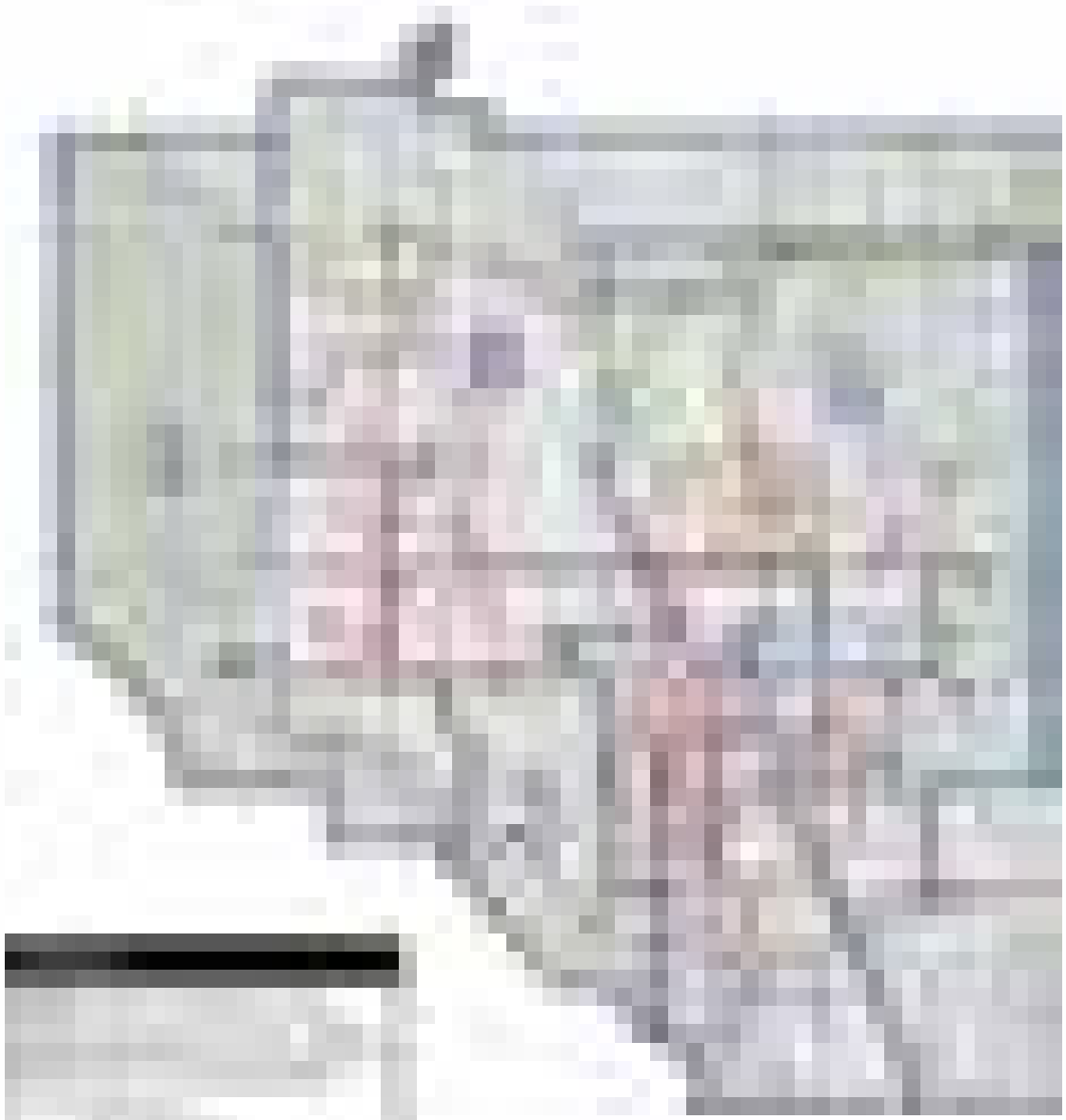
5. Keep greenbelt and trail corridors open and accessible – Almost every existing creek in Norman has been developed with limited physical and visual access to the greenbelt. Access to parks and trails is often difficult or almost impossible because lots back up to the greenbelt. Greenbelts that are designed to have public frontage on **one side** are strongly encouraged. The potential loss of value in "greenbelt" lots can be made up by the increase in value of other lots that now have much better physical and visual access to continual lengths of the greenbelt. The greenbelt park becomes a feature for the entire development, and not just the lots that back up to it.

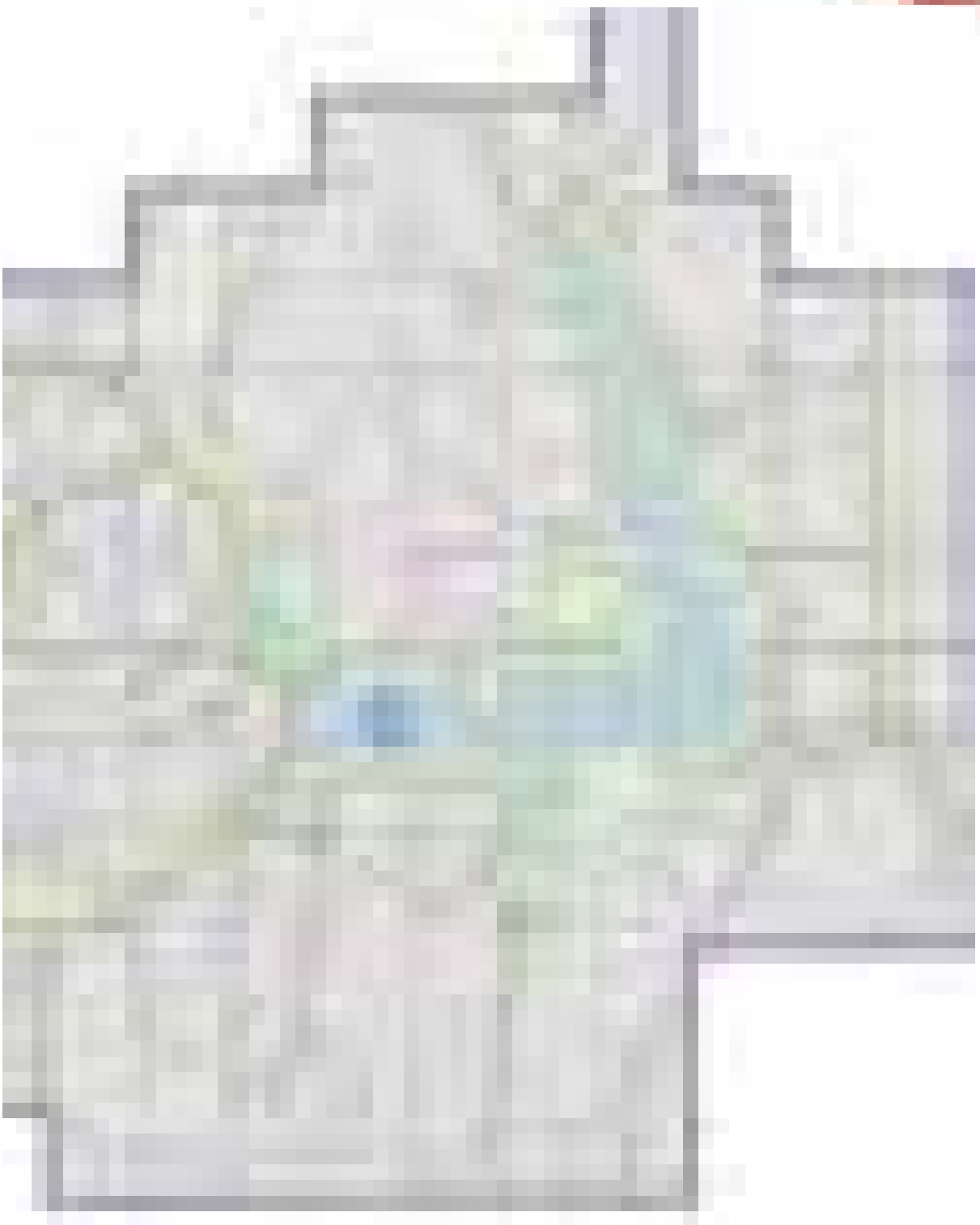
Recommendation #6

6. Seek partners – The City of Norman cannot implement this entire trail plan on its own. Multiple public and private entities must become partners in this effort. The University of Oklahoma, the Norman School District, special district areas, hospitals, and the State of Oklahoma are all necessary partners. On the private side, every development can help add small segments that can ultimately create one of the most connected cities anywhere in the United States.



CITYWIDE RECOMMENDATIONS

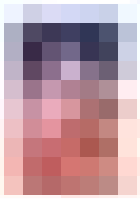


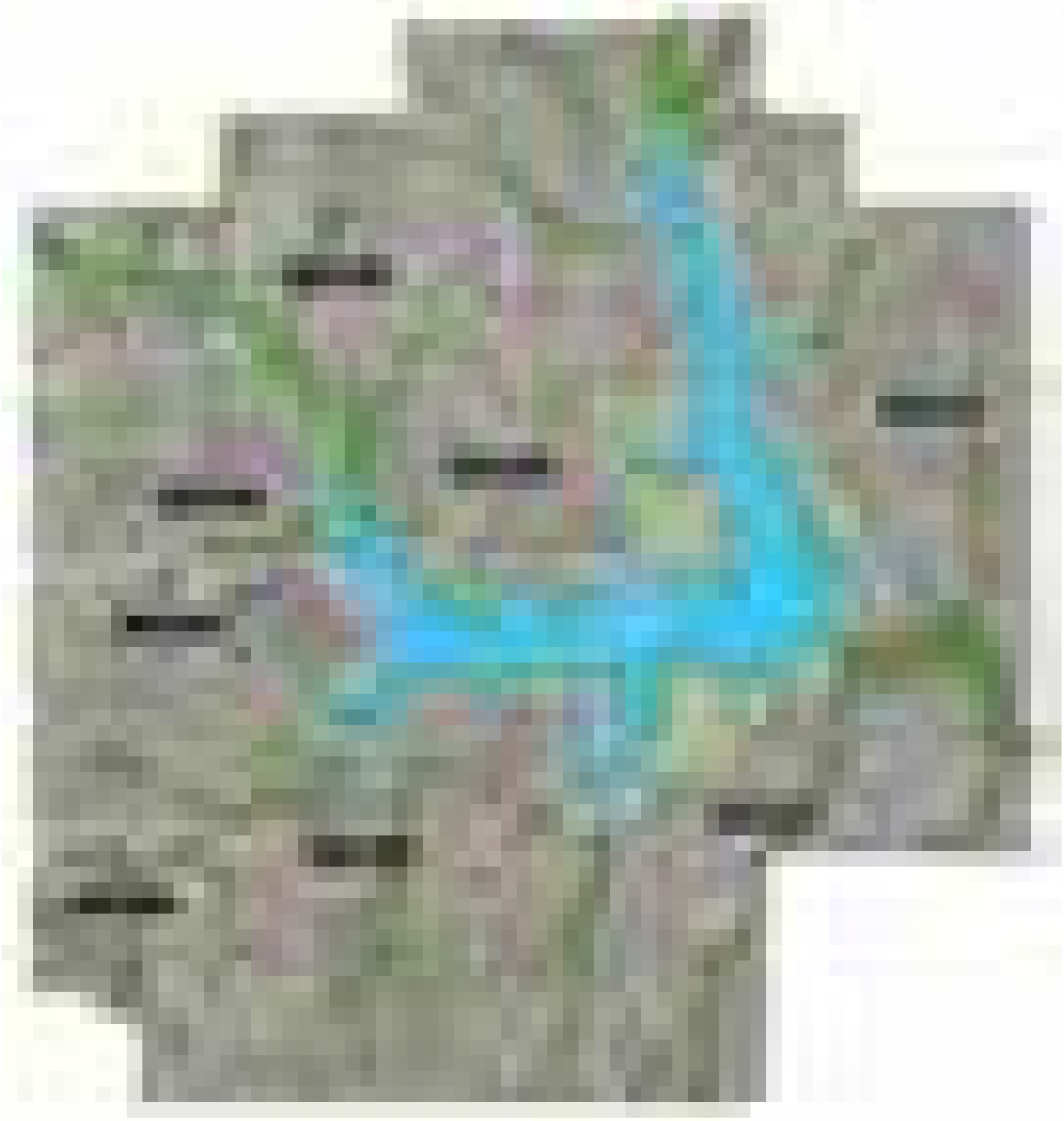


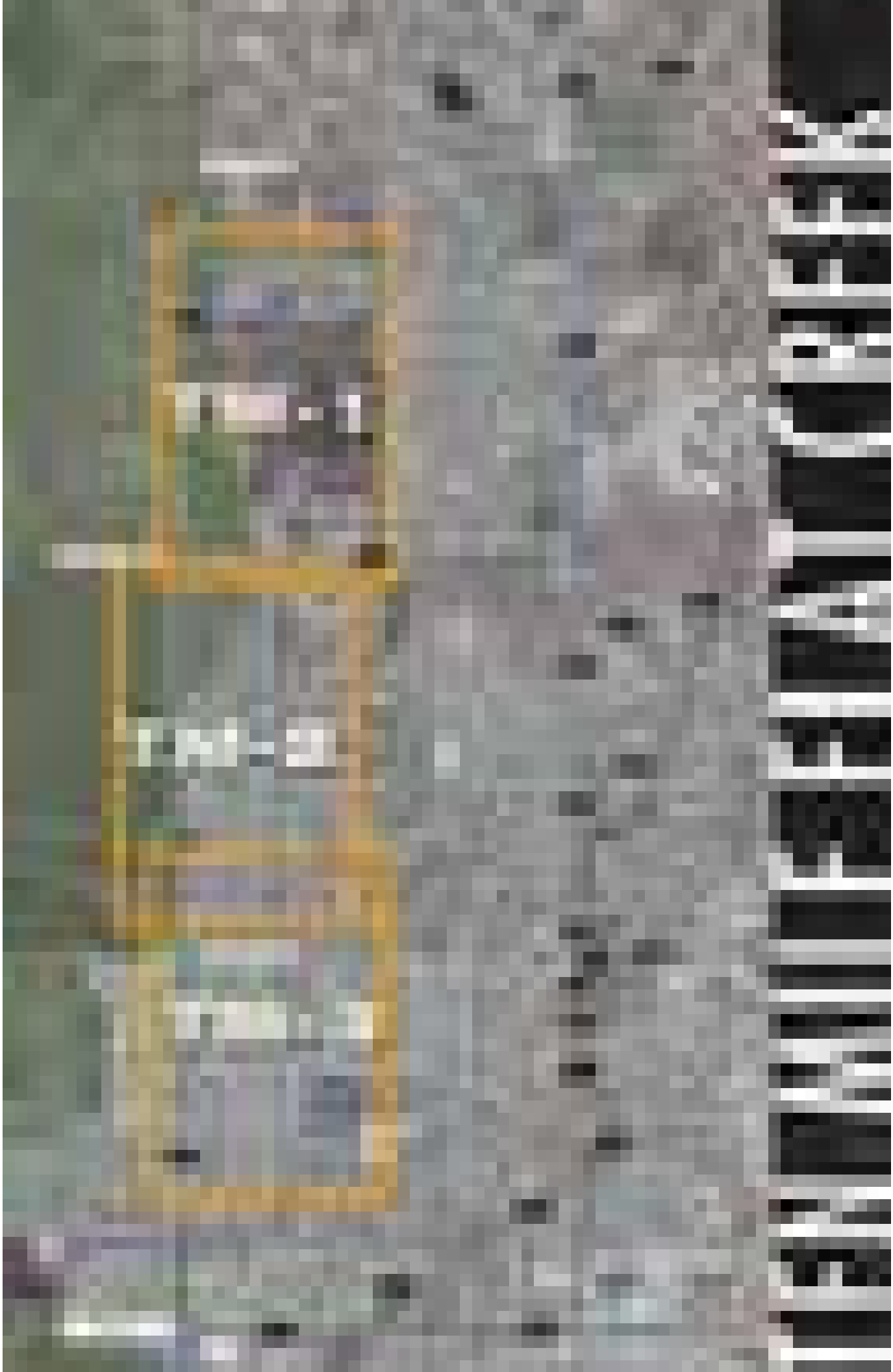
URBAN CORE RECOMMENDATIONS

NORMAN GREENWAY CITYWIDE KEY RECOMMENDATIONS

Summary:
This section shows the greenway potential for the city of Norman for the estimated year of 2040. With the combination of new development and existing greenways, Norman has the potential to be a "green" city. With these new greenways comes the opportunity to further connect the city with these potential greenways. The following map is a diagram which represents the key recommendations for the future of Norman.







TEN MILE FLAT

Location: Located in W sector of the City
From: Indian Hill Rd.
To: Canadian River

Surrounding Corridors: Brookhaven Creek, Canadian River, and Tributary G to Little River

Size: 12 Sq. Miles – 7,874 Acres (Approximately: W 72nd St. to W 48th St. and Indian Hill Rd. to Canadian River)

Major Transportation/Roads:
E/W: Main St. – Robinson – Rock Creek Rd. – Tecumseh Rd. – Franklin Rd. - Indian Hill Rd.
N/S: W 72nd St. – W 60th St. – W 48th St.

Major Area Corridor(s):
10 Mile Flat Creek runs predominantly North and South. This is located predominately in a Flood Plain.
The Canadian River has a flat and densely vegetated terrain. This Corridor has the potential to be a key connector with other Greenway Opportunities.

Minor Area Sub-corridor(s):
Robinson St. has an existing Trail which runs from W 24th St. to W 12th St.
24th St. and 12th St. is the major arterial streets connectors.
Local Streets have great opportunities for parkway connections with Schools, Parks and Major Retail land uses.

Land Use Context: Much of this corridor is highly undeveloped; the predominant land use is Agriculture uses. Low density residential is scattered throughout the corridor.

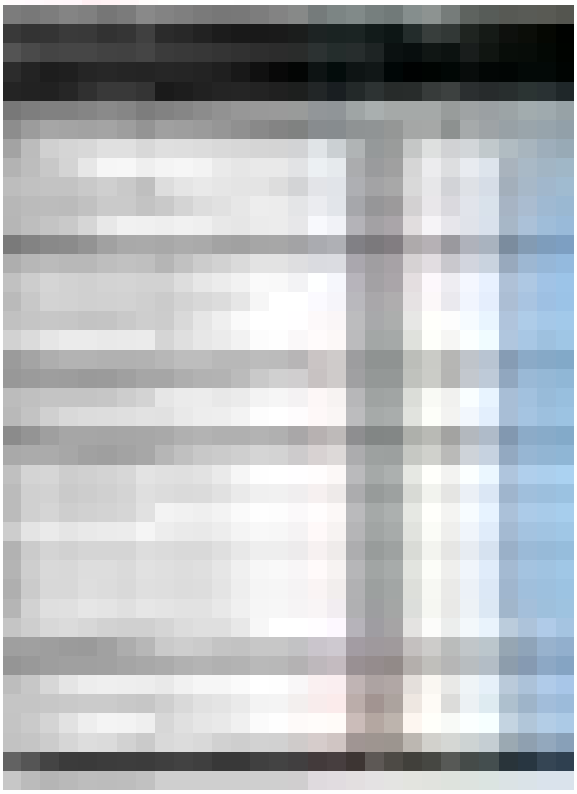
Key Destinations: No Schools or Parklands are located within Corridor area, but other local schools are located within the surrounding Corridors. Destinations would be located in surround Corridor areas.

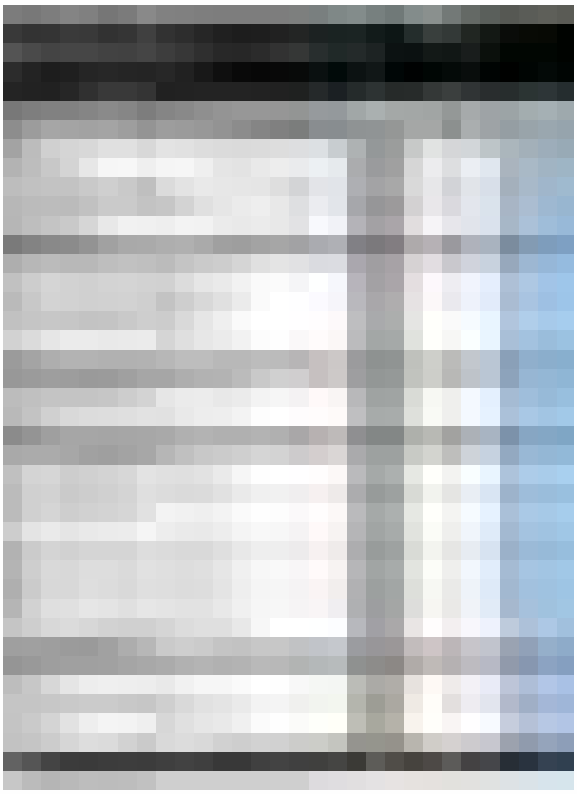
Key Opportunities:
Opportunities along Street Corridors: The use of Trails along street could be used due to the fact that much of this area is undeveloped. A majority of the routes that could be proposed in this area would be for recreational purposes not commuting.
Opportunities along Creek Corridors: A majority of the 10 Mile Flat Creek Corridor is undeveloped. Portions of the creek have areas in which a nature/scenic trail could be developed. The acquisition of land would be necessary to accomplish this goal.

Sensitive Areas: Areas located within heavily flooded zones

Potential Drainage Improvements: Drainage channel improvements located along portions of the creek

Suitability Analysis: Ten Mile Flat



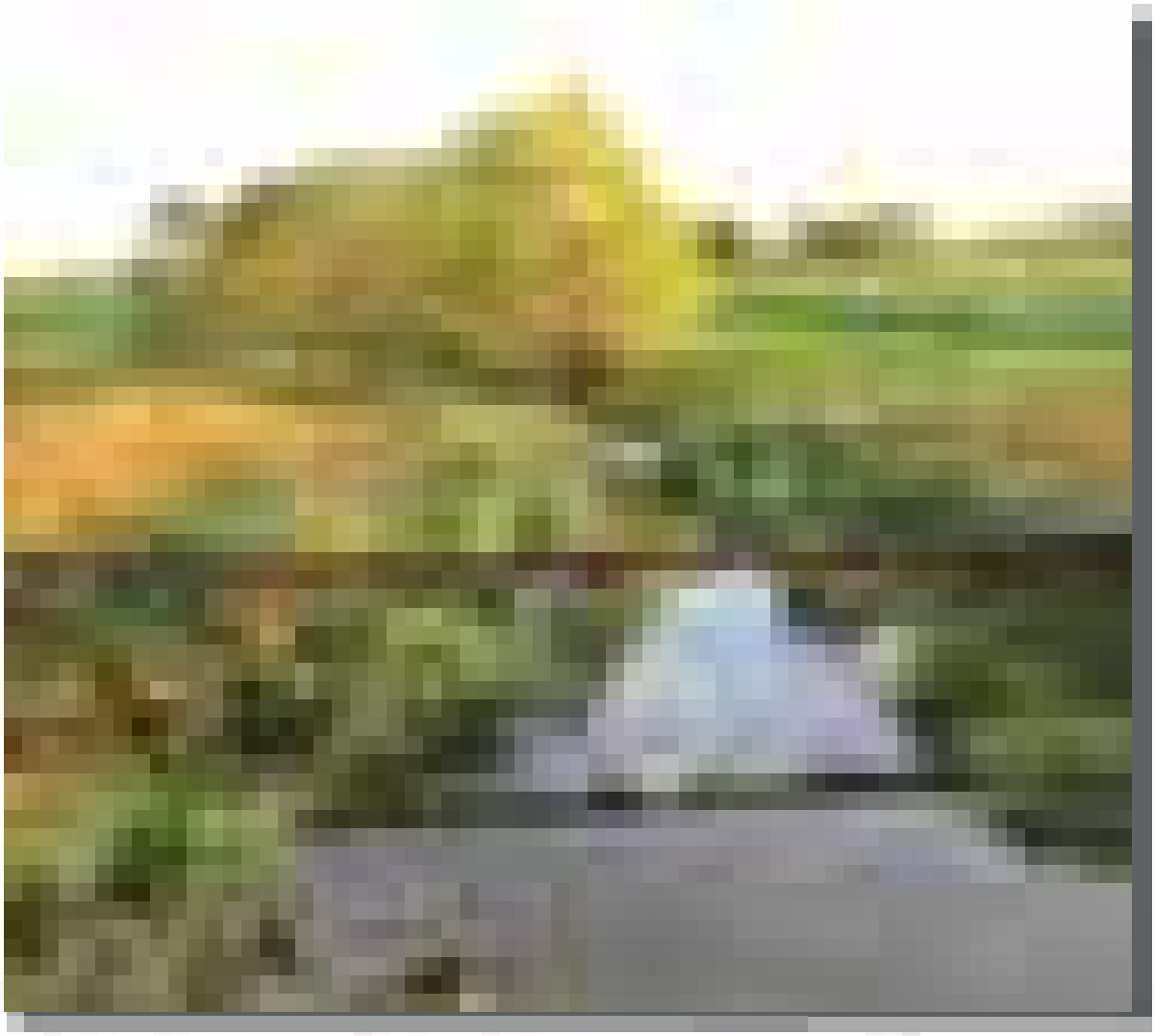


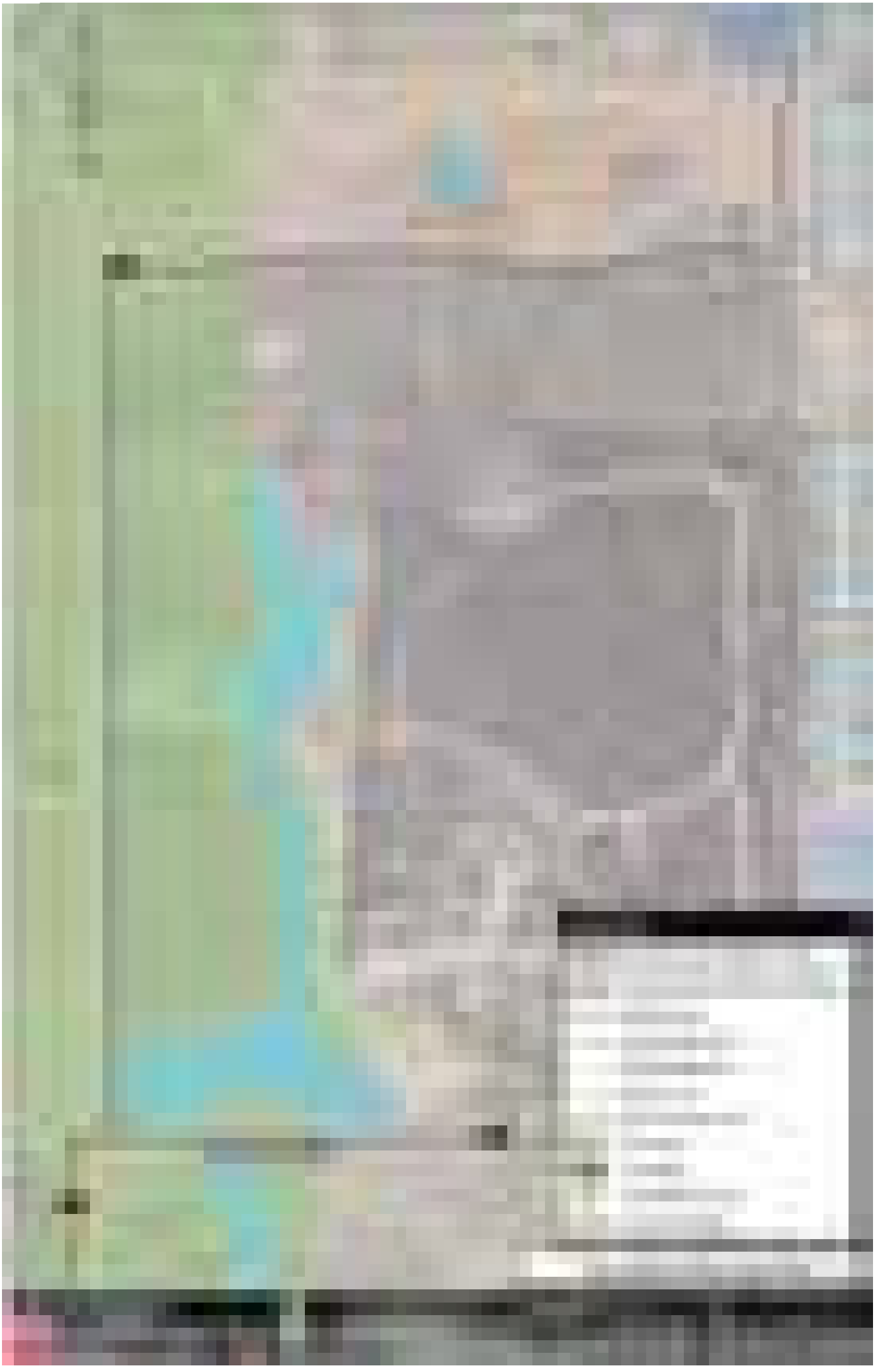
Prioritization Analysis: Ten Mile Flat

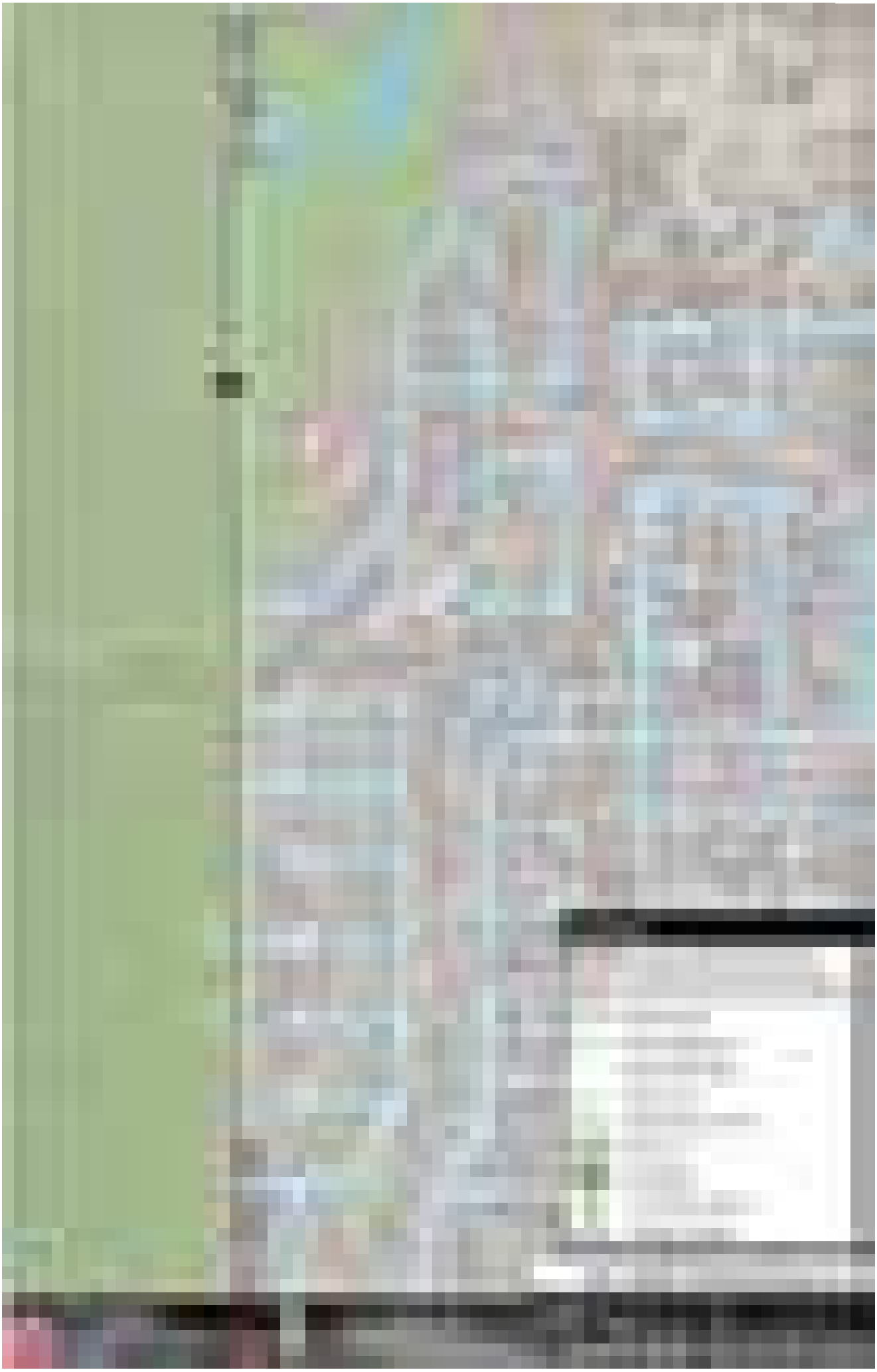
City of Norman
Greenway Master Plan

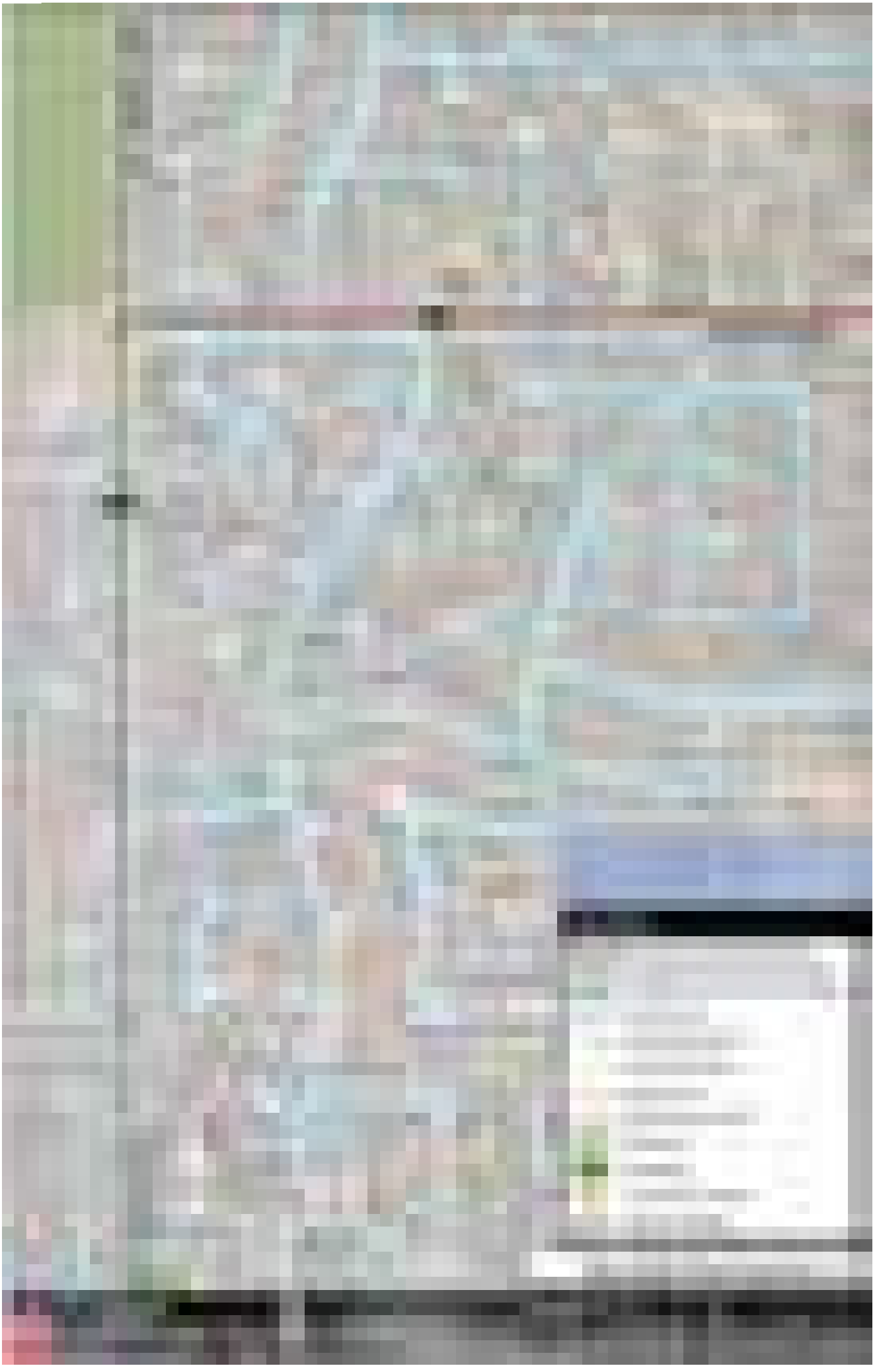
Greenway Corridor Prioritization: Ten Mile Flat

Number	Corridor		Prioritization Criteria							Total Score	Priority Category
		Length (L.F)	Suitability Evaluation Score (1 to 5)	Level of Connectivity (1 to 5)	Potential Level of Use (1= low, 5 = high)	Key Contribution to Greenway and Open Space Network (1 to 3)	Critical Opportunity (1-5)	Integration with Stormwater Plan/Facilities (1 to 3)	Level of Readiness (1 to 4)	Maximum Score = 30	21 to 30 = High 11 to 20 = Medium 0 to 11 = Long Term
PL-1	Powerline Easement (Castlerock Park to City limits)	14000	4	2	3	3	2	1	3	18.0	Medium
TM-1	Ten Mile Flat (Roosevelt Elem. To Rock Creek Rd) Segment 1	6600	4	0	2	2	4	1	2	15.0	Medium
TM-2	Ten Mile Flat (Rock Creek Rd. to Main St.) Segment 2	9500	4	2	3	1	3	1	3	17.0	Medium
		30100	4.0	1.3	2.7	2.0	3.0	1.0	2.7	16.7	Medium









TRIBUTARY G. CREEK

Location: Located in NW sector of the City
From: Indian Hill Rd.
To: Tecumseh Rd.

Surrounding Corridors: Brookhaven Creek, 10 Mile Flat, and Little River

Size: 5 Sq. Miles – 3,244 Acres (Approximately: W 48th St. and W 24th St. and Indian Hill Rd. to Tecumseh Rd.)

Major Transportation/Roads:
E/W: Indian Hill Rd. – Franklin Rd. – Tecumseh Rd.
N/S: W 48th St. – W 36th St. – IH-35 – W 24th St. - Highway 77/Flood St.

Major Area Corridor(s):
Tributary G to Little River Creek runs predominantly West to East. The creek does have potential for Greenway Trails along the corridor.
Proposed Legacy Trail has potential to be a major connection.
Minor Area Sub-corridor(s):
Franklin Rd. and Indian Hill Rd. are the major arterial streets connectors. Smaller Tributaries in undeveloped areas.

Land Use Context: Much of this corridor is undeveloped. Future Single Family residential will be the future predominate land use. This area also includes Medical, industrial, institutional, and Parkland uses.

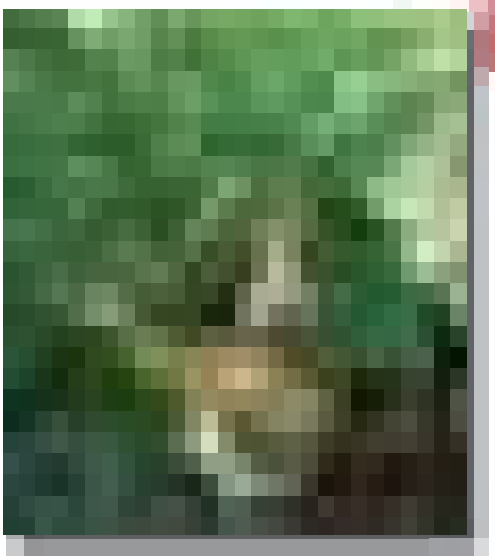
Key Destinations: One School (Roosevelt Elementary) is located within Corridor area, and other local schools are located within the surrounding Corridors. 2 Parks and the future Ruby Grant Park are located within this area. The proposed Legacy Trail section will be a key connector.

Key Opportunities:
Opportunities along Street Corridors: A key connection with the Moore-Norman Technology Center is located within this corridor. The possibility of Parkway Street Trails located along the Arterial streets such as Tecumseh Rd. and Franklin Rd. can help connect with key destinations in the area. Local Streets can be used when needed to connect with Schools, existing parks, open spaces, and major retail land uses.

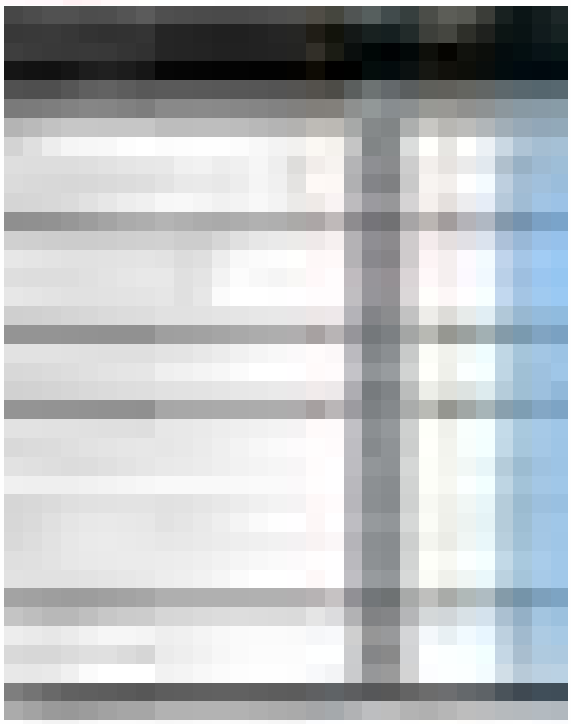
Opportunities along Creek Corridors: A majority of the Tributary G Corridor is undeveloped land. This is an opportunity to propose Greenway trails along these areas with future development.

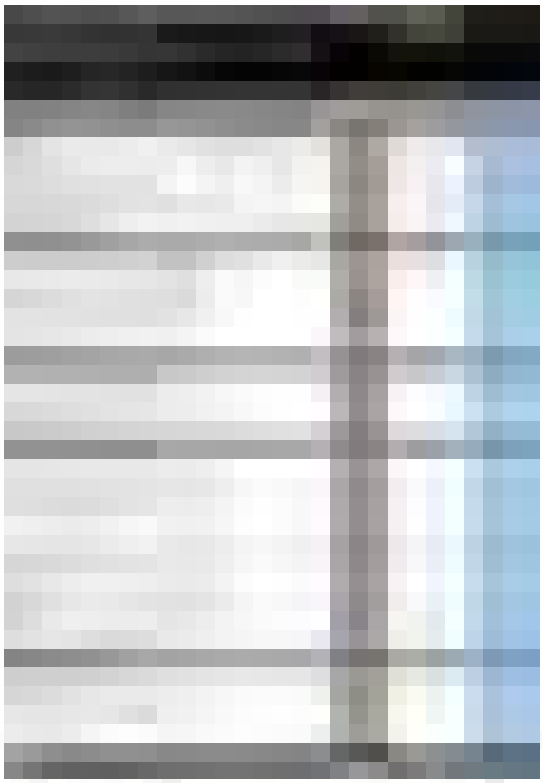
Sensitive Areas: IH-35 Corridor area and Flood St. Crossing

Potential Drainage Improvements: Road improvements along drainage channels



Suitability Analysis: Tributary G. Creek





Priortization Analysis: Tributary G. Creek

City of Norman
Greenway Master Plan

Greenway Corridor Prioritization: Tributary G

Number	Corridor		Prioritization Criteria							Total Score	Priority Category
		Length (L.F)	Suitability Evaluation Score (1 to 5)	Level of Connectivity (1 to 5)	Potential Level of Use (1= low, 5 = high)	Key Contribution to Greenway and Open Space Network (1 to 3)	Critical Opportunity (1-5)	Integration with Stormwater Plan/Facilities (1 to 3)	Level of Readiness (1 to 4)	Maximum Score = 30	21 to 30 = High 11 to 20 = Medium 0 to 11 = Long Term
TG-1	Tributary G West - Segment 1	3350	4	1	3	3	4	2	2	19	Medium
TG-2	Tributary G Central - Segment 2	3400	3	1	2	0	3	1	1	11	Medium
TG-3	Tributary G East - Segment 3	7000	4	1	3	3	3	1	1	16	Medium
TG-4-6	Tributary G South - Segments 4-6	7000	4	4	4	1	4	1	3	21	High
		20750	3.8	1.8	3.0	1.8	3.5	1.3	1.8	16.8	Medium

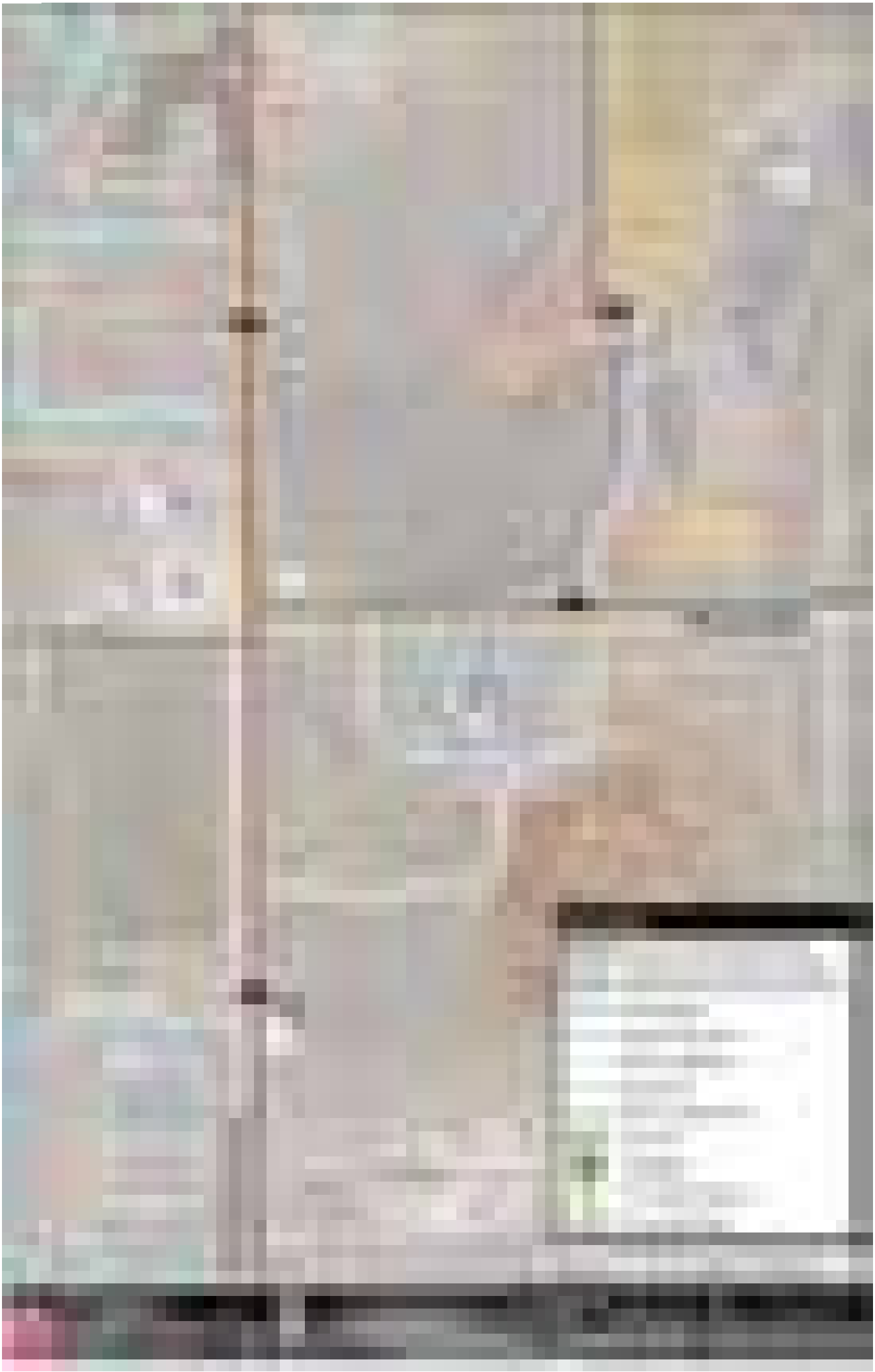
Urban Greenway System: Tributary G Key Recommendations

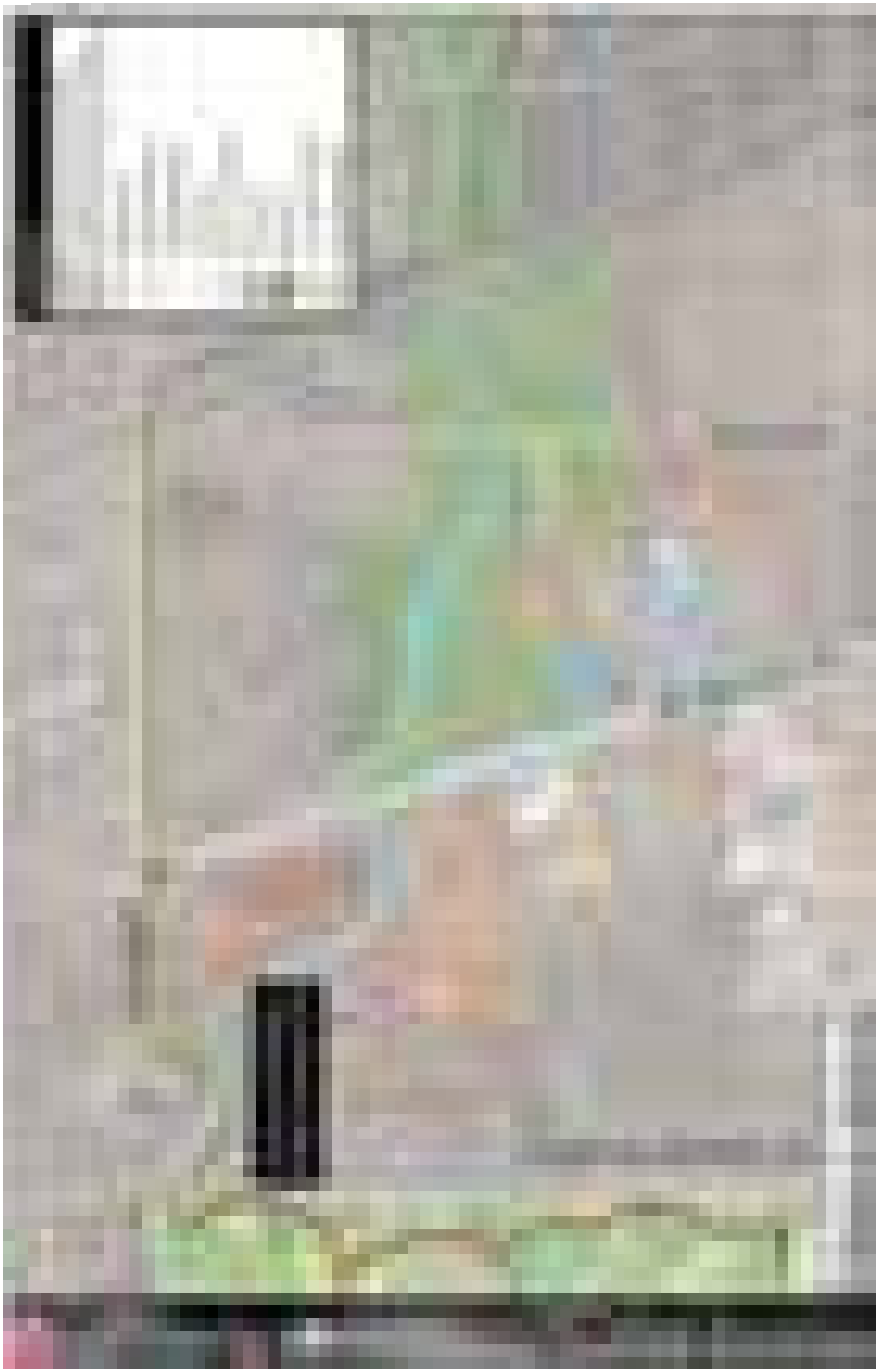
Ruby Grant Park is located in the center of this proposed greenway corridor. One recommendation will be a connection into Ruby Grant Park along W. 36th Ave. Another recommendation will be a connection from Ruby Grant Park to east of IH-35 either by creating a crossing under IH-35 by using the existing culverts or building a pedestrian crossing over IH-35. This greenway would then continue east towards Little River. Tributary G has great potential to serve a dual use for public use and drainage purposes. The estimated cost for these greenway improvements is shown below (see chart).

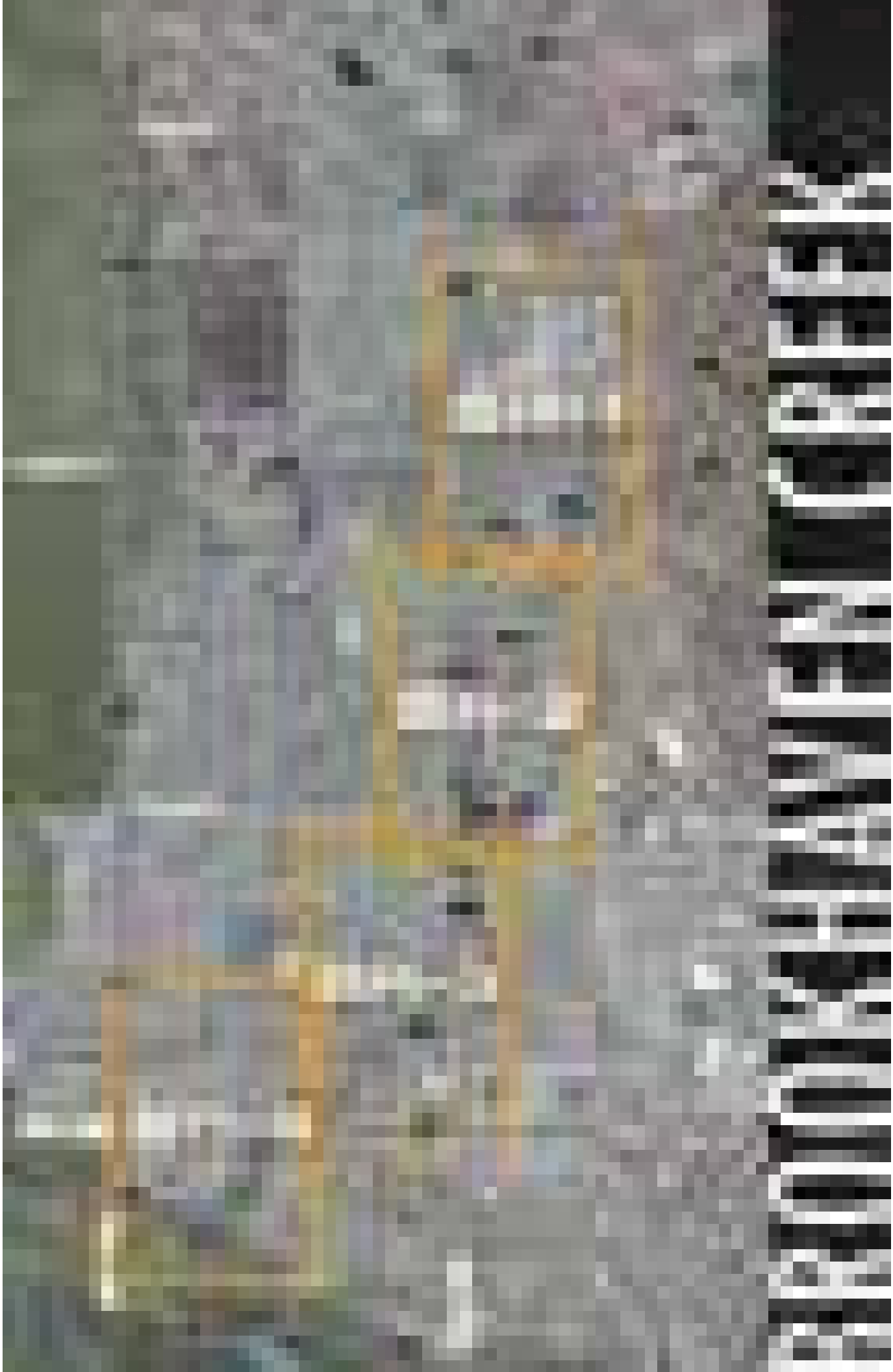
Norman Greenway Implementation Action Plan
Tributary G (Urban Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Tributary G	TG-2	IH-35	US 77	Greenway along Franklin., connects to Ruby Grant Park by crossing IH-35	5,200	$2,400,000	2015-2025
Tributary G	TG-3	US 77	12th Ave.	Greenway along Tributary., connects to Ruby Grant Park	7,000	$1,300,000	2015-2025
Tributary G	TG-5	Bridgeport	Tecumseh	Greenway along W 36th Ave., connects to Ruby Grant Park	2,600	$470,000	2015-2025
				Estimated Total	**14,800 3 Miles**	**$4,170,000**	

Tributary G Key Recommendations







BROOKHAVEN CREEK

Location: Located in SW sector of the City
From: Tecumseh Rd. west of IH-35
To: Canadian River

Surrounding Corridors: 10 Mile Flat, Tributary G, Merkel Creek

Size: 4 Sq. Miles – 2,833 Acres (Approximately: W.48th Ave. to IH-35, and Tecumseh Rd. (West of IH-35) to Canadian River)

Major Transportation/Roads:
E/W: Main St. – Robinson Rd. – Rock Creek Rd. – Tecumseh Rd.
N/S: W. 36th Ave.

Major Area Corridor(s):
Brookhaven Creek runs predominantly North and South. The creek does have some potential for Greenway Trails along the corridor, but most of the Corridor will need to be utilized with Parkway Trails due to developement.
The Canadian River has a flat and densely vegetated terrain. This Corridor has the potential to be a key connector with other Greenway Opportunities.

Minor Area Sub-corridor(s):
The Proposed Rock Creek Bridge will cross over IH-35 and has the potential to be the main pedestrian/Bike crossing the Highway IH-35.
Robinson Rd. and W. 36th Ave. are the major arterial streets connectors.
Local Streets in the area have great opportunities for parkway connections with parks and Major retail land uses.

Land Use Context: Much of this corridor is developed; the predominant land use is Residential with single family lots. The corridor area also includes: Retail, High Density Residential, Parkland, and Industrial/Commercial.

Key Destinations: No Schools are located within the Corridor area, but other local schools are located within the surrounding Corridors. Eight Parks are located within the study area. Major Retail uses include Sooner Mall, University Town Center PUD, and retail shopping centers. High Density Residential is also located within the area.

Key Opportunities: Opportunities along Street Corridors: The proposed Rock Creek Bridge over IH-35 is an excellent connection and extension of the Legacy Trail, this new connection would help connect the residents of western Norman across IH-35 to the new University Town Center and also the OU Campus. The possibility of Parkway Street Trails located along the Arterial streets such as Robinson Rd. and W. 36th Ave. can help connect with key destinations in the area. Local Streets can be used when needed to connect with existing parks, open spaces, and major retail land uses.

Opportunities along Creek Corridors: A majority of the Brookhaven Creek Corridor is urbanized and developed with many trail construction constraints. Portions of the creek have feasible areas for a trail to help link parks located within this corridor. For example:

- Willow Branch to Spring Brook Park
- Spring Brook Park to Robinson

Trails located along the Canadian River have potential for connection to major destinations and corridors.

Sensitive Areas: Residential houses with backyards extending out to the Creek edge. Where this condition exists, alternative routes are preferred where available. For example:

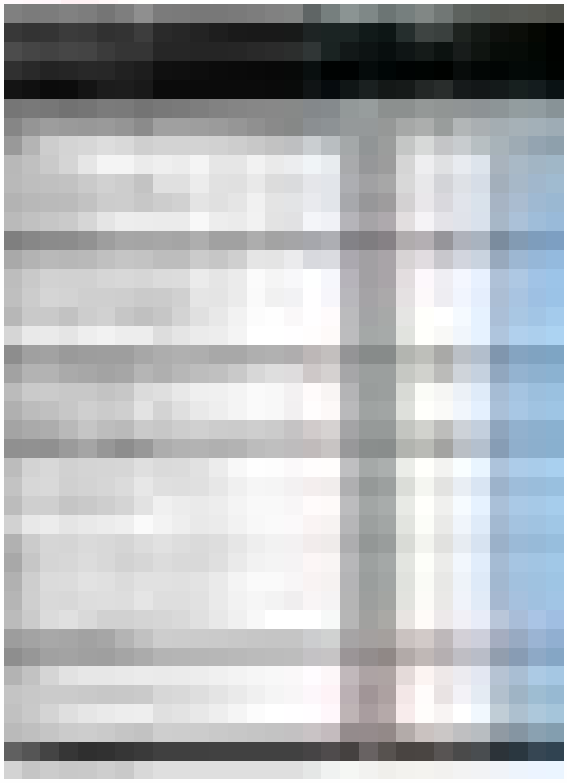
- Portions of Tributary A, from 36th Ave W to Pendleton St.
- Canadian River to Willow Branch
- Morgan Park to Rock Creek Rd.

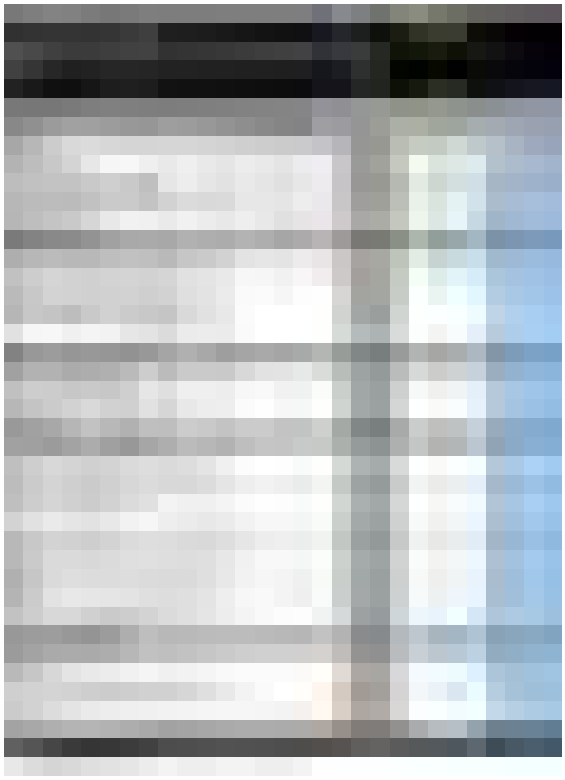
Potential Drainage Improvements: Channel improvements located in the southern portions of Brookhaven creek will be needed.

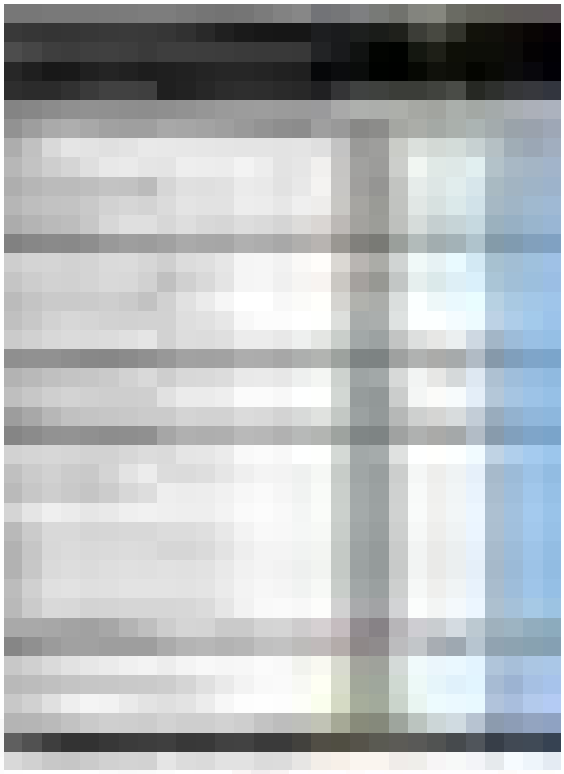
Brookhaven Creek Potential Corridor

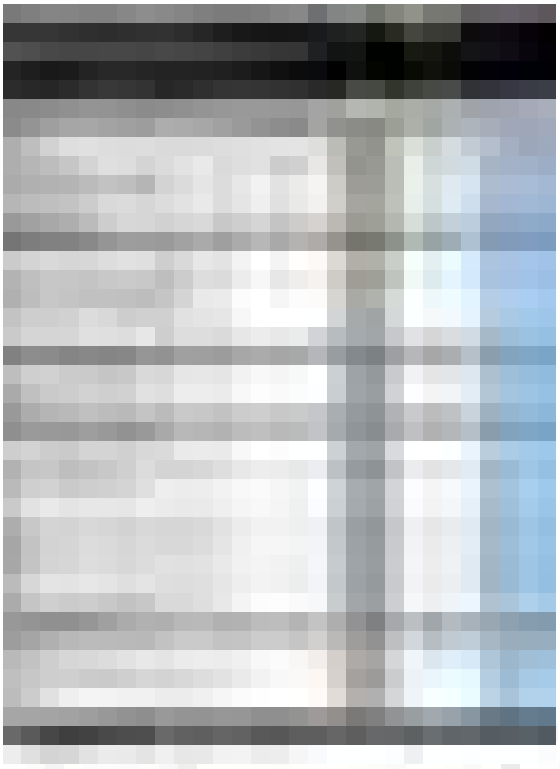
Brookhaven Creek Potential Corridor

Suitability Analysis: Brookhaven Corridor







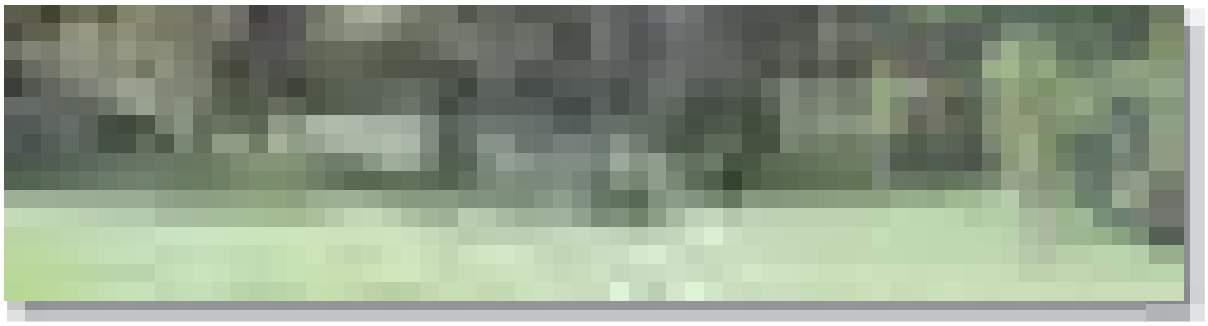


Prioritization Analysis: Brookhaven Corridor

City of Norman
Greenway Master Plan

Greenway Corridor Prioritization: Brookhaven Creek

Number	Corridor		Prioritization Criteria							Total Score	Priority Category
		Length (L.F)	Suitability Evaluation Score (1 to 5)	Level of Connectivity (1 to 5)	Potential Level of Use (1= low, 5 = high)	Key Contribution to Greenway and Open Space Network (1 to 3)	Critical Opportunity (1-5)	Integration with Stormwater Plan/Facilities (1 to 3)	Level of Readiness (1 to 4)	Maximum Score = 30	21 to 30 = High 11 to 20 = Medium 0 to 11 = Long Term
RS-1	Rock Creek Street Segment 1 (W. 48th Ave. to W. 36th Ave.)	4500	4	1	3	1	3	1	2	15	Medium
RS-2	Rock Creek Street Segment 2 (Legacy Trail to W. 36th Ave.)	1500	5	5	5	2	5	1	3	26	High
BH 1-7	Brookhaven Creek (Tecumseh to Robinson Rd.) Segments 1-7	25000	4	3	4	2	4	1	3	21	High
BH 8-14	Brookhaven Creek (Robinson Rd. to Main St.) Segments 8-14	14000	4	3	3	3	3	2	3	21	High
BH 15-16	Brookhaven Creek (Main St. to Canadian River) Segments 15-16	4500	4	2	2	2	2	1	2	15	Medium
		49500	4.2	2.8	3.4	2	3.4	1.2	2.6	19.6	Medium



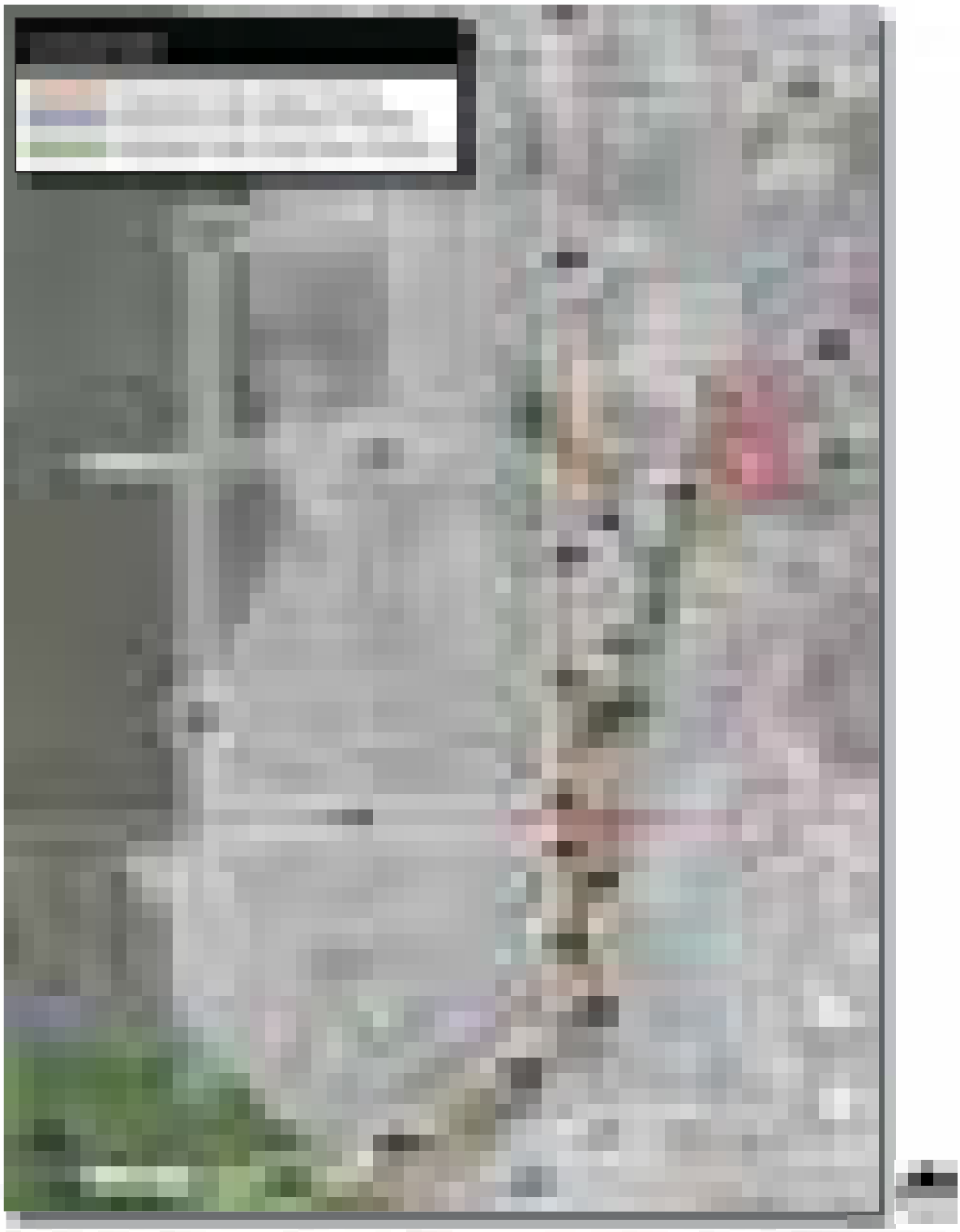
Urban Greenway System: Brookhaven Creek Key Recommendations

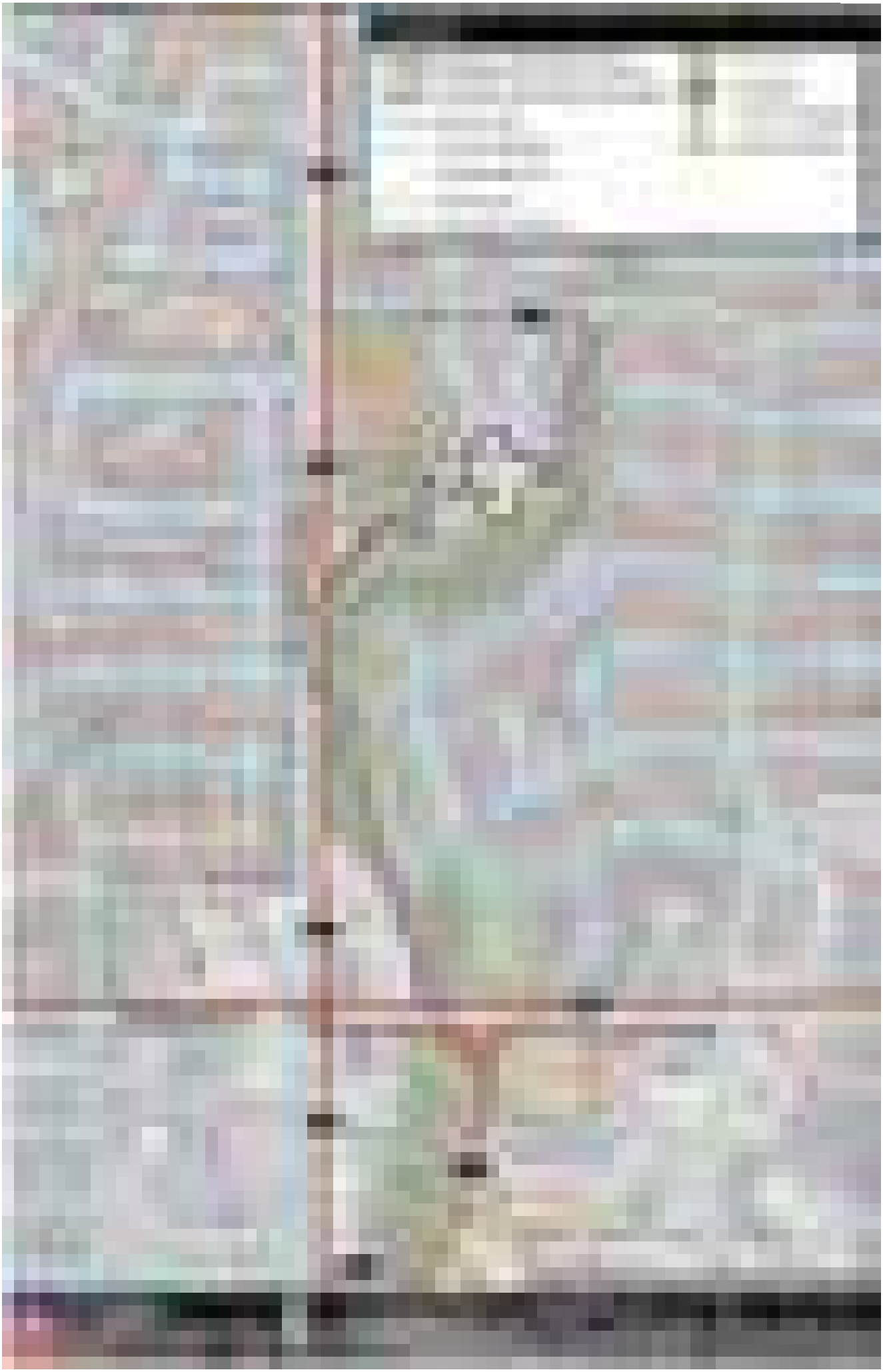
The key recommendations for this sector will be a greenway corridor which runs from Tecumseh then south to Main St. along W. 36th Ave. and Brookhaven Creek. This corridor will help connect the proposed Ruby Grant Park, Kevin Gottshall Park and the Canadian River Corridor. Another key recommendation for this area is utilizing the proposed Rock Creek Bridge extension to cross the major barrier IH-35. This will be a major connection for residents of the West side of IH-35 to reach the Legacy Trail. The estimated cost for these greenway improvements is shown below (see chart).

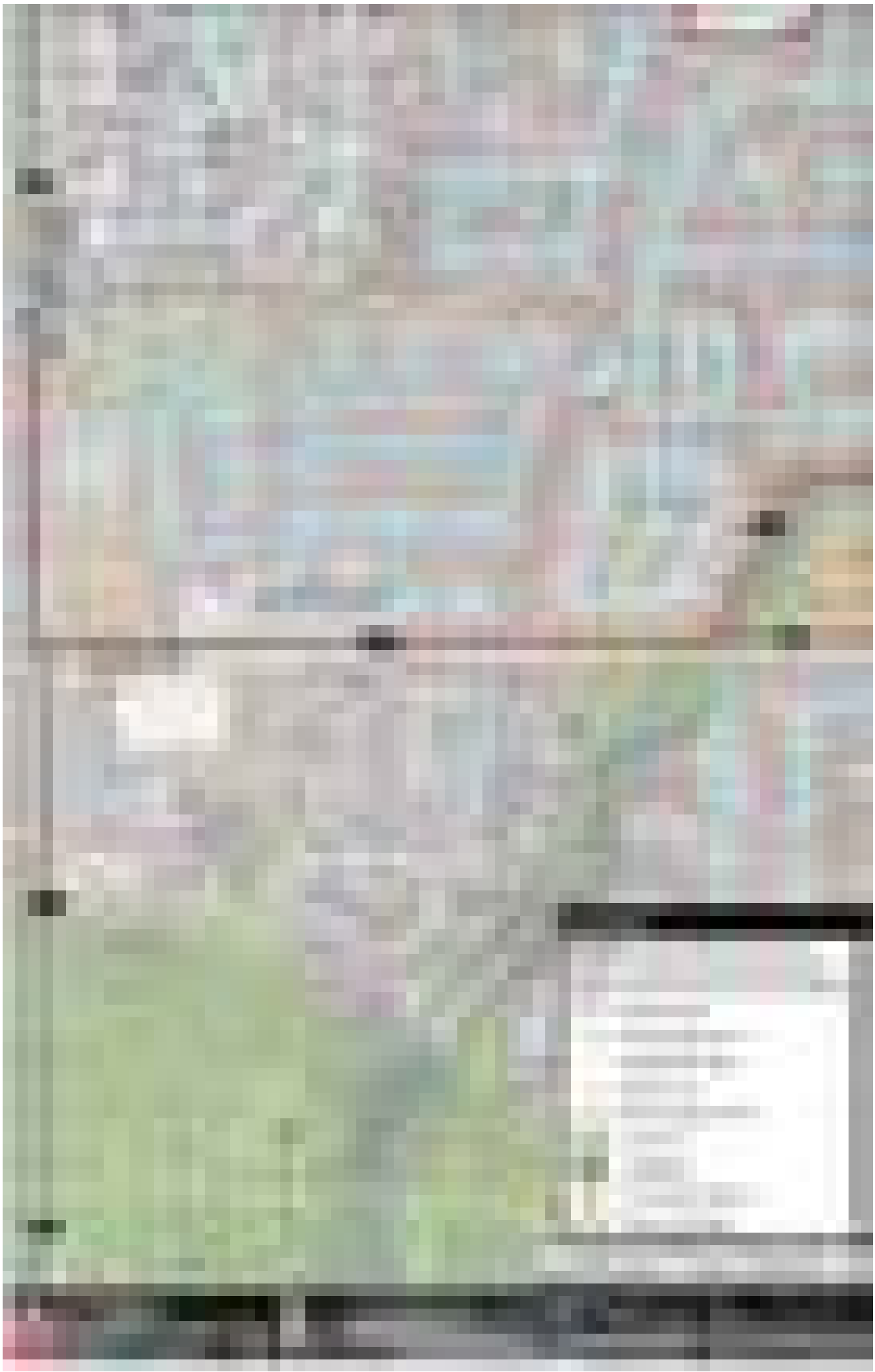
Norman Greenway Implementation Action Plan
Brookhaven Creek (Urban Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Brookhaven	BH-1	Tecumseh	Rock Creek Rd.	Greenway along W 36th Ave., connects to Ruby Grant Park and proposed Rock Creek Bridge	5,400	$1,000,000	2010-2020
Brookhaven	BH-3	Rock Creek Rd.	Crossroads	Greenway along W 36th Ave., connects to Ruby Grant Park and proposed Rock Creek Bridge	2,700	$510,000	2010-2020
Brookhaven	BH-6	Crossroads	Existing Sidewalk	Greenway along W 36th Ave.	1,000	$210,000	2015-2025
Brookhaven	BH-7	Existing Sidewalk	Robinson	Greenway along W 36th Ave.	1,700	$340,000	2015-2025
Brookhaven	BH-9	Robinson	Havenbrook	Greenway along W 36th Ave.	1,000	$270,000	2015-2025
Brookhaven	BH-11	Havenbrook	Quail	Greenway along W 36th Ave.	4,500	$720,000	2020-2030
Brookhaven	BH-12	Havenbrook	Quail	Greenway along Brookhaven Creek Corridor, Greenway	2,500	$470,000	2015-2025
Brookhaven	BH-13	W 36th Ave.	Willow Branch	Greenway along Brookhaven Creek Corridor, Greenway	3,000	$570,000	2020-2030
Brookhaven	BH-14	Willow Branch	Main Street	Greenway along Brookhaven Creek Corridor, Greenway	1,400	$300,000	2020-2030
Brookhaven	BH-15	Brookhaven Creek	48th St.	Greenway along Main St., connects to Kevin Gottshall Greenway	2,500	$480,000	2015-2025
Brookhaven	RS-2	W. 36th Ave.	W.24th Ave.	Greenway along Rock Creek and Rock Creek Bridge Proposal, connects Western Norman to Legacy Trail	4,500	$640,000	2009-2015
				Estimated Total	**30,200 6 Miles**	**$5,510,000**	

Brookhaven Creek Key Recommendations







MERKLE CREEK

Location: Located in SW sector of the City
From: Westheimer Airpark
To: Canadian River

Surrounding Corridors: Brookhaven Creek, Imhoff Creek, Canadian River, and Little River

Size: 4 Sq. Miles – 2,860 Acres (Approximately: IH-35 to W 12th Ave., and Westheimer Airpark to Canadian River)

Major Transportation/Roads:
E/W: Main St. – Robinson Rd. – Lindsey St.
N/S: W 24th Ave. – W 12th Ave. – IH-35

Major Area Corridor(s):
Merkle Creek runs predominantly North and South. The creek does have some potential for Greenway Trails along the corridor, but some areas of the Corridor will need to be utilized with Parkway Trails.
The Canadian River has a flat and densely vegetated terrain. This Corridor has the potential to be a key connector with other Greenway Opportunities.

Minor Area Sub-corridor(s):
Robinson has an existing Trail which runs from W 24th Ave. to W 12th Ave.
24th Ave. and 12th Ave.are the major arterial streets connectors.
Local Streets have great opportunities for parkway connections with Schools, Parks and Major Retail land uses.

Land Use Context: Much of this corridor is developed; the predominant land use is Residential with single family lots. Commercial and Major Retail is densely located along IH-35 from Robinson St. to Main St. The corridor area also includes High Density Residential, Parkland, Institutional and Industrial Land Uses.

Key Destinations: Two Schools (Cleveland Elementary and Alcott Middle School) are located within Corridor area, and other local schools are located within the surrounding Corridors. The Cleveland County YMCA along with two Parks is also located within this area. Major Retail and Commercial uses located along IH-35. Areas with High Density Residential are excellent attractors in this corridor.

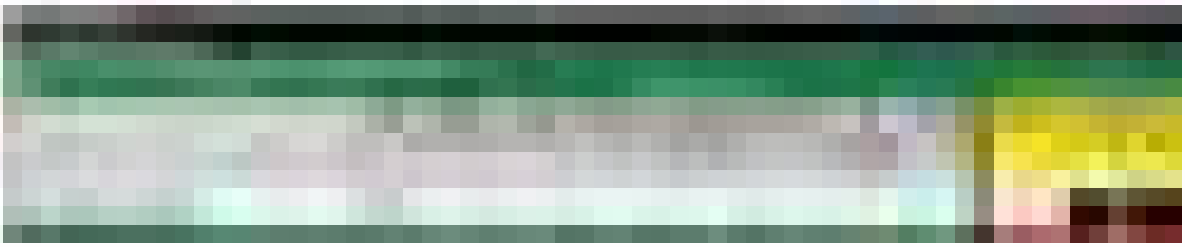
Key Opportunities:
Opportunities along Street Corridors: The existing Trail/Path that runs parallel with Robinson St. is an opportunity to connect with the new Legacy Trail. This Trail also has an opportunity to connect with the Cleveland County YMCA for Recreational Uses. The possibility of Parkway Street Trails located along the Arterial streets such as W 24th Ave. and W 12th Ave. can help connect with key destinations in the area. Local Streets can be used when needed to connect with Schools, existing parks, open spaces, and major retail land uses.
Opportunities along Creek Corridors: A majority of the Merkle Creek Corridor is urbanized and developed with many possible constraints. Portions of the creek have feasible areas for a trail to help link Single Family Residential, High Density Residential, and parks located within this corridor. Trails located along the Canadian River have potential for connection to other major destinations and corridors.

Sensitive Areas: Residential houses with backyards and property boundaries extending out to the Creek edge. Merkle Creek goes through Westwood Golf Course which creates a connection barrier; parkway trails and or sidewalks will need to be used to maneuver around this area.

Potential Drainage Improvements: Road improvements along drainage channels

Suitability Analysis: Merkle Creek

Priortization Analysis: Merkle Creek



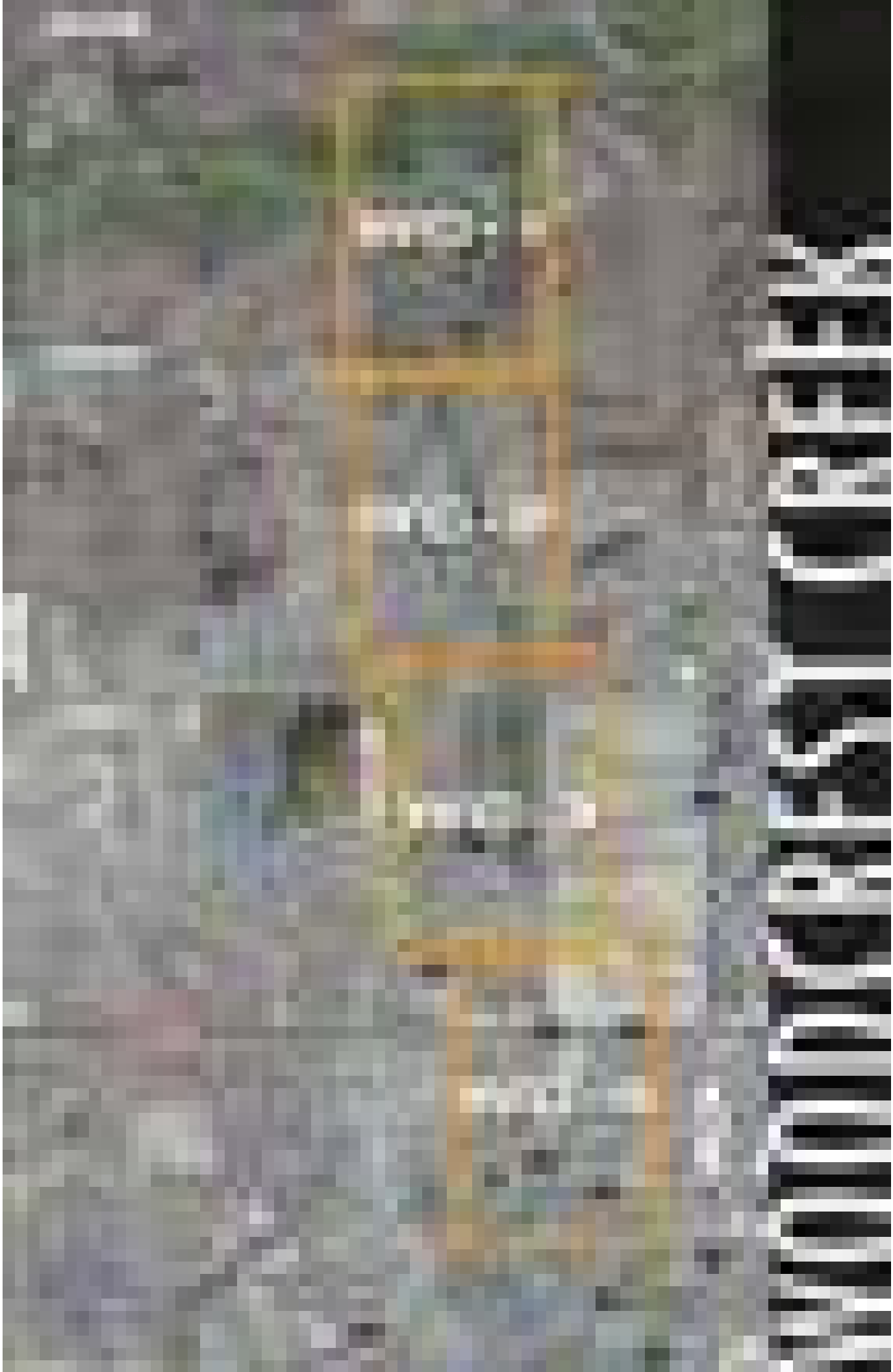
Urban Greenway System: Merkle Creek

The key recommendation for this sector is to create a greenway which connects the existing Legacy Trail at Robinson and W. 24th Ave. to the central Imhoff creek greenway system. This gives a chance for residents within the Merkle creek area to connect to the University of Oklahoma and Westwood Park recreational area. The estimated cost for these greenway improvements is shown below (see chart).

Norman Greenway Implementation Action Plan
Merkle Creek (Urban Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Merkle	**MC-1**	Main St.	Robinson	Greenway along E 24th Ave., connects to existing Legacy Trail and proposed Imhoff creek greenway	5,730	$1,100,000	2010-2025
Merkle	**MC-2**	Main St.	McGee	Greenway along E 24th Ave., connects to existing Legacy Trail	5,400	$1,000,000	2010-2025
Merkle	**MC-3**	McGee	Imhoff Creek	Greenway along E 24th Ave., connects to existing Legacy Trail	3,000	$610,000	2010-2025
				Estimated Total	**14,130 3 Miles**	**$2,710,000**	

Merkle Creek Key Recommendations



WOODCREST CREEK

Location: Located in NC sector of the City
From: Little River Creek
To: Robinson

Surrounding Corridors: Little River, Rock Creek, Bishop Creek, Imhoff Creek, and Merkle Creek

Size: 3 Sq. Miles – 1,928 Acres (Approximately: Porter Ave. to E 24th St. and Robinson to Little River)

Major Transportation/Roads:
E/W: Tecumseh Rd. – Rock Creek Rd.
N/S: Porter Ave. – E 12th St.

Major Area Corridor(s):
Woodcrest Creek runs predominantly North and South. The creek does have some potential for Greenway Trails along the corridor, but some areas of the Corridor will need to be utilized with Parkway Trails.

Minor Area Sub-corridor(s):
Robinson St. has an existing Trail which runs from W 24th St. to W 12th St.
Porter Ave. and E 12th St. are the major arterial streets connectors. Local Streets have great opportunities for parkway connections with Schools, Parks and Major Retail land uses.

Land Use Context: Much of this corridor is developed; the predominant land use is Residential with single family lots. The corridor area also includes Parkland, High Density Residential, and Institutional.

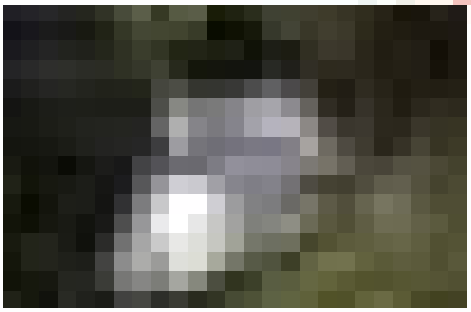
Key Destinations: One School (Norman High School North) is located within Corridor area, and other local schools are located within the surrounding Corridors. Eight Parks including the 12th St. Recreational Center are located within study area. High Density Residential along with Sutton Wilderness will be Key connection points.

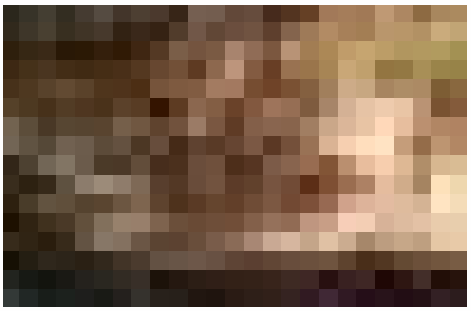
Key Opportunities:
Opportunities along Street Corridors: The existing and proposed Trail/Paths located within the OU Campus area are opportunities to tie into the OU Campus from the surrounding uses. The possibility of Parkway Street Trails located along the Arterial streets such as Rock Creek Rd. can help connect with key destinations in the area. Local Streets can be used when needed to connect with Schools, existing parks, and open spaces.

Opportunities along Creek Corridors: The northern half of Rock Creek has not yet been developed which arises the opportunity for Greenway spaces being preserved in future development. Opportunities to Connect with Sutton Wilderness Trail (Recreational): Off and On Street Trails can be used to connect to and from the Sutton Wilderness area; this is a great attractor for recreational use a connection trail should be considered.

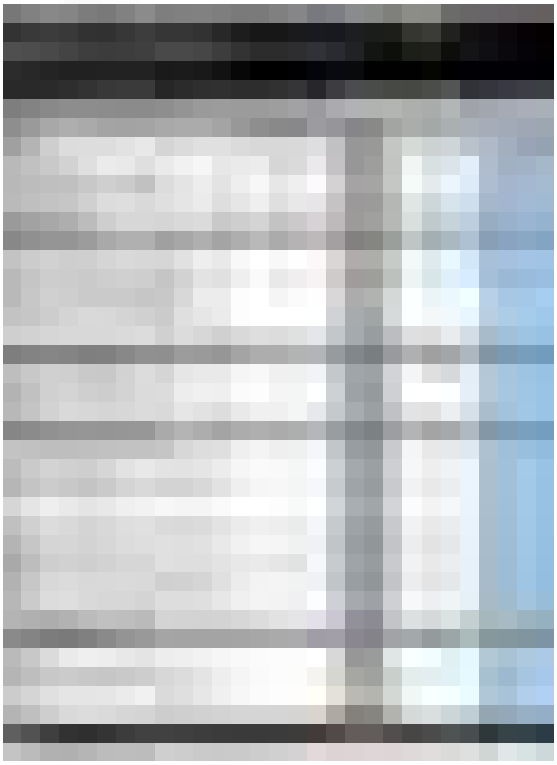
Sensitive Areas: Residential houses with backyards extending out to the Creek edge. Where this condition exists, alternative routes are preferred where available. For example, from Rock Creek Rd. to Tecumseh Rd.

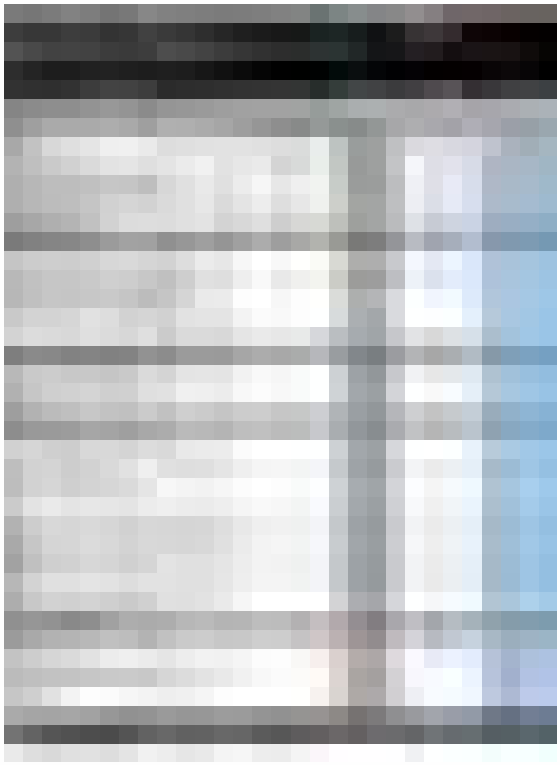
Potential Drainage Improvements: Channel bank improvements along the central corridor of the creek. A regional detention pond is proposed to be developed upstream of Rock Creek Rd.





Suitability Analysis: Woodcrest Creek





Prioritization Analysis: Woodcrest Creek

City of Norman
Greenway Master Plan

Greenway Corridor Prioritization: Woodcrest Creek

Number	Corridor		Prioritization Criteria							Total Score	Priority Categor
		Length (L.F)	Suitability Evaluation Score (1 to 5)	Level of Connectivity (1 to 5)	Potential Level of Use (1= low, 5 = high)	Key Contribution to Greenway and Open Space Network (1 to 3)	Critical Opportunity (1-5)	Integration with Stormwater Plan/Facilities (1 to 3)	Level of Readiness (1 to 4)	Maximum Score = 30	21 to 30 = High 1 to 20 = Medium 0 to 11 = Long Term
WC - 1-5	Wood Crest Creek North (Tecumseh to Griffin Memorial Park) Segments 1-5	15600	4	2	3	3	3	3	3	21	High
WC - 6-8	Wood Crest Creek South (Griffin Memorial to Main St.) Segments 6-8	11600	5	3	3	2	3	2	3	21	High
		27200	4.5	2.5	3	2.5	3	2.5	3	21	High

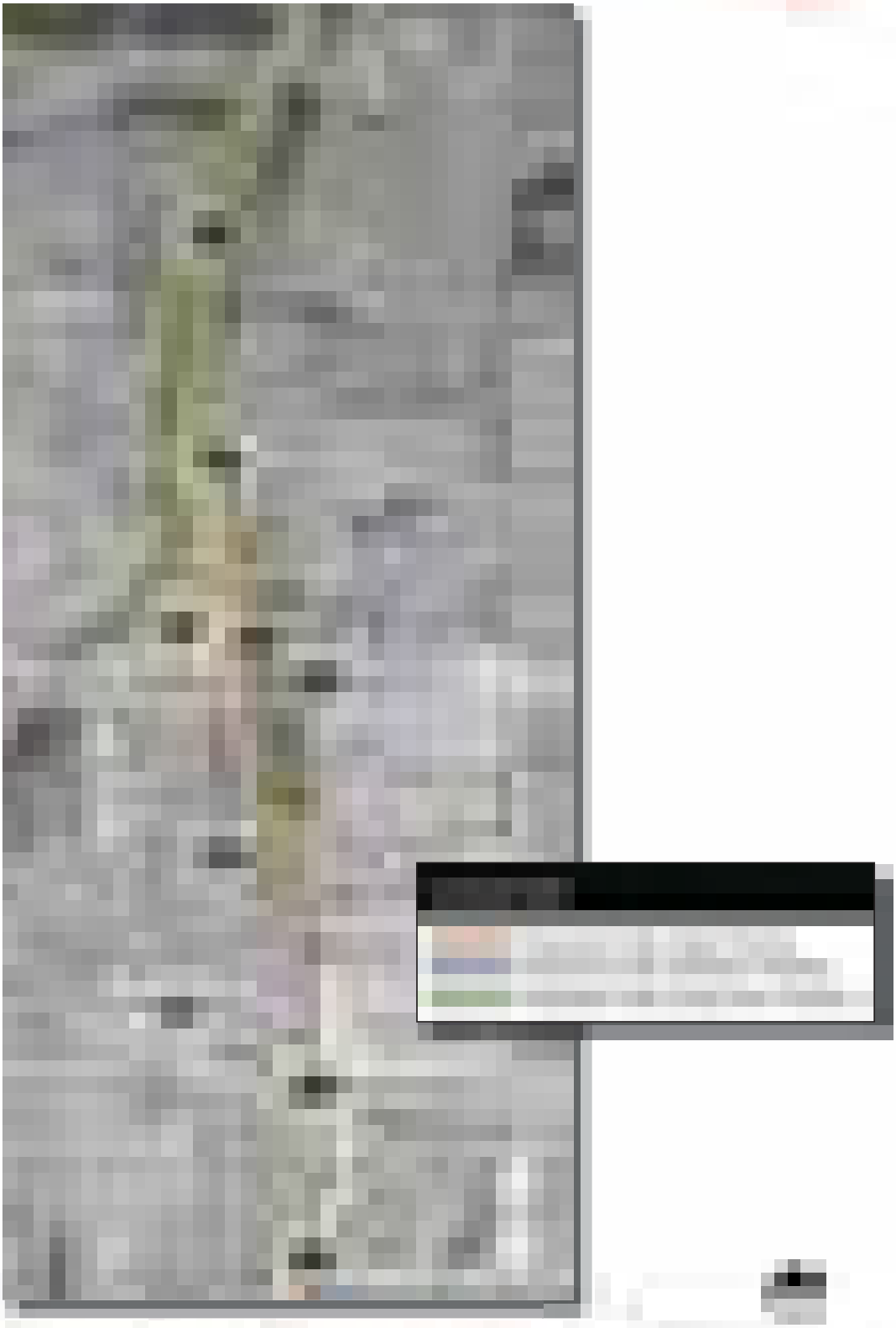
Urban Greenway System: Woodcrest Creek Key Recommendations

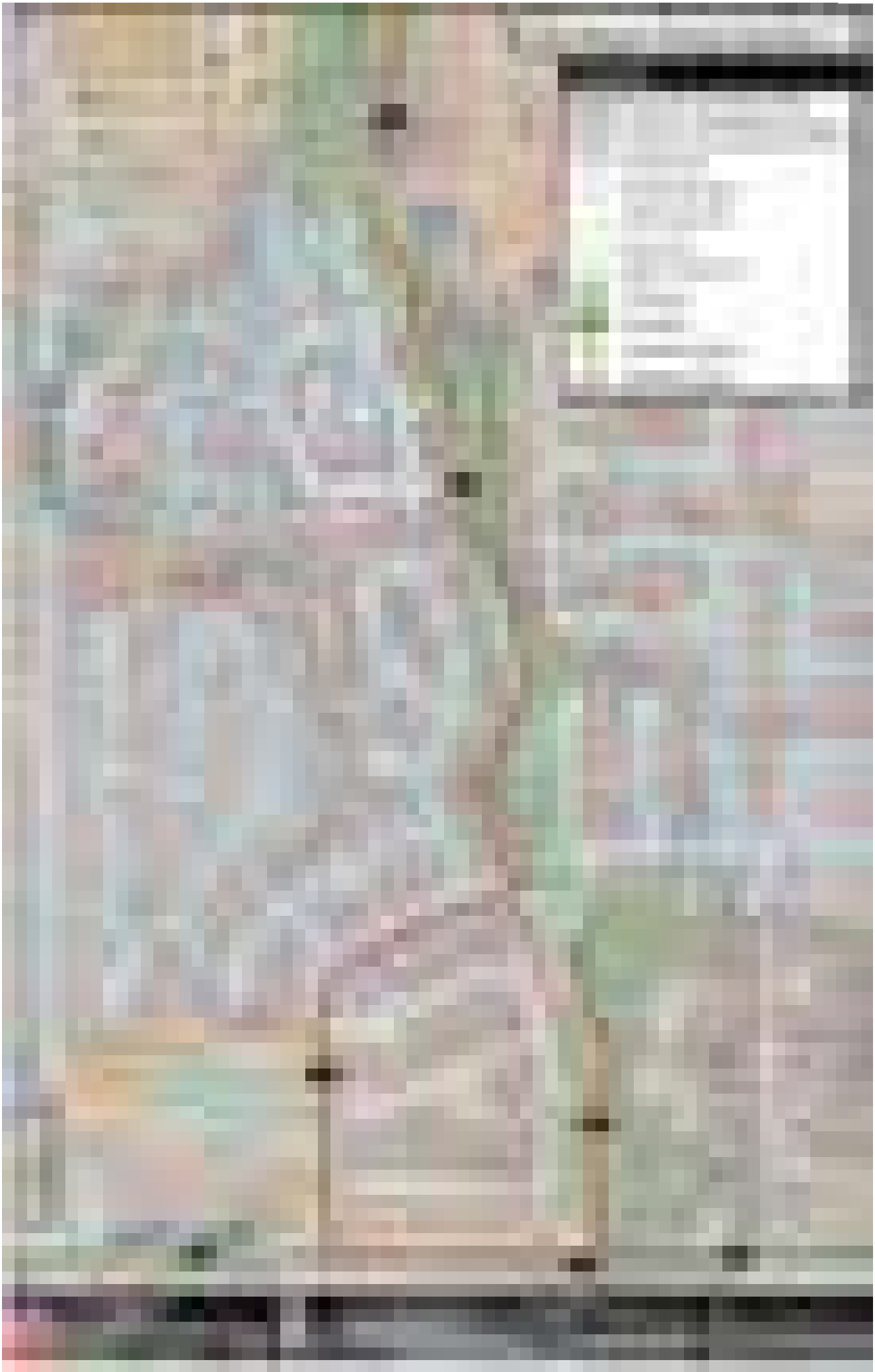
The Woodcrest creek greenway recommendations will run from Little River south to Robinson. This greenway has both rural and urban characteristics which will make this a unique greenway. The greenway will be used for drainage improvements along with opportunities for trail connections. The greenway will connect Little River to Sutton Wilderness area and Griffin Memorial Park. The estimated cost for these greenway improvements is shown below (see chart).

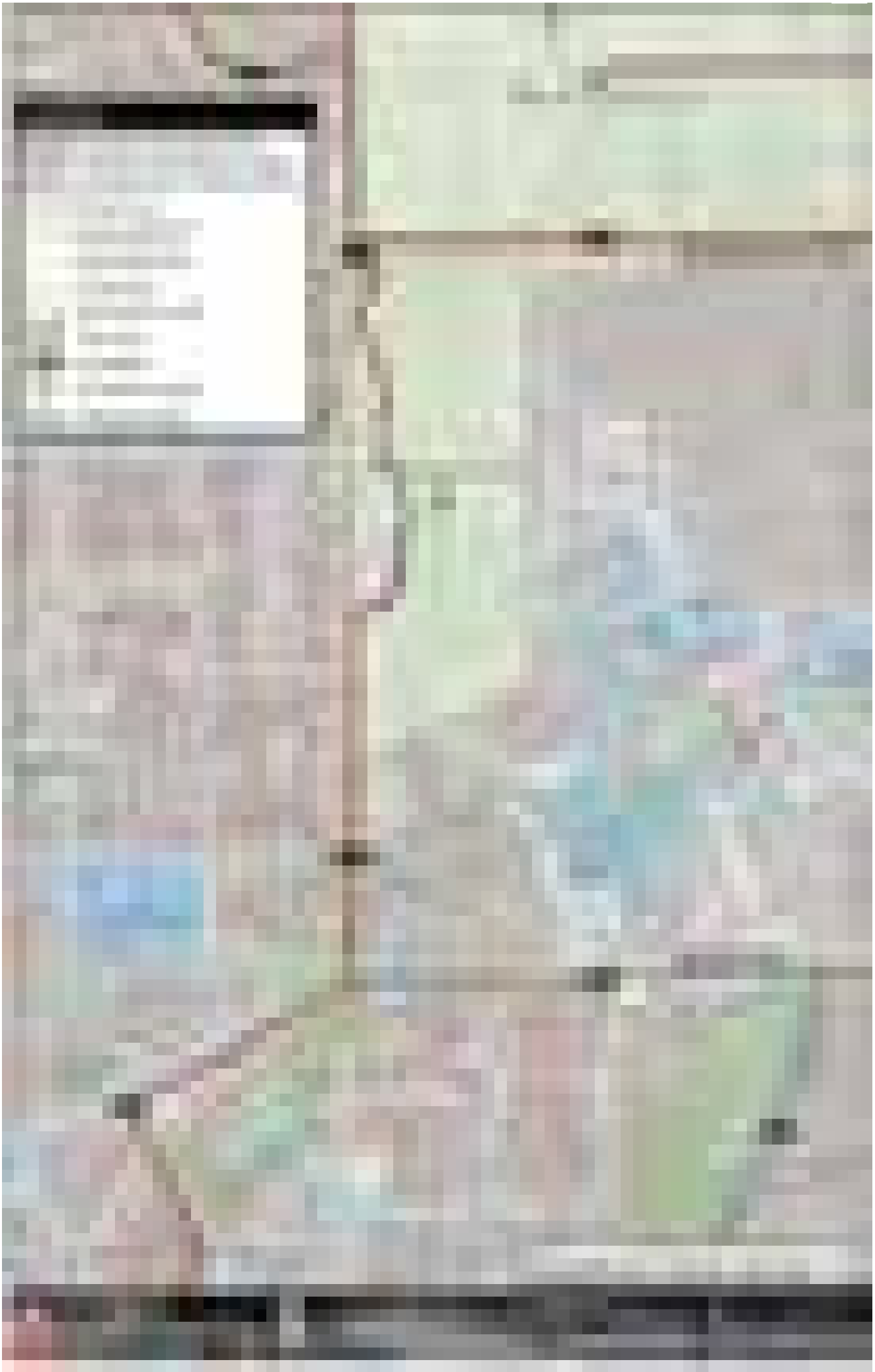
Norman Greenway Implementation Action Plan
Woodcrest Creek (Urban Greenway)

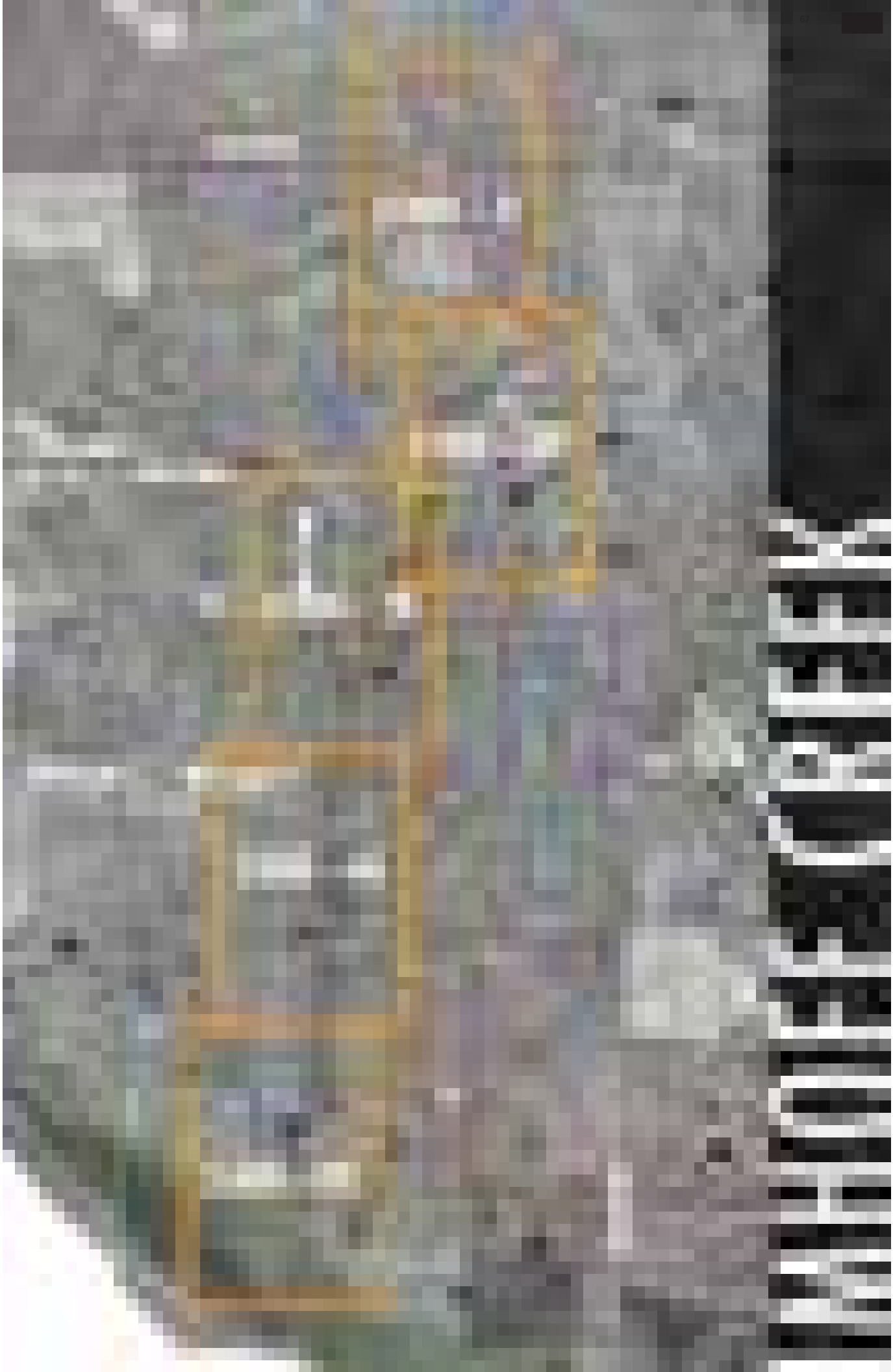
Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Woodcrest	**WC-1**	Little River Creek	Nantucket St.	Greenway along Woodcrest creek, connects to proposed Little River scenic greenway and Sutton wilderness area	4,100	$720,000	2010-2020
Woodcrest	**WC-2**	Nantucket St.	Sequoyah Trails	Greenway along Woodcrest creek, connects to proposed Little River scenic greenway and Sutton wilderness area	2,700	$490,000	2010-2020
Woodcrest	**WC-4**	Sequoyah Trail Park	Rock Creek	Greenway along Woodcrest creek, connects to proposed Little River scenic greenway and Sutton wilderness area	1,200	$300,000	2015-2025
Woodcrest	**WC-5**	Rock Creek	Robinson Rd.	Greenway along Woodcrest creek, connects to proposed Little River scenic greenway and Sutton wilderness area	4,700	$900,000	2015-2025
Woodcrest	**WC-6**	Woodcrest Creek	W. 12th Ave.	Greenway along Woodcrest creek, connects to proposed Little River scenic greenway and Sutton wilderness area	3,300	$650,000	2015-2025
Woodcrest	**WC-7**	Robinson Rd.	Frances Cate Park	Greenway along Woodcrest creek, connects to proposed Little River scenic greenway and Sutton wilderness area	1,800	$350,000	2020-2030
Woodcrest	**WC-8**	Frances Cate Park	Main Street	Greenway along Carter St., connects to downtown Norman and Griffin Memorial Park	1,300	$300,000	2015-2025
				Estimated Total	**19,100**	**$3,710,000**	
					4 Miles		

Woodcrest Creek Key Recommendations









IMHOFF CREEK

Location: Located in South Central sector of the City
From: Robinson St.
To: Canadian River

Surrounding Corridors: Merkle Creek, Bishop Creek, and Woodcrest Creek

Size: 3 Sq. Miles – 2,167 Acres (Approximately: W 24th Ave. to OU Campus., and Robinson Rd. to Canadian River)

Major Transportation/Roads:
E/W: State Highway 9 - Main St. – Robinson Rd. – Lindsey St. – Imhoff Rd.
N/S: . W 12th Ave.

Major Area Corridor(s):
Imhoff Creek runs predominantly North and South. The creek does have some potential for Greenway Trails along the corridor, but some areas of the Corridor will need to be utilized with Parkway Trails.
The Canadian River has a flat and densely vegetated terrain. This Corridor has the potential to be a key connector with other Greenway Opportunities.

Minor Area Sub-corridor(s):
24th Ave. and 12th Ave. are the major arterial streets connectors.
Berry Rd. and Brooks are key collector street connectors.
Local Streets have great opportunities for parkway connections with OU Campus, Schools, Parks and Major Retail land uses.
Legacy Rail Trail is an existing Trail Corridor located at the northern edge of the corridor.

Land Use Context:
A majority of this corridor is densely developed; the predominant land use is Residential with single family lots. Downtown is located within this existing corridor zone. The OU Campus is located directly to the East, and also includes High Density Residential, Parkland, Institutional and Industrial Land Uses.

Key Destinations:
The OU Campus is a key destination for users in this Corridor. Six Schools (Adams Elementary, McKinley Elementary, Jackson Elementary, Whittier Middle School, and Norman High School.) are located within Corridor area, and other local schools are located within the surrounding Corridors. Seven Parks are located within study area. Major Retail and Commercial uses located along IH-35. Areas with High Density Residential are excellent attractors in this corridor.

Key Opportunities:
Opportunities along Street Corridors: The existing Rail Trail path of the Legacy Trail is a great opportunity for this corridor to connect into. This Trail is a key connector into the OU Campus. The possibility of using Berry Rd. as a parallel route to Imhoff creek is an opportunity to create a North to South spine route in this corridor. The opportunity to make an aesthetically pleasing trail is possible. Local Streets such as Brooks can be used when needed to connect with OU Campus, Schools, existing parks, open spaces, and major retail land uses.

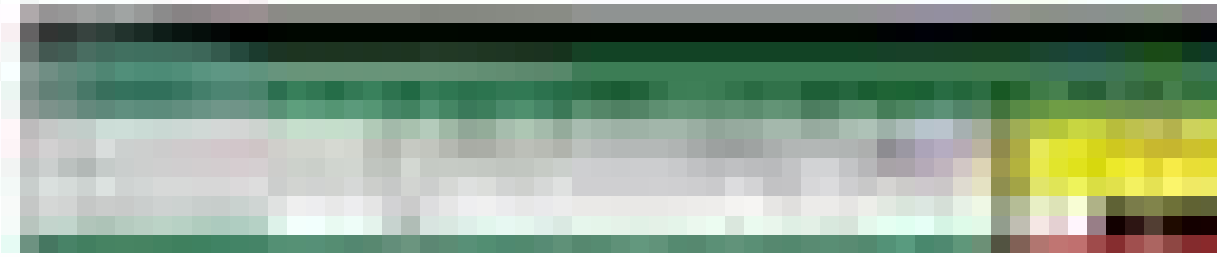
Opportunities along Creek Corridors: A majority of the Imhoff Creek Corridor is urbanized and developed with many possible constraints. Portions of the creek, from Lindsey heading north to Symmes, have feasible areas for a trail to help link Single Family Residential, High Density Residential, and parks located within this corridor. Where the trail has constraints the use of Parkway Street Corridors will be necessary. At the far southern end of this corridor is the possibility of connecting into the proposed Canadian River trail corridor.

Sensitive Areas: A majority of this trail corridor is residential housing with the property line extending to the creek, which creates future land acquisition problems. The WPA channels located along the northern portions of Imhoff Creek carry great historic value to the City of Norman, and should be preserved.

Potential Drainage Improvements: Channel bank stabilization will be needed along the southern portions of the creek. Storm sewer improvements at Lindsey and McGee will be incorporated, along with road crossing improvements and channel conveyance.

Suitability Analysis: Imhoff Creek

Prioritization Analysis: Imhoff Creek

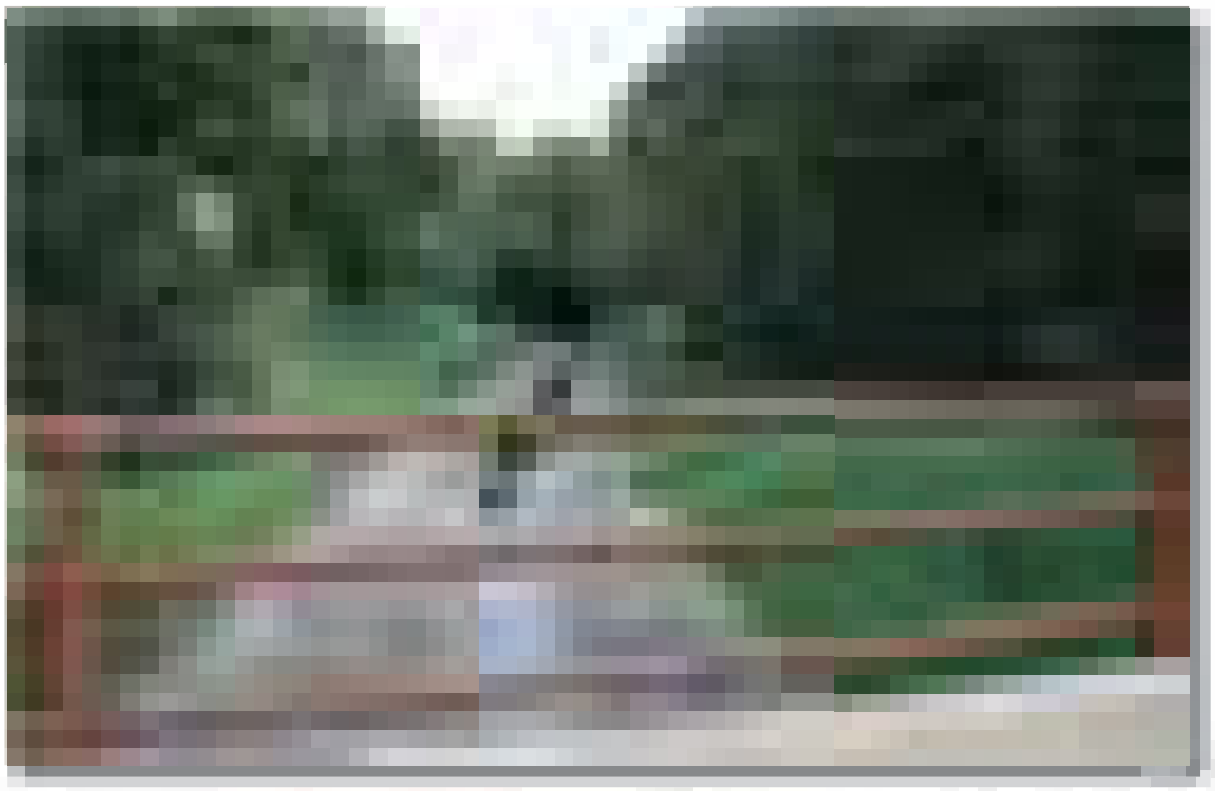


Urban Greenway System: Imhoff Creek

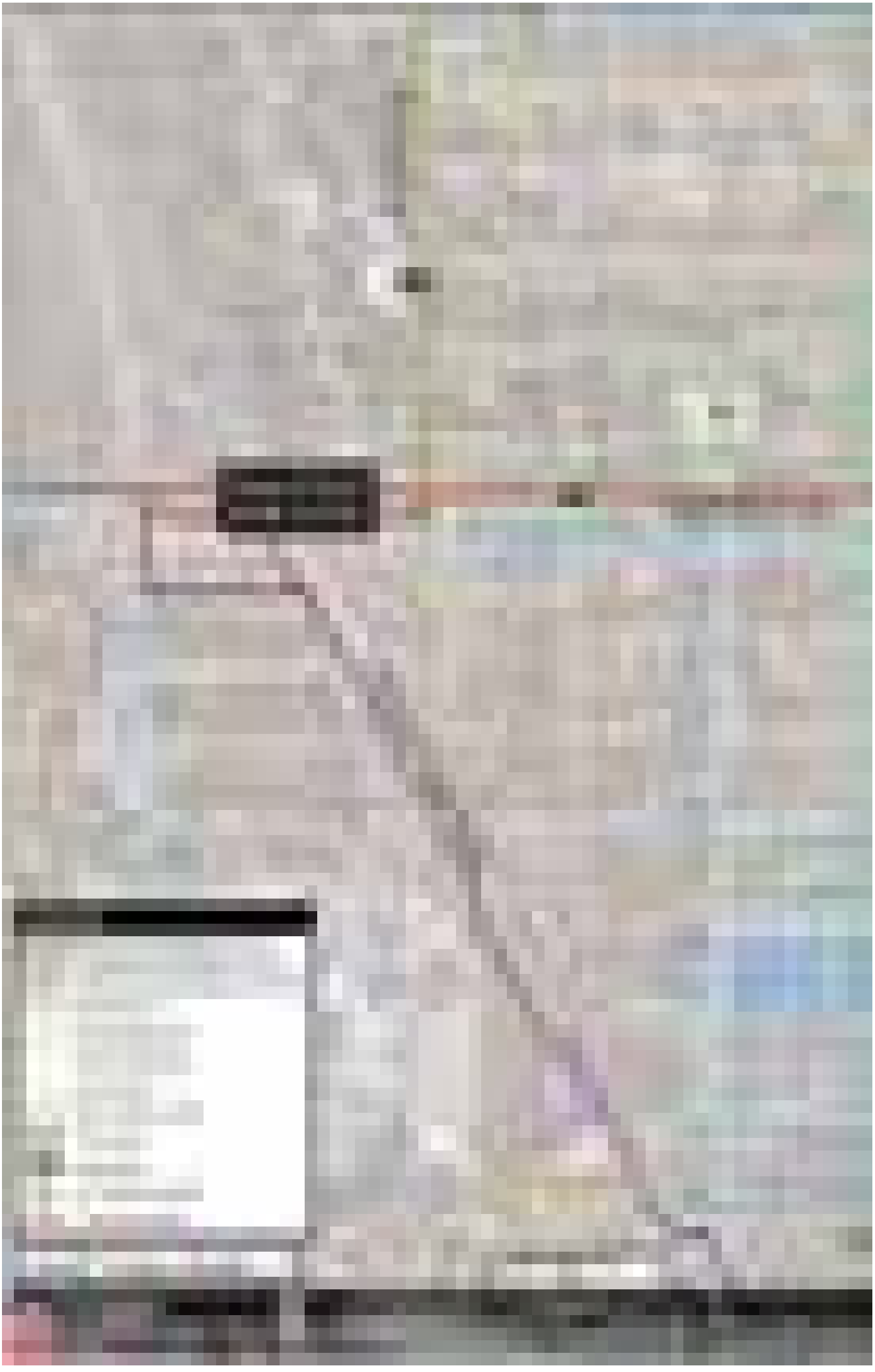
This greenway is located in the central core of the city and has importance due to the connection with Andrews Park, Downtown, and Oklahoma University. The recommended greenway system will connect these areas by utilizing creek and street corridors. With improvements to Imhoff creek brings opportunities to create greenway for this portion of Norman. The connection to Oklahoma University is a key recommendation due to the number of users this greenway could produce. The estimated cost for these greenway improvements is shown below (see chart).

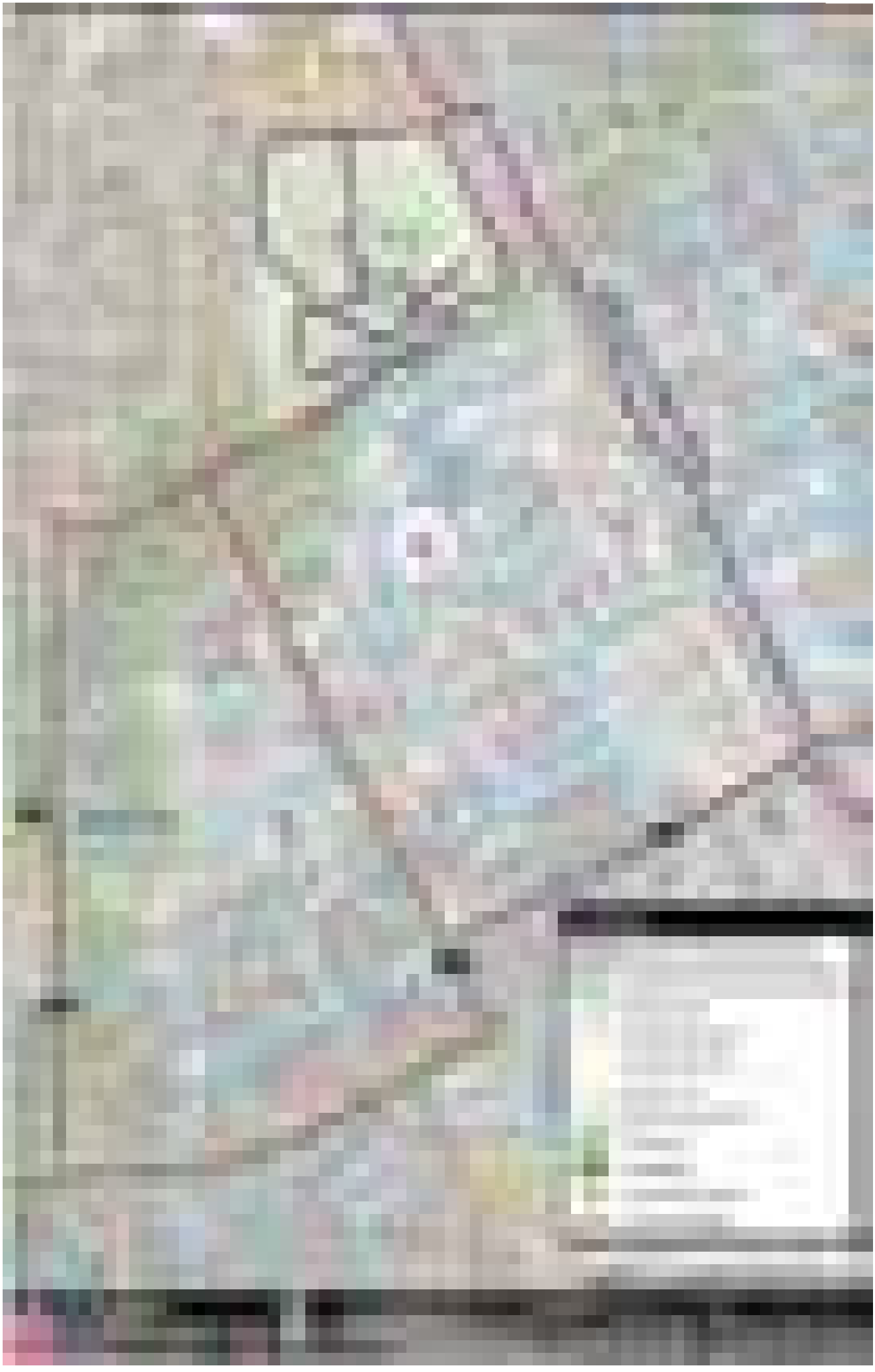
Norman Greenway Implementation Action Plan
Imhoff Creek (Urban Greenway)

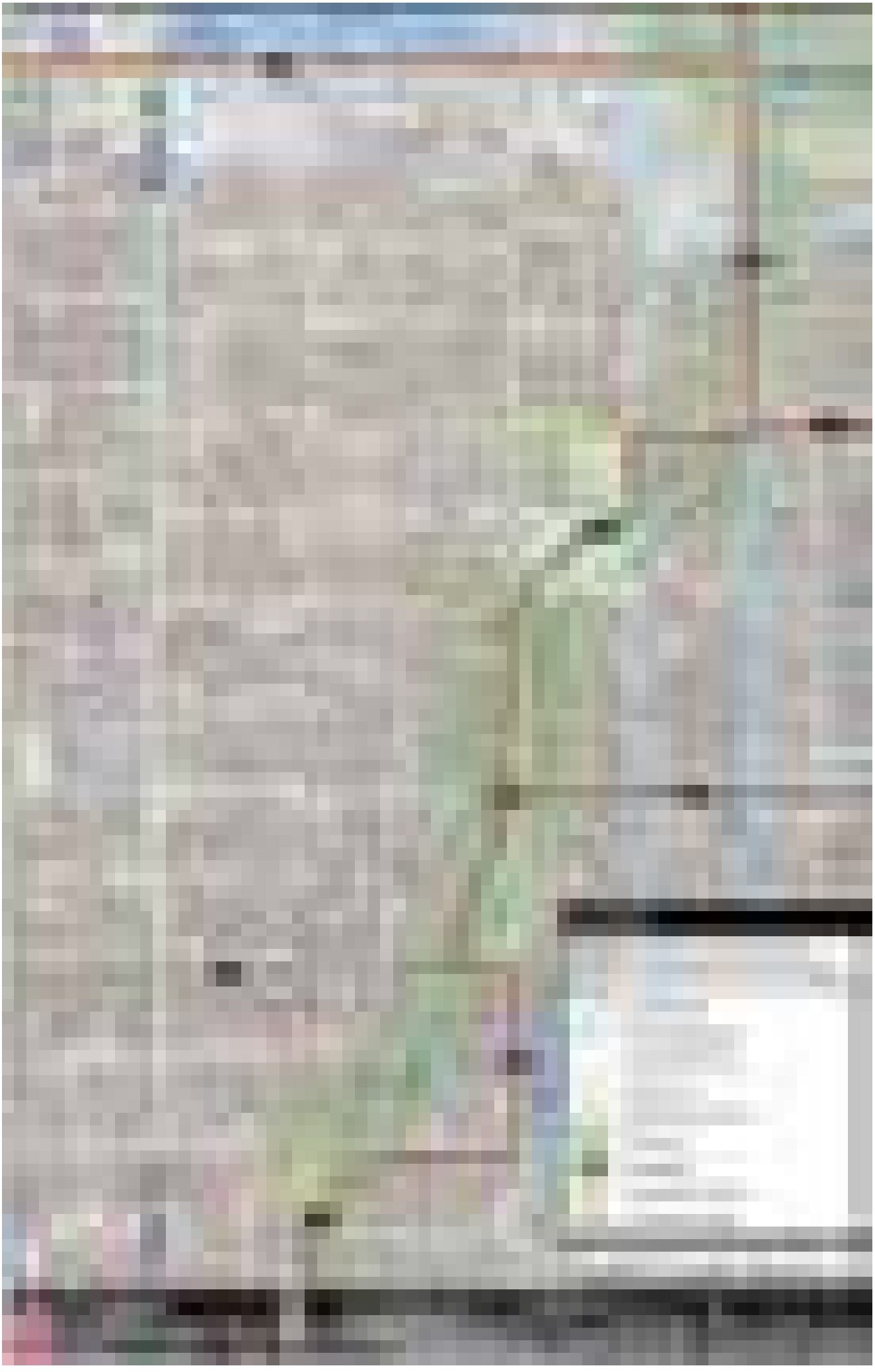
Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Imhoff	IM-1	Andrews Park	Lion's Park	Greenway along surrounding road corridors, connects to Imhoff creek, Andrews Park and downtown Norman	4,100	$820,000	2010-2020
Imhoff	IM-1A	Andrews Park	Lion's Park	Greenway along surrounding road corridors, connects to Imhoff creek, Andrews Park and downtown Norman	4,000	$680,000	2010-2020
Imhoff	IM-2	Lion's Park	McNamee	Greenway along Imhoff creek through Lion's Park	800	$200,000	2015-2025
Imhoff	IM-3	McNamee	Cruce	Greenway along Imhoff creek	1,400	$400,000	2015-2025
Imhoff	IM-4	Cruce	Brooks Ave.	Greenway along Pickard St.	1,550	$350,000	2015-2025
Imhoff	IM-5	Brooks Ave.	Lindsey St.	Greenway along Imhoff creek	1,900	$390,000	2020-2030
Imhoff	IM-6	Lindsey St.	Imhoff Rd.		5,400	$1,100,000	2010-2020
Imhoff	IM-8	Berry Rd.	Chautauqua	Greenway along Imhoff creek	5,200	$1,000,000	2015-2025
Imhoff	OU-1	Imhoff Creek	Classen	Greenway along Boyd, connects greenway to OU campus	4,700	$1,100,000	2020-2030
Imhoff	OU-2	Imhoff Creek	Maple (OU Campus)	Greenway along Boyd, connects greenway to OU campus	3,100	$720,000	2020-2030
Imhoff	RB-1	Flood	Griffin Memorial Park	Greenway along Robinson, key connection to existing Legacy trail, Griffin Memorial Park, and Andrews Park	7,700	$1,400,000	2015-2025
Imhoff	RB-2	Griffin Memorial Park	Water Treatment Area	Greenway along Robinson, key connection, Griffin Memorial Park and connects to the proposed water-line greenway	11,000	$1,900,000	2015-2026
				Estimated Total	**50,850**	**$10,060,000**	
					10 Miles		

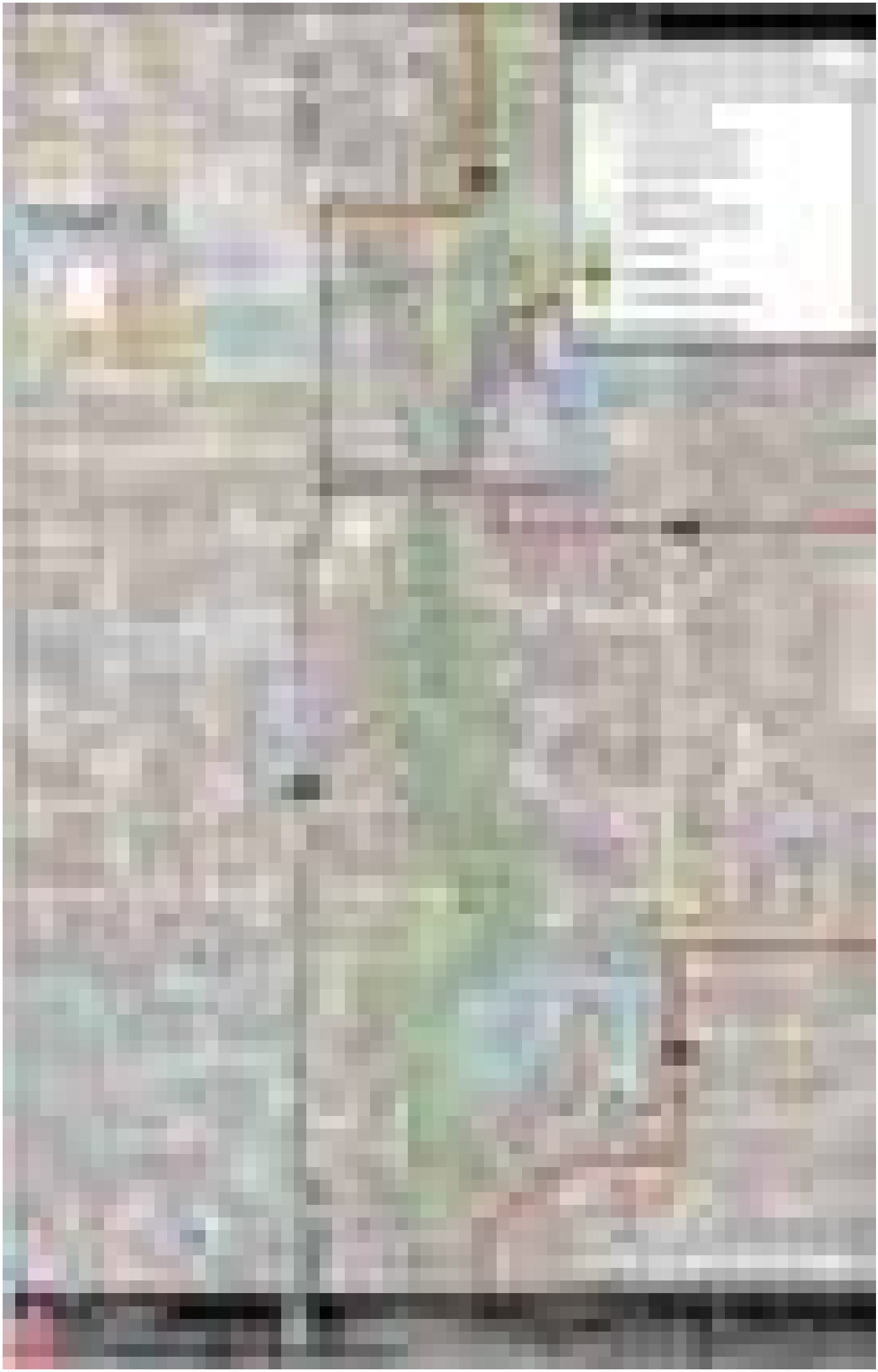


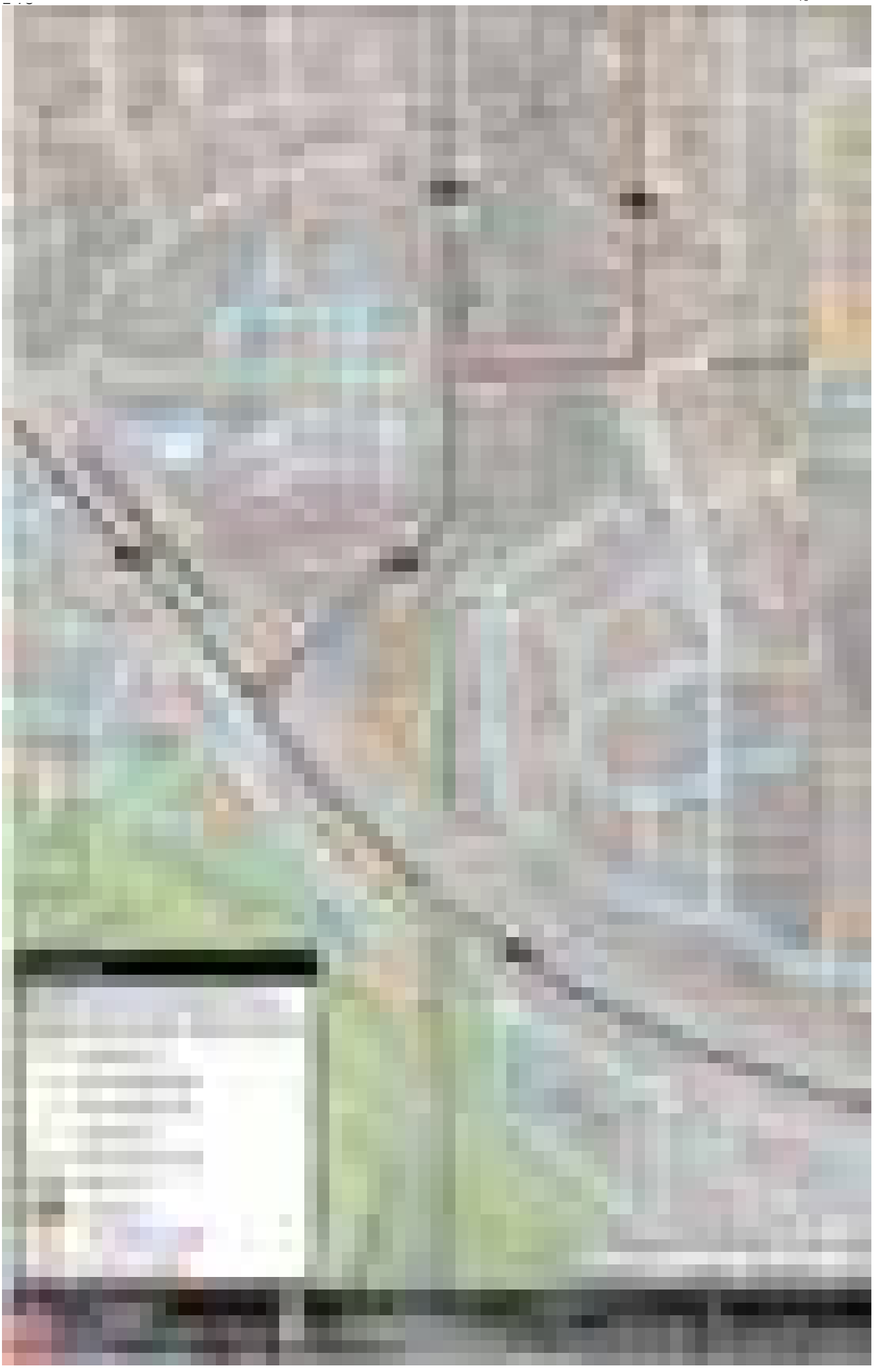
Imhoff Creek Key Recommendations











BISHOP CREEK

Location: Located in SC sector of the City
From: Robinson
To: Canadian River

Surrounding Corridors:
Rock Creek, Imhoff Creek, Canadian River, and Little River

Size: 10 Sq. Miles – 6,326 Acres (Approximately: Porter Ave. to E 24th St. and Robinson to Canadian River)

Major Transportation/Roads:
E/W: Main St. – Robinson – Alameda St. - Lindsey St. – Imhoff Rd. - State Highway 9
N/S: Porter Ave. – E 12th St. – E 24th St.

Major Area Corridor(s):
Bishop Creek runs predominantly North and South. The creek does have some potential for Greenway Trails along the corridor, but some areas of the Corridor will need to be utilized with Parkway Trails.
OU Campus is a major area Connector.
The Canadian River has a flat and densely vegetated terrain. This Corridor has the potential to be a key connector with other Greenway Opportunities.

Minor Area Sub-corridor(s):
Robinson St. has an existing Trail which runs from W 24th St. to W 12th St.
24th St. and 12th St. are the major arterial streets connectors. Local Streets have great opportunities for parkway connections with Schools, Parks and Major Retail land uses.

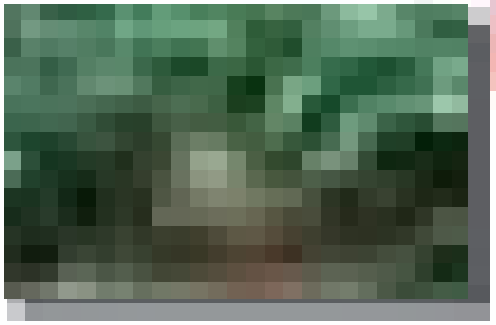
Land Use Context:
Much of this corridor is developed; the predominant land use is Residential with single family lots. The OU Campus is a Major Land Use. High Density Residential is a key use due to student living for OU. The corridor area also includes Parkland, Institutional and Industrial uses.

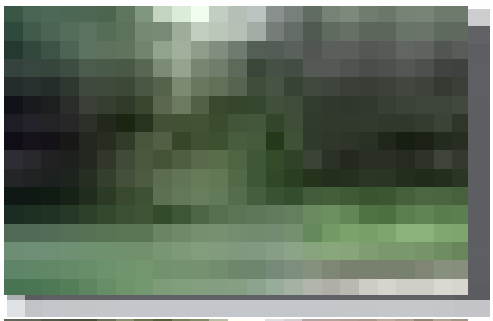
Key Destinations:
OU Campus is located within the Corridor Area. Six Schools (Jefferson Elementary, Kennedy Elementary, Madison Elementary, Lincoln Elementary, Irving Middle School, and Longfellow Middle School) are located within Corridor area, and other local schools are located within the surrounding Corridors. Downtown is located within this corridor area. 18 Parks are located within study area. High Density Residential along with Major Retail zones will be key attractors in this Corridor.

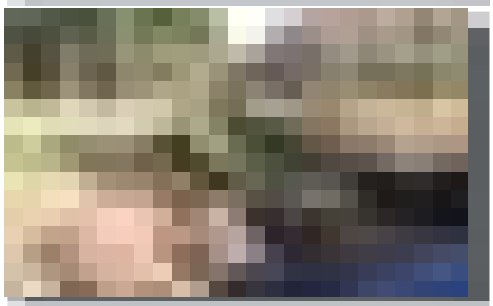
Key Opportunities:
Opportunities along Street Corridors: The existing and proposed Trail/Paths located within the OU Campus area are opportunities to tie into the OU Campus from the surrounding uses. The possibility of Parkway Street Trails located along the Arterial streets such as Lindsey St. can help connect with key destinations in the area. Local Streets can be used when needed to connect with OU Campus, Schools, existing parks, open spaces, and major retail land uses.
Opportunities along Creek Corridors: A majority of the Bishop Creek Corridor is urbanized and developed with many possible constraints. Portions of the creek have feasible areas for a trail to help link Single Family Residential, High Density Residential, and parks located within this corridor.

Sensitive Areas:
Residential houses properties extend out to the Creek edge. Bishop Creek runs through the OU Golf Course which creates a connection barrier; a rail trail could be used to move around this area.

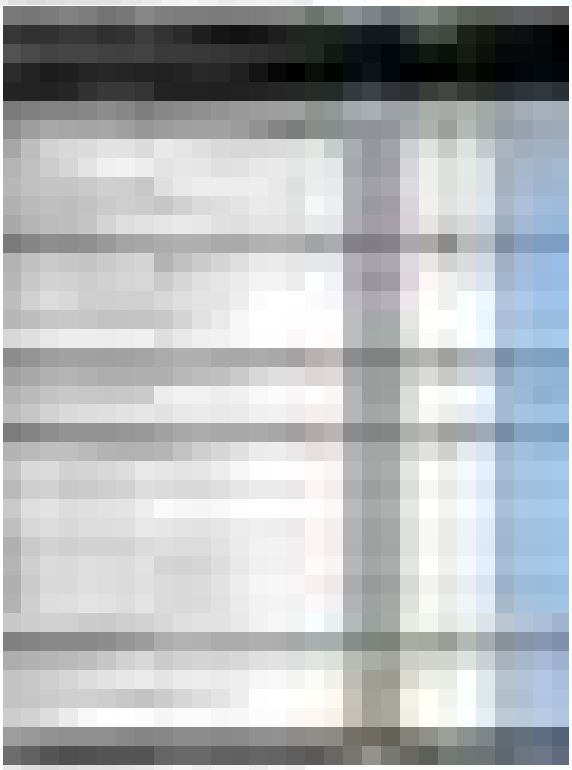
Potential Drainage Improvements: Channel and bank stabilization along many portions of the creek

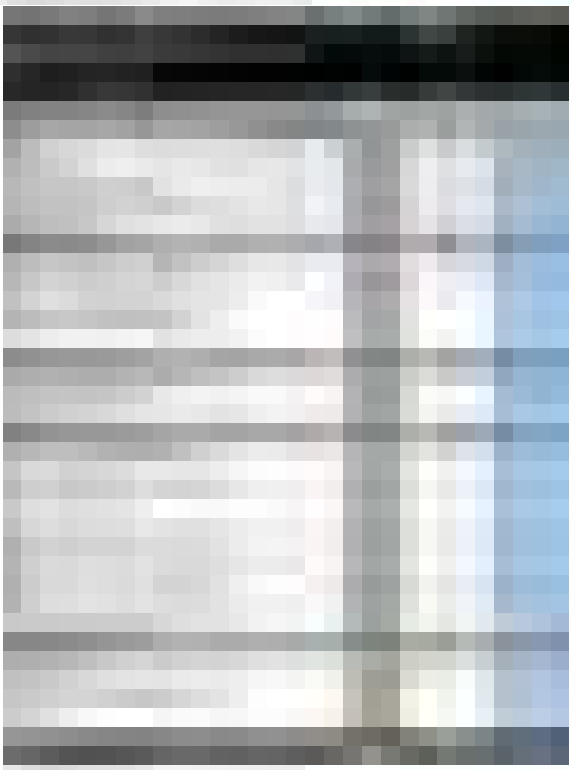




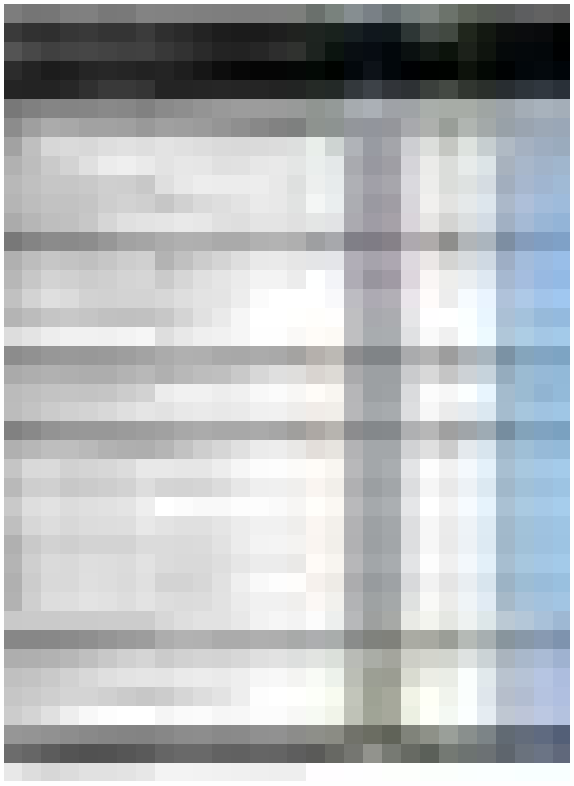


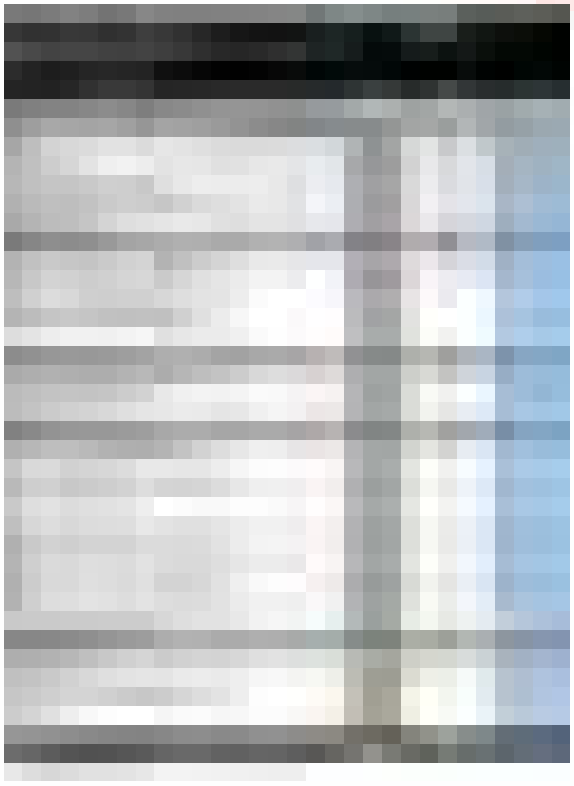
Suitability Analysis: Bishop Creek

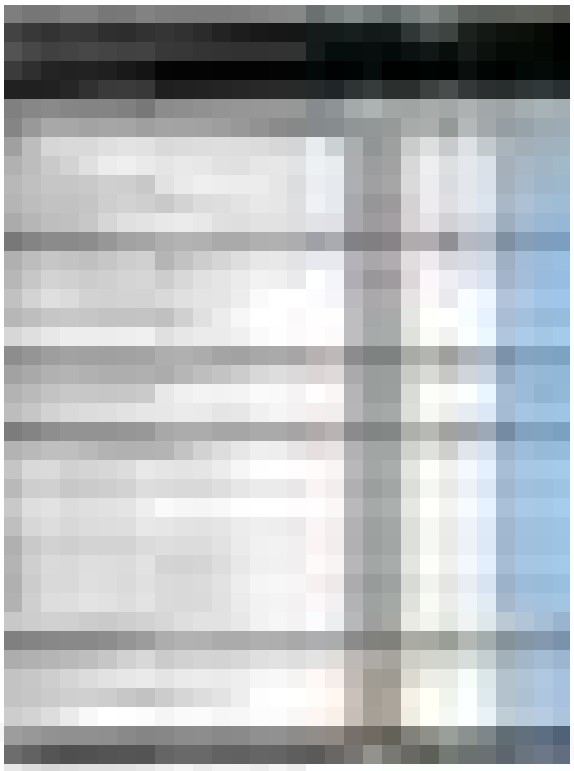


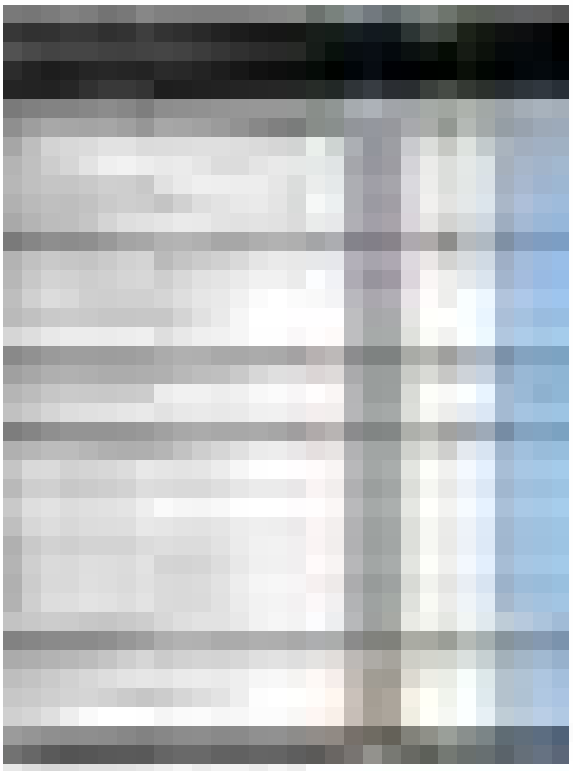


Suitability Analysis: Bishop Creek

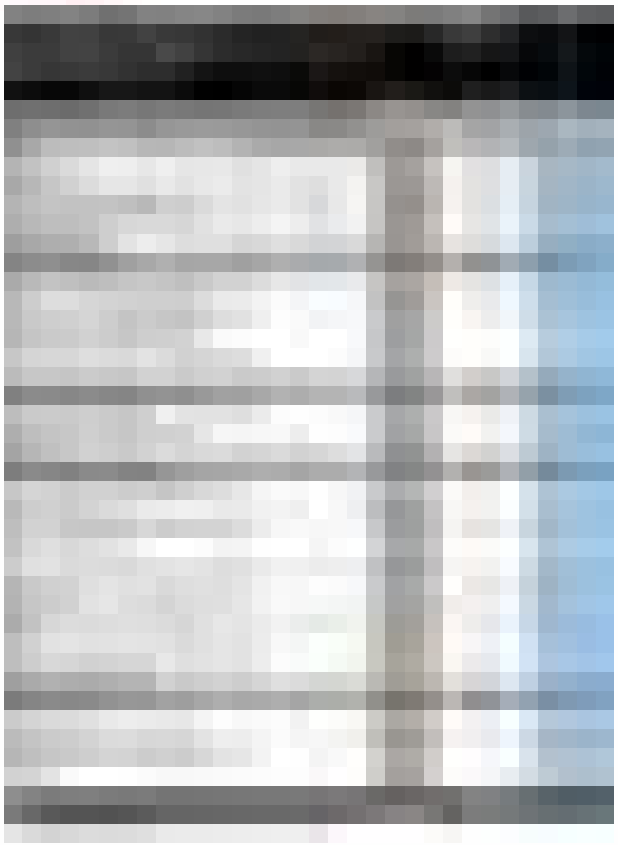








Suitability Analysis: Bishop Creek



Prioritization Analysis: Bishop Creek

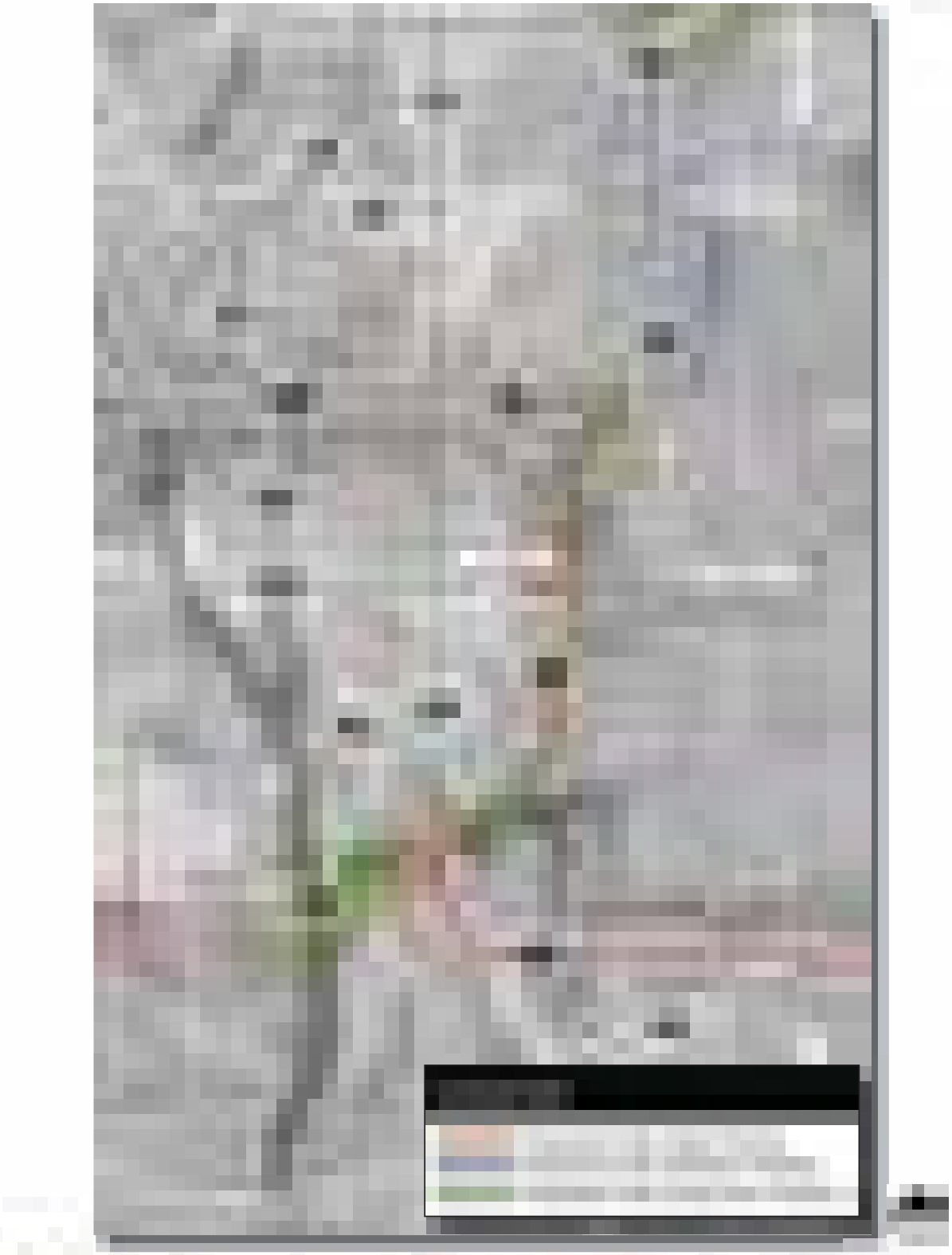
Urban Greenway System: Bishop Creek Key Recommendations

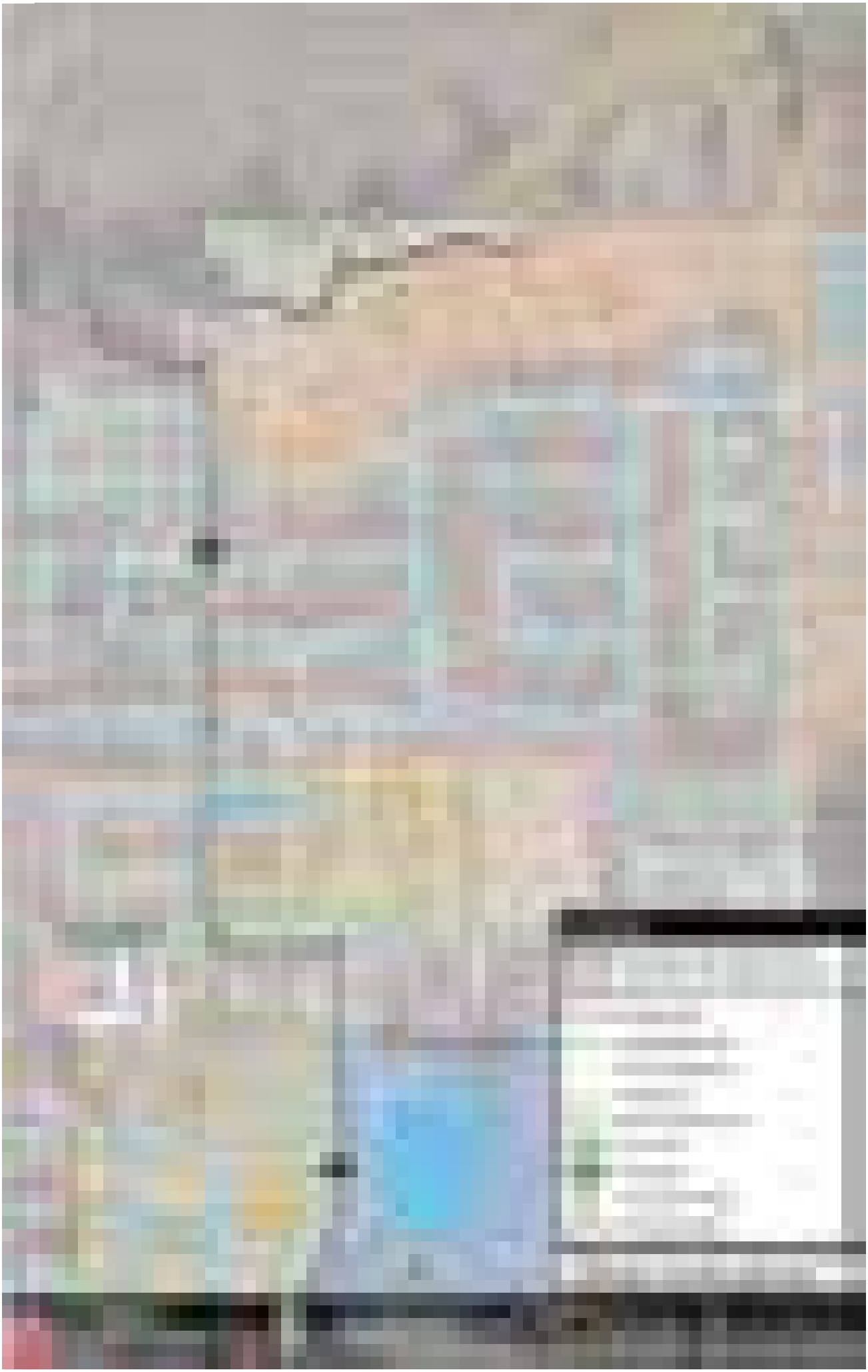
The key greenway recommendations for this corridor are intended to connect eastern urban area to the central core of Norman and Oklahoma University. A key recommendation will be continuing the Colonial Estates Trail to both the Northern and southern portions of Oklahoma University. The northern connection will be located along the Boyd St. corridor. The southern recommendation is a highly needed greenway connection into campus. The greenway will run south along Bishop Creek until Classen. The greenway corridor will then utilize Constitution into campus. Another recommendation will be connecting the Bishop Creek greenway to State Hwy. 9 along Imhoff St, which will connect to the Lake Thunderbird Greenway. The estimated cost for these greenway improvements is shown below (see chart).

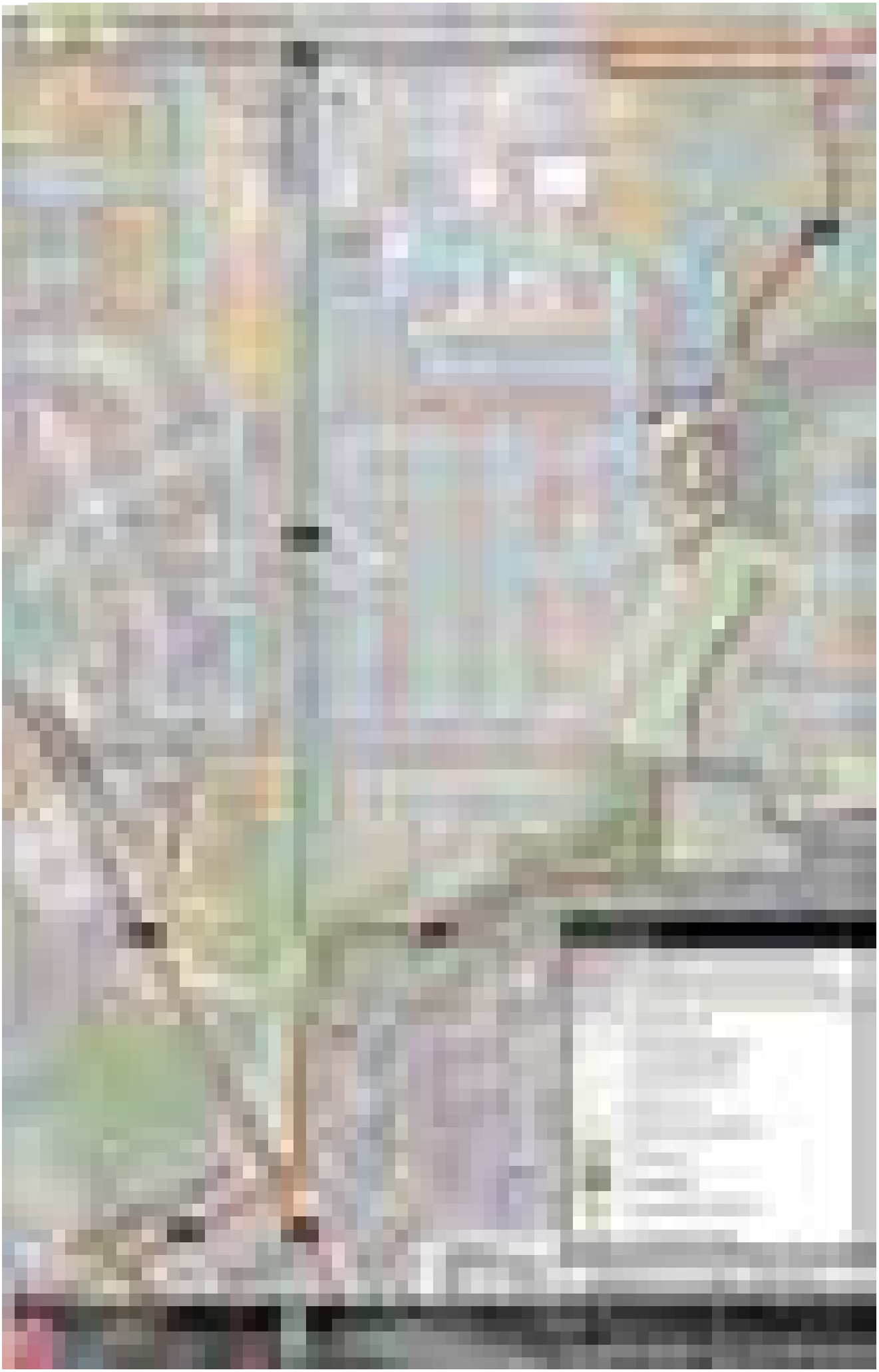
Norman Greenway Implementation Action Plan
Bishop Creek (Urban Greenway)

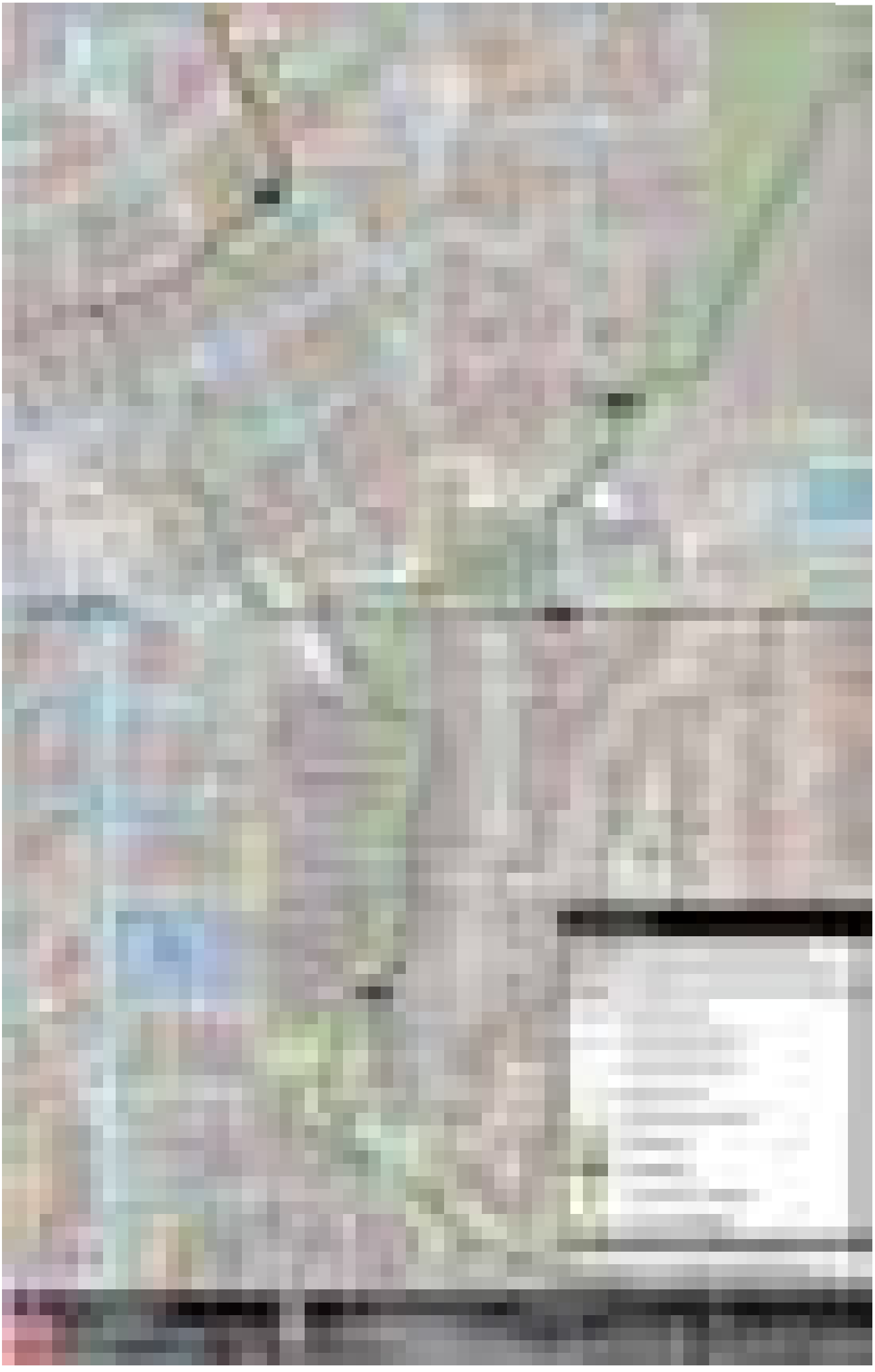
Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Bishop	BC-2	University	Carter	Greenway along Eufaula and Main St., Connects to downtown Norman	6,000	$1,100,000	2010-2020
Bishop	BC-9	12th Ave.	Vicksburg	Greenway along Boyd, connects to OU campus	5,300	$920,000	2010-2020
Bishop	BC-10	Trout	12th Ave.	Greenway along surrounding road corridors, connects to OU campus	4,700	$830,000	2015-2025
Bishop	BC-15	Lindsey	Classen	Greenway along Bishop Creek, connects with existing Colonial Estates greenway	5,800	$1,100,000	2015-2025
Bishop	BC-16	Monitor	Classen	Greenway along Constitution, key greenway connection to OU Campus	3,700	$750,000	2010-2015
Bishop	BC-18	State Hwy 9	Bishop Creek	Greenway along Bishop Creek	4,600	$790,000	2020-2030
				Estimated Total	**30,100**	**$5,490,000**	
					6 Miles		

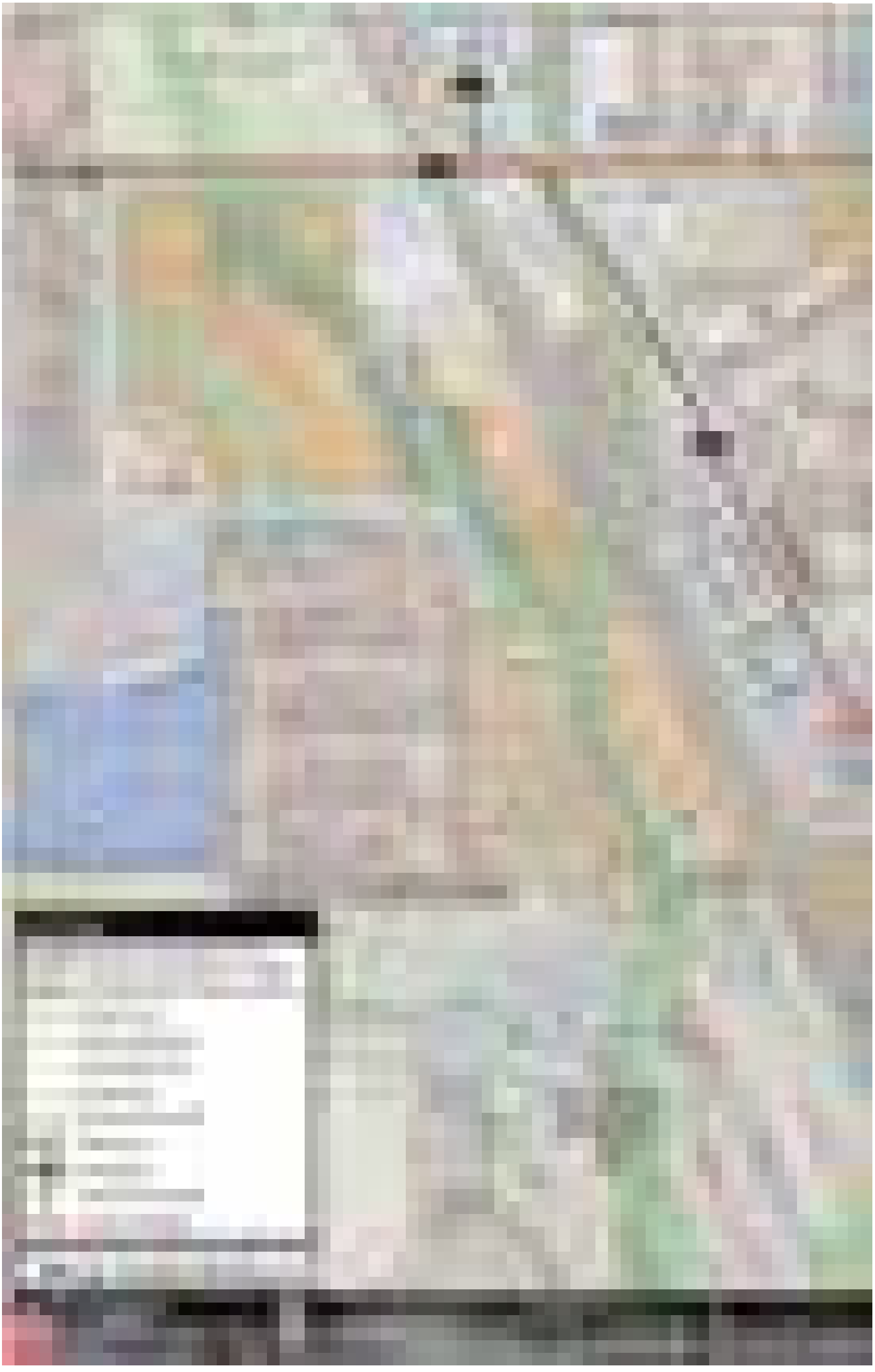
Bishop Creek Key Recommendations

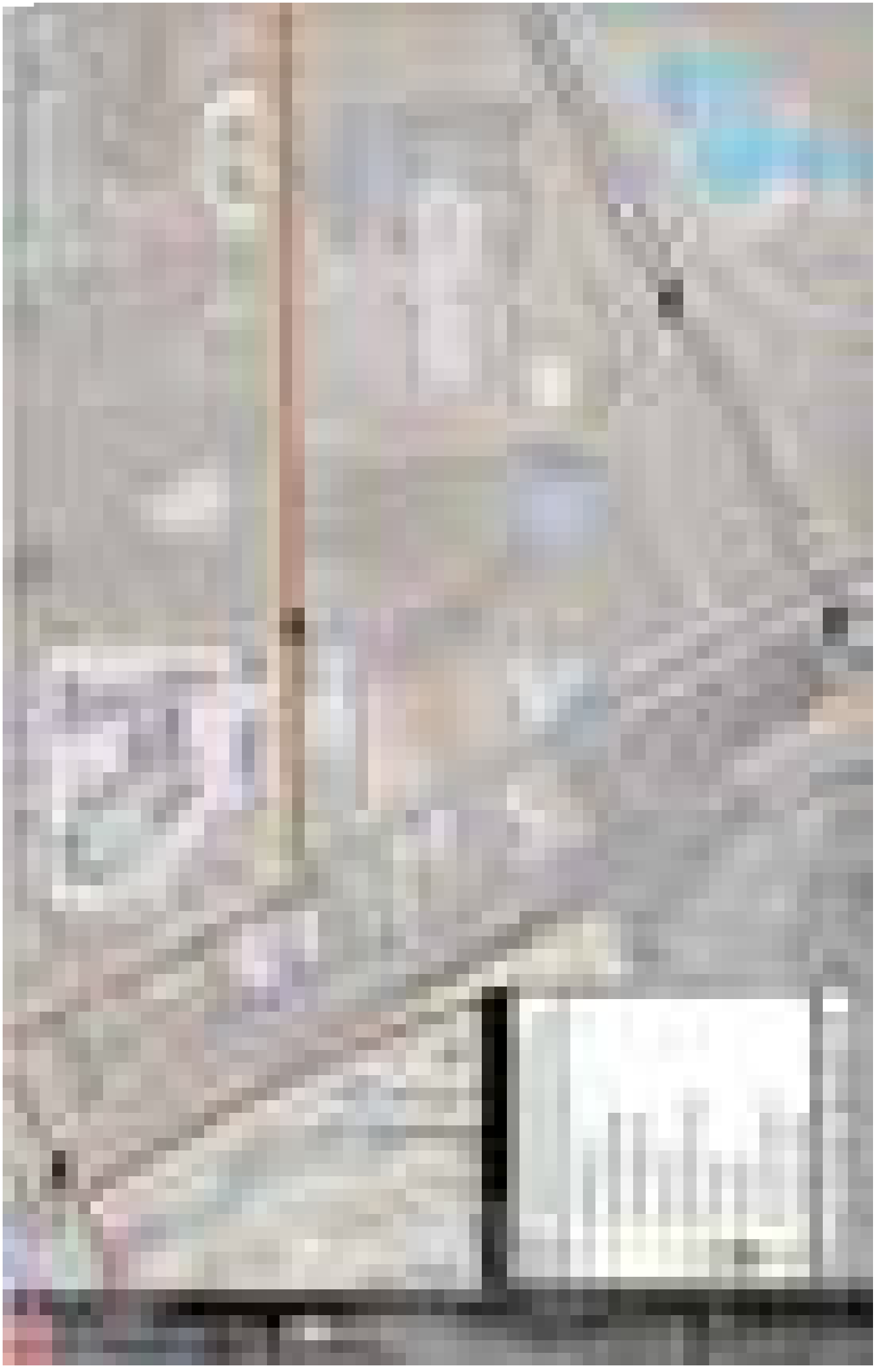


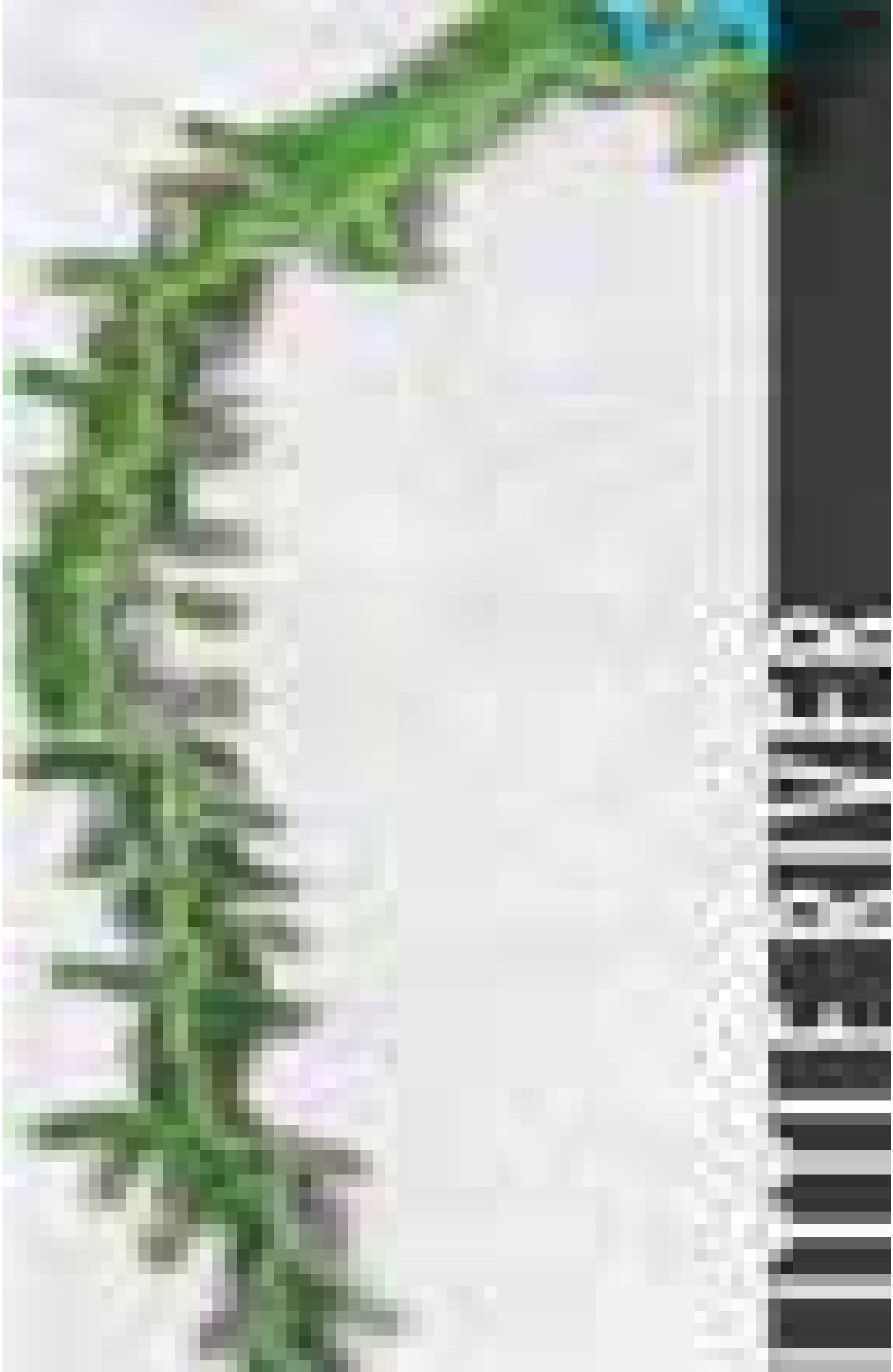












LITTLE RIVER CORRIDOR

Location: Located in NC sector of the City
From: W 24th Ave.
To: Lake Thunderbird.

Surrounding Corridors: Tributary G to Little River, Brookhaven Creek, Merkle Creek, Woodcrest Creek and Lake Thunderbird

Size: 8 Sq. Miles – 5,704 Acres (Approximately: W 24th to Lake Thunderbird and Indian Hill Rd. to Rock Creek Rd.)

Major Transportation/Roads:
E/W: Indian Hill – Franklin Rd. – Tecumseh Rd. – Rock Creek Rd.
N/S: Porter Ave. – W 24th Ave. through E 84th Ave.

Major Area Corridor(s):
Little River Creek runs predominantly West to East. The creek does have some potential for Greenway Trails along the corridor, but some areas of the Corridor will need to be utilized with Parkway Trails.
Proposed Legacy Trail has potential to be a major connection.

Minor Area Sub-corridor(s):
Robinson St. has an existing Trail which runs from W 24th Ave. to W 12th St.
Local Streets have some potential opportunities for parkway connections with the addition of sidewalks.

Land Use Context: Much of this corridor is undeveloped; the predominant land use is Low Density Residential. Future Single Family Residential will occur in this area. Agriculture land is prevalent in this corridor as well.

Key Destinations: No Schools are located within Corridor area, but other local schools are located within the surrounding Corridors. No Parks are located within study area. Future Land use developments will create new destinations in this area.

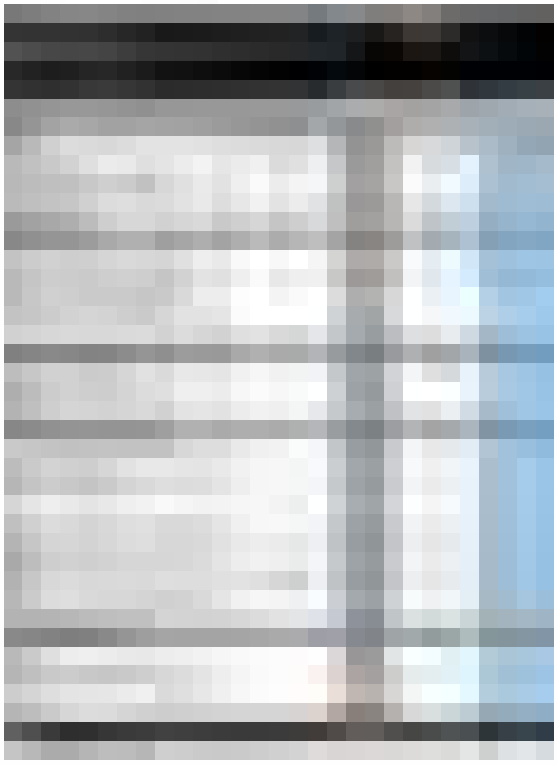
Key Opportunities:
Opportunities along Street Corridors: The possibility of Parkway Street Trails located along the Arterial streets such as Tecumseh can help connect with key destinations in the surrounding areas.

Opportunities along Creek Corridors: A majority of the Little River Corridor is undeveloped agriculture land which has opportunities for acquisition by the city for public Greenway space along the Creek Corridor. This Greenway Trail could lead users from the proposed Legacy Trail out to Lake Thunderbird. This has the potential to be a signature facility in Norman.

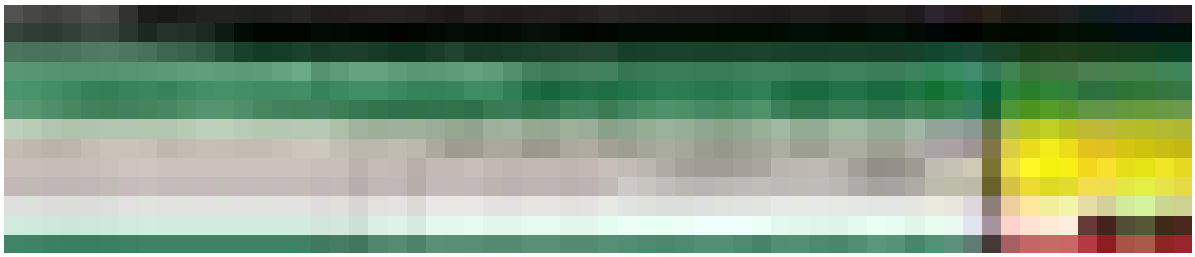
Sensitive Areas: Flood prone areas along creek and agriculture lands.

Potential Drainage Improvements: Bank stabiliation will be required along portions of Little River Corridor.

Suitability Analysis: Little River Corridor



Prioritization Analysis: Little River Corridor



Urban Greenway System: Little River Key Recommendations

This greenway recommendation runs from W. 12th Ave. to Woodcrest Creek. This proposed area will be a great opportunity for a scenic greenway to connect users from western Norman to north central Norman. The estimated cost for these greenway improvements is shown below (see chart).

Norman Greenway Implementation Action Plan
Little River (Urban Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Little River	LR-4	Little River	Rock Creek Rd	Greenway along drainage corridor, Connects Legacy trail to Little River	11,100	$1,900,000	2020-2030
Little River	LR-5	W 12th Ave.	Woodcrest Creek	Greenway along Rock Creek Rd., Connects Little River and Sutton Wilderness	5,100	$930,000	2015-2025
Little River	LR-6	Rock Creek Rd.	Robinson	Greenway along Stubbman Rd., Connects Little River,Sutton Wilderness and Legacy trail	5,200	$980,000	2010-2020
				Estimated Total	**21,400 4 Miles**	**$3,810,000**	

Little River Key Urban Recommendations

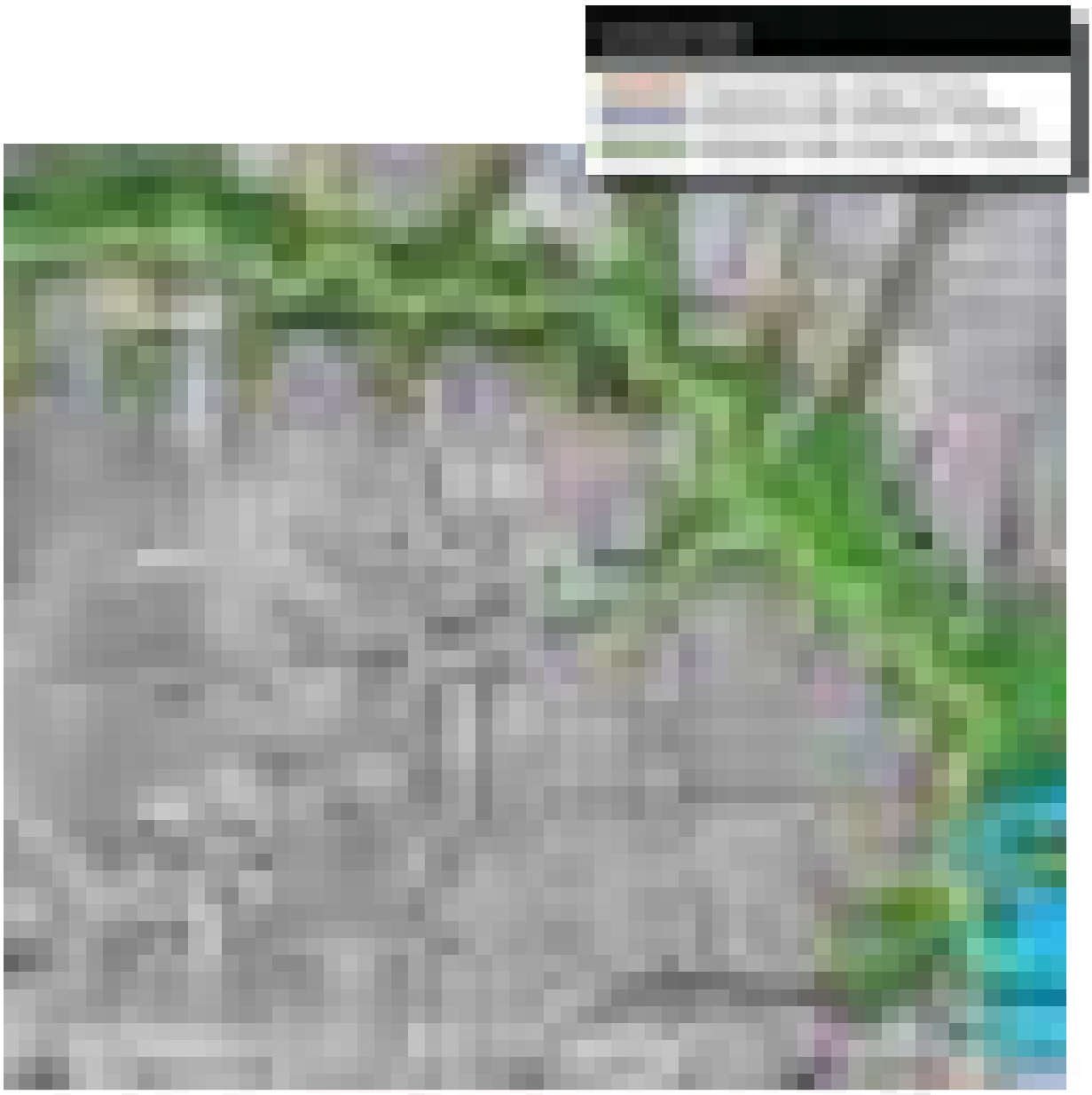
October 2009

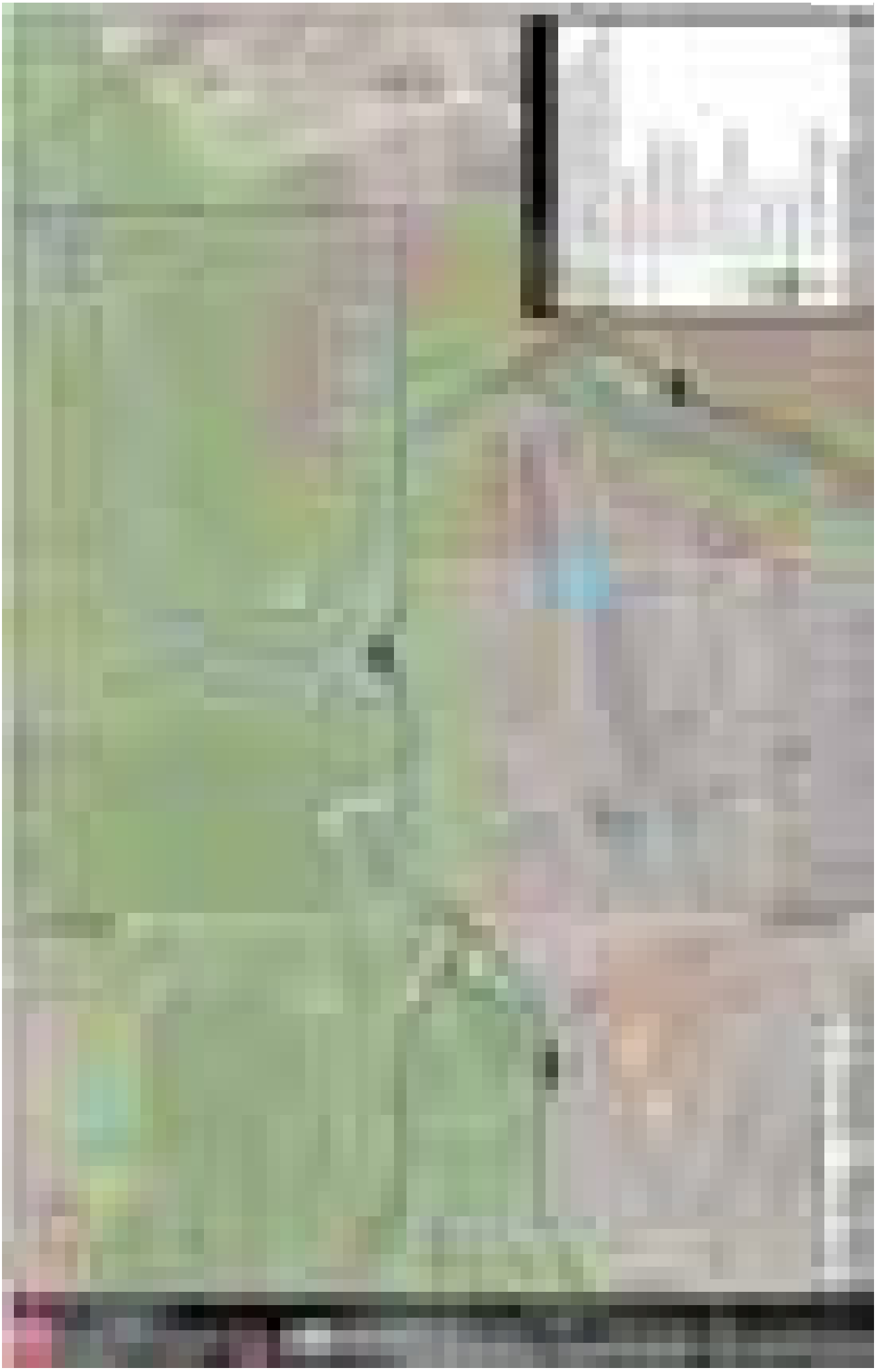
Scenic Rural Greenway System: Little River to Lake Thunderbird

This greenway corridor is proposed to run from East to West along Little River in northern Norman. This greenway will preserve open space for public and drainage uses. The greenway is also proposed to include a crushed material scenic trail to Lake Thunderbird. This is a great opportunity for recreation and educational uses for the citizens of Norman. The estimated cost for these greenway improvements is shown below (see chart).

Norman Greenway Implementation Action Plan
Little River to Lake (Scenic Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Little River	LR-1	W. 12th Ave.	E. 12th Ave.	Greenway along Little River Corridor, connects to Lake Thunderbird (Natural Surface Trail)	14,400	$1,100,000	2010-2020
Little River	LR-2	E. 12th Ave.	E. 36th Ave.	Greenway along Little River Corridor, connects to Lake Thunderbird (Natural Surface Trail)	13,200	$990,000	2015-2025
Little River	LR-3	E. 36th Ave.	Lake Thunderbird	Greenway along Little River Corridor, connects to Lake Thunderbird (Natural Surface Trail)	40,400	$3,000,000	2020-2040
				Estimated Total	**68,000 13 Miles**	**$5,090,000**	





ROCK CREEK/HALL PARK

Location: Located in Central sector of the City
From: Rock Creek Rd.
To: Alameda St.

Surrounding Corridors: Woodcrest Creek, Bishop Creek, Dave Blue, Little River, and Lake Thunderbird

Size: 7 Sq. Miles – 4,283 Acres (Approximately: E 24th Ave. to E 60th Ave. and Rock Creek Rd. to Alameda St.)

Major Transportation/Roads:
E/W: Robinson – Rock Creek Rd. - Alameda
N/S: E 24th Ave. – E 36th Ave. – E 48th Ave. – E 60th Ave.

Major Area Corridor(s):
Rock Creek runs predominantly East and West. The creek does have potential for great scenic greenway corridors, which would have uses for the public and drainage improvements. Future development in this area will also provide opportunities for greenway developments.

Minor Area Sub-corridor(s):
Robinson Street Is the major arterial street connector. Local Streets have great opportunities for parkway connections with Schools, Parks and Major Retail land uses.

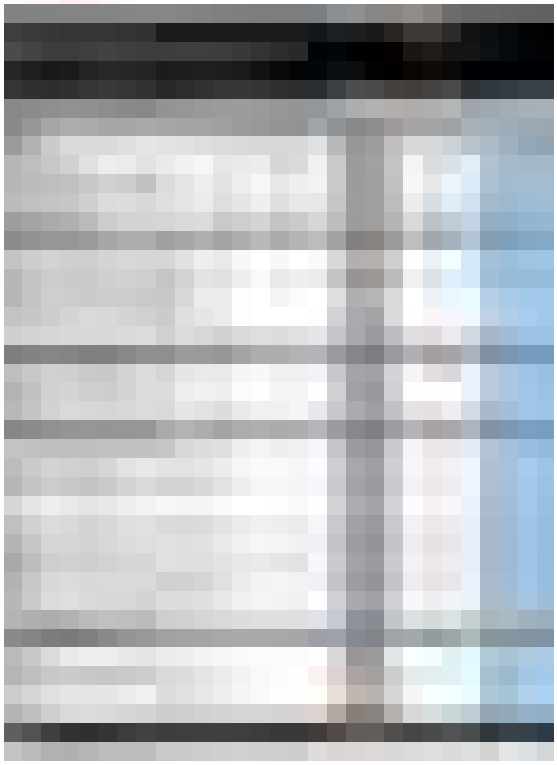
Land Use Context: Much of this corridor is undeveloped; the predominant future land use will be Rural Residential development. The corridor area also includes Parkland, High Density Residential, and Institutional.

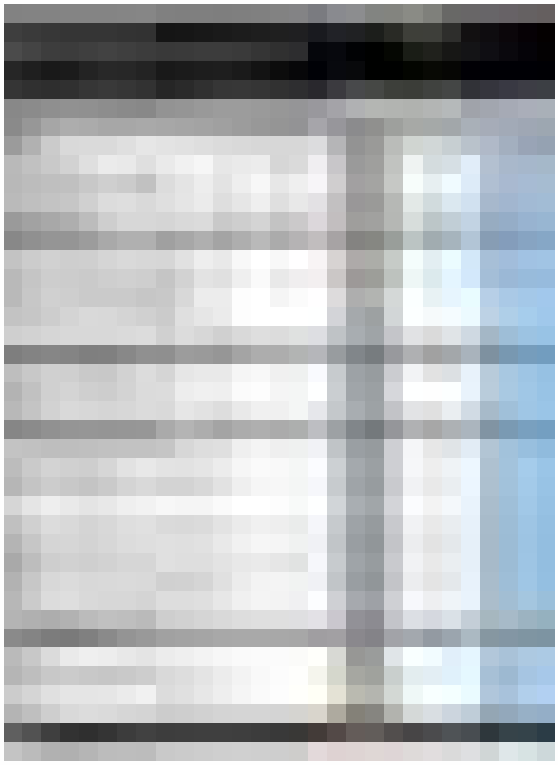
Key Destinations: No Schools are located within Corridor area, but other local schools are located within the surrounding Corridors. Eight Parks are located within study area. This corridor has the potential to connect the Doubletree Greenbelt and the Hall Park Greenbelt systems to Lake Thunderbird and to the west the more urbanized area of Norman.

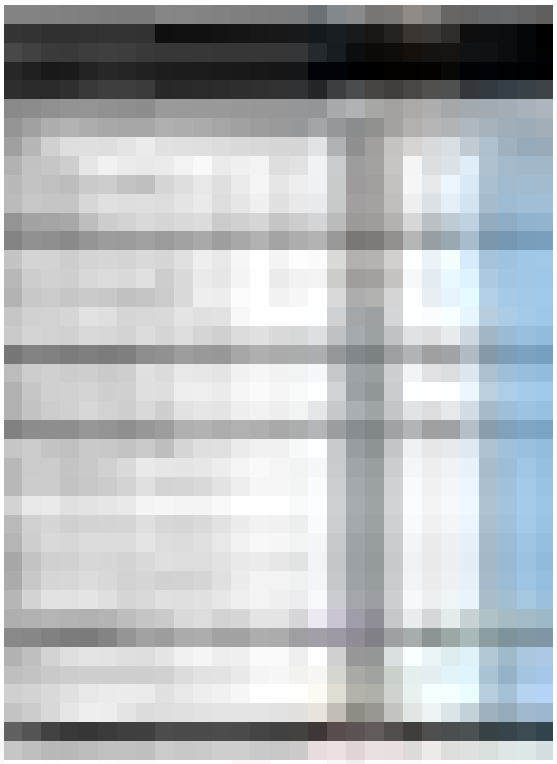
Key Opportunities: Opportunities along Street Corridors: Local Streets can be used when needed to connect with Schools, existing parks, and open spaces.
Opportunities along Creek Corridors: Most of the Drainage corridors for Rock Creek have yet to be developed; these areas are excellent opportunities to preserve spaces for Greenways. This corridor has the opportunity to be a scenic greenway and add great value to the city of Norman. The Hall Park and Double Tree communities are located within this corridor. A key opportunity is to connect the urban core of the city and these developments through greenways. This corridor is one of the most aesthetically visual areas in Norman. The greenway could be connected with the urban areas with greenways along Robinson. It also connects with the proposed raw water line trail and the Little River greenway, which both connect to Lake Thunderbird.

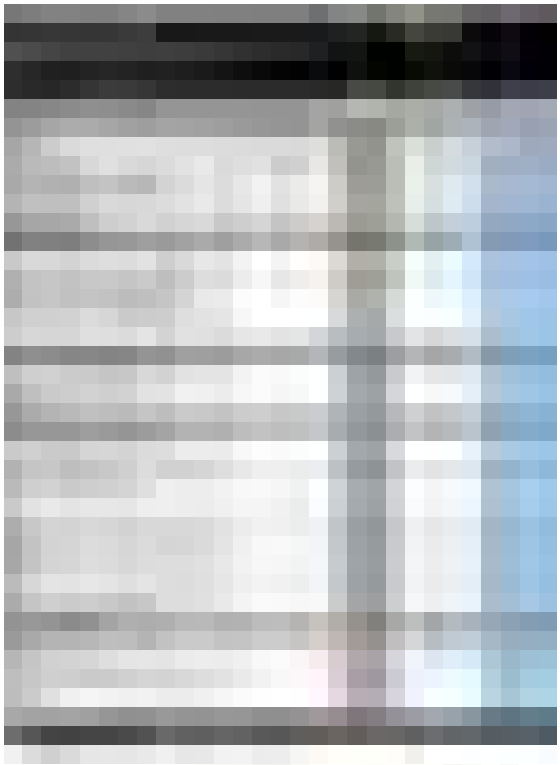
Sensitive Areas: Existing developed areas along the creek corridor

Suitability Analysis: Rock Creek Corridor







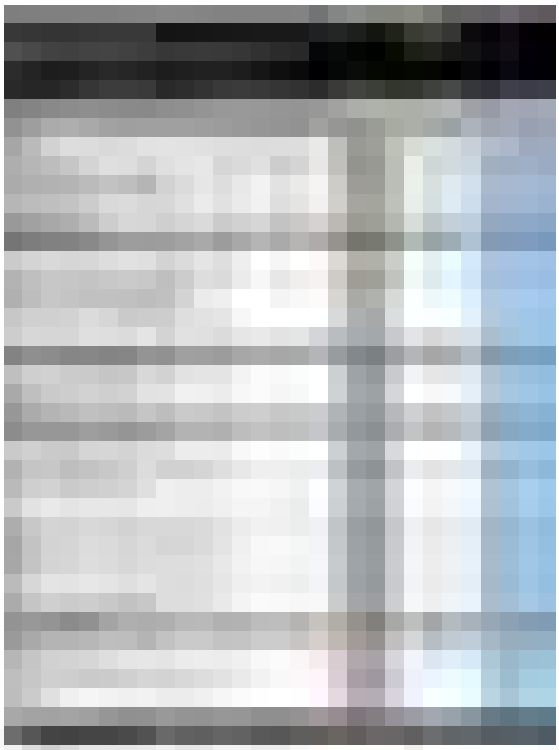


Prioritization Analysis: Rock Creek Corridor

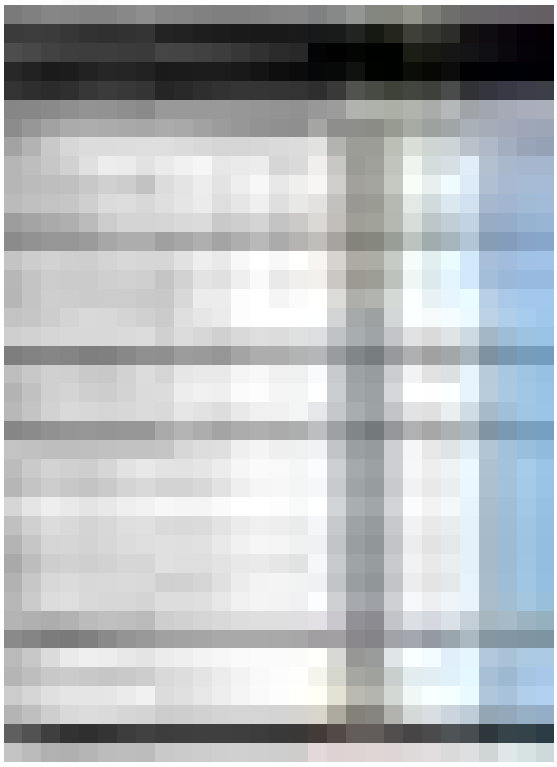
City of Norman
Greenway Master Plan

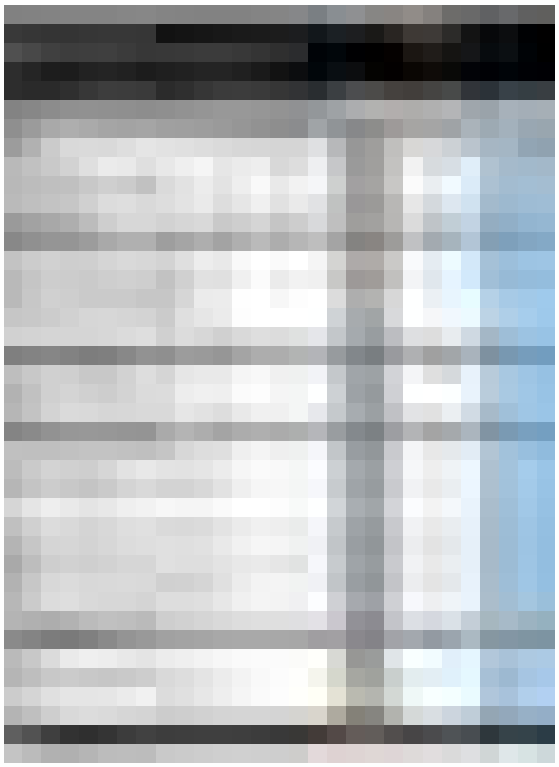
Greenway Corridor Prioritization: Rock Creek

Number	Corridor		Prioritization Criteria							Total Score	Priority Category
		Length (L.F)	Suitability Evaluation Score (1 to 5)	Level of Connectivity (1 to 5)	Potential Level of Use (1= low, 5 = high)	Key Contribution to Greenway and Open Space Network (1 to 3)	Critical Opportunity (1-5)	Integration with Stormwater Plan/Facilities (1 to 3)	Level of Readiness (1 to 4)	Maximum Score = 30	21 to 30 = High 11 to 20 = Medium 0 to 11 = Long Term
RC-1	Rock Creek - Segment 1	3300	4	4	3	3	2	1	2	19	Medium
RC-2	Rock Creek - Segment 2	24700	4	5	3	3	2	1	2	20	Medium
RC-3	Rock Creek - Segment 3	9426	4	2	2	3	3	1	2	17	Medium
RC 4-5	Rock Creek - Segments 4-5	23000	4	4	3	3	3	1	R	18	Medium
		60426	4.0	3.8	2.8	3.0	2.5	1.0	2.0	19.0	Medium

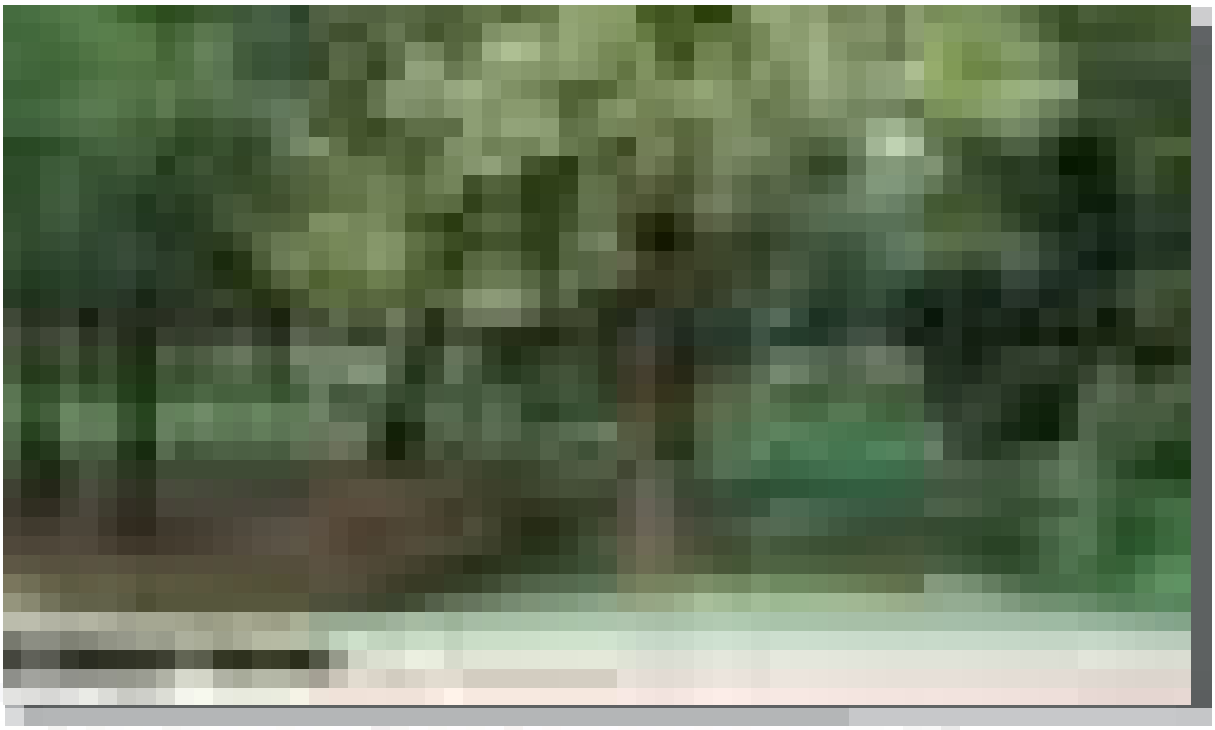


Suitability Analysis: Hall Park Corridor





Prioritization Analysis: Hall Park Corridor



Urban Greenway System: Rock Creek and Hall Park Key Recommendations

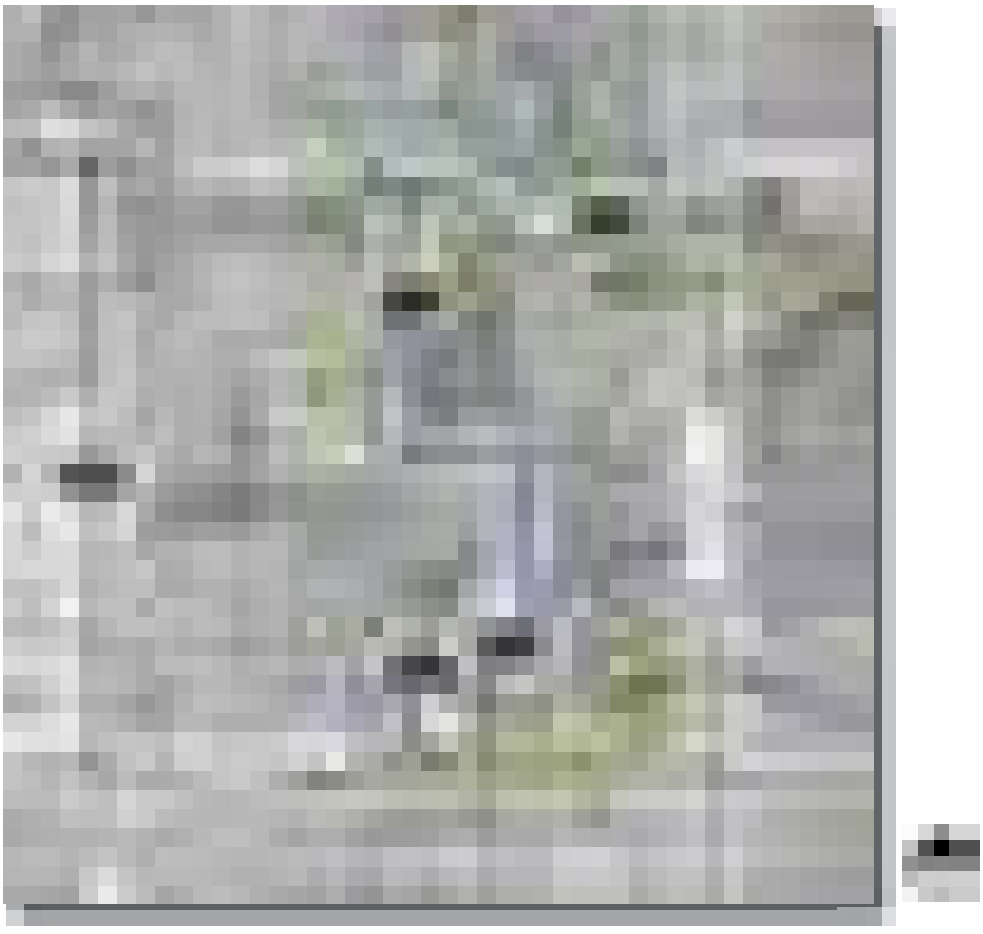
The Rock creek greenway will continue to grow with future development. The key recommendations for this corridor will connect the central urban greenways to the potential scenic rural greenway corridors. Improvements to the Hall Park greenway are included in these recommendations. These improvements will connect to the Sutton Wilderness and to downtown Norman. The estimated cost for these greenway improvements is shown below (see chart).

Norman Greenway Implementation Action Plan
Rock Creek (Urban Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Rock Creek	RC-1	Robinson	Little River	Greenway along Rock Corridor, connects to Lake Thunderbird (Natural Surface Trail)	3,300	$350,000	2010-2030
Rock Creek	RC-4	Little River	Hall Park	Greenway along Rock Creek Corridor (Natural Surface Trail)	19,500	$1,700,000	2020-2040
Rock Creek	RC-5	Double Tree Greenbelt	Proposed Greenway	Greenway along Rock Creek Corridor, (Natural Surface Trail)	3,600	$400,000	2015-2025
				Estimated Total	**23,100 4 Miles**	**$2,100,000**	

Norman Greenway Implementation Action Plan
Hall Park (Urban Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Rock Creek	HP-1	W. 12th Ave.	Hall Park	Greenway within Hall Park Greenway	7,600	$1,300,000	2015-2025
Rock Creek	HP-2	Hall Park	Hall Park	Greenway within Hall Park Greenway	1,200	$260,000	2015-2025
Rock Creek	HP-3	Hall Park	Robinson	Greenway within Hall Park Greenway, connects to proposed Robinson greenway	2,500	$510,000	2015-2025
Rock Creek	HP-4	Rock Creek Rd.	E. 24th Ave.	Greenway within Hall Park Greenway, connects to proposed Robinson greenway	3,100	$620,000	2015-2025
				Estimated Total	**14,400 3 Miles**	**$2,690,000**	

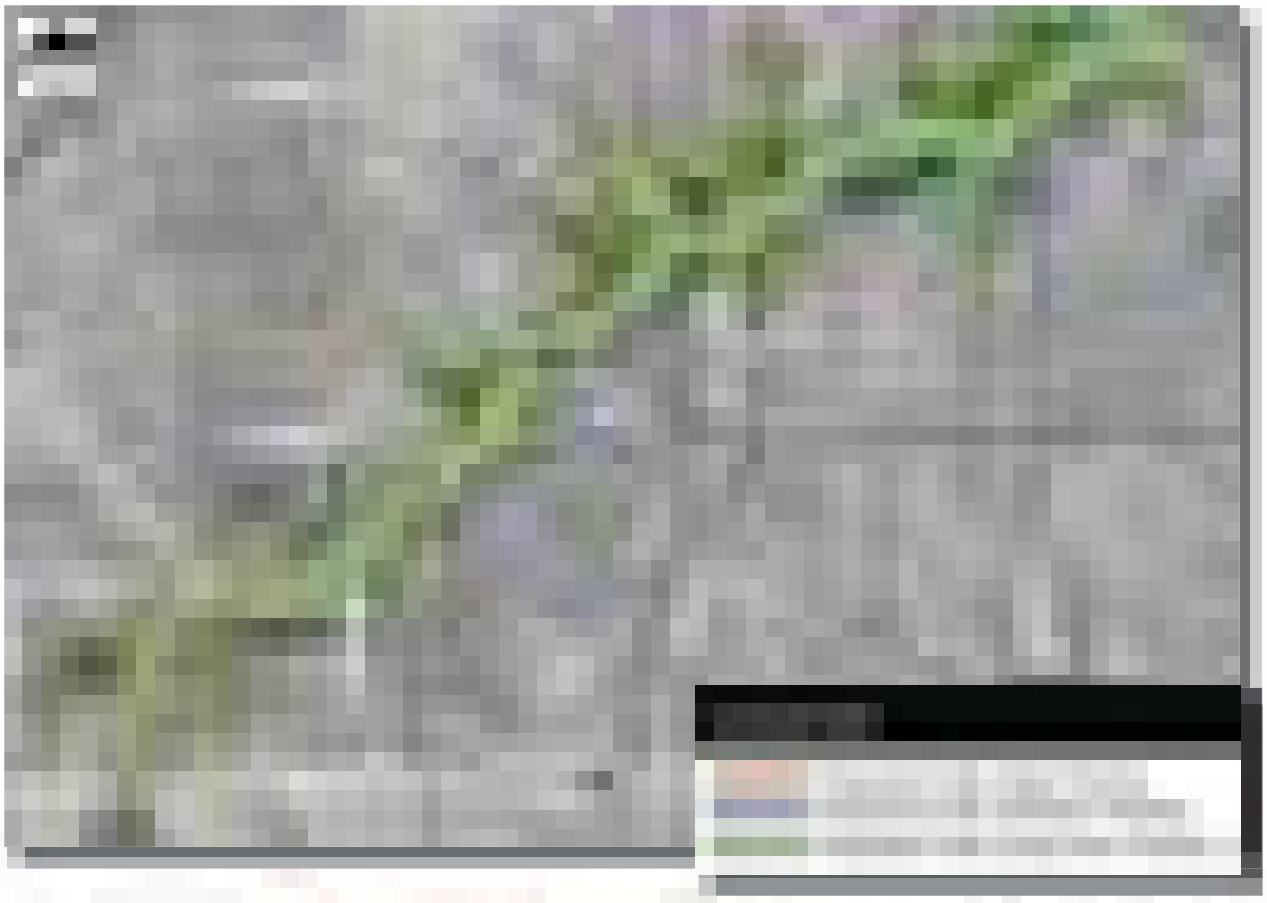


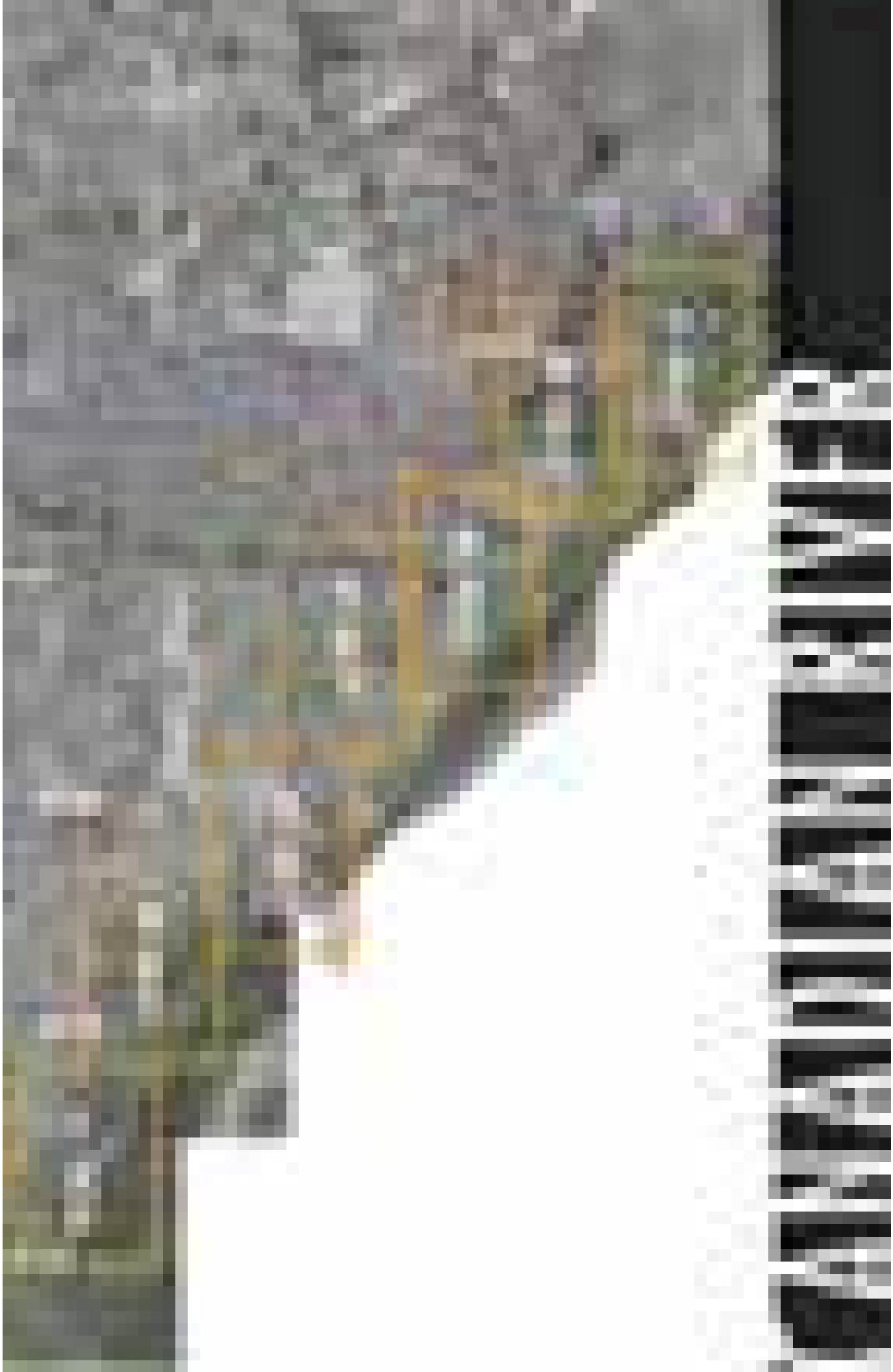
Scenic Rural Greenway System: Rock Creek

The recommendations for this corridor will be a continuous greenway from Little River to the proposed Waterline Greenway along Rock Creek. This greenway also has the opportunity for trail to be located within the greenway along Rock Creek. The scenic trail will be constructed with crushed materials. The estimated cost for these greenway improvements is shown below (see chart).

Norman Greenway Implementation Action Plan
Rock Creek (Scenic Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Rock Creek	RC-2	Creek Tributary	Rock Creek	Greenway along Rock Corridor, connects to Lake Thunderbird (Natural Surface Trail)	24,700	$3,000,000	2010-2030
Rock Creek	RC-3	Robinson	Little River	Greenway along Rock Corridor, connects to Lake Thunderbird (Natural Surface Trail)	9,400	$1,500,000	2010-2030
				Estimated Total	**34,100 6 Miles**	**$1,500,000**	





CANADIAN RIVER CORRIDOR

Creek Corridor Analysis

Location: Located in Southern sector of the City
From: Western City Limits of City.
To: Canadian Trails Park

Surrounding Corridors: Ten Mile Flat, Brookhaven, Merkel, Imhoff

Size: 3.5 Sq. Miles – 2,100 Acres

Major Transportation/Roads:
E/W: – Lindsey St. and State Hwy. 9
N/S: W. 36th St. – IH-35

Major Area Corridor(s):
Canadian River runs predominately west to East and is the final drainage point for many of the major corridors in Norman.

Minor Area Sub-corridor(s):
State Hwy. 9 is the major arterial street connector.
This area has great potential for natural scenic trails to meander though-out this corridor.

Land Use Context: Much of this corridor is undeveloped. The conditions in most of this corridor make it difficult for development. This is an environmentally sensitive zone.

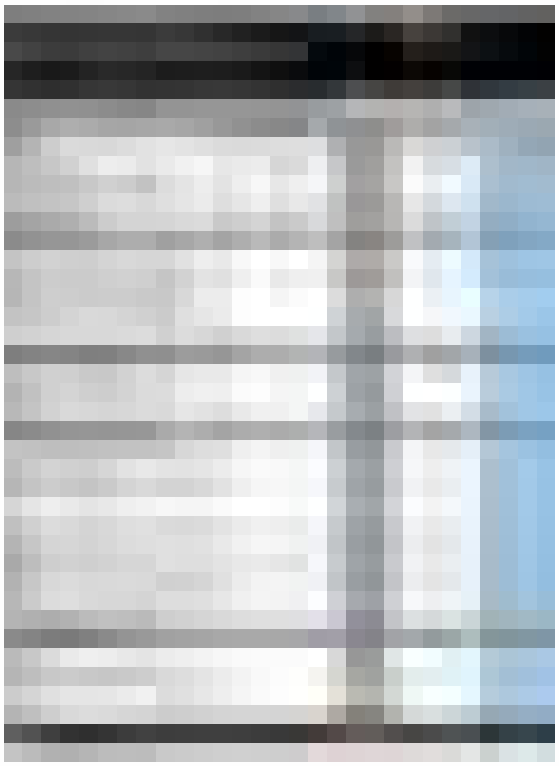
Key Destinations: No Schools are located within Corridor area, but other local schools are located within the surrounding Corridors.

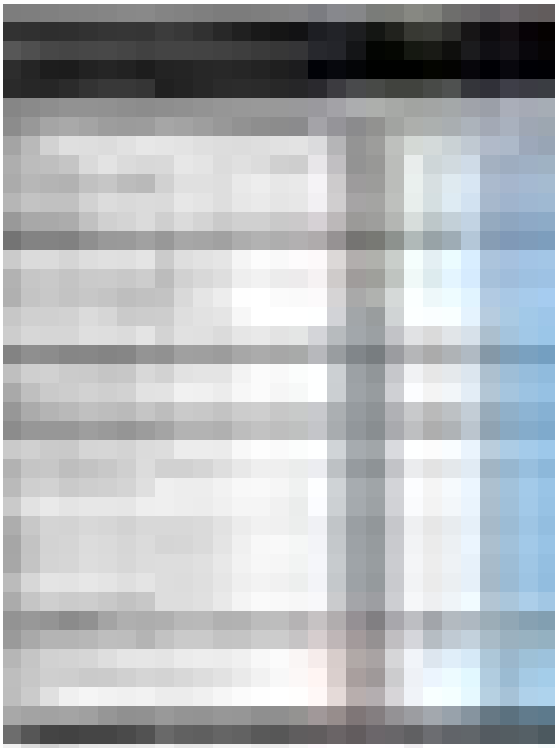
Key Opportunities:
Nature Trails: Nature Trails would be a great opportunity for wildlife observation and scenic trails. The opportunity for education uses is an opportunity as well for groups of all ages to see what different types of environments are located within the greenway.

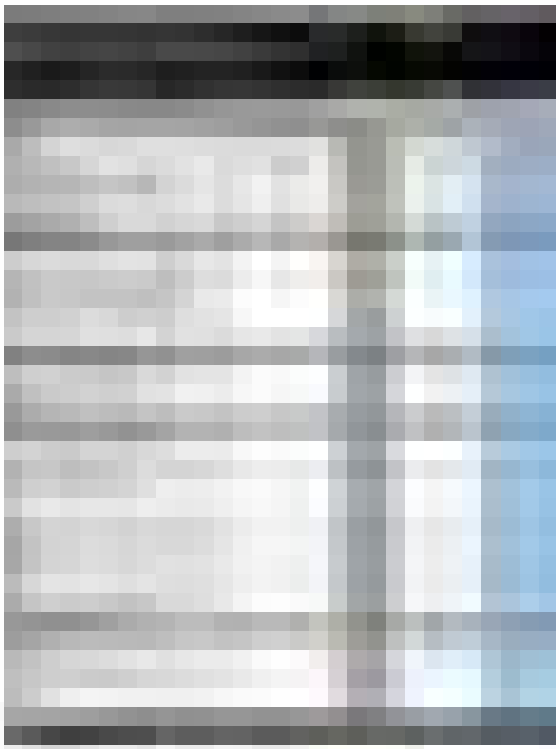
Sensitive Areas: If any greenways are located in this area the design will need to take into consideration the surrounding natural environment.

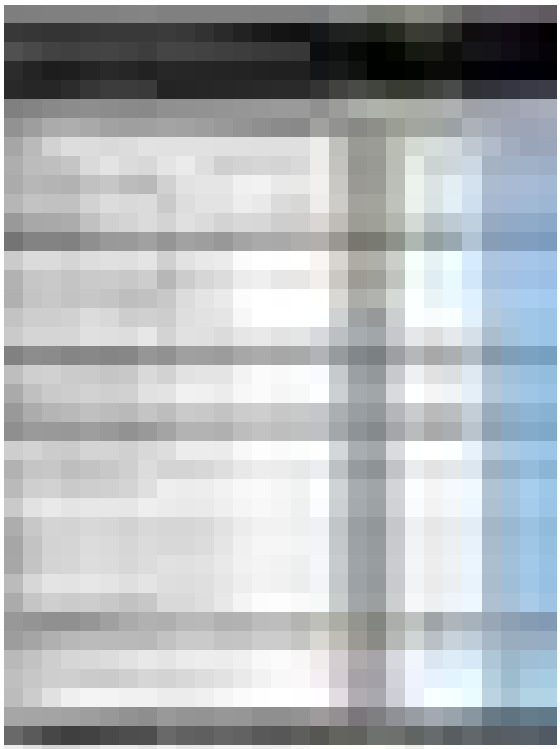
Potential Canadian River Greenway

Suitability Analysis: Canadian River Corridor

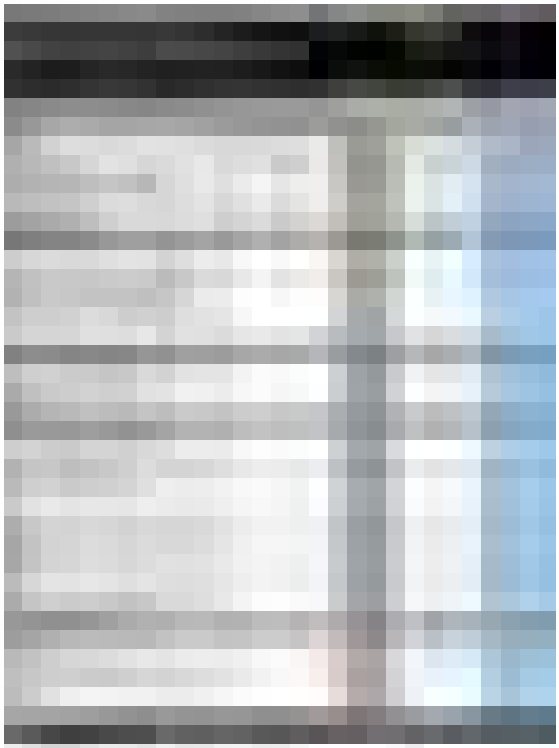








Suitability Analysis: Canadian River Corridor



Prioritization Analysis: Canadian River Corridor

City of Norman
Greenway Master Plan

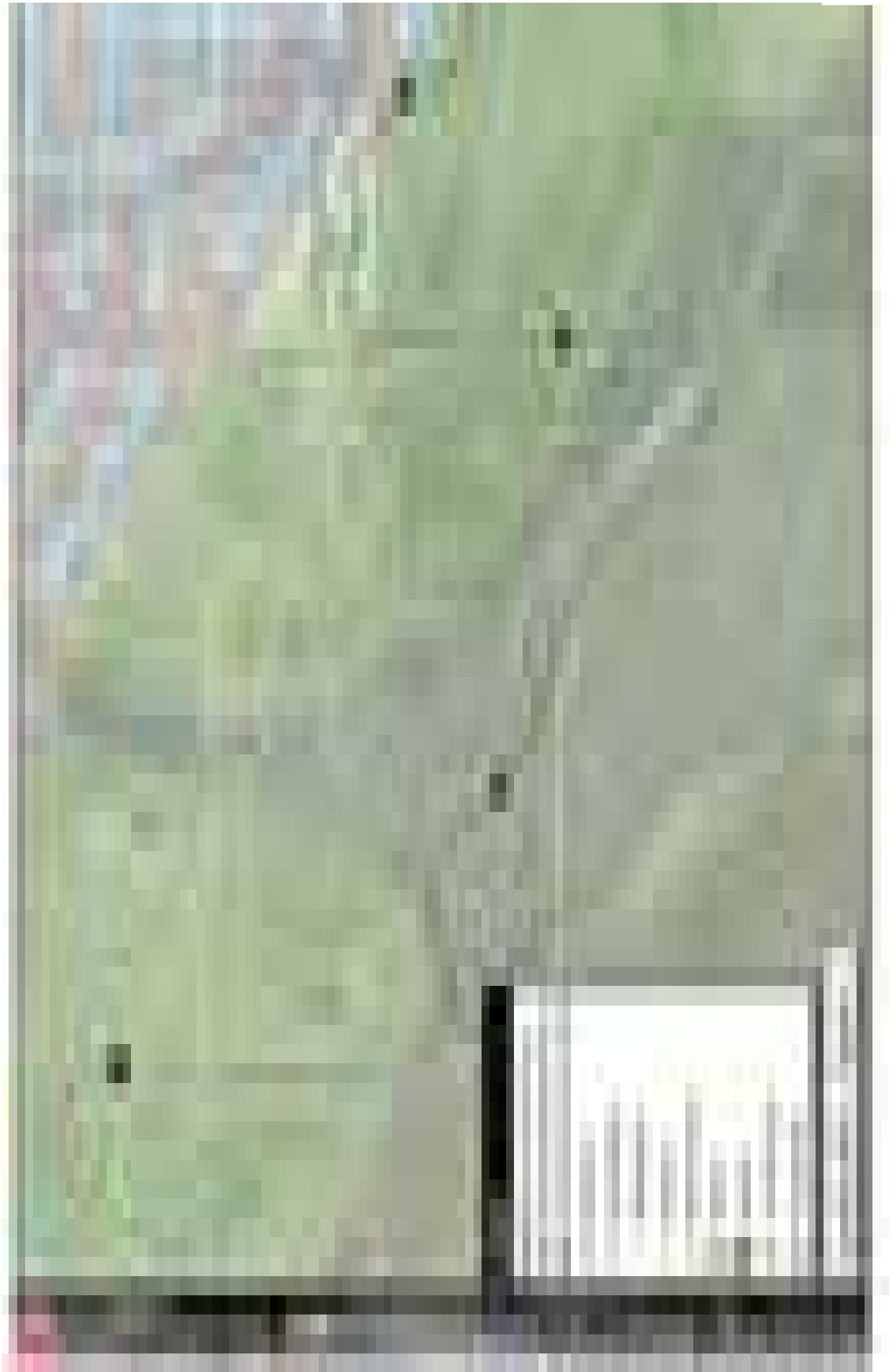
Greenway Corridor Prioritization: Canadian River Corridor

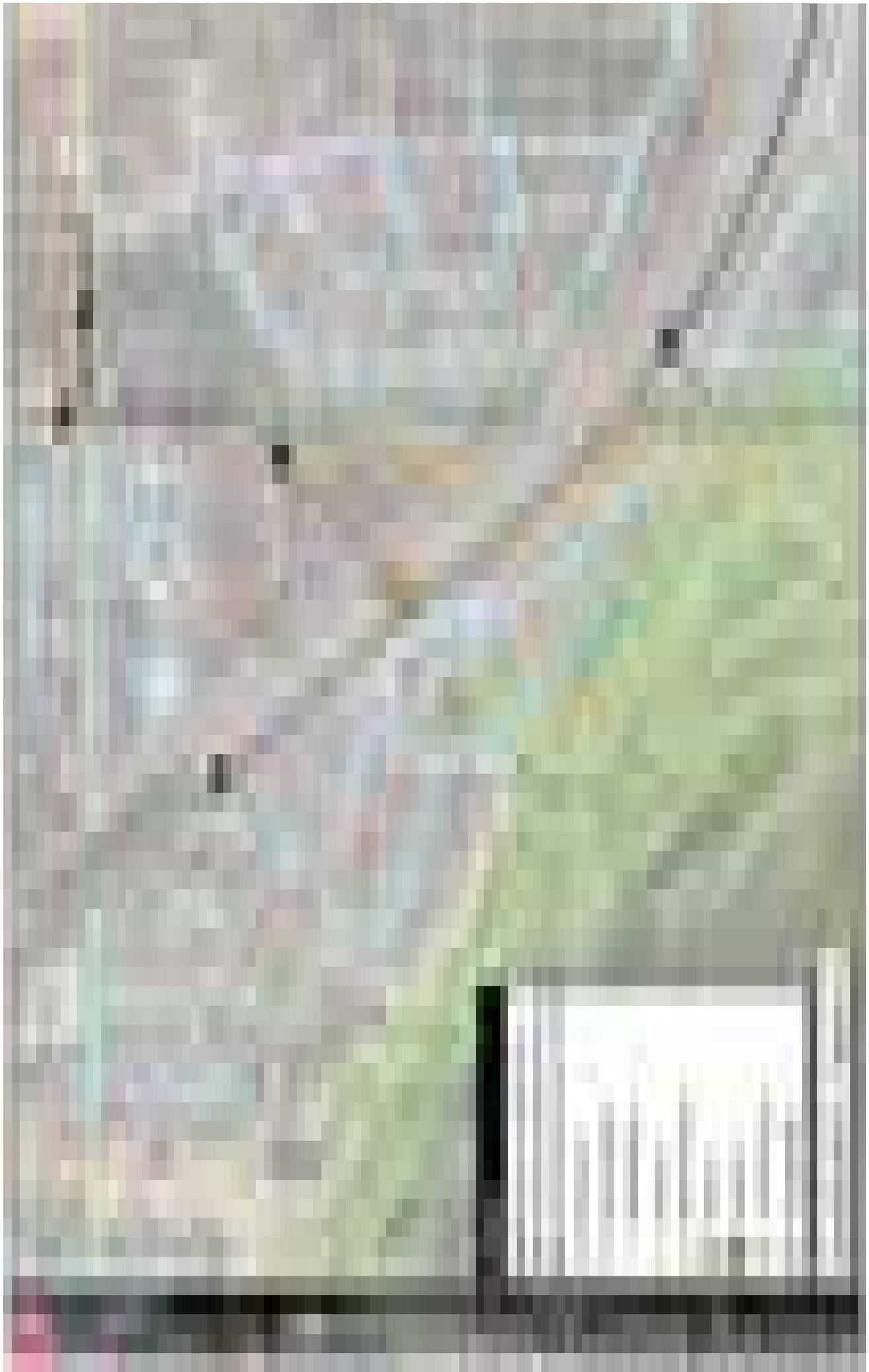
Number	Corridor	Prioritization Criteria								Total Score	Priority Category
		Length (L.F)	Suitability Evaluation Score (1 to 5)	Level of Connectivity (1 to 5)	Potential Level of Use (1= low, 5 = high)	Key Contribution to Greenway and Open Space Network (1 to 3)	Critical Opportunity (1-5)	Integration with Stormwater Plan/Facilities (1 to 3)	Level of Readiness (1 to 4)	Maximum Score = 30	21 to 30 = High 11 to 20 = Medium 0 to 11 = Long Term
CR 1-3	Canadian River Trail West Segments 1-3	8300	4	1	3	3	2	1	2	16	Medium
CR 4-6	Canadian River Trail West (Crosses under IH-35) 4-6	8700	4	4	3	3	3	1	3	21	High
CR 7-8	Canadian River Trail Central Segments 7-8	10500	4	3	3	1	2	1	2	16	Medium
CR 9-10,12	Canadian River Trail East Segments 9,10,12	18800	4	2	2	3	3	1	2	17	Medium
CR 11	Canadian River Trail East Segments 11	10100	4	2	3	1	2	1	2	15	Medium
		56400	4	2.4	2.8	2.2	2.4	1	2.2	17	Medium

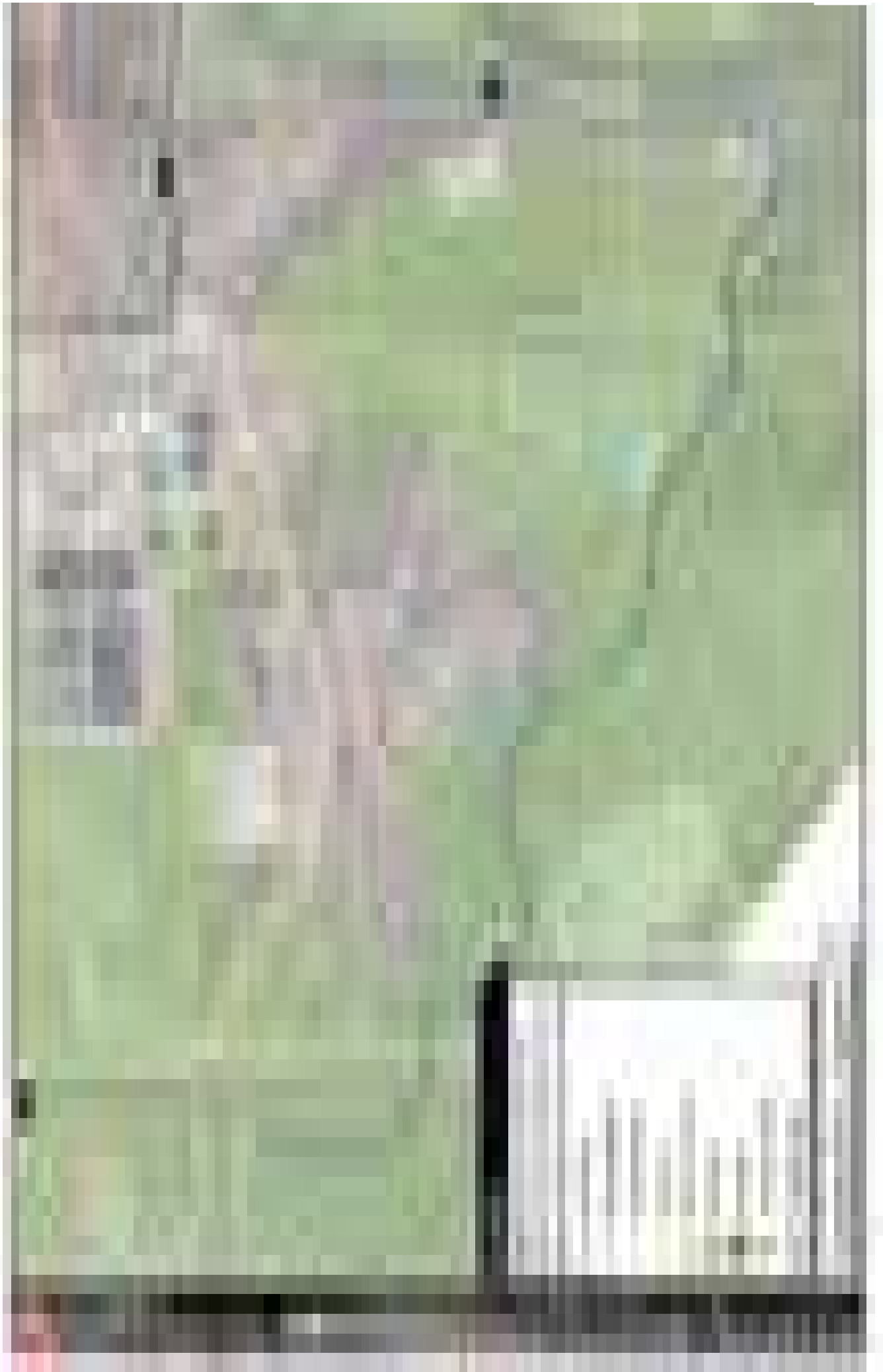
Scenic Greenway System: Canadian River Key Recommendations

Norman Greenway Implementation Action Plan
Canadian River (Scenic Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Canadian	**CR-1**	W 48th Ave.	Brookhaven Creek	Greenway along Canadian River Corridor, connects Brookhaven greenway (Natural Surface Trail)	3,900	$670,000	2010-2020
Canadian	**CR-2**	Brookhaven Creek	Cherry Creek Park	Greenway along Canadian River Corridor, connects Brookhaven greenway (Natural Surface Trail)	1,600	$340,000	2020-2040
Canadian	**CR-3**	Cherry Creek Park	Lindsey Street	Greenway along Canadian River Corridor, connects Brookhaven greenway (Natural Surface Trail)	2,800	$500,000	2020-2040
Canadian	**CR-4**	Lindsey Street	IH-35	Greenway along Canadian River Corridor, connects under IH-35 to Merkle and Imhoff Greenways (Natural Surface Trail)	4,100	$760,000	2010-2020
Canadian	**CR-5**	IH-35	24th Ave.	Greenway along Canadian River Corridor, connects under IH-35 to Merkle and Imhoff Greenways (Natural Surface Trail)	2,500	$460,000	2010-2020
Canadian	**CR-6**	State Hwy 9	Adkin's Crossing Park	Greenway along Canadian River Corridor, connects under IH-35 to Merkle and Imhoff Greenways (Natural Surface Trail)	2,100	$440,000	2020-2040
Canadian	**CR-7**	24th Ave.	Berry Rd.	Greenway along Canadian River Corridor, connects under IH-35 to Merkle and Imhoff Greenways (Natural Surface Trail)	6,200	$1,100,000	2010-2020
Brookhaven	**BH-16**	Main St.	Canadian River Trail	Greenway along W 48th Ave., connects to Canadian River and Kevin Gottshall Greenway (Natural Surface Trail)	2,000	$380,000	2010-2020
				Estimated Total	**25,200 5 Miles**	**$4,650,000**	

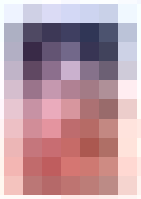






Scenic Greenway System: Lake Trail South Key Recommendations

This greenway recommendation utilizes the State Highway 9 corridor along with the Dave Blue Greenway. This greenway would connect southern Norman to Lake Thunderbird. The potential greenway has the opportunity to be a signature greenway system that many will recognize Norman. The estimated cost for these greenway improvements is shown below (see chart).



Norman Greenway Implementation Action Plan
Greenway to Lake Greenway South - State Hwy. 9 and Dave Blue Creek (Scenic Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Dave Blue	LT-2	E. 24th Ave.	E. 48th Ave.	Greenway along State Hwy 9 corridor, connects to Lake Thunderbird (Natural Surface Trail)	10,600	$960,000	2010-2020
Dave Blue	LT-3	E. 48th Ave.	Dave Blue Creek	Greenway along State Hwy 9 corridor, connects to Lake Thunderbird (Natural Surface Trail)	8,000	$1,255,000	2015-2025
Dave Blue	LT-4	State Hwy. 9	Alameda	Greenway along Dave Blue Creek, connects to Lake Thunderbird (Natural Surface Trail)	23,800	$2,120,000	2020-2040
				Estimated Total	**42,400**	**$4,335,000**	
					8 Miles		

Scenic Greenway System: Water-Line Greenway Key Recommendations

The waterline greenway is an opportunity for the city to take advantage of land that is already owned by the city through a waterline easement. This greenway would run parallel to Robinson then Alameda until it reaches Lake Thunderbird. This greenway would connect central Norman to the Lake recreational area. The estimated cost for these greenway improvements is shown below (see chart).

Norman Greenway Implementation Action Plan
Water-line (Scenic Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Waterline	WL-1	Water Treatment Plan	E 48th Ave.	Greenway along water-line easement, connects to Lake Thunderbird (Natural Surface Trail)	7,700	$730,000	2010-2020
Waterline	WL-2	E 48th Ave.	E 60th Ave.	Greenway along water-line easement, connects to Lake Thunderbird (Natural Surface Trail)	5,200	$550,000	2010-2020
Waterline	WL-3	E 60th Ave.	E 84th Ave.	Greenway along water-line easement, connects to Lake Thunderbird (Natural Surface Trail)	11,600	$1,000,000	2015-2025
Waterline	WL-4	E 96th Ave.	Lake Thunderbird	Greenway along water-line easement, connects to Lake Thunderbird (Natural Surface Trail)	14,600	$1,300,000	2015-2025
				Estimated Total	**39,100 7**	**$3,580,000**	

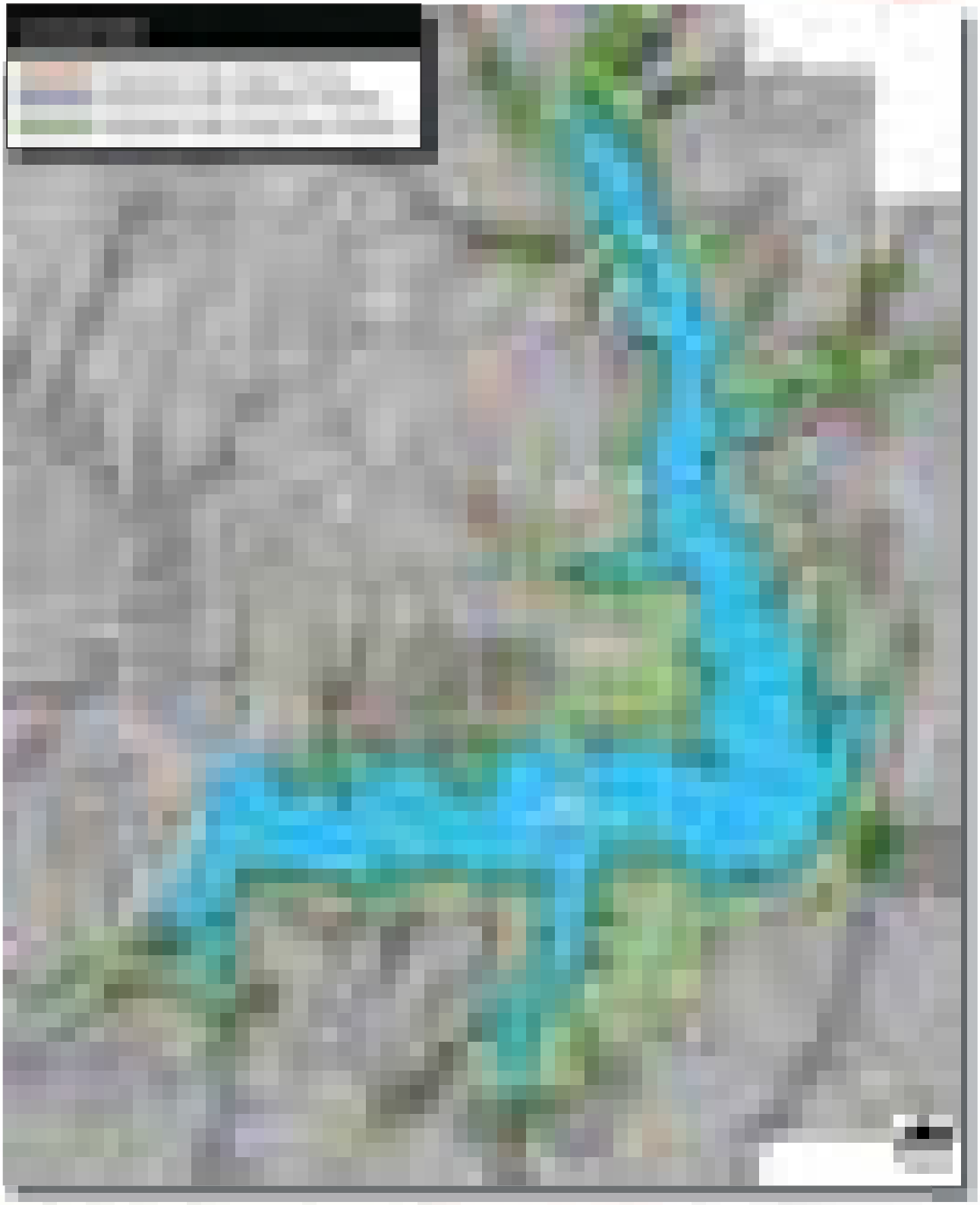
October 2009

Scenic Greenway System: Lake Thunderbird Greenway Key Recommendations

The recommendations for the Lake Thunderbird area would be to create a greenway which looped around Lake Thunderbird. This recommendation has the potential to be one of the key greenways for Norman. The proposed greenway could also be used for education purposes. The estimated cost for these greenway improvements is shown below (see chart).

Norman Greenway Implementation Action Plan
Lake Thunderbird (Scenic Greenway)

Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Lake Thunderbird	TH-1	Alameda	Alameda	Greenway corridor around Lake Thunderbird (Natural Surface Trail)	144,300	$16,000,000	2010-2040
				Estimated Total	**144,300 27 Miles**	**$16,000,000**	

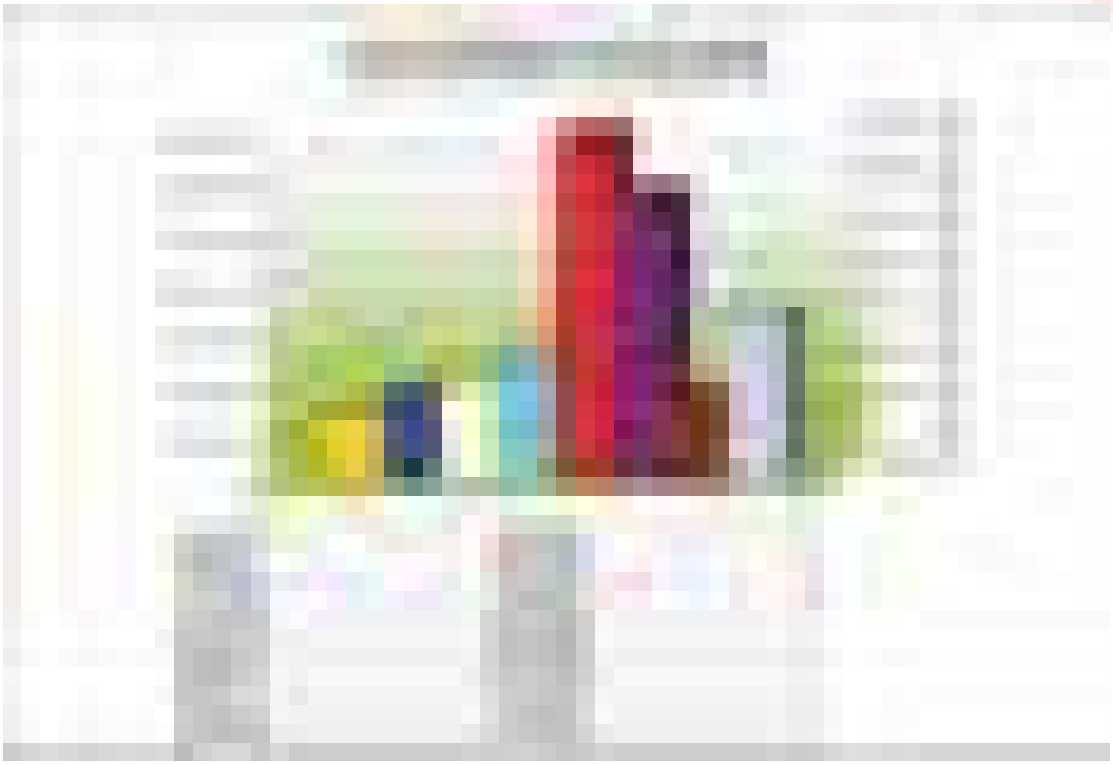


Greenway Cost Analysis

The process folowing the greenway opportunities and recommendations was to figure the costs of implementing the greenway systems through-out the city of Norman. The following cost estimates were broken down by watershed areas and divided into costs by Ward districts.

Key recommendations were then divided into the urban core recommendations and the rural recommendations.

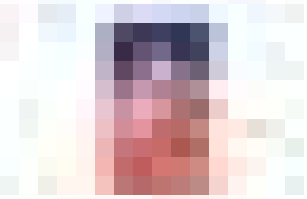
The following charts represent the estimated cost for citywide greenway implementation.



Urban Greenway Key Recommendations Costs

Norman Greenway Implementation Action Plan
Key Recommendations (Urban Greenways)

Segment	Watershed	Ward	Segment Start	Segment End	Trail Corridor Along	Potential Prioritization	Potential Drainage Improvements	Length (in linear feet)	Overall Potential Cost per Segment
	Brookhaven								
BH-1	Brookhaven	8	Tecumseh	Rock Creek Rd.	W 36th Ave.	High		5,400	$1,000,000
BH-3	Brookhaven	8	Rock Creek Rd.	Crossroads	W 36th Ave.	High		2,700	$510,000
BH-6	Brookhaven	8	Crossroads	Existing Sidewalk	W 36th Ave.	High		1,000	$210,000
BH-7	Brookhaven	8	Existing Sidewalk	Robinson	W 36th Ave.	Medium		1,700	$340,000
BH-9	Brookhaven	8	Robinson	Havenbrook	W 36th Ave.	Medium		1,000	$270,000
BH-11	Brookhaven	8	Havenbrook	Quail	W 36th Ave.	Medium		4,500	$720,000
BH-12	Brookhaven	8	Havenbrook	Quail	Brookhaven Creek	High		2,500	$470,000
BH-13	Brookhaven	3	W 36th Ave.	Willow Branch	Brookhaven Creek	High	Yes	3,000	$570,000
BH-14	Brookhaven	3	Willow Branch	Main Street	Brookhaven Creek	High	Yes	1,400	$300,000
BH-15	Brookhaven	3	Brookhaven Creek	48th St.	Main St.	Medium		2,500	$480,000
RS-2	Brookhaven	8	W. 36th Ave.	W.24th Ave.	Rock Creek Rd.	High	Yes	4,500	$640,000
	Tributary G						Total	30,200	$5,510,000
TG-2	Tributary G	8	IH-35	US 77	Franklin	High		5,200	$2,400,000
TG-3	Tributary G	8	US 77	12th Ave.	Tributary G Creek	High		7,000	$1,300,000
TG-5	Tributary G	8	Bridgeport	Tecumseh	W 36th Ave.	High		2,600	$470,000
	Little River						Total	14,800	$4,170,000
LR-4	Little River	6	Little River	Rock Creek Rd	Drainage creeks	Long Term		11,100	$1,900,000
LR-5	Little River	6	W 12th Ave.	Woodcrest Creek	Rock Creek Rd.	Long Term		5,100	$930,000
LR-6	Little River	6	Rock Creek Rd.	Robinson	Stubbeman	Medium		5,200	$980,000
	Merkle						Total	21,400	$3,810,000
MC-1	Merkle	8	Main St.	Robinson	W. 24th Ave.	High		5,730	$1,100,000
MC-2	Merkle	8	Main St.	McGee	W. 24th Ave./Boyd	Medium	Yes	5,400	$1,000,000
MC-3	Merkle	8	McGee	Imhoff Creek	Brooks	Medium		3,000	$610,000
	Woodcrest						Total	5,730	$2,710,000
WC-1	Woodcrest	6	Little River Creek	Nantucket St.	Woodcrest Creek	High		4,100	$720,000
WC-2	Woodcrest	6	Nantucket St.	Sequoyah Trails	Woodcrest Creek	High	Yes	2,700	$490,000
WC-4	Woodcrest	6	Sequoyah Trail Park	Rock Creek	Woodcrest Creek	High		1,200	$300,000
WC-5	Woodcrest	6	Rock Creek	Robinson Rd.	Griffin Memorial Park	High	Yes	4,700	$900,000
WC-6	Woodcrest	6	Woodcrest Creek	W. 12th Ave.	Rock Creek Rd.	Medium		3,300	$650,000
WC-7	Woodcrest	6	Robinson Rd.	Frances Cate Park	Frances Cate Park	High		1,800	$350,000
WC-8	Woodcrest	4	Frances Cate Park	Main Street	Carter St.	High		1,300	$300,000
	Imhoff						Total	19,100	$3,710,000
IM-1	Imhoff	4	Andrews Park	Lion's Park	Road Corridor	High	Yes	4,100	$820,000
IM-1A	Imhoff	4	Andrews Park	Lion's Park	University	High		4,000	$680,000
IM-2	Imhoff	4	Lion's Park	McNamee	Lion's Park	High	Yes	800	$200,000
IM-3	Imhoff	4	McNamee	Cruce	Imhoff Creek	High	Yes	1,400	$400,000
IM-4	Imhoff	4	Cruce	Brooks Ave.	Pickard St.	High		1,550	$350,000
IM-5	Imhoff	4	Brooks Ave.	Lindsey St.	Imhoff Creek	High	Yes	1,900	$390,000
IM-6	Imhoff	4	Lindsey St.	Imhoff Rd.	Berry Rd.	High		5,400	$1,100,000
IM-8	Imhoff	4	Berry Rd.	Chautauqua	Road Corridor	High		5,200	$1,000,000
OU-1	Imhoff	4	Imhoff Creek	Classen	Boyd	High		4,700	$1,100,000
OU-2	Imhoff	4	Imhoff Creek	Maple (OU Campus)	3rd St.	High		3,100	$720,000
RB-1	Imhoff	6	Flood	Griffin Memorial Park	Robinson	High		7,700	$1,400,000
RB-2	Imhoff	6	Griffin Memorial Park	Water Treatment Area	Robinson	Medium		11,000	$1,900,000
	Bishop						Total	50,850	$10,060,000
BC-2	Bishop	4	University	Carter	Eufaula/Main St.	High		6,000	$1,100,000
BC-9	Bishop	1	12th Ave.	Vicksburg	Street Corridor	High	Yes	5,300	$920,000
BC-10	Bishop	4	Trout	12th Ave.	Boyd	High		4,700	$830,000
BC-15	Bishop	1	Lindsey	Classen	Bishop Creek Tributary A	High		5,800	$1,100,000
BC-16	Bishop	7	Monitor	Classen	Constitution	High	Yes	3,700	$750,000
BC-18	Bishop	7	State Hwy 9	Bishop Creek	Bishop Creek	Medium		4,600	$790,000
	Rock Creek						Total	30,100	$5,490,000
HP-1	Rock Creek	6	W. 12th Ave.	Hall Park	Hall Park	Medium		7,600	$1,300,000
HP-2	Rock Creek	6	Hall Park	Hall Park	Hall Park	Medium		1,200	$260,000
HP-3	Rock Creek	6	Hall Park	Robinson	Hall Park	Medium		2,500	$510,000
HP-4	Rock Creek	6	Rock Creek Rd.	E. 24th Ave.	Hall Park	Medium		3,100	$620,000
							Total	14,400	$2,690,000
							Overall Total	171,780 33 Miles	$38,150,000



Rural Scenic Greenway Key Recommendations Costs

Key Recommendations (Scenic Greenways)

Segment	Watershed	Ward	Segment Start	Segment End	Trail Corridor Along	Potential Prioritization	Potential Drainage Improvements	Length (in linear feet)	Overall Potential Cost per Segment
	Waterline Greenway								
WL-1	Waterline	5	Water Treatment Plan	E 48th Ave.	Robinson	Long Term	No	7,700	$730,000
WL-2	Waterline	5	E 48th Ave.	E 60th Ave.	Robinson	Long Term	No	5,200	$550,000
WL-3	Waterline	5	E 60th Ave.	E 84th Ave.	Alameda	Long Term	No	11,600	$1,000,000
WL-4	Waterline	5	E 96th Ave.	Lake Thunderbird	Alameda	Long Term	No	14,600	$1,300,000
	Greenway to Lake South						**Total**	**39,100**	**$3,580,000**
LT-2	Dave Blue	5	E. 24th Ave.	E. 48th Ave.	State Hwy. 9	High	No	10,600	$960,000
LT-3	Dave Blue	5	E. 48th Ave.	Dave Blue Creek	State Hwy. 9	Long Term	No	8,000	$1,255,000
LT-4	Dave Blue	5	State Hwy. 9	Alameda	Dave Blue Creek	Long Term	No	23,800	$2,120,000
	Little River to Lake						**Total**	**42,400**	**$1,100,000**
LR-1	Little River	6	W. 12th Ave.	E. 12th Ave.	Little River Corridor	Long Term	No	14,400	$1,100,000
LR-2	Little River	6	E. 12th Ave.	E. 36th Ave.	Little River Corridor	Long Term	No	13,200	$990,000
LR-3	Little River	6	E. 36th Ave.	Lake Thunderbird	Little River Corridor	Long Term	No	40,400	$3,000,000
	Rock Creek						**Total**	**68,000**	**$5,090,000**
RC-2	Rock Creek	5	Robinson	Little River	Rock Creek	Long Term	No	24,700	$3,000,000
RC-4	Rock Creek	5	Little River	Hall Park	Drainage creeks	Long Term	No	19,500	$1,700,000
RC-5	Rock Creek	5	Double Tree Greenbelt	Proposed Greenway	Drainage creeks	Long Term	No	3,600	$400,000
	Canadian River						**Total**	**47,800**	**$5,100,000**
CR-1	Canadian	3	W 48th Ave.	Brookhaven Creek	Canadian River	Medium	No	3,900	$670,000
CR-2	Canadian	3	Brookhaven Creek	Cherry Creek Park	Canadian River	Medium	No	1,600	$340,000
CR-3	Canadian	3	Cherry Creek Park	Lindsey Street	Canadian River	Medium	No	2,800	$500,000
CR-4	Canadian	3	Lindsey Street	IH-35	Canadian River	Medium	No	4,100	$760,000
CR-5	Canadian	2	IH-35	24th Ave.	Canadian River	Medium	No	2,500	$460,000
CR-6	Canadian	2	State Hwy 9	Adkin's Crossing Park	24th Ave.	Medium	No	2,100	$440,000
CR-7	Canadian	2	24th Ave.	Berry Rd.	State Hwy. 9	Medium	No	6,200	$1,100,000
BH-16	Brookhaven	3	Main St.	Canadian River Trail	W 48th Ave.	Medium	No	2,000	$380,000
	Lake Thunderbird						**Total**	**17,000**	**$3,170,000**
TH-1	Lake Thunderbird	5	Alameda	Alameda	Lake Thunderbird	Long Term	No	144,300	$16,000,000
							Total	**144,300**	**$16,000,000**
							Overall Total	**358,600 68 Miles**	**$34,040,000**

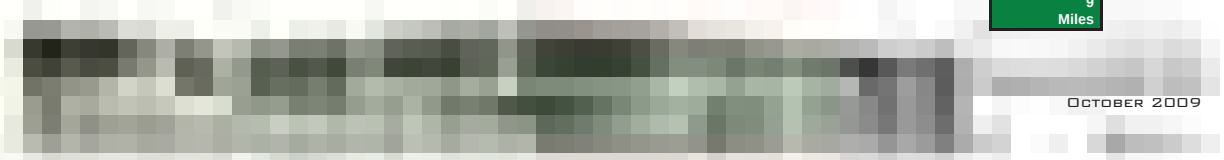
Potential Greenways with Drainage Improvments

Areas through-out Norman have been identified for storm water drainage improvements. Some of these potential improvement areas are also areas for recommended greenways. These specific greenways have the potential of being implemented quickly and possibly funded with money from the storm water improvement funds.

Norman Greenway Implementation Action Plan

Recommended Greenways with Drainage Improvements

Segment	Watershed	Ward	Segment Start	Segment End	Trail Corridor Along	Potential Prioritization	Length (in linear feet)	Overall Potential Development Cost per Segment
BH-4	Brookhaven	8	W 36th Ave.	Prairie Creek Park	Tributary A Brookhaven Creek	Medium	1,200	$280,000
BH-10	Brookhaven	8	Robinson	W 36th Ave.	Brookhaven Creek	High	2,100	$470,000
BH-13	Brookhaven	3	W 36th Ave.	Willow Branch	Brookhaven Creek	High	3,000	$570,000
BH-14	Brookhaven	3	Willow Branch	Main Street	Brookhaven Creek	High	1,400	$300,000
RS-2	Brookhaven	8	W. 36th Ave.	W.24th Ave.	Rock Creek Rd.	High	4,500	$640,000
TG-1	Tributary G	8	Ruby Grant Park	IH-35	Tributary G Creek	Medium	4,500	$800,000
WC-2	Woodcrest	6	Nantucket St.	Sequoyah Trails	Woodcrest Creek	High	2,700	$490,000
WC-5	Woodcrest	6	Rock Creek	Robinson Rd.	Griffin Memorial Park	High	4,700	$900,000
MC-2	Merkle	8	Main St.	McGee	W. 24th Ave./Boyd	Medium	5,400	$1,000,000
IM-1	Imhoff	4	Andrews Park	Lion's Park	Road Corridor	High	4,100	$820,000
IM-2	Imhoff	4	Lion's Park	McNamee	Lion's Park	High	800	$200,000
IM-3	Imhoff	4	McNamee	Cruce	Imhoff Creek	High	1,400	$400,000
IM-5	Imhoff	4	Brooks Ave.	Lindsey St.	Imhoff Creek	High	1,900	$390,000
BC-8	Bishop	4	Alameda	Boyd	Bishop Creek	Medium	3,400	$660,000
BC-9	Bishop	1	12th Ave.	Vicksburg	Street Corridor	High	5,300	$920,000
BC-16	Bishop	7	Monitor	Classen	Constitution	High	3,700	$750,000
						Total	50,100 9 Miles	$9,590,000



APPENDIX B - ACTION PLAN FOR COMPLETION OF THE GREENWAYS MASTER PLAN

Action Plan for Completion of Greenways Master Plan, October 26, 2009

The Greenbelt Commission was asked to develop, with assistance from city staff, an Action Plan to identify the areas of the Greenways Master Plan that the Greenbelt Commission believes still needed additional work and refinement before the Plan should be considered for adoption. From that directive, a sub-committee was formed at the September 21st Commission meeting to develop a plan. The sub-committee met several times over the following weeks to work on this plan, then at the regular Greenbelt Commission meeting on October 26th, the full Commission reviewed and accepted this Action Plan.

The following action items are intended to identify the framework the Commission believes needs to be undertaken in order to complete the plan and to properly prioritize the steps to be taken before the Plan should be considered for adoption by the City Council.

Three informational maps have been prepared to illustrate the concepts for the first three of the following action items:

- Map 1—Is reflective of the current Greenways Master Plan and distinguishes storm water system related trails from all others;
- Map 2—Illustrates all existing and proposed urban trails and highlights those proposed along drainage ways in existing urbanized developments; and
- Map 3—Identifies a spine/loop trail system as a key component needed in the Greenway Master Plan.

Action Item 1:

The implementation for this item would involve distinguishing all storm water system related trails from others, and would include:

- **Clarify** existing plan identification of all proposed trails along drainage ways (Map 1);
- **Identify** additional possible storm water related trails;
- **Identify** proposed trail locations through existing urbanized drainage ways in order to separate those trails for more detailed analysis. (This item will require identification of adjacent property owners to include them in discussion of appropriateness of a trail (Map 2). It is anticipated that these trails would be lowest priority and not planned until adjoining properties were in support and that alternatives along existing right-of-ways would be added for each of these alignments); and
- **Prioritize** all of the above, including consideration of possible location for sanitary sewer and storm sewer maintenance trails.

Action Item 2:

Distinguish and map all non-storm water system trails and sidewalks:

- **Clarify** existing plan as to which are existing sidewalks, existing sidewalks to be upgraded to wider trails, wider existing trails or desired trails that are not yet constructed (Map 2);

- **Identify** additional possible non-storm water system trails and sidewalks; and
- **Prioritize** all of the above, giving highest priority to neighborhood connectors critical to connection of existing urban areas to primary loop/spine trails.

Action Item 3:

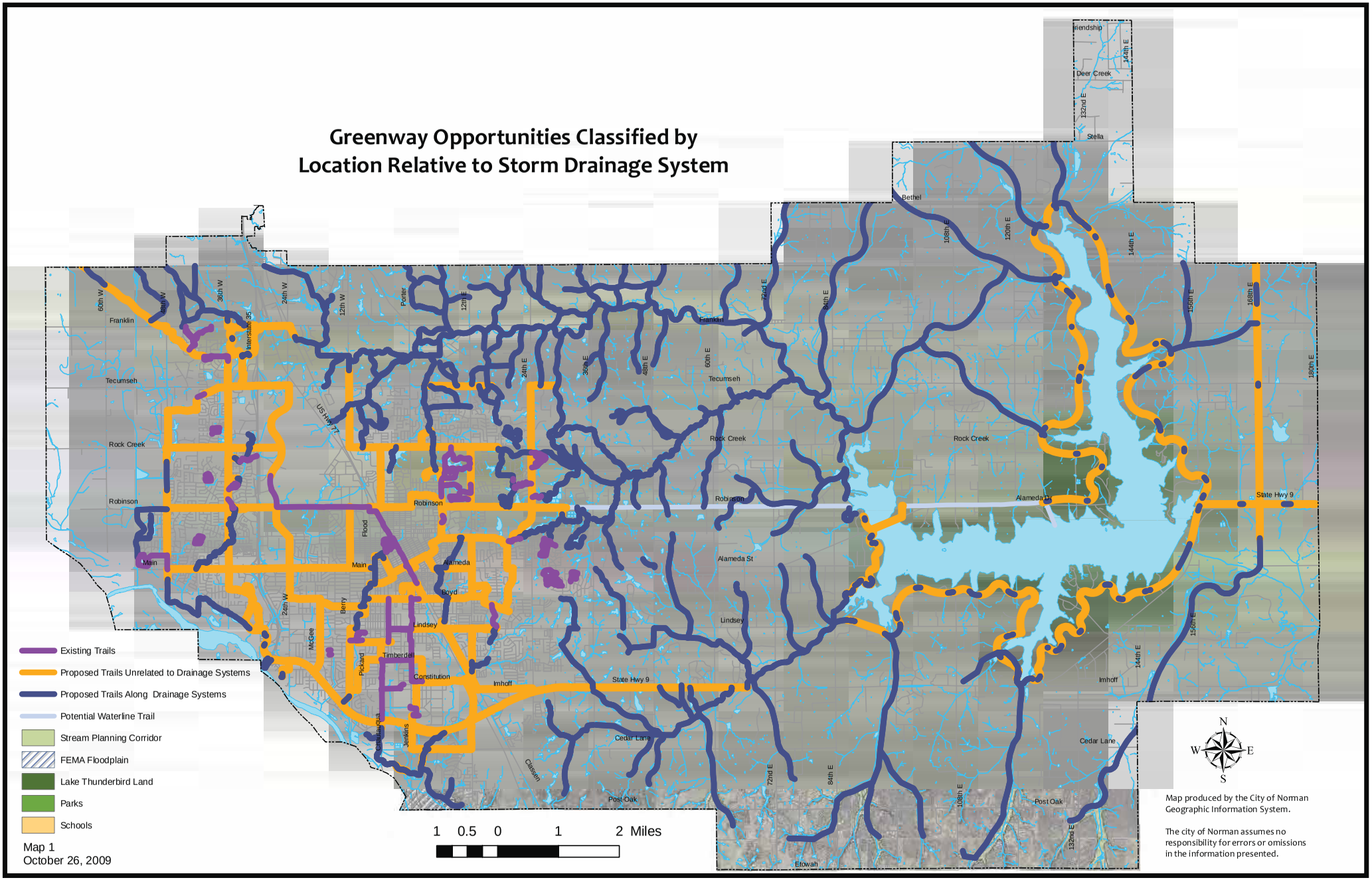
Focus and refine primary loop/spine trail to connect urbanized Norman to Lake Thunderbird along Little River to the north, Highway 9 to the south as well as connecting Reaves Park at the south end with Ruby Grant Park to the north via Legacy Trail and other connections through OU (Map 3). (An alignment farther west through Ten Mile Flats would also be desirable.)

- **Identify** existing portions of the key, major loop/spine trail system;
- **Identify** necessary desired urban and rural pieces of this loop/spine; and
- **Prioritize** and calculate costs for this primary target of the Plan.

Action Item 4:

- **Identify** possible funding mechanisms, to include both the cost of construction and all required maintenance.

Greenway Opportunities Classified by Location Relative to Storm Drainage System

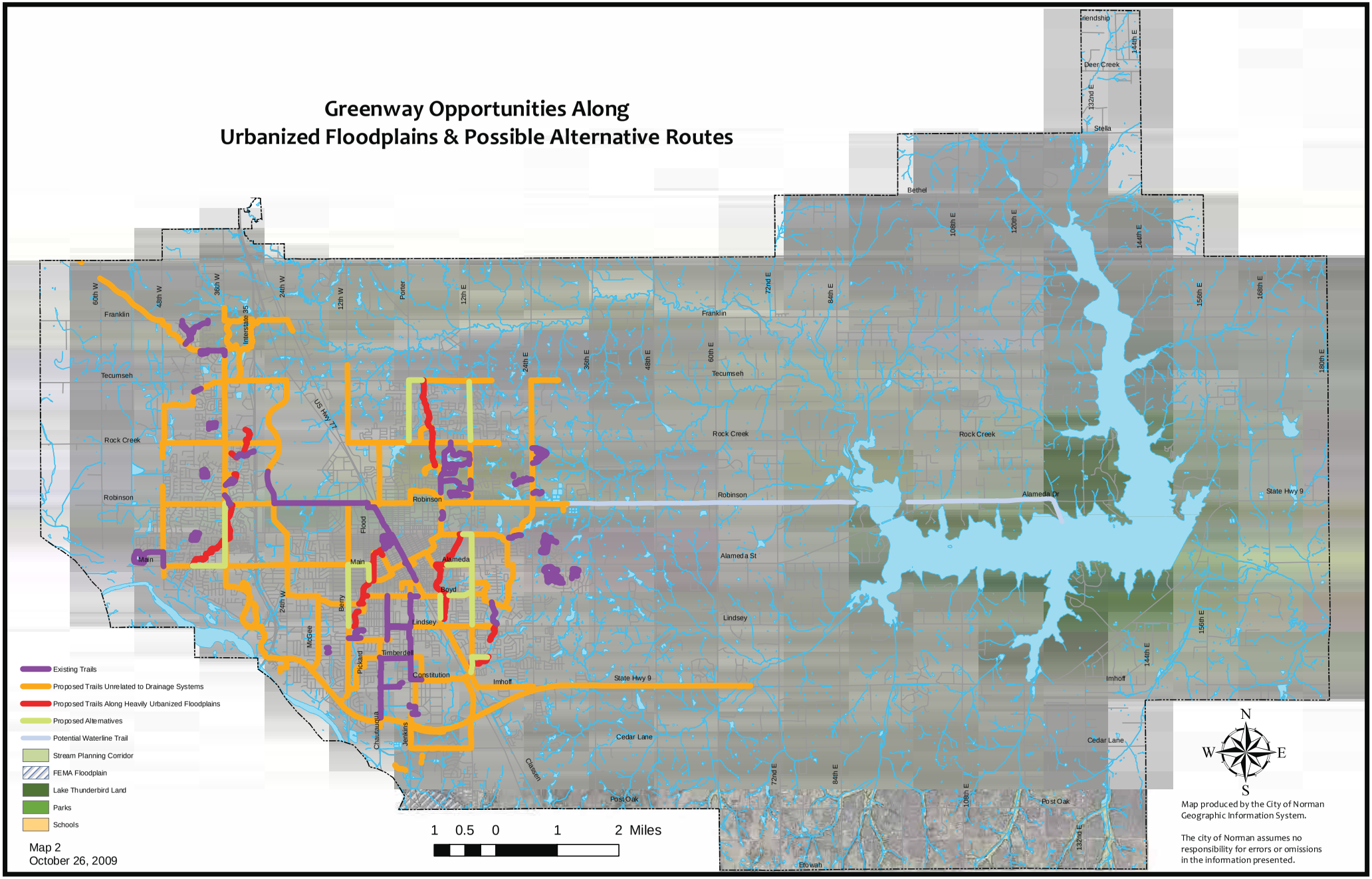


Map 1
October 26, 2009

Map produced by the City of Norman Geographic Information System.

The city of Norman assumes no responsibility for errors or omissions in the information presented.

Greenway Opportunities Along Urbanized Floodplains & Possible Alternative Routes



Map 2
October 26, 2009

Map produced by the City of Norman Geographic Information System.

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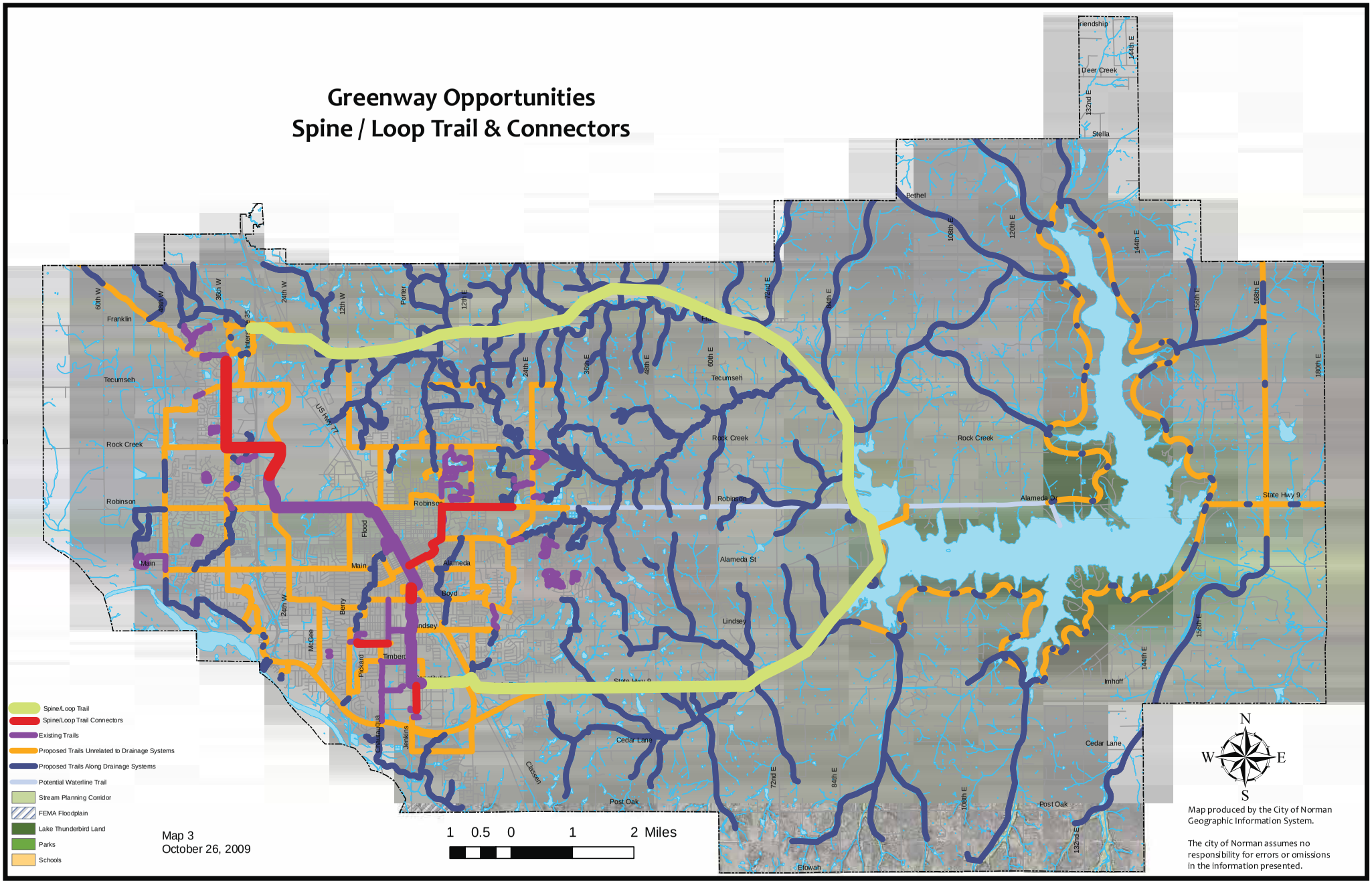
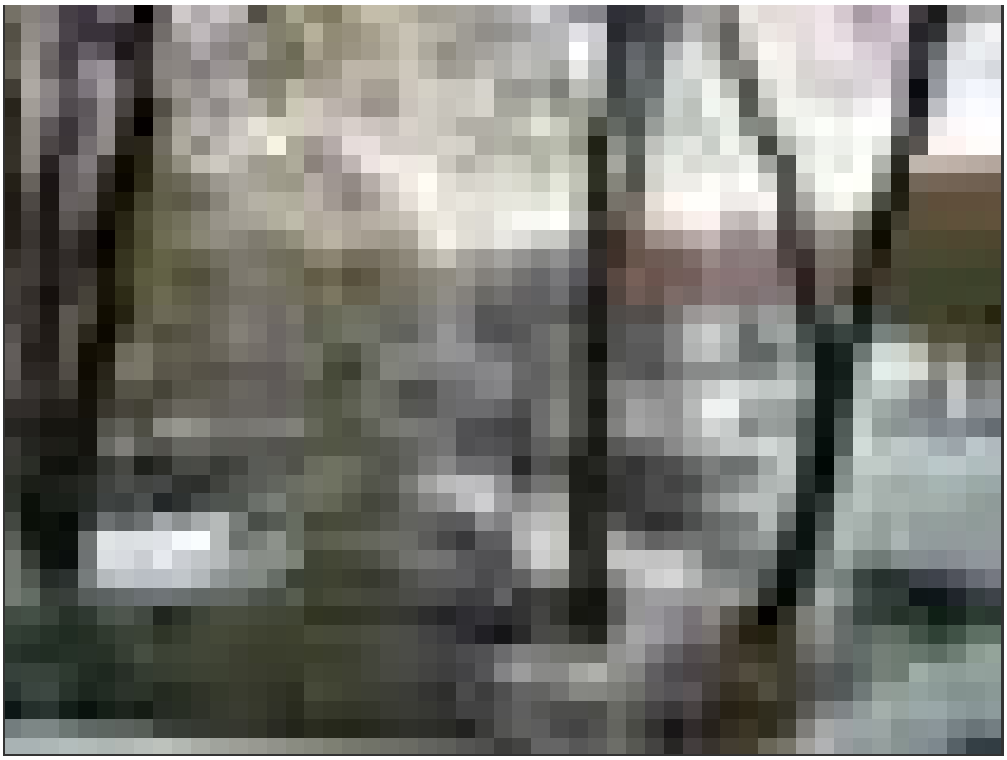
Greenway Opportunities
Spine / Loop Trail & Connectors





APPENDIX C – SUMMARY OF PUBLIC INPUT

Public and Stakeholder Input

Public input is a critical component of any planning process. A long range plan must represent the long range goals of the citizens and residents, who are going to fund the planned facilities, support them and ultimately use those planned facilities. In the case of this planning effort, public input consisted of:

- Feedback and recommendations from previous citywide planning efforts
- Citizen surveys from recent years
- Public meeting conducted during this greenbelt planning process
- Meetings with the City of Norman Greenbelt Commission and the Storm Water Task Force
- One on one stakeholder and staff meeting to discuss recommendations

Public and Stakeholder Input from Previous Planning Efforts

The Green Dreams Report issued in 2002 ushered in a new era for Norman. In that report, and in subsequent actions by the City of Norman, the case was made for greatly increasing the focus on preserving natural corridors throughout the city. The Green Dreams Report was written by citizens of Norman, and it documented the tremendous support and desire that Norman residents have to make Norman a beautiful and interesting place to live and visit.

As a result of Green Dreams a series of public meetings were held over the past several years so as to provide opportunities for input of goals. These meetings started with a basic summary of the process and then progressed into a review of opportunities for trails and greenbelts throughout Norman. At each of the meetings, citizens were invited to ask questions, comment or write suggestions on maps provided throughout the meeting room.

Public input meetings helped reassure the strong community support of greenways by the citizens of Norman. A wide variety of issues were expressed in the series of public meetings. The issues ranged from maintenance improvements to existing greenways and trails to future solutions for developing greenways and possible locations where these proposed greenways could connect. Much of the citizen feedback came in the form of comments written on a series of maps placed on the walls for the citizens to review. These comments suggested multiple locations for new trail development and key locations for new trail connection. Positive comments on areas where trails or greenways could not feasibly be developed were also included. This exercise was an integral part for the planning and implementation of the future greenway corridors.

Residents of Norman have been considering greenbelts, greenways and trails for almost ten years, this Plan builds upon the ideas, dreams and concerns that have been discussed over that period of time. The Green Dreams Report in 2002, followed by the Norman 2020 Plan and the 2025 update addressed the need for greenbelt preservation and trail development.

Important themes are covered below:

Comments from the 2006 Citizen Dialogue

- We would like to see Norman be more pedestrian friendly.
- We would like to see the core area strengthened and restored.
- We would like to promote mixed use development within dense areas.
- We would like to preserve the uniqueness of Norman.
- We encourage alternative transportation, biking and walking.
- We agree with conservation incentives and the need for sustainability.
- Encourage neighborhood communities: neighborhood associations, community centers (child friendly parks, community gardens) within walking distance.
- City beautification/utilization: pedestrian pathways, pave alleys, and create easy access walkways between neighborhoods. Use more native/easy care species of trees that can be used by people such as planting pecans, black walnut, peach, etc. Include running, biking, and hiking trails, keeping it pet friendly.
- Think long term; don't let short tem issues control Norman's direction.
- We believe we need to have responsible environmental policies.
- We believe it is important that we affirm the goals of the 2025 Plan.
- We identify conservation/protection of the environment as a priority.
- We agree with conservation incentives and the need for sustainability.
- Develop multi-use trails that recreational cyclists as well as others can use and improve sidewalks so children can bike to school.
- Design safer on-street cycling infrastructure that allows reasonable commuting through out Norman, particularly central Norman such as the addition of striped bicycle lanes to existing major arterials and road signs that remind motorists of the need to "Share the Road" with bicyclists.
- Create an integrated trail/biking/greenbelt system for our city. It should include on and off-road cycling, be comprehensive for the entire city and encourage developers to build to complete the plan.

Citizen Input from Opinion Surveys

A citizen satisfaction survey conducted in 2007 consisted of questions relating to the preservation of greenbelts, key needs in the city and support for open space funding initiatives. The survey sample size was 803 completed surveys and represented a +/- 3.4% margin of error at a 95% confidence level. This means that if the survey was held 100 times, using 100 different random samples, the results would fall within the limits of error at least 95 times.

Key responses from the survey relating to greenbelts and trails in Norman are as follows:

- When asked which would be the most beneficial for you personally, 22% of citizens surveyed responded with more green space, parks and trails. (The highest response.)
- When asked which would be the most beneficial for the citizens of Norman, the response for more green space, parks and trails was 18.5%, the second highest after an increase of police officers at 19%.
- More than 80% of citizens surveyed would be very likely or somewhat likely to support public money being used to help create more green space including parks and trails.
- The second-most beneficial for the citizens of Norman response, ranking third behind an increase of police officers and an increase of fire fighters, more green space, parks, and trails.
- When asked “Why are you dissatisfied with the quality of your neighborhood?” more than 4% of citizens responded with the lack of maintenance and upkeep.
- When asked “Why are you dissatisfied with the quality of city parks?”, more than 6% responded with a reference to lack of maintenance and upkeep.
- When asked “Why are you dissatisfied with the appearance of the city?”, 4.9% responded that not enough green space was a major issue.
- 82% of citizens surveyed between the ages of 18-24 would be very likely to support money being used to help fund more green space, including parks and trails.
- The age groups are balanced with a high satisfaction of the quality of the city parks.
- 25% of respondents who think more green space would be the most beneficial to the citizens of Norman were between the ages of 18-24. The lowest percentage age group with 7.7% was citizens 65+.
- Almost 50% of respondents who feel that more green space would be most beneficial for them personally were between the ages of 18-44.

Greenbelt Commission Input

Over the 12 month planning process, a total of 7 meetings with the Greenbelt Commission Task Force were held to provide guidance. The Greenbelt Commission Task Force was comprised of 11 individuals with a variety of backgrounds. Meetings were held in November of 2007 and February, March, May, June, July and December of 2008. These meetings focused on types of greenway and trail corridors in the city, review of opportunity corridors in all parts of Norman, review of the methodology used for both suitability evaluations and prioritization criteria and review of the recommended corridors. Members of the committee contributed vital local knowledge and strongly influenced many key topics. Topics included coordination with on-going bicycle planning both in the city and on the OU Campus.

Key comments received included:

- Members expressed a strong desire for a connected network of trails and green corridors.
- Members expressed the desire for looped systems that had a natural setting as well as a more urban setting. They favored the idea of a loop that circled portions of the city.
- Members suggested changes to the evaluation matrix to provide greater connectivity to key city areas such as parks, retail centers, and University areas.
- Members suggested many potential locations for trails and greenbelt corridors, as well as others where the lack of right-of-way provided limited space for public access.

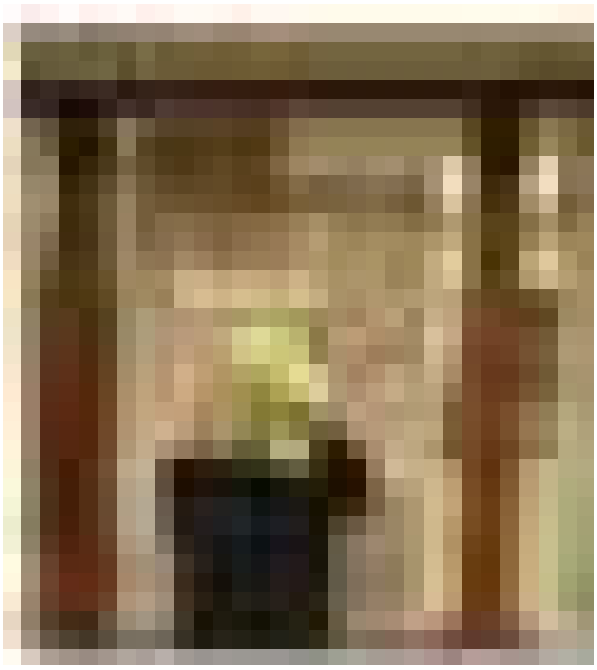
Storm Water Master Plan Task Force Input

Five workshops sessions were held with the Storm Water Master Plan Task Force to review ideas for the Greenbelt Master Plan. The task force included citizens, representatives from the development community, staff members and elected officials of Norman. These meetings were held in November of 2007, and in February, May, July and December of 2008. During these meetings, a strong support of creating a better Norman was expressed by the Task Force, identifying key ideas and recommendations regarding greenways.

Key comments received included:

- Concern over infringing on the ability of private property owners to develop their properties in a way that achieved a reasonable return was raised. The specific exclusion of any development in areas not formally designated a 100 year flood zones by FEMA, such as stream planning corridors, was opposed by some on the Task Force.
- Requiring that trails be built by property owners as part of development was an issue of concern to some on the Task Force.
- Greenways and trails were supported by the Task Force.
- Some Task Force members favored an emphasis on greenbelt preservation in undeveloped areas of the city, rather than trying to squeeze something into the urban core of the city.
- There were concern by some over any changes to the city's parkland dedication ordinance to allow trails in lieu of parks.
- The Task Force was generally in favor of using a portion of a storm water utility fee as primary funding source for trail construction and greenbelt preservation along key corridors in Norman.

Public Input Meetings and Presentations



A series of public meetings were conducted over the 12 month planning period to provide opportunities for input from everyone interested in the planning process for greenways and trails. These meetings started with a basic summary of the process, and then progressed into a review of opportunities for trails and greenbelts throughout Norman. Meetings were held in September and November 2007, and in February, May and December 2008. At each of the meetings, citizens were invited to ask questions, comment or write suggestions on maps provided throughout the meeting area.

The public input meetings helped reassure the strong community support of greenways by the citizens of Norman. During these public meetings a wide variety of issues were expressed. The issues ranged from concerns over maintenance improvements to existing greenways and trails, future solutions for developing greenways and possible locations these proposed greenways could connect with one another. Much of the citizen feedback came in the form of comments written on a series of maps placed on the walls for the citizens to review. These comments suggested multiple locations for new trail development and key locations for new trail connections. Positive comments on areas where trails or greenways could not be feasibly developed were also included. This exercise was an integral part for the planning and possible implementation of the future greenway corridors.