

ENGINEERING SUCCESS



411 N. Webb Rd.
Wichita, KS 67206
316.684.9600

DRAINAGE REPORT FOR

Cargill Addition
Wichita, Kansas

PROJECT NUMBER: 1601060462
DATE: May 2017



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General Information

Purpose

Cargill Grain and Oil Seed Supply Chain Facility has proposed an expansion and redevelopment of their existing plant. A re-plat of a portion of the property is required to identify property lines and boundaries for the expansion along with vacating easements, setbacks, and street right-of-way. This report is required for plat approval and allows for review of conformance with city requirements for managing drainage. This report will review existing drainage conditions and evaluate proposed drainage conditions as a result the facility expansion.

Location

The project is located in the City of Wichita, Sedgwick County, Kansas. The area of the proposed plat is 15.4 acres. The property lies between 13th Street and 16th Street, and west of Mosley Street in an industrial corridor that is supported by rail access. The site is located in Section 9, Township 27 South, Range 2 East. The property is currently platted as Parameters Second Addition and Glaze's Addition. The site is shown on the USGS Quadrangle, Appendix A, and the Aerial Photograph, Appendix B.

Development

The site is the location of a Cargill Grain and Oil seed Supply Chain Facility. The facility receives soybeans by truck. An existing soybean oil extraction facility processes the soybeans. Soybean meal is shipped offsite via rail and truck. Soybean oil is transferred to the refinery facility within the bounds of the plat. A multiple railcar loading/unloading area is located west of the refinery. Stormwater runoff is collected in containment basins at the refinery and rail loadout areas within the refinery. Then runoff from the containment areas is treated by an on-site water treatment facility before discharging into the existing public sanitary sewer system. Cargill operates under City of Wichita Wastewater Discharge Permit #5082.

The property is being platted as the Cargill Addition, three lots ranging in size from 1.8 to 9.7 acres. A portion of the new processing facility is currently under construction and is located west of the existing extraction facility. Cargill is underway with the planning of a new operation that will be constructed on Lot 1, Block 1. A tank farm and additional railcar loading/unloading are also being planned to support the various operations on the Cargill property. A new onsite water treatment facility will be constructed north of the existing refinery facility. The new treatment facility will replace the existing treatment facility. The existing facility will remain and will be modified into a pump station to transfer stormwater to holding tanks and/or the treatment facility, but no longer treat water. The plat is shown in Appendix C. Brenntag Southwest owns property adjacent to and surrounded by the re-platted property and is not included in the plat or proposed improvements.

Datum

The project is shown in NAVD 88 Datum.

Soils

The site is comprised of the following soil types according to the NRCS (SCS) Soil Survey, Appendix D:

- Urban land-Elandco Complex, 0 to 1 percent slopes, HSG "B"

Since the site is heavily compacted industrial use land, the Hydrologic Soil Group (HSG) for selection of runoff curve numbers (CN) is HSG "D".

Flood Insurance Rate Map (FIRM)

The site is in Zone X, areas with reduced risk flood due to levee, areas with a 0.2% annual chance flood hazard, and areas 1% annual chance flood with average depth less than one foot or with drainage areas

of less than one square mile, according to FEMA FIRM panel 20173C354G effective December 22, 2016, as shown in Appendix E. The nearest Zone AE floodplain is located approximately 1,000 feet east of the property along Wichita Drainage Canal.

Drainage Patterns

Hydrologic Methods

The drainage basin was modeled using Hydraflow Hydrographs by AutoCAD. Existing and proposed conditions Hydraflow Hydrographs outputs are located in Appendix F. The SCS method was used in calculations with rainfall depths determined from Mid-Century weather station in Wichita, Kansas, NOAA Atlas 14 Volume 8 Version 2, as shown in Table 1.

Table 1. Rainfall Depths (inches) for 24-Hour Design Storm

| | 1-Year | 2-Year | 5-Year | 10-Year | 25-Year | 50-Year | 100-Year |
|-------------|--------|--------|--------|---------|---------|---------|----------|
| Mid-Century | 2.90 | 3.39 | 4.24 | 6.05 | 6.71 | 6.92 | 7.83 |

Drainage Patterns

The site has a drainage area of approximately 19.1 acres and slopes from north to south with elevations ranging from 1310.1 to 1304.4, as shown in Appendix G. Brenntag Southwest and the existing Cargill Facility outside of the proposed plat, drains from north to south onto the Cargill Addition. The refinery facility and rail loadout are 2.1 acres of 100% contained area and flows to the water treatment facility. Existing area, time of concentration, curve number, and peak flow rates for the site are shown in Table 2. It was determined the site has a curve number of 95 representing an industrial site since this site is fully developed and compacted in most pervious areas.

Table 2. Drainage Conditions

| | Area (acres) | Tc (min) | CN | 1-Yr (cfs) | 2-Yr (cfs) | 5-Yr (cfs) | 10-Yr (cfs) | 25-Yr (cfs) | 50-Yr (cfs) | 100-Yr (cfs) |
|----------|--------------|----------|----|------------|------------|------------|-------------|-------------|-------------|--------------|
| Existing | 17.0 | 19.6 | 95 | 44.4 | 52.9 | 67.6 | 80.2 | 98.5 | 114 | 129 |
| Proposed | 15.2 | 19.6 | 95 | 39.7 | 47.3 | 60.4 | 71.7 | 88.1 | 102 | 115 |

The runoff from the proposed processing facility, tank farm, and additional rail loading/unloading is 100% contained within the basin. This additional area combined with existing containment areas result in a total of 3.9 acres or 1.8 acre increase in contained area. The areas within the plat that will be contained are shown in Appendix H. This reduces the drainage area leaving the site by 1.8 acres. Proposed area, time of concentration, curve number, and peak flow rates for the site are shown in Table 2. The curve number of 95 was used since the site will continue to be used for industrial land use. With the addition of the contained area to the site, all design storm peak flow rates are reduced, therefore no detention is required.

Water Quality

City of Wichita Water Quality requirements will be achieved through a Hydroguard system that was installed in Mead Avenue at 13th Street to treat areas of the site with soybean debris. This Hydroguard provides water quality for portions of the site in addition to the water treatment that occurs on all contained areas.

If additional water quality is required, it will be obtained through the City of Wichita's in-lieu-of program. The program offers the Developer/Owner pay for establishing and maintaining those offsite BMP's by paying \$19/acre/year for the total project area. The monthly fee is ongoing and does not go away. Fees may be periodically adjusted as the program matures.

Channel Protection

Channel protection is not needed in this area because this area is shown as not required on the Map of Downstream Stabilization Standard Watershed and Streams.

According to the Map of Downstream Stabilization Standard Watershed and Streams, Appendix G-2 of the C.O.W. of the drainage manual this site is in an area that does not require channel protection.

Utilities

Existing stormwater sewer, sanitary sewer, and water are located along 13th Street, Barwise Avenue, and 15th Street. These utilities will continue to serve any improvements to the site.

Permitting

U.S. Army Corps of Engineers

Since there are no potential wetlands on the site and there is no blue line stream on the site, permitting through the U.S. Army Corps of Engineers will not be required.

Federal Emergency Management Agency (FEMA)

There are no FEMA floodplains on the site; therefore permitting through FEMA will not be required.

Kansas Department of Health and Environment (KDHE)

Since the site disturbs more than 1.0 acre, a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) will be required.

Kansas Department of Health and Management (KDWPT)

The KDWPT will be contacted during the KDHE NOI permitting process. It is not anticipated there will be any concerns.

Kansas Historical Society (KHS)

The KHS will be contacted during the KDHE NOI permitting process. Since there are no historical buildings on site, it is not anticipated there will be any concerns.

Kansas Division of Water Resources (DWR)

Water Structure, Channel Changes, and Floodplain Fill

Since all the drainage areas draining through the site are under 640 acres, water structures, channel change, and floodplain fill permits are not required.

Water Appropriations

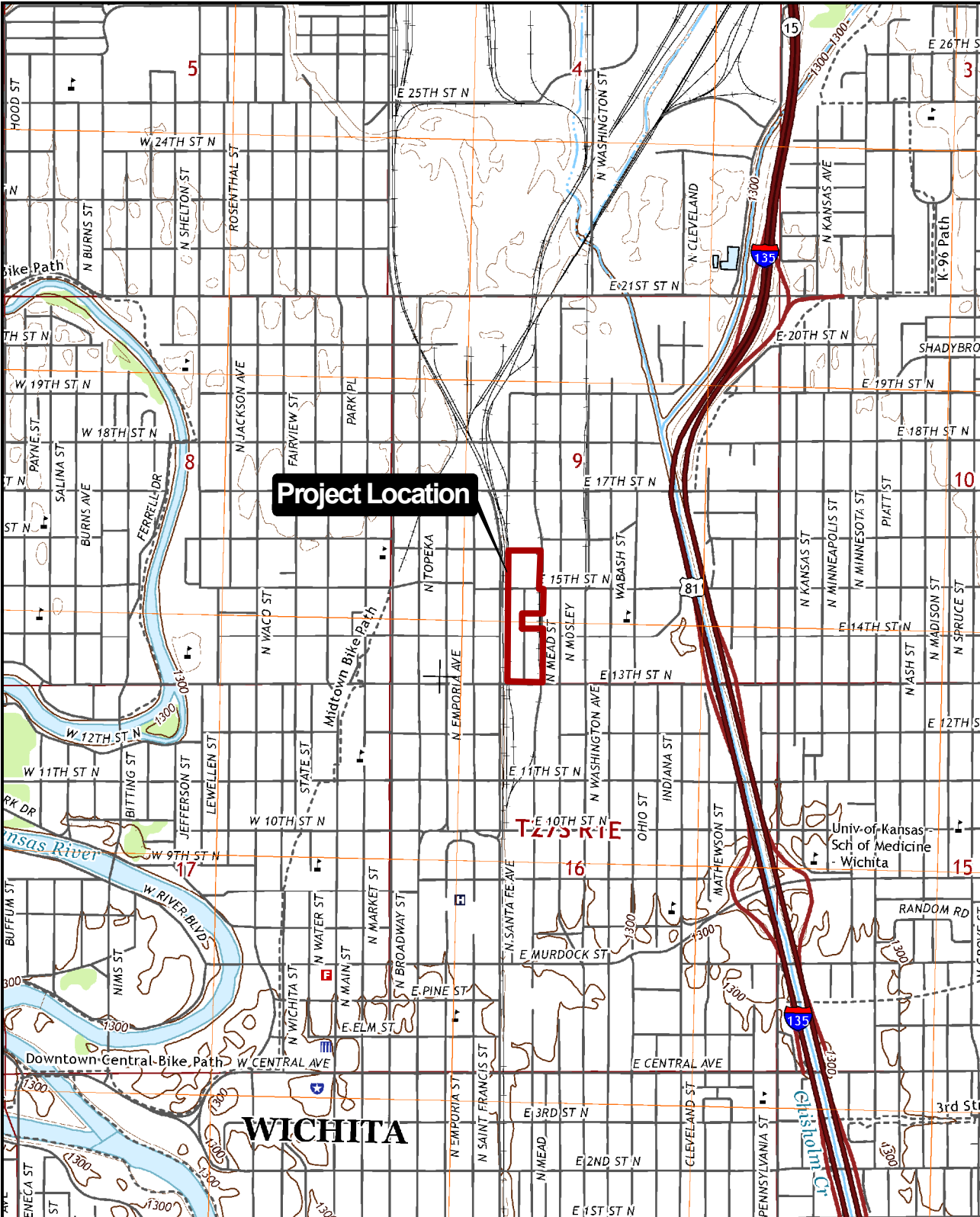
There will not be a pond with a permanent pool; therefore, a water appropriations permit will not be provided.

Summary

The project is located in the City of Wichita, Kansas. The site is being re-platted into three lots to identify property lines and boundaries and vacate easements, setbacks, and right-of-ways. The existing site includes a soybean oil extraction facility, refinery facility, soybean storage tanks, rail lines, and a water treatment facility.

The proposed project will add a new processing facility, a tank farm, and new water treatment facility. With the improvement to the site, 1.8 acres of additional area will be contained and treated prior to discharge into the City's sanitary sewer system, thus decreasing the overall storm runoff from the site. All containment will be treated, monitored, and released to the City's sanitary sewer system under a City Wastewater Discharge Permit. Since the peak flow rates in all design storms are reduced with the improvements to the site, no additional detention is required. Water Quality requirements for the site will be provided through an existing Hydroguard structure, water treatment of all contained areas, and if necessary, the City of Wichita's in-lieu fee program.

Appendix A - USGS Quadrangle



**USGS QUAD EXHIBIT
CARGILL TRIANGLE
WICHITA, KANSAS**

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**SEC: 09
TWP: T27S
RNG: R1E**

PROJECT NO. 1601060462

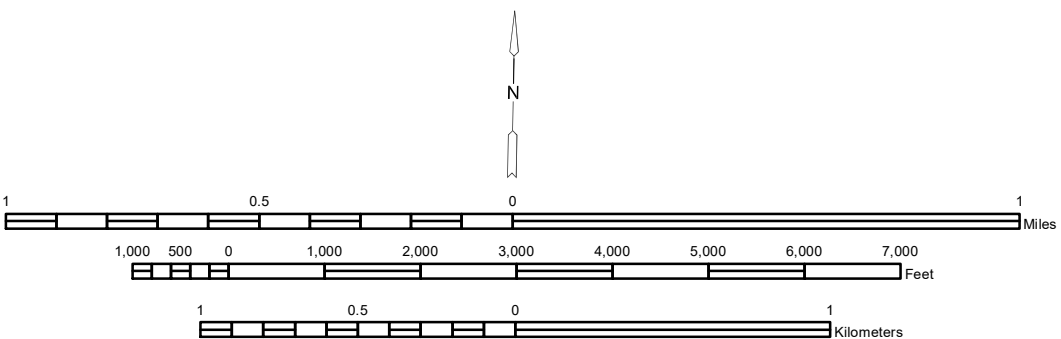
DATE 5/9/2017

SCALE 1"=2000'

DESIGNED DRAWN CHECKED
LES LES KLA

| NO. | REVISION | DATE |
|-----|----------|------|
| | | |
| | | |
| | | |

SHEET NO.



Appendix B - Aerial Photograph



SAINT FRANCIS AVE

15TH ST

SANTA FE AVE

MEAD AVE

Project Location

MOSLEY AVE

WASHINGTON AVE

14TH ST

13TH ST

16TH ST



0 62.5 125 250
1"=250' / 1:3000

SEC: 09
TWP: T27S
RNG: R1E

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Wichita, KS • 316.684.9600

**AERIAL EXHIBIT
CARGILL TRIANGLE
WICHITA, KANSAS**

| | | |
|------------------------|------------------|------------------|
| PROJECT NO. 1601060462 | DATE: 5/9/2017 | SHEET NO. |
| DRAWN BY: LES | DESIGNED BY: LES | APPROVED BY: KLA |
| | | 1 OF 1 |

Appendix C - Plat

LEGAL DESCRIPTION

A replat of the below described tract of land:

Lots 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, and 59, Parmenters Second Addition to Wichita, Sedgwick County, Kansas, together with the vacated east-west alley running between Barwise and Mead and parallel to and just north of Thirteenth Street, and the vacated alley at the rear of Lots 8, 9, 10, 11, 12, 13, and 14, from Barwise Avenue to the west right-of-way of the Atchison, Topeka and Santa Fe Railway Company, and the West Half of the vacated north-south alley commencing at the north line of said Lot 59, thence directly south to Thirteenth Street,
 TOGETHER WITH,
 The West Half of Lot 2, Glaze's Addition to Wichita, Sedgwick County, Kansas, EXCEPT the east 18.75 feet thereof for street, TOGETHER WITH,
 Lots 1, 2, 3, 4, 5, 6 and 7, on Thirteenth Street, together with the South Half of the vacated alley adjoining on the North AND Lots 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58 and 60, on Barwise Avenue, together with the North Half of the vacated alley adjoining Lot 16 on the South, all in Parmenters Second Addition to Wichita, Sedgwick County, Kansas,
 TOGETHER WITH,
 Commencing at the Northwest corner of the South Half of Lot 10, Glaze's Addition to Wichita, Sedgwick County, Kansas, thence East 226 feet; thence in a Southerly direction a distance of 264.51 feet, more or less, to a point on the North line of Fifteenth Street; thence West along the North line of Fifteenth Street a distance of 223.6 feet; thence North 264.39 feet to the point of beginning, being a part of Lots 10 and 8, Glaze's Addition to Wichita, Sedgwick County, Kansas,
 TOGETHER WITH,
 Lots 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33, on Pearl Street, in Carey Avenue Addition to the City of Wichita, Sedgwick County, Kansas,
 TOGETHER WITH,
 Reserve "A", Carey Avenue Addition to the City of Wichita, Sedgwick County, Kansas,
 TOGETHER WITH,
 The 9 foot platted alley lying south of Lots 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33, on Pearl Street and north of Reserve A, all in Carey Avenue Addition to the City of Wichita, Sedgwick County, Kansas,
 TOGETHER WITH,
 A part of Lots 8 and 10, in Glaze's Addition to Wichita, Kansas, described as:
 Beginning at a point 19.5 feet North of the Southeast corner of Lot 8; thence North along the East line of Lots 8 and 10, a distance of 264.72 feet, more or less, to the Northeast corner of the South one-half of said Lot 10; thence West along the North line of the South one-half of said Lot 10, to a point in the center line of a sanitary sewer, said point being 226 feet East of the Northwest corner of the South one-half of said Lot 10; thence Southerly along the center line of said sanitary sewer to a point 223.6 feet East and 19.5 feet North of the Southwest corner of said Lot 8; thence East to the point of beginning, Sedgwick County, Kansas, EXCEPT the South 5 feet thereof dedicated for street purposes,
 TOGETHER WITH,
 The East Half of Lot 4, except the West 31.25 feet thereof, and the East Half of Lot 6, except the North 40.5 feet thereof, and except the West 31.25 feet thereof, Glaze's Addition to Wichita, Sedgwick County, Kansas,
 TOGETHER WITH,
 The West 185 feet of Lots 4 and 6, Glaze's Addition to Wichita, Sedgwick County, Kansas,
 TOGETHER WITH,
 That part of 15th Street adjoining and abutting the north line of Lot 6, Glaze's Addition to Wichita, Sedgwick County, Kansas lying west of Barwise Avenue and lying east of the west line of said Glaze's Addition,
 TOGETHER WITH,
 That part of Mead Avenue lying east of the following:
 Lots 1, 2, 3, 4, 5, 6 and 7, on Thirteenth Street, together with the South Half of the vacated alley adjoining on the North AND Lots 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58 and 60, on Barwise Avenue, together with the North Half of the vacated alley adjoining Lot 16 on the South, all in Parmenters Second Addition to Wichita, Sedgwick County, Kansas,
 TOGETHER WITH,
 That part of Mead Avenue lying east of the following:
 The East Half of Lot 4, except the West 31.25 feet thereof, and the East Half of Lot 6, except the North 40.5 feet thereof, and except the West 31.25 feet thereof, Glaze's Addition to Wichita, Sedgwick County, Kansas,
 TOGETHER WITH,
 That part of Pearl Street platted in Carey Avenue Addition to the City of Wichita, Sedgwick County, Kansas.

CONTAINS: square feet or 15.55 acres of land, more or less.

NOTES

- LOCATION: Located in central Wichita lying north of 13th Street and south of 16th Street east of the elevated BNSF Railroad and west of Mosley Street in an industrial corridor that is supported by access to railroads. Cargill corporation has a strong presence in the area and owns much of the land in immediate vicinity. The subject property operates a division of their Cargill Agricultural Supply Chain (CASC).
- REPLAT HISTORY: Glazes Addition was platted on December 12, 1884; Parmenters 2nd Addition was platted on June 25, 1886; Carey Avenue Addition was platted on May 11, 1887.
- LOT TOTAL: 3
- EXISTING/PROPOSED USES: Existing - Industrial Manufacturing / Processing
Proposed - Industrial Manufacturing / Processing
- ZONING: Existing - "LI" Limited Industrial
Proposed - "LI" Limited Industrial
- PLAT AREA: Gross: 670,856 sq. ft. or 15.4 acres ±
- SURVEY DATE: May 2017 (by MKEC)
- PUBLIC UTILITIES: Municipal sanitary sewer is provided within the Barwise Avenue street right-of-way and 15th Street right-of-way. There is also an existing municipal sanitary sewer line north of 15th Street that will be partially abandoned west of extended Barwise Avenue. Easements are being provided over the sewer infrastructure that will remain operational. Municipal water is provided in 15th Street and in Barwise Avenue rights-of-way. Municipal stormwater is available within Barwise Avenue, 15th Street, and 13th Street rights-of-way. Easements are being provided over the stormwater infrastructure that will remain operational.
- FLOOD: According to FEMA FIRM Community Unit Panel 2017C0354G, effective date December 22, 2016; this property lies within a portion of flood zone "X", "0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile"; as well as Area with Reduced Flood Risk due to Levee.
- DRAINAGE: A drainage report shall accompany this final plat.
- BUILDING SETBACKS: Zero foot except for an existing twenty foot private building setback and five feet along the south south side of property abutting 13th Street, as shown hereon.
- ACCESS CONTROLS: All abutters rights of access to or from 13th Street North over and across the south line of "CARGILL ADDITION," are hereby granted to the appropriate governing body, provided however two full movement openings shall be allowed as indicated hereon.
- PROJECT ELEVATION: Existing contours are shown in NAVD 88 datum. Existing utility elevations are shown in Cargill project datum. Conversion between the two datums are as follows: Cargill datum + 1188.2 = NAVD 88

LEGEND

- 6IN - Coniferous Tree
- Edge Of Trees
- Deciduous Tree
- SN - Sign
- Pole
- Telephone Riser
- Telephone Vault
- Cable TV Riser
- Fiber Optics Indicator Sign
- Power Pole
- Light Pole
- Electric Transformer
- Sanitary Sewer Manhole
- Fire Hydrant
- Water Valve
- Existing Structure
- Easement
- Fence
- Storm Sewer Pipe
- Water Line
- Sanitary Sewer Line
- Gas Line
- Overhead Electric
- Underground Telephone
- Section Corner Monument Found
- Found 3/4" rebar w/ Ruggles & Bohm Id cap (or see annotation for type)
- Set 3/4" rebar w/ MKEC CLS 39 Id. cap (or see annotation for type)
- Benchmark
- Measured
- Described
- Platted
- Calculated from Measurement
- Calculated from Described
- Calculated from Plat
- C.A.C. - Complete Access Control
- Lot
- Block

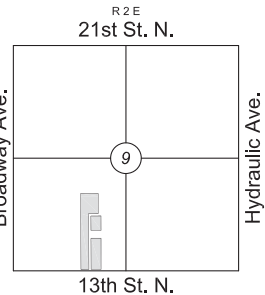
BENCHMARKS

- BM#1 Chiseled square cut on pipe rack footing, near the southeast corner of tank containment area, south end of loading rack along railroad tracks, Elev. = 1307.596 NAVD 88, (Cargill Datum = 119.396)
- BM#2 Chiseled square cut on top of concrete retaining wall at the northeast corner of transformer containment, South of Geka Building, Elev. = 1306.99 NAVD 88, (Cargill Datum = 118.79)



Basis of Bearings: Kansas coordinate system of 1983 south zone bearing of N89°15'38"E on the south line of the Southwest Quarter, Section 9, Township 27 South, Range 1 East of the 6th Principal Meridian. 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

SW. cor., SW. 1/4, Sec. 9, T27S, R1E, 6th P.M.



VICINITY MAP

PRELIMINARY PLAT

A portion of the SW. 1/4, Sec. 9, T27S, R1E, 6th P.M.

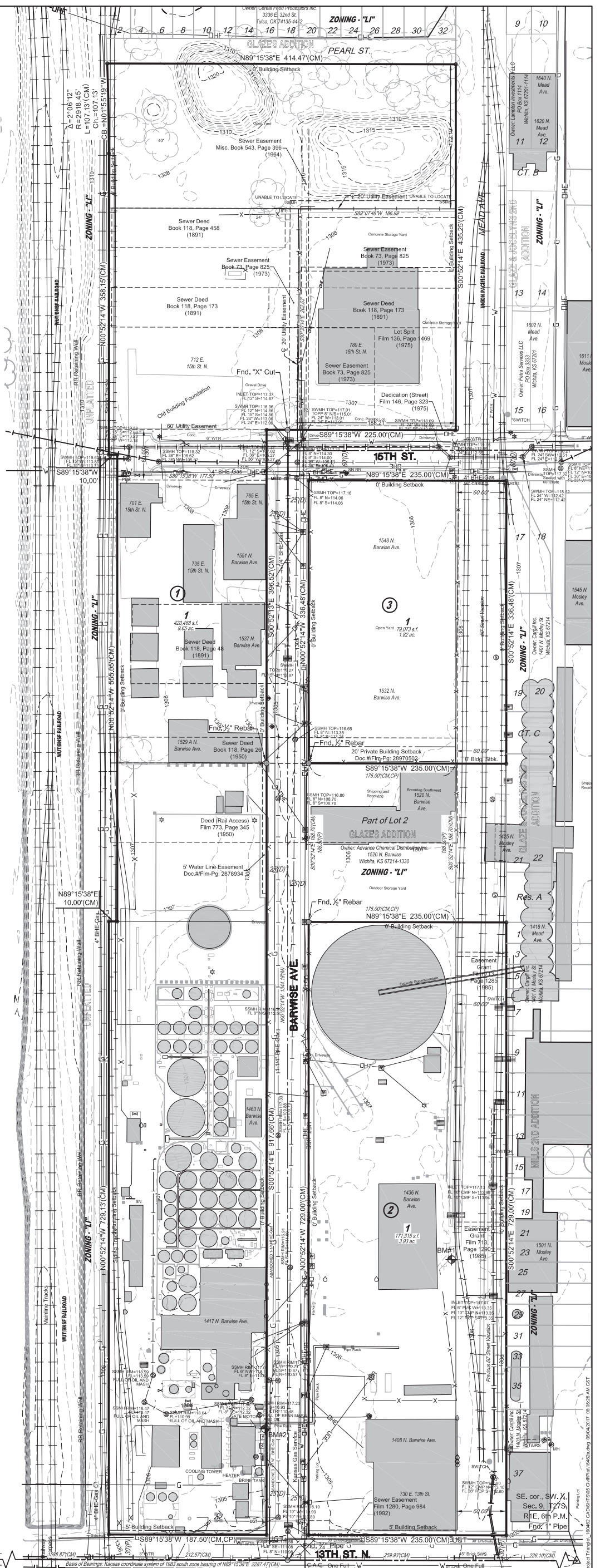
CARGILL ADDITION

OWNER / DEVELOPER: Cargill, Incorporated 1401 N. Mosley St., Wichita, KS 67214 (316) 292-2354

SUB2017-20
 Subdivision Meeting: May 25, 2017
 Date submitted: May 8, 2017

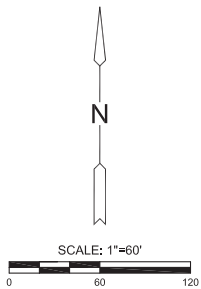


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FINAL PLAT CARGILL ADDITION

AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS
a replat of portions of Parmenters Second Addition, Glaze's Addition, Carey Avenue Addition, and 15th Street,
all in the Southwest Quarter, Section 9, Township 27 South, Range 1 East, of the 6th Principal Meridian, Wichita, Sedgwick County, Kansas

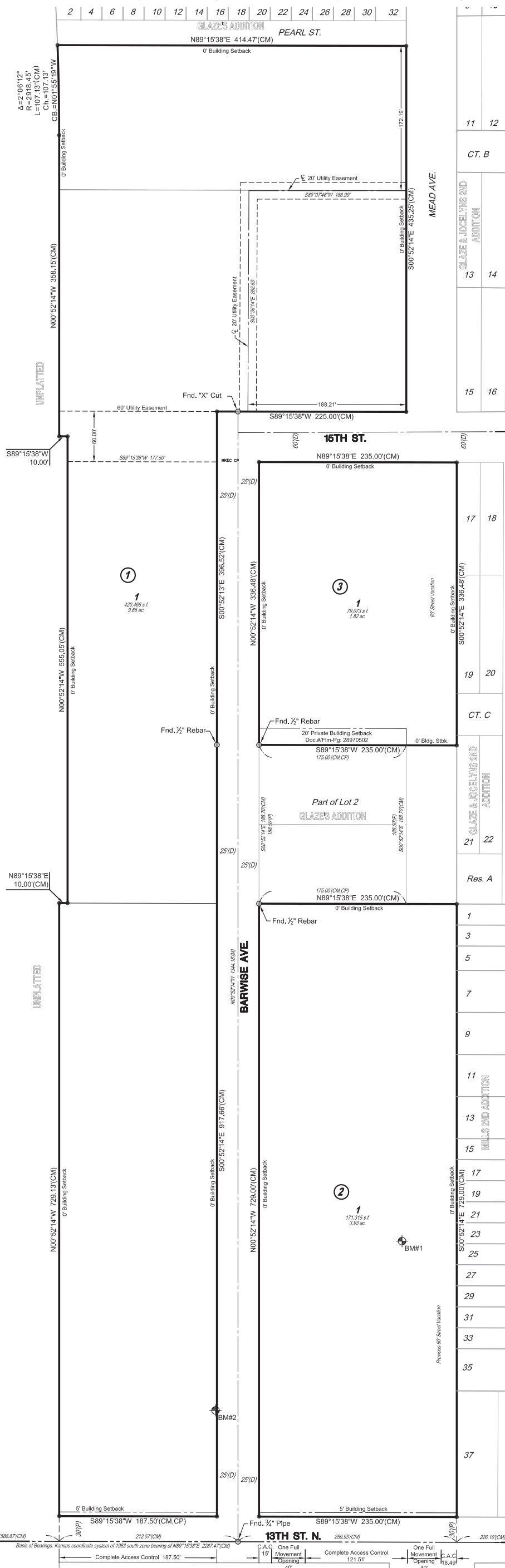


Basis of Bearings: Kansas coordinate system of 1983 south zone bearing of N89°15'38"E on the south line of the Southwest Quarter, Section 9, Township 27 South, Range 1 East of the 6th Principal Meridian. This plat is surveyed and platted on NAD83 using Kansas state plane south zone coordinates, modified to the surface, having a combined adjustment scale factor of 1.000120014401728

LEGEND

Date of Survey: May 2017

- △ = Section Corner Monument Found
- = Found monument (see annotation for type)
- = Set 5/8" rebar w/ MKEC CLS 39 id. cap (or see annotation for type)
- ⊕ = Benchmark
- (M) = Measured
- (D) = Described
- (P) = Platted
- (CM) = Calculated from Measurement
- (CD) = Calculated from Described
- (CP) = Calculated from Plat
- C.A.C. = Complete Access Control
- 1 = Lot
- ① = Block



BENCHMARKS

- BM#1 ⊕ Chiseled square cut on pipe rack footing, near the southeast corner of tank containment area, south end of loading rack along railroad tracts. Elev.=1307.596 NAVD 88, (Cargill Datum = 119.396)
- BM#2 ⊕ Chiseled square cut on top of concrete retaining wall at the northeast corner of transformer containment, South of Geka Building. Elev.=1306.99 NAVD 88, (Cargill Datum = 118.79)

SW. cor., SW. 1/4, Sec. 9, T27S, R1E, 6th P.M.

SE. cor., SW. 1/4, Sec. 9, T27S, R1E, 6th P.M.
Fnd. 1" Pipe



FINAL PLAT
CARGILL ADDITION
AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS
a replat of portions of Parmenters Second Addition, Glaze's Addition, Carey Avenue Addition, and 15th Street,
all in the Southwest Quarter, Section 9, Township 27 South, Range 1 East, of the 6th Principal Meridian, Wichita, Sedgwick County, Kansas

CERTIFICATE OF SURVEY

I, James C. McClure, a Professional Surveyor in Kansas, do hereby certify that I have been in responsible charge of surveying and platting of "CARGILL ADDITION" an addition to Wichita, Sedgwick County, Kansas, into Lots and Blocks, the same being accurately set forth in the accompanying plat and described herein:

Lots 8, 9, 10, 11, 12, 13, 14, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, and 59, Parmenters Second Addition to Wichita, Sedgwick County, Kansas, together with the vacated east-west alley running between Barwise and Mead and parallel to and just north of Thirteenth Street, and the vacated alley at the rear of Lots 8, 9, 10, 11, 12, 13, and 14, from Barwise Avenue to the west right-of-way of the Atchison, Topeka and Santa Fe Railway Company, and the West Half of the vacated north-south alley commencing at the north line of said Lot 59, thence directly south to Thirteenth Street,

TOGETHER WITH,
The West Half of Lot 2, Glaze's Addition to Wichita, Sedgwick County, Kansas, EXCEPT the east 18.75 feet thereof for street,
TOGETHER WITH,

Lots 1, 2, 3, 4, 5, 6 and 7, on Thirteenth Street, together with the South Half of the vacated alley adjoining on the North AND Lots 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58 and 60, on Barwise Avenue, together with the North Half of the vacated alley adjoining Lot 16 on the South, all in Parmenters Second Addition to Wichita, Sedgwick County, Kansas,

TOGETHER WITH,
Commencing at the Northwest corner of the South Half of Lot 10, Glaze's Addition to Wichita, Sedgwick County, Kansas, thence East 226 feet; thence in a Southerly direction a distance of 264.51 feet, more or less, to a point on the North line of Fifteenth Street; thence West along the North line of Fifteenth Street a distance of 223.6 feet; thence North 264.39 feet to the point of beginning, being a part of Lots 10 and 8, Glaze's Addition to Wichita, Sedgwick County, Kansas,

TOGETHER WITH,
Lots 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33, on Pearl Street, in Carey Avenue Addition to the City of Wichita, Sedgwick County, Kansas,

TOGETHER WITH,
Reserve "A", Carey Avenue Addition to the City of Wichita, Sedgwick County, Kansas,

TOGETHER WITH,
The 9 foot platted alley lying south of Lots 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31 and 33, on Pearl Street and north of Reserve A, all in Carey Avenue Addition to the City of Wichita, Sedgwick County, Kansas,

TOGETHER WITH,
A part of Lots 8 and 10, in Glaze's Addition to Wichita, Kansas, described as:

Beginning at a point 19.5 feet North of the Southeast corner of Lot 8; thence North along the East line of Lots 8 and 10, a distance of 264.72 feet, more or less, to the Northeast corner of the South one-half of said Lot 10; thence West along the North line of the South one-half of said Lot 10, to a point in the center line of a sanitary sewer, said point being 226 feet East of the Northwest corner of the South one-half of said Lot 10; thence Southerly along the center line of said sanitary sewer to a point 223.6 feet East and 19.5 feet North of the Southwest corner of said Lot 8; thence East to the point of beginning, Sedgwick County, Kansas, EXCEPT the South 5 feet thereof dedicated for street purposes,

TOGETHER WITH,
The East Half of Lot 4, except the West 31.25 feet thereof, and the East Half of Lot 6, except the North 40.5 feet thereof, and except the West 31.25 feet thereof, Glaze's Addition to Wichita, Sedgwick County, Kansas,

TOGETHER WITH,
The West 185 feet of Lots 4 and 6, Glaze's Addition to Wichita, Sedgwick County, Kansas,

TOGETHER WITH,
That part of 15th Street adjoining and abutting the north line of Lot 6, Glaze's Addition to Wichita, Sedgwick County, Kansas lying west of Barwise Avenue and lying east of the west line of said Glaze's Addition,

TOGETHER WITH,
That part of Mead Avenue lying east of the following:

Lots 1, 2, 3, 4, 5, 6 and 7, on Thirteenth Street, together with the South Half of the vacated alley adjoining on the North AND Lots 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58 and 60, on Barwise Avenue, together with the North Half of the vacated alley adjoining Lot 16 on the South, all in Parmenters Second Addition to Wichita, Sedgwick County, Kansas,

TOGETHER WITH,
That part of Mead Avenue lying east of the following:

The East Half of Lot 4, except the West 31.25 feet thereof, and the East Half of Lot 6, except the North 40.5 feet thereof, and except the West 31.25 feet thereof, Glaze's Addition to Wichita, Sedgwick County, Kansas,

TOGETHER WITH,
That part of Pearl Street platted in Carey Avenue Addition to the City of Wichita, Sedgwick County, Kansas,

CONTAINS: 670,856 square feet or 15.40 acres of land, more or less.

All streets, 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, as amended.

I hereby certify that the details of this plat are correct to the best of my knowledge and belief this ____ day of _____, 2017.

James C. McClure, P.S. #1251
MKEC Engineering, Inc. (CLS 39)
411 North Webb Road
Wichita, Kansas 67206

OWNER'S CERTIFICATE

Know all men by these presents that we the undersigned property owners of the land above set forth in the Professional Surveyor's Certificate, have caused the same to be surveyed and platted into Lots and Blocks, the same to be known as "CARGILL ADDITION" an addition to Wichita, Sedgwick County, Kansas.

Easements for the construction and maintenance of drainage and utilities, as indicated hereon, are hereby granted to the public. No signs, light poles, private drainage systems, masonry trash enclosures or other structures shall be located within public utility easements, unless approved by City of Wichita Public Works Department.

All abutters rights of access to or from 13th Street North over and across the south line of "CARGILL ADDITION," are hereby granted to the appropriate governing body, provided however two full movement openings shall be allowed as indicated hereon.

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

Jim Bell, Regional Operations Leader

STATE OF KANSAS, SEDGWICK COUNTY) ss:
This instrument was acknowledged before me on ____ day of _____, 2017, by Jim Bell, Regional Operations Leader, Cargill, Incorporated.

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

Notary Public:
print name
My Term Expires: _____

PLANNING COMMISSION CERTIFICATE

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

Dated this ____ day of _____, 2017.

WICHITA-SEDGWICK COUNTY METROPOLITAN AREA PLANNING COMMISSION

By _____
David W. Foster, Chairman

Attest:

Dale Miller, Secretary

GOVERNING BODY CERTIFICATE

This plat approved and all dedications shown hereon, accepted by the Wichita City Council of the City of Wichita, Kansas dated this ____ day of _____, 2017.

At the direction of the City Council.

Jeff Longwell, Mayor

Attest:

Karen Sublett, City Clerk

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 _____, 2017, at _____ o'clock __M; and is duly recorded.

Tonya E. Buckingham, Register of Deeds

Attest:

Judy J. Paget, Deputy

TRANSFER RECORD

STATE OF KANSAS, SEDGWICK COUNTY) ss:

Entered on transfer record this ____ day of _____, 2017.

Kelly B. Arnold, County Clerk

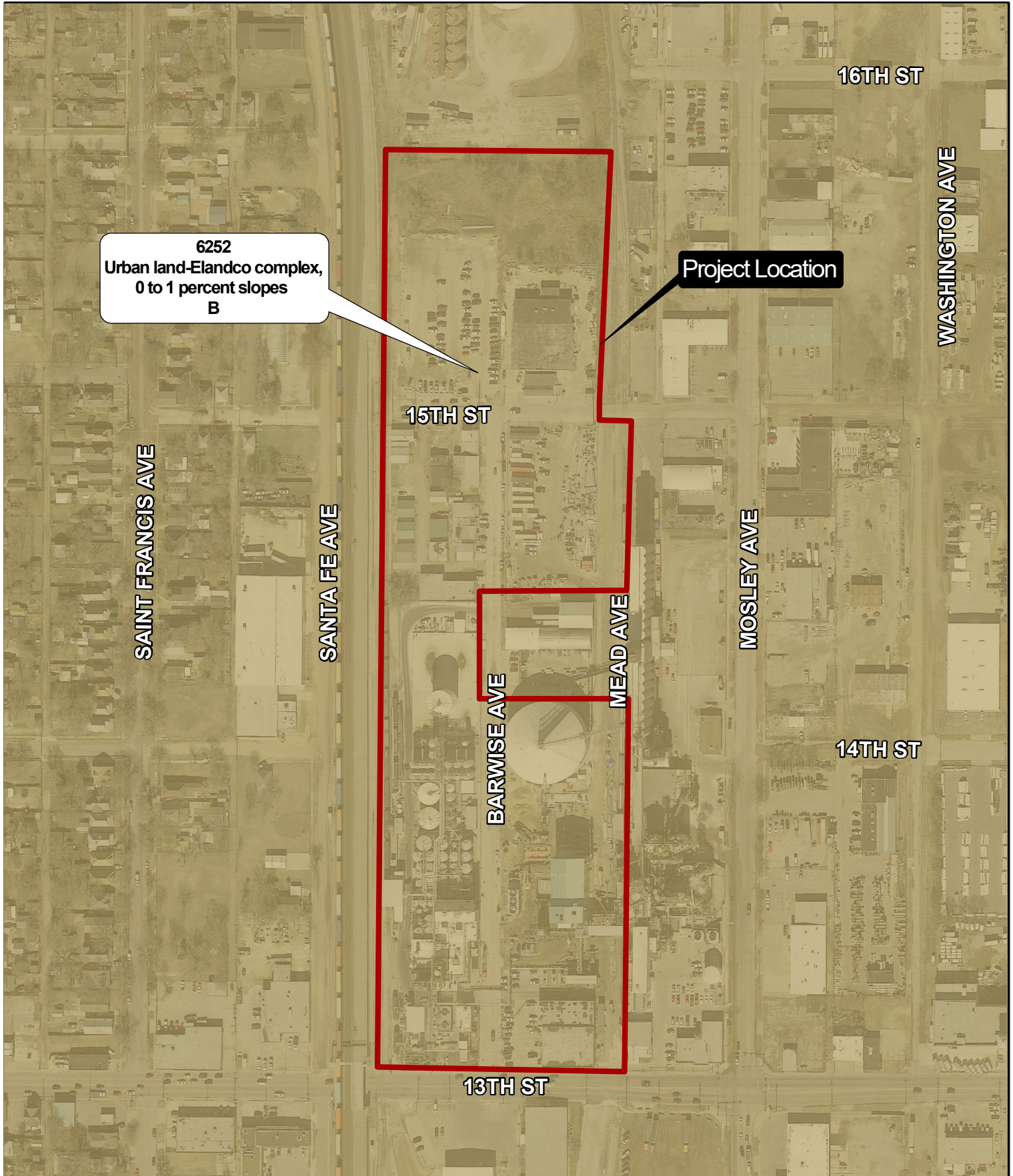
COUNTY SURVEYOR

STATE OF KANSAS, SEDGWICK COUNTY) ss:

Reviewed in accordance with K.S.A. 58-2005 on this ____ day of _____, 2017.

Tricia L. Robello, P.S. #1246
Deputy County Surveyor
Sedgwick County, Kansas

Appendix D - Soil Survey



6252
Urban land-Elandco complex,
0 to 1 percent slopes
B

Project Location

SEC: 09
TWP: T27S
RNG: R1E

1"=250' / 1:3000

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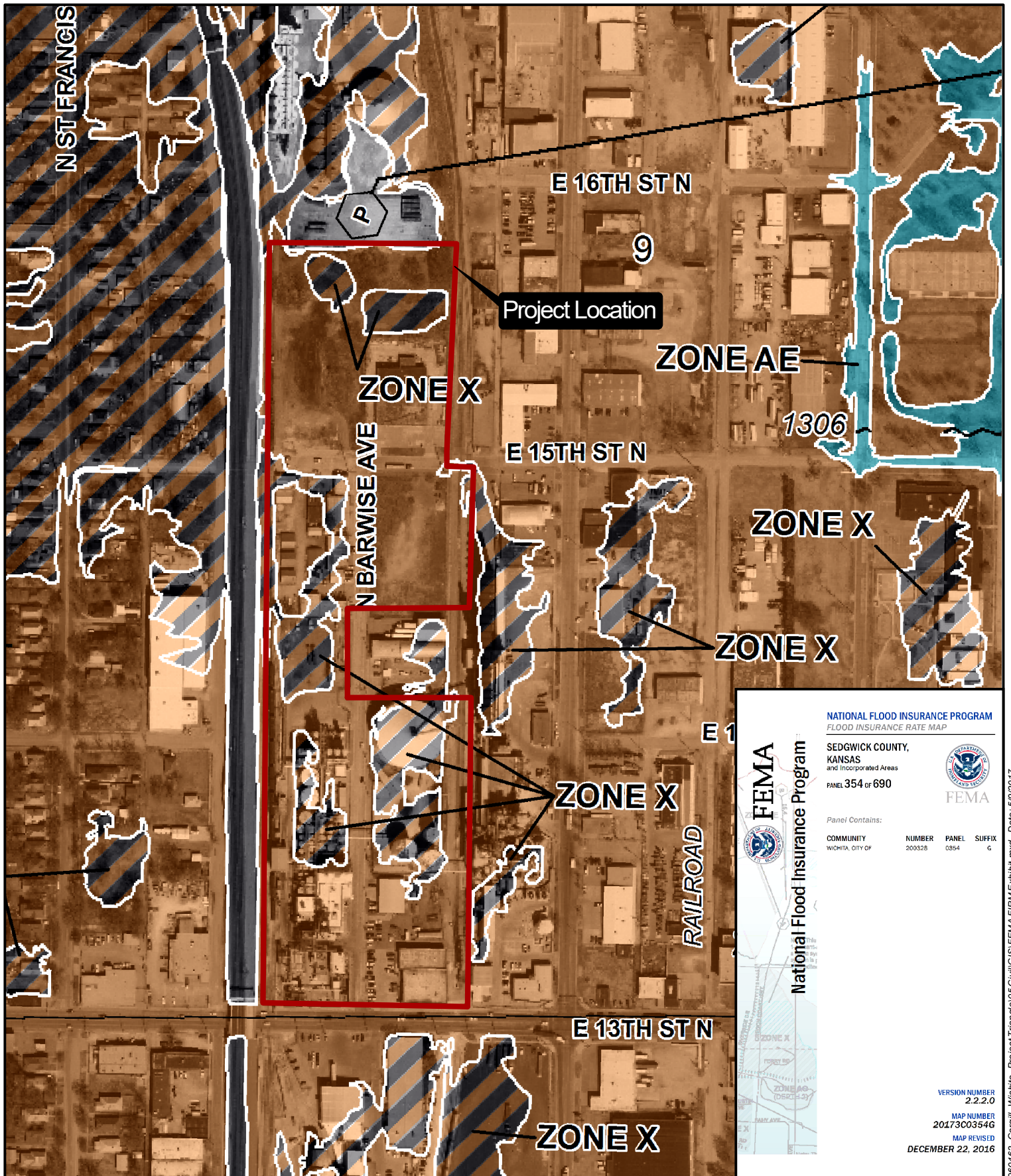
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MKEC

Wichita, KS · 316.684.9600

| | | | |
|--|------------------|------------------|--------|
| NRCS SOIL SURVEY EXHIBIT CARGILL TRIANGLE WICHITA, KANSAS | | | |
| PROJECT NO. 1601060611 | DATE: 5/9/2017 | SHEET NO. | |
| DRAWN BY: LES | DESIGNED BY: LES | APPROVED BY: KLA | 1 OF 1 |

Appendix E - FEMA FIRM



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

SEDGWICK COUNTY,
KANSAS
and Incorporated Areas
PANEL 354 of 690

Panel Contains:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|------------------|--------|-------|--------|
| WICHITA, CITY OF | 200328 | 0354 | G |

VERSION NUMBER
2.2.2.0

MAP NUMBER
20173C0354G

MAP REVISED
DECEMBER 22, 2016

SEC: 09
TWP: T27S
RNG: R1E

1"=300' / 1:3600

0 150 300

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Wichita, KS • 316.684.9600

**FEMA FIRM EXHIBIT
CARGILL TRIANGLE
WICHITA, KANSAS**

| | | |
|------------------------|------------------|------------------|
| PROJECT NO. 1601020462 | DATE: 5/9/2017 | SHEET NO. |
| DRAWN BY: LES | DESIGNED BY: LES | APPROVED BY: KLA |
| | | 1 OF 1 |

Appendix F - Hydraflow Hydrograph Outputs

Watershed Model Schematic

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.514



Legend

| <u>Hyd.</u> | <u>Origin</u> | <u>Description</u> |
|-------------|---------------|---------------------|
| 1 | SCS Runoff | Existing Conditions |
| 2 | SCS Runoff | Proposed Conditions |

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.514

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (acft) | Hydrograph Description | |
|--|--------------------------|-----------------|---------------------|--------------------|-----------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1 | SCS Runoff | 44.38 | 2 | 724 | 3.332 | ----- | ----- | ----- | Existing Conditions | |
| 2 | SCS Runoff | 39.68 | 2 | 724 | 2.979 | ----- | ----- | ----- | Proposed Conditions | |
| 16462 Cargill Wichita Project Triangle.gpw | | | | | Return Period: 1 Year | | | Wednesday, 05 / 10 / 2017 | | |

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.514

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (acft) | Hydrograph Description | |
|--|--------------------------|-----------------|---------------------|--------------------|-----------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1 | SCS Runoff | 52.89 | 2 | 724 | 4.011 | ----- | ----- | ----- | Existing Conditions | |
| 2 | SCS Runoff | 47.29 | 2 | 724 | 3.586 | ----- | ----- | ----- | Proposed Conditions | |
| 16462 Cargill Wichita Project Triangle.gpw | | | | | Return Period: 2 Year | | | Wednesday, 05 / 10 / 2017 | | |

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.514

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (acft) | Hydrograph Description |
|--|--------------------------|-----------------|---------------------|--------------------|-----------------------|---------------|------------------------|---------------------------|------------------------|
| 1 | SCS Runoff | 67.56 | 2 | 724 | 5.196 | ----- | ----- | ----- | Existing Conditions |
| 2 | SCS Runoff | 60.40 | 2 | 724 | 4.646 | ----- | ----- | ----- | Proposed Conditions |
| 16462 Cargill Wichita Project Triangle.gpw | | | | | Return Period: 5 Year | | | Wednesday, 05 / 10 / 2017 | |

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.514

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (acft) | Hydrograph Description | |
|--|--------------------------|-----------------|---------------------|--------------------|------------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1 | SCS Runoff | 80.24 | 2 | 724 | 6.233 | ----- | ----- | ----- | Existing Conditions | |
| 2 | SCS Runoff | 71.74 | 2 | 724 | 5.573 | ----- | ----- | ----- | Proposed Conditions | |
| 16462 Cargill Wichita Project Triangle.gpw | | | | | Return Period: 10 Year | | | Wednesday, 05 / 10 / 2017 | | |

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.514

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (acft) | Hydrograph Description | |
|--|--------------------------|-----------------|---------------------|--------------------|------------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1 | SCS Runoff | 98.48 | 2 | 724 | 7.737 | ----- | ----- | ----- | Existing Conditions | |
| 2 | SCS Runoff | 88.05 | 2 | 724 | 6.918 | ----- | ----- | ----- | Proposed Conditions | |
| 16462 Cargill Wichita Project Triangle.gpw | | | | | Return Period: 25 Year | | | Wednesday, 05 / 10 / 2017 | | |

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.514

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (acft) | Hydrograph Description | |
|--|--------------------------|-----------------|---------------------|--------------------|------------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1 | SCS Runoff | 113.25 | 2 | 724 | 8.962 | ----- | ----- | ----- | Existing Conditions | |
| 2 | SCS Runoff | 101.26 | 2 | 724 | 8.013 | ----- | ----- | ----- | Proposed Conditions | |
| 16462 Cargill Wichita Project Triangle.gpw | | | | | Return Period: 50 Year | | | Wednesday, 05 / 10 / 2017 | | |

Hydrograph Summary Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.514

| Hyd. No. | Hydrograph type (origin) | Peak flow (cfs) | Time interval (min) | Time to Peak (min) | Hyd. volume (acft) | Inflow hyd(s) | Maximum elevation (ft) | Total strge used (acft) | Hydrograph Description | |
|--|--------------------------|-----------------|---------------------|--------------------|-------------------------|---------------|------------------------|---------------------------|------------------------|--|
| 1 | SCS Runoff | 128.65 | 2 | 724 | 10.245 | ----- | ----- | ----- | Existing Conditions | |
| 2 | SCS Runoff | 115.03 | 2 | 724 | 9.161 | ----- | ----- | ----- | Proposed Conditions | |
| 16462 Cargill Wichita Project Triangle.gpw | | | | | Return Period: 100 Year | | | Wednesday, 05 / 10 / 2017 | | |

Hydrograph Report

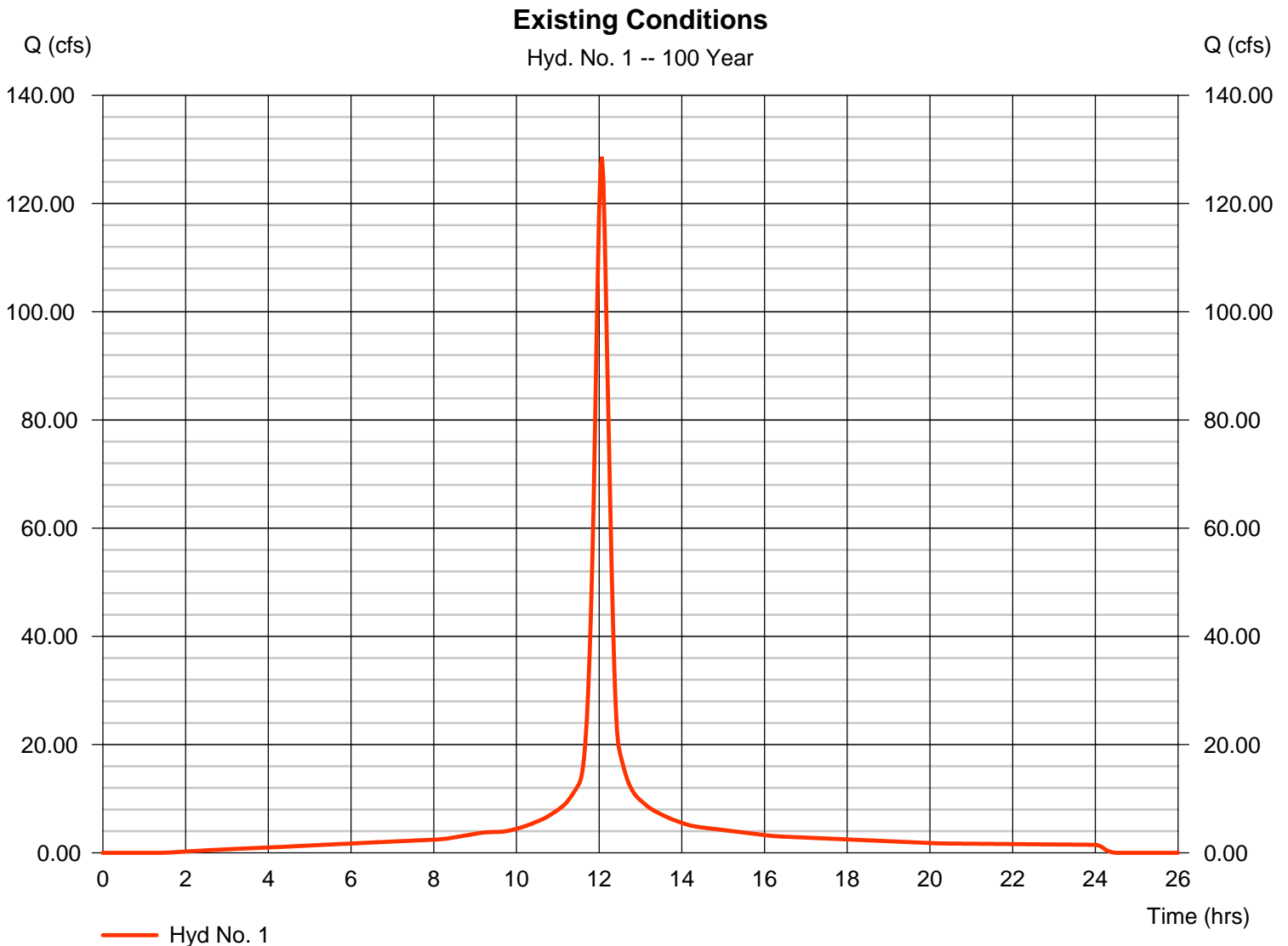
Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.514

Wednesday, 05 / 10 / 2017

Hyd. No. 1

Existing Conditions

| | | | |
|-----------------|--------------|--------------------|---------------|
| Hydrograph type | = SCS Runoff | Peak discharge | = 128.65 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 12.07 hrs |
| Time interval | = 2 min | Hyd. volume | = 10.245 acft |
| Drainage area | = 17.000 ac | Curve number | = 95 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = TR55 | Time of conc. (Tc) | = 19.60 min |
| Total precip. | = 7.83 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |



Hydrograph Report

Hydraflow Hydrographs Extension for AutoCAD® Civil 3D® 2016 by Autodesk, Inc. v10.514

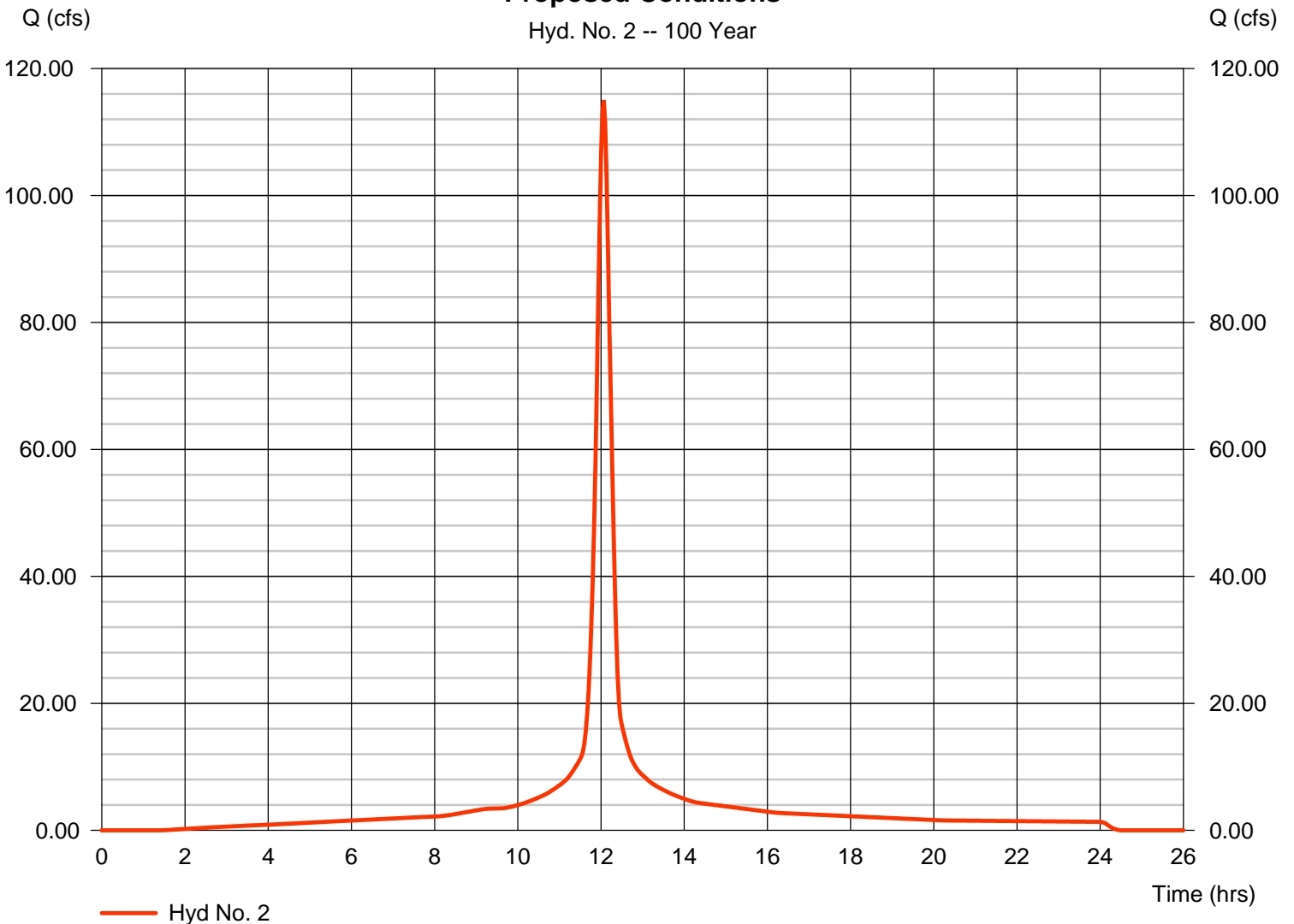
Wednesday, 05 / 10 / 2017

Hyd. No. 2

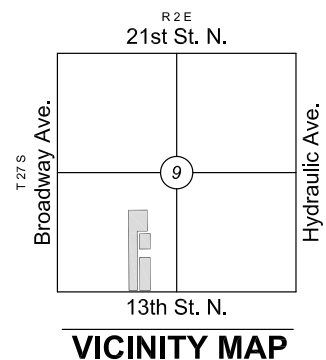
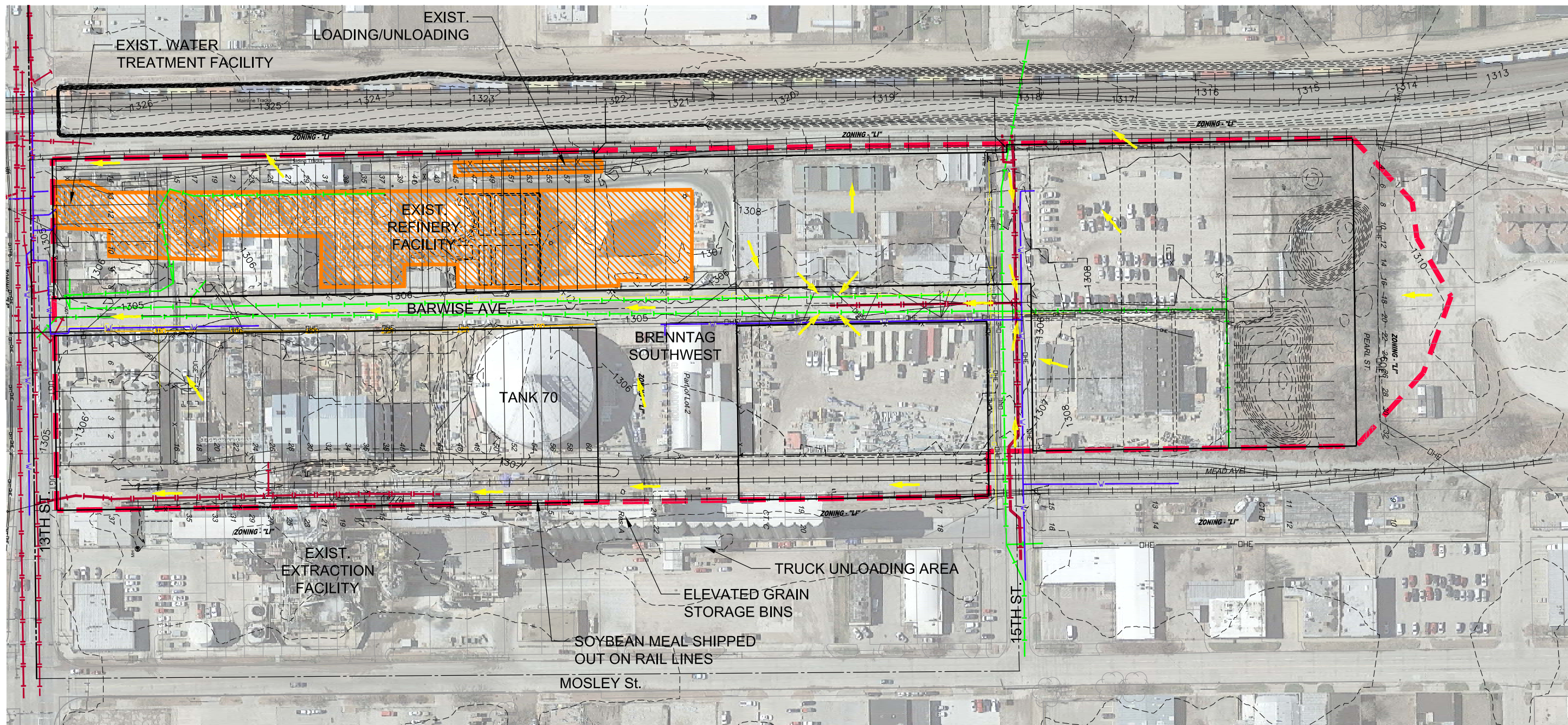
Proposed Conditions

| | | | |
|-----------------|--------------|--------------------|--------------|
| Hydrograph type | = SCS Runoff | Peak discharge | = 115.03 cfs |
| Storm frequency | = 100 yrs | Time to peak | = 12.07 hrs |
| Time interval | = 2 min | Hyd. volume | = 9.161 acft |
| Drainage area | = 15.200 ac | Curve number | = 95 |
| Basin Slope | = 0.0 % | Hydraulic length | = 0 ft |
| Tc method | = TR55 | Time of conc. (Tc) | = 19.60 min |
| Total precip. | = 7.83 in | Distribution | = Type II |
| Storm duration | = 24 hrs | Shape factor | = 484 |

Proposed Conditions



Appendix G - Existing Conditions



LEGEND

| | |
|--|-------------------------|
| | - DRAINAGE BOUNDARY |
| | - 100% CONTAINED |
| | - EASEMENT |
| | - FENCE |
| | - STORM SEWER PIPE |
| | - WATER LINE |
| | - SANITARY SEWER LINE |
| | - GAS LINE |
| | - OVERHEAD ELECTRIC |
| | - UNDERGROUND TELEPHONE |
| | - LOT |
| | - BLOCK |
| | - FLOW ARROW |

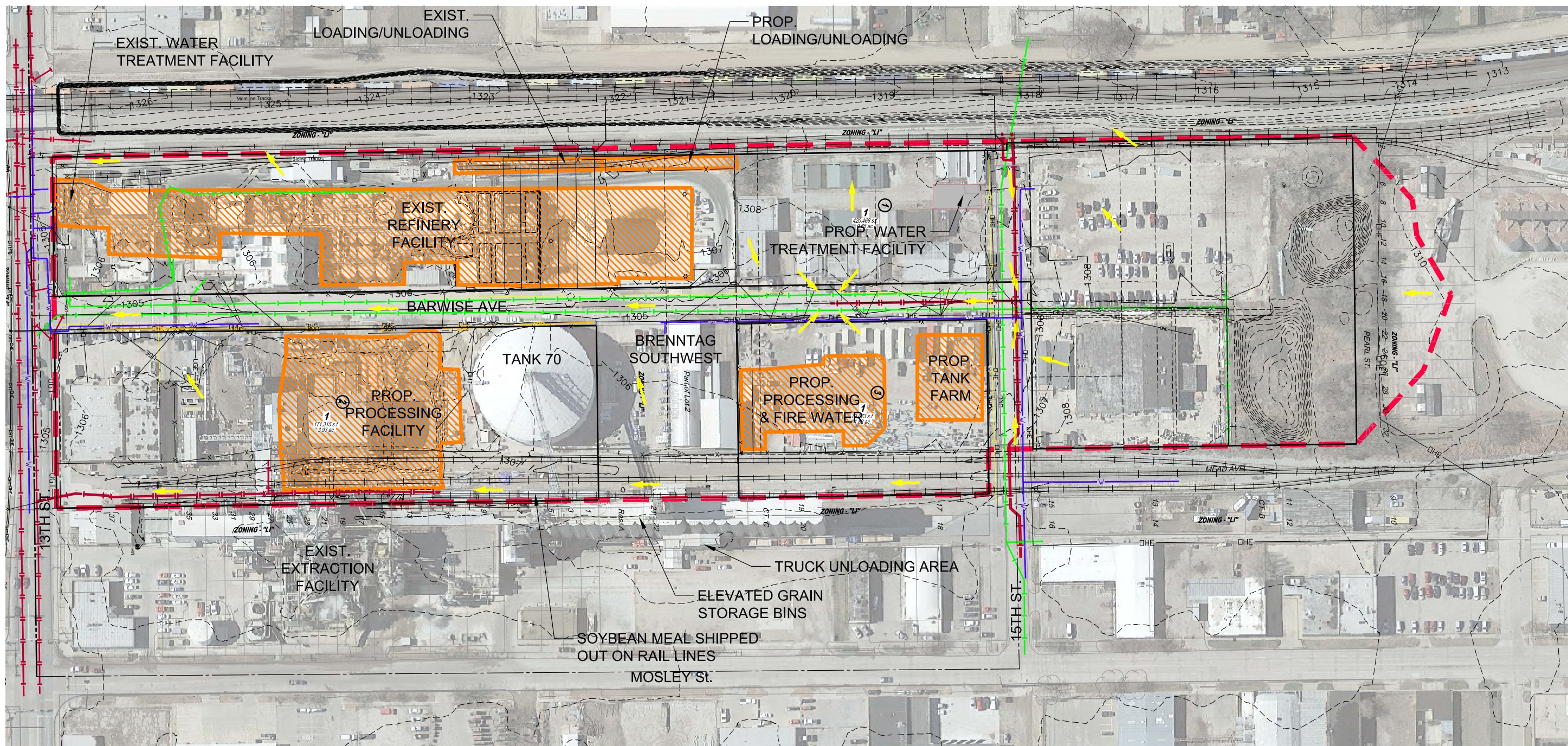
EXISTING SITE MAP
CARGILL ADDITION
WICHITA, KANSAS

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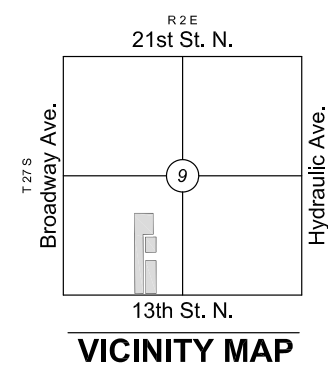
EXISTING SITE MAP

| | | |
|-------------|------------|---------|
| PROJECT NO. | 1601060462 | |
| DATE | MAY 2017 | |
| SCALE | 1" = 70' | |
| DESIGNED | DRAWN | CHECKED |
| KLA | CRM | KLA |
| NO. | REVISION | DATE |
| | | |
| SHEET NO. | | |
| 1 OF 1 | | |

Appendix H - Proposed Conditions

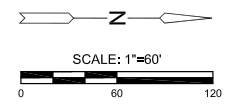


PROPOSED SITE MAP
CARGILL ADDITION
WICHITA, KANSAS



LEGEND

- DRAINAGE BOUNDARY
- 100% CONTAINED
- EASEMENT
- FENCE
- STORM SEWER PIPE
- WATER LINE
- SANITARY SEWER LINE
- GAS LINE
- OVERHEAD ELECTRIC
- UNDERGROUND TELEPHONE
- LOT
- BLOCK
- FLOW ARROW



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PROPOSED SITE MAP

| | | |
|-------------|------------|---------|
| PROJECT NO. | 1601060462 | |
| DATE | MAY 2017 | |
| SCALE | 1" = 70' | |
| DESIGNED | DRAWN | CHECKED |
| KLA | CRM | KLA |
| NO. | REVISION | DATE |
| | | |
| SHEET NO. | | |