City of Broken Arrow

Drainage Advisory Committee



PROJECT REPORT

DATE:	January 16, 2025/April 24, 2025
NAME	Patrick Wilson, City of Broken Arrow
ADDRESS / LOCATION	Covington Creek Tributary, City of Broken Arrow
WATERSHED	Adams Creek
ESTIMATE	\$500,000
CASE NO.	25-005

DESCRIPTION

Deer Creek, an Unnamed Tributary to Covington Creek, and Covington Creek are experiencing increased erosion due to high velocity. The higher velocities create an erosive force that breakdown creek embankments, transports suspended soil particles and deposits sediments along these drainage ways. The sediments build up and trap floating debris, which blocks and impedes flow in the creek. In addition, the increased velocities due to the blockages under cut and erode away embankment material that supports vegetation as well as public and private infrastructure along the creek banks. All 3 creeks are located on private property owned by an HOA or individual homeowners. See attached report dated July 2020.

The Drainage Advisory Committee recommended on 7/27/20 and Council approved on 8/18/20 the expenditure of \$35,000.00 for design and construction plans to mitigate the creeks mentioned above.

The Drainage Advisory Committee recommended on 2/28/22 and Council approved on 3/21/22 the expenditure of \$30,000.00 for applying for an Individual 404 Permit from the United States Army Corps of Engineers and to finalize the construction documents.

The USACE Individual Permit has been processed and was executed by the City of Broken Arrow on April 17, 2025.

A Floodplain Development Permit still needs to be submitted to the City of Broken Arrow.

The conceptual construction cost estimate was approximately \$480.000.00 (2020 dollars). After the design was complete the construction cost estimate increased to about \$1,137,000.00 (2022 dollars). The current construction cost estimate is \$1,200,000.

The HOA has requested a partnership with the City of Broken Arrow to share the construction costs.

Rev. 1 02-05-21

BENEFIT

Mitigate the erosion to re-establish banks to protect an exposed City storm sewer headwall and a utility pole at the edge of the bank while reducing the flooding impacts.

RECOMMENDATION

Approve the request for expenditure of \$500,000 to construct erosion control and channel stabilization of Covington Creek Tributary.

COMPLETED BY: Patrick Wilson DATE: 1/16/25 & 4/24/25

Rev. 1 02-05-21

City of Broken Arrow

Drainage Advisory Committee



APPLICATION

DATE:	1-16-2025
OWNER NAME:	Forest Ridge Homeowner's Association
PHONE NUMBER:	
EMAIL ADDRESS:	
OWNER MAILING ADDRESS:	404 N Forest Ridge Blvd, Broken Arrow, OK 74014
ADDRESS OF PROPERTY WITH DRAINAGE PROBLEM:	Numerous properties in Deer Creek, Stanford Landing, Wyckford, Covington Estates (West) and Coving Estates (East) subdivision. See Map
LOCATION OF DRAINAGE ISSUE ON PROPERTY:	In the man-made channel along Covington Creek Tributary

DESCRIPTION OF PROBLEM: (*PHOTOS SHOULD ACCOMPANY APPLICATION)

Copied from DAC application presented 7/27/2020.

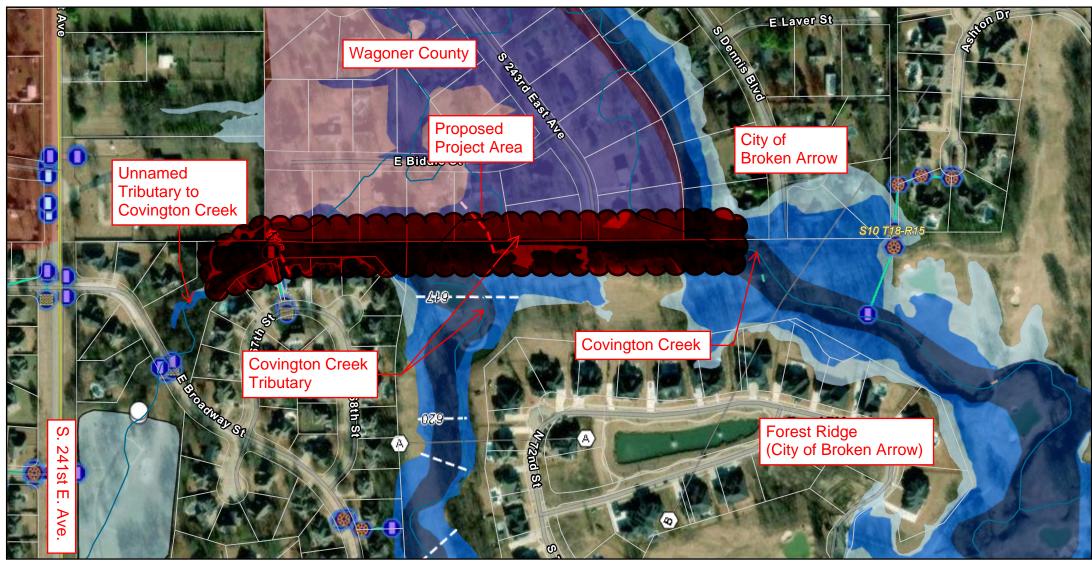
The man-made channel between the Stanford Landing Subdivision, Wyckford Subdivision and Covington Estates Subdivisions has eroded over time to the point that pedestrian trails, stormwater infrastructure and trees are in danger of falling into the channel and, thereby, creating significant blockages to the flow. This is very concerning because just a small amount of blockage can have a tremendous impact on whether or not properties flood during routine storm events. It is important for the channel to be maintained and kept free of debris and sedimentation deposits as much as practicable. The vast majority to almost the entirety of the channel is located in a drainage easement in the Covington Estates subdivisions. One of the subdivisions is under the jurisdiction of Wagoner County. The Forest Ridge Home Owner's Association and the residents of Covington Estates have agreed, in concept, to work with the City of Broken Arrow in an collaborative effort to mitigate the effects of erosion in this channel in order to better protect all residents in this vicinity. The Forest Ridge Home Owner's Association has agreed, in concept to this point, to help fund the construction of certain improvements. The Forest Ridge Homeowner's Association and the individual residents in Covington Estates (West) are seeking the City of Broken Arrow's assistance under the 2018 General Obligation Bond Program, Proposition 6 funds.

Signature:

RETURN TO STORMWATER DIVISION MANAGER'S OFFICE, PO BOX 610 Broken Arrow, OK 74013

Rev. 1 05-08-2020

Covington Creek Tributary





Parcels Sections (PLSS) Blue Line Streams (ODOT) Address Points Contours_1ft_Bridge

Culvert

- Unknown Pipe Culvert

Detention Pond

Linear Drain — Unknown

Box Culvert

— Arch Culvert

Bridge Culvert

Pipe Arch Culvert

Trench Drain Slotted Drain

Open Channel

- Unknown Aquaduct Channel Spillway Channel

 Natural Channel Ditch Channel

Roadside Gutter

Pipe

— Unknown

Gravity

Force Main Perforated

BMP Inlet

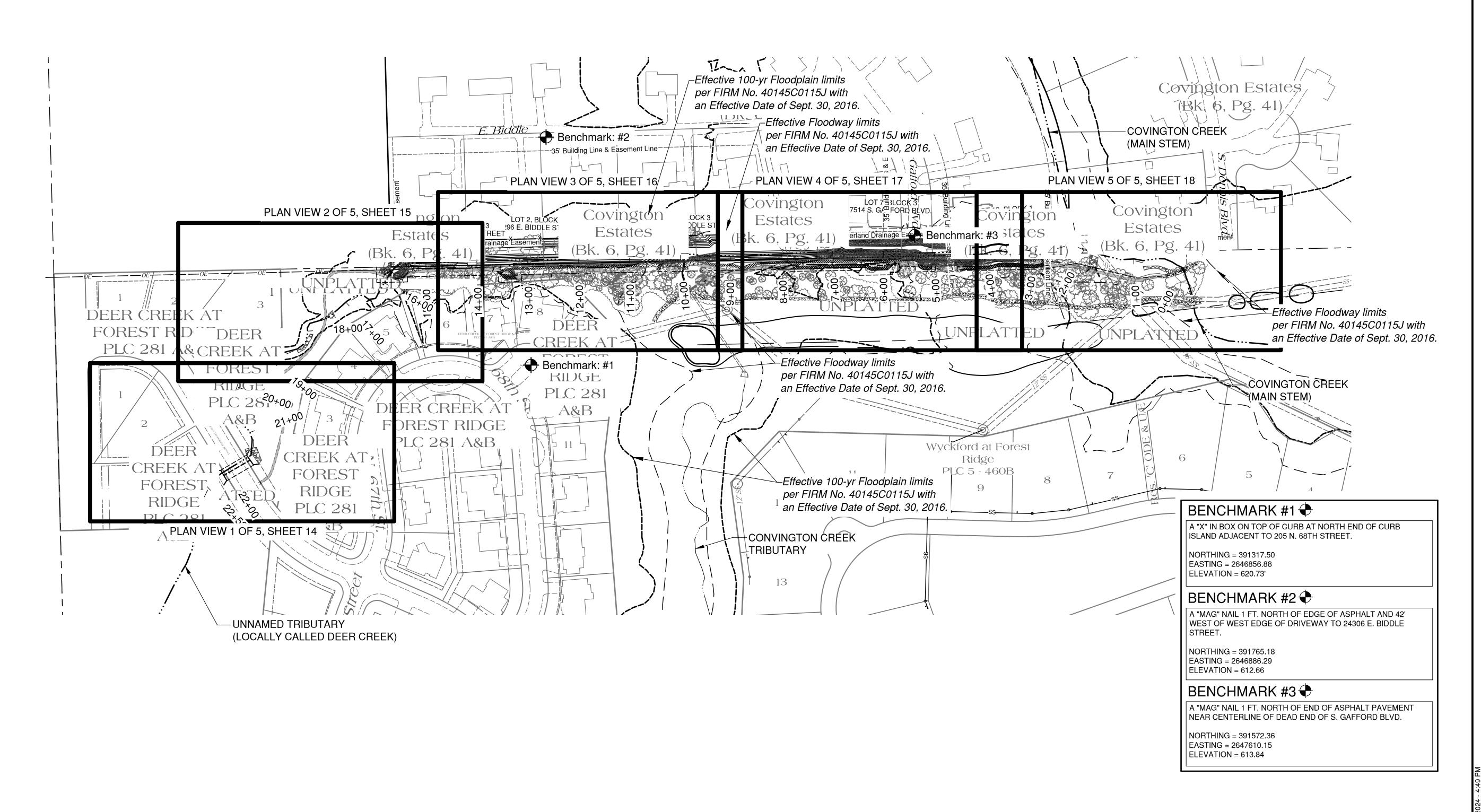
Unknown

This map's utility information is for general purposes only. The City of Broken Arrow makes no warranties regarding its accuracy, completeness, or reliability. Use of this information is at risk.

0 0.04 0.09 0.18 mi

City of Tulsa, US Census Bureau, INCOG, & unknown, Esri Community Maps Contributors, City of Tulsa, Missouri Dept. of Conservation, Missouri DNR, Texas Parks & Wildlife, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census

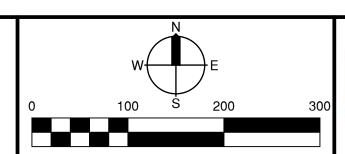






THIS DOCUMENT IS PRELIMINARY IN NATURE AND IS NOT A FINAL, SIGNED AND SEALED DOCUMENT.

DATE	REVISIONS	CITY OF
		BROKENARROW
		Where opportunity lives



LANS & ESTIMA	TES PREPARED BY:
t o n	Tulsa Engineering & Planning Associates
	9810 E 42nd St., Suite 100 Tulsa, Oklahoma 74146
	Phone: 918-252-9621 Fax: 918-340-5999
	Certificate of Authorization No. 531 Renewal Date June 30, 202

	SCALE:	DESIGN	DATE
BANK STABILIZATION PLAN VIEW KEY MAP	HORZ. NA	RKF	8/20/2021
DANK STADILIZATION I LAN VILW KET MAI	VERT. NA	REVIEWED	DATE
	DRAWING NAME:	SAS	8/20/2021
	19-106 Overall Plan	SHEET	13
COVINGTON CREEK & TRIBUTARIES BANK STABILIZATION	View.dwg	OF	21

DRAFTED SAS

APPROVED

RKF

8/20/2021

DATE

8/20/2021

PROJECT NO. 19-106

CITY OF BROKEN ARROW

COVINGTON ESTATES CHANNEL DRAINAGE REPORT

JULY 2020

PREPARED FOR
THE DRAINAGE ADVISORY COMMITTEE

EXECUTIVE SUMMARY

In 2014, the Forest Ridge Homeowners Association (FRHOA) in connection with the Robson Companies, Inc. commenced with the construction of a segmental retaining structure within a manmade "cut-off" channel in order to prevent and mitigate the effects and impacts from continued erosion along the sides of the channel that is adjacent to the Forest Ridge golf course, which is now Wyckford at Forest Ridge subdivision. Although the initial construction of the retaining structure was located within a platted public drainage easement, it was later deemed improper by the Wagoner County District Attorney's office due to the fact that the FRHOA did not have the legal and proper authority to construct any improvements within the drainage easement. The construction effort has ceased and has not reconvened since late 2014.

Although this matter is considered a private property owner dispute, it has intertwined and involved officials from both Wagoner County and the City of Broken Arrow, as well as private professional engineering consultants. In 2018, after several attempts to resolve the conflict between the two (2) disputing parties, the FRHOA filed a lawsuit against the seven (7) adjacent property owners located in the Covington Estates (West) subdivision immediately north of the Forest Ridge golf course, now Wyckford at Forest Ridge subdivision. The lawsuit essentially claims that these seven (7) individuals have not provided the essential care and maintenance necessary to the man-made "cut-off" channel running across their individual properties, thereby allowing erosion to occur and damaging the adjacent FRHOA property. In turn, the individual property owners in Covington Estates have essentially stated, but not yet filed to the City's knowledge a counter lawsuit that the developers of the Forest Ridge subdivisions have increased stormwater flow onto their property that has adversely impacted and damaged their properties and property values.

During the 2018 General Obligation promotion meetings, representatives of the FRHOA questioned City representatives on whether or not Proposition No. 6 – Drainage funds could be utilized to finance an improvement to this "cut-off" channel. After some internal discussions, the City stated that there was a possibility that these funds might be available for such a project. Obviously, much more detail is required before a definitive answer could be provided. Regardless, any project that might be developed for Council's consideration absolutely must provide a direct and definable benefit to the residents of Broken Arrow.

Recently, after the passage of the 2018 General Obligation Bond and the FRHOA's filing of the lawsuit, both the FRHOA and the Covington Estates residents have reached out to the City of Broken Arrow and requested assistance in efforts to improve the drainage courses such that the public, specifically the residents of Broken Arrow experience a benefit. Staff believes that there may be an opportunity to address the continual and routine flooding as well as erosion related

issues immediately in this specific area. A more global and encompassing solution could produce a better and positive overall impact to all surrounding residents in this vicinity.

It is crucial to note that since some of the property in question lies outside of the city's jurisdiction and could be problematic regarding potential expenditures, the FRHOA has offered to pay some costs specifically associated with those areas located along the stretch of the channel where it abuts city and county jurisdiction.

Lastly, it should be noted that Staff has not developed a project at this time, but instead desires to seek the Council's input in this highly volatile matter before any further engagement commences. The following attached report provides significant details regarding this matter.

DETAILED REPORT

Introduction. Associated with the preparation and then subsequent passage of the 2018 General Obligation Bond Program, a representative of the Forest Ridge Homeowner's Association (FRHOA) asked if the Proposition 6: Drainage funds could be used for a specific project in the Forest Ridge community. The area in question is the man-made creek channelization section that runs from west to east along the northern border of the Deer Creek at Forest Ridge subdivision and a portion of the former Forest Ridge Golf Course area, now Wyckford at Forest Ridge subdivision, coupled with the southern border of the Covington Estates subdivision. The proposed project in question is an embankment stabilization effort and a stormwater conveyance improvement effort along this specific section of the drainage way.

Background. The Covington Creek watershed has a significant history of being a challenging drainage basin with regards to flooding and erosion effects since long before the Robson Companies began to develop the Forest Ridge planned community. In fact, the Oklahoma Department of Transportation (ODOT) indicates that the high water mark prior to the widening of the Kenosha Street (East 71st Street South) in the early 1980s is still above the current-day 100-year (1% chance) base flood elevation (BFE). This fact is evidenced in the Oklahoma Department of Transportation construction plans for Kenosha Street widening dated 1980.

The Covington Creek watershed lies within the larger Adams Creek watershed, which drains to the Verdigris River. The Covington Creek drainage basin consists of 5.92 square miles (3,789 acres). It begins just south of State of Oklahoma Highway 51 and meanders in a northerly manner 6.3 miles to its confluence with Adams Creek approximately one-half mile north of Kenosha Street and one-quarter mile east of East 65th Street South (Oneta Road). Please refer to Exhibit A for further clarity.

As Wagoner County began to develop and new residential, commercial and industrial subdivisions were platted, stormwater runoff increased due to the increased impervious areas in this basin until government regulations required on-site detention to offset this increased runoff. In efforts to address this increase in stormwater runoff in this area, as well as in their respective jurisdictions as a whole, local and county governments enacted subdivision regulations and stormwater management ordinances to counter-act the effects of increased stormwater runoff. The City of Broken Arrow was first to establish an ordinance regarding stormwater management in 1977 and followed up with a much more restrictive stormwater management ordinance adopted on April 25, 2002. Around the late 1980s to the early 1990s, Wagoner County likewise adopted subdivision regulations that required restrictive stormwater management approaches. On April 16, 2012, Wagoner County adopted a Flood Damage Prevention ordinance that provided much more restrictive criteria than prior approaches for development.

Development Area. Wagoner County records indicate that on March 6, 1974, the developers of the original Allison Estates Second subdivision filed a plat with the Wagoner County Clerk. On May 8, 1975, the owners filed a replat of the Allison Estates subdivision in Wagoner County and changed the name to Covington Estates subdivision. Both the original plat and the subsequent replat of this addition show a 30-foot to 40-foot platted drainage easement along the southern border of the subdivision, as well as a double 40-foot for a total of an 80-foot platted drainage easement running diagonally through the center of the subdivision. In April of 1989, the City of Broken Arrow prepared sanitary sewer plans for construction in order to install a new lift station and collection system as a part of an assessment district to incorporate the eastern half of Covington Estates subdivision into the city limits of Broken Arrow. The division line was the diagonal channel that ran through the middle of the Covington Estates subdivision. Please refer to Exhibit B for details of the drainage easement in question.

In 1986, shortly after the Covington Estates subdivision was re-platted, the Robson Companies began to develop the Forest Ridge subdivisions, a master planned, resort style, community in this same watershed. This community includes numerous subdivisions positioned around an athletic club and golf course. Currently, in July 2020, there are 15 individual subdivisions located on nearly 1,100 acres plus one (1) additional subdivision in the early phases of construction. These subdivisions are largely located south of Kenosha Street (East 71st Street South) and extend about one-half mile south of Houston Street (East 81st Street South) and are generally positioned along four (4) individual creeks: Covington Creek, an unnamed Covington Creek tributary, Timber Creek and Deer Creek. The majority of these subdivisions are located east of 65th Street (South 241st East Avenue also known as Oneta Road) and west of 79th Street (South 257th East Avenue also known as Midway Road).

Most crucial to these discussions are those subdivisions that drain directly to Covington Creek on the eastern side of the Forest Ridge community, the unnamed tributary in the center of the development that drains into Covington Creek and, lastly, Deer Creek along the western boundary of the community that drains into the unnamed tributary. Please refer to Exhibit C for clarity of the proposed project area.

Covington Estates Subdivision History. In 1974, when the Sandlane Investment Company platted the original Allison Estates Second subdivision, which later was re-platted as the Covington Estates subdivision, and began construction on the public improvements, the developer constructed man-made channels that essentially redirected the stormwater runoff collected in all three (3) creeks (Covington Creek, the unnamed tributary of Covington Creek and Deer Creek) and rerouted the stormwater through the subdivision. The developer constructed two (2) "cut-off" channels to reroute the runoff to a single main channel that drained through the center of the Covington Estates subdivision.

One "cut-off" channel runs eastward about 1,400 feet from Deer Creek on the far western side of the subdivision due east to the point at which the main channel was constructed. In addition, this particular channel intercepts the unnamed tributary of Covington Creek about midway between Deer Creek and the main channel. The other "cut-off" channel runs westward about 400 feet east of the main channel and collects Covington Creek near the midpoint of the channel. Both channels reroute the upstream stormwater runoff to the main channel.

At this juncture, the developer essentially rerouted all three (3) creeks and combined them in one (1) main man-made channel that divided the subdivision into two (2) halves. One-half (1/2) on the western side of the channel and one-half (1/2) on the eastern side of the channel. This main channel runs generally in a northwest direction through the subdivision.

These three (3) different "cut-off" channel segments consist of varying drainage easement widths along the southern side of the Covington Estates' properties. The western "cut-off" channel was placed within a 40-foot wide drainage easement, except for one section that was placed within a 30-foot wide drainage easement. The eastern "cut-off" channel was placed within a 20-foot wide drainage easement. The main channel was placed within an 80-foot wide drainage easement.

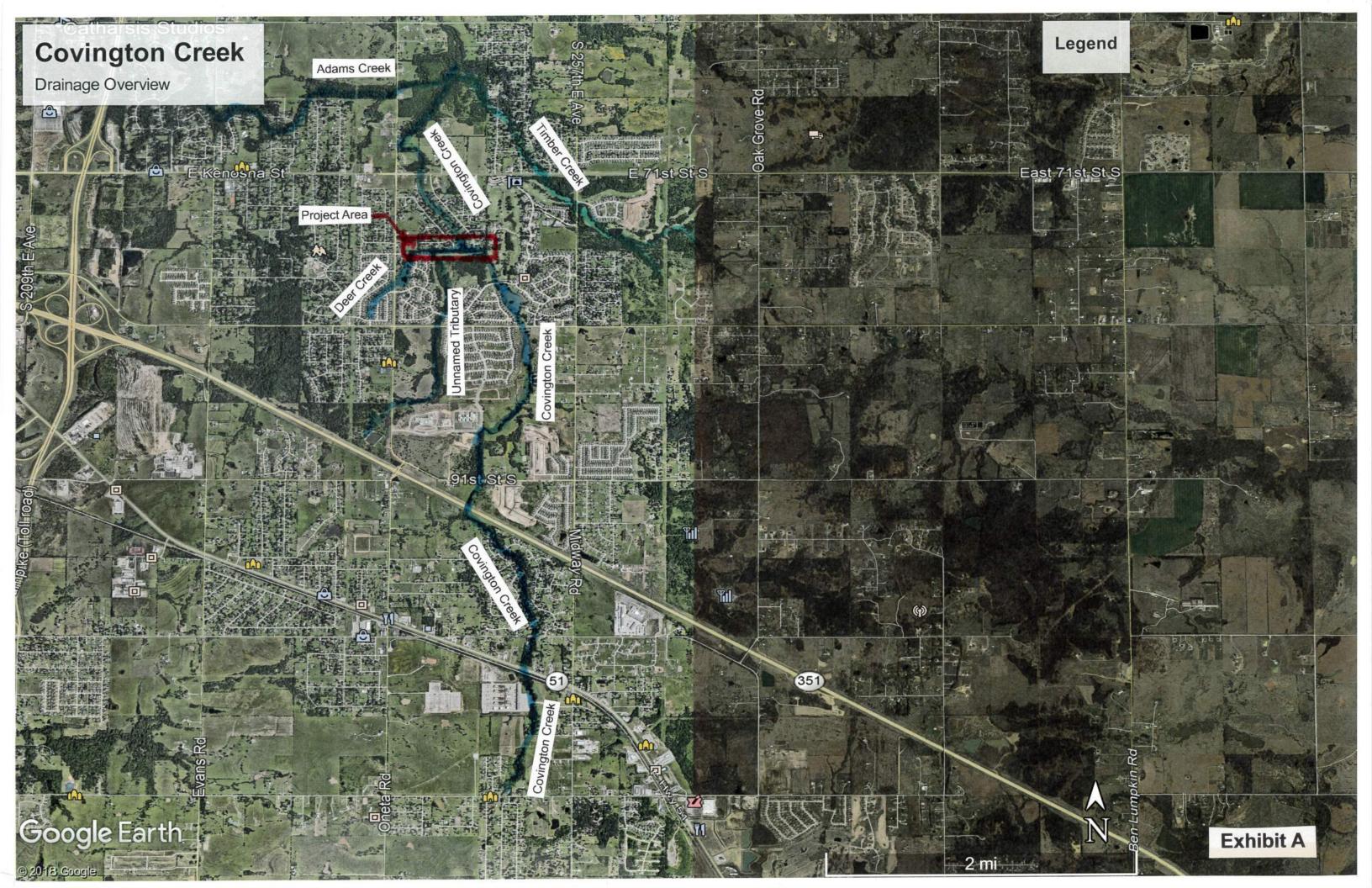
Forest Ridge Subdivision History. In the late 1980s, the Robson Companies, Inc. constructed the Forest Ridge golf course. A portion of the golf course ran alongside the Covington Estates' man-made "cut-off" channels along the southern border of the subdivision. Over time, Forest Ridge developed residential subdivisions around the golf course and the Covington Estates subdivision. Some subdivisions were developed along Covington Creek main stem. Others were developed west of the main stem along an unnamed tributary of Covington Creek and along Deer Creek, while other subdivisions were developed to the north and east of the main stem along Timber Creek. The main focus of this report are those subdivisions developed along Deer Creek and along the unnamed tributary to the west of the confluence of Covington Creek.

A few of the more pertinent subdivisions regarding this particular issue and that drain directly into this man-made channel include the following: Deer Creek at Forest Ridge, Deer Creek II at Forest Ridge, Deer Creek III at Forest Ridge, Stanford's Landing I at Forest Ridge, Stanford's Landing III at Forest Ridge, The Highlands I at Forest Ridge, The Highlands III at Forest Ridge, The Highlands IV at Forest Ridge, and now Wyckford at Forest Ridge. Essentially, this equates to the southeast quarter of Section 9, the southwest quarter of Section 10, the northwest quarter of Section 15, and the northeast quarter of Section 16 all in Township 18 North and Range 15 East, based upon the Indian Meridian. The drainage area is approximately one square mile. All the subdivisions identified above are located within the city limits of Broken Arrow. Please refer to Table 1 for identification of all pertinent subdivisions that affect these drainage ways.

Drainage Issue. Historically, the Covington Estates subdivision west and to a lesser extent to the east of the main channel has experienced significant flooding. The flooding largely affects property owners that reside outside of the jurisdiction of the city; however, several property owners that reside within the city limits are affected as well.

Not only does this area experience repeat flooding, but the energy within routine stormwater runoff flows create erosive forces that breakdown creek embankments, transports suspended soil particles and deposits sediments along these drainage ways. These sediments build up and trap floating debris, which blocks and impedes flow in the creek. In addition, the increased velocities due to the blockages under cut and erode away embankment material that supports vegetation as well as public and private stormwater infrastructure along the creek banks.

Potential Mitigation Efforts. Both the FRHOA and the Covington Estates' affected property owners have agreed in concept that if the City of Broken Arrow could participate in a more global solution that benefited all parties including FRHOA, the Covington Estates residents and the residents of Broken Arrow in the project vicinity, then the parties in conflict would be willing to work together to resolve the matter.



K.N COX B ASSOCIATES SANDLANE INVESTMENT COMPANY 3314 East 5ist Street Tulsa, Oktohoma 74135 TEL + 742 - 2417 324 Main Mall Suite 200 Tulsa, Oklahama 74103 TEL: 583-7588 NE Comer NW./4 SOUTH T-18-N, R 15-F Section Line STREET EAST \$ 89"49" E - 1317. 25" 7/st. Lil OUT OUT (N/2 , NE/4 , NW/4) \supset S 89*49'19" E - 1104.53' S89°49'55"E -1316.55" 22 76.79 10 28 SEAST SISMORE STREET W E. SISMORE ST. 25 Duncing A Easement Line lil 188.08 Lil 0 4 50 1 U) 17 < TLI N89"50'33"W -658.48 JOHNSON STREET ... EAST 35.78 T ALLISON EST. IT
NOW Covington
Estates D. Z , O 2 13 : E. LAVER " 150 96 108.20 EAST LAVER STREET (W/2 , SW/4, NW/4) OUT 1 22 23 20 237:17 E. STREET BIDDLE BIDDLE EAST BIDDLE \$7. : ST. "Cut-Off" Channel "Cut-Off" Channel N 89° 51' 45" W - 1970.62" SW Corner NW/4

4

tent to the Burthmast corner of said 55.1. Malf (6/2) of the Morthmast Quarter (NE/N) of the Borthmast (0/2) of the Burthmast (0/2) of th

WHISTAS. The said OWNER has caused the above described property to be surveyed, platted and stuked in lots, blacks and strents in conformity with the accompanying alak which it hereby adopts as the plat of the

ANT, the undersigned OMER benefix dedicates for the public use the afrecis shown on said glat, and decirate for public use the caments as shown and designated on the accompanying plat for the several surprises of constructing, maintaining, operating, repairing, emoving and replacing any and all public utilities, including storm and santary strings and equipment for each such facility, including the poles. It is not an advertise of the second strings and equipment for each such facility, including the poles. On the second second strings and equipment for each such facility, including the poles. On the second sec

AMD, the undersigned OMMER, for the purpose of providing an orderly development of the entire tract, and for the durther purpose of insuring adequate restrictions and covenants, and for the matual benefit of the undersigned OMMER, its successors and assigns, and the adjacent owners abouting the tract, their successors and assigns, and the adjacent owners abouting the tract, their successors and assigns, do become proposed to the provided of the provided and the adjacent owners and the successors and assigns, do become provided as a successor and assigns and the adjacent owners and the successors and assigns and the adjacent owners are successful as a successful assigns and the adjacent owners are successful as a successful assignment of the actual provided as a successful as a successful

PROTECTIVE CONFHARTS AND RESTRICTIONS

Ine supply of electric and telephone service may be located underground in the easement ways reserved for general ulility services, shown on the attached plat. Service protectals and transformers, as sorfers of supply at secondary voltages may also be located in said mannersh ways. Underground service cabing to all house; which may be located on all lots in said addition may run from the mearest service pedental or transforcer to the point of usage detur-since by the location and construction of such boses as may be located upon said lots provided that upon the installation of such service rable to a particular house, the supplier of electric service shall theraffith be described. The supplier of electric service shall theraffith be described to a five foot strip extending 0.2.5 feet on the side of such service cabil, artending from the service pedental or transformer to the service of the service cabing artending from the service pedental or transformer to the service of

The supplier of electric and telephone service service, through its proper agents and employees, shall at all limes have right of access to all such easement ways shown on said plat, or provided for in this Deed of Dedication for the purpose of installing, maintaining, removing or replacing any portion of said underground electric facilities so installied by it.

The owner of each lot shall be responsible for the protection of the underground facilities located on his

The owner of sech is all the second of grade or any construction activity which may interfere with property and plant in all the second of grade or any construction activity which may interfere with the second of the second of

2. Overhead pole less for the supply of electric and tolephone service may be located along the easements as required. Street light poles standards may be served by underground cubic and elsewhere throughout said Addition all supply lines may be located underground, in the essement ways reserved for general utility surposes and streets, shown on the attached plat.

All plans and specifications must be submitted to the doveloper or his duly authorized representative for written approval prior to start of construction. All permanent structures must be now construction. We register a new youngly used shall be moved on to any bones ite in this festidential development.

4. No residence previously uses shall be known and described as single family residential homesites. Mo struct ture shall be eracted, altered, placed or permitted to remain on any homesite which exceeds two stories in highl, and all residences must have a private garge not less than two cars attached to the residence. Any detached structures to be built on the homesite such as storage building, covered entertainment areas etc. shall conform to the basic of the duelling thereon, and the plans for such structure must be superitted to the developer for approval prior to start of construction, Carports, in addition to a two-car garges.

6. The exterior of all structures erected on any homesite shall be constructed of a minimum of 65% stone or

brick.

No noxious or offensive trade or activity shall be carried on upon any homesite nor shall anything be done thereoe that may be or may become an amnoyance or a nuisance to the neighborhood.

No namesis, livestock, or poulty of any kind shall be raised, brade or kept on any homesite, except dogs.

cats, or other household gets may be kept provided that they are not kept, brod, or maintained for any convertial purposa.

No sign of any kind shall be displayed to the public view on any lot except one professional sign of not

or rent, or signs, used by a builder to advertise the property during the construction and sales period.

O. No trailer, beanment, bent, shack, garage, barn or other orbibilitying type structures shall be moved onto
any homesite in this residential development. No temporary structures will be permitted.

start of construction and then the construction shall be completed within 9 months. All homesites shall be maintained in a neat and orderly condition at all times.

No fences of any king shall be placed beyond the front building line of the residence. No fencing shall

13. All entrances from streets shall have drain title, size approved by developer or County Commissioner of Magoner County.
14. All industrial Super systems to be constructed according to County and State Health Department require-

14. All individual sever systems to be constructed according to County and State Health Department requirements.
15. There will be no less than 1500 square foot of liveable floor area in the residence, exclusive of garage.

porch and patio areas.

16. No building shall be crected mearer to the front property line than the building line shown on the plat.

17. Prior to the construction of any residence, a drain tile of the proper size shall be installed in the roadway sitch at the drive location.

MIEST: The same of the bank

WHOMO G. FELDMAN. Secretary

Before me, the undersigned, a Motary Public in and for said County and State, on this 7 day of identical person who subscribed the name of the maker thereof to the foregoing instrument and as its President acknowledged to de that he executed the same as his free and voluntary act and deed and such Corporation for the uses and purposes therein set forth.

MOTARY PUBLIC .

My Commission Expires: 1 1 1 1 1 7 1

CERTIFICATE OF SURVEY

K. of COX & sessing Section 1. Se

STATE OF OKLAHOMA] SS.

Before me, the endersigned, a Motory Public in and for said County and State, on this 30 St. day of the said State, and the said State, and the said State, and the said State, and the said State of the said State, and the said State of the said S

Mary to and some the

My Commission Expires: Suptamber 12,1994

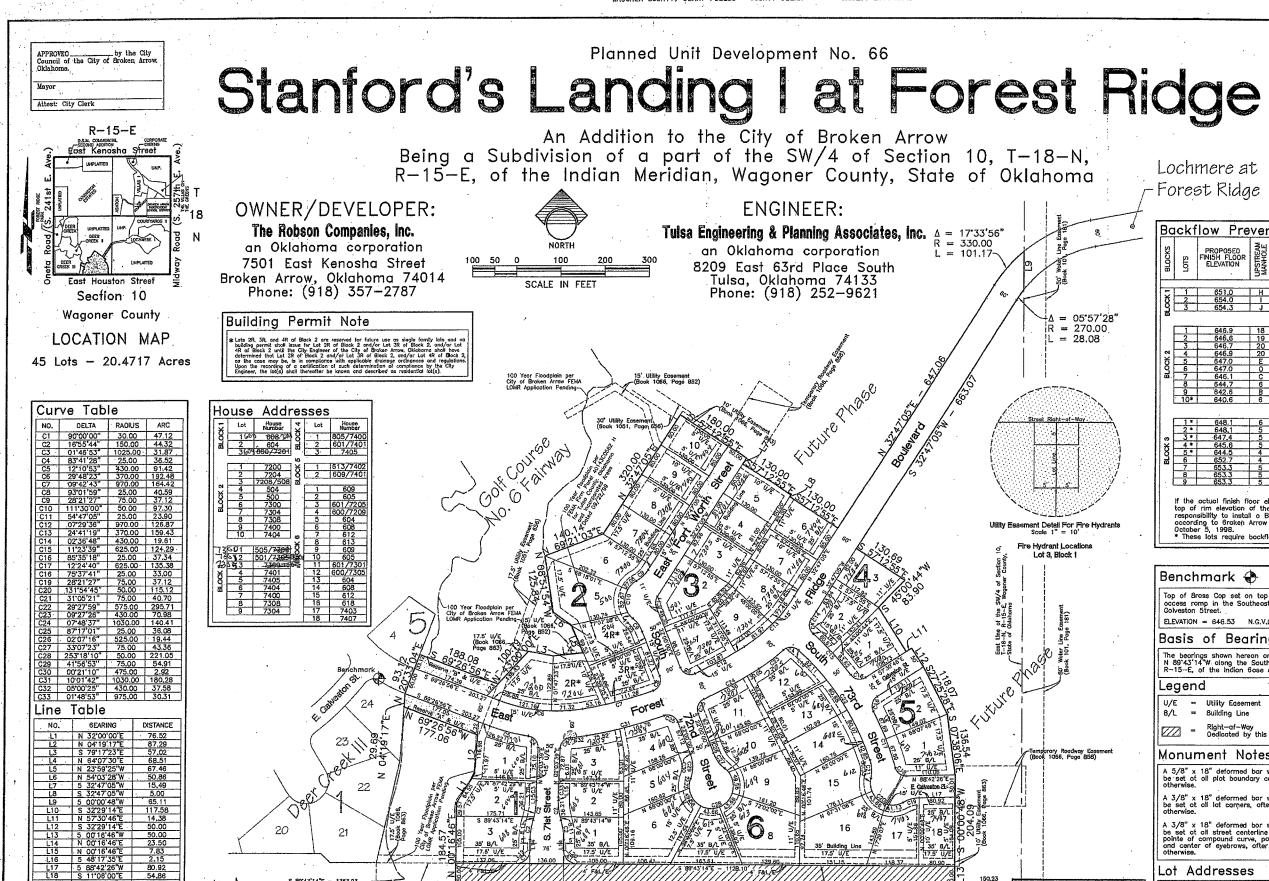
Costify that, The Tayer we wash on the setone description. 3.6.194 Exhibit B

Was my Cheerty Grasum



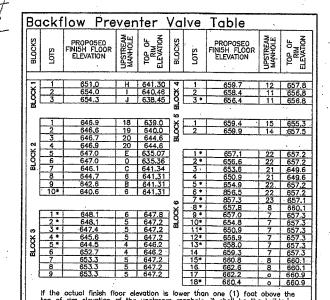
Table 1

Forest Rdige Developments							
Subdivision Name	S-T-R	PUD No	Date	Recordation No.			
Allison Estates Second	10-18-15	NA	3/6/1974	Bk 6 Pg 29			
Covington Estates replat of Allison Estates Second	10-18-15	NA	5/8/1975	Bk 6 Pg 41			
Deer Creek at Forest Ridge	10-18-15	66	11/7/1990				
Deer Creek II at Forest Ridge	10-18-15	66	11/9/1992				
Deer Creek III at Forest Ridge	10-18-15	66	11/9/1992				
Stanford's Landing I at Forest Ridge	10-18-15	66	12/7/1999	199916243			
Stanford's Landing II at Forest Ridge	10-18-15	66 & 66B	6/15/2001	2001 7771			
Stanford's Landing III at Forest Ridge	10-18-15	66 & 66B	4/4/2003	2003 5436			
Highlands I at Forest Ridge	15-18-15		1/13/2003	2003 632			
Highlands II at Forest Ridge	15-18-15		8/16/2004	2004 12676			
Highlands III at Forest Ridge	15-18-15		7/1/2008	2008 9498			
Highlands IV at Forest Ridge	15-18-15		12/6/2011	2011 13532			



-Forest Ridae

Lochmere at



Benchmark 🕀 Top of Bross Cop set on top af curb approximately 18 feet east of handicop access ramp in the Southeast Quadrant of Forest Ridge Boulevord and East Golveston Street. ELEVATION = 646.53 N.G.V.O. 1929 Basis of Bearings The bearings shown hereon are based on on assumed bearing of N 89*43*14*W along the South line of the SW/4 of Section 10, T-18-N, R-15-E, of the Indian 6ase and Meridian, Wogener County, State of Okic

Monument Notes

Lot Addresses

Stanford's Landing I at Forest Ridge

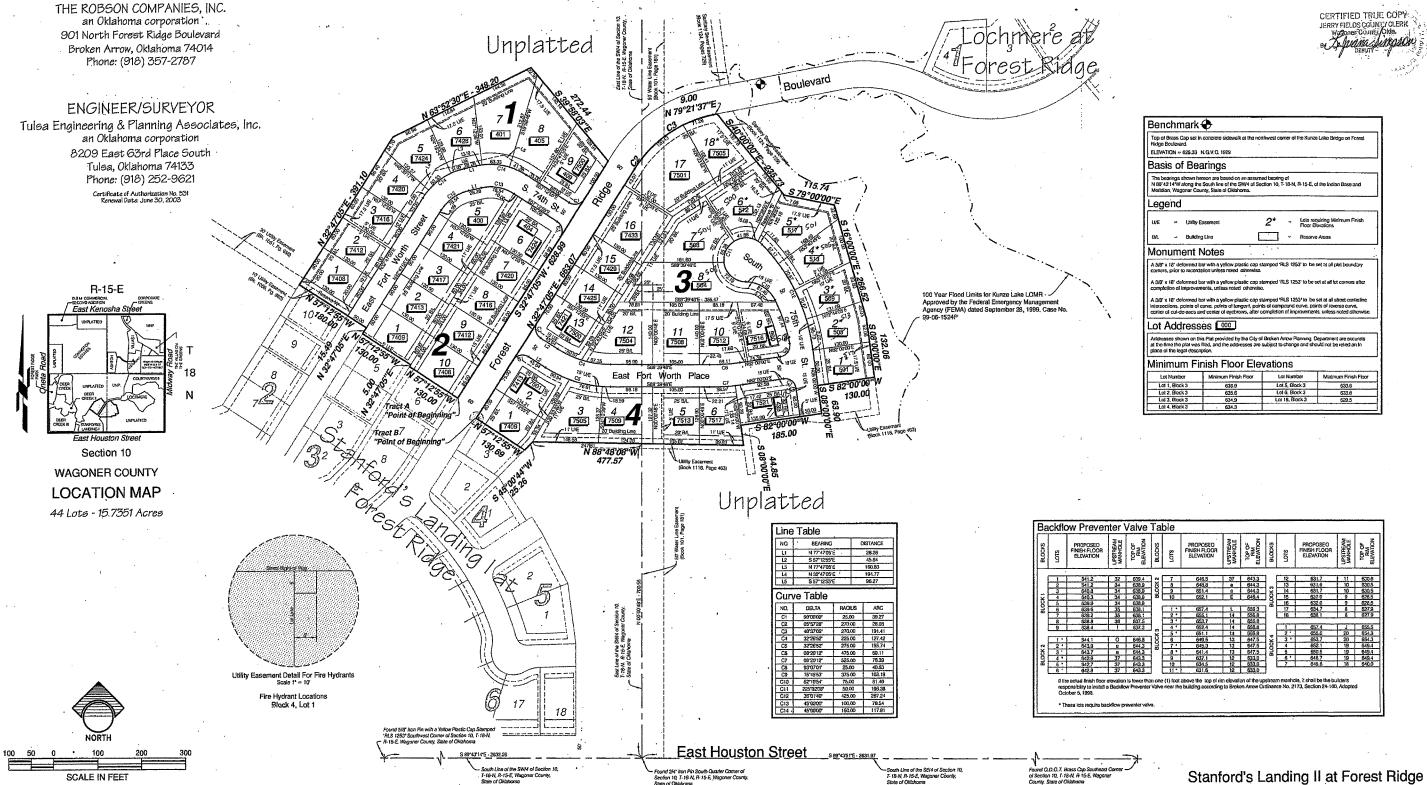
APPROVED 12-4-01 by the City

OWNER/DEVELOPER

Planned Unit Development No. 66 & 66B

Stanford's Landing II at Forest Ridge

An Addition to the City of Broken Arrow Being a Subdivision of a part of the S/2 of Section 10, T-18-N, R-15-E, of the Indian Meridian, Wagoner County, State of Oklahoma



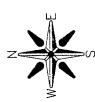
FILE DATE: 04/04/2003 FILE TIME: 02:43
WAGGNER COUNTY, JERRY FIELDS - COUNTY CLERK BOOK: PLC4 PAGE: 415 RECE#: 2003 5436 *** I, the undersigned, the duty qualified and eating count, Treasurer, of Wagoner County, Wagoner, Cirlahoma, hereby certify that according to the 2002 tax rolls the tax LOCATION MAP Planned Unit Development No. 66 & 66B WAGONER COUNTY Stanford's Landing III at Forest Ridge R-15-E An Addition to the City of Broken Arrow being a Subdivision of a part of the S/2 of Section 10, T-18-N, R-15-E, of the Indian Meridian, Wagoner County, State of Oklahoma Curve Table NO. DELTA RADIUS Owner / Developer Engineer / Surveyor The Robson Companies, Inc. Tulsa Engineering & Planning Associates, Inc. an Oklahoma corporation 901 North Forest Ridge Boulevard Broken Arrow, OK 74014 an Oklahoma corporation 8209 East 63rd Place South 0 918.357.2787 918.252.9621 SCALE: 1" = 60 FEET CERTIFICATE OF AUTHORIZATION NO. 531 RENEWAL DATE: JUNE 30, 2003 Section 10 3 Line Table 45 Lots - 16.6864 Acres East Fort Worth Place | NUMBER | DIRECTION | DISTANCE | Li | N 08°00'00'W | 10.98 | L2 | N 72°59'30'W | 15.11 Stanfords Landing II 21 601 /at/Forest Ridge **Backflow Preventer Valve Table** Utility Essement (Book 1116, Page 483) N 82°00'00"E 4 44.85 N 08°00'00"W 20 7 605 604 100 Year Floodplain for Kunze Lake LOMR -Approved by the Federal Emergency Management Agency (FEMA) dated -September 28, 1999, Case No. 99-06-1524P 2 3 5 7410 7414 609 7518 7512 7404 25' Bullaing Line "Kunze Lake" East Galveston Street Umplatted 8.48 617 50.00 N 32°29'14"W-Drainage and Utility Eas 2 3 26 5 621 Top of Brass Cap set in concrete aldewalk at the northwest corner of the Kunze Lake Bridge on Fores 7405 7409 7513 7517 7521 7525 614 20' Buildling Line Basis of Bearings 105.14 95.13 11' Uliky Easement 80.11 625 11 Ulffly Easen N 87°01'52'W - 119.8 no Duliding ine 20' Buldling Line 11 Utility Easement Legend 17 16 F&L/E = Fence & Landscape = Right of Way dedicated by Plai 15 14 13 7412 - Reserve Area A & B 7416 12 7514 7518 7522 7524 7528 7532 Monument Notes A 5/6" x 18" deformed bar with a yellow plastic cap st 13 East Galveston Place 633 15 Dilly Fasement Addresses shown on this Plet provided by the City of Broken Arrow Planning Department are accurate at the tings the pilet was filled, and the addresses are subject to change and should not be relied an in plann of the land 3^{-12} 15 Utiliy Easemen 3 10 6 6 7547 8 7413 7417 7511 7515 7519 7539 7523 7527 7535 7531 7543 17.5't Hilly Easemen APPROVED 1-6-03 by the City Council of the City of Broken Arrow, 17.5' Utility Essement 50.00 N 00°16'46"E-Point of Beginning*
Found 3/4* fron Pin South Oserter
Corner of Section 10, T-18-N, R-15-E
Waggener County, State of Oklahoma S 00°16'09"W 50' Right-of-Way Dedlca' (Book 1179, Page 556) South Line of the SE/4 of Section 10, T-18-N, A-16-E, Wagoner County State of Oklahoma N 89°43'51"W - 1762.47 N 89°43'51"W - 869.50 East Houston Street Found O.D.O.T. Brass Cap Southeas Comer of Section 10, T-18-N, R-15-E Wagoner County, State of Oktahorna Stanford's Landing III at Forest Ridge PT02-126 02-207 Sheet 1 of 2

CERTIFIED TRUE COPY
JERRY FIELDS COUNTY CLERK
Wagoner County, Okla.

NO.

R

4RROW, BEING A '4 OF SECTION 10, 'OKLAHOMA BROKEN ARROW, PART OF THE W/2 SW/4 5-E, WAGONER COUNTY, THET-18-N, R-15-E, SUBDIVISION OF A



SCALE IN FEE 60 30

7501 EAST KENOSHA STREET BROKEN ARROW, OKLAHOMA 74014 PHONE: (918) 357-2787 OWNER: The robson companies,

tulsa engineering & planning associates, inc 8209 EAST 63rd PLACE SOUTH TULSA, OKLAHOMA 74133 PHONE: (918) 252-9621 **ENGINEER**:

× 2 ×

WAGONER COUNTY

LOCATION MAP

46 LOTS - 20,0916 ACRES

Ó 01.619 7 R=152.00 0-183*00'00 Ø II' UTILITY EASEMEN 619.70 A STATE OF THE STA KONLHON HLLB 17.5' UTILITY EASEMENT (BY SEPARATE INSTRUMENT BOOK 783, PAGES 625-686) IN S' UTILITY EASEMENT W/2 SW/4, R-15-E | |8`≠|| |3,00,00°008 NI3054'42'E OF THE T-18-N, 1 BROADWAY SECTION 10, 443.78 589°40'33"E M HALL ESMT. M,00,00.00N 202'00

OE ZECTION 10' 1-18-N' K-12-E MEZT TINE OE THE M/S ZM/4'

ACMIMENT NOTES

1 A 350° Y 9° DEFORD OF BIT A YELLOW PLASTIC CAP
COMMENS, PRIGOT OF BETT A TALL PLAST ROUNDAY
COMMENS, PRIGOT OF BETT A THE PLAST ROUNDAY
STAMMED "18, SEAST TO BE SET A TALL DAY
STAMMED "18, SEAST TO BE SET A TALL TO COMPENS AFTER
STAMMED "18, SEAST TO BE SET A TALL STAMPORT COMPENS
MITTERECTORS, POUNTS OF CHOMISTO OF THE PROPERTY
POUNTS OF COMPONIC CHINE TA ALL STREAM ESTIMATE
TO SET OF COUNTS OF CHOMISTO.
COMPLETIONS, POUNTS OF CHOMISTO.
POUNTS OF COMPONIC CHINE TO EFFORM AFTER
COMPLETION OF MANOLEMENTS, UNLESTS
COMPLETION OF THE PROPERTY.

50.00

624.70 16

R* 42 5 00 41 * 0* 61

624.90

LEGEND

LEGEND

LIGHTONE LINE

LIGHT OF LOWENTY

LIGHT OF LOWENTY

LIGHT OF LOWENTY

CONTINUES ROWANN TANNY

REDUREMENTS

REDUREMENTS

REDUREMENTS

1.EN67H 94.90 60.00 20.00 20.00 15.00 13.00 13.00 13.00 15.00 15.00 16.06

y l eno

HLNOS

CURVE TABL

AND

98'2517 - M,,00,00000N

'S]

'I ISIYZ

52.82 503°00 19*1

HLBB

0-35-50-15.

TEERTS 32

840.62 S 3°00'19"E

IX.S' UTILITY EASEMENT

18.87.8 3"84"78°8 N

*00,00 *55°0

A VERNIE

HL89

THE BASIS OF BEARINGS IS BASED ON AN ASSUMEO BEARING OFF IN DOPOZOWY ALONG THE WEST LINE OF SECTION IO, T-1840, R-15-E, OF THE WIDDAM BASE AND MERICIAN, WAGONER COUNTY STATE OF OKLAHOMA. BASIS OF BEAPINGS

50,000 50,000

55.5.7.2 56.5.7.2 56.5.7.2 56.5.7.3 56.5.7.3 56.5.7.3 56.5.3 56

33,700 1,720 1

Tick. Hood by: 3.

DEED

संस्था और म्यास्त्रा

1992 NOV -9 PH 12:

Plat Cabinet 3 287-A+B.

P. U. D. NO. 66

DEER CREEK III AT FUREST RIUGE

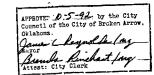
AN ADDITION TO THE CITY OF BROKEN ARROW, BEING A SUBDIVISION IN A PART OF THE SW/4 OF SECTION 10, T-18-N, R-15-E, WAGONER COUNTY, STATE OF OKLAHOMA.

OWNER:

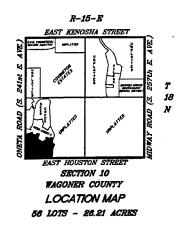
The Robson Companies, Inc.

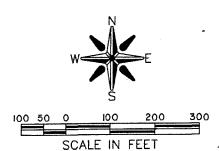
ENGINEER:
Tuisa Engineering & Planning Associates, Inc.

8209 East 63rd Place South Tulsa, Oklahoma 74133 Phone: (918) 252-9621



- 17





BASIS OF BEARINGS:

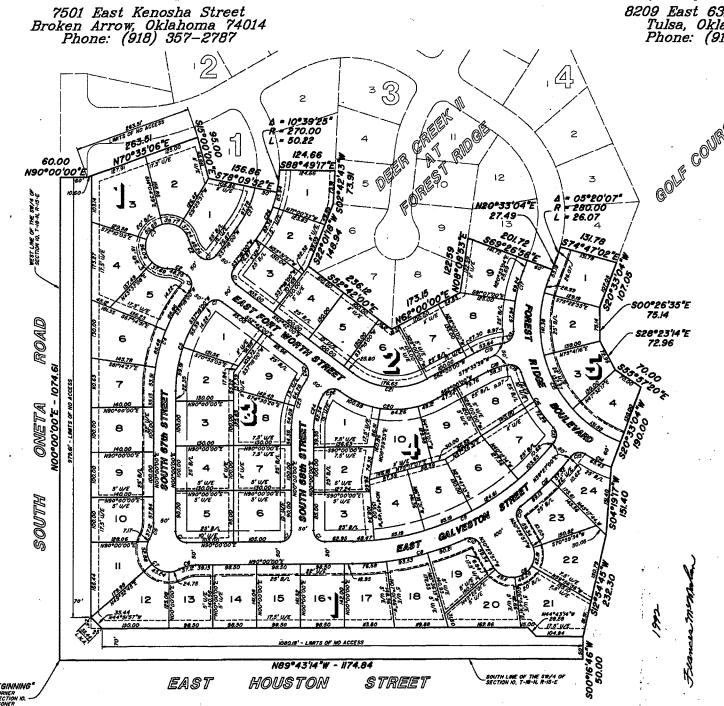
The basis for bearings is based on an assumed bearing of N 00°00'00" along the west bino of Section IO, T-18-14, R-15-1 of the Indian Base and Meridian, Waganar County, State of

MONUMENTATION:

- I. A 5/8" x i8" deformed bar with a yellow plastic a etomped "RLS 1253" to be set at all plat baundo corners, prior to recordation, unless noted otherwise.
- A 3/8" x 18" deformed bar with a yellow plastic cap stamped "RLS 1253" to be set at all lot carners after completion at improvements, unless noted atherwise.
- 3. A 3/8" x 18" detarmed bor with a yellow plastic cop stamped "RLS 1253" to be set of all street centorline intersections, points of curve, points of tangent, points of sampound curve, points of reverse curve, center of culride-race and conter of syebrows, ofter completion of improvements, unless noted otherwise.

BENCHMARK:

Top at bross cap set an lop of curb approximately is feet east of handleap access romp in the southeast quadrant of Ferest Ridge Southward and East Galveston Stroet. Elevation = 646.53 (N.G.V.D.)

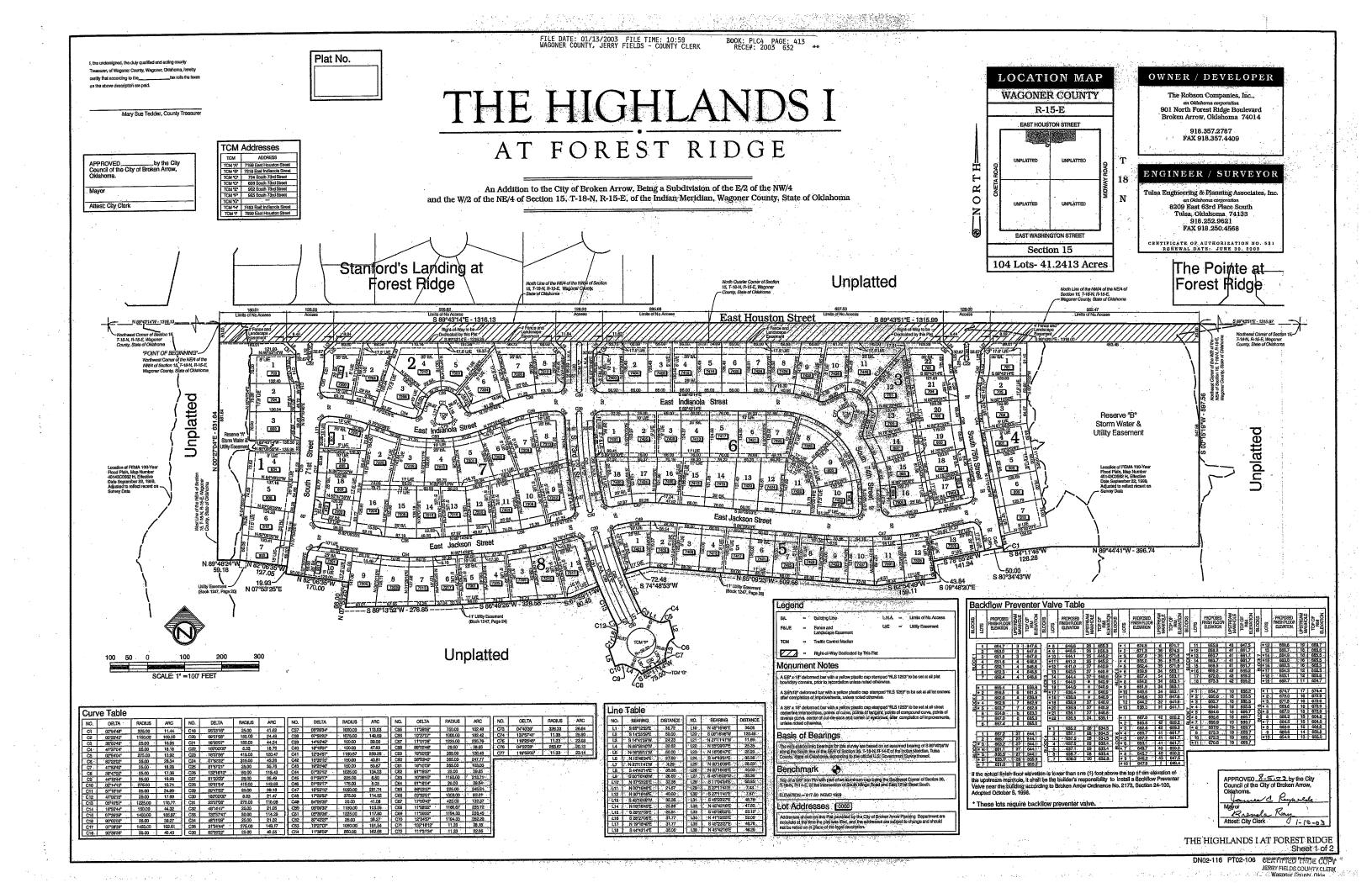


BK. - BOOK
B/L - BUILDING LINE
POS. - PAGES
U/E - UTRITY EASEMENT
L.M.A. - LIMITS OF NO ACCESS

	CURVE	TABLE	•
NO.	DELTA	RADIUS	ARC
CI	90'00'00"	25.00	39.27
C2	36'52'12"	75.00	48.26
CJ	253'44'23"	50.00	221.43
C4	37'18'00"	350.00	227.85
C5	37 18 00	300.00	195.30
C6	28'21'27"	75.00	37.12
C7	146 42 55	50.00	128.03
C8	23'52'24"	525.00	260.42
C9	50'33'00"	575.00	507.30
C10	83'22'27"	25.00	36.38
C11	180'00'00"	50.00	157.08
C12	13'25'30"	625.00	146.45
C13	820735	25.00	35.83
C14	11'01'31"	340.00	65.43
C15	90'00'00"	280.00	439.82
C16	24'21'49	340.00	144.58
C17	23'07'01"	340.00	137.18
C18	173339	125.00	38.31
C19	17'33'39"	175.00	53.64
C20	65'08'16"	205.00	233.06
C21	65'18'00"	155.00	176.65
C22	95'41'17"	25.00	41.75
C23	86'45'13	25.00	37.85
C24	31'26'59"	150.00	82.34
C25	34'03'13"	200.00	118.87
C26	25'27'52	270.00	120.00
C27	25'27'52"	220.00	97.78

છ		PROPOSED	TOP OF RIM ELEVATION
BLOCKS	ا ع	PROPOSED FINISH FLOOR ELEVATION	OF UPSTREAM SANITARY MANHOLE
ž	Suo7	ELEVATION	SANITARY
			MOSTIFULE
	1	640.7	638.4
	2	640.8	638.4
BLOCK!	3	640.9	642.5
	5	641.3 641.3	642.5
	8	641.3 642.7	640.8 642.4
	5	644.3	<i>647.8</i>
	8	645.7	647.8
	9	648.7	647.8
-	10 11	652.0 652.9	651.4
ğ	12	652.9	651,4 653.3
2	13	852.5	653.3
~	14	649.3 646.9	<i>648.6</i>
	15 16	646.9 646.3	644.9 648.2
	12	646.3 648.6	648.2 648.2
	18	650.1	651.9
	19	650.0	651.9
	20	647.7	647.8 647.8
	21 22	646.6 646.9	647.8
	23	650.0	645.5 648.9
	24	649.5	648.9
ROCKE	1	639.1	640.9
	3	639.5 640.0	640.9 639.8
	4	642.5	643.9
	5	643.0	643.9
	6	6475	646.3
	8	648.5	646.3 646.3
	8	650.0 649.0	646.3
	,		070.5
	1	641.9 643.6	642.4
	2	643.6	644.9
	3	654.0 647.0	644.9 646.7
ROCKS	<i>4</i> 5	650.4	646.7
3	6	646.4	646.7
7	7	645.0	646.7
	8	644.4 644.1	845.3 644.9
	g	644.1	044.9
	f	644.5	645.3
	2	645.4	647.9 647.9
.	3	646.2	647.9
	4	649.5	648.8
ROOK	5	650.1 650.4	648.8 649.3
9	2	650.4 650.6 650.6	649.3
1	8	650.6	649.3 649.3
	9	648.6 647.6	649.3
إ	10	54/.5	648.8
10	1	648.6	648.3
×	2	650.5	649.4
BOOK 5	3	650.5 650.5	647.1
	1	648.7	647.1
11	the oct	uoi tinish floor ele top of rim ele monhole, it sholl ility to install o bo building according t	evotion is lower
U.C	etreom	monhole, it shoti	be the builders
70	sponsib	ility to install o bo	ockwoter device
774	iar ing t	ounaing accordina t	O OFORBR AFFOW

SHEET I OF 2



OWNER / DEVELOPER

The Robson Companies, Inc., 901 North Forest Ridge Boulevard Broken Arrow, Oklahoma 74014 918.357.2787

THE HIGHLANDS II

AT FOREST RIDGE

(Lots 8 - 19, BLOCK 1; Lots 8 - 17, BLOCK 4; Lots 14 - 26, BLOCK 5; Lots 11 - 23, BLOCK 8; All of BLOCKS 9 & 10; Lots 1 - 10, BLOCK 11; Lots 1 - 7, BLOCK 12; Lots 17 - 18, BLOCK 12; Lots 1 - 2, BLOCK 13; Lots 32 - 34, BLOCK 13)

CERTIFICATE OF AUTHORIZATION NO. 531
RENEWAL DATE: JUNE 30, 2005

A subdivision in the City of Broken Arrow, being a part of the N/2 of Section 15, T-18-N, R-15-E, of the Indian Meridian, Wagoner County, State of Oklahoma

ENGINEER / SURVEYOR

Tulsa Engineering & Planning Associates, Inc.

an Oktationa corporation 6737 South 85th East Avenue Tulsa, Oklahoma 74133 918.252.9621

CERTIFIED TRUE COPY JERRY FIELDS COUNTY CLER Wagoner County, Olda.

46

SEAL

4

I, the undereigned, the duly qualified and acting County

Treesurer of Wagoner County, Wagoner, Oklahoma, hereby certify that according to the 2003 tax rolls, the

love marshall



Benchmark 🕀

A chiseled square on top of curb on the couthaasterly side of median latend of the traffic circle, in line with the centertine of South Highlands Blvd. Said traffic circle is at the intersection of South Highlands Blvd.

THE HIGHLANDS II AT FOREST RIDGE DN02-116 PT02-106 Sheet 1 of 3

Mayor

M. Slavie Boldie

Attest: City Clark 8-12-04

SEAL

THE HIGHLANDS III

AT FOREST RIDGE

Tulsa Engineering & Planning Associates, Inc.

6737 South 85th East Avenue Tulsa, Oklahoma 74133 918.252.9621

ENGINEER / SURVEYOR

CERTIFICATE OF AUTHORIZATION NO. 531 RENEWAL DATE: JUNE 30, 2009

(Lots 20-28, BLOCK 1; Lots 18 - 27, BLOCK 4; Lots 11- 21, BLOCK 11; Lots 8 - 16, BLOCK 12

Lots 3 - 31, BLOCK 13; All of Block 14; Lots 1 - 7, BLOCK 15; Lots 1 - 9, BLOCK 16) A subdivision in the City of Broken Arrow, being a part of the N/2 of Section 15, T-18-N, R-15-E, of the Indian Meridian, Wagoner County, State of Oklahoma



=	ગસા	CKHOV	VF	16	ve	H	ei va	11V	e 1	aun)											Leg	BII	u
ROCKS	s	PROPOSED FRISSED ROOM ELEVATION	PEAN FOLE	P OF ATION	BLOCKS	8	PROPOSED FINSHED ROOK	UPSTREAM	TOP OF RIM ELEVATION	BLOCKS LOTS	PROPOSED PINISHED ROOM	REAM HOLE	TOP OF PIIK FIEWATION	SXS	şa	PROPOSED FINISHED FLOOR	UPSTREAM	TOP OF RIM LEVATION	8 8	PROPOSED FINISHED FLOOR	UPSTREAM MANHOLE TOP OF RIM ELEVATION	B/L	12	Building Line Fence &
2	STOJ	BLEVATION	S S	5.3	98	LOTS	ELEVATION	P. P. S. P.	6.3	BLOC	ELEVATION	S A	5.5	M	STOJ	ELEVATION	SAN	FLEV TO	rots	ELEVATION	EF. D. EF.	F&L/E	=	Landscape Easement
ł		653.6		850.8		• 11	645.9		849.2	3	663.0	TTT	858.2	-	24	663.4	ь	658.5		677.8	27 673.3	L.N.A.	- 25	Limits of No Access
ı	20	654.4	17	652.4	11	12	646.6	G 18	651.3	1 4	681.2	12	658.3	۱.	25	661.2	6	658.5	<u>. -</u>	677.0	27 673.3	11		
ı	22	655.1	11	852.4		*13	548.7	6	651.4	3	662.7	13	659.7	7	26	658.7	13	859.7	3	874.8	27 873.3	1		
1 :	23	655.6	1	652.4		•14	856.9	\vdash	660.2	• 6	665.8	14	664.9	18	• 27	657.3	12	658.3	4	671.7	26 668.0	Mor	HIT	ment Notes
ð	24	655.6	2	851.8	151	• 15	860.1	.1.	660.2	• 7	667.6	15	668.6	72	+ 26	657.2	12	658.3	. 5	668.9	26 666.0	IVIO	ıu,	HEIR HOLES
9	25	655.2	2	651.8	ŏ	16	683.0	1	680.2	8	678.0	15	668.8	3	• 29	656.9	11	658.2	• B	663.0	26 668.0			
· "	26	655,8	3	652.7	131	*17	666.1	Ų	678,3	• 9	872.4	16	672.1	1					• 7	856.3	26 668,0	A 5/8" >	(18°	daformed bar with a yel
1	27	658.8	4	655,7		•16	669.9	1	678.3	10	874.4	16	6721	4	1 2	8.083	32				·····	be set a	at aii	plat boundary comers, p
1	26	658.6	5	655.3]]	• 19	674.1	1	678.3 678.3	C +17	877.1	17	878.7 878.7	4	* 2 * 3	879,3 874.8	32	678.6 678.6	0.2	661.7 664.7	8 661.0 9 667.4	otherwi		,,
1		642.2	19	638.0	٠ ١	*20 21	676.1 682.4	141	678.3	Š 13	680.5	17	678.7	+	-4	670.3		670.3	1 3	666.8	9 667.4	I Outer me	30,	
1	18	642.7	19	638.0	4 1	211	902.4	21	0/0.1	9 14	681.1	17	678.7	+	1 5	667.3	31	670.3	* 4	668.3	9 667.4	il		
1	20	643.3	19	638.0	1 1	• 6 1	682.7	FI	682.1	F 15	679.6	17	878.7	12	• 6	664.2		670.3	4	569.6	9 667.4	A 3/8" >	(18"	deformed bar with a yel
3	21	644.2	20	541.8		- 5	682.3	1	682.1	+ 16	678.1	17	678.7	۱×	• 7	658.0	30	680.5	3 + 8	872.0	10 874.7	be set	at alt	lot corners after complet
Ď	- 22	645.9	21	646.4		• 10	681.6	Ē	682.1	± 17	676.4	17	878.7	18	* B	850.6	30	660.5	4 7	873.8	10 874.7	otherwi		
2	23	648.2	21	646.4	131	• 11	679.6	Ē	582.1	* 16	874.4	17	678.7	T#	• 9	656,3	30	660.5	8	676.0	10 674.7	Distorm	3G.	
	24	650.2	21	646,4		• 12	677.3	E	682.1	× 19	6727	16	672.1	7	10	663.0	30	660.5	9	877.6	a 675.2	έl		
1	25	651.5	22	647,2		• 13	674.9	D	875.7	+20	870.5	16	872.1	1	•11		31	670.3				il A 3/8" :	18"	deformed bar with a yel
1	26	851.5	22	647.2		14	6724	D	875.7	+21	668.5	15	668.8]	12	671.6		670.3						street centerilne interse
ı	27	651.2	23	645.2	1 I	• 15	870.0	0	875.7	₹22	566.6	15	668.8	1	+ 13	874.8		678.6						
1						16	667.6	c	668.7	* 23	665.2	14	864.9	J	+ 14	678.2	32	678.6						nts of compound curve,
		iese lofs i	•			•									* 15	679.6	32	679.6						and center of eyebrows, i otherwise,
1		actual finished																				11		
	valve:	upstream ma near the build ed October 5,	ing ac																			Bas	is 4	of Bearings

OWNER / DEVELOPER

The Robson Companies, Inc.,

901 North Forest Ridge Boulevard Broken Arrow, Oklahoma 74014

918.357.2787

n	a				Notes
=	Building Line	OD/E	=	Overland Drainage Easement	 Water to be supplied by the City of Broken Arrow. Sewage to be received by the City of Broken Arrow.
=	Fence & Landscape Easement	TCM	=	Traffic Control Median	Stormwater Detention
æ	Limits of No Access	U/E	#	Utility Easement	Stormwater detention accommodations for this site are

5/8" x 18" daformed bar with a yellow plastic cap stamped "FILS 1253" to a set at all plat boundary comers, prior to recordation unless noted Lot Addresses 0000

\(\cdot 3/\text{if}^n\) x 18" deformed bar with a yellow plastic cap stamped "RLS 1253" to eset at all street centerline intersections, points of curve, points of any points of compound curve, points of reverse curve, center of sud-de-seas and center of eyebrows, after completion of improvements, niess noted otherwise.

Basis of Bearings

The non-astronomic bearings for said tract are based on an assumed bearing of S 89°43°14°E along the north line of the NWI/4 of Section 15, T-18-N, H-15-E, of the Indian Meridlan, Wagoner County, State Oklahoma, according to the official U.S. Government survey thereof.

Benchmark �

A chiseled square on top of curb on the southeasterly side of median island of the trattic circle, in line with the centerline of South Highlands Blvd. Said traffic circle is at the intersection of South Highlands Blvd. and East Jackson Pleas
ELEVATION = 676.63 (NGVD 1929)

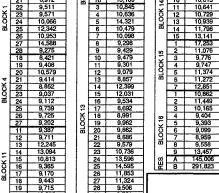
provided by the ons

Addresses shown on this plat were provided by the City of Broken Arrow Engineering Department. The addresses are subject to change and should not be relied upon in place of the legal description.

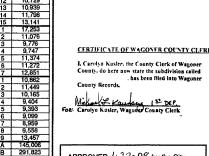
Line Table

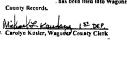
3 .	N 00°32'59" E	3,35	L16	N 53°09'43" E	24.4
3	N 77°26'43* E	75.05	L19	N 25°10'54" W	33.
1	N 80°10'02" E	64,61	L20	N 67°45'38" E	24.0
5	N 03°33'55" W	13.47	L21	N 35°41'40" E	23.6
5	S 03°07'41" E	19.99	LZ	N 58°00'42" W	6.4
7	S 67°45'38" W	24.44	1.23	N 21°08'54" E	91.0
3	N 35°41'40" E	30.15	1.24	N 27°27'13° E	11,3
3	N 53°09'43" E	24,42'	L2!	N 64°50'34" E	11.3
0	N 54°55'16" E	28.77	1.29	S 45°15'01" E	56,3
1	S 88°24'20" W	13.48	1 —		
2	S 64°50'34" W	27.92			
3	N 27°27'13" E	27.92	l		

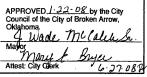
~	U4-47 33	יטט,טטס ו	[DU. 19	ı	U39	101-1740	1125,00	20.41 €	1
3	12°45'39"	600.00	133.63	1	C40	01°07'42"	1050.00	20.68	1
4	70°10'01"	25.00'	30.82	1	C41	43°59'26"	25.00'	19.19'	1
5	147°58'02"	50.00	129,10	1	C42	58°47'21"	25.00	25.65	•
6	58°37'28"	25.00'	25.58	1	C43	20°08'45"	200.00	70,32	l
7	24°22'35"	265.00	112.74	1	C44	16°05'48"	450.00	126.42	1
B	43°31'09"	215.00'	163,30'	1	C45	40°01'43"	250,00	174.66	1
9	85°45'07"	25.00	37.42	1	C46	85°45'07"	25.00 ^t	37.42'	
ō	40°01'43"	300,00	209.59	1	C47	08°10'49"	650.00'	92.80	1
1	16°05'46"	400.00	112.37	1	C48	31°13'47"	425.00	231.65	
2	22°48'59"	250.00	99.56	1	C49	90°00'00"	25.00	39.27	
3	44°59'23"	25.00'	19.63	1	C50	19°24'56'	475.00	160.96	ı
4	42°48'06"	25,00°	18,68	1	C51	16°12'55"	500.00'	141.51	
5	10°55'05"	1050.00	200.08	1	C52	21°19'01"	200.00	74.41'	l
6	92°47'46"	25.00'	40,49	l	C53	52°52'59"	25.00	23,07'	
7	05°26'05"	450.00	42.68	1	C54	37°29'28"	25.00	16.36	
8	29°36'05"	175.00	90.41]	C55	11°24'43"	1125.00'	224.08	
9	47°43'47"	25,00'	20.83	1	Ç56	02°21'10"	500.00	20.53	
0	142°36'39"	50,00	124.45]	Ç57	180°00'00"	6.83	21.47	l
1	13°48'22"	175.00	42.17]	C58	00°59'11"	650.00	11,19	ł



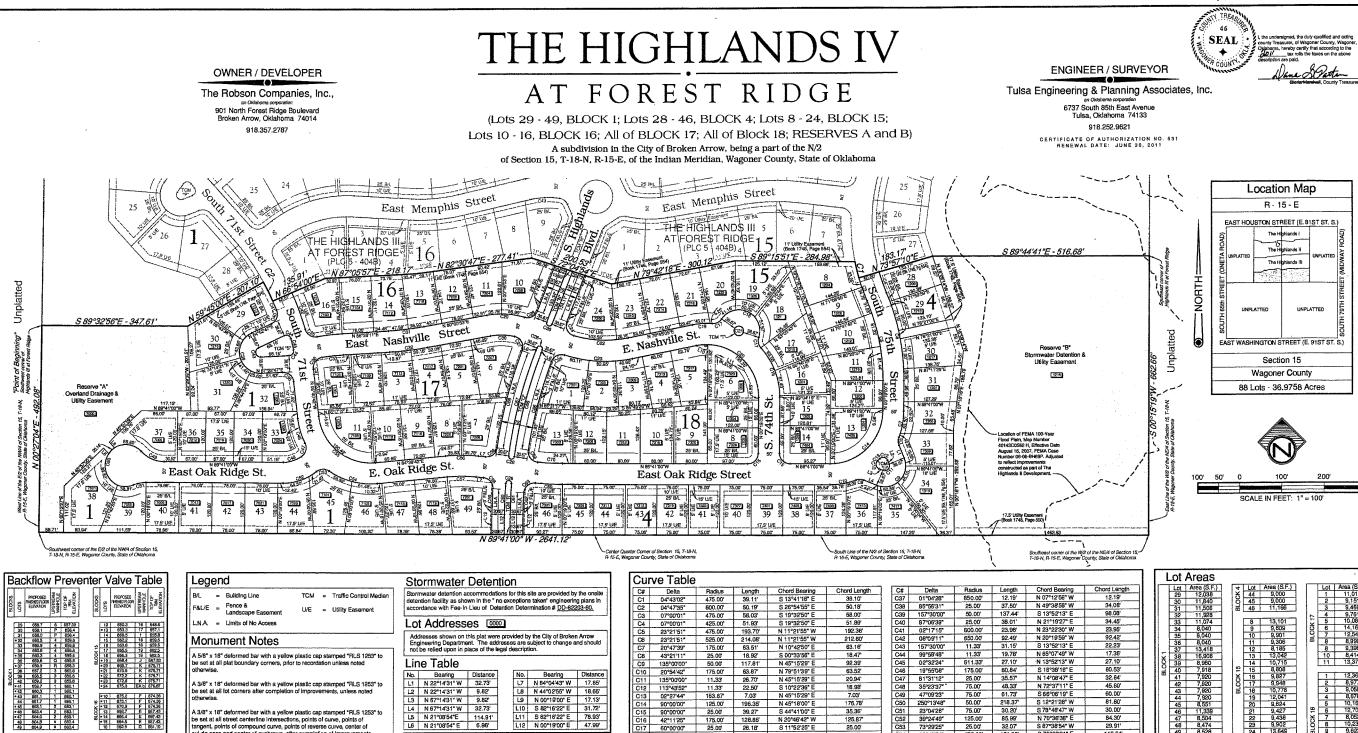
	1	LO	Alea (S.F.)	
7	1	9	11,711	ļ
	4	9 10	10,613	i
7	BLOCK 14	11 12	10,641	ı
7	Ιð	12	10,729	ı
7	19	13	10,939	1
7	面	14	11,798	ı
7		15	13,141	
7		1	17,253	ı
7	10	2	11,076	l
7	BLOCK 15	3	9,776	ı
7	ð	4	9,747	l
7	Q	4 5	11,374	l
7	00	6	11,272	l
7	1	. 7	12,851	l
┪		1	10,862	ı
7		ż	11,449	[
7		3	10,165	1
7		4	9,404	ı
┪	=	4 5	9,393	
7	18	6	9,099	•
1	BLOCK 16	6 7	8,959	ı
7	1 20	8	9,558	1
		9	13,457	1
-	1 . 1			i







THE HIGHLANDS III AT FOREST RIDGE DN02-116 PT02-106 Sheet 1 of 3



20	38	657.2	3	655.8	1	+21	670.9	K	675.71
Š	39	658.5	13	655.8	1	+ 22	672.2	K	675.71
8	40	659.2	3	655.6	1	× 23	672,8	TK	675.71
æ	¥41	669.7	1	560.1	1	- 24	675.3	EXb	676,67
	• 42	660,3	1 1	880.1	1				
	+ 43	681.1	11	660.1	1	*10	875.2	T F	674.38
	44	661.7	77	660.1	<u>u</u>	*11	673.1	TF	674.36
	+ 45	663.1	2	663.1		• 12	670,9	F.	674.36
	• 48	863.4	1 2	663.1	S S S S S S S S S S S S S S S S S S S	13	686.7	E	687.43
	• 47	564.C	2	669.1	1 ≱	* 14	686.4	TE	667.43
	48	864.B	8	663.4	1	+ 15	664.5	E	887.43
	49	684.9	3	563,4	ł	16	862.9	D	661,10
	28	650.4	TE	642.23	}	* 1	663.3	16	665.6
	29	649.5	TI	842.23	1	+ 2	664.8	6	865,6
	30	648.2	11	642.23	1	* 3	586.4	6	665.6
	31	847.2	M	644.28	ł .	4	868.4	18	665.6
	32	847.3	1 M	644.28	1 1	5	870.5	ь	867.0
	33	647.3	N	841.29	ž	6	67B.5	D	667.0
	34	647.6	N	641.29	o g	* 7	668.9	ь	667.0
	* 35	648.8	7	652.4	86	* 6	566.0	6	665.6
*	* 3B	652.6	7	652.4		* 9	665.4	6	665.6
×	37	655.2	7	652.4		* 10	664.0	6	665.6
BLOCK	*38	657.4	6	657.9		•11	663.6	8	685.6
ᄧ	* 39	658.5	B	657.9					
	40	659.6	6	857.9			671.7	1 0	688.0
	*41	681,9	9	662,6	i	2	671.7	13	697.9
	± 42	663.8	9	662.B		3	671.3	13	667.9
	43	664.2	9	552.6		4	870.8	13	667.9
	44	REAR	9	6628		3	689.6	13	587.9

be set at all street centerline intersections, points of curve, points of tangent, points of compound curve, points of reverse curve, center of cul-de-sacs and center of eyebrows, after completion of improvements,

Basis of Bearings

The non-astronomic bearings for said tract are based on an assumed bearing of 8 89°43°44°E along the north line of the NW4 of Section 15, T-18-N, R-15-E, of the Indian Merdilan, Wagoner Courty, State of Oklahoma, according to the official U.S. Government survey thereof.

Benchmark �

A chiseled square on top of curb on the southeasterly side of median Island of the traffic circle, in line with the centerline of South Highlands Blvd. Said traffic circle is at the intersection of South Highlands Blvd. and East Jackson Place. ELEVATION = 676.63 (NGVO 1929)

Notes

C2	04°47'35"	600.00'	50.19'	S 26°54'55" E	50.18	C38	85°56'31"	25.00'	37.50	N 49°38'58" W	34.08'
C3	07°00'01"	475.00'	58.03'	S 19°32'50° E	58.00'	C39	157°30'00"	50.00'	137.44	S 13°52'13" E	98.08'
C4	07°00'01"	425.00'	51.93'	S 19°32'50" E	51.89'	C40	87°06'39"	25.00	38.01	N 21°19'27" E	34.45'
C5	23°21'51"	475.00'	193.70	N 11°21'55" W	192.36	C41	02°17'15"	600.00*	23.96'	N 23°22'30" W	23.95'
C6	23°21'51"	525.00'	214.08	N 11°21'55" W	212.60'	C42	08°09'11"	650.00	92.49'	N 20°19'59" W	92.42'
C7	20°47'39"	175.00'	63.51'	N 10°42'50" E	63.16'	C43	157°30'00"	11.33'	31.15'	S 13°52'13" E	22.23'
C8	43°21'11"	25.00	18.92"	S 00°33'56" E	18.47'	C44	99°58'48"	11.33'	19.78'	N 65°07'49" W	17.36
C9	135°00'00"	50.00	117.81	N 45°15'29" E	92.39'	C45	02°32'24"	611.33*	27.10	N 13°52'13" W	27.10'
C10	20°54'42"	175.00'	63.87	N 79°51'39" E	63.52'	C46	19°55'08"	175.00'	60.84	S 16°38'16" E	60.53'
C11	135°00'00"	11.33	26.70	N 45°15'29" E	20.94'	C47	81°31'12"	25.00°	35.57'	N 14°08'47" E	32.64
C12	113°43'52"	11.33"	22.50	S 10°22'36" E	18.98'	C48	35°23'37"	75,00°	48.33	N 72°37'11" E	45.60'
C13	02°27'44"	163.67'	7.03'	N 45°15'29" E	7.03'	C49	47°09'23"	75.00	61.73	S 66°06'19" E	60.00
C14	90°00'00"	125.00	196.35	N 45°18'00" E	176.78'	C50	250°13'48"	50,00'	218.37	S 12°21'28" W	81.80'
C15	90°00'00"	25.00	39.27*	S 44°41'00" E	35.36	C51	23°04'26"	75.00'	30.20	S 78°48'47" W	30.00'
C16	42°11'25"	175.00'	128.86	N 20°46'42* W	125.87	C52	39°24'49"	125.00'	85.99'	N 70°36'38" E	84.30
C17	60°00'00"	25.00	26.18	S 11°52'25" E	25.00'	C53	73°29'25*	25.00	32.07	S 87°38'54" W	29.91'
C18	163°34'25"	50.00	142,74	N 83°39'37" W	98.97	C54	39°43'54"	175.00'	121.35'	S 75°28'21" E	118.94'
C19	15°48'05"	175.00'	48.26	S 86°39'07" W	48.11'	C55	88°39'36"	125.00'	193.43	S 51°00'30" E	174.70
C20	101°33'55"	125.00	221.58	N 50°27'58* W	193.68'	C56	11°15'35"	400.00'	78.61'	N 89°42'31" W	78.48'
C22	27°26'28"	275,00'	131.71'	S 87°31'41" E	130.45	C57	11°15'35"	350.00'	88.78	N 69°42'31° W	68.67'
C23	28°51'05"	325.00	163.65'	S 86°49'23" E	161.93'	C58	87°30'29"	25.00	38.18'	N 40°19'29" W	34.58'
C24	94°57'21"	25.00°	41.43'	S 26°19'47" E	36.85'	C59	3°06'46"	1125.00	61.12'	S 01°52'23" W	61.11'
C25	87°00'22"	25.00°	37.98	S 64°05'59" W	34.42	C60	03°53'31*	1094.33'	74.34'	S 02°15'46" W	74.32
C26	180°00'00"	6.83'	21.47'	N 68°51'06" W	13.67'	C61	03°53'31"	1080.67	73.41'	S 02°15'46" W	73.40
C27	98°06'47"	25.00	42.81	N 28°30'18" W	37.77	C62	02°48'31"	1050.00	51.47	S 01°43'16" W	51.47
C28	85°09'29"	25.00'	37.16'	N 63°43'38" E	33.83'	C63	92°41'13"	25.00	40.44'	S 49°28'07" W	36.17"
C29	26°17'30"	200.00	91.78'	N 86°50'22" W	90.97'	C64	92"55'24"	25.00'	40.55	S 37°44'40" E	36.25'
C30	22°25'25"	150.00'	58,70'	N 88°46'25" W	58.33'	C65	11°52'46"	1050.00	217.70'	S 14°39'25" W	217.31'
C31	06°27'18"	750.00'	84,50'	N 83°14'32" E	84.45	C66	13°30'52"	1080.67	254,90'	S 14°23'28" W	254.31'
C32	06°27'18"	800.00	90.13'	N 83°14'32" E	90.08'	C67	13°30'52"	1094.33'	258.12'	S 14°23'28" W	257.52
000	050471508	E00.00'	EO EO	C 039341457 W	50 SB'	CER	1200818"	1125.00'	238.33'	S 14°28'56" W	237.89

L	ot	Areas								
	Lot	Area (S.F.)	l [4	Lot	Area (S.F.)			Lot	Area (S.F.)
	29	12,038		×	44	9,000			1	11,012
	30	11,840	1	BLOCK 4	45	9,000			2	9,151
	31	11,506	1	ᇳ	46	11,166		1	3	9,466
	32	11,928	1 1					~	4	9,761
	33	11,074	1 1		8 9	13,101]	2	5	10,087
	34	8,040	1 1		9	9,609]	BLOCK 17	6	14,163
	35	8,040	1 1		. 10	9,901		13	7	12,548
1 :	36	8,040	1		11	9,306	1	100	8	8,999
1_	37	13,418]		12	8,185	ļ		8	9,396
12	38	16,906]		13	13,042	1		10	8,414
BLOCK	39	8,960	1 1		14	10,715			11	13,379
12	40	7,918	1 1	5	15	8,808]			
1	41	7,920	1 1	×	16	9,827]		1	12,365
	42	7,920	1 1	BLOCK 15	17	9,948	1		3	8,977
1	43	7,920	1 1		18	10,776]			9,058
1	44	7,920	1 1		19	12,041]		4	8,678
1	45	8,551	1 1		20	9,624		_	5	10,165
1	46	11,339	1 1		21	9,427	1	18	6	12,709
1	47	8,504	1		22	9,438]	BLOCK	7	8,052
1	48	8,474	1 1		23	9,902		lŏ	8	10,236
1	49	8,528	1		24	13,649	1	一品	9	9,623
1	50	9,105	1					1	10	8,937
1	51	11,707]		10	13,705	1	1	11	8,251
1			- }	φ	11	8,580	j	1	12	8,029
1	28	9,510]	BLOCK 16	12	9,353	1		13	8,269
	28	10,378]	ö	13	8,844	1	1	14	11,335
	30	11,525	1	9	14	10,240]	١.		
	31	10,908]	æ	15	10,072]	HES.	Α	106,671
1	32	9,350	1		18	12,340	1	LE.	В	311,456
1	33	9,698	ابرا	_						
4	34	15,481] [
BLOCK	35	11,870	11	Г						
Įŏ	36	8,563	11	1	APPF	ROVED_P	٠.	ы	_bv 1	he City
m	37	9,055	Council of the City of Broken Arrow,							
1	70	0.000								

THE HIGHLANDS IV AT FOREST RIDGE DN02-116 PT11-107 Sheet 1 of 3

mile

Preliminary Plat Planned Unit Development 66

SIDEWALK EASEMENT DETAIL (Typical)

OWNER / DEVELOPER

The Robson Companies, Inc., an Oklahama corpovation 901 North Forest Ridge Boulevard Broken Arrow, Oklahoma 74014 918.357.2787

at Forest Ridge

A subdivision in the City of Broken Arrow, being a part of the S/2 of Section 10, Township 18 North, Range 15 East, Wagoner County, State of Oklahoma





ENGINEER / SURVEYOR

Tulsa Engineering & Planning Associates, Inc.

an Oklahoma corporation 9820 East 41st Street, Suite 102 Tulsa, Oklahoma 74146 918,252,9621

GERTIFICATE OF AUTHORIZATION NO. 531 RENEWAL DATE: JUNE 30, 2019

Legend BA = Building Line U/E - Utility Easement T.C.M. - Traffic Control Median B/L & U/E = Building Line & SW/E - Sidewalk Easement F&LE = Fence & Landscape Monument Notes

A 3/8" x 18" deformed bar with a yollow plastic cap is be set at all lot corners after completion of improvem

Basis of Bearings

Benchmark �

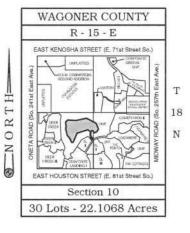
levation = 625,33 N.G.V.D. 1929

Notes

Stormwater Detention

LIF	ie labie				
No.	Bearing	Distance	No.	Bearing	Distant
L01	N 32*47'05'E	18,07"	L6	S 55*25'56"W	21.05
1.02	N 45*49'24"W	25,19'	L7	S 45*49'24"W	13.00
L03	S 45"49"24"E	43.77	1,8	N 45°49'24"W	13.00
1.004	As down committee	100,000	2.0	All or amounts artist	0.00

_		-	-	_	-
No.	Delta	Radius	Longth	Cloard Bearing	Chord Distanc
C1	03*07'56"	330.00	18.04	\$34° 21' 03"W	18,04
C2	81*44'25"	25.00	35.67	N4* 57' 12"W	32.72
C3	49"48"48"	265,00	230.39	\$20° 55' 00°E	223.21
.04	18*52'30*	155,00	51,06	S13* 25 39*W	50,83
C5	51"26'32"	125,00	112.23	529* 42' 40"W	108.50
C6	49*48'48"	235.00	204,31	\$20° 55' 00°E	197,94
C7.	81*44'25"	25,00	35,67	\$86* 41' 36'E	32.72
C8	16*31'11"	330,00	95.15	S44* 10' 36"W	94.82
C9	180,00,00.	6,00	18,85	N44" 10" 36"E	12.00
C10	1801001001	6.00	18,85	S44" 10" 36"W	12,00
Ctt	184*55'27"	4,60	14.85	N52" 13' 23"E	9.19
C12	08*20'35"	245.00	35,68	\$31" 08".36"E	35.64
C13	174*30*27*	3.00	9.14	S60° 16' 56"W	5.99
C14	07*46'29*	255.00	34.80	\$36* 21' 08'E	34,58
C15	131*34'59"	140.00	321.52	N10° 21' 34'W	255,38
C16	25*28'58*	400.00	177.90	N88° 53' 33"W	176.44
C17	14"36"01"	600,00	152.89	N85° 39' 58"E	152.48
C18	24*05'10"	175.00	73.57	S80° 55' 24"W	73.03
C19	48*35'47"	25.00	21.20	S86" 49' 18"E	20.57
C20	138*33'57*	40.00	96,74	S48° 11' 38"W	74.83
C21	48*35'47"	25.00	21.20	N3° 12' 33°E	20.57
C22	107*39'37"	12.00	30.20	S45° 49' 16"W	22.84
C23	144"10'59"	10.00	18.79	879* 06' 02*E	16.15
C24	110*30'06*	10.00	19.29	N5° 50' 12"W	16.43
C25	39*3353*	175.00	120.84	57° 43' 30"W	118.46
026	27*44'06"	400.00	193,63	825° 55' 30°E	191.74
C27	43"45'42"	50.00	38,19	N17° 54' 42"W	37.27
028	267*31'25*	40.00	186.77	N50° 12' 27"E	57.78
C29	43°45'42"	50.00	38,19	S61" 40'.24"E	37.27
C30	26°47'49"	370.00	173,05	S26* 23' 39"E	171,47
C31	90*56'17*	25.00	39,68	\$32* 28' 24"W	35,84
C32	05°56'33"	750,00	77,79	N74" 58" 17"E	77,75
C33	58*09'04"	140.00	142.09	N42" 55' 28"E	136.07
C34	90*00'00"	25.00	39.27	SS8* 50' 56"W	35.36
C35	131"34'59"	110,00	252,62	N10" 21' 34"W	200,65
C36	32°34'02*	155.00	88,10	S39* 08' 55"W	86,92
C37	21*19/38*	370.00	137,73	S89* 01' 47"W	136.93
C38	14"36"01"	370.00	137,73	\$89° 01' 47"W	136,93
C39	105"01'26"	630,00	160,54	N85° 39' 58°E	160,10
C40	90*00'00*	145,00	265,79	S40* 27' 16"W	230.11
C41	05*56'33*	25.00	39.27	\$57* 03' 27"E	35,36
C42	58*09'04"	720.00	74,68	N74° 58' 17"E	74,64
C43	94*09/20*	110.00	111.64	N42" 55' 28"E	106,91
C44	02"20"42"	175,00	111.54	N48" 14' 30"E	7.16



I, the undersigned, the duly qualified and acting county Treasurer, of Wagoner County, Wagoner, Oklahoma, hereby certify that according to the lax rolls the taxes on the above

Dana Patten, County Treasurer

____ by the City Counci of the City of Broken Arrow, Oklahoma Attest: City Clerk

Wyckford at Forest Ridge Date of Preparation: February 18, 2019

Erosion Along Deer Creek



Erosion Along Deer Creek – Trail Crossing





Erosion Along Deer Creek – Trail Crossing





Erosion Along Deer Creek & Confluence of Deer Creek & Covington Tributary





Erosion Along Covington Creek Tributary





Erosion Along Covington Creek Tributary



Erosion Along Covington Creek Tributary

