City of Norman

Greenways Master Plan - Appendices

Greenways Into The Future

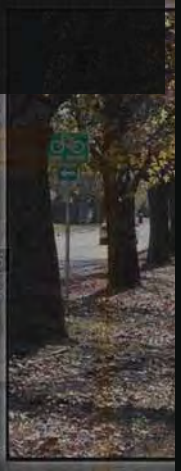
April 2012

APPENDIX A - IMPLEMENTATION GUIDE OF TRAILS AND OPEN SPACE

GREENWAY OPPORTUNITIES & RECOMMENDATIONS

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



City of Norman Oklahoma

GREENWAY MASTER PLAN

2009

HALFF

PBSJ

> 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

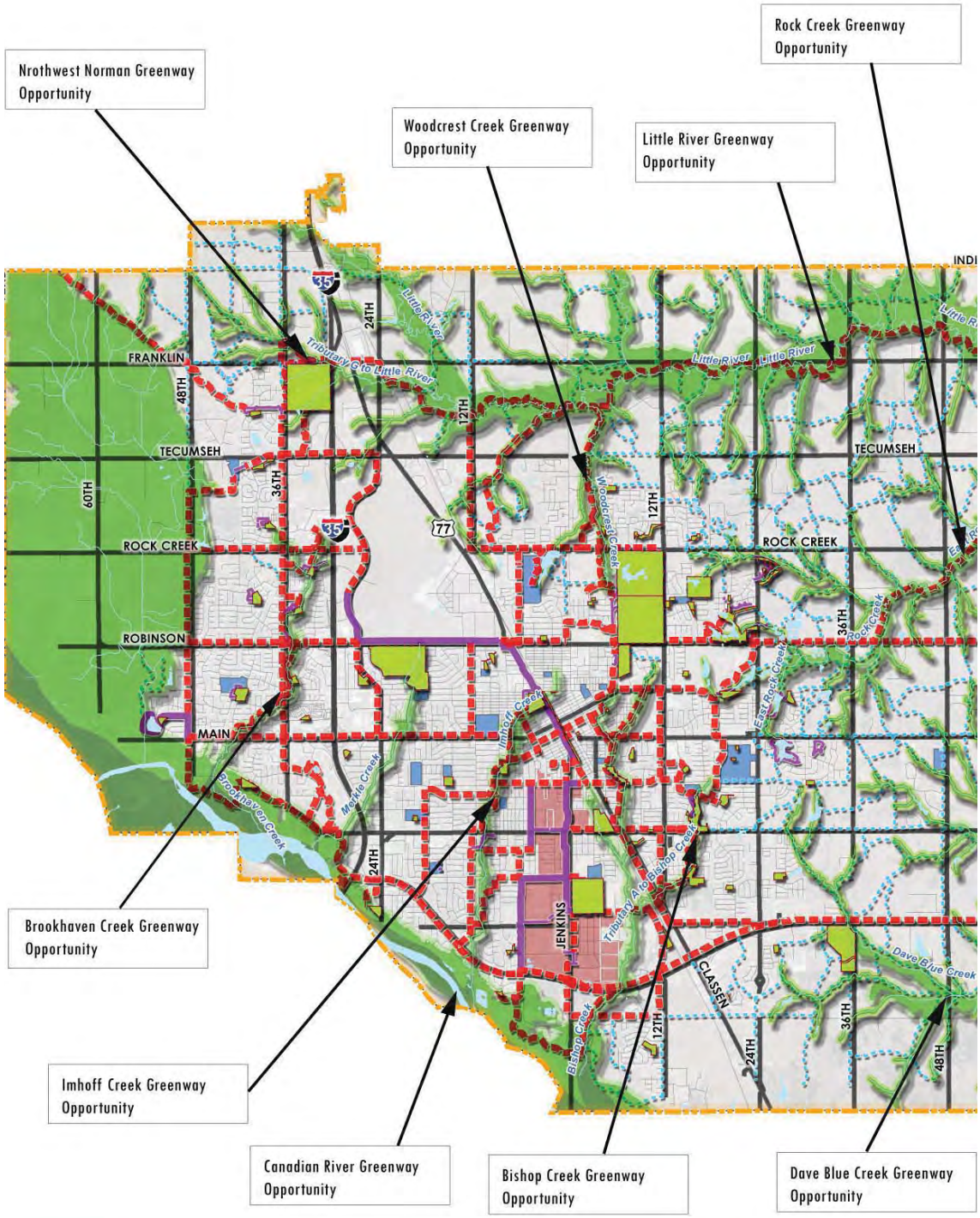
The process of identifying greenway and trail opportunities used these following steps:

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.



Greenway Opportunities & Recommendations

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.*

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS

Corridor Name: Canadian River Trail (Segments 1-3) **Corridor Score**: 4**

Corridor Description: From W 48th Ave. to Lindsey along Canadian River Corridor. Location of path to be determined after further study

Selection Criterion		Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. For each school or park; 1 pt. for other features up to maximum number of points)	**# of Elements* and Description of Elements**	**30%**	**30**	**6**
Schools	0		6	0
Trail-to-Trail	1		6	2
Connection to OU	0		5	0
Connection to Major City Destinations	1		4	2
Connection to Park(s) & Other City Amenities	1		5	2
Major Retail Center	0		2	0
Significant Employer(s)	0		2	0
Ownership Availability		**15%**	**15**	**5**
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) **(or)**			15	5
Other Public or Semi-public Entity Owned, **(or)** along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		**15%**	**15**	**15**
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	10
Adequate buffering from adjacent residential properties			5	5
Existing Physical Characteristics		**20%**	**20**	**20**
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) **(or)**			10	10
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	0
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	5
Existing Wetlands or other unique natural or urban features			5	5
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		**20%**	**20**	**20**
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	-1
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		**100%**	**100**	**66**

* Number of elements within 800 ft. radius

** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

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

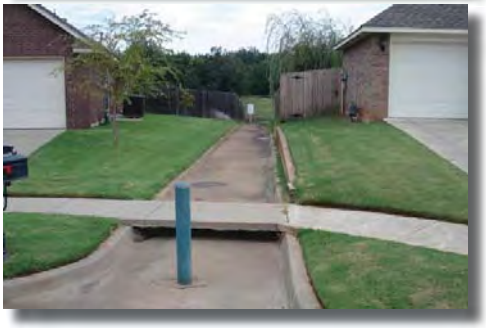
Does this corridor seize an opportunity to secure a corridor for a greenbelt or for a trail that may not be available in the future? Is the corridor going to be developed? Does not acquiring or developing this corridor add significantly more expense in the future as adjacent properties develop or surrounding 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.

City of Norman
Greenway Master Plan

Greenway Corridor Prioritization: Example 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
EX-1	Example - Segment 1	1000	5	5	5	3	5	3	4	30	High
EX-2	Example - Segment 2	1000	5	5	5	3	5	3	4	30	High
		2000	5	5	5	3	5	3	4	30	High

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.

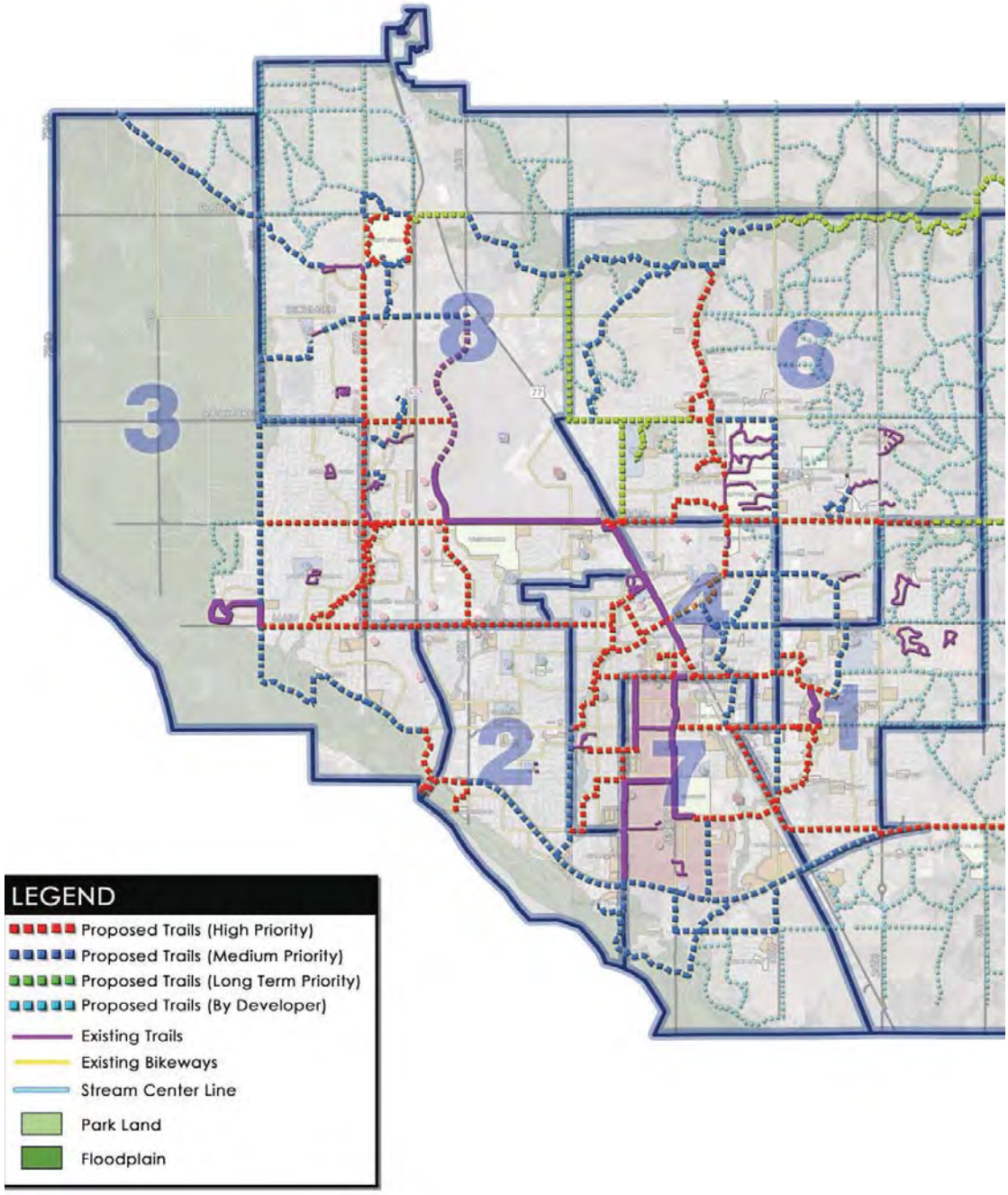
Recommendation #5

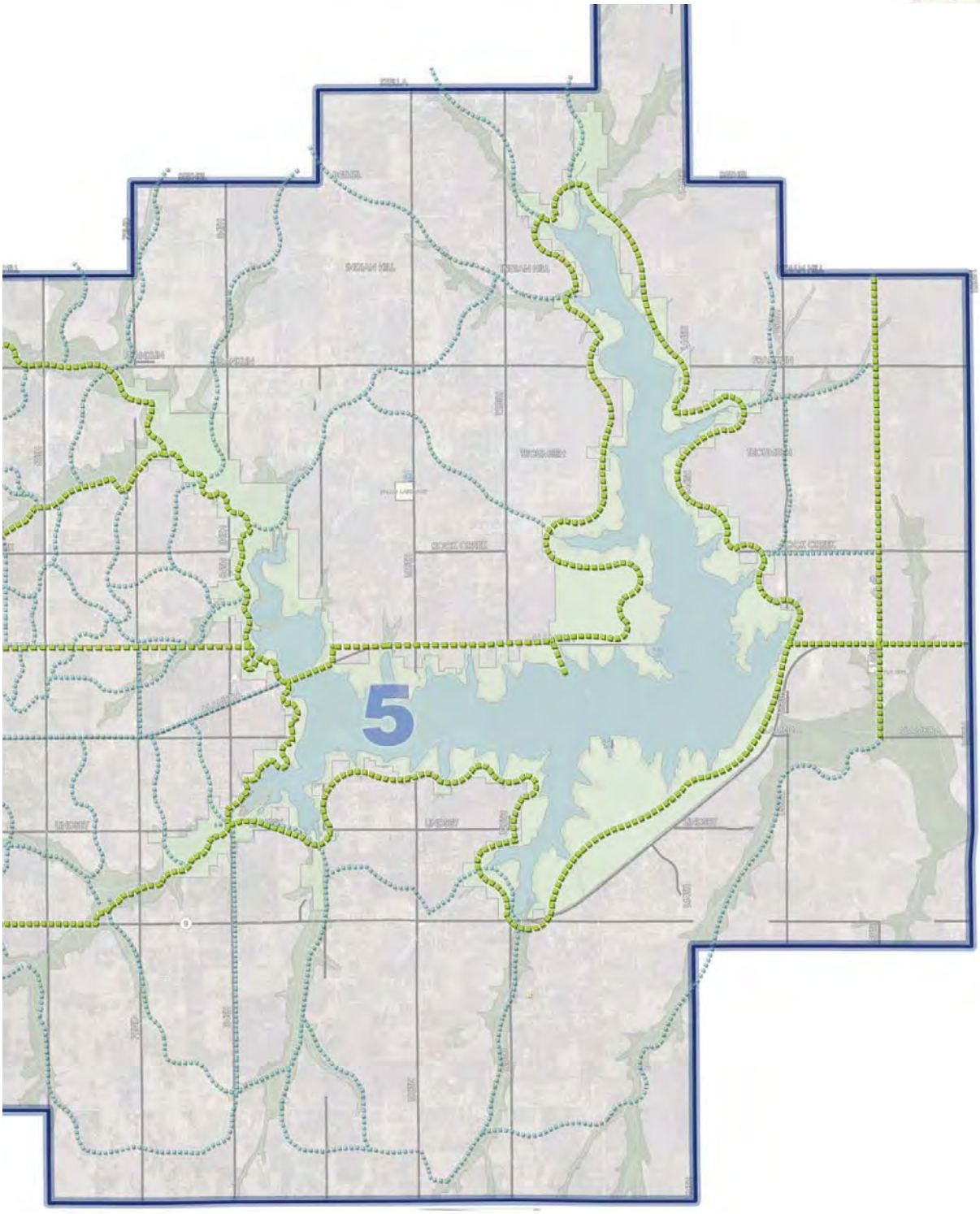
5. Keep greenbelt and trail corridors open and accessible – Almost every existing creek in Norman has been developed with limited physical and visual access to the greenbelt. Access to parks and trails is often difficult or almost impossible because lots back up to the greenbelt. Greenbelts that are 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

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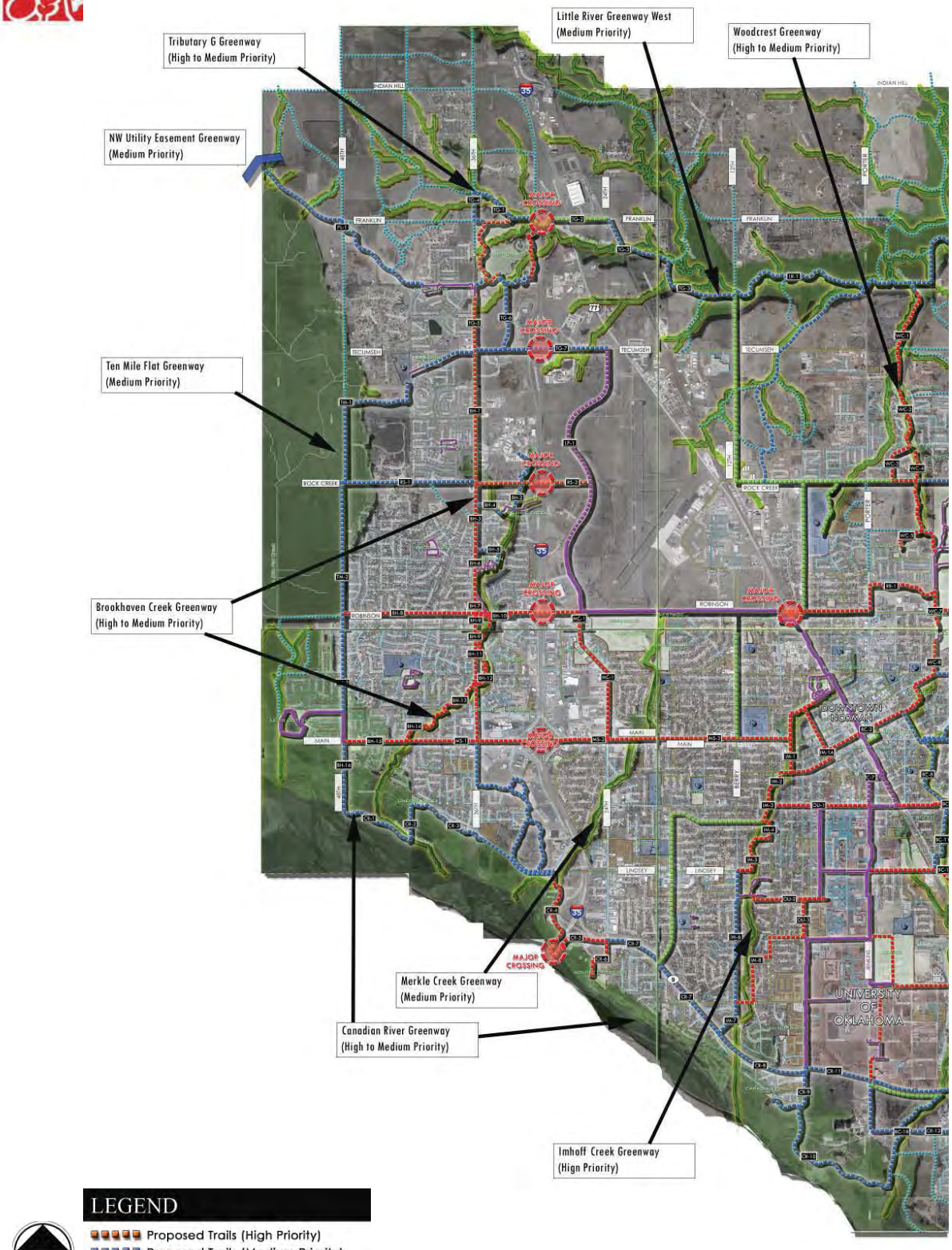
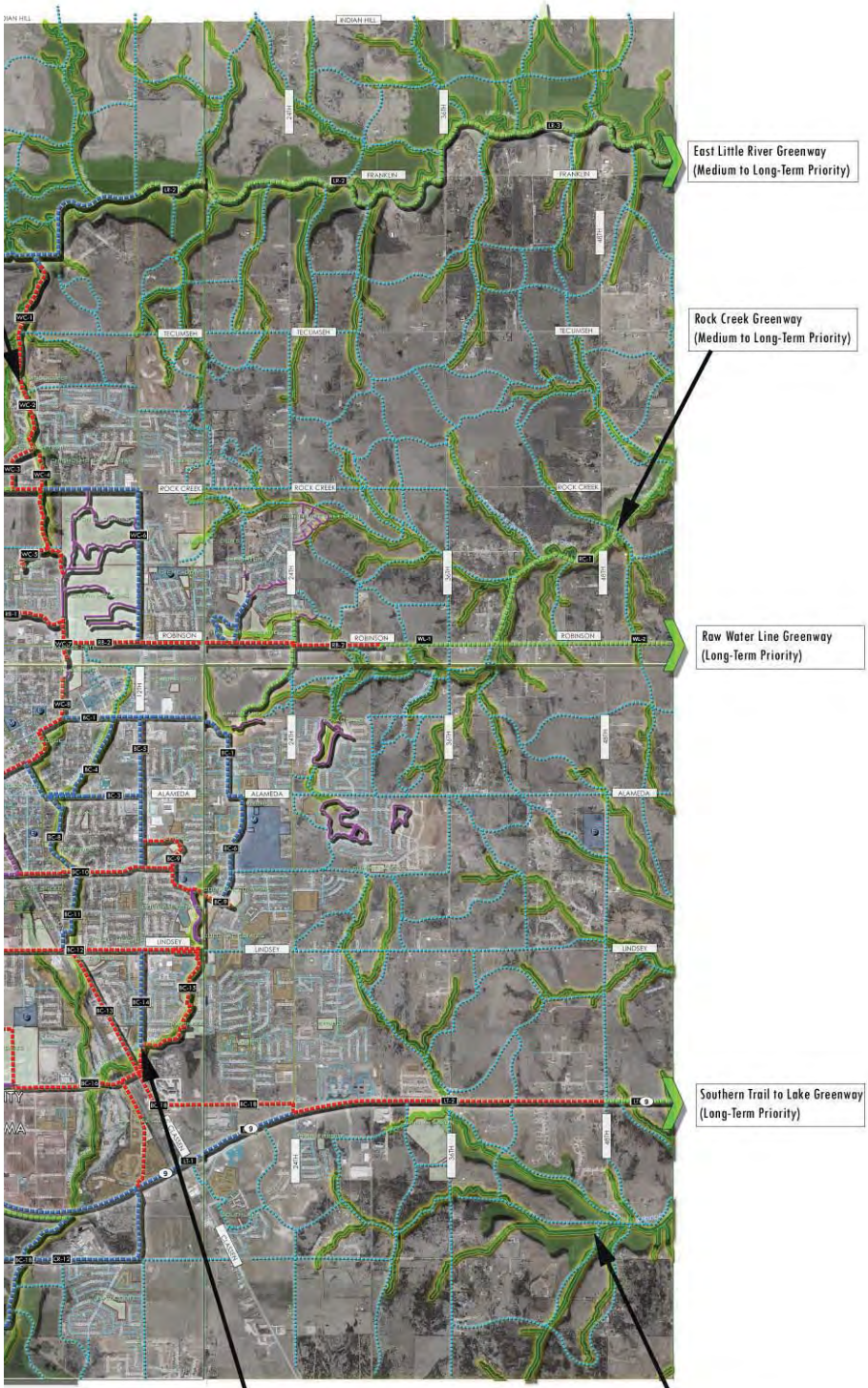
URBAN CORE RECOMMENDATIONS



LEGEND

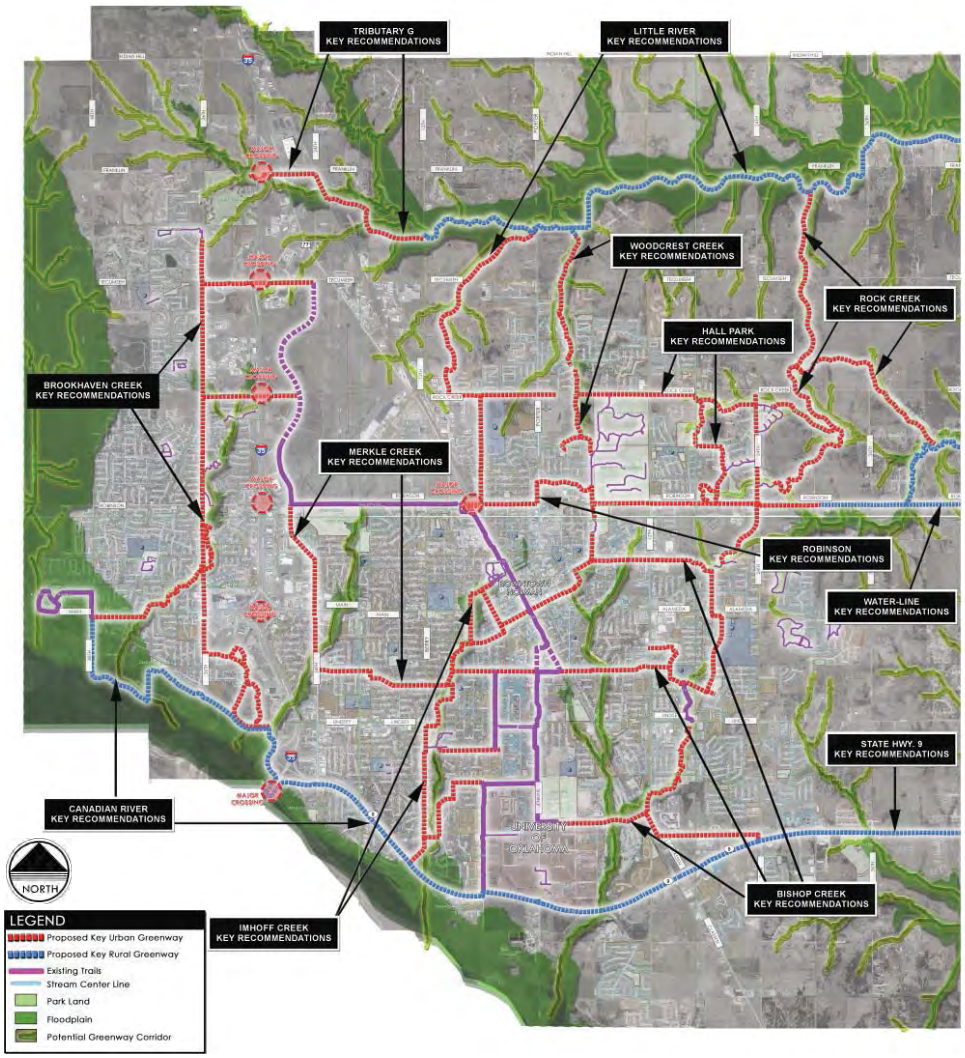
- Proposed Trails (High Priority)
- Proposed Trails (Medium Priority)
- Proposed Trails (Long Term Priority)

Greenway Opportunities & Recommendations

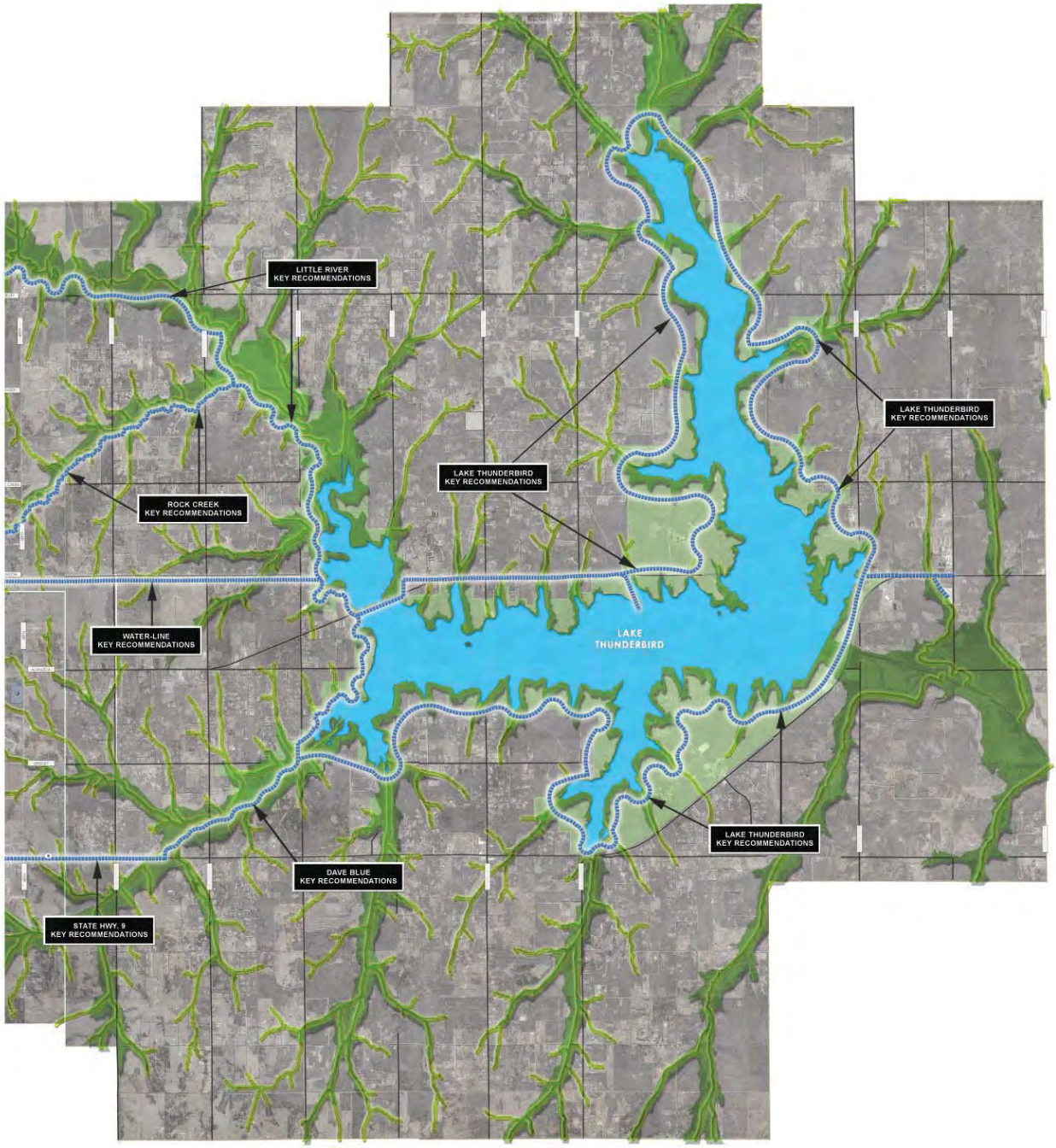


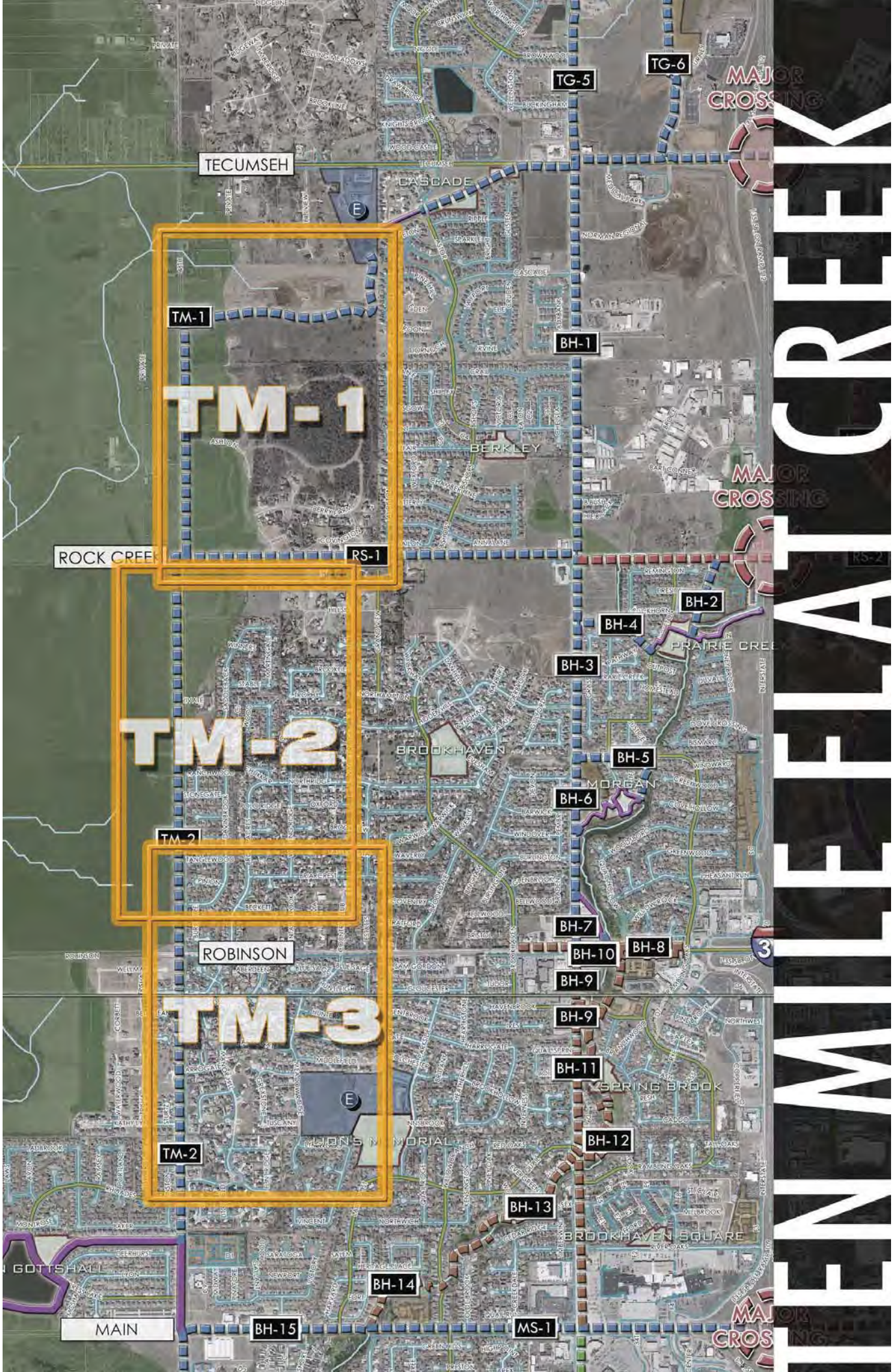
NORMAN GREENWAY CITYWIDE KEY RECOMMENDATIONS

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.



Greenway Opportunities & Recommendations




TEN MILE FLAT CREEK
TM-1
TM-2
TM-3
TM-1
TM-2
TM-2
TG-5
TG-6
MAJOR CROSSING
TECUMSEH
CASCADE
BH-1
BERKLEY
MAJOR CROSSING
ROCK CREEK
RS-1
RS-2
BH-2
BH-4
PRAIRIE CREEK
BH-3
BROOKHAVEN
BH-5
MORGAN
BH-6
BH-7
BH-10
BH-8
BH-9
ROBINSON
BH-9
BH-11
SPRING BROOK
BH-12
BH-13
BROOKHAVEN SQUARE
BH-14
MAIN
BH-15
MS-1
MAJOR CROSSING

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

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS

Corridor Name: Ten Mile Flat (Segment 1) — **Corridor Score**: 4**

Corridor Description: From Roosevelt Elementary to Rock Creek Rd along W. 48th Ave. Location of path to be determined after further study

Selection Criterion	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. for each school or park, 1 pt. for other features up to maximum number of points)		30%	30	4
Schools	1		5	2
Trail-to-Trail	0		6	0
Connection to OU	0		5	0
Connection to Major City Destinations	0		4	0
Connection to Park(s) & Other City Amenities	1		5	2
Major Retail Center	0		2	0
Significant Employer(s)	0		2	0
Ownership Availability		15%	15	10
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) **(or)**			15	15
Other Public or Semi-public Entity Owned, **(or)** along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	
Compatibility with Adjacent Land Uses		15%	15	15
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	10
Adequate buffering from adjacent residential properties			5	5
Existing Physical Characteristics		20%	20	20
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) **(or)**			10	10
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	0
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	5
Existing Wetlands or other unique natural or urban features			5	5
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		100%	100	69

* Number of elements within 600 ft. radius.

** Score ranges as follows: over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS

Corridor Name: Ten Mile Flat (Segment 2) — **Corridor Score**: 4**

Corridor Description: From Rock Creek Rd. to Main St. along W. 48th Ave. Location of path to be determined after further study

Selection Criterion	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. for each school or park, 1 pt. for other features up to maximum number of points)		30%	30	11
Schools	1		5	2
Trail-to-Trail	1		6	3
Connection to OU	0		5	0
Connection to Major City Destinations	1		4	2
Connection to Park(s) & Other City Amenities	2		5	4
Major Retail Center	0		2	0
Significant Employer(s)	0		2	0
Ownership Availability		15%	15	15
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) **(or)**			15	15
Other Public or Semi-public Entity Owned, **(or)** along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	
Compatibility with Adjacent Land Uses		15%	15	10
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	7
Adequate buffering from adjacent residential properties			5	3
Existing Physical Characteristics		20%	20	14
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) **(or)**			10	2
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	8
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	2
Existing Wetlands or other unique natural or urban features			5	2
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		100%	100	70

* Number of elements within 600 ft. radius.

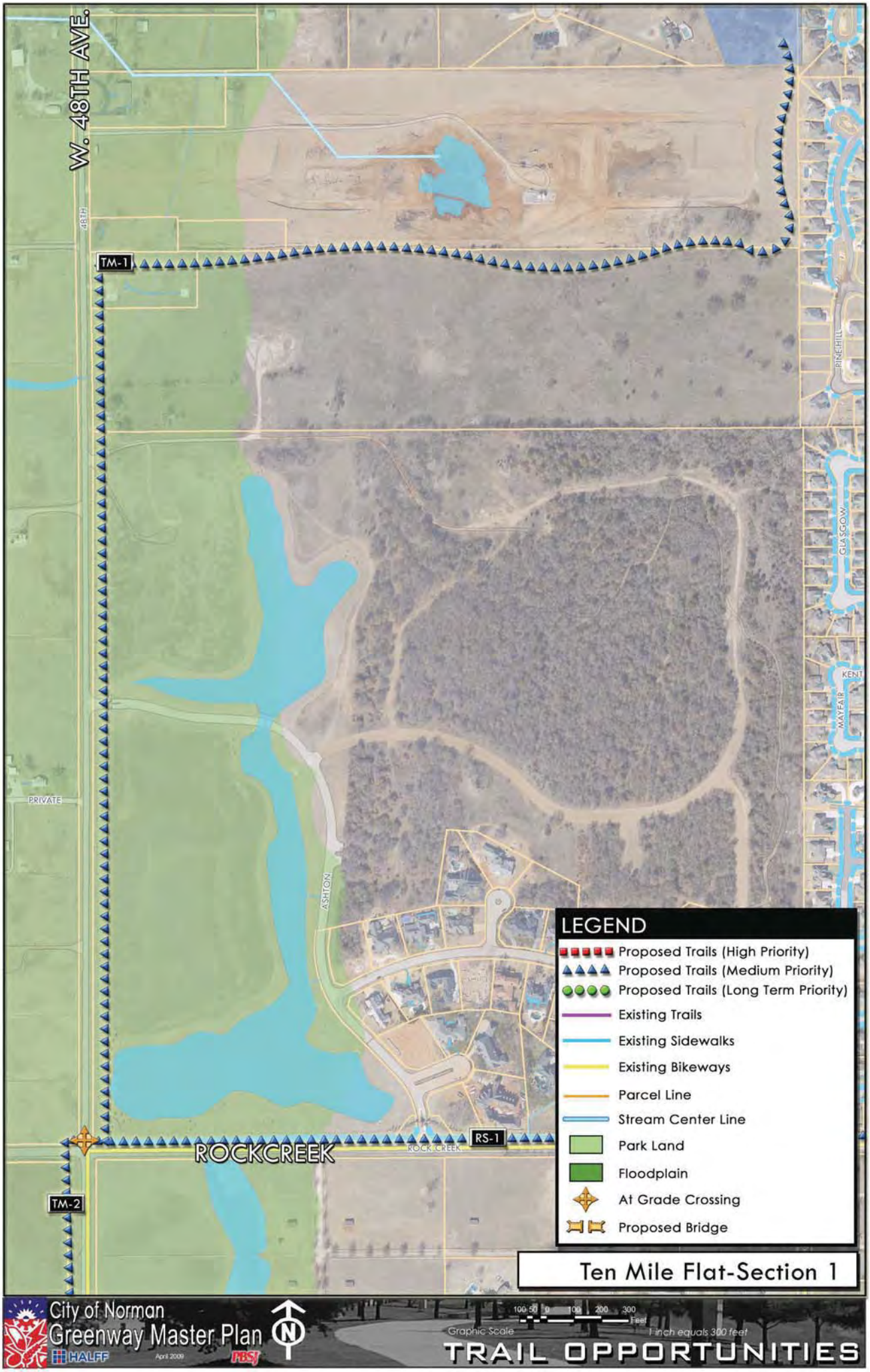
** Score ranges as follows: over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

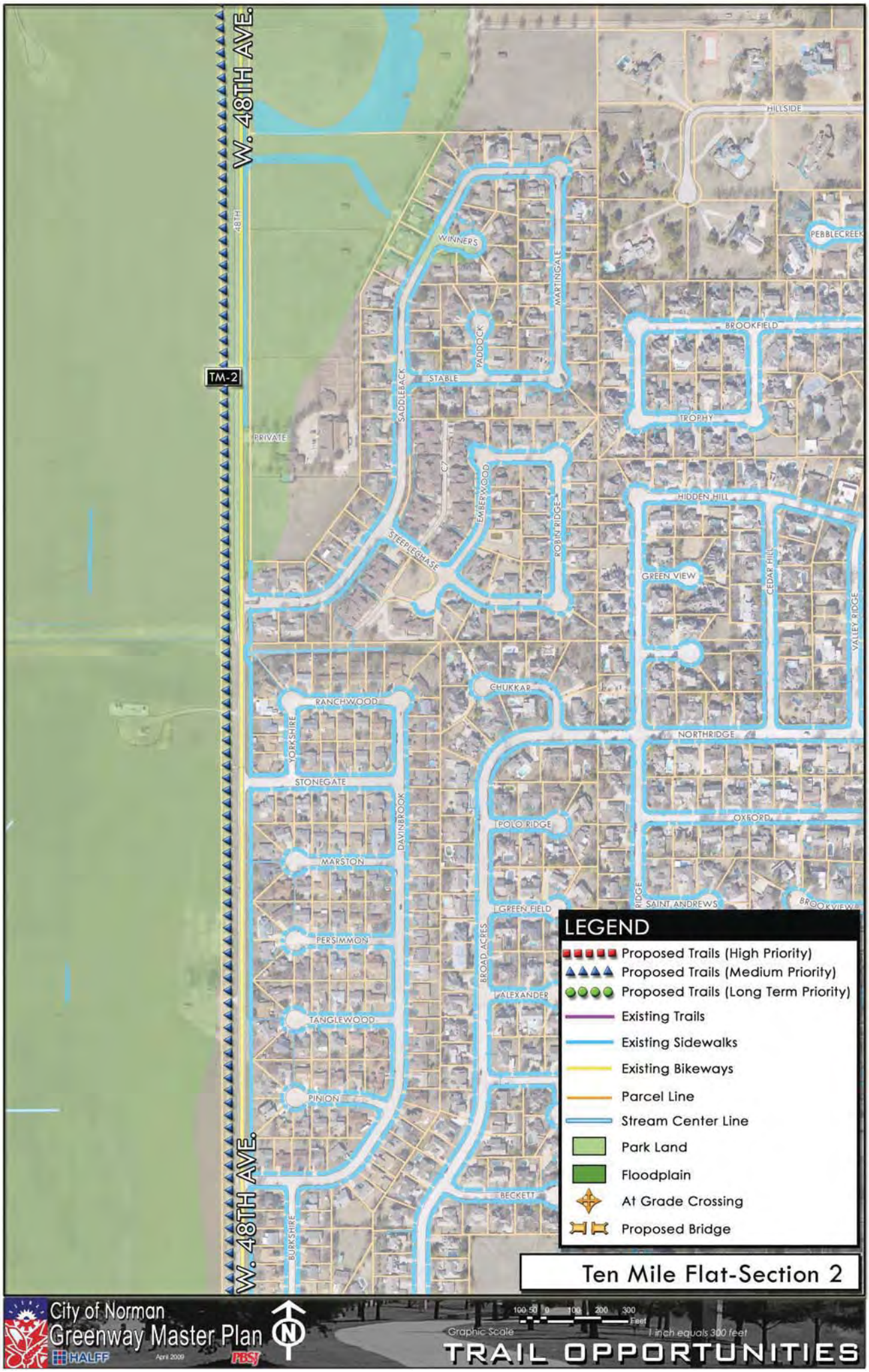
Prioritization Analysis: Ten Mile Flat

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


W. 48TH AVE.
48TH
TM-1
PINE HILL
GLASGOW
KENT
MAYFAIR
PRIVATE
ASHTON
ROCKCREEK
ROCK CREEK
RS-1
TM-2
LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
Ten Mile Flat-Section 1
City of Norman
Greenway Master Plan
HALFF
April 2009
PBSJ
100 50 0 100 200 300
Feet
Graphic Scale
1 inch equals 300 feet
TRAIL OPPORTUNITIES


W. 48TH AVE.
48TH
TM-2
HILLSIDE
PEBBLECREEK
WINNERS
MARTINGALE
BROOKFIELD
PADDOCK
STABLE
SADDLEBACK
TROPHY
PRIVATE
EMBERWOOD
ROBIN RIDGE
HIDDEN HILL
STEEPLECHASE
GREEN VIEW
CEDAR HILL
VALLEY RIDGE
CHUKKAR
RANCHWOOD
YORKSHIRE
NORTHRIDGE
STONEGATE
DAVINBROOK
POLO RIDGE
OXFORD
MARSTON
SAINT ANDREWS
BROOKVIEW
GREEN FIELD
PERSIMMON
BROAD ACRES
ALEXANDER
TANGLEWOOD
PINION
BECKETT
BURKSHIRE
W. 48TH AVE.
LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
Ten Mile Flat-Section 2
City of Norman
Greenway Master Plan
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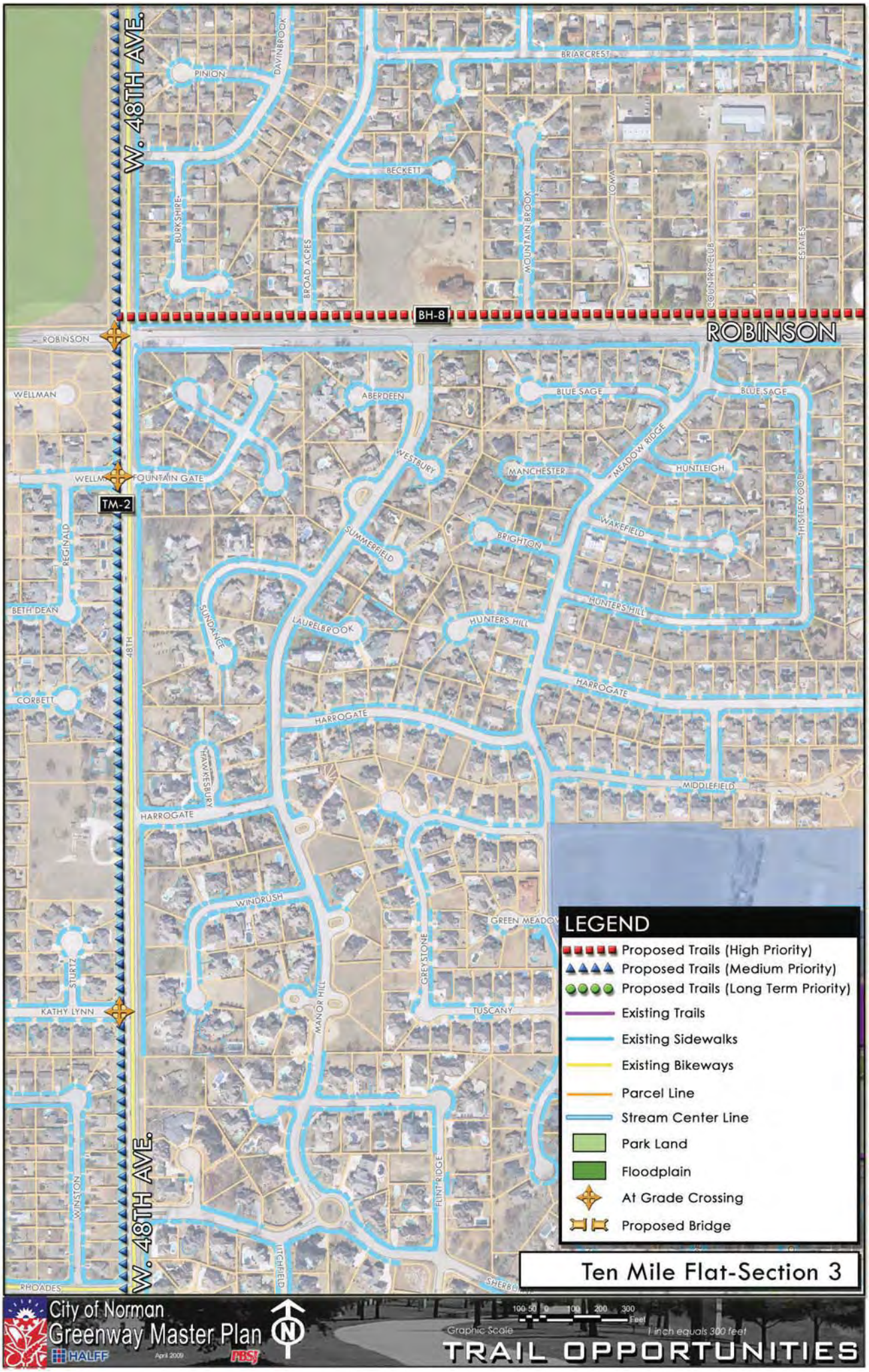
April 2009
PBSJ
N
100 50 0 100 200 300
Feet
Graphic Scale
1 inch equals 300 feet
TRAIL OPPORTUNITIES


W. 48TH AVE.
PINION
DAVINBROOK
BRIARCREST
BECKETT
BURKSHIRE
BROAD ACRES
MOUNTAIN BROOK
LOMA
COUNTRY CLUB
ESTATES
BH-8
ROBINSON
ROBINSON
WELLMAN
ABERDEEN
BLUE SAGE
BLUE SAGE
WESTBURY
MANCHESTER
MEADOW RIDGE
HUNTLEIGH
WELLMAN
FOUNTAIN GATE
TM-2
REGINALD
SUMMERFIELD
BRIGHTON
WAKEFIELD
THISTLEWOOD
BETH DEAN
SUNDANCE
LAURELBROOK
HUNTERS HILL
HUNTERS HILL
48TH
HARROGATE
CORBETT
HARROGATE
HAWKESBURY
MIDDLEFIELD
HARROGATE
WINDRUSH
GREEN MEADOW
STURTZ
GREYSTONE
KATHY LYNN
MANOR HILL
TUSCANY
FLINTRIDGE
WINSTON
LITCHFIELD
RHOADES
W. 48TH AVE.
LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
Ten Mile Flat-Section 3
City of Norman
Greenway Master Plan
HALFF
April 2009
PBSJ
N
100 50 0 100 200 300
Feet
Graphic Scale
1 inch equals 300 feet
TRAIL OPPORTUNITIES

TRIBUTARY G CREEK

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.

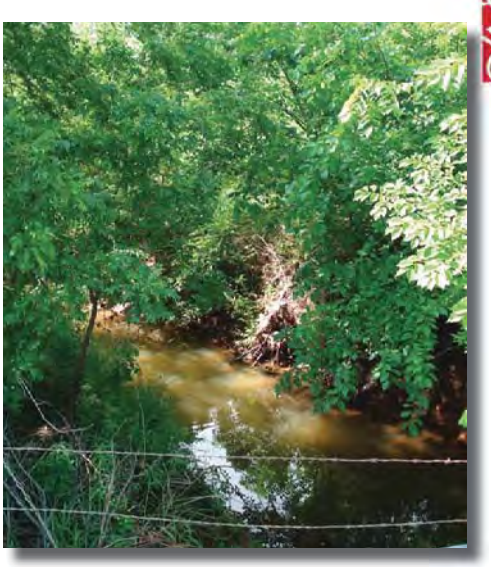
Key Destinations: One School (Roosevelt Elementary) is located within Corridor area, and other local schools are located within the surrounding Corridors. 2 Parks and the future Ruby Grant Park are located within this area. The proposed Legacy Trail section will be a key connector.

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

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS

Corridor Name: Tributary G (TG 1)
Corridor Description: From W. 36th Ave. to IH-35; Location of path to be determined after futher study

Corridor Score: 4**

Selection Criterion	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. for each school or park, 1 pt. for other features up to maximum number of points)		30%	30	5
Schools	1		6	2
Trail-to-Trail	1		6	2
Connection to OU	0		5	0
Connection to Major City Destinations	0		4	0
Connection to Park(s) & Other City Amenities	0		5	0
Major Retail Center	0		2	0
Significant Employer(s)	1		2	1
Ownership Availability		15%	15	6
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) **(or)**			15	6
Other Public or Semi-public Entity Owned, **(or)** along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	15
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	10
Adequate buffering from adjacent residential properties			5	5
Existing Physical Characteristics		20%	20	20
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) **(or)**			10	10
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	5
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	5
Existing Wetlands or other unique natural or urban features			5	0
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		**100%**	**100**	**88**

* Number of elements within 600 ft. radius
** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS

Corridor Name: Tributary G (TG-2)
Corridor Description: From IH-35 to US 77; Location of path to be determined after further study

Corridor Score: 3**

Selection Criterion	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. for each school or park, 1 pt. for other features up to maximum number of points)		30%	30	5
Schools	0		6	0
Trail-to-Trail	0		6	0
Connection to OU	0		5	0
Connection to Major City Destinations	1		4	1
Connection to Park(s) & Other City Amenities	1		5	2
Major Retail Center	0		2	0
Significant Employer(s)	1		2	2
Ownership Availability		15%	15	13
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) **(or)**			15	13
Other Public or Semi-public Entity Owned, **(or)** along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	12
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	8
Adequate buffering from adjacent residential properties			5	4
Existing Physical Characteristics		20%	20	7
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) **(or)**			10	0
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	10
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	3
Existing Wetlands or other unique natural or urban features			5	0
Major Barrier to use of this corridor (deduct up to 5 points)	Caraway RR-35		-5	-5
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		**100%**	**100**	**57**

* Number of elements within 600 ft. radius
** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS

Corridor Name: Tributary G (TG-3)
Corridor Description: From US 77 to 12th Ave.; Location of path to be determined after further study

Corridor Score: 4**

Selection Criterion	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. for each school or park, 1 pt. for other features up to maximum number of points)		30%	30	3
Schools	0		6	0
Trail-to-Trail	0		6	0
Connection to OU	0		5	0
Connection to Major City Destinations	0		4	0
Connection to Park(s) & Other City Amenities	1		5	2
Major Retail Center	0		2	0
Significant Employer(s)	1		2	1
Ownership Availability		15%	15	5
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) **(or)**			15	5
Other Public or Semi-public Entity Owned, **(or)** along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	13
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	10
Adequate buffering from adjacent residential properties			5	3
Existing Physical Characteristics		20%	20	20
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) **(or)**			10	10
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	0
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	5
Existing Wetlands or other unique natural or urban features			5	5
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		**100%**	**100**	**61**

* Number of elements within 600 ft. radius
** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS

Corridor Name: Tributary G (TG 4-8)
Corridor Description: From Tributary G Creek to Tecumseh; Location of path to be determined after further study

Corridor Score: 5**

Selection Criterion	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. for each school or park, 1 pt. for other features up to maximum number of points)		30%	30	12
Schools	1		6	2
Trail-to-Trail	1		6	2
Connection to OU	0		5	0
Connection to Major City Destinations	0		4	1
Connection to Park(s) & Other City Amenities	3		5	5
Major Retail Center	0		2	0
Significant Employer(s)	1		2	2
Ownership Availability		15%	15	15
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) **(or)**			15	15
Other Public or Semi-public Entity Owned, **(or)** along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	15
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	10
Adequate buffering from adjacent residential properties			5	5
Existing Physical Characteristics		20%	20	20
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) **(or)**			10	0
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	10
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	5
Existing Wetlands or other unique natural or urban features			5	5
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		**100%**	**100**	**82**

* Number of elements within 600 ft. radius

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

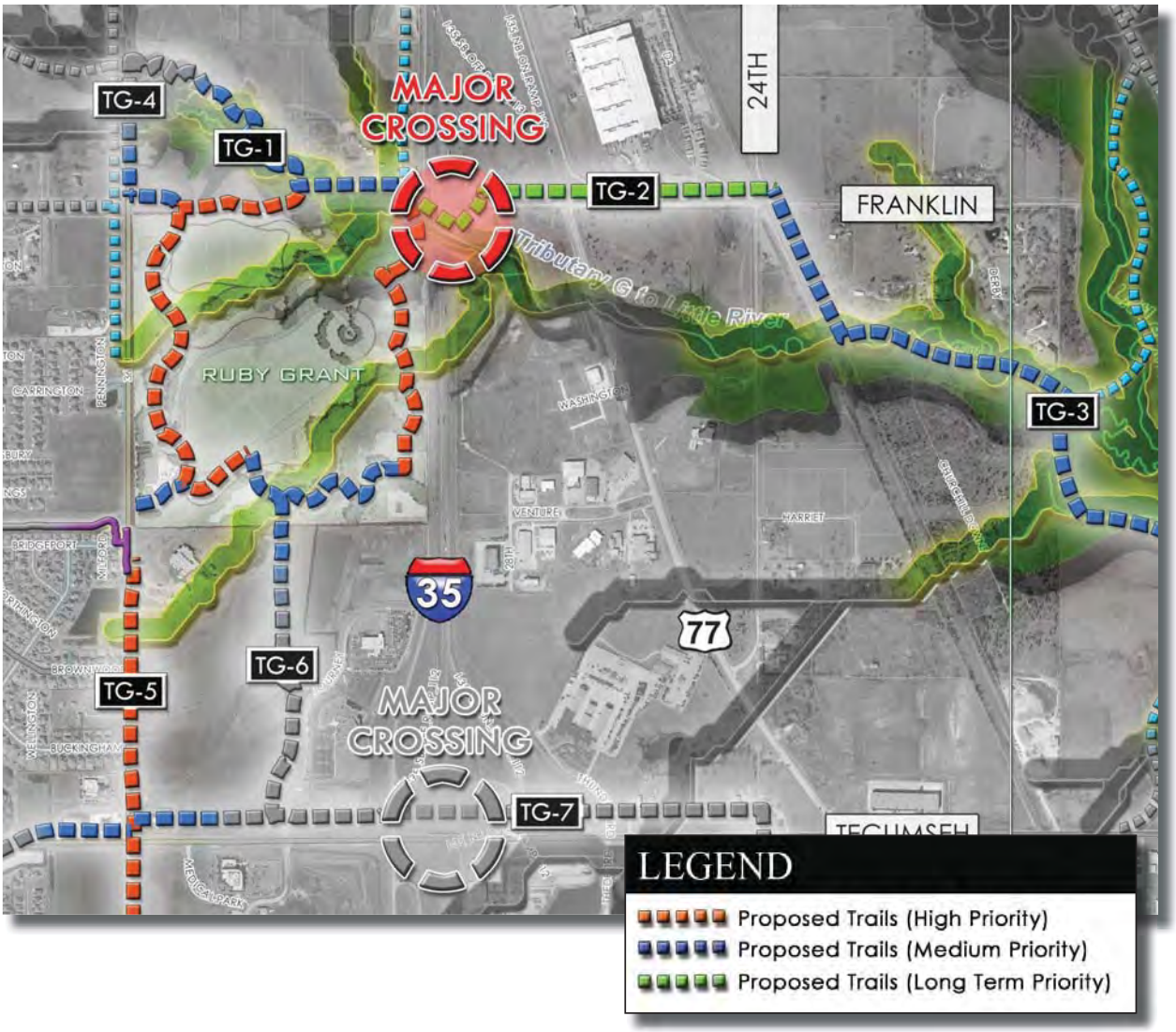
Urban Greenway System: Tributary G Key Recommendations

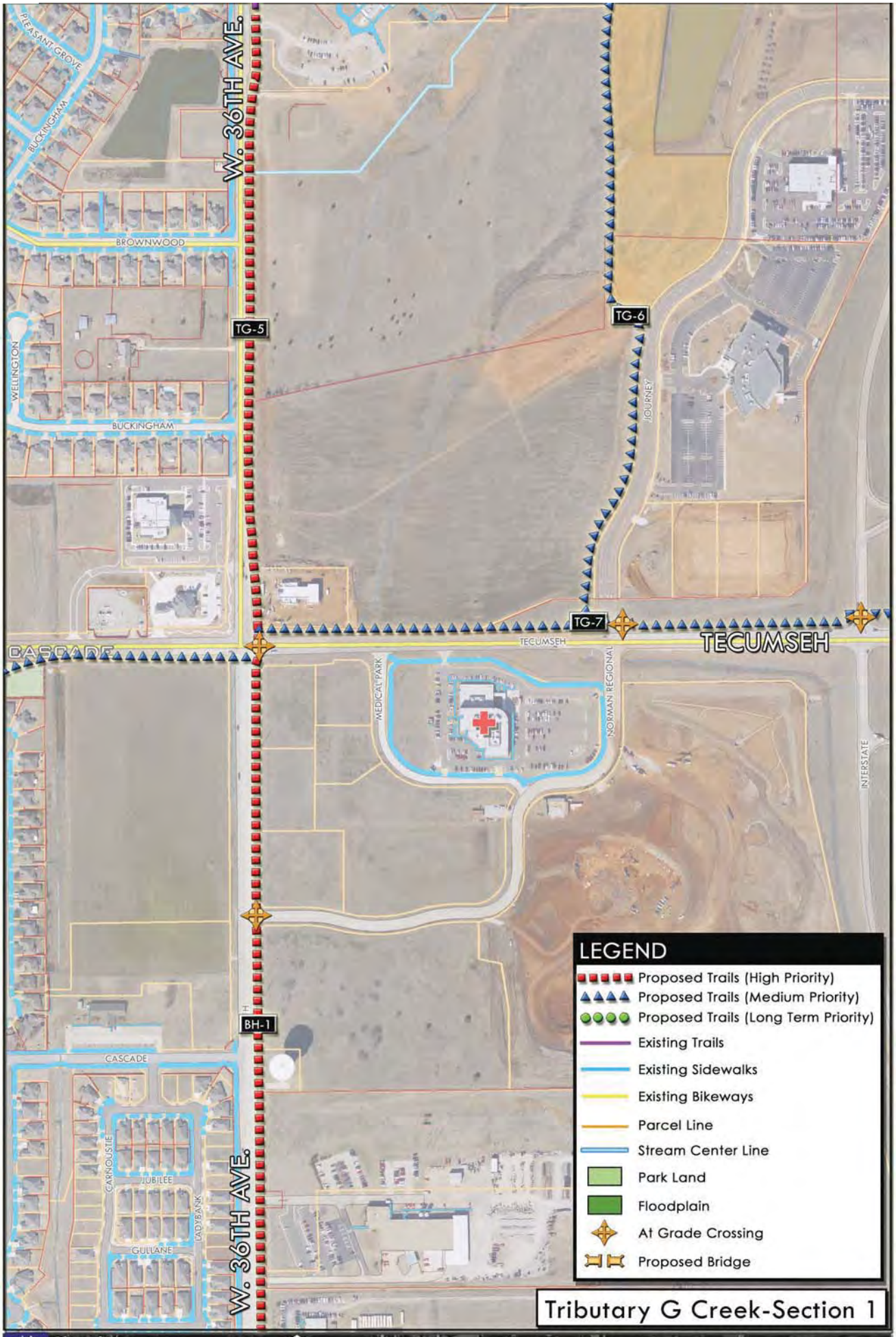
Ruby Grant Park is located in the center of this proposed greenway corridor. One recommendation will be a connection into Ruby Grant Park along W. 36th Ave. Another recommendation will be a connection from Ruby Grant Park to east of IH-35 either by creating a crossing under IH-35 by using the existing 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




PLEASANT GROVE
BUCKINGHAM
W. 36TH AVE.
BROWNWOOD
TG-5
TG-6
WELLINGTON
BUCKINGHAM
JOURNEY
TG-7
TECUMSEH
TECUMSEH
CASCADE
MEDICAL PARK
NORMAN REGIONAL
INTERSTATE
BH-1
CASCADE
CARNOUSTIE
JUBILEE
LADYBANK
GULLANE
W. 36TH AVE.
LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
Tributary G Creek-Section 1
City of Norman
Greenway Master Plan
HALFF
April 2009
PBS&J
N
100 50 0 100 200 300
Feet
Graphic Scale
1 inch equals 300 feet
TRAIL OPPORTUNITIES


W. 36TH AVE.
INTERSTATE 35
I-35
Tributary G to Little River
TG-4
TG-1
TG-2
FRANKLIN
FRANKLIN
Proposed Culvert or Bridge Crossing
RUBY GRANT
P
36TH
CARRINGTON
INTERSTATE
I-35
W. 36TH AVE.
BRIDGEPORT
MILFORD
TG-6
TG-5
LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
Tributary G Creek-Section 2
City of Norman
Greenway Master Plan
HALFF
April 2009
PBSJ
N
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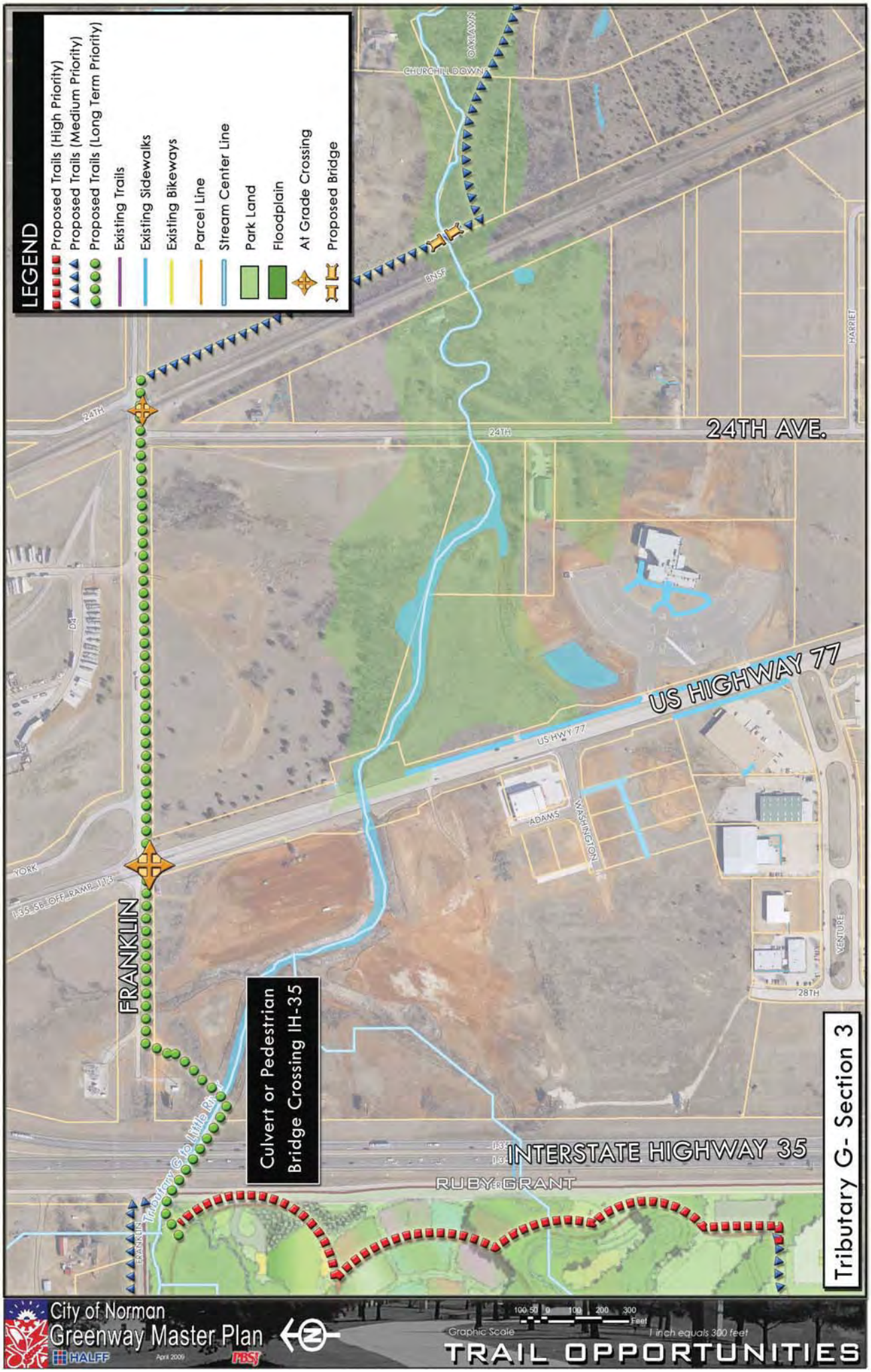
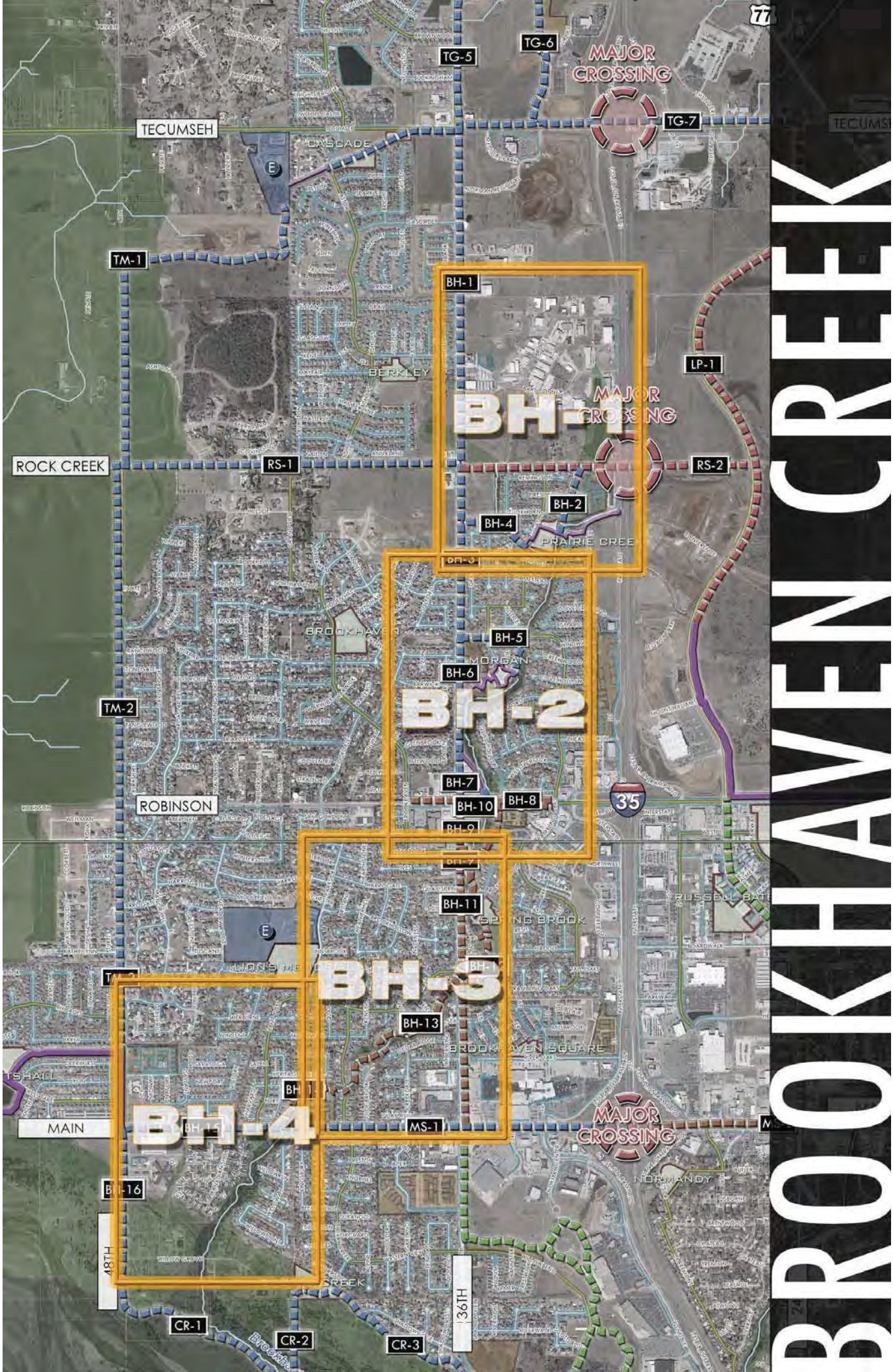
Feet
Graphic Scale
1 inch equals 300 feet
TRAIL OPPORTUNITIES


LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
24TH AVE.
US HIGHWAY 77
INTERSTATE HIGHWAY 35
FRANKLIN
Culvert or Pedestrian Bridge Crossing IH-35
Tributary G- Section 3
CHURCHILL DOWNS
OAKLAWN
BNSF
HARRIET
24TH
US HWY 77
ADAMS
WASHINGTON
VENTURE
28TH
YORK
I-35_SB_OFF_RAMP_I-35
RUBY GRANT
City of Norman
Greenway Master Plan
HALFF
April 2009
PBS&J
Graphic Scale
100 50 0 100 200 300
Feet
1 inch equals 300 feet
TRAIL OPPORTUNITIES

LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
12TH AVE.
LR-1
TG-3
TG-3
Little River
DERBY
OAKLAWN
CHURCHILL DOWNS
FIESTA
RAIL-LINE
BNSF
Tributary G- Section 4
City of Norman
Greenway Master Plan
HALFF
April 2009
PBSJ
Graphic Scale
100 50 0 100 200 300 Feet
1 inch equals 300 feet
TRAIL OPPORTUNITIES


BROOKHAVEN CREEK
BH-1
BH-2
BH-3
BH-4
TG-5
TG-6
TG-7
MAJOR CROSSING
TECUMSEH
CASCADE
TM-1
BERKLEY
LP-1
ROCK CREEK
RS-1
RS-2
BH-4
PRAIRIE CREE
BROOKHAVEN
BH-5
MORGAN
BH-6
TM-2
BH-7
BH-10
BH-8
ROBINSON
35
BH-9
BH-11
SPRING BROOK
RUSSELL BATH
BH-13
BROOKHAVEN SQUARE
MAIN
MS-1
NORMANDY
BH-16
48TH
36TH
CR-1
CR-2
CR-3

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

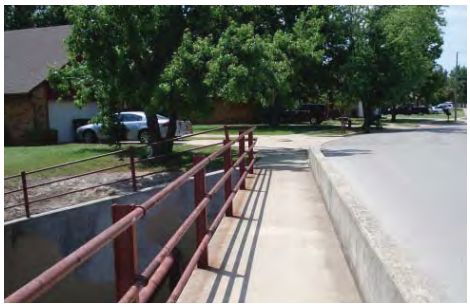
Trails located along the Canadian River have potential for connection to major destinations and corridors.

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

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS
Corridor Name: Rockcreek Rd. (RS-1) — **Corridor Score**: 4**
Corridor Description: From W. 48th Ave. to W. 36th Ave. Location of path to be determined after further study

Selection Criterion	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. For each school or park, 1 pt. for other features up to maximum number of points)		30%	30	8
Schools	0		6	0
Trail-to-Trail	1		6	3
Connection to OU	0		5	0
Connection to Major City Destinations	0		4	0
Connection to Park(s) & Other City Amenities	2		5	4
Major Retail Center	0		2	0
Significant Employer(s)	1		2	2
Ownership Availability		15%	15	15
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) (or)			15	15
Other Public or Semi-public Entity Owned, (or) along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	15
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	10
Adequate buffering from adjacent residential properties			5	5
Existing Physical Characteristics		20%	20	13
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) (or)			10	
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	10
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	3
Existing Wetlands or other unique natural or urban features			5	0
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		100%	100	72

* Number of elements within 600 ft. radius
** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS
Corridor Name: Rockcreek Rd. (RS-2) — **Corridor Score**: 5**
Corridor Description: From W. 36th Ave. to Legacy Trail. Potential future bridge to help cross IH-35 and connect with Legacy Trail. Location of path to be determined after further study

Selection Criterion	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (1 pts. For each school or park, 1 pt. for other features up to maximum number of points)		30%	30	18
Schools	0		6	0
Trail-to-Trail	3		6	4
Connection to OU	1		5	3
Connection to Major City Destinations	1		4	2
Connection to Park(s) & Other City Amenities	2		5	5
Major Retail Center	1		2	2
Significant Employer(s)	1		2	2
Ownership Availability		15%	15	15
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) (or)			15	15
Other Public or Semi-public Entity Owned, (or) along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	15
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	10
Adequate buffering from adjacent residential properties			5	5
Existing Physical Characteristics		20%	20	13
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) (or)			10	
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	10
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	3
Existing Wetlands or other unique natural or urban features			5	0
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		100%	100	81

* Number of elements within 600 ft. radius
** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS
Corridor Name: Brookhaven Creek (BH 1-7) — **Corridor Score**: 4**
Corridor Description: From Tecumseh Rd. to Robinson St. along Brookhaven Creek Corridor, Location of path to be determined after further study

Selection Criterion	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. For each school or park, 1 pt. for other features, up to maximum number of points)		30%	30	13
Schools	1		6	2
Trail-to-Trail	2		6	3
Connection to OU	0		5	0
Connection to Major City Destinations	0		4	0
Connection to Park(s) & Other City Amenities	7		5	5
Major Retail Center	2		2	2
Significant Employer(s)	2		2	2
Ownership Availability		15%	15	10
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) (or)			15	10
Other Public or Semi-public Entity Owned, (or) along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	11
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	8
Adequate buffering from adjacent residential properties			5	3
Existing Physical Characteristics		20%	20	15
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) (or)			10	5
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	5
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	3
Existing Wetlands or other unique natural or urban features			5	5
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		100%	100	72

* Number of elements within 600 ft. radius
** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS
Corridor Name: Brookhaven Creek (BH 8-14) — **Corridor Score**: 4**
Corridor Description: From Robinson to Main St. along Brookhaven Creek Corridor, Location of path to be determined after further study

Selection Criterion	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. For each school or park, 1 pt. for other features up to maximum number of points)		30%	30	12
Schools	1		6	2
Trail-to-Trail	3		6	4
Connection to OU	0		5	0
Connection to Major City Destinations	0		4	0
Connection to Park(s) & Other City Amenities	3		5	5
Major Retail Center	2		2	2
Significant Employer(s)	0		2	0
Ownership Availability		15%	15	5
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) (or)			15	5
Other Public or Semi-public Entity Owned, (or) along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	11
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	8
Adequate buffering from adjacent residential properties			5	3
Existing Physical Characteristics		20%	20	19
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) (or)			10	10
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	3
Existing Wetlands or other unique natural or urban features			5	5
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		100%	100	67

* Number of elements within 600 ft. radius
** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

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

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS

Corridor Name: Brookhaven Creek (BH 15-16) Corridor Score**: 4

Corridor Description: From Main to Canadian River along Main St. and W. 48th Ave. Location of path to be determined after further study

Selection Criterion		Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. for each school or park, 1 pt. for other features or businesses within 1/4 mile)	# of Elements* and Description of Elements	30%	30	10
Schools	0		6	0
Trail-to-Trail	1		6	3
Connection to OU	0		5	0
Connection to Major City Destinations	1		4	3
Connection to Park(s) & Other City Amenities	2		5	4
Major Retail Center	0		2	0
Significant Employer(s)	0		2	0
Ownership Availability		15%	15	13
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) (or)			15	13
Other Public or Semi-public Entity Owned, (or) along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	10
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	7
Adequate buffering from adjacent residential properties			5	3
Existing Physical Characteristics		20%	20	10
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) (or)			10	5
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	5
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	4
Existing Wetlands or other unique natural or urban features			5	5
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		100%	100	72

* Number of elements within 800 ft. radius

** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 = 2, 20 or less = 1

Urban Greenway System: Brookhaven Creek Key Recommendations

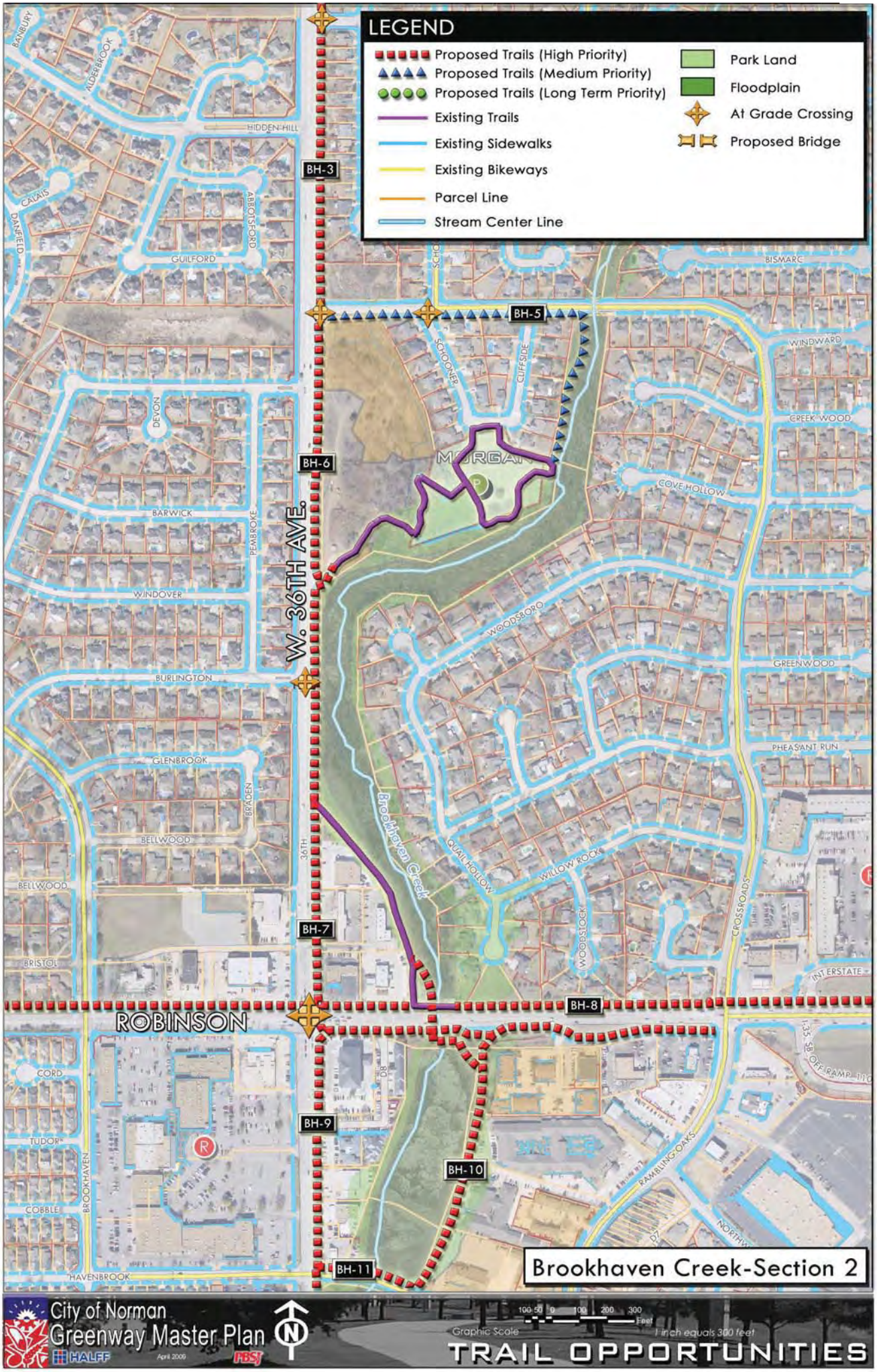
The key recommendations for this sector will be a greenway corridor which runs from Tecumseh then south to Main St. along W. 36th Ave. and Brookhaven Creek. This corridor will help connect the proposed Ruby Grant Park, Kevin Gottshall Park and the Canadian River Corridor. Another key recommendation for 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)

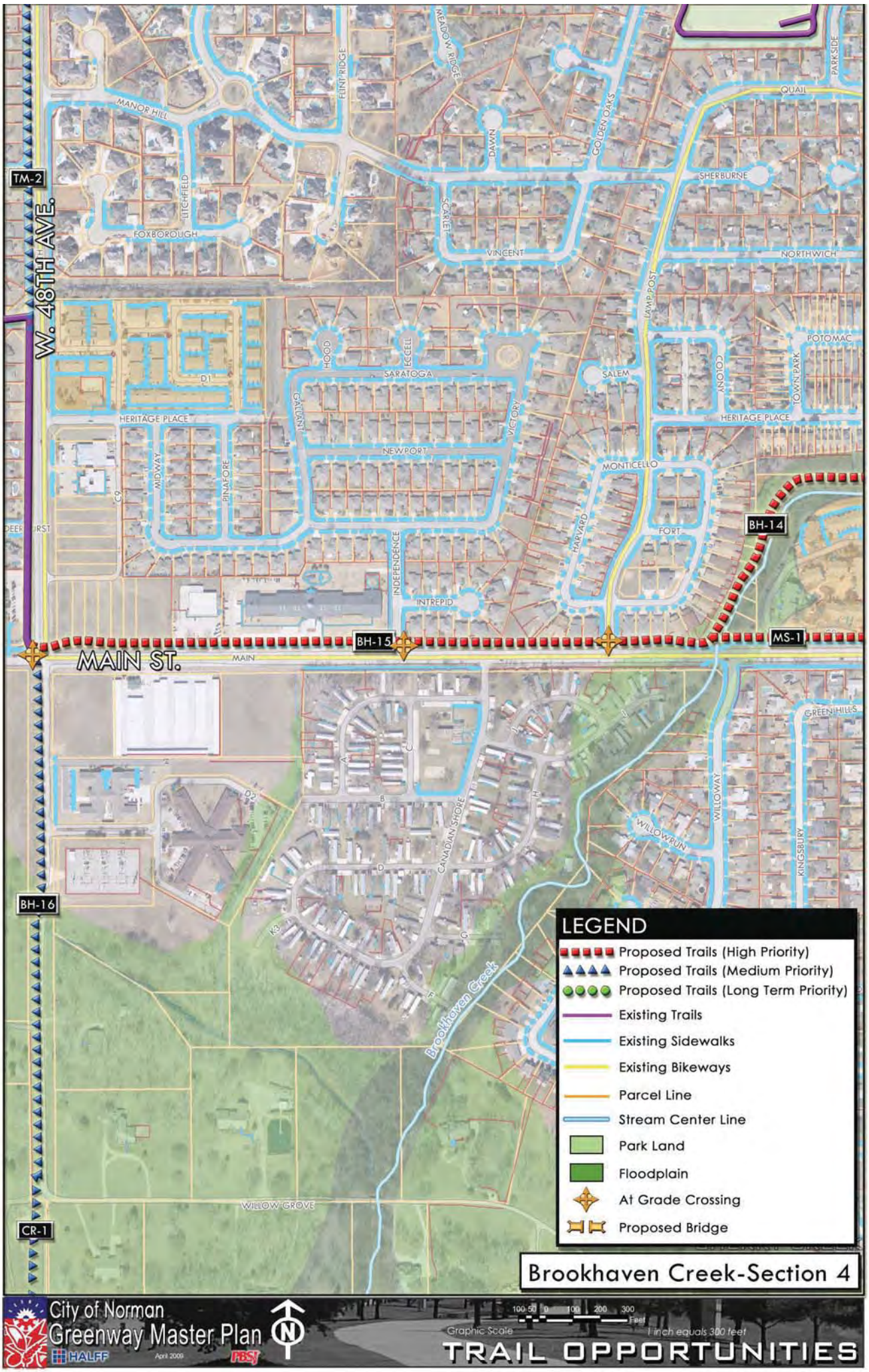
Watershed	Segment	Segment Start	Segment End	Proposed Action	Length (feet)	Potential Cost	Potential Timeframe
Brookhaven	BH-1	Tecumseh	Rock Creek Rd.	Greenway along W 36th Ave., connects to Ruby Grant Park and proposed Rock Creek Bridge	5,400	$1,000,000	2010-2020
Brookhaven	BH-3	Rock Creek Rd.	Crossroads	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


LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
W. 36TH AVE.
BH-1
BART CONNER
BOB BUSH
H.E. BLACK
INTERSTATE
I-35
Proposed Rock Creek Bridge Crossing
RS-1
ROCK CREEK
RS-2
REMINGTON
FIRESIDE
BUCKHORN
BH-2
BH-3
BH-4
Tributary A to Brookhaven Creek
Tributary B to Brookhaven Creek
PENDLETON
PRAIRIE CREEK
SUNFLOWER
GRASSLAND
PATHWAY
OUTPOST
SWAN HOLLOW
STONEYBROOK
IRONHORSE
Brookhaven Creek-Section 1
City of Norman
Greenway Master Plan
HALFF
April 2009
PBSJ
100 50 0 100 200 300
Feet
Graphic Scale
1 inch equals 300 feet
TRAIL OPPORTUNITIES


LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
BH-3
BH-5
BH-6
BH-7
BH-8
BH-9
BH-10
BH-11
W. 36TH AVE.
ROBINSON
BANBURY
ALDERBROOK
HIDDEN HILL
CALAIS
DANFIELD
ABBOTSFORD
GUILFORD
DEVON
BARWICK
PEMBROKE
WINDOVER
BURLINGTON
GLENBROOK
BRYDEN
BELLWOOD
BRISTOL
CORD
TUDOR
COBBLE
BROOKHAVEN
HAVENBROOK
SCHOONER
CUFFSIDE
BISMARC
WINDWARD
CREEK WOOD
COVE HOLLOW
WOODSBORO
GREENWOOD
PHEASANT RUN
Brookhaven Creek
QUAIL HOLLOW
WILLOW ROCK
WOODSTOCK
CROSSROADS
INTERSTATE
RAMBLING OAKS
Brookhaven Creek-Section 2
City of Norman
Greenway Master Plan
HALFF
April 2009
PBSJ
Graphic Scale
100 50 0 100 200 300
Feet
1 inch equals 300 feet
TRAIL OPPORTUNITIES


LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
BH-9
BH-10
BH-11
BH-12
BH-13
BH-14
MS-1
W. 36TH AVE.
36TH ST.
MAIN ST.
SPRING BROOK
LION'S MEMORIAL
COBBLE
HAVENBROOK
BROOKHAVEN
IVES
QUAIL SPRING
BRANCHWOOD
LANDSDOWNE
CEDAR BROOK
BOB WHITE
CHATHAM
BRECKINRIDGE
HEATHERHILL
BROOKHOLLOW
INVERNESS
SILVERWOOD
INNSBROOK
RED OAKS
QUAIL RIDGE
WILLOW BRANCH
KENSINGTON
PINEY OAK
QUAIL
EVERGREEN
HAMPTON
RAMBLING OAKS
BLUESTEM
WOODBINE
SUSSEX
BROOKFORD
WINDBROOK
STONEHAVEN
STAFFORD
NORTHWICH
CEDAR RIDGE
TIMBERWIND
RIVER OAKS
POTOMAC
HERITAGE PLACE
LYNNBROOK
OLDE BROOK
CREEKDALE
BELHAVEN
QUAIL RUN
Brookhaven Creek-Section 3
City of Norman
Greenway Master Plan
HALFF
April 2009
PBSJ
100 50 0 100 200 300
Feet
Graphic Scale
1 inch equals 300 feet
TRAIL OPPORTUNITIES


W. 48TH AVE.
MAIN ST.
MAIN
TM-2
BH-14
BH-15
BH-16
MS-1
CR-1
MANOR HILL
FLINT RIDGE
MEADOW RIDGE
DAWN
GOLDEN OAKS
PARKSIDE
QUAIL
SHERBURNE
NORTHWICH
LAMP POST
POTOMAC
COLONY
TOWN PARK
LITCHFIELD
FOXBOROUGH
SCARLET
VINCENT
HOOD
EGGELL
SARATOGA
SALEM
GALLANT
VICTORY
HERITAGE PLACE
NEWPORT
MONTICELLO
MIDWAY
PINAFORE
HARVARD
FORT
INDEPENDENCE
INTREPID
GREENHILLS
WILLOWAY
WILLOWRUN
KINGSBURY
CANADIAN SHORE
WILLOW GROVE
Brookhaven Creek
LEGEND
Proposed Trails (High Priority)
Proposed Trails (Medium Priority)
Proposed Trails (Long Term Priority)
Existing Trails
Existing Sidewalks
Existing Bikeways
Parcel Line
Stream Center Line
Park Land
Floodplain
At Grade Crossing
Proposed Bridge
Brookhaven Creek-Section 4
City of Norman
Greenway Master Plan
HALFF
April 2009
PBS&J
100 50 0 100 200 300
Feet
Graphic Scale
1 inch equals 300 feet
TRAIL OPPORTUNITIES

MERKLE CREEK

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

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS

Corridor Name: Merkle Creek (MC-1) — Corridor Score**: 4

Corridor Description: From Robinson to Main St. along street corridor;
Location of path to be determined after further study

Selection Criteria	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. For each school or park, 1 pt. for other features up to maximum number of points)		30%	30	16
Schools	1		6	2
Trail-to-Trail	1		6	4
Connection to OU	0		5	0
Connection to Major City Destinations	2		4	2
Connection to Park(s) & Other City Amenities	2		5	4
Major Retail Center	2		2	2
Significant Employer(s)	1		2	2
Ownership Availability		15%	15	15
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) **(or)**			15	15
Other Public or Semi-public Entity Owned, **(or)** along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	11
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	8
Adequate buffering from adjacent residential properties			5	3
Existing Physical Characteristics		20%	20	14
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) **(or)**			10	6
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	10
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	2
Existing Wetlands or other unique natural or urban features			5	3
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		100%	100	76

* Number of elements within 600 ft. radius
** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1

CITY of NORMAN - CORRIDOR SUITABILITY EVALUATION for GREENBELT CORRIDORS

Corridor Name: Merkle Creek (MC-2-3) — Corridor Score**: 4

Corridor Description: From Robinson to Main St. along street corridor;
Location of path to be determined after further study

Selection Criteria	# of Elements* and Description of Elements	Importance	Total Pts. Available	Points
Potential for Increasing Connectivity (2 pts. For each school or park, 1 pt. for other features up to maximum number of points)		30%	30	8
Schools	2		6	2
Trail-to-Trail	0		5	0
Connection to OU	0		5	0
Connection to Major City Destinations	1		4	2
Connection to Park(s) & Other City Amenities	2		5	4
Major Retail Center	0		2	0
Significant Employer(s)	0		2	0
Ownership Availability		15%	15	15
City Owned (1 point for every 7% public ownership of total acreage along the corridor, up to 15 pts. max.) **(or)**			15	15
Other Public or Semi-public Entity Owned, **(or)** along floodplain corridor that cannot reasonably be developed and where access trail easement or permanent dedication to the City of Norman is feasible			10	0
Compatibility with Adjacent Land Uses		15%	15	11
Adequate corridor width for trail (min. 15' width for trail unless special conditions apply)			10	8
Adequate buffering from adjacent residential properties			5	3
Existing Physical Characteristics		20%	20	14
a) Trail corridor is in 100 year floodplain or can provide stormwater system benefits (percentage basis up to max. pts. provided) **(or)**			10	6
b) Along urban corridor where significant aesthetic enhancements can benefit city			10	10
Existing Vegetation/Trees (percentage basis up to max. pts. provided)			5	2
Existing Wetlands or other unique natural or urban features			5	3
Major Barrier to use of this corridor (deduct up to 5 points)			-5	0
Only location for trail is within floodway portion of the corridor (deducts points if selected)			-5	0
Level of Public Support		20%	20	20
Potential for Concern from Current Corridor Ownership (-5 pts)			(-5)	0
Citizen Support for this corridor (from citizen committees, elected officials and documented citizen meetings)			20	20
Total		100%	100	68

* Number of elements within 600 ft. radius
** Score ranges as follows - over 80 = 5, over 60 = 4, over 40 = 3, over 20 =2, 20 or less = 1