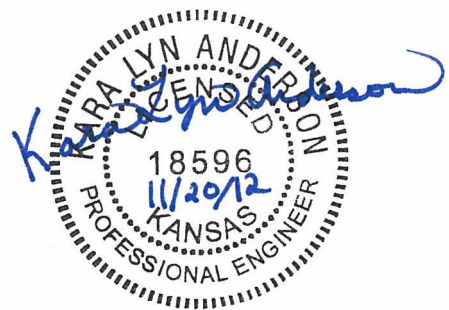


DRAINAGE REPORT

FOR

**THE WATERFRONT EIGHTH ADDITION**  
**Wichita, Kansas**

NOVEMBER 2012



## **Tab 1. Project Narrative**

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### ***Location***

The subject property is in the City of Wichita, Sedgwick County, Kansas. The proposed development is generally northeast of 13<sup>th</sup> Street and North Webb Road. The site is bordered by North Lindberg Street to the West and East 13<sup>th</sup> Street to the south. The site is a re-plat of lot 4 of the Waterfront Sixth Addition. The site lies within the southwest quarter of Section 9, Township 27 West, Range 2 East, 6<sup>th</sup> Principal Meridian. The plat area is approximately 3.8 acres, Appendix 1.1.

### ***Discussion of Development***

The site will develop as 9 commercial and office lots approximately 0.4 acres in size.

### ***Drainage Summary***

#### ***Pre-Development***

The site drains to the north into existing detention facilities constructed with various phases of the Waterfront Addition and to the south into an existing storm water sewer system that was designed for commercial development. Current land use consists of grass or pasture type usage. Pre-development runoff conditions for the site are discussed in the "Drainage Report for Waterfront Commercial, Waterfront Residential and Greenwich Office Park, Revised August 2007". Within this report, the site was located in sub-area drainage basins TR-20 ID 080 and 166.

#### ***Post-Development***

The entire site under post-developed conditions is included in the area tributary to the detention basin originally constructed for The Waterfront Sixth Addition, and subsequently altered to include post-developed flow from the site and from the west part of The Waterfront Residential Addition to the east. Post-developed runoff from the site is discussed in the "Drainage Report for Waterfront Commercial, Waterfront Residential and Greenwich Office Park, Revised August 2007". In this report, the site was modeled as a commercial area for post-developed conditions. There are multiple detention facilities constructed with the overall development which include modifications to the Waterfront Lake, Hotel Ponds, Waterfront Residential Pond, and dry detention. All of the facilities work together to reduce peak flow rates at the outfall of Beech Lake for the entire development. Table 1.1 below summarizes pre- and post-developed combined flows for the site, The Waterfront Sixth Addition, and from the west part of The Waterfront Residential Addition to the east.

This existing dry detention, residential pond, and Waterfront Lake provide post-developed detention and runoff volume control for The Waterfront Seventh Addition, The Waterfront Sixth Addition, and for the west part of The Waterfront Residential Addition to the east. The site will continue to drain as designed for the Waterfront 6<sup>th</sup> Addition.

### ***Best Management Practices***

The site will be seeded or sodded after completion of the construction of grading and utilities. During construction, curb protection, a construction entrance, and other erosion control devices will be used to prevent soil from leaving the site. A storm water pollution prevention plan will be developed and implemented prior to any soil disturbing activities.

## Appendix 1.1

---

Plat

**CERTIFICATE OF SURVEY**

I, Gregory J. Allison, a registered land surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "THE WATERFRONT EIGHTH ADDITION" an addition to Wichita, Sedgwick County, Kansas, into Lots, a Block, Reserves, and Street the same being accurately set forth in the accompanying plat and described herein:

A replat of Lot 4, Block 1, and Reserve "C", The Waterfront Sixth Addition, an addition to Wichita, Sedgwick County, Kansas.

All easements, rights-of-way, building setbacks, access controls, together with all other public dedications within the above described property, are hereby vacated and replatted by virtue of K.S.A. 12-512b.

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this \_\_\_ day of \_\_\_\_\_, 2012.

Gregory J. Allison, PE, LS #1257  
MKEC Engineering Consultants, Inc.  
411 North Webb Road  
Wichita, Kansas 67206

**OWNER'S CERTIFICATES**

Know all men by these presents that we the undersigned property owners of the land above set forth in the Registered Land Surveyor's Certificate, have caused the same to be surveyed and platted into Lots, a Block, Reserves, and Street the same to be known as "THE WATERFRONT EIGHTH ADDITION" an addition to Wichita, Sedgwick County, Kansas. The land contained herein is held and shall be conveyed subject to any applicable restrictions, reservations and covenants now on file or hereafter filed in the Office of the Register of Deeds of Sedgwick County, Kansas.

All abutters rights of access to or from 13th Street over and across the south line of "THE WATERFRONT EIGHTH ADDITION," are hereby granted to the appropriate governing body, provided however Block 1, shall be placed accordingly: The minimum distance between a full movement drive and another full movement drive shall be 400'; The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200' as set forth in the MAPD Access Management Regulations.

Easements for the construction and maintenance of public utilities and drainage, as indicated hereon, are hereby granted to the public.

Streets are hereby dedicated to and for the use of the public.

A drainage plan has been developed for this plat. All drainage easements, rights-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of stormwater.

Lots 1, 3, 4, and 5, Block 1, are required to adhere to the minimum pad elevation herein.

Reserves "A", and "B" are platted for berms, landscaping, irrigation, open space, monuments, sidewalks, and utilities in designated locations (by easement). Reserve "B" is also platted for drainage. The Reserves shall be owned and maintained by the Lot owner's association, provided however, that the undersigned or Lot owner's association as the undersigned successors in interest may, at its discretion deed parcels of said Reserves "A", and "B" to an owner(s) of an adjoining lot subject to the obligation to maintain such deeded parcel in compliance with the provisions hereof and in compliance with the maintenance covenants of any applicable restrictive covenants or regulations.

Beech Lake Investments, LLC, a Kansas Limited Liability Company and also;  
The Waterfront Holding Co., LLC, a Kansas Limited Liability Company

\_\_\_\_\_, Manager  
Johnny W. Stevens, Manager

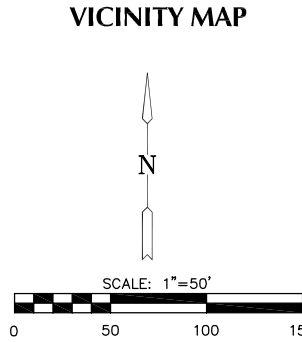
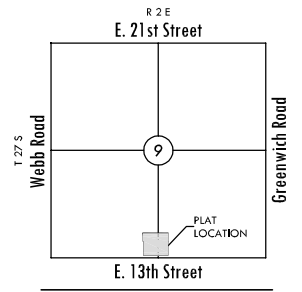
\_\_\_\_\_, Manager  
Stephen L. Clark, Manager

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This instrument was acknowledged before me on \_\_\_ day of \_\_\_\_\_, 2012, by Johnny W. Stevens, and Stephen L. Clark, Managers, Beech Lake Investment, LLC, a Kansas Limited Liability Company, and also; The Waterfront Holding Co., LLC, a Kansas Limited Liability Company.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year last above written.

SEAL \_\_\_\_\_, Notary Public  
Notary Public:  
My Term Expires: \_\_\_\_\_



Basis of Bearing: Kansas coordinate system of 1983 south zone grid bearing of N89°00'49"E along the S. line of SW ¼, Sec. 9, T27S, R2E, 6th P.M.

This plat is surveyed and platted on NAD88-09 using Kansas state plane south zone coordinates, modified to the surface, having a combined adjustment scale factor of 1.000120014401728

**BENCHMARK**

BM - Square cut on SW. corner of signal light pole base at NE. corner of Webb Rd. and 13th St.  
Elev.=1373.845 (NAVD 88)

**LEGEND**

Date of Survey: October, 2012

- △ = Section Corner Monument Found
- = Found 3/8" Rebar w/ MKEC CLS 39 id. cap
- = Set 3/8" rebar w/ MKEC CLS 39 id. cap
- (P) = Platted
- (D.E.) = Drainage Easement
- (U.E.) = Utility Easement

SW. cor., SW ¼, Sec. 9, T27S, R2E, 6th P.M.  
Fnd. chiseled "X"

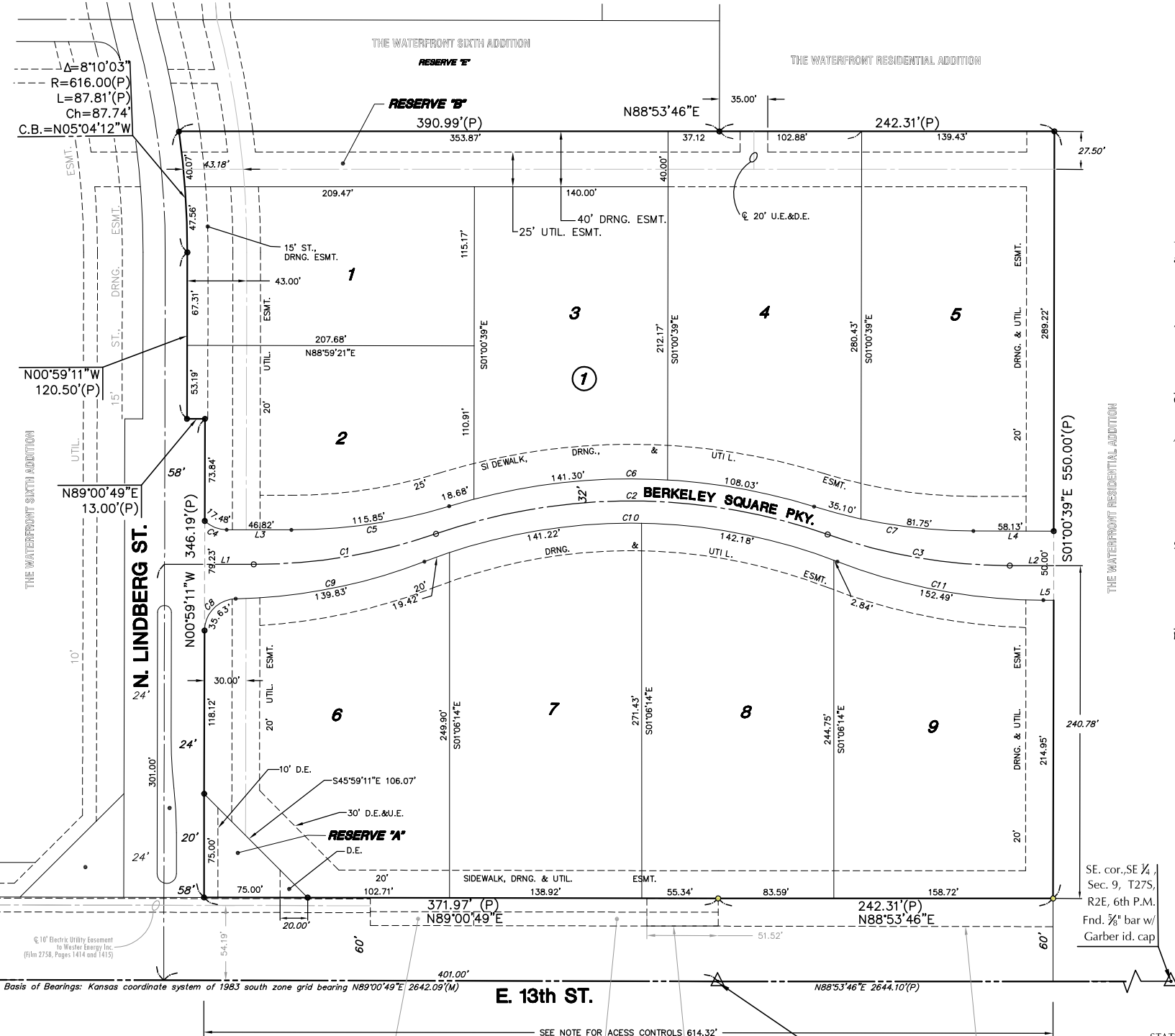
CURVE	LENGTH	RADIUS	DELTA
C1	134.30'	400.00'	19°14'11"
C2	288.73'	430.00'	38°28'22"
C3	134.30'	400.00'	19°14'11"
C4	17.48'	23.00'	43°33'24"
C5	115.85'	385.00'	17°14'29"
C6	268.01'	446.00'	34°25'50"
C7	117.00'	390.00'	17°11'21"
C8	35.63'	23.00'	88°45'20"
C9	139.83'	400.00'	20°01'45"
C10	305.67'	414.00'	42°18'10"
C11	152.49'	415.00'	21°03'14"

LINE	LENGTH	BEARING
L1	64.53'	N88°59'21"E
L2	31.74'	N88°59'21"E
L3	46.82'	N88°59'21"E
L4	58.13'	N88°59'21"E
L5	7.38'	N88°59'21"E

MINIMUM PAD ELEVATION LOWEST BUILDING OPENING		
LOT	BLOCK	ELEVATION NAVD 88
1, 3, 4, 5	1	1386.6

**FINAL PLAT**

**THE WATERFRONT EIGHTH ADDITION**  
AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS



Basis of Bearings: Kansas coordinate system of 1983 south zone grid bearing N89°00'49"E 2642.09'(M)

Right-of-way Agreement North 10' of the South 50' of the West 73.15' of the East 250' by Kansas Gas and Electric Co. Film 608, Page 1440

Easement for Right-of-way North 10' of the South 50' of the West 200.00' of the East 251.25' by Kansas Gas and Electric Co. Film 1743, Page 1805

20' Electric Utility Easement to Western Energy Inc. (Film 2758, Pages 1414 and 1415)

20' Grant of Right-of-Way to Kansas Gas-Electric, (Doc. #/Film-Pg: 28975193)

S. ¼ corner, Sec. 9, T27S, R2E, 6th P.M.  
Fnd. 3/8" bar w/ Garber id. cap

**NOTES**

Access Controls: 13th Street - Access points for Block 1 shall be placed accordingly: The minimum distance between full turning movement drives shall be 400'. The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200'.

**PLANNING COMMISSION CERTIFICATE**

This plat of "THE WATERFRONT EIGHTH ADDITION" has been submitted to and approved by the Wichita-Sedgwick County Metropolitan Area Planning Commission, Wichita, Kansas.

Dated this \_\_\_ day of \_\_\_\_\_, 2012

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

\_\_\_\_\_, Chair  
David Dennis, Chair

Attest: \_\_\_\_\_ Secretary  
John L. Schlegel, Secretary

Affix MAPC Seal

**GOVERNING BODY CERTIFICATE**

The dedications shown on this plat are hereby accepted and this plat is hereby approved by the governing body of the City of Wichita, Kansas.

Dated this \_\_\_ day of \_\_\_\_\_, 2012

At the direction of the City Council.

\_\_\_\_\_, Mayor  
Carl Brewer, Mayor

Affix City Seal

Attest: \_\_\_\_\_ City Clerk  
Karen Sublett, City Clerk

**TRANSFER RECORD**

STATE OF KANSAS, SEDGWICK COUNTY} ss:

Entered on transfer record this \_\_\_ day of \_\_\_\_\_, 2012

\_\_\_\_\_, County Clerk  
Kelly B. Arnold, County Clerk

Affix County Clerk Seal

**REGISTER OF DEEDS CERTIFICATE**

STATE OF KANSAS, SEDGWICK COUNTY} ss:

This is to certify that this instrument was filed for record in the Register of Deeds office this \_\_\_ day of \_\_\_\_\_, 2012, at \_\_\_ o'clock \_\_\_ M; and is duly recorded.

\_\_\_\_\_, Register of Deeds  
Bill Meek, Register of Deeds

Attest: \_\_\_\_\_ Deputy  
Tonya E. Buckingham, Deputy

Affix Register of Deeds Seal

**COUNTY SURVEYOR**

STATE OF KANSAS, SEDGWICK COUNTY} ss:

Reviewed in accordance with K.S.A. 58-2005 on this \_\_\_ day of \_\_\_\_\_, 2012.

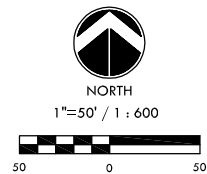
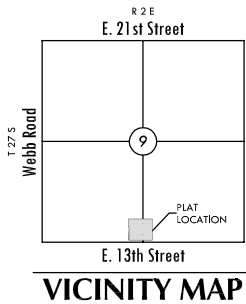
\_\_\_\_\_, Deputy County Surveyor  
Tricia L. Robello, LS #1246  
Deputy County Surveyor  
Sedgwick County, Kansas

**MKEC**  
ENGINEERING  
CONSULTANTS, INC.

411 N. WEBB ROAD  
WICHITA, KS. 67206  
316-684-9600

**NOTES**

1. LOCATION: Located in northeast Wichita, north of 13th Street North and east of Webb Road in an area of mixed uses having single family residential, hotels, and business offices.
2. LOT TOTAL: 9
3. ANNEXATION: City of Wichita
4. EXISTING/PROPOSED USES: Vacant Lot, Offices
5. ZONING: Existing - "LI" Limited Industrial  
Proposed - "LI" Limited Industrial
6. PLAT AREA: Gross - 7.89 acres
7. SURVEY DATE: October 2012 (by MKEC)
8. PUBLIC UTILITIES: Municipal sanitary sewer shall be extended to the site from the east. Municipal water is available from the north and east of property.
9. ACCESS CONTROLS: Access points for Block 1 along 13th Street shall be placed accordingly: The minimum distance between full turning movement drives shall be 400'. The minimum distance between a right-in/right-out drive and either another right-in/right-out drive or a full movement drive shall be 200'.
10. RESERVES: Reserves "A", and "B" are platted for berms, landscaping, irrigation, open space, monuments, sidewalks, and utilities in designated locations (by easement). Reserve "B" is also platted for drainage. The Reserves shall be owned and maintained by the lot owner's association, provided however, that the undersigned or Lot owner's association as the undersigned successors in interest may, at its discretion deed parcels of said Reserves "A", and "B" to an owner(s) of an adjoining lot subject to the obligation to maintain such deeded parcel in compliance with the provisions hereof and in compliance with the maintenance covenants of any applicable restrictive covenants or regulations.
11. FLOOD: According to FEMA FIRM Community Unit Panel 20173C0378E, effective date February 2nd, 2007; this property lies within flood zone "X", "Areas determined to be outside the 0.2% annual chance floodplain."
12. DRAINAGE: A drainage plan has been developed for this plat. All drainage easements, rights-of-way, or reserves shall remain at established grades or as modified with the approval of the applicable City or County Engineer, and unobstructed to allow for the conveyance of stormwater.



Basis of Bearing: Kansas coordinate system of 1983 south zone grid bearing of N89°00'49"E along the S. line of the SW ¼, Sec. 9, T27S, R2E, 6th P.M.

This plat is surveyed and platted on NAD83 using Kansas state plane south zone coordinates, modified to the surface, having a combined adjustment scale factor of 1.000120014401728

**LEGAL DESCRIPTION**

A replat of Lot 4, Block 1, and Reserve "C", The Waterfront Sixth Addition, an addition to Wichita, Sedgwick County, Kansas.

**LEGEND**

- - - EDGE OF TREES
- - DECIDUOUS TREE
- - SIGN
- - POWER POLE
- - ELECTRIC BOX
- - LIGHT POLE
- - FIRE HYDRANT
- - WATER VALVE
- - WATER METER
- - SECTION CORNER
- - BENCHMARK
- - - EASEMENT
- - - BUILDING SETBACK
- - - FENCE
- - - STORM SEWER PIPE
- - - WATER LINE
- - - SANITARY SEWER LINE
- - - GAS LINE
- - - GAS PIPELINE
- - - TELEPHONE LINE
- - - UNDERGROUND ELEC.
- - - CABLE LINE
- - - FIBER OPTIC CABLE

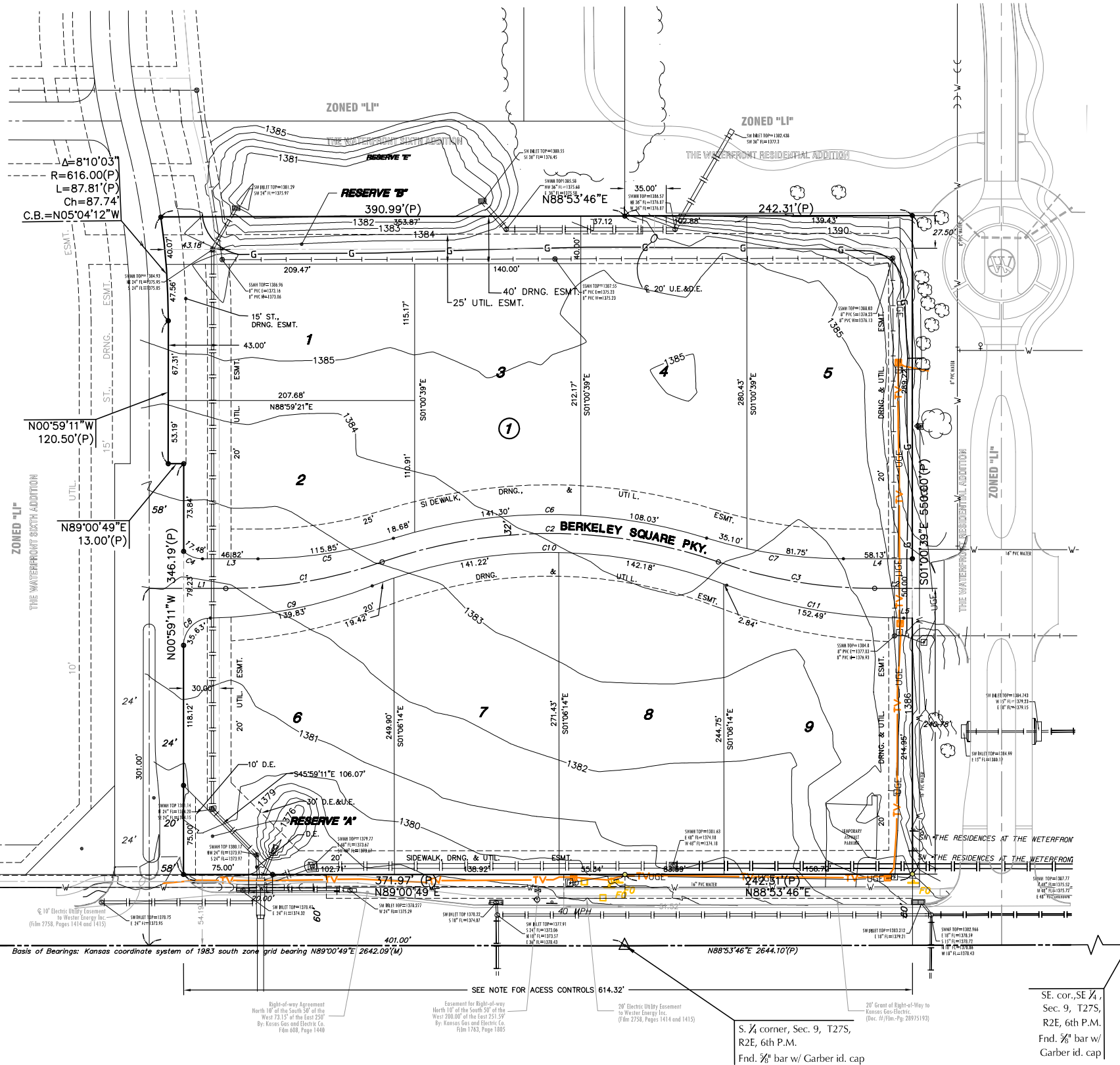
**BENCHMARK**

BM - Square cut on SW corner of signal light pole base at NE corner of Webb Rd. and 13th St. Elev.=1373.845 (NAVD 88)

MINIMUM PAD ELEVATION LOWEST OPENING		
LOTS (inclusive)	BLOCK	ELEVATION (NAVD88)
1, 3, 4, 5	1	1386.6

CURVE TABLE			
CURVE	LENGTH	RADIUS	DELTA
C1	134.30'	400.00'	19°14'11"
C2	288.73'	430.00'	38°28'22"
C3	134.30'	400.00'	19°14'11"
C4	17.48'	23.00'	43°33'24"
C5	115.85'	385.00'	17°14'29"
C6	268.01'	446.00'	34°25'50"
C7	117.00'	390.00'	17°11'21"
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C9	139.83'	400.00'	20°01'45"
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C11	152.49'	415.00'	21°03'14"

LINE TABLE		
LINE	LENGTH	BEARING
L1	64.53'	N88°59'21"E
L2	31.74'	N88°59'21"E
L3	46.82'	N88°59'21"E
L4	58.13'	N88°59'21"E
L5	7.38'	N88°59'21"E



**PRELIMINARY PLAT**

A portion of the Southwest Quarter, Section 9, Township 27 South, Range 2 East, 6th P.M.

**THE WATERFRONT EIGHTH ADDITION**

OWNER/DEVELOPER: Beech Lake Investments, LLC Attn: Johnny Stevens  
The Waterfront Holding Co., LLC Attn: Johnny Stevens

1223 N. Rock Road, Bldg. H200, Wichita, KS 67206  
PO Box 782257, Wichita, KS 67278

316-636-2100  
316-636-2100

Submitted: Oct. 22nd 411 N. WEBB ROAD  
Subdivision Hearing: Nov. 8th WICHITA, KS. 67206  
MAPC Hearing: Nov. 15th, 2012 316-684-9600



## Tab 2. Existing Conditions

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### *Description*

The site is approximately 3.8 acres of undeveloped ground consisting of grass or pasture. Existing conditions runoff for the site was included in the previous drainage report "Drainage Report for Waterfront Commercial, Waterfront Residential and Greenwich Office Park, Revised August 2007".

### *Soils*

The on-site soils are described in the previous drainage report noted above. According to the NRCS Sedgwick County Soil Survey, on-site soils consist mostly of Irwin silty clay loam (1 to 3% slopes) with a small amount of Goessel silty clay (1 to 3% slopes) in the north central part of the site. The Hydrological Soil Group classification for the Irwin and Goessel series soils is D. Drainage calculations in the previous report were based on class D soils.

### *Drainage Calculations*

#### *Runoff Method*

In the previous drainage report described above, pre-project conditions were modeled using a SCS TR-20 software model using the SCS 24-hour Type II design storms with a peaking factor of 484. In this model, the project site was included in sub-areas TR-20 ID 053 and 065. These sub-areas included the site.

#### *Rainfall*

The rainfall information used in the previous TR-20 modeling efforts was from the Kansas Department of Transportation Rainfall Depths for Kansas Counties June 1997. The rainfall values are shown below in Table 2.1.

Table 2.1. 24-Hour Rainfall Depths.

	2-Yr	5-Yr	10-Yr	100-Yr
Sedgwick	3.50	4.53	5.24	7.80

#### *Time of Concentration*

Time of concentration used for pre-development conditions for sub-area TR-20 ID 053 was 0.8340-hr or about 50-minutes and TR-20 ID 065 was 1.0448-hr or about 62.7 minutes.

#### *Curve Numbers*

The pre-development curve number used for sub-area TR-20 ID 053 was 84 and TR-20 ID 065 was 86.2.

#### *Drainage Patterns*

For pre-development conditions, the site generally drains south to the existing storm water sewer system.

## Tab 3. Post-Development Conditions

---

### **Description**

The 3.8 acre site will be platted into 9 smaller commercial and office lots rather than one large commercial lot. The site will continue to drain as previously planned. Post-developed conditions for the site were included in the previous drainage report "Drainage Report for Waterfront Commercial, Waterfront Residential and Greenwich Office Park, Revised August 2007". Multiple detention facilities work together to reduce the peak outflow at the outlet of Beech Lake. The Waterfront Residential Pond and the dry detention in the commercial area to the north provide storm water detention (volume control) for a drainage area which includes the site, as shown on the Drainage and Utility Plan Appendix 3.1. These areas were over detained to allow for portions of the property to leave the site undetained.

Water quality protection (WQv) and channel protection volumes (CPv) were calculated in the Waterfront Seventh Addition. WQv for the developments will also be provided within the existing Hotel Pond, Waterfront Residential Pond, the Waterfront Ponds, and Beech Lake. The overall lake/pond system will supply the CPv as noted in the Waterfront Seventh Drainage Report.

### **Drainage Calculations**

#### **Runoff Method**

In the previous drainage report noted above, post-project conditions were modeled using a SCS TR-20 software model using the SCS 24-hour Type II design storms with a peaking factor of 484. In this model, the project site was included in sub-area TR-20 ID 080 and 166.

#### **Rainfall**

The rainfall information used in the previous TR-20 modeling efforts for post-developed conditions was from the Kansas Department of Transportation Rainfall Depths for Counties June 1997. The rainfall values are shown below in Table 3.1.

Table 3.1. 24-Hour Rainfall Depths.

	2-Yr	5-Yr	10-Yr	100-Yr
Sedgwick	3.50	4.53	5.24	7.80

#### **Time of Concentration**

The post-developed time of concentration used for sub-area TR-20 ID 080 was 0.2556-hr or about 15-minutes and TR-20 ID 166 was 0.7876 or about 29-minutes.

#### **Curve Numbers**

The post-development curve number used for sub-area TR-20 ID 080 was 95 and 166 was 87.9 to represent the proposed commercial areas. Since the site will continue to develop as commercial as planned, the curve numbers will not change.

#### **Drainage Patterns**

The site will be graded and storm systems will be constructed to convey runoff from all storm events into the existing detention on the north and existing 48" storm water sewer to the south. The storm sewer layout is shown on the drainage and utility plan, Appendix 3.1. The proposed storm collection systems will convey runoff from the entire development into existing detention and storm water sewer facilities.

### ***Storm Water Sewer Systems***

Hydraflow Storm Sewers software was used for the hydraulic calculations for the proposed storm pipe systems. These pipe systems are preliminary sized for a 5-year event, in accordance with the commercial area they serve.

### ***Stormwater Quality Management***

WQv calculations for the site and for the remaining undeveloped tributary area to the south were completed in the Waterfront Seventh Addition Drainage Report April 2012. Although some open areas are planned for the site, the calculations proceeded with the assumption that there would not be any post-developed wooded areas. For the area south of the Hotel Pond, this area will develop completely as commercial. Approximately 1.1-acre-ft of treatment volume was required for the Seventh Addition, and 1.0-acre-ft for the undeveloped area that includes the Waterfront 8<sup>th</sup> Addition. Consequently, a total 2.1-acre-ft of WQv was needed. This treatment volume is obtained below the normal pool of the upper portion of the Hotel Pond, in the Waterfront Lake, and Beech Lake.

The Waterfront Lake and Beech Lake provide a permanent water quality pool volume. This pool has the capacity to remove the required 80% of post-developed total suspended solids (TSS) load from the site.

CPv for the site and for the remaining undeveloped tributary area to the south is provided in the regional lake complex on site. The Waterfront Lake and the connected Beech Lake are controlled by a downstream weir and dam. The weir includes a notch which has a dimension of 1-ft (deep) x 12-ft.(length). The 1-ft notch controls approximately the 1-year storm for the entire upstream 780 acre basin. The volume of water that accumulates within the Beech Lake ponds and controlled by 1-ft notch is approximately 40-acre-ft.

Appendix 3.4 contains the stage-storage-discharge information for Beech Lake which demonstrates the time for this volume of water to discharge downstream. The time for discharging this entire volume is nearly five days to reach the normal pool elevation of the Beech Lake.

A cursory review of the 780-acre basin indicates 65 to 75-acre-ft volume would be required to control the CPv for the entire 780 ac basin. This available volume CPv, coupled with several other ponds within the watershed indicates that the CPv is being provided on a regional basis within existing basin conditions.

## Appendix 3.1

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### Drainage and Utility Plan

**PRELIMINARY**  
NOT FOR  
CONSTRUCTION

**THE WATERFRONT**  
EIGHTH ADDITION

**DRAINAGE & UTILITY PLAN**

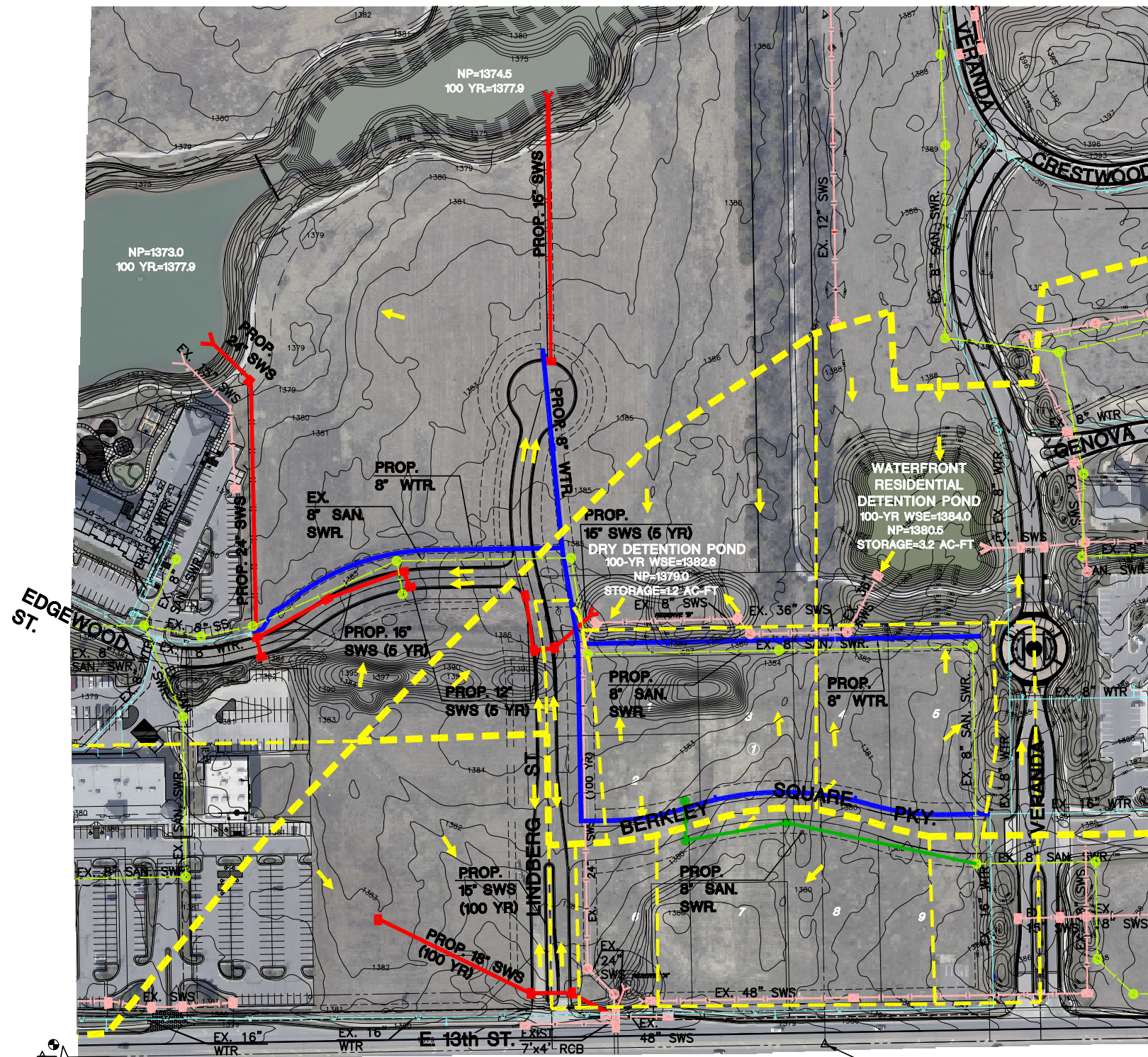
SHEET TITLE  
**02014**  
PROJECT NUMBER

KLA / DM / GJA  
DESIGNED DRAWN CHECKED

ISSUED  
**October 2012**

REVISED

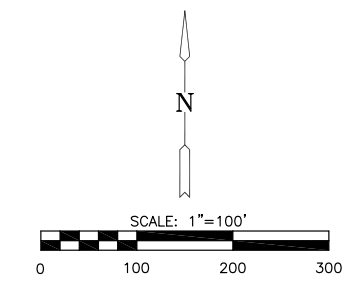
SHEET NO.



SW. cor., SW 1/4, Sec. 9, T27S, R2E, 6th P.M.  
Fnd. chiseled 'X'

S. 1/4 corner, Sec. 9, T27S, R2E, 6th P.M.  
Fnd. 3/8" bar w/ Garber id. cap

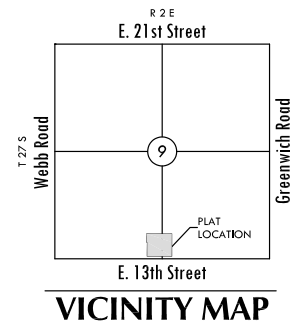
SE. cor., SE 1/4, Sec. 9, T27S, R2E, 6th P.M.  
Fnd. 3/8" bar w/ Garber id. cap



MINIMUM PAD ELEVATION LOWEST BUILDING OPENING		
LOT	BLOCK	ELEVATION NAVD 88
1, 3, 4, 5	1	1386.6

**BENCHMARK**

- BM - Square cut on SW. corner of signal light pole base at NE. corner of Webb Rd. and 13th St.  
Elev.=1373.845 (NAVD 88)



**LEGEND**

- 6IN - CONIFEROUS TREE
- 3IN - DECIDUOUS TREE
- SN - SIGN
- PP - POWER POLE
- ELEC BOX - ELECTRIC BOX
- LP - LIGHT POLE
- FH - FIRE HYDRANT
- WV - WATER VALVE
- WM - WATER METER
- SC - SECTION CORNER
- BM - BENCHMARK
- - EASEMENT
- - BUILDING SETBACK
- x --- - FENCE
- - EXIST. STORM SEWER PIPE
- - EXIST. WATER LINE
- - EXIST. SANITARY SEWER LINE
- - PROP. STORM SEWER PIPE
- - PROP. WATER LINE
- - PROP. SANITARY SEWER LINE
- G --- - GAS LINE
- P --- - GAS PIPELINE
- UGT --- - TELEPHONE LINE
- UGE --- - UNDERGROUND ELEC.
- OHE --- - OVERHEAD ELECTRIC
- FDC --- - FIBER OPTIC CABLE I
- - DRAINAGE SUB BASIN
- - FLOW ARROW

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PLOTED: Tuesday, November 20, 2012 @ 01:43PM

#### **Tab 4. Floodplain Submittal**

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There are no FEMA floodplains on the site. According to FIRM Map 20173C0378E with an effective date of February 2, 2007 and as revised with LOMR effective March 27, 2008, Panel 378 of 700, the nearest floodplain is about 112-ft downstream of the Hotel Pond on the west side of Waterfront Parkway.

## **Tab 5. Permits**

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### ***US Army Corps of Engineers***

There are no jurisdictional waters on the site, and no stream crossing or channel changes are proposed; therefore no Corps permit will be required

### ***Kansas Department of Agriculture***

The proposed site development does not change any waterways or provide any new detention areas; therefore a DWR permit will not be required.

### ***Federal Emergency Agency (FEMA)***

There are no FEMA floodplains on site; therefore no LOMC applications are required.

### ***Kansas Department of Transportation***

There are no state highways on site, nor is access to one needed.

### ***Sedgwick County Right-of-way Permit***

The site is within City limits, and access to a County is not required..