

## NOTICE TO CONTRACTORS

Notice is hereby given that sealed proposals for constructing Re-use Water Supply System to serve Spirit AeroSystems will be received at the Office of the Purchasing Manager, City Hall, 455 North Main, Wichita, Kansas until 10:00 o'clock A. M. on **June 17, 2016**, at which time the bids will be opened publicly and read aloud and tabulated by the Board of Bids and Contracts for consideration by the City Council. Bids received after said time will be returned unopened.

**NOTE:** BIDDER SHALL AFFIX THE FOLLOWING PROJECT NUMBER TO THE BID ENVELOPE **468-85095**

**ATTENTION ALL BIDDERS:** A BID BOND IN THE AMOUNT OF FIVE PERCENT (5%) OF THE TOTAL BID OR AN ANNUAL BID BOND IS REQUIRED PRIOR TO BID OPENING. SEE SECTION 102.3 OF THE CITY OF WICHITA STANDARD SPECIFICATIONS FOR FURTHER INFORMATION.

BIDDERS ARE ADVISED TO CONTACT THE OFFICE OF THE CITY ENGINEER (316-268-4501) SHOULD THEY HAVE ANY QUESTIONS OR CONCERNS ABOUT THE PLANS, SPECIAL OR SUPPLEMENTAL PROVISIONS, MINORITY STATUS, OR THE PROPER PREPARATION OF THE BID DOCUMENT.

THE BID FORM SHALL BE PREPARED USING UNIT PRICES PER BID ITEM, UNLESS OTHERWISE NOTED.

## SPECIAL PROVISION TO CITY OF WICHITA, KANSAS STANDARD SPECIFICATIONS

Re-use Water Supply System to serve Spirit AeroSystems  
468-85095 PPN 665009 OCA 620784

The City of Wichita's Standard Specifications are required provisions for the furnishing of all materials and doing all work to complete the above referenced project, and are hereby made a part of these provisions as if fully set forth herein. Said Standard Specifications shall control except as modified by the following Special Provisions. The Standard Specifications are on file in the City Engineer's Office, available for purchase from QuikPrint for the construction of City projects, or can be found online at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx> **\*\*Plan sheets for this project are available on the City website, however, blueline copies can be picked up at QuikPrint, 217 Pennsylvania, Wichita KS, telephone (316) 942-2208 after June 8, 2016.\*\*** The following **Special Provisions** shall be applicable to this project:

The Contractor shall read and fully comprehend every aspect of the contract provisions included in this bid proposal, prior to submitting a bid for the project. Any questions prior to bid submittal should be directed to Stan Breitenbach, P.E., Project Engineer, at (316) 268-4235 or [sbreitenbach@wichita.gov](mailto:sbreitenbach@wichita.gov).

THIS **IS NOT** A STATE/FEDERAL AID CONTRACT.

### PROJECT SPECIFIC

1. **Pre-Bid Conference.** **Monday, June 13, 2016, at 10:00 a.m.**, Engineering Conference Room, Central Maintenance Facility, 1801 S. McLean, Wichita Kansas.
2. **Start Date.** The work order on this project shall be issued **At Contractor's Request** after the contract for this project has been awarded to the successful bidder.
3. **Public Information Meeting.** Contractor will be required to schedule a 'Public Information' meeting at least 7 days in advance of construction. Contractor will provide a minimum three-day notice of said meeting's time and location to adjacent residents, property owners and businesses. The Contractor will moderate the meeting and discuss issues such as construction schedules, phasing, traffic control, access to properties and any special considerations regarding the construction and phasing of the project. Key Contractor and City personnel should be in attendance.
4. **Working Days/Completion Date.** The completion of this work requires coordination with the completion of the pump building water supply by others. All work on the project except for the placement of buffalo seed shall be completed by **November 4, 2016** which coincides with the completion date of the pump building. The placement of the buffalo seed not completed by August 12 shall cease and resume after April 15 of 2017 and shall be completed by **May 15, 2017**. Working days will be charged as provided for in the Standard Specifications, once the work order is issued. **The non-availability of material shall not prevent working days from being assessed.**

**For calendar-day completion projects**, the Contractor is required to work a minimum of six days per week excluding official city holidays. Work, which will require inspection by the Engineer, shall not be permitted on Sundays.

5. **Basis of Payment.** Payment for the bid items will be as a **lump sum/measured quantity** amount based on the bid quantities and unit prices in the bid proposal.
6. **Approved Materials List.** A list of materials approved for use on City of Wichita construction projects can be found on the City website at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx>. All approved materials shall conform to the appropriate requirements set forth in the Standard Specifications, and shall have been previously approved by the Material Review Board (MRB). Information on obtaining approval for new materials through the MRB is available on the website.

7. **Existing Conditions Documentation.** Contractor shall document existing property conditions prior to construction. Documentation shall be video-recorded tape supplemented with 35 mm or digital photographs. Neither videotape nor photographs shall be made from a moving vehicle. **One (1) copy of the documentation package shall be provided to the Engineer prior to beginning construction on the project.**
  
8. **Revised 052914 (gj)**  
**Pipe Backfill.** All box culvert, storm sewer, duct bank, waterline and sanitary sewer excavation under proposed pavement shall be sand filled and flushed (jetted and vibrated) per City Standard Specifications (section 801), unless flowable fill or other improved backfill material is otherwise specified. The sand fill shall start at the top of improved bedding and be brought up uniformly to an elevation 12 inches above the top of pipe, or 2 feet below the bottom of proposed pavement, whichever is higher. However, in no instance shall the sand fill be brought up to less than 6 inches below the pavement subbase material. Storm sewer adjacent to the back of curb and sanitary sewer in front and side lots shall also be sand filled per this provision, to within 2 feet of final grade. All costs for sand filling and flushing shall be included in the unit price bid for "Fill, Sand (Flushed & Vibrated)". This item shall be paid for at the unit price bid per linear foot of trench filled, regardless of trench depth and/or pipe size, unless indicated otherwise by the plans or contract.

**The following are Standard Special Provisions to the City of Wichita Standard Specifications (1998).**

- Last Revised January 13, 2016 (sm)

**PART 100**

1. **Bid Form, Preparation and Final Payment.** Section 102.1, “Preparation of Proposal”, add the following: Bids should be prepared showing unit prices, extension amounts and a total of the extended amounts, which shall be the total bid. Below is a brief example of a properly prepared bid:

**(PRICES SHALL INCLUDE ALL MATERIAL AND LABOR) [Quantity x Unit Price = Amount]**

<b>ITEMS</b>	<b>QUANTITY</b>	<b>UNIT PRICE</b>	<b>AMOUNT</b>
5" AC Pvmt (3" Bit Base)	1234 sy	6.00	7,404.00
Excavation	234 cy	2.00	468.00
Site Clrg & Restoration	1 LS	2,000.00	2,000.00
<b>Bid Total</b>			<b>\$9,872.00</b>

**LEGEND:** LS = Lump Sum, lf = lineal ft, ea = each, gl = gallons, sy = square yds, sf = square ft, tn = tons, cy = cubic yds, cf = cubic ft, **Unit Price** = price per unit of measure as specified

2. **Revised 01132016 (sm)**  
**Subcontractors.** Section 102.4, “Subcontractors”, delete the section and replace with the following: The Successful Contractor shall submit a list of potential Subcontractors with the executed contract on the forms provided by Purchasing. If no Subcontractors are to be utilized, the Contractor shall so indicate on the forms provided by Purchasing.

For non-State/Federal-aid projects, Contractors are encouraged to utilize minority and/or disadvantaged Contractors and Suppliers whenever possible. The City shall identify and certify DBE’s and MBE’s. Prior to payment of the final estimate, the Contractor shall be required to submit a list of Subcontractors and Suppliers actually used on the project along with the dollar amount paid per Subcontractor. Failure to submit the list of Subcontractors used will result in a delay of the final payment until such list is provided.

For State/Federal-aid projects, the awarded Contractor shall ensure that all FHWA-1273 documentation included in the project bid proposal is also included in Subcontractor agreement(s) or contract(s) for this project. Contractor will provide the City Engineer with a copy of said Subcontractor contract(s) for compliance purposes.

3. **Tax Exempt Status.** Section 102.6, “Sales Tax Exemption”, replace first paragraph with the following: Most contracts for projects let through the City Engineer's office are exempt from State and Local sales taxes. Projects that are not exempt will be clearly identified in the bid solicitation. Do not include sales tax in your bid unless clearly directed to do so. Water projects are sales tax exempt.
4. **Davis-Bacon Wage Determination.** Section 102.7, “Equal Employment Opportunity”, add the following: On State/Federal-aid contracts, Contractor is required to pay Davis-Bacon wages and meet the requirements of the Davis-Bacon Wage Act **for the entire project, including non-participating work.** Compliance with the Davis-Bacon Act (40 U.S.C. 276a to a-7) as supplemented by Department of Labor regulations (29 CFR Part 5) (Construction contracts in excess of \$2,000 awarded by grantees and sub grantees).
5. **Schedule of Values.** Add Section 102.15 as follows:  
**102.15 SCHEDULE OF VALUES**  
 Upon award of the contract, the Contractor shall submit a schedule of values to the Project Engineer, for all bid items with a quantity and unit of measure of “1 LS”. The schedule shall include information relevant to how the Contractor intends to be paid for these respective items, to be approved by the Project Engineer prior to beginning construction.
6. **DBE Requirements for State/Federal Aid Projects.** Add Section 102.45 as follows:  
**102.45 DBE REQUIREMENTS FOR STATE/FEDERAL AID PROJECTS**  
 The Contractor shall be required to meet the DBE goal as designated in the respective bid proposal. (1) DBE’s must be certified by KDOT. A list of KDOT certified DBE’s may be found on the Internet at [www.ksdot.org/divadmin/DBEConstruction/dbedir.aspx](http://www.ksdot.org/divadmin/DBEConstruction/dbedir.aspx). (2) For each DBE listed by the successful bidder,

the City will send a letter to them requesting their concurrence that they intend to perform the work indicated in the Contractor's bid and the dollar amount. (3) For each month that the DBE works, they must submit to the City a copy of the completed DBE Payment Affidavit. (4) In addition, the Contractor must comply with the "Payment to Subcontractors" Contract Provision.

7. **Pre-Qualified Contractors List.** Add Section 102.51 as follows:

**102.51 PRE-QUALIFIED CONTRACTORS LIST**

For state/federal aid projects, the prime contractor must be on the Kansas Department of Transportation's pre-qualified contractors list. A bid submitted by a contractor not on the list will be considered non-responsive and rejected. KDOT's pre-qualified contractors list can be found at <http://www.ksdot.org/divoperat/rptInternetList.pdf>.

8. **Basis of Award.** Section 103.2, "Award of Contract", add the following: The contract shall be awarded on the basis of the **lowest responsible Base Bid**, provided the bid is within the Engineer's Estimate. If applicable, Add Alternate(s) may be accepted as determined by the City after the bids are opened, as available funding may allow.

9. **Liability Insurance Specifications.** Section 103.5 shall be replaced with:

The **Successful Bidder** will be required to furnish a Certificate of Insurance (prior to the Purchase Order, Agreement, or Contract being issued) with the following minimum coverage:

1. Commercial General Liability

Covering premises---operations, xcu hazards when applicable, Product/Completed Operations, Broad Form Property Damage and Contractual Liability with minimum limits as follows:

Bodily Injury Liability	\$500,000 Each Occurrence \$500,000 Each Aggregate
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Property Damage Liability	\$500,000 Each Occurrence \$500,000 Each Aggregate
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Or

Bodily Injury and Property Damage Liability (Combined Single Limit)	\$500,000 Each Occurrence \$500,000 Each Aggregate
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2. Comprehensive Automobile Liability

All Owned, Non-Owned, and Hired vehicles with minimum limits as follows:

Bodily Injury Liability	\$500,000 Each Accident
Property Damage Liability	\$500,000 Each Accident

Or

Bodily Injury and Property Damage Liability (Combined Single Limit)	\$500,000 Each Accident
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3. Workers' Compensation

Statutory

Employers Liability	\$100,000 Each Accident \$500,000 Aggregate \$100,000 Occupational Disease
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The Insurance Certificate must contain the following:

Statement that the Contractual Liability includes the Liability of the City of Wichita assumed by the Contractor in the contract documents.

The Certificate of Insurance must be submitted **within ten (10) days** after notification of award to the City of Wichita Purchasing Manager, City Hall, 12th Floor, 455 North Main, Wichita, Kansas, 67202-1694.

10. **Dewatering.** Section 104.1, “Work to be done”, add the following: If dewatering is necessary on this project, the Contractor shall contact the Environmental Services Department at (316) 268-8351, to determine if the groundwater requires special handling. The cost of dewatering is subsidiary to pipe installation bid items and not to be bid or paid separately.
11. **Project Erosion Control Requirements.** Section 104.3, “Cleanup, Dust Control, Pollution Control, Surface Water and Erosion Control”, add the following: The Contractor must implement erosion control measures on this project using Best Management Practices (BMPs). BMPs used may include silt fence and hay bale barriers, perforated (gravel filled) pipe inlet protection, or other as specifically approved by the City Engineer’s Office. Gravel Packs and sand bags at inlets will no longer be accepted. The Contractor will comply with all sections of Ordinance #44-123 and practice ‘good housekeeping’ at all times. Any dirt or mud tracked off the Contractor’s construction site onto paved public or private streets, or ditches, or discharges of same into lakes, ponds, ditches or storm sewers must be cleaned up within 24 hours. Failure to abide by these requirements may result in the assessment of fines, as provided in Ordinance #44-123. Ordinance #44-123 is referenced in Chapter 16.32 of the City Code, which may be viewed on the City’s website.

Construction activities that will, either individually or in combination with other related projects, disturb a total of one or more acres (as determined by the City Engineer) are subject to the requirements of the Kansas Water Pollution Control (KWPC) General NPDES Permit. If applicable to this project, a copy of the permit, including the Notice of Intent (NOI) and the Storm Water Pollution Prevention Plan (SWPPP) prepared by the Engineer, is attached for detailed review. The SWPPP prepared by the Engineer is for information only and the contractor will be required to submit a project specific SWPPP to the City for approval prior to beginning construction. The terms and conditions of the KWPC general permit may be found on the KDHE website at [www.kdheks.gov/stormwater/cons\\_stormwater\\_permit.htm](http://www.kdheks.gov/stormwater/cons_stormwater_permit.htm). A copy of the attached Contractor’s Certification Form, certifying comprehension of the general permit and SWPPP requirements, must be signed and submitted to the Field Engineer prior to starting construction.

**During construction, the Contractor must maintain copies of the approved NOI and SWPPP on the construction site at all times. Should the Contractor’s intended construction sequence or approach differ from that described in the approved SWPPP, the Contractor must submit an amended SWPPP to the City for review and approval, prior to enacting the change.**

12. **Maintenance of Existing Pavement/Snow Removal.** Sections 104.4, “Maintenance of Roadway and Sidewalk Surfaces”, replace the first paragraph with the following: The Contractor shall examine the condition of the existing pavement and haul roads prior to bidding. The maintenance of the existing pavement and haul roads, extending to the limits of traffic control in all directions, will be the Contractor’s responsibility upon award of the contract, through project final acceptance. Such maintenance shall include maintaining the traveled portions of roadways and walkways in smooth and acceptable surface conditions free from potholes settlements, elevation offsets, etc.

Also add the following to the same section of 104.4 for snow removal during construction:

**Snow removal.** Section 104.4 , “Maintenance of Roadway and Sidewalk Surfaces”, add the following: The Contractor will be required to perform snow removal within the limits of the traffic control upon request by the Engineer. The contractor will be paid on a force account basis per the latest KDOT Specifications. Contractor is required to restore any traffic control devices impacted by snow removal operations at the contractor’s expense. This includes any traffic control disturbed by City crews during snow/ice operations. Contractor is also required to clean traffic control devices during construction to restore reflectivity and visibility to MUTCD requirements.

13. **Work Zone Safety and Mobility.** Section 104.5, “Maintenance of Work Areas”, add the following: On State/Federal-aid contracts, the Contractor shall be required to provide the Project Engineer with the name

of a work zone safety and mobility contact for the project, prior to beginning work. This will also include a 24-hour contact number for that person and proof that they have completed an **Advance Work Zone** course, **ATTSA's Traffic Control Supervisor** course or an approved equivalent training course.

14. **Schedule.** Add Section 105.15 as follows:

**105.15 SCHEDULE**

For state/federal aid projects and any others that effect existing traffic patterns, the Contractor shall be required to submit a proposed work schedule to the Engineer, for approval, prior to beginning work. The Engineer can also request a schedule on any other type of project, if needed. The Contractor shall plan and schedule work to produce the least interference with traffic, businesses, and home owners and to minimize the use of planned detours. The Schedule shall provide enough detail so the Engineer may determine the Controlling Item of Work (CIOW) and other activities that affect the contract time. The Engineer will request the Contractor to submit a revised Schedule if the Engineer believes the Schedule is unworkable, or if the work has fallen behind. The Contractor shall notify the Engineer of Schedule changes, delays, or both regardless of whether additional time or money is being sought. The contractor shall submit an updated schedule for the following: as requested by the Engineer at any time; any contract/scope of work changes; when the sequence of activities is altered; and/or the time changes for performing an activity

15. **Reasonable Access.** Section 105.7, "Inspection", add the following: Successful Contractor must allow City Inspectors and vehicles reasonable access onto the project site.

16. **Discrepancies in Contract Documents.** Add Section 105.8 as follows:

**105.8 DISCREPANCIES IN CONTRACT DOCUMENTS**

If there is a discrepancy between Contract Documents, the order of precedence is:

1. Project Addenda
2. Project Specific Special Provisions
3. Standard Special Provisions to the City of Wichita Standard Specifications
4. Plans
5. Standard Specifications

17. **Buy America Materials.** Add Section 106.15 as follows:

**106.15 BUY AMERICA MATERIALS**

On State/Federal-aid contracts, the Contractor shall be reminded that the current KDOT Special Provision for "Buy America" applies to all items of work on the project, including "non-participating" bid items.

18. **Revised 022315 (sm)**

**Water Usage.** Section 107.5, "Use of Fire Hydrants", delete the section and replace with the following: Contractors wishing to use water from a City fire hydrant shall be required to obtain a Fire Hydrant Usage Permit. The user shall contact the Public Works & Utilities Department Meter Repair Shop at (316) 219-8925 for permit and meter costs, availability, and detailed information. The Contractor shall be directly responsible for all costs associated with using City water, and the costs will not be billed to or paid for by a specific project. The cost for hydrant meter rental and for the water usage itself will NOT be tax exempt. Water usage for filling, flushing and sampling of new water lines will be excluded from this requirement, and will not require a permit. If the contractor is using a water tank that is filled by a fire hydrant or other publicly supplied water source in the water system, they are required to have the water tank inspected for required backflow protection and permitted by City personnel. Failure to get the inspection and associated annual permit will lead to a fine as defined by municipal codes 17.12.240 and 17.12.320. Construction activities associated with the project will cease until the issue is resolved. Contractors shall inquire about the inspection and annual permit when picking up the fire hydrant meter.

19. **Electronic Message Boards.** Section 107.8, "Notifications by Contractor", add part "e)" as follows: When a bid item for "Sign, Electronic Portable Message" is included in the project, the contractor shall be required to provide the same, with as many as four message boards expected to be used at any one time, unless otherwise specified. This will be a final measured quantity bid

item, with the signs to be utilized as directed by the Project Engineer, prior to and during the project.

20. **Traffic Control Devices.** Section 107.9, “Work Zone Traffic Control”, add the following: All traffic control devices to be used on the project shall conform to the requirements of the KDOT “General Traffic Control” detail sheet (TE700, or current version). The Contractor shall be aware of the particular requirements of the item referencing “NCHRP Report 350 Crashworthy Requirements”. Certification for the same shall be received and approved by the Project Engineer prior to beginning work on the project.
21. **Added 061215 (sd)**  
**Working Days.** Section 108.5, “Working Days”, item “h)”, delete the first sentence and replace with the following: Working Day reports will be available for the Contractor’s review by the end of the following week in the Construction Division Field Office, located at the Central Maintenance Facility, 1801 S. McLean Blvd.

Add the following: The Working Day reports shall remain in the Field Office at all times. Copies are available upon request if the Contractor desires any for their records.

22. **Partial Payments.** Section 109.6, “Partial Payments and Retainage”, add the following: The awarded Contractor shall waive all rights on all partial estimate calculations, and estimates shall be processed without the Contractor’s review and authorization. However, Contractor shall review and approve the final payment at the completion of the project. The Contractor may request partial estimate review and approval by written request submitted with the signed contract.

Also in Section 109.6, replace the third paragraph with the following: Partial payments will only be made for stored materials when indicated in the “Project Specific” provisions for each project.

Also in Section 109.6, add the following: On Federal Aid contracts only, the City will release retainage on bid items installed by subcontractors upon acceptance of the work. Contractor must make payment to Subcontractor(s) for such work within 30 days of payment by the City. Proof of payment to Subcontractor(s) shall be provided to the City via Form 1010.

23. **Final Payment Requirements:** Add to Section 109.7, “Acceptance & Final Payment”:  
**Final Payment Requirements.** Time is of the essence when completing City paperwork related to the Project. Paperwork required from the Contractor for the Project, including but not limited to certification of pipe, beam, manholes or other structural materials; State of Kansas Project Completion Certification; Affidavit of paying all claims, liens and subcontractors; Statement of Subcontractors and Supplies; and any other document needed for project closeout shall be submitted within 60 days of substantial completion of any project. City shall transmit to the Contractor the Final Summary for the project as soon as reasonably possible. Failure by Contractor to submit any objection, correction, or modification within 90 days of transmittal of a Final Summary shall constitute waiver of such right to contest and will be deemed final acceptance of the City’s calculations. Such waiver will be a full and final waiver of all rights to object to or contest City calculations of quantities provided, provision of lump-sum materials or payment amounts owed to Contractor and shall be binding on Contractor for purposes of any dispute or litigation. For purposes of retainage and/or compliance with the Fairness in Construction Acts, any contractual payment owed is deemed disputed until the Final Summary is expressly accepted as shown by contractor’s signature on a copy returned to the City or until Contractor has waived the opportunity to contest final summary calculations by the City of Wichita.

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## **PART 200**

1. **Underground Irrigation Systems.** Section 201.3, “Sprinkler Systems”, delete the section and replace with the following: Properties within the project may have underground irrigation systems (lawn sprinklers)

which conflict with new construction. Contractor shall remove such components as needed during construction of the project, salvaging all sprinkler heads, valves and operators, and pertinent controllers/equipment to the property owner, where possible. Portions of underground irrigation systems not in conflict with new construction shall be protected from damage and shall remain in place. The Contractor shall exercise caution, through communication with the property owner, to insure that work completed as part of the project does not adversely affect the operation of existing irrigation system(s) on private property, behind the right-of-way. The Contractor is to coordinate final site restoration with the property owner, such that they are afforded the opportunity to replace the irrigation system prior to sod/seed installation. All work associated with this item will not be paid for separately, but considered SUBSIDIARY to the "Site Clearing" bid item, or equivalent equal.

2. **Tree Removal.** Section 202.2, "Hedge and Tree Removal", delete the second paragraph and replace with the following: Unless otherwise indicated on the plans or in the "Project Specific" Special Provisions, all projects shall include bid items for "Large Tree Removal" and "Small Tree Removal", if applicable. Any tree 15 inches in diameter or larger, as measured 24 inches above the natural ground level shall be considered a "Large Tree" for payment purposes. Any tree less than 15 inches in diameter, as measured 24 inches above natural ground level shall be considered a "Small Tree" for payment purposes. All tree removal will be approved by the Project Engineer prior to completing the work.

### PART 300

1. **Excess Excavation Disposal.** Section 301.4, "Surplus Material", delete the section and replace with the following: Unless otherwise directed by the plans, project special provisions or addenda, all excess excavation will become the property of the Contractor, to be disposed of at a location determined also by the Contractor. The Contractor shall be aware of and take responsibility for obtaining required permits to place any fill in a designated floodplain, floodway or special management areas. Special management areas would include wetlands, US Corp of Engineer's holding areas, detention ponds, etc. Contact City of Wichita at (316) 268-4498 for flood determinations within the City limits. For flood determinations outside of the City, contact Sedgwick County Code Enforcement at (316) 660-1840.

### PART 400

1. **Geogrid Reinforced Aggregate Base.**

Delete Section 404.1, "Crushed Rock Base For Concrete Paver Surface".

Replace Section 404.2, "Materials", with the following:

#### **404.2 MATERIALS**

##### **General:**

Materials to be used for geogrid reinforced base construction shall consist of virgin crushed stone, recycled Portland cement concrete, or a blend of recycled Portland cement concrete and Reclaimed Asphalt Pavement (RAP). This blend is not to exceed 50% RAP and shall be tested by use of an asphalt burn off oven to ensure compliance. All materials shall meet the following gradation specification.

##### **Stone/Concrete / Blended Aggregate:**

##### **1) Gradation**

<u>Sieve Size</u>	<u>% Retained (by dry weight)</u>
2-1/2"	0
3/4"	20-60
#4	50-80
#40	80-94
#200	90-98

## 2) Durability

Virgin base material quality shall conform to the requirements specified by the KDOT Subsection 1102 for Durability Class 1.

## 3) Absorption

All virgin base material shall have a maximum absorption of four percent (4%).

### **Biaxial Geogrid:**

The geogrid shall be a regular grid structure formed to provide tensile strength biaxially, both in the machine and cross machine directions of the grid, and shall have aperture geometry and rib and junction cross-sections sufficient to permit significant mechanical interlock with the material being reinforced. The geogrid shall maintain its reinforcement and interlock capabilities under repeated dynamic loads while in service and shall also be resistant to ultraviolet degradation, to damage under normal construction practices and to all forms of biological or chemical degradation normally encountered in the material being reinforced.

The geogrid shall be a single layer, non-bonded mat. A list of approved geogrids can be found on the City of Wichita website at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx>. Unless otherwise specified in the plans or project provisions, the Contractor shall be allowed to use any geogrid or geotextile fabric on the Approved Materials List, for base reinforcement. The same product shall be used throughout a project, unless approved by the Engineer prior to installation.

**Standard Biaxial Geogrid**

PROPERTY	TEST METHOD	UNITS	VALUE	
			MD <sup>1</sup>	CMD <sup>1</sup>
<u>Interlock</u>				
Open Area	COE Method <sup>2</sup>	% (min)	70	
<u>Reinforcement</u>				
Tensile modulus				
Initial (@ 1% strain)	ASTM D 6637	lb/ft (min)	14,000	20,000
Tensile strength				
@ 2% strain	ASTM D 6637	lb/ft (min)	270	330
@ 5% strain	ASTM D 6637	lb/ft (min)	540	630
Ultimate	ASTM D 6637	lb/ft (min)	850	910
Junction strength				
Ultimate	GRI-GG2 <sup>3</sup>	lb/junction (min)	30	
Ultimate	GRI-GG2 <sup>3</sup>	lb/ft (min)	360	360
<u>Material</u>				
UV Resistance (@ 500 hours)	ASTM D 4355	% Strength Retained (min)	60	

#### Notes:

1. Machine Direction (MD) is along roll length and Cross Machine Direction (CMD) is across roll width.
2. Percent open area measured without magnification by Corps of Engineers method as specified in CW 02215 Civil Works Construction Guide, November 1977.
3. Revised July, 2000.

### High Strength Biaxial Geogrid

PROPERTY	TEST METHOD	UNITS	VALUE	
			MD <sup>1</sup>	CMD <sup>1</sup>
<u>Interlock</u>				
Open Area	COE Method <sup>2</sup>	% (min)	70	
<u>Reinforcement</u>				
Tensile modulus				
Initial (@ 1% strain)	ASTM D 6637	lb/ft (min)	27,500	45,000
Tensile strength				
Initial (@ 1% strain)	ASTM D 6637	lb/ft (min)	275	450
@ 2% strain	ASTM D 6637	lb/ft (min)	410	620
@ 5% strain	ASTM D 6637	lb/ft (min)	810	1340
Ultimate	ASTM D 6637	lb/ft (min)	1310	1970
Junction strength				
Ultimate	GRI-GG2 <sup>3</sup>	lb/junction (min)	30	
Ultimate	GRI-GG2 <sup>3</sup>	lb/ft (min)	360	360
<u>Material</u>				
UV Resistance (@ 500 hours)	ASTM D 4355	% Strength Retained (min)	70	

**Notes:**

1. Machine Direction (MD) is along roll length and Cross Machine Direction (CMD) is across roll width.
2. Percent open area measured without magnification by Corps of Engineers method as specified in CW 02215 Civil Works Construction Guide, November 1977.
3. Revised July, 2000.

**Geotextile Fabric:**

The fabric shall consist of high tenacity monofilament and fibrillated polypropylene yarns. The fabric shall maintain its reinforcement, filtration, and separation capabilities under repeated dynamic loads while in service and shall also be resistant to ultraviolet degradation, to damage under normal construction practices and to all forms of biological or chemical degradation normally encountered in the material being reinforced.

The fabric shall be a single layer, non-bonded material. A list of approved fabrics can be found on the City of Wichita website at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx>. Unless otherwise specified in the plans or project provisions, the Contractor shall be allowed to use any geogrid or fabric on the Approved Materials List, for base reinforcement. The same product shall be used throughout a project, unless approved by the Engineer prior to installation.

**Standard Geotextile Fabric**

<b>PROPERTY</b>	<b>TEST METHOD</b>	<b>UNITS</b>	<b>VALUE</b>
<u>Characteristics</u>			
Coefficient of Interaction Ci (Sand)	ASTM D 5321		0.8
Flow Rate	ASTM D 4491	gal/min/ft	40
Permeability	ASTM D 4491	cm/sec	0.050
Permittivity	ASTM D 4491	1/sec	.0152
AOS	ASTM D 4751	US Sieve #	30
<u>Reinforcement</u>			
Tensile strength			
@ 2% strain	ASTM D 4595	lb/ft (min)	540
@ 5% strain	ASTM D 4595	lb/ft (min)	1350
Ultimate	ASTM D 4595	lb/ft (min)	2700
<u>Material</u>			
UV Resistance (@ 500 hours)	ASTM D 4355	% Strength Retained (min)	70

**High Strength Geotextile Fabric**

<b>PROPERTY</b>	<b>TEST METHOD</b>	<b>UNITS</b>	<b>VALUE</b>
<u>Characteristics</u>			
Coefficient of Interaction Ci (Sand)	ASTM D 5321		0.8
Flow Rate	ASTM D 4491	gal/min/ft	30
Permeability	ASTM D 4491	cm/sec	0.050
Permittivity	ASTM D 4491	1/sec	0.050
AOS	ASTM D 4751	US Sieve #	30
<u>Reinforcement</u>			
Tensile strength			
@ 2% strain	ASTM D 4595	lb/ft (min)	960
@ 5% strain	ASTM D 4595	lb/ft (min)	2400
Ultimate	ASTM D 4595	lb/ft (min)	4800
<u>Material</u>			
UV Resistance (@ 500 hours)	ASTM D 4355	% Strength Retained (min)	70

Section 404.3, "Construction Requirements", replace "Placing and Overlapping Geogrids" with the following:

**Placing and Overlapping Geogrids and Fabrics:**

Place geogrid/fabric in position and roll out over the prepared subgrade. Geogrid/fabric should be cut to conform to manhole covers or other protrusions. Geogrid/fabric should be cut and overlapped as necessary to accommodate curves. Unless otherwise indicated in the plans or project provisions, all geogrids and fabrics shall be overlapped one foot (1') in both the longitudinal and transverse directions. Pin overlaps to secure against separation and to provide anchorage. Over very soft ground, wire, plastic ties or hog rings can be used on five to twenty-foot spacings as necessary to secure the overlaps.

2. **Revised 061215 VFA limits (sd)**

**Asphalt Pavement Materials and Manufacture.** Section 405.2, “Materials and Manufacture”, replace from the start of the “Asphalt Cement” subsection to the end of Section 405.2 with the following:

**Asphalt Cement:**

Asphalt cement shall be of uniform consistency, free from water to the extent that it will not foam when heated to three hundred fifty degrees (350°) F., and it shall meet the following requirements for physical and chemical properties:

**Polymer Modified Performance Grade Asphalt Cement**

Original Binder:

Flash Point (°C), 230

Rotational Viscosity at 135 °C (Pa’s), 3 max

Dynamic Shear at grade temperature (kPa), 1.00 min

Separation (°C max), 2 max

Rolling Thin Film Oven Residue:

Mass Loss (%), 1.00 max

Dynamic Shear at grade temperature (kPa), 2.20 min

Elastic Recovery at 25 °C, 10 cm Elongation (% min), 65 min

Pressure Aging Vessel Residue:

Dynamic Shear at test temperature (kPa), 5,000 max

Creep stiffness at test temperature, stiffness 300 max MPa & m Value 0.300 min

**Non-Polymer Modified Performance Grade Asphalt Cement**

Original Binder:

Flash Point (°C), 230

Rotational Viscosity at 135 °C (Pa’s), 3 max

Dynamic Shear at grade temperature (kPa), 1.00 min

Rolling Thin Film Oven Residue:

Mass Loss (%), 1.00 max

Dynamic Shear at grade temperature (kPa), 2.20 min

Pressure Aging Vessel Residue:

Dynamic Shear at test temperature (kPa), 5,000 max

Creep stiffness at test temperature, stiffness 300 max MPa & m Value 0.300 min

Unless otherwise shown on the plans, all asphaltic concrete pavement placed on city projects shall use PG 64-22 asphalt cement for the full thickness of non-arterial streets, with BC-I and SC-I mix designs for base and surface asphalt, respectively. Arterial streets shall utilize a BM-2 mix design with PG64-22 asphalt cement for the base and PG70-28 for surface. Mill & overlay projects using BM1-B surface mixes shall also use PG 70-28 graded oil. The contractor may substitute an alternate grade of asphalt that complies with or exceeds the upper and lower grade designations for the grade specified. Such substitutions require advanced approval by the Engineer and any additional cost will be the responsibility of the contractor.

**Composition of Asphaltic Mixtures:**

Aggregates, mineral filler and asphalt shall comply with the requirements, as stated previously in this subsection. The Contractor shall submit to the Engineer before December 31 of each calendar year a complete listing of Individual Aggregate Sieve Analysis, Mix Combination Sieve Analysis and any other pertinent data on the mixes to be used during the following calendar year. The Engineer may use the submitted design in whole or in part, at his discretion. The mix design shall be adjusted as necessary when a change in the source of materials is approved. Any mix design that proves to be unsatisfactory shall be adjusted by the Engineer. There shall not be less than three percent (3%) or more than twenty-five (25%) of material between any two successive sieves in the following series: No. 4, 8, 16, 30 and 50. The requirements for percent retained on the No. 200 sieve (dry screen) will be waived, provided the plasticity index of the mineral filler is four (4) or less.

Salvaged hot mix asphaltic materials may be recycled and combined with new materials to produce asphaltic base course and surface mixtures for use in construction of such base courses and surface courses as required by plans. The combination of salvaged hot mix asphaltic material with new materials shall not exceed thirty-five percent (35%) for base course mixtures or fifteen percent (15%) for surface course mixtures. Recycled materials will not be allowed in the BM-IB surface mixture. All base course mixtures containing recycled asphaltic material shall conform to the standard specification requirements for the base mix used on the project. All surface course mixtures containing recycled asphaltic material shall conform to the standard specification requirements for the surface course mix used on the project.

**Gradation Requirements:**

**Mineral Aggregates Percentage by Weight Retained**

<b>Base Sieve Size</b>	<b>Surface Course BC-I</b>	<b>Surface Course SC-I</b>	<b>Surface Course BM-2</b>	<b>Course BM-IB</b>
2-1/2"				
1-1/2"				
1"0	0			
3/4"	0-12		0	0
1/2"		0-8		0-10
3/8"	2-35	0-18	8-30	12-26
#4		18-39		39-56
#8	30-66	35-53	42-72	60-76
#10				
#16		50-68		72-87
#20				
#30	60-82	60-80	64-88	79-92
#40				
#50		70-88		84-95
#80				
#100		80-93		88-98
#200	89-96	90-95	90-97	92-98
P-200	4-11	5-10	3-10	2-8

The combined material for asphalt surface course, SC-I, shall contain not less than 47 percent crushed material, including the material passing the No. 200 sieve.

The combined material for asphalt surface course, BM-IB, shall contain not less than 75 percent crushed material, including the material passing the No. 200 sieve. In addition, course aggregate (#4+) used in BM-IB shall have a maximum absorption of two percent.

**Design Requirements:**

All asphalt mixtures shall conform to the following Marshall requirements when tested in accordance with the latest revision of ASTM D-1559.

<b>Mix Type</b>	<b>BC-I</b>	<b>SC-I</b>	<b>BM-2</b>	<b>BM-IB</b>
Min stability (lbs)	1000	1600	1600	1800
Voids (%)	3-7	3-5	3-5	3-5
VFA (%)	<b>65-78</b>	<b>65-78</b>	<b>65-78</b>	<b>65-78</b>

BM-IB requirements shall be for a 75-blow Marshall.

3. **Warm Mix Asphalt (WMA).**

Section 405.2, "Materials and Manufacture", add the following:

When using WMA the Contractor shall submit a mix design to the Engineer for review at the preconstruction conference or prior to starting the project. All materials used in the production of WMA shall comply with the latest City of Wichita Engineering Standard Specifications. The following shall be submitted by the Contractor to Engineer: plant mixing temperatures, temperature range for compacting, WMA technology information and recommended rate of application.

Section 405.3, "Paving Plant", add the following:

WMA may be produced by HMA plant foaming processes and equipment in order to reduce HMA plant production temperatures. WMA chemical and organic additives shall not be allowed on City of Wichita projects. WMA foaming process additive must be on KDOT's prequalified materials list.

Section 405.4, "Paving Plant Operations", add the following:

When using WMA, the mixing temperature may be reduced no more than 30°F for WMA water foaming processes.

Section 405.7, "Placing Requirements", add the following:

All WMA surface course mixtures shall be delivered to the place of construction within a temperature range of between two hundred thirty degrees (230°) F and three hundred thirty-five degrees (335°) F. WMA base mixtures shall be delivered to the place of construction within a temperature range of between one hundred ninety degrees (190°) F and three hundred thirty-five degrees (335°) F. The temperature of the asphaltic mixtures shall be regulated within these limits in accordance with the workability of the mix and the weather conditions. It is the Contractors responsibility to keep the mixture at a suitable temperature that allows proper workability when hand spreading and raking of the material is required in order to meet density requirements.

For WMA mixes containing polymer modified asphalt mixtures with a Performance Grade of 70-28 or greater, and whether for base or surface course, the mixture shall be delivered to the place of construction within a temperature range of between two hundred forty-five degrees (245°) F and three hundred thirty-five degrees (335°) F.

Section 405.8, "Compaction of Mixtures", add the following:

When using WMA, achieve the maximum density before the temperature of the WMA falls below one hundred sixty-five (165°) F. Do not crush the aggregate. On incidental or miscellaneous work, the Engineer may waive the minimum roller requirement if conditions warrant. Roller marks may be removed with a self-propelled static roller when the pavement surface temperature falls below one hundred sixty-five degrees (165°) F for WMA.

4. **Asphalt Pavement Placing Requirements.** Section 405.7, "Placing Requirements", add the following under "Machine Spreading":

When called for in the Project Specific Special Provisions, the contractor shall be required to remix the surface asphalt material hauled to the project site prior to placement. The material transfer device shall be self propelled, capable of moving independent of the paver or attached to the paver. The material transfer device shall perform additional mixing of material and deposit the asphalt into the paver at a uniform temperature and consistency. Acceptable equipment includes a mobile conveyor, material transfer device, shuttle buggy material transfer vehicle, material transfer paver, or paver with remixer conveyor system. The contractor shall take care not to damage the asphalt below the surface course. The contractor must still achieve density requirements in Section 405.8 of the Standard Specification when using equipment listed above. The contractor will not be allowed to dump the wings of the paver receiving hopper during the paving operation.

In addition, replace from the start of the "Placing Temperature" subsection to the end of Section 405.7 with the following:

### **Placing Temperature:**

All asphaltic surface course mixtures shall be delivered to the place of construction within a temperature range of between two hundred sixty degrees (260°) F. and three hundred thirty-five degrees (335°)F. Asphaltic base mixtures shall be delivered to the place of construction within a temperature range of between two hundred twenty degrees (220°) F. and three hundred thirty-five (335°) F. The temperature of the asphaltic mixtures shall be regulated within these limits in accordance with the workability of the mix and the weather conditions. The temperature of the asphaltic materials shall be maintained at the above indicated maximum temperature when hand spreading and raking of the material is required.

For polymer modified asphalt mixtures with a Performance Grade of 70-28 or greater, and whether for base or surface course, the mixture shall be delivered to the place of construction within a temperature range of between two hundred seventy-five degrees (275°) F and three hundred thirty-five degrees (335°) F.

### **Weather Limitations for Placing Asphaltic Mixtures:**

Asphaltic mixtures shall not be placed on any wet or frozen surface or when the weather conditions otherwise are detrimental to the proper handling or finishing of such mixtures. Asphaltic mixtures shall not be placed when the air temperature as measured in the shade is less than 40°F. Asphaltic base course material with thicknesses of three inches (3") or more may be placed when the air temperature as measured in the shade is 30°F or above with the approval of the Engineer if density and Marshall requirements can be obtained.

For polymer modified asphalt mixtures with a Performance Grade of 70-28 or greater, base mixtures may be placed when the air temperature as measured in the shade is 45°F or above, and surface mixtures may be placed when the temperature as measured in the shade is 50°F or above, with the approval of the Engineer and if density and Marshall requirements can be obtained. In addition, the asphalt surface temperature for all subsequent placement after first base lift shall be 50°F or above.

5. **Coarse Aggregate for Portland Cement Concrete Pavement.** Section 406.2, "Materials", delete the following sentence of the "Coarse Aggregate" subsection:  
"The soundness requirement will be waived if the aggregate meets all the requirements for durability of Class I aggregate as specified in the KDOT Standard Specifications."
6. **Fly Ash Substitution of Portland Cement.** Section 406.2, "Materials", add the following:  
**Fly Ash:**  
All fly ash shall meet the requirements of ASTM C-618, Class C. Certificates shall be provided identifying the source of the fly ash for review and approval by the Engineer. Fly ash such as produced in furnace operations utilizing liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The maximum substitution of Portland Cement with fly ash in any fly ash-approved city concrete mix shall not exceed 15% by weight. All fly ash suppliers must submit test data from the previous 12 months and monthly reports from then on to support compliance with ASTM C-618. All concrete mix designs, including those with fly ash, shall be approved by the Engineer prior to use.
7. **Added 061215 (sd)**  
**Concrete batch tickets.** Section 406.2, "Mixing", add the following: Provide a batch slip issued at the batching plant including batch weights of every constituent of the concrete and time of charging of the mixer drum with cementitious material and aggregates. Include quantities, type, product name and manufacturer of all admixtures on the batch ticket for each batch delivered to the project.
8. **Immersion Vibrators.** Section 406.3, "Placing and Finishing", add the following: All concrete pavement, including streets, driveways, valley gutters, and intersections shall be vibrated with an immersion vibrator. Use of a vibrating screed as the sole source for consolidation of concrete pavement will not be allowed.
9. **Sand Cushion.** Section 407.3, "Construction Requirements", replace the first sentence of the sixth paragraph with the following: A sand cushion may be placed on the foundation prior to the construction of sidewalk, driveway approaches and wheel chair ramps when approved by the Engineer. Sand cushion is not allowed under curb and gutter and street pavement.

10. **Sidewalk Slope.** Section 407.5, “Sidewalks”, replace the first sentence in the second paragraph with the following:  
Sidewalk shall have a **maximum** cross slope of one-quarter inch (1/4”) per foot.

11. **Added 061215 (sd)**

**Pavement Markings.** Add Section 411 as follows:

**411 PAVEMENT MARKINGS**

Unless otherwise indicated on the plans, all pavement markings for asphalt pavement shall be thermoplastic; for concrete shall be epoxy. Pavement markings shall be installed per manufacturer’s recommendations and shall meet KDOT 2007 Standard Specifications for State Road and Bridge Construction, Section 806 (for a copy of this, go to <http://www.ksdot.org/burConsMain/specprov/2007/806.pdf>). Full traffic may not be restored (and substantial project completion achieved) until all pavement markings are in place. Should construction timing be such that restoration of traffic becomes necessary during temperatures prohibiting the installation of permanent markings, the Contractor shall install and maintain temporary markings until such time that permanent markings may be properly installed. Except for the material requirement, temporary pavement markings shall be placed equivalent, in every manner (i.e. dimension, frequency, spacing, etc.), to the permanent marking layout. The cost for temporary pavement markings will not be paid for directly, but shall be considered subsidiary to the bid item for “Pavement Markings”.

The contractor shall be required to grind off or cover any conflicting pavement markings within the traffic control limits for the project. The pavement markings shall be replaced at the conclusion of the project in accordance with this section. All costs associated with this work shall be subsidiary to the bid item for “Traffic Control”. If no “Traffic Control” bid item exists, the costs shall be considered subsidiary to other bid items.

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**PART 700**

1. **Electrical Billing.** Section 701.2, “Contractor Responsibilities”, replace the fourth paragraph with the following: The Contractor shall notify the appropriate power company prior to any service connection or attachment to determine the proper type and method of hook-up or installation. The cost of any initial hook-up charge will be paid by the City of Wichita directly to the utility. Electrical service to a contractor provided field office will not be directly billed to the City, but paid for through the bid item provided for the same. The contractor shall not use any City paid utility service for their construction operations.

2. **Added 061215 (sd)**

**Ownership and Maintenance of Existing Traffic Signals.** Section 701.2, “Contractor Responsibilities”, add the following: Upon issuance of the Notice to Proceed, the Contractor will assume all responsibilities associated with ownership and maintenance of existing traffic signals within the project when the project installs a new traffic signal or upgrades any component utilized in the operation of the existing traffic signal. Contractor will have ownership and maintenance of the existing traffic signal until released by the City’s Traffic Engineer.

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**PART 800**

- All AWWA references shall be for the latest revision regardless of the date shown.
- All reference to “Appendix 1” shall be considered Appendix D”.

1. **Revised 061215 Approved quarries (sd)**

**Type I Pipe Bedding Material.** Section 801.2, "Pipe Bedding", item "a)", revise to read as follows: **Type I Pipe Bedding Material** will be crushed rock conforming to ASTM C-33, Gradation No. 67, and will meet all requirements for Portland Cement Concrete Pavement Coarse Aggregate, section 406.2, City of Wichita Standard Specifications.

As of June 12, 2015, approved Suppliers for Type I bedding are:

Dolese	Richard Spurs quarry	Lawton, Oklahoma
Cornejo Quality Stone	Harshman quarry	Moline, Kansas
Martin Marietta	Blake quarry	Severy, Kansas
Whittaker	Whittaker quarry	Winfield, Kansas

2. **Trench Stabilization (Improved Bedding) for Pipes in Groundwater.** Section 801.4, "Trench Stabilization", delete the second paragraph and replace with the following: Trench stabilization must be installed when any level of groundwater or unstable soils are encountered. Trench stabilization for sanitary/storm sewer pipe will consist of over excavation and placement of Type I bedding material, a minimum of six inches under and on the sides of the pipe, up to middle of the pipe. Any trench stabilization required as a result of surface water entering the trench or to correct inadvertent over-depth trenching will be installed at the Contractor's expense. All Type I bedding material for trench stabilization must be approved by the City's Materials Testing Lab prior to use.

3. **Improved Bedding.** Section 801.5, "Improved Bedding", revise the first sentence under "General" to the following: Improved bedding shall consist of the zone from six inches (6") under the barrel of the pipe extending to a level twelve inches (12") above the top of pipe.

"Sanitary/Storm Sewer, revise paragraph "a" as follows:

**Improved bedding for rigid pipe** shall consist of Type 1 or 2 Pipe Bedding Material under the barrel of the pipe extending up to a level equal to the middle of the pipe. Type 3 Pipe Bedding Material shall be used from this level to a level twelve inches (12") above the top of the pipe.

4. **Rock Bedding for Structures.** Section 801.5, "Structures", add the following: All sanitary, storm sewer, water and traffic structures, including but not limited to Reinforced Concrete Box Culverts, Curb Inlets, Area Inlets, Manholes, Water Vaults, Air Release Vaults and Traffic Service Boxes must have a minimum of 6" of Type I bedding material placed under the structure, to the limits of excavation. Improved bedding material for these structures will not be paid for separately, but will be considered subsidiary to the bid item for the structure itself. All Type I bedding material for sewer and water structures must be approved by the City's Materials Testing Lab prior to use.

5. **Backfill Requirements.** Section 801.6, "Backfilling and Compaction", delete the fifth paragraph under "General" and replace with the following:

Trenches to be sand backfilled as called out on the plans or in the Project Specific Special Provisions, or when the excavated material is not suitable for backfill material as determined by the Engineer, shall be consolidated by flushing as follows. The top one foot (1') of trenches to be flushed shall be earth backfill compacted to a density equal to or greater than the existing adjacent undisturbed material. Sand backfill material to be flushed shall be placed in six feet (6') maximum lifts when the trench is within alley or street right-of-way, and in twelve feet (12') maximum lifts when the trench is outside of alley or street right-of-way. Each lift shall be thoroughly consolidated by using water jets and vibrators. Consolidation of sand backfill by flushing and vibrating shall result in a final density which equals or exceeds ninety percent (90%) of the standard density. Water shall be applied so that effective settlement is obtained with a minimum amount of water. Trenches shall not be permitted to overflow. Special care must be taken during backfilling, flushing, and compacting operations to prevent pipe from floating. Water shall be introduced into the layer being flushed through a long pipe nozzle and in such a manner that the granular fill, tamped material or the previously placed layer will not be disturbed, and in no case shall the nozzle end be inserted closer than three feet (3') above the top of the pipe.

6. **Boring and Jacking Installation**. Section 802.3 “Pipe Installation by Boring and Jacking Methods”, replace the first paragraph and the first two sentences of the second paragraph with the following:  
Water and sanitary sewer pipe shall not be installed by boring and jacking methods directly unless approved by the engineer. All carrier pipes within casing shall be approved restrained joint pipe that shall extend a minimum of three feet (3’) past each end of the casing.

Steel casing shall be installed by boring and jacking methods where specified by the plans. Pipe will not be allowed to be bored and jacked directly.

7. **Casing End Seal**. Section 802.3, “Pipe Installation by Boring and Jacking Methods”, add the words “Approved flexible” before “end seals”.

8. **Fire Hydrants**. Section 803.3, “Materials”, delete the full “Fire Hydrants” subsection and replace with the following for all water projects.

**A) General** - The fire hydrants supplied under these specifications must meet in every way the American Water Works and New England Water Works Association Standard Specifications for Fire Hydrants for Ordinary Water Works Service, AWWA C502-54, or the latest revision thereof, except as herein specifically noted and as herein supplemented. Section number in most instances makes direct reference to the above AWWA Specification.

**B) Traffic Type Fire Hydrant** - The fire hydrant shall be of the traffic accident type, so that in the event of traffic accident the barrel will not become broken, nor the main operating stem become broken or bent. Only the safety flange or safety breaker bolts joining the upper and lower barrel sections can be damaged in the event of a traffic accident, which parts shall be easily and quickly replaceable.

**C) Fire Hydrant Requirements** - The fire hydrant must meet the following requirements:

- 1) Shutoff shall be with pressure by compression.
- 2) The inlet connection shall be a 6” mechanical joint. Required glands, gaskets, bolts and nuts required shall be supplied with the fire hydrant. Tee head bolts and nuts shall be of Corten material.
- 3) **Provisions shall be made for lengthening the hydrant without the necessity of excavation.**
- 4) All working parts of the valve shall be removable through the top of the hydrant without the necessity of excavation. Removal of parts shall be accomplished with the use of a small hydrant hand tool.
- 5) All parts entering into the manufacture of the fire hydrants shall be interchangeable.
- 6) The top of the hydrant shall be so constructed that the operating threads are immersed in a sealed oil or grease reservoir. “O” ring seals shall be used to prevent water and oil leakage. The stem shall be bronze lined where it passes through the “O” rings. The operating nut shall be provided with seal or shield.
- 7) The interior of the shoe shall be coated with a cement mortar lining in accordance with AWWA C-104-53, or the latest revision thereof; or with a catalyst cured or electro fused epoxy, minimum thickness 10 mils.

**D) Fire Hydrant Valve** - The fire hydrant valve shall meet the following requirements:

- 1) The main valve assembly shall be seated in a sub-seat of all bronze material so as to provide bronze to bronze engagement of the valve seat ring and to provide a drainage channel of non-ferrous material.
- 2) The entire valve assembly, including lower valve plate, shall be bronze or stainless steel. The lower stem, viz. that portion below the lower valve plate, shall be completely enclosed with bronze cap nut or nuts.
- 3) Valve facing – The main valve shall be faced with balata, hycar rubber, or approved equal.
- 4) The fire hydrant main valves must move from full closed to full open in not less than 12 complete turns and not more than 18 complete turns of the operating nut.

- 5) Any spring assembly between the stem and the main valve, used by the manufacturer to facilitate operations, shall be composed of either bronze or stainless steel.
- 6) The fire hydrant must open left (counter clockwise).
- 7) The hydrant must have two drain valves for automatic draining of the barrel when the main valve is closed. The City of Wichita Public Works and Water Utilities Material Review Board may grant exceptions to this requirement on an individual hydrant model basis.
- 8) The main valve shall be designed to provide for flushing at the drain valves during the first four turns of opening the main valve.
- 9) The main valve opening shall be 4.5 inches unless otherwise specified.
- 10) The operating nut and cap nuts shall be a 1.5 inch pentagon to match operating nuts on hydrants now in system.

**E) Revised 052915 (jk)**

**Nozzles** - The fire hydrant must have three nozzles:

- 1) Two 2.5 inch nominal nozzles with 2.5 inch national standard thread.
- 2) One 5 inch Storz pumper nozzle with cable attachment. Chains shall not be accepted.
- 3) The 2.5 inch nozzles shall be joined to the barrel by either a threaded or twist-lock type joint. The threads provided shall match threads now in service with other fire hydrants in use in the City of Wichita.
- 4) The hydrant pumper nozzle shall be of one-piece design compatible with 5" Storz hose coupling. The nozzle shall be an integral part of the fire hydrant and must be furnished by the manufacturer. Storz adapters will not be accepted.

**F) Fire Hydrant Materials** - The materials used in the manufacture of the fire hydrant shall be as follows:

- 1) All iron castings shall be made from a superior quality iron and of even grain and must possess a tensile strength of not less than 32,000 pounds per square inch.
- 2) Flange bolts and nuts shall be of Everdur, stainless steel, or Corten for that type fire hydrant employing drainage between flanges of shoe and barrel.
- 3) Stuffing box packing must have "O" ring seals for upper stem.
- 4) Gasket material shall be rubber composition.
- 5) The epoxy coating shall be applied as follows:
  - (a) The casting shall be grit or sand blasted to bare metal, blown free of dust, and then cured by heating to 135°F.
  - (b) The coating shall be applied in a dust free area.
  - (c) The coating shall be applied in not less than three applications of equal thickness.

**G) Fire Hydrant Color** - The nozzle caps and bonnet of the fire hydrant shall be red and all other parts above ground shall be aluminum color.

**H) Approved Hydrants** - A list of approved fire hydrants can be found on the City of Wichita website at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx>.

9. **Separation of Water Mains and Sewers.** Section 803.4, "Separation of Water Mains and Sewers", delete subsection "a" and replace with the following subsections:

**a) Gravity Sanitary Sewers.** When potable water pipes and gravity sanitary sewers are laid parallel to each other, the horizontal distance between them shall be not less than 10 feet regardless of elevation difference. The distance shall be measured from edge to edge. The laying of water pipes and sanitary sewers shall be in separate trenches with undisturbed earth between them. In cases where it is not practical to maintain a 10-foot separation, equivalent protection shall be required **and approved by KDHE.**

When a water pipe and a gravity sanitary sewer cross and there is 2 feet or more of separation (clear space), no special requirements or limitations are provided herein. In cases where it is not practical to maintain a 2-foot separation, equivalent protection shall be required **and approved by KDHE.**

Joints in the sewer pipe shall be located as far as practical from the intersected water main.

**b) Pressure Sanitary Sewers.** When a water pipe and pressure sanitary sewer are laid parallel to each other, the same separation rules apply as for gravity pipe.

When a water pipe (including service lines) and a pressure sanitary sewer cross and the pressure sewer is 2 feet or more (clear space) below the water pipe, no special requirements or limitations are provided herein. In cases where it is not practical to maintain a 2-foot separation or the sewer is above, equivalent protection shall be required **and approved by KDHE.**

The remaining subsections under “Separation of Water Mains and Sewers” shall now be:

- c) Sewer connections
- d) Sewer manholes
- e) Storm sewers
- f) Drains

10. **Waterline Abandoned in Place.** Section 803.5 “Construction Methods”, add the following:  
Both ends of all pipes to be abandoned in place shall be plugged with a mechanical joint cap. Pipes abandoned in place having diameters greater than fifteen inches (15") shall be filled with sand or grout and plugged with a mechanical joint cap.
11. **Approved Water Valves.** Section 803.7, “Valves”, delete the 3<sup>rd</sup> paragraph and replace with the following: A list of approved water valves can be found on the City of Wichita website at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx>.
12. **Water Services.** Section 803.12, “Meter Service Connection”, add the following:  
**Water Service Replacement.** The Contractor shall replace all water services that are connected to the water mains being replaced. The Contractor shall be paid for the actual number of services installed at the unit price bid for the appropriate water service bid item. Water service tables shall be included in the project plan set. The tables are to be completed by the project Inspector as services are replaced. The Contractor shall provide all information necessary to complete the tables. All water services found as 1” or smaller shall be replaced using 1” service materials, unless otherwise directed by the plans. The Contractor shall provide all materials for the water service replacement bid item, including: installation of the 1” service saddle, 1” service tubing as necessary, 1” meter setter, meter box, ring, and lid. The same shall apply for relocated services – new 1” meter setter, approved meter adapters, meter box, ring, and lid.

**Water Meter Replacement.** All existing water meters are to be replaced where water services are replaced or relocated. The new water meter shall be located in the same proximity as the existing water meter, where possible. The new water meters are to be set into the new 1” water meter setters using approved adapters, if needed. The Public Works & Utilities Department will provide the new 1” meters at no cost. **All existing 5/8”, 3/4” and 1” water meters shall be replaced with new 1” water meters.** Where an existing meter is found to have an ERT, the meter shall be reinstalled into the new 1” water service and the necessary water meter information shall be provided. The new water meters shall be provided by the Public Works & Utilities Department, at no cost to the Contractor. The new meters may be picked up at the Public Works & Utilities Department Maintenance warehouse at 1825 S. McLean Blvd.

The Contractor shall return the old water meters to the Public Works & Utilities Department Maintenance warehouse within three working days of the meter removal unless otherwise directed by the Public Works & Utilities Department as approved by the Engineer. The Contractor shall be required to pick up new water meters from the Public Works & Utilities Department Maintenance warehouse. No more than 20 water meters may be picked up at one time. To pick up the water meters, the Contractor shall contact the warehouse supervisor at (316) 219-8915, and provide the water project number and project description, and the number of which size meter is required, **24 hours in advance of picking up the new meters.** The warehouse supervisor shall record the Contractor’s name, project number, water meter sizes, the meter numbers, and provide lists of the water meter numbers to the Contractor, the project Inspector, and to Public Works & Utilities Department at (316) 268-4555 and other Public Works &

Utilities Department staff as necessary. When an existing water meter is found, the meter shall be replaced with a new water meter; the project Inspector shall record the address where the old meter was removed, the old meter number, the old meter reading, the new water meter number, the new water meter size, the new meter reading, and confirm the address where the new meter is installed. The project Inspector shall provide the information to the project Engineer, and to Systems Planning of the Public Works & Utilities Department

The meter installation information is to be provided within three (3) working days after the new meter is installed. All new water meters picked up from the Public Works & Utilities Department Maintenance warehouse that are not installed, shall be returned to the Public Works & Utilities Department Maintenance warehouse. The meter numbers of the meters returned shall be recorded and a list prepared. Copies of that list shall be provided to the project Inspector, the project Contractor, and to Public Works & Utilities Department. The Contractor shall be charged directly for all new water meters that were picked up but not used or returned to the Public Works & Utilities Department warehouse. The water meter adapters to be used on this project shall be of a brand approved for use by the Wichita Public Works & Utilities Department. The adapters shall be brass, easily installed or removed, and have gaskets that may be easily removed or replaced as necessary. The water Contractor shall deliver all existing meter rings and lids that do not meet current City of Wichita standard specifications or are not in suitable condition, to the Public Works & Utilities Department material yard at 1825 S. McLean Blvd. Picking up and transporting the new water meters, the old water meters, and the meter rings and lids, shall be considered subsidiary to the water service installation bid item and not be bid or paid for separately.

**ERT Installation.** The Public Works & Utilities Department shall be responsible for providing the ERT with all water meters to be installed. The Contractor is responsible for installing the ERT for each water meter installation. Costs for installing the ERT at each water service installation shall be considered subsidiary to the water service installation bid items and not be bid or paid for separately.

**Water Service Abandonment, 1” and Smaller:** For all water service abandonments included on plans, the contractor will expose the corporation at the water main and shut it off. Water service tubing will be separated from the corporation and the meter box, ring & lid will be removed from the meter setter. The contractor will provide measurements for the corporation in relation to the center line of the nearest streets. Any services not shown on plans that are discovered during construction will require verification from the City before abandonment.

13. **Blocking.** Section 803.14, “Blocking”, add the following:  
All waterline pipe 20” and larger shall be restrained joint, where necessary, and thrust blocking will not be allowed. Restrained joint pipe will not be called out in the plans, but shall be required as specified by the pipe manufacturer and/or supplier. In addition to a comprehensive lay schedule, the contractor shall be required to provide complete documentation and certification to the Project Engineer from the Contractor that explicitly states in every case that those sections of pipe to be restrained meet or exceed adequate restraint for the pressure class specified.
14. **Water Line Testing.** Section 803.15, “Testing”, delete the “General” and “Pressure Tests” sections and replace with the following. Also delete the “Leakage Test” section.

**General:**

All sizes of water lines, including fittings and connections shall be pressure tested for watertightness by subjecting each section of line to hydrostatic tests in accordance with applicable provisions of AWWA C-600, except as modified below. The contractor shall provide all equipment, material, and labor to perform the required testing.

**Pressure/Leak Tests:**

Water lines, including all fittings and connections to the water mains shall be tested for watertightness by subjecting each section to pressure/leak test. The pressure shall be measured at the lowest end of the section under test. The pipe is to be tested at a test pressure of 150 psi. The duration of the test is to be two hours unless otherwise directed by the Engineer. Each section of the project is to be tested separately as per AWWA C-600, or as modified by these specifications. A section of less than 500 feet may be

tested with the next adjacent section, however, testing of sections longer than 1/2 mile in total pipe length shall not be allowed unless written approval from the Engineer has been provided.

Pressure/leak testing may begin only after appropriate backfilling has been completed and the last concrete thrust block has set for seven days, unless high early strength concrete was used, in which case the block must set for 36 hours prior to testing. The pipe to be tested shall be filled slowly with water and allowed to stand for 24 hours to allow for absorption. After the 24-hour period, the test may begin. Any exposed valves, fittings, pipe sections, and fire hydrants, etc., shall be examined during the pressure/leak test for cracks, leaks, or other signs of leakage. The pipe section is to be pumped to 150 psi and the pressure gages observed for the duration of the test. The pressure shall not vary more than 5 psi during the testing period with no additional water added. The pipe sections that do not pass testing, shall be repaired or replaced with sound material as directed by the Engineer, at the expense of the Contractor. The test shall be redone after repairs have been made. Only after the section has passed the test shall the section be accepted.

15. **Tracer Wire.** Add Section 803.17 as follows:

**803.17 TRACER WIRE**

All water line installations shall include a tracer wire and test stations as referenced by the City of Wichita Standard Water Assembly Detail (WL-101).

16. **Ductile Iron Pipe Requirement.** Section 803.3, "Materials", add the following under "General":  
e) Ductile Iron Cement Lined (DICL) pipe shall be used any time the length of pipe to be installed is 11' or less. If a change to the project occurs that requires a run of pipe less than or equal to 11' long, or the plans failed to show DICL for the same, the contractor will be compensated for additional cost, if necessary, as agreed to by the Engineer.
17. **Butterfly Valve Orientation.** Section 803.3, "Materials", add the following under section "c" of "Water Valves": Mechanical Joint Butterfly Valves shall be installed such that the operator is adjacent to the closest property line.
18. **Sanitary Sewer Couplings.** Section 804.2, "Materials", add the following: Allowed couplings for sanitary sewer connections are as follows:  
**PVC to VCP Connections:**
  - 8" pipe connections – non-shear repair couplings will be required.
  - Greater than 8" pipe connections – Fernco couplings (concrete encased) are allowed.**Private Laterals, Schedule 40 PVC to VCP Connections:**
  - 4" & 6" pipe connections - non-shear repair couplings will be required.**PVC to PVC Connections:**
  - When connecting plastic pipe to plastic pipe, a gasketed plastic coupling of the same material and schedule or SDR as the pipe shall be used, for 8" diameter pipe or larger. For 4" and 6" diameter pipes, the coupling may be gasketed or solvent welded.**Approved Non-Shear Couplings for 4", 6" and 8" pipes:**
  - **Cascade Couplings**
  - **Shear Guard Couplings by Indiana Seal**

The Contractor is to supply and install additional laminated gaskets as may be needed due to variances in outside diameter of existing materials. Cost of additional gaskets shall be subsidiary to the installation of the pipe.

**Fernco Coupling Specifications:**

Fernco couplings shall be banded with two stainless steel bands on each side of the coupling and each band shall be sealed in position at the junction of the band screw and band thread with a two part epoxy. The coupling shall be encased in concrete.

All Cascade and Fernco style couplings of any style shall be wrapped with 8-mil polyethylene wrap (polywrap) to prevent corrosion. The polywrap shall be continuous, securely taped and provide a continuous barrier between the coupling and surrounding pipe bedding or concrete. All couplings, regardless of the material, shall be bedded with Type I bedding a minimum of 6" on all sides.

19. **Sanitary Sewer Pipe – Ductile Iron.** Section 804.2, Stormwater/Sanitary Pipes, remove part “e”, “Ductile Iron Pipe (Sanitary)” from the specifications. Ductile iron pipe is not allowed for sanitary sewer construction on City of Wichita projects.
20. **Corrugated High Density Polyethylene Pipe.** Section 804.2, “Materials”, add the following:  
**Storm Water Pipe:**  
**Corrugated High Density Polyethylene Pipe -**

**1. Material**

Corrugated High Density Polyethylene (HDPE) pipe for storm water shall conform to ASTM F2306 and AASHTO M294, or the latest revisions thereof, and shall be Type S or Type SP (Perforated – only when specified) only. All HDPE pipe joints shall consist of integral bell and spigot with rubber gasket that meets specification requirements of ASTM F477. Bell shall span over three (3) spigot corrugations. All joints shall be soil tight, per ASTM F2306, paragraph 6.6.3.1, and AASHTO M294.

**2. Size**

HDPE pipe shall have an I.D. equivalent to the pipe size specified by the project plans. **The maximum allowable inside diameter for HDPE pipe shall be thirty (30”).**

**3. Connections and Fittings**

Fittings/connections will only be allowed in repair situations, and as approved by the City’s Construction Engineer. No fittings will be allowed between dissimilar materials. Connection to an existing pipe, regardless of the existing pipe material, shall be by means of a structure, to be designed into the project. All fittings to be used for HDPE to HDPE connections shall not reduce or impair the overall integrity or function of the pipeline and shall meet the requirements of AASHTO M294 and ASTM F2306. Fittings may be either molded or fabricated, and shall be soil tight. Common corrugated fittings include in-line joint fittings such as couplers and reducers, and branch assembly fittings such as bends, tees, wyes and end caps. Only fittings supplied or recommended by the manufacturer, and as approved by the Construction Engineer, shall be used. The cost of such fittings, adapters, and connections shall be considered subsidiary to the HDPE pipe bid item, and will not be bid or paid for separately.

**4. Allowable Use**

HDPE pipe will only be allowed when specified on the plans or in project specific provisions. HDPE pipe placement within the street right-of-way, including under pavement, shall only be permissible for roadways that carry less than 3,000 vehicles per day.

The last run of pipe to an end section, headwall, ditch or other such facility must be concrete. HDPE pipe shall always terminate at a manhole or other type structure, and no exposed pipe will be permitted. The use of HDPE pipe as a road or driveway culvert will only be allowed as approved by the City Engineer’s office.

**5. Installation**

Pipe bedding shall be improved Type 1 or Type 2 per Section 801.2 and 801.5 (Flexible Pipe) of the Standard Specifications, with the following modification. Improved bedding shall be placed a minimum of six inches (6”) under the barrel of the pipe to twelve inches (12”) above the pipe, or to within two feet (2’) of final grade, whichever is higher.

**There is to be a minimum of thirty-six inches (36”) of cover above the top of pipe**, as measured from the top of curb in street right-of-way, and from proposed ground level in side and back lot easements.

The minimum trench width shall be 1-½ times the pipe diameter plus twelve inches (12”).

Installation of HDPE pipe shall be by methods approved by the Construction Engineer, and per the manufacturer’s recommendation. Methods other than approved shall not be allowed. Any installation of HDPE pipe by methods that are not approved shall be removed and reinstalled at the expense of the Contractor.

## **6. Testing**

The Contractor shall televise and mandrel the HDPE pipe thirty (30) days after construction. Any barrel deflection of the pipe (reduction of the barrel base inside diameter) greater than 5% will require the reinstallation or replacement of the pipe by the Contractor. Any penetration of the pipe that is encountered during televising will also be reinstalled or replaced by the Contractor, at no additional cost to the project. Repairs will be made per the manufacturer's recommendation and as approved by the Construction Engineer. The cost of all testing shall be considered subsidiary to the HDPE pipe bid item, and will not be bid or paid for separately.

Mandrel testing shall be completed per City of Wichita Standard Specifications. Televising of HDPE pipe shall be per the following.

### **HDPE Storm Sewer Pipe – Televising Specifications**

All HDPE storm sewer pipe being televised by private companies shall conform to the following set of standards:

Videos may be submitted by Compact Disc (CD) or DVD. CD's and DVD's shall be of high quality and clarity.

Videos and written logs shall be clearly labeled with project name, project number and clear reference to the location of storm sewer work.

The camera operator shall provide an audio description to clearly identify the segment being televised. They shall locate the line being televised from the closest north-south street and east-west street. Beginning and Ending structures shall be called out using the stationing and line number references as shown on the construction plans.

Televising will begin at the center of the upstream manhole and will run continuously to the center of the downstream manhole. The center of the upstream manhole shall be set at 0 ft and the video shall show the complete footage of each line. Any breaks or discontinuities in the video recording will result in the video being rejected and a new and complete video will need to be submitted.

Approximately one inch simulated flow shall be added to show flow grade.

Camera shall be pulled in the same direction as the flow, unless approved in writing by the City Engineer's office.

Camera travel must be slow enough that the reviewer can easily have three seconds to view the entire circumference of the pipe before the camera passes by any location.

Contractor shall identify on the video and on the written log, each feature observed. Any special features shall be identified by station, left or right. The operator shall pause the camera at each feature such that it will be clearly visible on the screen for review, and pan/tilt/rotate the camera head to obtain a clear view of the entire outside perimeter of the pipe.

For any potential defect, such as a gapped joint, the camera shall stop, pan/tilt/rotate and observe the entire defect. This means left, right and top shall be clearly visible for review.

The camera operator will provide an audio description of every feature viewed.

If a cleaner head is pulled ahead of the camera, it shall not be operated unless it is necessary to lower the flow level to view taps, risers and other features. When a cleaner head is used in front of camera it shall be positioned no closer than three feet to the camera. If necessary to pressurize the cleaner nozzle to view a defect or connection while the camera is stationary, the simulated flow level must be re-established prior to the televising continuing after the pressure is removed from nozzle. If the nozzle must be pressurized for

a length of pipe where the camera is not stationary, after the nozzle pressure is off, the camera must be returned to the starting point where the cleaner was pressurized and travel through the same area with simulated flow.

The Project Construction Engineer shall be notified in advance when the televising is to take place (specification requires televising to be completed a minimum of thirty days after completion of the project), and the video and written logs shall be submitted to the Construction Engineer's office within one week of completion.

21. **Manholes/Inlets Manhole Coatings and Joint Wraps.** Section 804.4, "Manholes/Inlets", item "Precast Concrete Manholes Type P",

Replace Section f) with the following:

All interior surfaces of precast manholes shall receive a troweled or broomed grout finish to fill any voids and irregularities prior to applying epoxy paint. All inside surfaces of the manhole that will be exposed to sewer gases shall be coated with two coats of approved epoxy paint. A list of approved epoxy paints can be found on the City of Wichita website at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx>.

Add the following sections:

i) Exterior manhole walls shall be coated with an approved waterproofing membrane system. A list of approved waterproofing membrane systems can be found on the City of Wichita website at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx>.

j) All manholes with a pipe size greater than or equal to 15" shall have an approved epoxy lining system applied to interior surfaces in lieu of the epoxy paint listed in section (f). A list of approved epoxy lining systems can be found on the City of Wichita website at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx>.

k) All manhole section joints that will be in groundwater or installed at a depth greater than 12ft shall be wrapped with an approved External Joint Seal. A list of approved External Joint Seals can be found on the City of Wichita website at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx>.

22. **Sanitary Sewer Testing.** Section 804.5, "Testing", replace the second sentence under "Pipeline Testing and Inspection", regarding sanitary sewer air testing, with the following:

All sanitary sewers constructed, regardless of size or pipe type, will be air tested by the contractor, per the specifications in this section. If a bid item is not included for testing, all costs associated with air testing shall be considered SUBSIDIARY to other items of work.

Also replace the entire fifth paragraph, regarding deflection testing, with the following:

Unless otherwise directed by the plans or Project Specific Special Provisions, all flexible and semi-rigid pipe shall be tested for deflection after installation and backfill. Deflection may be tested by a mandrel or by direct measurement of the vertical diameter of the pipe. Pipe that has deflected more than five percent (5%) of its nominal dimension shall be reconstructed, repaired or reconstructed by the Contractor at his expense. The reconstructed pipe shall also be tested for deflection. All deflection testing shall be completed by the contractor, including necessary equipment and labor, regardless of the number of tests required to achieve acceptance. All new sanitary sewer pipe will be televised by the City one time. If corrections/repairs are necessary for any reason, re-televising will be the responsibility of the contractor.

23. **Added 061215 (sd)**  
**Sediment Removal for Storm Water Treatment Devices.** Add to Section 804.6 as follows:  
**Storm Water Treatment Device Sediment Removal**  
Upon completion of all permanent seeding and sod placement, the Contractor shall remove all sediment and trash from any Storm Water Treatment Devices installed on the project. Final Acceptance of the project will not be given until the Contractor completes the required cleaning. All sediment and trash removed shall be disposed of properly in accordance with all City, State, and Federal regulations.
24. **Pressure Sanitary Sewer.** Add Section 804.7 as follows:  
**804.7 PRESSURE SANITARY SEWER**  
**Locating and Testing**  
a) **Tracer Wire/Signage.** All pressure sanitary sewer installation shall include tracer wire and signage as shown on the City of Wichita Standard Detail (SS-106).  
  
b) **Testing.** All pressure sanitary sewer shall be tested similar to waterlines per section 803.15
25. **Form High Modulus PVC Liner Pipe.** Delete Section 806. Folded and expanded PVC pipe is not allowed.
26. **Pipe Lubrication.** Section 808.3, "Pipe Lubrication System", add the following: All pipe lubrication shall be required to be a non-toxic lubricant.

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## **PART 900**

1. **Landscape Specifications.** Part 900 has been revised and is available at QuikPrint (217 Pennsylvania (316) 942-2208) or online at <http://www.wichita.gov/Government/Departments/PWU/Pages/Regulations.aspx> (November, 2011). The Contractor shall take special note of the revised "Maintenance/Acceptance" and "Payment" specifications for seeding and sodding.
2. **Turf Restoration/Temporary Erosion Control.** Section 901, "General", replace the second and third paragraph with the following, to reflect a change in payment of temporary erosion control blanket:

All areas disturbed by construction that are adjacent to developed properties shall be restored with sod to match the existing turf type, as shown on the plans. A property shall generally be considered developed if occupied by a residential or commercial structure, parking lot, or other facility used on a regular basis. Restoration of disturbed areas shall include, but not be limited to, top soil preparation, fertilizer and sod installation. All sodding work shall be in accordance with the specifications in this section and City of Wichita Administrative Regulation 6.5 or the current version. The regulation governs cleanup and restoration or replacement following construction. The plans shall indicate the estimated square yards of disturbed area to be sodded, within the projected construction limits for the project. The contractor shall be responsible for restoring all areas **disturbed** by construction, including those outside construction limits shown on the plans. When the weather/season prevents the installation of sod the Contractor shall be responsible for installing approved erosion control blanket at the back of curb (8' minimum width) where all drainage goes to the street; and through full ditch/swale/slope sections where drainage goes elsewhere. The temporary erosion control blanket is to be removed before the sod is placed. All costs for installation of temporary erosion control blanket shall be paid for through the final measured bid item for the same. All costs for sod installation, including removal of the temporary erosion control blanket, shall be considered subsidiary to the bid item "Sodding", or equivalent. In the absence of a bid item for sod installation, all associated work shall be considered subsidiary to other bid items. All areas disturbed by construction that are adjacent to non-developed properties shall be restored by seeding with a mixture of Ryegrass (applied at a rate of 50 lbs per acre) and Buffalo grass (applied at a rate of 200 lbs per acre). A property shall be considered non-developed if vacant land

and/or is used primarily for agricultural purposes. Restoration of disturbed areas shall include, but not be limited to, topsoil preparation, fertilizer, and seeding. All seeding work shall be in accordance with the specifications in this section and City of Wichita Administrative Regulation 6.5 or current version. The regulation governs cleanup and restoration or replacement following construction. The plans shall indicate the estimated square yards of disturbed area to be seeded, within the projected construction limits for the project. The contractor shall be responsible for restoring all areas **disturbed** by construction, including those outside construction limits shown on the plans. When the weather/season prevents the placement of seed the Contractor shall be responsible for installing approved erosion control blanket at the back of curb (8' minimum width) where all drainage goes to the street; and through full ditch/swale/slope sections where drainage goes elsewhere. The temporary erosion control blanket is to be removed before the permanent seed is planted. All costs for installation of temporary erosion control blanket shall be paid for through the final measured bid item for the same. The Contractor shall be responsible for installing approved permanent erosion control blanket over all seeded areas. All costs associated with permanent seeding and permanent erosion blanket, including removal of the temporary erosion control blanket, shall be considered subsidiary to the bid item "Seeding", or equivalent. In the absence of a bid item for seeding, all associated work shall be considered subsidiary to other bid items.

3. **Erosion Control Blanket for Permanent Seeding.** Replace Section 902.7, "Erosion Control Blanket", with the following:

When permanent seeding is specified but weather or seasonal limitations prevent the planting of the permanent seed, an approved erosion control blanket shall be installed at the back of curb (8' minimum width) where all drainage goes to the street; and through full ditch/swale/slope sections where drainage goes elsewhere. The temporary erosion control blanket is to be removed before the permanent seed is planted. All costs for installation of temporary erosion control blanket shall be paid for through the final measured bid item for the same.

When permanent seeding is specified, an approved control blanket shall be installed over the entire seeded area, unless otherwise indicated in the plans or provisions. All costs for the erosion control blanket shall be subsidiary to the bid item "Seeding", or equivalent.

4. **Erosion Control Blanket for Temporary Seeding.** Section 902.8, "Temporary Seeding", replace the last paragraph with the following:

When temporary seeding is placed, an approved erosion control blanket shall be installed at the back of curb (8' minimum width) where all drainage goes to the street; and through full ditch/swale/slope sections where drainage goes elsewhere. The erosion control blanket is to be removed before the permanent seed is placed. All costs for installation of temporary erosion control blanket shall be paid for through the final measured bid item for the same.

5. **Erosion Control Blanket for Sodding.** Section 903.6, "Erosion Control Blanket", replace with the following:

When sodding is specified but weather or seasonal limitations prevent installation of the same, an approved erosion control blanket shall be installed at the back of curb (8' minimum width) where all drainage goes to the street; and through full ditch/swale/slope sections where drainage goes elsewhere. The temporary erosion control blanket is to be removed before the sod is installed. All costs for installation of temporary erosion control blanket shall be paid for through the final measured bid item for the same.

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## **Appendix 1**

1. **Appendix 1 - "Water Main Disinfection Procedures"**  
Delete Appendix 1 and replace with Appendix D from the KDHE minimum design standards.



Susan Mosier, MD, Secretary

Department of Health & Environment

Sam Brownback, Governor

RE: Authorization to Discharge Construction Stormwater Runoff  
Kansas Water Pollution Control General Permit No. S-MCST-0312-1

Dear Permittee:

Enclosed is the authorization to discharge stormwater runoff under the referenced construction stormwater general permit at the construction site described therein. Please retain a copy of the authorization at the project site or at the records address identified on the Notice of Intent (NOI) form.

A new construction stormwater general permit was issued March 2, 2012 which includes significant changes in stormwater management requirements. Permittees whose projects are authorized to discharge stormwater from construction activities after March 2, 2012 must meet the requirements of the new General Permit. Because this authorization to discharge obligates the permittee to meet permit requirements, we ask that you review the new permit carefully. Additional information, instructions and forms relating to the new general permit are available on the KDHE Stormwater Website at [www.kdheks.gov/stormwater](http://www.kdheks.gov/stormwater). Paper copies are also available by written request.

A \$60 annual permit fee will be due each year for the duration of the project. In accordance with K.A.R. 28-16-56(b)(5) the general permit fee must be paid annually to maintain coverage under the construction stormwater general NPDES permit. You will receive an invoice approximately 30 days prior to the anniversary date of your permit. When submitting the annual permit fee, please reference the permit number and include the invoice so that we can apply it to the appropriate permit. Checks for the annual fees should be made payable to KDHE. In order to ensure that the appropriate person is notified of the annual permit fee, please notify KDHE of any change in address or contact information.

Once the construction has been completed and final stabilization has been achieved, please submit a Notice of Termination (NOT). After KDHE has accepted the NOT, permit coverage is terminated and the annual general permit fee is no longer required.

For projects with multiple phases, only those included on the NOI addressed by this authorization will be covered. Additional phases will need to have an NOI submitted and authorized.

If you have any questions regarding the enclosed authorization to discharge, or coverage under the general permit, please contact me at (785) 296-5549 or by email at: [stormwater@kdheks.gov](mailto:stormwater@kdheks.gov)

Enclosure: Authorized NOI



NOTICE OF INTENT (NOI)

For Authorization to Discharge Stormwater Runoff from Construction Activities
In accordance with the Kansas Water Pollution Control General Permit Under the
National Pollutant Discharge Elimination System (NPDES)

Submission of this Notice of Intent constitutes notice that the party identified in Section I of this form requests authorization for coverage under the Kansas
Water Pollution Control general permit, or KDHE issued successor permits, issued for stormwater runoff from construction activities in the State of
Kansas. Becoming a permittee obligates the discharger to comply with the terms and conditions of the general permit. Completion of this NOI does not
provide automatic coverage under the general permit. Coverage is provided and discharge permitted when the Kansas Department of Health and
Environment (KDHE) authorizes the discharge of stormwater runoff from the construction activities identified on the NOI and supporting
documentation. A signed and dated copy of the first page of the NOI indicating the Authorization will be provided to the owner or operator, or all
three pages for Conditional Authorizations. Upon authorization of the construction activity discharge, a Kansas permit number and a Federal permit
number will be assigned to the construction project. A complete request for Authorization for coverage under the general permit must be submitted
or the request will not be processed (see listing on Page 3 of this NOI). KDHE will notify owners or operators whose Notice of Intent (NOI) and
supporting documentation for Authorization of stormwater runoff associated with construction activities are incomplete, deficient, or denied.
Please Print or Type.

I. OWNER OR OPERATOR ADDRESS, BILLING, CONTACT & RECORDS LOCATION INFORMATION

A. Owner or Operator's Name: Stan Breitenbach
Company Name: Public Works & Utilities, C.O.W.
Owner or Operator's Phone: (316) 268-4235
Mailing Address: 455 N Main, 7th Floor
City: Wichita State: KS Zip: 67202
C. Contact Name: Stan Breitenbach
Company Name: Public Works & Utilities, C.O.W.
Contact Phone: (316) 268-4235
Mailing Address: 455 N Main, 7th Floor
City: Wichita State: KS Zip: 67202
E-mail Address (optional): SBreitenbach@wichita.gov
B. Billing Contact Name:
Billing Contact Address (if different):
City: State: Zip:
D. Address where records will be kept (if not on-site):
Records Address:
City: State: Zip:

II. SITE INFORMATION

A. Project Name: Re-Use Water Supply System to serve Spirit AeroSystems - Phase 2 Pipeline
B. LEGAL SITE DESCRIPTION:
Site Address:
City: Wichita State: KS Zip:
(Nearest City to Project)
County: Sedgwick
QTR of QTR of QTR Section: 23
Township: 28 South; Range: 1 E W
Latitude: 37° 36' 14", Longitude: - 97° 17' 39"
Deg. Min. Sec. Deg. Min. Sec.

For Official Use Only:

Received RECEIVED APR 13 2016 BUREAU OF WATER
Amount Paid: \$60
Date: 4-13-16
Initials: dg
Check No.: 316801
Authorized: [X] Y; [ ] N
Is Authorization Conditional? [ ] Y; [X] N
Reviewer: [Signature]
Date: 5-16-2016
KS Permit No.: S-AR94-1327
Federal Permit No.: KSR 11985

Send completed 3 page NOI form with original signature and all appropriate submittals (see page 3 of NOI) to:

Note: A copy of the permit can be obtained at: www.kdheks.gov/stormwater or by submitting a written request to KDHE.

Kansas Department of Health and Environment
Bureau of Water, Industrial Programs Section
1000 SW Jackson, Suite 420
Topeka, KS 66612-1367

KDHE Contact Information:
Phone: (785) 296-5545
E-mail: stormwater@kdheks.gov



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Kansas Ecological Services Field Office  
2609 Anderson Avenue  
Manhattan, Kansas 66502



May 27, 2016

Mark Buckingham, PE, LEED AP  
MKEC Engineering Success  
411 North Webb Road  
Wichita, KS 67206

RE: Re-Use Water Supply Pipeline, Sedgwick Co.

FWS Tracking # 2016-CPA-0612

Dear Mr. Buckingham:

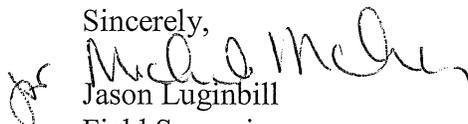
This is in response to your April 29, 2016 email requesting comment on the proposed construction of a new re-use water 12-inch transmission pipeline, to be located in Sedgwick County, Kansas.

Based on review of the proposed action, I conclude that no federally-listed threatened or endangered species are likely to be present in the project area.

The Migratory Bird Treaty Act prohibits the taking, killing, possession, and transportation, (among other actions) of migratory birds, their eggs, parts, and nests, except when specifically permitted by regulations. While the Act has no provision for allowing unauthorized take, the USFWS realizes that some birds may be killed during project construction even if all known reasonable and effective measures to protect birds are used. The USFWS Office of Law Enforcement carries out its mission to protect migratory birds through investigations and enforcement, as well as by fostering relationships with individuals, companies, and industries that have taken effective steps to avoid take of migratory birds, and by encouraging others to implement measures to avoid take of migratory birds. It is not possible to absolve individuals, companies, or agencies from liability even if they implement bird mortality avoidance or other similar protective measures. However, the Office of Law Enforcement focuses its resources on investigating and prosecuting individuals and companies that take migratory birds without identifying and implementing all reasonable, prudent and effective measures to avoid that take. Companies are encouraged to work closely with Service biologists to identify available protective measures when developing project plans and/or avian protection plans, and to implement those measures prior to/during construction or similar activities.

Thank you for this opportunity to comment on the proposal. If we can be of any further assistance, please call Ms. Michele McNulty, of this office, at 785-539-3474 ext. 106.

Sincerely,

  
Jason Luginbill  
Field Supervisor

cc: KDWPT, Pratt, KS (Ecological Services)

1320 Research Park Drive  
Manhattan, Kansas 66502  
(785) 564-6700



900 SW Jackson, Room 456  
Topeka, Kansas 66612  
(785) 296-3556

Jackie McClaskey, Secretary

Governor Sam Brownback

May 23, 2016

CITY OF WICHITA  
STAN BREITENBACH  
445 N MAIN 7TH FLOOR  
WICHITA KS 67202

Re: Proj. No.: Spirit Aerosystems Water Line  
Class C Levee Modification  
Arkansas River  
Sedgwick County  
WSN: LSG-0502, Notice No.: 2016137

Dear Mr. Breitenbach:

Consideration has been given to your application for a permit and approval of plans relating to the Class C Levee modification along Arkansas River at a location in the Government Lot 1 and 5 in the NE 1/4 and the NW 1/4, all in Section 27, Township 28 South, Range 1 East, Sedgwick County, Kansas.

In accordance with the provisions of K.S.A. 24-126, the Chief Engineer has approved the plans and issued the enclosed approval of application, authorizing construction of the proposed project. Please note the approval conditions on the reverse side of the approval document. Condition No. 9 requires the owner to notify this office within 30 days after the project is completed. A Notice and Proof of Completion form is enclosed for this purpose. Other special conditions have been added to limit the removal of timber and vegetation, to prohibit the introduction of toxic or deleterious materials into the watercourse, and to require the project meet the floodplain management requirements of the community.

The one set of plans submitted to this office has been endorsed with the Chief Engineer's approval and will be retained in our files. Should you desire any copies of the plans with the Chief Engineer's approval shown thereon, please submit the required number.

Comments about this proposed project were received from several agencies during the environmental review process. Copies of the letters with recommendations from the environmental review agencies are enclosed for your information.

City Of Wichita  
WSN: LSG-0502, Notice No.: 2016137  
Page 2

The work has been authorized to be completed on or before July 1, 2019. Approval for construction of this project will expire on that date unless the time is subsequently specifically extended by the Chief Engineer. Any desired extension of time should be requested in writing approximately 30 days prior to the expiration date.

Sincerely,



Janelle Phillips, P.E.  
Water Structures Program  
(785) 564-6656

Enclosure

pc: Kara Anderson- MKEC Engineering  
Tim Stolz- City Of Wichita FPA

THE STATE OF KANSAS



KANSAS DEPARTMENT OF AGRICULTURE  
Jackie McClaskey, Secretary of Agriculture

DIVISION OF WATER RESOURCES  
David W. Barfield, Chief Engineer

APPROVAL OF APPLICATION

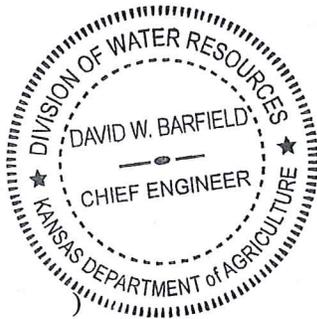
NO. LSG-0502

K.S.A. 24-126

The Chief Engineer of the Division of Water Resources, Kansas Department of Agriculture, by virtue of the powers and duties imposed by K.S.A. 24-126, hereby issues this approval to City Of Wichita, giving his consent to Class C Levee modification along Arkansas River at a location in the Government Lot 1 and 5 in the NE 1/4 and the NW 1/4, all in Section 27, Township 28 South, Range 1 East, Sedgwick County, Kansas.

All work authorized by this approval shall be performed in accordance with the maps, plans, profiles and specifications filed with the application and approved by the Chief Engineer, and in accordance with plans for any changes or modifications subsequently approved by the Chief Engineer subject to the provisions of the aforementioned statute, its regulations and the attached approval conditions.

Witness my hand this 23rd day of May, 20 16.



David W. Barfield

David W. Barfield, P.E.  
Chief Engineer  
Division of Water Resources  
Kansas Department of Agriculture

State of Kansas )  
  )SS  
County of Riley     )

The foregoing instrument was acknowledged before me this 23rd day of May, 20 16, by David W. Barfield, Chief Engineer, Division of Water Resources, Kansas Department of Agriculture.



Karen Hunter  
Notary Public

RECORD THIS INSTRUMENT IN THE OFFICE OF THE REGISTER OF DEEDS  
OF THE COUNTY WHEREIN THE WORK IS LOCATED

### APPROVAL CONDITIONS

1. This approval grants no water rights nor other property rights, nor does it authorize any injury to private property, invasion of private rights nor impairment of senior water rights, nor does it exempt the applicant from obtaining consent from appropriate federal, state or local government.
2. The work shall at all times be subject to supervision and inspection by representatives of the Division of Water Resources.
3. No changes in the work, maps, plans, profiles and specifications as approved shall be made except with the written consent of the Chief Engineer.
4. Any work authorized by this approval will be maintained in a condition satisfactory to the Chief Engineer and substantially in accordance with the approved plans.
5. The clearing of trees, brush, drift and other debris, in order to maintain the work substantially in accordance with the approved plans is hereby authorized, except that the removal of plantings made specifically for habitat or environmental mitigation is not authorized by this approval.
6. Any excess material deposited in the stream channel incidental to the construction and maintenance of the project authorized by this approval shall be removed and the channel restored to a condition satisfactory to the Chief Engineer and substantially in accordance with the approved plans.
7. All areas disturbed by construction or other exposed soil areas shall be seeded and maintained with a mixture of grass or other vegetation appropriate to the soils, climate and project in order to minimize erosion and protect the project integrity.
8. If the work is not completed on or before the 1st day of July, 2019, this approval, if not specifically extended, shall cease and be null and void. If, upon the expiration or revocation of the approval, the work has not been completed, the applicant shall, at his own expense and to such extent and in such time and manner as the Chief Engineer may require, remove all or any portion of the uncompleted work and restore the watercourse to a satisfactory condition. No claim shall be made against the State of Kansas on account of any such removal or alteration.
9. Within thirty (30) days after the completion of the work authorized in this approval, the applicant shall file with the Division a statement that the work has been performed in accordance with this approval and the approved maps, plans, profiles and specifications.
10. The Chief Engineer reserves the right to require such changes in the maps, plans, profiles and specifications as may be considered necessary. The Chief Engineer further reserves the right to modify, suspend or revoke this approval at any time, should the applicant fail to comply with any of the conditions of this approval or regulations of the Division without sufficient cause or should such action be deemed necessary in the interest of public safety and welfare.
11. That the clearing of timber and vegetation is restricted to the absolute minimum required to accomplish the work and not interfere with the beneficial use of project.
12. No deleterious or toxic materials shall be introduced into the watercourse or reservoir by runoff, leaching or disposal during or in connection with the work authorized by this permit.
13. The project must meet the floodplain management requirements of the community.

Operations Office  
512 SE 25<sup>th</sup> Ave.  
Pratt KS 67124-8147



Phone: 620-672-5911  
Fax: 620-672-6020  
www.kdwp.state.ks.us

Robin Jennison, Secretary

Sam Brownback, Governor

05/02/2016

Janelle Phillips  
Kansas Department of Agriculture  
Division of Water Resources  
1320 Research Drive  
Manhattan, KS 66502-5000

Ref: D1.1103  
Sedgwick  
ECA 2016137  
Track: 20090188-3  
W Section: 27 Township: 28S Range: 01E  
Section: 9 Township: 28S Range: 01E  
Ws No: LSG-0502  
Site Name: Re-Use Water Supply System to  
Serve Spirit Aero Systems

Dear Ms. Phillips:

**RE: KDWPT T&E Review concerning levee modification along Arkansas River, Sedgwick, County.**

We have reviewed the information for the proposed project consisting of levee modifications Along Arkansas River at a location in Government Lot 1 in the NE 1/4 of Section 27, and Government Lot 5 in the NW 1/4 of Section 27, all in Township 28 South, Range 1 East, Sedgwick County, Kansas. The project was reviewed for potential impacts on crucial wildlife habitats, current state-listed threatened and endangered species and species in need of conservation, and Kansas Department of Wildlife, Parks, and Tourism managed areas for which this agency has administrative authority.

We concede to the proposed project and recommend the following:

**To avoid impacts to existing wetlands, streams and floodplain habitat, minimize the removal of native upland and riparian vegetation, implement and maintain standard erosion control Best Management Practices such as silt fencing, hay / straw bale ditch checks, erosion control blankets, storm drain inlet protection and temporary weed-free seeding/mulching to protect water quality and erosion during construction.**

**Reseed and landscape with native to the area warm-season grasses and forbs to permanently revegetate all areas disturbed by construction.**

**Minimize any instream construction activities (particularly during general spawning dates of May 1 through July 31).**

**Insure water line is bored at a significant depth under the Arkansas River. Several bored pipelines are becoming exposed within the city of Wichita due to the Arkansas River channel downgrading through the city. These exposed pipelines are becoming aquatic barriers at base flow levels.**

Results of our review indicate there will be no significant impacts to crucial wildlife habitats; therefore, no special mitigation measures are recommended. The project will not impact any public recreational areas, nor could we document any potential impacts to currently listed threatened or endangered species or species in need of conservation. No Department of Wildlife and Parks permits or special authorizations

will be needed if construction is started within one year, and no design changes are made in the project plans. Since the Department's recreational land obligations and the State's species listings periodically change, if construction has not started within one year of this date, or if design changes are made in the project plans, the project sponsor must contact this office to verify continued applicability of this assessment report. For our purposes, we consider construction started when advertisements for bids are distributed.

Thank you for the opportunity to provide these comments and recommendations.

Sincerely,

A handwritten signature in cursive script that reads "Ryan Waters".

Ryan Waters, Stream Biologist  
Ecological Services Section

## Phillips, Janelle

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**From:** Kathy Haynes <k.haynes@kcc.ks.gov>  
**Sent:** Tuesday, April 19, 2016 8:40 AM  
**To:** Phillips, Janelle  
**Subject:** RE: ECA#2016137

A review of Conservation Division files failed to indicate any environmental concerns within the acreage described in this application.

In the event unexpected circumstances are encountered during construction, such as the discovery of abandoned oil, gas or exploratory holes or lead lines, the applicant should contact, Jeff Klock at (316) 630-4000, so appropriate regulatory response can be made.

If you have any questions or concerns, please call me at (316) 337-6243.

**Kathy Haynes**  
Department of Environmental Protection and Remediation



Conservation Division  
Kansas Corporation Commission  
266 N. Main Ste 220 | Wichita, KS | 67202-1513  
Phone (316) 337-6243 | Fax (316) 337-6232 | <http://kcc.ks.gov/>

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**From:** Phillips, Janelle [<mailto:Janelle.Phillips@KDA.KS.GOV>]  
**Sent:** Wednesday, April 13, 2016 3:19 PM  
**To:** Kathy Haynes; KDWP; KSHS; Larry Biles ([lbiles@k-state.edu](mailto:lbiles@k-state.edu)); Paul Liehti; SCC Office Assistant; Scott Satterthwaite  
**Cc:** [sbreitenbach@wichita.gov](mailto:sbreitenbach@wichita.gov); [kanderson@mkec.com](mailto:kanderson@mkec.com); [TSTOLZ@SEDGWICK.GOV](mailto:TSTOLZ@SEDGWICK.GOV); Kelly Dixon ([kdixon@sedgwick.gov](mailto:kdixon@sedgwick.gov)); Lanterman, Jeff; Dodson, Scott T NWK ([Scott.T.Dodson@usace.army.mil](mailto:Scott.T.Dodson@usace.army.mil))  
**Subject:** ECA#2016137

The Water Projects Environmental Coordination Act, K.S.A. 82a-325 to 327, requires this agency to provide seven other agencies in the state government an opportunity to review and comment on your application for a period of not less than 30 days. The environmental coordination process has been initiated, but a thorough review of your project may not yet have been performed. You will be informed of any changes that may be necessary to comply with our rules and regulations and any concerns or comments we receive from the environmental coordination agencies.

This letter does not provide any permission to begin the construction of your project. **Construction can begin only after written approval has been obtained from the Chief Engineer of this agency.** If you have any questions or comments please contact this office by writing or calling (785) 564-6656.

**Notice No.:** 2016137

**Date of Notice:** 4/13/2016

**WS No.:** LSG-0502

**Expiration Date:** 5/13/2016

**Project No.:** Class C Levee Modification

Along Arkansas River at a location in Government Lot 1 in the NE 1/4 of Section 27, and Government Lot 5 in the NW 1/4 of Section 27, all in Township 28 South, Range 1 East, Sedgwick County, Kansas

<https://agriculture.ks.gov/eca-user-login>

<https://agriculture.ks.gov/divisions-programs/dwr/stream-and-floodplain-permits/environmental-coordination-notice>

Janelle N. Phillips, P.E., C.F.M., LEED-AP

Water Structures Program

Kansas Department of Agriculture

Division of Water Resources

1320 Research Park Drive

Manhattan, KS 66502

785-564-6656

[janelle.phillips@kda.ks.gov](mailto:janelle.phillips@kda.ks.gov)

<http://agriculture.ks.gov/dwr>

Our applications have changed. Please visit our website to get current applications for new projects at:

<http://agriculture.ks.gov/divisions-programs/dwr/stream-and-floodplain-permits>



Kansas Historical Society

Sam Brownback, Governor  
Jennie Chinn, Executive Director

MEMORANDUM

To: ECA Permit Applicant  
From: Kansas State Historical Society  
Bob Hoard, State Archeologist  
Re: Historic and Prehistoric Cultural Resources

Because of time and budget constraints, the Kansas State Historical Society has elected to waive review of permit applications under the Water Projects Environmental Coordination Act (KSA-82a-325 *et seq.*). However, digging, grading, and other types of construction activities may reveal the presence of buried historic and/or prehistoric archeological sites or artifacts within your project area. If archeological materials are encountered during construction, please contact me at 785-272-8681 ext. 269 or by email at [rhoard@kshs.org](mailto:rhoard@kshs.org) and do not further disturb the site. If the materials appear to be significant, we may ask for the opportunity to document or salvage the.

In the event human burials or remains are encountered, the Kansas Unmarked Burial Sites Preservation Act (KSA 75-2741 through 75-2754) requires the finder to immediately report these discoveries to the local law enforcement agency. If the remains are not the result of criminal activity, their fate will be determined by the Unmarked Burial Sites Preservation Board. Encountering an unmarked burial does not necessarily stop a project. Discussion with the Board may lead to modification of the project, and in some cases the burial is removed and the project allowed to proceed. Human burials and associated artifacts must not be further disturbed after their discovery, until law enforcement officials or the Unmarked Burial Sites Preservation Board has determined the appropriate action. The Unmarked Burial Sites Preservation Act provides substantial penalties for intentionally disturbing human burials and grave goods, whether located on public or private property. If you find a bone that you suspect may be human, leave it where it is and get expert help to identify it. The county coroner, a medical doctor, or an archeologist can help.

**What to Look For**

Archeological sites from the historic and prehistoric periods may be buried. Prehistoric sites can be recognized by the presence of discolored earth, bones, stone tools (arrow heads, knives, scrapers), stone flakes (thin, sharp edged pieces of stone produced when making chipped stone tools), burned stones, and pieces of coarse, unglazed pottery. Stone flakes are the most commonly found artifact.

Historic period sites can be recognized by the presence of stone, brick, or concrete foundation walls, or concentrations of these materials. Many of the items used in historic times are similar to those used today. Bottles, cups, tin cans, buckets, hand tools, glass fragments, and other items can be easily recognized. If you are unsure of the significance of what you have found, contact my office.

Thank you for assisting in preserving the archeological heritage of Kansas.

\*\*\*\*\*

These actions do not constitute compliance with Section 106 of the National Historic Preservation Act. If this project receives federal funding, licensing, permitting or assistance you must contact the State Historic Preservation Office (785-272-8681 ext. 240) prior to construction for a review of the undertaking under federal law.



## **Kansas Forest Service Policy for Environmental Coordination Act Permits**

Under the Water Projects Environmental Coordination Act, the Kansas Forest Service (KFS) is responsible for reviewing permit applications from the Kansas Department of Agriculture, Division of Water Resources to determine if projects adversely affect critical forest resources.

Due to the large volume of permits we are unable to review them all. For this reason we request the Division of Water Resources to share this document with all people applying for ECA

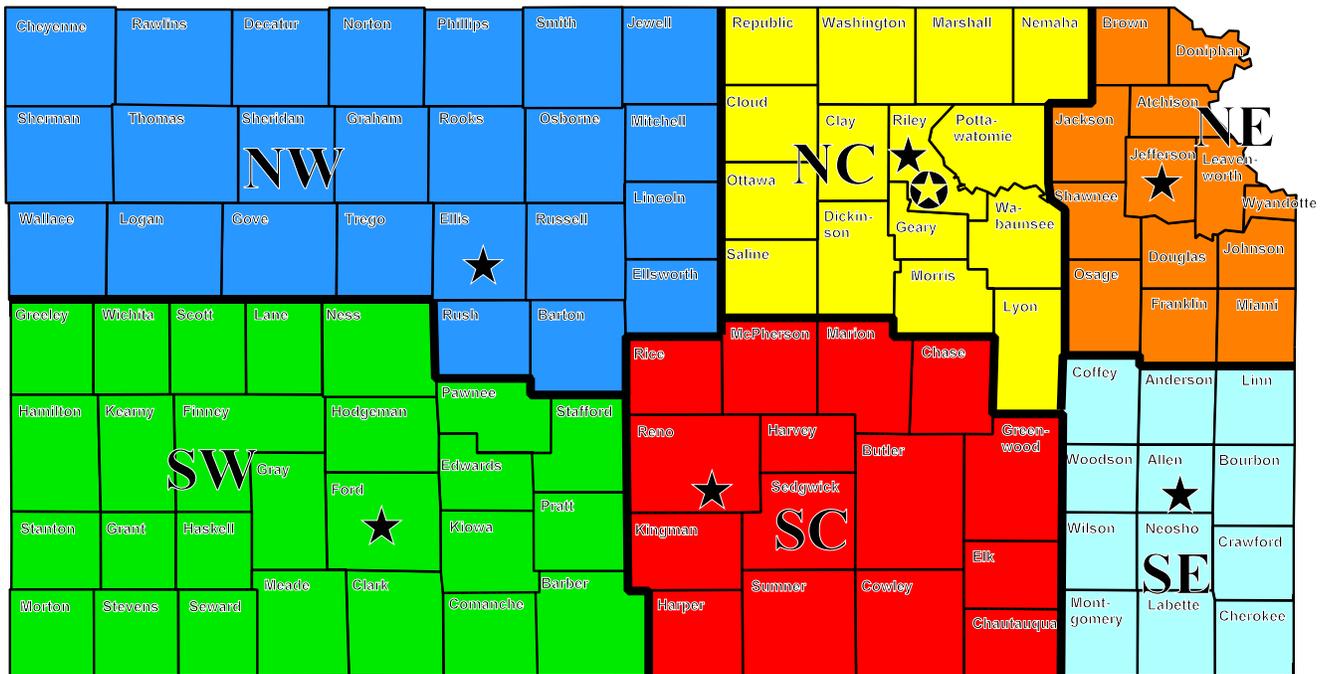
There is 2.2 million acres of forestland in Kansas and a significant percent is riparian forest that borders streams and rivers providing important water quality, soil conservation, wildlife habitat, recreational and wood product benefits to the people of Kansas.

Each year we lose a million acres of forestland to development in the United States (Ralph Alig, USDA FS Pacific NW Research Station). This generally occurs in small patches which often seem insignificant, but collectively degrades our quality of life.

**If your project contributes to the conversion of forestland to another land use that exceeds an acre in size, the Kansas Forest Service requests that you consider mitigating the damage by planting at least 435 native trees per acre on a site of similar ecological value.**

Kansas Forest Service foresters are available to assist with preparing tree planting plans at no charge and can also advise on financial incentives programs to help cover project expenses. Foresters contact information may be found on the back of this sheet. You are also invited to check out the KFS web site ([www.kansasforests.org](http://www.kansasforests.org)) for additional information.

# Kansas Forest Service State and District Offices



**★NW**

James H. Strine  
District Forester  
Kansas Forest Service  
1232 240th Avenue  
Hays, KS 67601-9228  
785-625-3425, Ext. 220  
Fax: 785-623-4369  
Email: [jstrine@ksu.edu](mailto:jstrine@ksu.edu)

**★ NC**

Thad K. Rhodes  
District Forester  
Kansas Forest Service  
3705 Miller Parkway  
Manhattan, KS 66503  
785-776-5182  
Fax: 785-539-7983  
Email: [Trhodes@ksu.edu](mailto:Trhodes@ksu.edu)

**★ SE**

Vacant  
District Forester  
Kansas Forest Service  
202 West Miller RD  
Iola, KS 66749  
620-365-2901 Ext 123  
Fax: 620-365-2901  
Email: [Crobinso@ksu.edu](mailto:Crobinso@ksu.edu)

**★ SW**

John Klempa  
District Forester  
Kansas Forest Service  
2106 E Spruce ST  
Garden City, KS 67846-6362  
620-275-0211  
Fax: 620-275-4903  
Email: [jdklempa@ksu.edu](mailto:jdklempa@ksu.edu)

**★ SC**

Dennis W. Carlson  
District Forester  
Kansas Forest Service  
9 West 28th, Suite B  
Hutchinson, KS 67502-3453  
620-663-3501  
Fax: 620-663-3866  
Email: [Dcarlson@ksu.edu](mailto:Dcarlson@ksu.edu)

**★ NE**

David L. Bruton  
District Forester  
Kansas Forest Service  
318 Broadway  
Valley Falls, KS 66088-1302  
785-945-6292  
Fax: 785-945-6882  
Email: [Dbruton@ksu.edu](mailto:Dbruton@ksu.edu)



State Office  
Bob Atchison  
Rural Forestry Coordinator  
2610 Claflin RD  
Manhattan, KS 66502-2798  
785-532-3310  
Fax: 785-532-3310  
Email: [Atchison@ksu.edu](mailto:Atchison@ksu.edu)



Jones Lang LaSalle Brokerage, Inc.  
4300 Amon Carter Blvd., Suite 100  
Fort Worth, Texas 76155  
tel +1 817-230-2600, fax +1 817 306-8265

May 13, 2016

City of Wichita  
Attention: Mr. Stan Breitenbach  
455 N Main  
7th Floor  
Wichita, Kansas 67202

16-54865

Dear Mr. Breitenbach:

Enclosed please find one (1) fully executed Agreement for your file. **A copy of the executed Agreement must be available upon request at the job site allowing authorization to do the work.** Please contact the BNSF Roadmaster, at telephone (316) 284-3479 (Office), or (806) 672-8819 (Cell), ten (10) days in advance of entry and **BEFORE YOU DIG, CALL 1-800-533-2891.** If you need additional information please contact me at (817) 230-2628.

Sincerely,

*Vicki Norman*

Vicki Norman  
Senior Manager Permits

Attachment

cc: Jeremy Willingham - BNSF Roadmaster – [Jeremy.Willingham@bnsf.com](mailto:Jeremy.Willingham@bnsf.com)

## PIPELINE LICENSE

THIS PIPELINE LICENSE ("**License**") is made to be effective May 13, 2016, (the "**Effective Date**") by and between **BNSF RAILWAY COMPANY**, a Delaware corporation ("**Licensor**") and **CITY OF WICHITA**, ("**Licensee**").

In consideration of the mutual covenants contained herein, the parties agree to the following:

### GENERAL

1. Grant of License. Licensor hereby grants Licensee a non-exclusive license, subject to all rights, interests, and estates of third parties, including, without limitation, any leases, use rights, easements, liens, or other encumbrances, and upon the terms and conditions set forth below, to construct and maintain, in strict accordance with the drawings and specifications approved by Licensor as part of Licensee's application process (the "**Drawings and Specifications**"), One (1) pipeline, Twelve (12") inches in diameter inside a Twenty Four (24") inch steel casing (collectively, the "**Pipeline**"), across or along Licensor's rail corridor at or near the station of Wichita, County of Sedgwick, State of Kansas, Line Segment 7400, Mile Post 217.60 as shown on the attached Drawing No. 66575, dated April 19, 2016, attached hereto as **Exhibit "A"** and incorporated herein by reference (the "**Premises**").
2. Term. This License shall commence on the Effective Date and shall continue for a period of twenty-five (25) years, subject to prior termination as hereinafter described.
3. Existing Improvements. Licensee shall not disturb any improvements of Licensor or Licensor's existing lessees, licensees, easement beneficiaries or lien holders, if any, or interfere with the use, repair, maintenance or replacement of such improvements.
4. Use of the Premises. Licensee shall use the Premises solely for construction, maintenance, and use of the Pipeline in accordance with the Drawings and Specifications. The Pipeline shall carry water, and Licensee shall not use the Pipeline to carry any other material or use the Premises for any other purpose.
5. Alterations. Except as set forth in this License, Licensee may not make any alterations to the Premises or permanently affix anything to the Premises or any buildings or other structures adjacent to the Premises without Licensor's prior written consent.

### COMPENSATION

6. License Fee. Licensee shall pay Licensor, prior to the Effective Date, the sum of Three Thousand Six Hundred and No/100 Dollars (\$3,600) as compensation for the use of the Premises.
7. Costs and Expenses.
  - 7.1 For the purpose of this License, "cost" or "costs" and "expense" or "expenses" includes, but is not limited to, actual labor and material costs including all assignable additives, and material and supply costs at current value where used.
  - 7.2 Licensee agrees to reimburse Licensor (pursuant to the terms of **Section 8** below) for all costs and expenses incurred by Licensor in connection with Licensee's use of the Premises or the presence, construction and maintenance of the Pipeline, including but not limited to the furnishing of Licensor's flaggers and any vehicle rental costs incurred. Licensee shall bear the cost of flagger services and other safety measures provided by Licensor, when deemed necessary by Licensor's representative. Flagging costs shall include, but not be limited to, the following: pay for at least an eight (8) hour basic day with time and one-half or double time for overtime, rest days and holidays (as applicable); vacation allowance; paid holidays (as applicable); railway and unemployment insurance; public liability and property damage insurance; health and welfare benefits; transportation; meals; lodging and supervision. Negotiations for railway labor or collective

transportation; meals; lodging and supervision. Negotiations for railway labor or collective bargaining agreements and rate changes authorized by appropriate Federal authorities may increase flagging rates. Flagging rates in effect at the time of performance by the flaggers will be used to calculate the flagging costs pursuant to this **Section 7**.

8. **Payment Terms.** All invoices are due thirty (30) days after the date of invoice. If Licensee fails to pay any monies due to Licensor within thirty (30) days after the invoice date, then Licensee shall pay interest on such unpaid sum from the due date until paid at an annual rate equal to the lesser of (i) the prime rate last published in *The Wall Street Journal* in the preceding December plus two and one-half percent (2-1/2%), or (ii) the maximum rate permitted by law.

#### **LICENSOR'S RESERVED RIGHTS**

9. **Reserved Rights of Use.** Licensor excepts and reserves the right, to be exercised by Licensor and any other parties who may obtain written permission or authority from Licensor:
- 9.1 to maintain, use, operate, repair, replace, modify and relocate any utility, power or communication pipe/lines/cables and appurtenances (other than the Pipeline) and other facilities or structures of like character upon, over, under or across the Premises existing as of the Effective Date;
  - 9.2 to construct, maintain, renew, use, operate, change, modify and relocate any tracks or additional facilities, structures and related appurtenances upon, over, under or across the Premises; or
  - 9.3 to use the Premises in any manner as Licensor in its sole discretion deems appropriate, provided Licensor uses all commercially reasonable efforts to avoid material interference with the use of the Premises by Licensee for the purpose specified in **Section 4** above.
10. **Right to Require Relocation.** If at any time during the term of this License, Licensor desires the use of its rail corridor in such a manner as would, in Licensor's reasonable opinion, be interfered with by the Pipeline, Licensee shall, at its sole expense, within thirty (30) days after receiving written notice from Licensor to such effect, make such changes in the Pipeline as in the sole discretion of Licensor may be necessary to avoid interference with the proposed use of Licensor's rail corridor, including, without limitation, the relocation of the Pipeline, or the construction of a new pipeline to replace the Pipeline. Notwithstanding the foregoing, Licensee agrees to make all emergency changes and minor adjustments, as determined by Licensor in its sole discretion, to the Pipeline promptly upon Licensor's request.

#### **LICENSEE'S OPERATIONS**

11. **Construction and Maintenance of the Pipeline.**
- 11.1 Licensee shall notify Licensor's Roadmaster, at 115 East 5th Street, Newton, Kansas, 67114, telephone (316) 284-3479 (Office) or (806) 672-8819 (Cell), or at least ten (10) business days prior to installation of the Pipeline and prior to entering the Premises for any subsequent maintenance thereon. In the event of emergency, Licensee shall notify Licensor of Licensee's entry onto the Premises at the telephone number above as soon as practicable and shall promptly thereafter follow up with written notice of such entry.
  - 11.2 Licensee's on-site supervisors shall retain/maintain a fully executed copy of this License at all times while on the Premises.
  - 11.3 While on the Premises, Licensee shall use only public roadways to cross from one side of Licensor's tracks to the other.
  - 11.4 Any contractors or subcontractors performing work on the Pipeline or entering the Premises on behalf of Licensee shall be deemed servants and agents of Licensee for purposes of this License.

- 11.5 Under no conditions shall Licensee be permitted to conduct any tests, investigations or any other activity using mechanized equipment and/or machinery, or place or store any mechanized equipment, tools or other materials, within twenty-five (25) feet of the centerline of any railroad track on the Premises unless Licensee has obtained prior written approval from Licensor. Licensee shall, at its sole cost and expense, perform all activities on and about the Premises in such a manner as not at any time to endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. If ordered to cease using the Premises at any time by Licensor's personnel due to any hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to monitor Licensee's use of the Premises to determine the safe nature thereof, it being solely Licensee's responsibility to ensure that Licensee's use of the Premises is safe. Neither the exercise nor the failure by Licensor to exercise any rights granted in this Section will alter the liability allocation provided by this License.
- 11.6 Licensee shall, at its sole cost and expense, construct and maintain the Pipeline in such a manner and of such material that the Pipeline will not at any time endanger or interfere with (i) the existence or use of present or future tracks, roadbeds, or property of Licensor, (ii) the safe operation and activities of Licensor or existing third parties, or (iii) the rights or interests of third parties. The construction of the Pipeline shall be completed within one (1) year of the Effective Date, and any subsequent maintenance shall be completed within one (1) year of initiation. Within fifteen (15) days after completion of the construction of the Pipeline or the performance of any subsequent maintenance thereon, Licensee shall, at Licensee's own cost and expense, restore the Premises to substantially their state as of the Effective Date, unless otherwise approved in advance by Licensor in writing. On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense, surrender the Premises to Licensor pursuant to the terms and conditions set forth in **Section 24** hereof.
- 11.7 Licensor may direct one or more of its field engineers to observe or inspect the construction and/or maintenance of the Pipeline at any time for compliance with the Drawings and Specifications and Legal Requirements (defined below). If ordered at any time to halt construction or maintenance of the Pipeline by Licensor's personnel due to non-compliance with the Drawings and Specifications or any other hazardous condition, Licensee shall immediately do so. Notwithstanding the foregoing right of Licensor, the parties agree that Licensor has no duty or obligation to observe or inspect, or to halt work on, the Pipeline, it being solely Licensee's responsibility to ensure that the Pipeline is constructed and maintained in strict accordance with the Drawings and Specifications and in a safe and workmanlike manner in compliance with all terms hereof. Neither the exercise of, nor the failure by Licensor to exercise, any right granted by this Section will alter in any way the liability allocation provided by this License. If at any time Licensee shall, in the sole judgment of Licensor, fail to properly perform its obligations under this **Section 11**, Licensor may, at its option and at Licensee's sole expense, arrange for the performance of such work as it deems necessary for the safety of its operations and activities. Licensee shall promptly reimburse Licensor for all costs and expenses of such work, pursuant to the terms of **Section 8**. Licensor's failure to perform any obligations of Licensee shall not alter the liability allocation hereunder.

## 12. Boring and Excavation.

- 12.1 Prior to Licensee conducting any boring, excavation, or similar work on or about any portion of the Premises, Licensee shall explore the proposed location for such work with hand tools to a depth of at least three (3) feet below the surface of the ground to determine whether pipelines or other structures exist below the surface, provided, however, that in lieu of the foregoing, Licensee shall have the right to use suitable detection equipment or other generally accepted industry practice (e.g., consulting with the Underground Services Association) to determine the existence or location of pipelines and other subsurface structures prior to drilling or excavating with mechanized equipment. Licensee may request information from Licensor concerning the existence and

approximate location of Licensor's underground lines, utilities, and pipelines at or near the vicinity of the proposed Pipeline by contacting Licensor's Telecommunications Helpdesk at least thirty (30) business days prior to installation of the Pipeline. Upon receiving Licensee's timely request, Licensor will provide Licensee with the information Licensor has in its possession regarding any existing underground lines, utilities, and pipelines at or near the vicinity of the proposed Pipeline and, if applicable, identify the location of such lines on the Premises pursuant to Licensor's standard procedures. Licensor does not warrant the accuracy or completeness of information relating to subsurface conditions of the Premises and Licensee's operations will be subject at all times to the liability provisions herein.

- 12.2 For all bores greater than 26-inch diameter and at a depth less than 10.0 feet below bottom of rail, a soil investigation must be performed by Licensee and reviewed by Licensor prior to construction. This study is to determine if granular material is present, and to prevent subsidence during the installation process. If the investigation determines in Licensor's reasonable opinion that granular material is present, Licensor may select a new location for Licensee's use, or may require Licensee to furnish for Licensor's review and approval, in Licensor's sole discretion, a remedial plan to deal with the granular material. Once Licensor has approved any such remedial plan in writing, Licensee shall, at Licensee's sole cost and expense, carry out the approved plan in accordance with all terms thereof and hereof.
- 12.3 Any open hole, boring, or well, constructed on the Premises by Licensee shall be safely covered and secured at all times when Licensee is not working in the actual vicinity thereof. Following completion of that portion of the work, all holes or borings constructed on the Premises by Licensee shall be:
- 12.3.1 filled in to surrounding ground level with compacted bentonite grout; or
- 12.3.2 otherwise secured or retired in accordance with any applicable Legal Requirement. No excavated materials may remain on Licensor's property for more than ten (10) days, but must be properly disposed of by Licensee in accordance with applicable Legal Requirements.

## LIABILITY AND INSURANCE

### 13. Liability and Indemnification.

- 13.1 For purposes of this License: (a) "**Indemnitees**" means Licensor and Licensor's affiliated companies, partners, successors, assigns, legal representatives, officers, directors, shareholders, employees, and agents; (b) "**Liabilities**" means all claims, liabilities, fines, penalties, costs, damages, losses, liens, causes of action, suits, demands, judgments, and expenses (including, without limitation, court costs, reasonable attorneys' fees, costs of investigation, removal and remediation, and governmental oversight costs) environmental or otherwise; and (c) "**Licensee Parties**" means Licensee or Licensee's officers, agents, invitees, licensees, employees, or contractors, or any party directly or indirectly employed by any of them, or any party they control or exercise control over.
- 13.2 **TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND AND HOLD HARMLESS INDEMNITEES FOR, FROM, AND AGAINST ANY AND ALL LIABILITIES OF ANY NATURE, KIND, OR DESCRIPTION DIRECTLY OR INDIRECTLY ARISING OUT OF, RESULTING FROM, OR RELATED TO (IN WHOLE OR IN PART):**
- 13.2.1 **THIS LICENSE, INCLUDING, WITHOUT LIMITATION, ITS ENVIRONMENTAL PROVISIONS,**
- 13.2.2 **ANY RIGHTS OR INTERESTS GRANTED PURSUANT TO THIS LICENSE,**

- 13.2.3 LICENSEE'S OCCUPATION AND USE OF THE PREMISES,
- 13.2.4 THE ENVIRONMENTAL CONDITION AND STATUS OF THE PREMISES CAUSED BY OR CONTRIBUTED TO BY LICENSEE, OR
- 13.2.5 ANY ACT OR OMISSION OF ANY LICENSEE PARTY.
- 13.3 TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE NOW AND FOREVER WAIVES ANY AND ALL CLAIMS THAT BY VIRTUE OF ENTERING INTO THIS LICENSE, LICENSOR IS A GENERATOR, OWNER, OPERATOR, ARRANGER, OR TRANSPORTER FOR THE PURPOSES OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, AS AMENDED ("CERCLA") OR OTHER ENVIRONMENTAL LAWS (DEFINED BELOW). LICENSEE WILL INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM ANY AND ALL SUCH CLAIMS. NOTHING IN THIS LICENSE IS MEANT BY EITHER PARTY TO CONSTITUTE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES AND THIS LICENSE SHOULD NOT BE SO CONSTRUED. IF ANY AGENCY OR COURT CONSTRUES THIS LICENSE TO BE A WAIVER OF ANY INDEMNITEE'S COMMON CARRIER DEFENSES, LICENSEE AGREES TO INDEMNIFY, HOLD HARMLESS, AND DEFEND INDEMNITEES FOR ANY LIABILITIES RELATED TO THAT CONSTRUCTION OF THIS LICENSE. IN NO EVENT AS BETWEEN LICENSOR AND LICENSEE AS TO USE OF THE PREMISES AS CONTEMPLATED BY THIS LICENSE SHALL LICENSOR BE RESPONSIBLE TO LICENSEE FOR THE ENVIRONMENTAL CONDITION OF THE PREMISES.
- 13.4 IF ANY EMPLOYEE OF ANY LICENSEE PARTY ASSERTS THAT HE OR SHE IS AN EMPLOYEE OF ANY INDEMNITEE, TO THE FULLEST EXTENT PERMITTED BY LAW, LICENSEE SHALL, AND SHALL CAUSE ITS CONTRACTOR TO, RELEASE, INDEMNIFY, DEFEND, AND HOLD THE INDEMNITEES HARMLESS FROM AND AGAINST ANY LIABILITIES ARISING OUT OF OR RELATED TO (IN WHOLE OR IN PART) ANY SUCH ASSERTION INCLUDING, BUT NOT LIMITED TO, ASSERTIONS OF EMPLOYMENT BY AN INDEMNITEE RELATED TO THE FOLLOWING OR ANY PROCEEDINGS THEREUNDER: THE FEDERAL EMPLOYERS' LIABILITY ACT, THE SAFETY APPLIANCE ACT, THE LOCOMOTIVE INSPECTION ACT, THE OCCUPATIONAL SAFETY AND HEALTH ACT, THE RESOURCE CONSERVATION AND RECOVERY ACT, AND ANY SIMILAR STATE OR FEDERAL STATUTE.
- 13.5 THE FOREGOING OBLIGATIONS OF LICENSEE SHALL NOT APPLY TO THE EXTENT LIABILITIES ARE PROXIMATELY CAUSED BY THE GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF ANY INDEMNITEE, BUT SHALL APPLY TO ALL OTHER LIABILITIES, INCLUDING THOSE ARISING FROM OR ATTRIBUTED TO ANY OTHER ALLEGED OR ACTUAL NEGLIGENCE, INTENTIONAL ACTS, OR STRICT LIABILITY OF ANY INDEMNITEE.
- 13.6 Upon written notice from Licensor, Licensee agrees to assume the defense of any lawsuit or other proceeding brought against any Indemnatee by any entity, relating to any matter covered by this License for which Licensee has an obligation to assume liability for and/or save and hold harmless any Indemnatee. Licensee shall pay all costs and expenses incident to such defense, including, but not limited to, reasonable attorneys' fees, investigators' fees, litigation and appeal expenses, settlement payments, and amounts paid in satisfaction of judgments.
14. Personal Property Risk of Loss. ALL PERSONAL PROPERTY, INCLUDING, BUT NOT LIMITED TO, FIXTURES, EQUIPMENT, OR RELATED MATERIALS UPON THE PREMISES WILL BE AT THE RISK OF LICENSEE ONLY, AND NO INDEMNITEE WILL BE LIABLE FOR ANY DAMAGE THERETO OR THEFT THEREOF, WHETHER OR NOT DUE IN WHOLE OR IN PART TO THE NEGLIGENCE OF ANY INDEMNITEE.

15. Insurance. Licensee shall, at its sole cost and expense, procure and maintain during the life of this License the following insurance coverage:

- 15.1 Commercial General Liability Insurance. This insurance shall contain broad form contractual liability with a combined single limit of a minimum of \$5,000,000 each occurrence and an aggregate limit of at least \$10,000,000 but in no event less than the amount otherwise carried by Licensee. Coverage must be purchased on a post 2004 ISO occurrence or equivalent and include coverage for, but not limited to, the following:

- Bodily Injury and Property Damage
- Personal Injury and Advertising Injury
- Fire legal liability
- Products and completed operations

This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- The definition of insured contract shall be amended to remove any exclusion or other limitation for any work being done within 50 feet of railroad property.
- Waiver of subrogation in favor of and acceptable to Licensor.
- Additional insured endorsement in favor of and acceptable to Licensor and Jones Lang LaSalle Brokerage, Inc.
- Separation of insureds.
- The policy shall be primary and non-contributing with respect to any insurance carried by Licensor.

It is agreed that the workers' compensation and employers' liability related exclusions in the Commercial General Liability Insurance policy(s) required herein are intended to apply to employees of the policy holder and shall not apply to Licensor's employees.

No other endorsements limiting coverage may be included on the policy.

- 15.2 Business Automobile Insurance. This insurance shall contain a combined single limit of at least \$1,000,000 per occurrence, and include coverage for, but not limited to the following:

- Bodily injury and property damage.
- Any and all vehicles owned, used or hired.

This policy shall also contain the following endorsements, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Licensor.
- Additional insured endorsement in favor of and acceptable to Licensor.
- Separation of insureds.
- The policy shall be primary and non-contributing with respect to any insurance carried by Licensor.

- 15.3 Workers' Compensation and Employers' Liability Insurance. This insurance shall include coverage for, but not limited to:

- Licensee's statutory liability under the workers' compensation laws of the state(s) in which the services are to be performed. If optional under state laws, the insurance must cover all employees anyway.
- Employers' Liability (Part B) with limits of at least \$500,000 each accident, \$500,000 by disease policy limit, \$500,000 by disease each employee.

This policy shall also contain the following endorsements or language, which shall be indicated on the certificate of insurance:

- Waiver of subrogation in favor of and acceptable to Licensor.

- 15.4 Railroad Protective Liability Insurance. This insurance shall name only Licensor as the Insured with coverage of at least \$5,000,000 per occurrence and \$10,000,000 in the aggregate. The coverage obtained under this policy shall only be effective during the initial installation and/or construction of the Pipeline. **THE CONSTRUCTION OF THE PIPELINE SHALL BE COMPLETED WITHIN ONE (1) YEAR OF THE EFFECTIVE DATE.** If further maintenance of the Pipeline is needed at a later date, an additional Railroad Protective Liability Insurance Policy shall be required. The policy shall be issued on a standard ISO form CG 00 35 12 03 and include the following:
- Endorsed to include the Pollution Exclusion Amendment.
  - Endorsed to include the Limited Seepage and Pollution Endorsement.
  - Endorsed to include Evacuation Expense Coverage Endorsement.
  - No other endorsements restricting coverage may be added.
  - The original policy must be provided to Licensor prior to performing any work or services under this License.
  - Definition of "Physical Damage to Property" shall be endorsed to read: "means direct and accidental loss of or damage to all property owned by any named insured and all property in any named insured's care, custody and control arising out of the acts or omissions of the contractor named on the Declarations."

In lieu of providing a Railroad Protective Liability Policy, for a period of one (1) year from the Effective Date, Licensee may participate in Licensor's Blanket Railroad Protective Liability Insurance Policy available to Licensee or its contractor. The limits of coverage are the same as above. The cost is \$1,150.

- I elect to participate in Licensor's Blanket Policy;
- I elect not to participate in Licensor's Blanket Policy.

15.5 Intentionally deleted.

15.6 Other Requirements:

- 15.6.1 Where allowable by law, all policies (applying to coverage listed above) shall contain no exclusion for punitive damages.
- 15.6.2 Licensee agrees to waive its right of recovery against Licensor for all claims and suits against Licensor. In addition, Licensee's insurers, through the terms of the policy or a policy endorsement, must waive their right of subrogation against Licensor for all claims and suits, and the certificate of insurance must reflect the waiver of subrogation endorsement. Licensee further waives its right of recovery, and its insurers must also waive their right of subrogation against Licensor for loss of Licensee's owned or leased property, or property under Licensee's care, custody, or control.
- 15.6.3 Licensee is not allowed to self-insure without the prior written consent of Licensor. If granted by Licensor, any self-insured retention or other financial responsibility for claims shall be covered directly by Licensee in lieu of insurance. Any and all Licensor liabilities that would otherwise, in accordance with the provisions of this License, be covered by Licensee's insurance will be covered as if Licensee elected not to include a self-insured retention or other financial responsibility for claims.
- 15.6.4 Prior to entering the Premises, Licensee shall furnish to Licensor an acceptable certificate(s) of insurance including an original signature of the authorized representative evidencing the required coverage, endorsements, and amendments. Licensee shall notify Licensor in writing at least 30 days prior to any cancellation, non-renewal, substitution, or material alteration. In the event of a claim or lawsuit involving Licensor arising out of this License, Licensee will make available any required policy covering such claim or lawsuit.

- 15.6.5 Any insurance policy shall be written by a reputable insurance company acceptable to Licensor or with a current Best's Guide Rating of A- and Class VII or better, and authorized to do business in the state(s) in which the service is to be provided.
- 15.6.6 If coverage is purchased on a "claims made" basis, Licensee hereby agrees to maintain coverage in force for a minimum of three years after expiration or termination of this License. Annually, Licensee agrees to provide evidence of such coverage as required hereunder.
- 15.6.7 Licensee represents that this License has been thoroughly reviewed by Licensee's insurance agent(s)/broker(s), who have been instructed by Licensee to procure the insurance coverage required by this License. Allocated Loss Expense shall be in addition to all policy limits for coverages referenced above.
- 15.6.8 Not more frequently than once every five years, Licensor may reasonably modify the required insurance coverage to reflect then-current risk management practices in the railroad industry and underwriting practices in the insurance industry.
- 15.6.9 If any portion of the operation is to be subcontracted by Licensee, Licensee shall require that the subcontractor shall provide and maintain insurance coverages as set forth herein, naming Licensor as an additional insured, and shall require that the subcontractor shall release, defend and indemnify Licensor to the same extent and under the same terms and conditions as Licensee is required to release, defend and indemnify Licensor herein.
- 15.6.10 Failure to provide evidence as required by this **Section 15** shall entitle, but not require, Licensor to terminate this License immediately. Acceptance of a certificate that does not comply with this Section shall not operate as a waiver of Licensee's obligations hereunder.
- 15.6.11 The fact that insurance (including, without limitation, self-insurance) is obtained by Licensee shall not be deemed to release or diminish the liability of Licensee, including, without limitation, liability under the indemnity provisions of this License. Damages recoverable by Licensor shall not be limited by the amount of the required insurance coverage.
- 15.6.12 These insurance provisions are intended to be a separate and distinct obligation on the part of the Licensee. Therefore, these provisions shall be enforceable and Licensee shall be bound thereby regardless of whether or not indemnity provisions are determined to be enforceable.
- 15.6.13 For purposes of this **Section 15**, Licensor shall mean "Burlington Northern Santa Fe, LLC", "BNSF Railway Company" and the subsidiaries, successors, assigns and affiliates of each.

#### **COMPLIANCE WITH LAWS, REGULATIONS, AND ENVIRONMENTAL MATTERS**

##### **16. Compliance with Laws, Rules, and Regulations.**

- 16.1 Licensee shall observe and comply with any and all laws, statutes, regulations, ordinances, orders, covenants, restrictions, or decisions of any court of competent jurisdiction ("**Legal Requirements**") relating to the construction, maintenance, and use of the Pipeline and the use of the Premises.
- 16.2 Prior to entering the Premises, Licensee shall and shall cause its contractor(s) to comply with all of Licensor's applicable safety rules and regulations. Licensee must ensure that each of its employees, contractors, agents or invitees entering upon the Premises completes the safety orientation program at the Website "www.BNSFcontractor.com" (the "**Safety Orientation**") within one year prior to entering upon the Premises. Additionally, Licensee must ensure that each and

every employee of Licensee, its contractors, agents and invitees possess a card certifying completion of the Safety Orientation prior to entering upon the Premises. Licensee must renew the Safety Orientation annually.

- 16.3 Licensee shall obtain on or before the date it or its contractor enters the Premises, any and all additional rights-of way, easements, licenses and other agreements relating to the grant of rights and interests in and/or access to the Premises (collectively, the "**Rights**") and such other rights, licenses, permits, authorizations, and approvals (including without limitation, any necessary local, state, federal or tribal authorizations and environmental permits) that are necessary in order to permit Licensee to construct, maintain, own and operate the Pipeline and otherwise to perform its obligations hereunder in accordance with the terms and conditions hereof.
- 16.4 Licensee shall either require that the initial stated term of each such Rights be for a period that does not expire, in accordance with its ordinary terms, prior to the last day of the term of this License or, if the initial stated term of any such Right expires in accordance with its ordinary terms on a date earlier than the last day of the term of this License, Licensee shall, at its cost, exercise any renewal rights thereunder, or otherwise acquire such extensions, additions and/or replacements as may be necessary, in order to cause the stated term thereof to be continued until a date that is not earlier than the last day of the term of this License.
- 16.5 Upon the expiration or termination of any Right that is necessary in order for Licensee to own, operate or use the Pipeline in accordance with the terms and conditions of this License, this License thereby shall automatically expire upon such expiration or termination of the Right.

17. Environmental.

- 17.1 Licensee shall strictly comply with all federal, state and local environmental Legal Requirements and regulations in its use of the Premises, including, but not limited to, the Resource Conservation and Recovery Act, as amended (RCRA), the Clean Water Act, the Oil Pollution Act, the Hazardous Materials Transportation Act, and CERCLA (collectively referred to as the "**Environmental Laws**"). Licensee shall not maintain a treatment, storage, transfer or disposal facility, or underground storage tank, as defined by Environmental Laws on the Premises. Licensee shall not release or suffer the release of oil or hazardous substances, as defined by Environmental Laws on or about the Premises.
- 17.2 Licensee covenants that it will not handle or transport "hazardous waste" or "hazardous substances", as "hazardous waste" and "hazardous substances" may now or in the future be defined by any federal, state, or local governmental agency or body through the Pipeline on Licensor's property. Licensee agrees periodically to furnish Licensor with proof, satisfactory to Licensor that Licensee is in compliance with the provisions of this **Section 17.2**.
- 17.3 Licensee shall give Licensor immediate notice to Licensor's Resource Operations Center at (800) 832-5452 of any known (i) release of hazardous substances on, from, or affecting the Premises, (ii) violation of Environmental Laws, or (iii) inspection or inquiry by governmental authorities charged with enforcing Environmental Laws with respect to Licensee's use of the Premises. Licensee shall use the best efforts to promptly respond to any release on, from, or affecting the Premises. Licensee also shall give Licensor immediate notice of all measures undertaken on behalf of Licensee to investigate, remediate, respond to or otherwise cure such release or violation.
- 17.4 If Licensor has notice from Licensee or otherwise of a release or violation of Environmental Laws arising in any way with respect to the Pipeline which occurred or may occur during the term of this License, Licensor may require Licensee, at Licensee's sole risk and expense, to take timely measures to investigate, remediate, respond to or otherwise cure such release or violation affecting the Premises or Licensor's right-of-way.

- 17.5 Licensee shall promptly report to Licensor in writing any conditions or activities upon the Premises known to Licensee which create a risk of harm to persons, property or the environment and shall take whatever action is necessary to prevent injury to persons, property, or the environment arising out of such conditions or activities; provided, however, that Licensee's reporting to Licensor shall not relieve Licensee of any obligation whatsoever imposed on it by this License. Licensee shall promptly respond to Licensor's request for information regarding said conditions or activities.

### DISCLAIMER OF WARRANTIES

18. No Warranties.

18.1 **LICENSOR'S DUTIES AND WARRANTIES ARE LIMITED TO THOSE EXPRESSLY STATED IN THIS LICENSE AND SHALL NOT INCLUDE ANY IMPLIED DUTIES OR IMPLIED WARRANTIES, NOW OR IN THE FUTURE. NO REPRESENTATIONS OR WARRANTIES HAVE BEEN MADE BY LICENSOR OTHER THAN THOSE CONTAINED IN THIS LICENSE. LICENSEE HEREBY WAIVES ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE PREMISES OR WHICH MAY EXIST BY OPERATION OF LAW OR IN EQUITY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, HABITABILITY OR FITNESS FOR A PARTICULAR PURPOSE.**

18.2 **LICENSOR MAKES NO WARRANTY, REPRESENTATION OR CONDITION OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING (A) THE SCOPE OF THE LICENSE OR OTHER RIGHTS GRANTED HEREUNDER TO LICENSEE OR (B) WHETHER OR NOT LICENSEE'S CONSTRUCTION, MAINTENANCE, OWNERSHIP, USE OR OPERATION OF THE PIPELINE WILL VIOLATE OR INFRINGE UPON THE RIGHTS, INTERESTS AND ESTATES OF THIRD PARTIES, INCLUDING, WITHOUT LIMITATION, ANY LEASES, USE RIGHTS, EASEMENTS AND LIENS OF ANY THIRD PARTY.**

19. Disclaimer of Warranty for Quiet Enjoyment. **LICENSOR DOES NOT WARRANT ITS TITLE TO THE PREMISES NOR UNDERTAKE TO DEFEND LICENSEE IN THE PEACEABLE POSSESSION OR USE THEREOF. NO COVENANT OF QUIET ENJOYMENT IS MADE.**

20. Eviction at Risk of Licensee. In case of the eviction of Licensee by anyone owning, claiming title to, or claiming any interest in the Premises, or by the abandonment by Licensor of the affected rail corridor, Licensor shall not be liable (i) to refund Licensee any compensation paid hereunder, except for the pro-rata part of any recurring charge paid in advance, or (ii) for any damage Licensee sustains in connection with the eviction.

### LIENS AND TAXES

21. Liens and Charges. Licensee shall promptly pay and discharge any and all liens arising out of any construction, alterations or repairs done, suffered or permitted to be done by Licensee on Premises. Licensor is hereby authorized to post any notices or take any other action upon or with respect to Premises that is or may be permitted by law to prevent the attachment of any such liens to Premises; provided, however, that failure of Licensor to take any such action shall not relieve Licensee of any obligation or liability under this **Section 21** or any other Section of this License.

22. Taxes. Licensee shall pay when due any taxes, assessments or other charges (collectively, "**Taxes**") levied or assessed by any governmental or quasi-governmental body upon the Pipeline or any other improvements constructed or installed on the Premises by or for Licensee (collectively, the "**Improvements**") or any Taxes levied or assessed against Licensor or the Premises that are attributable to the Improvements.

**DEFAULT, TERMINATION, AND SURRENDER**

23. **Default and Termination.** In addition to and not in limitation of Licensor's right to terminate for failure to provide evidence of insurance as required pursuant to the terms of **Section 15**, the following events are also deemed to be events of default pursuant to which Licensor has the right to terminate as set forth below:
- 23.1 If default shall be made in any of Licensee's covenants, agreements, or obligations contained in this License and Licensee fails to cure said default within thirty (30) days after written notice is provided to Licensee by Licensor, or in case of any assignment or transfer of this License in violation of **Section 26** below, Licensor may, at its option, terminate this License by serving five (5) days' notice in writing upon Licensee. Notwithstanding the foregoing, Licensor shall have the right to terminate this License immediately if Licensee fails to provide evidence of insurance as required in **Section 15**.
- 23.2 Should Licensee not comply fully with the obligations of **Section 17** regarding the handling or transporting of hazardous waste or hazardous material, notwithstanding anything contained in any other provision of this License, Licensor may, at its option, terminate this License by serving five (5) days' notice of termination upon Licensee.
- 23.3 Any waiver by Licensor of any default or defaults shall not constitute a waiver of the right to terminate this License for any subsequent default or defaults, nor shall any such waiver in any way affect Licensor's ability to enforce any Section of this License. The remedy set forth in this **Section 23** shall be in addition to, and not in limitation of, any other remedies that Licensor may have at law or in equity.
- 23.4 In addition to and not in limitation of Licensor's rights to terminate this License for failure to provide evidence of insurance or occurrence of defaults as described above, this License may be terminated by either party, at any time, by serving thirty (30) days' written notice of termination upon the other party. Such termination shall not release either party hereto from any liability or obligation under the License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or thereafter in case by the terms of the License it is provided that anything shall or may be done after termination hereof.
24. **Surrender of the Premises.**
- 24.1 On or before expiration or termination of this License for any reason, Licensee shall, at its sole cost and expense:
- 24.1.1 if so directed by Licensor in writing, remove the Improvements, the Pipeline and all appurtenances thereto, or, at the sole discretion of Licensor, fill and cap or otherwise appropriately decommission the Pipeline with a method satisfactory to Licensor;
- 24.1.2 report and restore any damage to the Premises or Licensor's other property arising from, growing out of, or connected with Licensee's use of the Premises;
- 24.1.3 remedy any unsafe conditions on the Premises created or aggravated by Licensee; and
- 24.1.4 leave the Premises in substantially the condition which existed as of the Effective Date.
- 24.2 Upon any expiration or termination of this License, if Licensee fails to surrender the Premises to Licensor or if Licensee fails to complete its obligations under **Section 24.1** above (the "**Restoration Obligations**"), Licensee shall have a limited license to enter upon the Premises solely to the extent necessary for Licensee to complete the Restoration Obligations, and all liabilities and obligations of Licensee hereunder shall continue in effect until the Premises are

surrendered and the Restoration Obligations are completed. Neither termination nor expiration shall release Licensee from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination, or, if later, the date when Licensee surrenders the Premises and all of the Restoration Obligations are completed.

- 24.3 If Licensee fails to complete the Restoration Obligations within thirty (30) days after the date of such termination of its tenancy, then Licensor may, at its election, either: (i) remove the Pipeline and the other Improvements or otherwise restore the Premises, and in such event Licensee shall, within thirty (30) days after receipt of bill therefor, reimburse Licensor for cost incurred, (ii) upon written notice to Licensee, take and hold the Pipeline and the other Improvements and personal property as its sole property, without payment or obligation to Licensee therefor, or (iii) specifically enforce Licensee's obligation to restore and/or pursue any remedy at law or in equity against Licensee for failure to so restore. Further, if Licensor has consented to the Pipeline and the other Improvements remaining on the Premises following termination, Licensee shall, upon request by Licensor, provide a bill of sale in a form acceptable to Licensor conveying the Pipeline and the other Improvements to Licensor.

### MISCELLANEOUS

25. Successors and Assigns. All provisions contained in this License shall be binding upon, inure to the benefit of, and be enforceable by the respective successors and assigns of Licensor and Licensee to the same extent as if each such successor and assign was named a party to this License.
26. Assignment.
- 26.1 Licensee may not sell, assign, transfer, or hypothecate this License or any right, obligation, or interest herein (either voluntarily or by operation of law, merger, or otherwise) without the prior written consent of Licensor, which consent may not be unreasonably withheld or delayed by Licensor. Any attempted assignment by Licensee in violation of this **Section 26** shall be a breach of this License and, in addition, shall be voidable by Licensor in its sole and absolute discretion.
- 26.2 For purposes of this **Section 26**, the word "assign" shall include without limitation (a) any sale of the equity interests of Licensee following which the equity interest holders of Licensee immediately prior to such sale own, directly or indirectly, less than 50% of the combined voting power of the outstanding voting equity interests of Licensee, (b) any sale of all or substantially all of the assets of (i) Licensee and (ii) to the extent such entities exist, Licensee's parent and subsidiaries, taken as a whole, or (c) any reorganization, recapitalization, merger or consolidation involving Licensee. Notwithstanding the foregoing, any reorganization, recapitalization, merger or consolidation following which the equity interest holders of Licensee immediately prior to such reorganization, recapitalization, merger or consolidation own, directly or indirectly, at least 50% of the combined voting power of the outstanding voting equity interests of Licensee or any successor thereto or the entity resulting from such reorganization, recapitalization, merger or consolidation shall not be deemed an assignment. **THIS LICENSE SHALL NOT RUN WITH THE LAND WITHOUT THE EXPRESS WRITTEN CONSENT OF LICENSOR, SUCH CONSENT TO BE IN LICENSOR'S SOLE DISCRETION.**
- 26.3 Notwithstanding the provisions of **Section 26.1** above or anything contained in this License to the contrary, if Licensee sells, assigns, transfers, or hypothecates this License or any interest herein in contravention of the provisions of this License (a "**Purported Assignment**") to another party (a "**Purported Transferee**"), the Purported Transferee's enjoyment of the rights and privileges granted under this License shall be deemed to be the Purported Transferee's agreement to be bound by all of the terms and provisions of this License, including but not limited to the obligation to comply with the provisions of **Section 15** above concerning insurance requirements. In addition to

and not in limitation of the foregoing, Licensee, for itself, its successors and assigns, shall indemnify, defend and hold harmless Licensor for all Liabilities of any nature, kind or description of any person or entity directly or indirectly arising out of, resulting from or related to (in whole or in part) a Purported Assignment.

26.4 The provisions of this **Section 26** shall survive the expiration or earlier termination of this License.

27. **Notices.** Any notice, invoice, or other writing required or permitted to be given hereunder by one party to the other shall be in writing and the same shall be given and shall be deemed to have been served and given if (i) placed in the United States mail, certified, return receipt requested, or (ii) deposited into the custody of a nationally recognized overnight delivery service, addressed to the party to be notified at the address for such party specified below, or to such other address as the party to be notified may designate by giving the other party no less than thirty (30) days' advance written notice of such change in address.
- If to Licensor: Jones Lang LaSalle Brokerage, Inc.  
4300 Amon Carter Blvd., Suite 100  
Fort Worth, TX 76155  
Attn: Permits/Licenses
- with a copy to: BNSF Railway Company  
2301 Lou Menk Drive GOB-3W  
Fort Worth, TX 76131  
Attn: Senior Manager Real Estate
- If to Licensee: City of Wichita  
455 N Main Street  
7th Floor  
Wichita, Kansas 67202
28. **Survival.** Neither termination nor expiration will release either party from any liability or obligation under this License, whether of indemnity or otherwise, resulting from any acts, omissions or events happening prior to the date of termination or expiration, or, if later, the date when the Pipeline and the other Improvements are removed and the Premises are restored to its condition as of the Effective Date.
29. **Recordation.** It is understood and agreed that this License shall not be placed or allowed to be placed on public record.
30. **Applicable Law.** All questions concerning the interpretation or application of provisions of this License shall be decided according to the substantive laws of the State of Texas without regard to conflicts of law provisions.
31. **Severability.** To the maximum extent possible, each provision of this License shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this License shall be prohibited by, or held to be invalid under, applicable law, such provision shall be ineffective solely to the extent of such prohibition or invalidity, and this shall not invalidate the remainder of such provision or any other provision of this License.
32. **Integration.** This License is the full and complete agreement between Licensor and Licensee with respect to all matters relating to Licensee's use of the Premises, and supersedes any and all other agreements between the parties hereto relating to Licensee's use of the Premises as described herein. However, nothing herein is intended to terminate any surviving obligation of Licensee or Licensee's obligation to defend and hold Licensor harmless in any prior written agreement between the parties.
33. **Joint and Several Liability.** If Licensee consists of two or more parties, all the covenants and agreements of Licensee herein contained shall be the joint and several covenants and agreements of such parties.

34. Waiver. The waiver by Licensor of the breach of any provision herein by Licensee shall in no way impair the right of Licensor to enforce that provision for any subsequent breach thereof.
35. Interpretation.
- 35.1 This License shall be interpreted in a neutral manner, and not more strongly for or against any party based upon the source of the draftsmanship; both parties hereby agree that this License shall not be subject to the principle that a contract would be construed against the party which drafted the same. Article titles, headings to sections and paragraphs and the table of contents (if any) are inserted for convenience of reference only and are not intended to be a part or to affect the meaning or interpretation hereof. The exhibit or exhibits referred to herein shall be construed with and as an integral part of this License to the same extent as if they were set forth verbatim herein.
- 35.2 As used herein, "include", "includes" and "including" are deemed to be followed by "without limitation" whether or not they are in fact followed by such words or words of like import; "writing", "written" and comparable terms refer to printing, typing, lithography and other means of reproducing words in a visible form; references to any person are also to that person's successors and permitted assigns; "hereof", "herein", "hereunder" and comparable terms refer to the entirety hereof and not to any particular article, section, or other subdivision hereof or attachment hereto; references to any gender include references to the masculine or feminine as the context requires; references to the plural include the singular and vice versa; and references to this License or other documents are as amended, modified or supplemented from time to time.
36. Counterparts. This License may be executed in multiple counterparts, each of which shall, for all purposes, be deemed an original but which together shall constitute one and the same instrument, and the signature pages from any counterpart may be appended to any other counterpart to assemble fully executed documents, and counterparts of this License may also be exchanged via email or electronic facsimile machines and any email or electronic facsimile of any party's signature shall be deemed to be an original signature for all purposes.
37. Licensor's Representative. Jones Lang LaSalle Brokerage, Inc. is acting as representative for BNSF Railway Company.

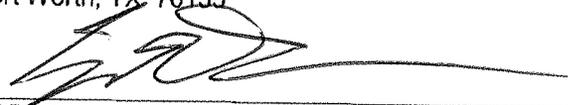
**END OF PAGE – SIGNATURE PAGE FOLLOWS**

This License has been duly executed by the parties hereto as of the date below each party's signature; to be effective, however, as of the Effective Date.

**LICENSOR:**

**BNSF RAILWAY COMPANY**, a Delaware corporation

By: Jones Lang LaSalle Brokerage, Inc.,  
4300 Amon Carter Blvd, Suite 100  
Fort Worth, TX. 76155

By:   
\_\_\_\_\_  
Ed Darter  
Title: Sr. Vice President - National Accounts  
\_\_\_\_\_  
Date: \_\_\_\_\_

**LICENSEE:**

**CITY OF WICHITA**

455 N Main Street  
7th Floor  
Wichita, Kansas 67202

By:  (STAN BREITENBACH)  
\_\_\_\_\_  
Title: SPECIAL PROJECTS ENGINEER  
\_\_\_\_\_  
Date: 7-22-16  
\_\_\_\_\_

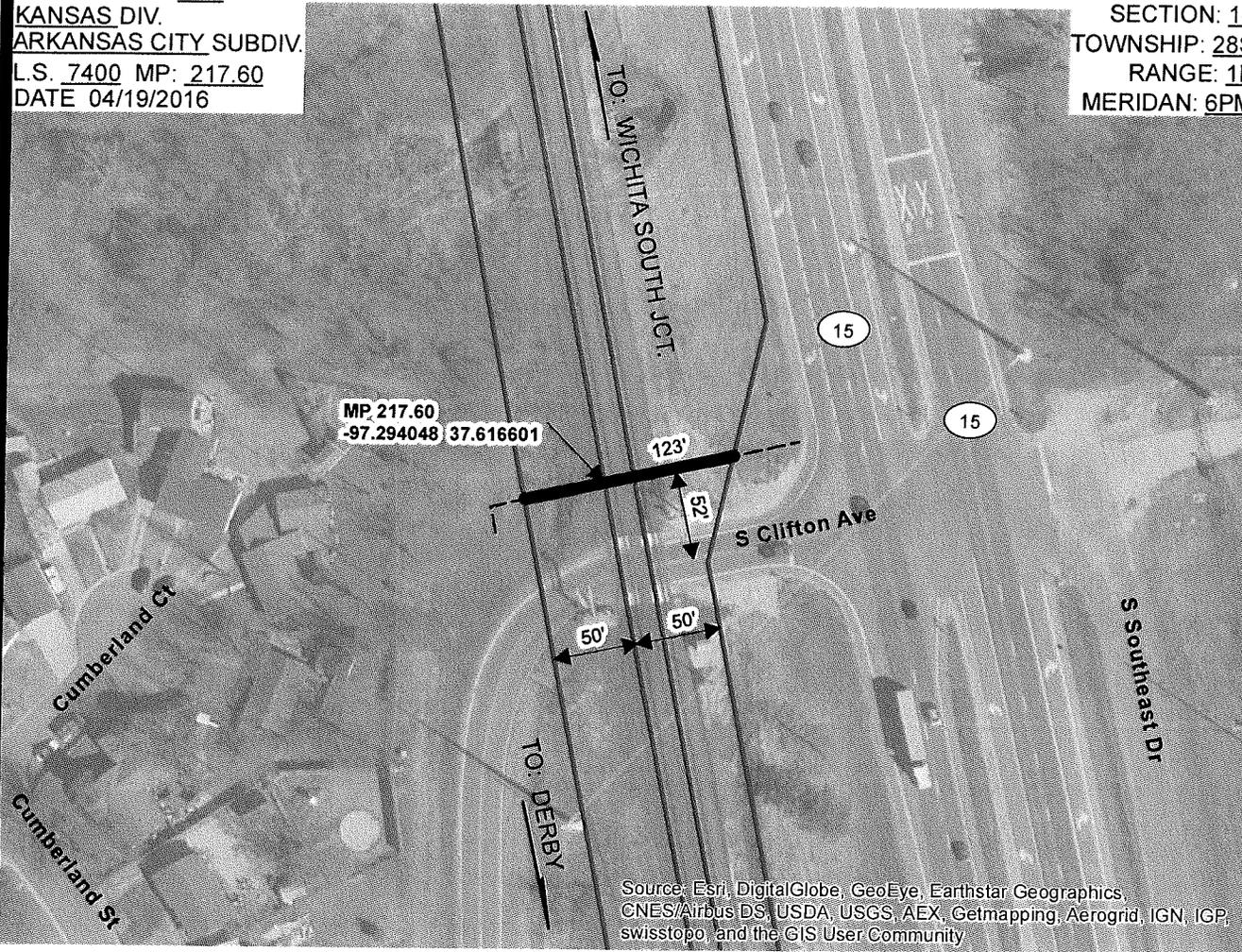
**EXHIBIT "A"**  
 ATTACHED TO CONTRACT BETWEEN  
**BNSF RAILWAY COMPANY**  
 AND



**CITY OF WICHITA**

SCALE: 1 IN. = 100 FT.  
KANSAS DIV.  
ARKANSAS CITY SUBDIV.  
 L.S. 7400 MP: 217.60  
 DATE 04/19/2016

SECTION: 14  
 TOWNSHIP: 28S  
 RANGE: 1E  
 MERIDAN: 6PM



DESCRIPTION OF PIPELINE  
 PIPELINE SHOWN BOLD

	CARRIER PIPE	CASING PIPE		CARRIER PIPE	CASING PIPE
SIZE:	<u>12"</u>	<u>24"</u>	LENGTH ON R/W:	<u>123'</u>	<u>123'</u>
CONTENTS:	<u>WATER</u>		WORKING PRESSURE:	<u>100 PSI</u>	
PIPE MATERIAL:	<u>PVC</u>	<u>STEEL</u>	BURY: BASE/RAIL TO TOP OF CASING		<u>14.2'</u>
SPECIFICATIONS / GRADE:	<u>C900, DR 18</u>	<u>GRADE B</u>	BURY: NATURAL GROUND		<u>9.9'</u>
WALL THICKNESS:	<u>0.733"</u>	<u>0.406"</u>	BURY: ROADWAY DITCHES		<u>9.9'</u>
COATING:	<u>-</u>	<u>-</u>	CATHODIC PROTECTION		<u>-</u>

VENTS: NUMBER - SIZE - HEIGHT OF VENT ABOVE GROUND -  
 NOTE: CASING TO BE JACKED OR DRY BORED ONLY

**AT WICHITA**  
**COUNTY OF SEDGWICK**

**STATE OF KS**

**AMM**