SPRING HILL CITY COUNCIL
REGULAR MEETING
AGENDA
THURSDAY, OCTOBER 13, 2016
7:00 P.M.
SPRING HILL CIVIC CENTER
401 N. MADISON – ROOM 15

CALL TO ORDER

INVOCATION Pastor Janice Hawley, Hillside Community Lutheran Church

PLEDGE OF ALLEGIANCE

ROLL CALL

APPROVAL OF AGENDA

CITIZEN PARTICIPATION

CONSENT AGENDA:

The items on the Consent Agenda are considered by staff to be routine business items. Approval of the items may be made by a single motion, seconded, and a majority vote with no separate discussion of any item listed. Should a member of the Governing Body desire to discuss any item, it will be removed from the Consent Agenda and considered separately.

1. Approval of Minutes: September 22, 2016

2. Consider Approval of Contract: Document Conversion of Case Files for Spring Hill Police Department, Scanning America, Inc.

3. Consider Approval of Contract: Design Services for Audio Visual Installation, Civic Center Revitalization Project, CCS Presentation Systems

4. Consider Approval of Contract: Microsoft Government Server and Cloud Program Enrollment, SHI International Corp

5. Consider Approval of Improvement Agreement: Dayton Creek, PV Investments, LLC

6. Consider Approval of Final Plat: FP-06-16, Dayton Creek, Northwest corner 191st Street & 169 Highway, PV Investments, LLC

7. Consider Acceptance of Permanent Utility and Drainage Easement and Dedication of Public Street for Blackhawk Apartments: Blackhawk Apartment Homes, LLC and Blackhawk Development, LLC

8. Consider Approval of Special Event: Mother/Son Date Night, Spring Hill Recreation Commission

9. Consider Approval of Special Event: Spooktacular, Spring Hill Recreation Commission

10. Consider Approval of Special Event: Family Movie Night, Spring Hill Recreation Commission

FORMAL COUNCIL ACTION

11. Appropriation Order 2016-10-13

12. Consider Approval of Reimbursement Agreement for Dayton Creek: PV Investments, L.L.C., a Kansas limited liability company, and Bradley D. Vince

13. Consider Approval of Resolution 2016-R-29: Approving and Authorizing Execution of Agreement with Richard Caplan and Associates for a Housing Needs Analysis of the City Relating to Oak Woods Subdivision Pursuant to the Kansas Rural Housing Incentive District Act

14. Ordinance No. 2016-14: Consider approval of the contract for assignment of City Solid Waste Contract to Waste Management of Kansas, Inc. and amendments to City Solid Waste Contract relating to the term of the contract and rates for solid waste service

15. Ordinance No. 2016-15: Chapter XVIII of the Spring Hill Municipal Code and incorporating by reference the Spring Hill Uniform Technical Specifications and Design Criteria for Public Improvement Projects, First Edition 2016

16. Transition of Elections and Terms of Office of the Governing Body from April Election Cycle to November Election Cycle:
    Charter Ordinance No. 36
    Ordinance 2016-16

ANNOUNCEMENTS and REPORTS

EXECUTIVE SESSION
Consideration of motion to recess into executive session under the Attorney-Client Privilege Exception to the Kansas Open Meetings Act

ADJOURN

City of Spring Hill, Kansas
Minutes of City Council Regular Session
September 22, 2016

A Regular Session of the City Council was held in the Spring Hill Civic Center, 401 N. Madison, Council Chambers, Spring Hill, Kansas on September 22, 2016. The meeting convened at 7:00pm with Mayor Ellis presiding, and Glenda Gerrity, City Clerk recording.

Councilmembers in attendance:	Chris Leaton Clint Gillis *arrived at 7:25pm* Floyd Koder Scott Snavely
Councilmembers absent:	Andrea Hughes
Staff in attendance:	City Administrator Jonathan Roberts Police Chief Richard Mann Finance Director Melanie Landis Community Development Director Jim Hendershot Public Affairs Specialist Allysha Walmann
Consultants in attendance:	City Attorney Frank Jenkins

ROLL CALL
The City Clerk called the roll of the City Council. With a quorum present, the meeting commenced.

APPROVAL OF THE AGENDA
Motion by Leaton, seconded by Snavely, to approve the agenda as published. Motion carried 3-0-0

PROCLAMATION – National 4-H Week
The Mayor read aloud and officially proclaimed the week of October 2-8, 2016 as National 4-H Week. The Mayor then signed the Proclamation and distributed them to the 4-H Clubs that were present at the meeting.

CITIZEN PARTICIPATION:
Mrs. Holly Shupert introduced her daughter, Langston Shupert, Miss Kansas Princess. Langston will represent Kansas at the 2016 Miss American Princess National Pageant in Florida at Walt Disney World. The Mayor thanked Langston for attending the meeting and wished her the best at the National Pageant.

PUBLIC HEARING
Proposed Assessments for Estates of Wolf Creek Special Benefit District
The Finance Director introduced the public hearing for the proposed assessments for Estates of Wolf Creek Special Benefit District. Ms. Landis gave a brief overview of how a benefit district is created. Ms. Landis reported that the public hearing was published in the Miami County Republic and notices were mailed to the property owners within the benefit district regarding the public hearing and proposed assessment amount.

The Mayor opened the public hearing at 7:18pm and requested comments from the public.

Joe Zanski, 18522 W. 193rd Street, stated that he purchased his home in June (2016) and was unaware of the assessment until he received the notice in the mail. He believed that his lot was lien free and wanted to bring it to the attention of the City Council. He added that there was no paperwork about the assessment and nothing was stated at the closing.

City staff confirmed that the proposed benefit district was recorded against the subdivision with Johnson County on

August 18, 2014. The Mayor understood his frustration and explained that this should have been discovered during the title search. Unfortunately, the City is not involved with the closings or the transaction of selling property.

Councilman Gillis arrived at 7:25pm

Josh Erhart – 19314 Millview Road, also expressed his frustration with the developer and not knowing about this benefit district until they received a post card in the mail. He believes that this should have been handled in a more professional manner.

Dave Hoover – 19322 Millview, echoed his frustration as well. He believes the developer should be paying for this and added that he will review his paperwork. He also mentioned that his street name is Millview, however, the plat reads Skyview. This causes problems with his house not showing up in mapping programs for deliveries, etc. City staff was directed to research this discrepancy and contact Mr. Hoover about the findings.

The Mayor closed the public hearing at 7:30pm

The Mayor declared a 10-minute recess.

The meeting reconvened with everyone present.

PRESENTATION – Resident Survey Results, ETC Institute
The Public Affairs Specialist introduced Mr. Jason Morado, Senior Project Manager, with ETC Institute. Mr. Morado reported that ETC Institute is a national leader in Market Research and helps Cities gather and use survey data to enhance organizational performance. Mr. Morado reviewed the results of the survey and compared them to the surveys that were conducted in 2013 and 2005 by ETC Institute. The survey indicated that residents have a positive perception of the City, satisfaction ratings increased significantly since 2013, and Spring Hill rates higher than other communities in the overall quality of City services.

The Mayor thanked Mr. Morado for the report and directed staff to share the results in the next newsletter.

CONSENT AGENDA:
Motion by Leaton, seconded by Gillis, to approve the Consent Agenda with amended minutes.

1. Approval of Minutes: September 8, 2016 Councilman Leaton requested a correction to the minutes. Under "Councilmembers in attendance" change Chad Eckert to Scott Snavely.
2. Appropriation Order 2016-09-22
3. Consider Cereal Malt Beverage License Renewal: K & M BBQ
4. Consider Cereal Malt Beverage License Renewal: Queen's Price Chopper
5. Consider Approval of Agreement: Facility Usage Agreement, Johnson County, Kansas
6. Consider Approval of Permanent Utility Easement: Mid-Am Building Supply

Motion carried 4-0-0.

FORMAL COUNCIL ACTION
7. Ordinance No. 2016-13: Levying and assessing special assessments on certain lots, pieces and parcels of land liable for such special assessments to pay the costs of internal improvements in the City of Spring Hill, KS (Estates of Wolf Creek benefit district)
The Finance Director presented the ordinance for levying and assessing special assessments for Estates of Wolf Creek Benefit District, which is the next step which levies assessments against those properties. Ms. Landis reported that the public hearing was published in the Miami County Republic, which was held earlier this evening, and notices were mailed to property owners within the benefit district area. Owners will again be notified and will have an opportunity to prepay the amount in full, without interest, within a designated period.

Motion by Leaton, seconded by Gillis, to approve Ordinance 2016-13 in the amount of $410,000.00. Motion carried 4-0-0.

8. **Resolution No. 2016-R-28: Authorizing the Public Sale of Approximately $12,470,000 Principal Amount of General Obligation Refunding and Improvement Bonds, Series 2016B, of the City of Spring Hill, Kansas**
The Finance Director presented the resolution authorizing the Public Sale of Approximately $12,470,000 Principal Amount of General Obligation Refunding and Improvement Bonds, Series 2016B.

The proposed 2016B general obligation issue is structured to refund the following general obligations issues:

(a) General Obligation Bonds, Series 2007A, dated August 15, 2007, in the original principal amount of $5,960,000 and outstanding in the principal amount of $2,890,000;

(b) General Obligation Bonds, Series 2008A, dated June 1, 2008, in the original principal amount of $6,870,000 and outstanding in the principal amount of $4,975,000; and

(c) General Obligation Bonds (Taxable Build America Bonds – Direct Pay to Issuer), Series 2009B, dated September 1, 2009, in the original principal amount of $5,085,000 and outstanding in the principal amount of $4,135,000;

(d) General Obligation Temporary Notes, Series 2016A, in the original principal amount of $386,500 (the "Notes"), to provide interim financing to pay to cost of certain sewer improvements.

Refunding of the general obligation bonds through early redemption offers the option to achieve interest cost savings. The benefit district for Estates of Wolf Creek will be financed for 20 years through this issue as well.

Motion by Leaton, seconded by Gillis, to approve Resolution 2016-R-28. Motion carried 4-0-0.

EXECUTIVE SESSION – Attorney-Client Privilege Exception

Motion by Leaton, seconded by Gillis to recess into Executive Session for 10 minutes under the Attorney-Client Exception to the Kansas Open Meetings Act: Subject – Contract with Fire District No. 2 of Johnson County, Kansas. The following persons are to be in attendance: City Administrator, Director of Finance Director, and City Attorney. Motion carried 4-0-0.

The meeting recessed at 9:00pm with the executive session to begin at 9:10pm.

The meeting reconvened at 9:20pm with everyone present.

Mayor Ellis announced that no votes were taken or decisions made during the executive session. The discussion was limited to the subject stated.

ADJOURN

Motion by Leaton, seconded by Snavely, to adjourn.

The meeting adjourned at 9:21pm.

_____
Glenda Gerrity, City Clerk

Approved by the Governing Body on _____.

AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: GLENDA GERRITY
MEETING DATE: OCTOBER 13, 2016
DATE: OCTOBER 6, 2016

Consent Item: Agreement for Document Conversion of Case Files for Spring Hill Police Department with Scanning America

Background/Analysis: City Staff has researched the option of outsourcing scanning services for the numerous documents within each department. These projects cost much less when outsourced and, in addition to lower costs, will also result in better quality, and earlier completion. The first phase of this project includes numerous case files located at the Spring Hill Police Department.

The Spring Hill Police Department has approximately 14,200 files and 159,750 images that need to be scanned. The digitized files will be published as Laserfiche attachable volumes which will import directly into the City's Laserfiche electronic content management application. Images will be published to the City's choice of media such as DVD, Flash Drive, etc.

City staff researched the alternatives and Scan America is a local company providing secure scanning services for confidential information and the scanned documents will interface with our existing Laserfiche system. All other alternatives did not meet these requirements.

Legal Review: Lowe Law Firm has reviewed and approved the agreement documents and insurance certificates requested.

Funding Review or Budgetary Impact: This agreement is proposed in accordance with the Spring Hill Purchasing Policy, First Edition, Section 2.03C. The estimated cost of the document conversion is $11,413.25 based on the project estimate.

Alternatives:

1. Approve the agreement with Scanning America.
2. Deny the agreement with Scanning America.
3. Table the issue and direct staff to further research.

Recommendation: Staff recommends the approval of an agreement with Scanning America for the scanning services related to the Spring Hill Police Department case files.

Attachments: Professional services agreement with Scanning America

AGREEMENT BETWEEN CITY OF SPRING HILL, KANSAS, AND SCANNING AMERICA, INC.

THIS AGREEMENT is made and entered this 6th day of October, 2016, by and between the City of Spring Hill, Kansas, a Kansas municipal corporation (**"City"**), and Scanning America, Inc., a Kansas corporation (**"Contractor"**).

1. **Work to be Provided.** Contractor shall provide and pay for all labor, services, materials, supplies, tools, equipment, supervision, management and anything else necessary to accomplish the results and objectives described in **Exhibit A** (Scope of Work) to this Agreement (the "**Work**") in compliance with all provisions of this Agreement.

2. **Completion.** Contractor shall complete all the Work no later than December 15, 2016.

3. **Payment to Contractor.** Provided Contractor performs all the Work in accordance with this Agreement and complies with all obligations of Contractor under this Agreement, City shall pay Contractor based on the following:

   - $0.059 per scanned image
   - Estimated total of 159,750 images at $0.059 per image equates to $9,425.25.
   - $0.14 per file indexed
   - Estimated total of 14,200 files at $0.14 per file equates to $1,988.00.
   - Estimated total project cost of $11,413.25.
   - Image quantities are estimates only. Actual number of images will be invoiced.

   This amount includes all taxes, costs, permit fees, profit, overhead, expenses and compensation of every kind related to the Work. Payment shall be made upon completion of all the Work.

4. **Safety Precautions.** Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Work and shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent injury, damage or loss to (a) employees and other persons at the site of the Work or who may be affected by the Work, and (b) material and equipment stored at on-site or off-site locations for use in performance of the Work. Contractor shall give notice and comply with applicable laws, ordinances, rules, regulations, orders and the like bearing on safety of persons or property and their protection from injury, damage or loss.

5. **Termination for Convenience by City.** City may terminate this Agreement at any time for convenience, for any reason or no reason at all, by delivering written notice of termination to Contractor. In the event of termination, City shall pay Contractor for the reasonable value of the Work rendered and provided to the date of delivery of the termination notice.

6. **Assignment.** This Agreement may not be assigned by either party without the prior written consent of the other party.

7. **Amendment or Modification of Agreement.** Any amendment or modification of this Agreement shall be made only in writing, signed by City and Contractor.

8. **Entire Agreement.** This Agreement constitutes the entire agreement between the City and Contractor on this subject, and as such is intended to be the exclusive statement of the promises, representations, and negotiations made in connection with the subject matter hereof.

9. **Time.** Time is of the essence of this Agreement.

10. **Waiver.** No waiver of any provision of this Agreement shall be effective unless agreed in writing by the party against whom such waiver is sought to be enforced. Waiver of any breach or default hereunder shall not constitute a waiver of any other default or breach, whether similar or otherwise.

11. **Applicable Law; Venue; Attorney Fees.** This Agreement is made in Kansas and is to be interpreted and enforced under Kansas law. Any litigation between the parties arising out of or related to this Agreement shall be brought only in the District Court of Johnson County, Kansas, and in no other court or location. In any such litigation, the prevailing party shall be entitled to an award of reasonable attorneys' fees and expenses incurred in the litigation.

12. **Compliance With Kansas Acts Against Discrimination, and Other Discrimination Laws.** To the extent applicable, with respect to all Work provided by Contractor under this Agreement, Contractor agrees to comply with the requirements of K.S.A. 44-1030 of the Kansas Acts Against Discrimination. Contractor also agrees to comply with all ADA, Civil Rights Act, and Age Discrimination and Employment Act (ADEA) requirements and obligations. Contractor agrees to indemnify and hold City harmless from all claims and damages, including but not limited to attorney fees and expenses, arising from any failure by Contractor to comply with all such requirements of this Section with respect to all Work under this Agreement.

13. **Commercial General Liability Insurance.** Contractor shall procure and maintain, at its sole cost and expense, throughout the duration of the Contract,

commercial general liability insurance in accordance with the insurance requirements shown in attached **Exhibit B**.

14. **Worker's Compensation Insurance.** Contractor shall procure and maintain, at its sole cost and expense, throughout the duration of this Contract, worker's compensation insurance in accordance with the insurance requirements shown in attached **Exhibit B**.

15. **Automobile Liability Insurance.** Contractor shall procure and maintain, at its sole cost and expense, throughout the duration of this Contract, automobile liability insurance in accordance with the insurance requirements shown in attached **Exhibit B**.

16. **Other Insurance Requirements.** In addition to what is required in Sections 13, 14, and 15 above, Contractor, prior to commencing the Work under this Contract, shall comply with all other insurance related requirements, if any, shown in attached **Exhibit B**.

17. **Indemnity of City.** Contractor, at its sole cost and expense, shall indemnify, hold harmless and protect the City, including its officers, employees, agents, Mayor and City Council members from and against any and all *Loss*. "*Loss*" means any and all loss, damage, liability or expense, of any nature whatsoever, whether incurred as a judgment, settlement, penalty, fine, or otherwise (including attorney's fees and the cost of defense), in connection with any action, proceeding, demand, or claim, whether real or spurious, for injury, including death, to any person or persons or for damages to or loss of, or the loss of use of, property of any person, firm or corporation, including the parties hereto, which arises out of, or is connected with, or is claimed to arise out of or be connected with, any intentional, wanton or negligent act or omission of the Contractor, its agents, employees, officers, subcontractors, suppliers, or Contractor members. However, this hold harmless and indemnification shall not apply to the extent such "*Loss*" results from any negligent, intentional or wanton act or omission on the part of the City, its officers, agents, employees, representatives, subcontractors, suppliers, Mayor, or City Council members.

18. **Remedy of Defective Work.** If any defects in the Work are discovered within two (2) years from the final completion of the Work, Contractor shall promptly remedy such defects at its own expense.

19. **Notices.** Notices shall be deemed duly given upon hand-delivery, or upon mailing, first class or overnight delivery charge pre-paid, or upon emailing, addressed as below indicated.

If to the City: City of Spring Hill, Kansas
401 North Madison Street
P.O. Box 424
Spring Hill, KS 66083
Attn: Glenda Gerrity, City Clerk
Email: gerrityg@springhillks.gov

If to Contractor: Scanning America, Inc.
1440 North 3rd Street
Lawrence, Kansas 66044

Attn: Brett Benson, Account Exec.

Email: brett@scanningamerica.com

20. **Application of Kansas Tort Claims Act.** The City is a governmental entity within the meaning of K.S.A. 75-6106 (Kansas Tort Claims Act). The liability for each of the acts or omissions of its officers, employees, agents, City Council members and Mayor shall be determined pursuant to the provisions of that Act. City shall not be deemed to have waived any defense available to it under the provisions of the Act, whether with respect to the Contractor or to third parties.

21. **Relationship of the Parties.** The City and Contractor are separate entities. Nothing in this Agreement shall be construed to create or imply an agency, participation or joint venture between the parties hereto, nor shall any City Council member, Mayor, officer, director, member, employee or agent of either party be deemed to be a City Council member, Mayor, officer, director, member, employee or agent of the other party for any purpose.

22. **Default.** If either party is in breach of this Agreement, the other party may give the breaching party a 10 day written notice of the breach. The breaching party shall have 10 days from receipt of the written notice in which to cure the breach. If the breach is not cured within 10 days after the breaching party receives notice of the breach, the party giving the notice may declare the breaching party in default. In the event of such declaration of default, the party declaring the default may exercise its remedies provided under the law.

23. **Binding Effect.** This Agreement shall be binding upon, and inure to the benefit of, the parties and their respective heirs, administrators, executors, successors, and permitted assigns.

"CITY"

City of Spring Hill, Kansas, a Kansas
municipal corporation

By:_____
Steven M. Ellis, Mayor

ATTEST:

By:_____
Glenda Gerrity, City Clerk

APPROVED AS TO FORM:

By:_____
Frank H. Jenkins, Jr., City Attorney

"CONTRACTOR"

Scanning America, Inc.
A Kansas Corporation

By: Brett Benson

Capacity: Account Executive

EXHIBIT A

Scope of Work

Description of Services to be provided by Service Provider:

- Provide document preparation, scanning, QA and Indexing of approximately 71, 15" Letter/Legal size boxes, with an estimated 14,200 case files, containing an estimated 159,750 images.
- Service Provider will prep case files for scanning. This includes removing pages from folders, removing staples, unfolding pages, repairing tears, etc.
- Files will be scanned at 200 dpi, bi-tonally
- There may be color photos or other color documents that will be scanned in color.
- Each file will be indexed by Case Number, which can be located on the file folder.
- Client will provide a data report containing metadata associated with the case files in order to automatically link additional index fields at no extra cost.
- Service Provider will provide transportation of files from Client's facility to Service Provider's production facility.
- During conversion, Service Provider will perform Scan On Demand File Retrievals for any documents that the Client should need. These files will be posted to Client's account on Service Provider's secure FTP server so that Client can download them. All transmissions through SFTP are completely encrypted.
- After conversion, file pages will be kept in original order and packed back into original boxes loosely. (Not re-assembled in folders)
- OPTIONAL Service Provider will transport original paper files back to Client's facility.
- OPTIONAL Service Provider will have AAA NAID Certified Destruction performed on the case files post-production. (Agreement and signed authorization from Spring Hill PD is required prior to destruction)
- Q.A. processes will be performed for each service provided.
- Digitized files will be formatted to multi-page, Group IV TIFF images for bi-tonal documents and single page JPEG images for color documents.
- Digitized files will be published as Laserfiche Attachable Volumes which will import directly into Client's Laserfiche Electronic Content Management application.
- Images and metadata will be published to the Client's choice of media such as DVD, Flash Drive, etc.
- Actual number of images and indexes will be invoiced.

EXHIBIT B

Insurance Requirements

(See attached requirements, which are incorporated by reference)

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 10/6/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Calvin Eddy Kappelman Insurance
1011 Westdale Rd.

Lawrence KS 66049-2638

CONTACT NAME: Patricia Huebner
PHONE (A/C, No, Ext): (785)843-2772 FAX (A/C, No): (785)843-1583
E-MAIL ADDRESS: phuebner@cekinsurance.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : Travelers Indemnity of Amer	25666
INSURER B : Travelers - Indemnity	25658
INSURER C : Hartford Insurance Co	00914
INSURER D : Philadelphia Insurance Company	23850
INSURER E :	
INSURER F :	

INSURED
Scanning America Inc
1440 N 3rd St

Lawrence KS 66044-9128

COVERAGES CERTIFICATE NUMBER: 2015-2016 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 300,000
				6805435L081	10/15/2015	10/15/2016	MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	X POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ 2,000,000
	OTHER:						Blanket Additional Insured	$
B	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO						BODILY INJURY (Per person)	$
	ALL OWNED AUTOS / SCHEDULED AUTOS			BA5439L018	10/15/2015	10/15/2016	BODILY INJURY (Per accident)	$
	HIRED AUTOS / NON-OWNED AUTOS						PROPERTY DAMAGE (Per accident)	$
							Medical payments	$ 5,000
B	X UMBRELLA LIAB / OCCUR						EACH OCCURRENCE	$ 2,000,000
	EXCESS LIAB / CLAIMS-MADE						AGGREGATE	$ 2,000,000
	DED X RETENTION $ 10,000			CUP7382Y965	10/15/2015	10/15/2016		$
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY						PER STATUTE / OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		37WBCCB6671	10/15/2015	10/15/2016	E.L. EACH ACCIDENT	$ 1,000,000
							E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
							E.L. DISEASE - POLICY LIMIT	$ 1,000,000
D	Professional Liability			PHSD977466	10/15/2015	10/15/2016	$1,000,000 Limit	
	Cyber Liability			PHSD1094634	12/19/2015	12/19/2016	$1,000,000 Limit	

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)
$1,500,000 coverage for Valuable Papers

CERTIFICATE HOLDER

lazenbyn@springhillks.com

City of Spring Hill Kansas
Natalie Lazenby
401 N Madison
PO Box 424
Spring Hill, KS 66083

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

TRACY CULLERS/PHUEB

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AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: MELANIE LANDIS, FINANCE DIRECTOR
MEETING DATE: OCTOBER 13, 2016
DATE: OCTOBER 6, 2016

Formal Action Item: Professional Service agreement with CCS Presentation Systems

Background/Analysis: City staff released a request for proposals related to the technology design and installation for inclusion in the draft Civic Center renovation construction drawings. Three proposals were received.

The company recommended by staff for this project is able to meet the project installation requirements, provided a reasonable design cost and is qualified under the State of Kansas contract pricing. CCS Presentation Systems proposal includes a design fee of 4% of the project estimate. The project estimate is based on preliminary walk-through discussions with City staff. Product procurement and complete installation of equipment including termination of cabling are included in the proposed agreement. The agreement also includes a three year warranty of workmanship on installation and one year of software/firmware upgrades and warranty repair/replacement work from the date of install at no additional cost to the City. A fifty percent design credit will be applied to the final installation invoice.

Legal Review: Lowe Law Firm has reviewed and approved the agreement documents and insurance certificates requested.

Funding Review or Budgetary Impact: This agreement is proposed in accordance with the Spring Hill Purchasing Policy, First Edition, Section 2.03C. The estimated cost of the design is $5,770.68 based on the project estimate. Installation will be billed at the State contract price of $80/hour.

Alternatives:

1. Approve the agreement with CCS Presentation Systems.
2. Deny the agreement with CCS Presentation Systems.
3. Table the issue and direct staff to further research.

Recommendation: Staff recommends the approval of an agreement with CCS Presentation Systems for the technology design and installation project related to the Civic Center renovation project.

Attachments: Professional services agreement with CCS Presentation Systems

AGREEMENT

THIS AGREEMENT is made and entered into this 6th day of October, 2016, by and between the CITY OF SPRING HILL, KANSAS, hereinafter referred to as "**City**," and CCS PRESENTATION SYSTEMS, hereinafter referred to as "**Contractor**."

SECTION I – SCOPE AND ORDER OF PRECEDENCE

Contractor shall provide to the City certain products and/or services as outlined in **Exhibit A**, a copy of which is attached hereto and incorporated by reference herein, to the City's complete satisfaction and in compliance with the Request for Quote issued by the City on September 27, 2016, (the "RFQ") attached hereto and incorporated by reference as **Exhibit A**; and the Contractor's response dated October 4, 2016 (the "RFQ Response"), attached hereto and incorporated by reference as **Exhibit B**; the defined Scope of Work ("SOW") attached hereto and incorporated by reference as **Exhibit C**.

If there is a conflict among any of the Exhibits referenced above, the following order of precedence shall apply:

1. This Agreement, excluding exhibits
2. The Scope of Work (**Exhibit C**)
3. The RFQ (**Exhibit A**)
4. The RFQ Response (**Exhibit B**)

SECTION II - COMPENSATION

The City agrees to pay Contractor for the products and services as outlined by the Agreement, an as detailed in **Exhibit C**.

The Compensation will be paid to Contractor on the schedule as outlined in **Exhibit C** upon successful completion of any and all work as identified for each specific phase of the project. Upon invoicing by the Contractor, the City will pay Contractor within thirty (30) days of receipt any undisputed invoice.

SECTION III - DISPUTE RESOLUTION

City and Contractor agree that disputes relative to the products delivered and work performed should first be addressed by negotiations between the parties. If direct negotiations fail to resolve the dispute, the party initiating the claim that is the basis for the dispute shall be free to take such steps as it deems necessary to protect its interests; provided, however, that notwithstanding any such dispute, Contractor shall proceed with the work as per this Agreement as if no dispute existed; and provided further that no dispute will be submitted to arbitration without the parties' express written consent.

SECTION IV - TERMINATION FOR CONVENIENCE

Notwithstanding anything in this Agreement, the City may terminate this Agreement at its convenience by giving the Contractor seven (7) days' prior written notice. In the event of such termination,

City shall pay Contractor for the reasonable value of the services rendered by the Contractor to City up to the date and time that the prior written notice of such termination is delivered to Contractor.

Any such termination shall not relieve the City of its obligations to pay Contractor for services satisfactorily performed through the effective date of termination. Compensation shall not include anticipatory profit or consequential damages, neither of which will be allowed.

SECTION V - ASSIGNMENT

Parties hereto agree that neither shall assign, sublet or transfer their interest in this Agreement without the written consent of the other and further agree that this Agreement binds the parties, their successors, trustees, assignees and legal representatives.

SECTION VI - PRIOR VERBAL OR WRITTEN STATEMENTS NOT BINDING

It is understood and agreed that the written terms and provisions of this Agreement shall supersede all prior verbal and written statements of any and every official and/or other representative of the City and Contractor and such statements shall not be effective or be construed as entering into, or forming a part of, or altering in any way whatsoever, the written Agreement. In the event that the City issues a purchase order, work order, invoice or similar document relating to services performed, such purchase order or similar document shall be for the City's administrative purposes only and will not supplement, supersede, modify or affect any of the terms and conditions set forth herein.

SECTION VII - INDEPENDENT CONTRACTOR

Contractor is an independent contractor and as such neither Contractor nor its personnel are agents or employees of the City. Contractor is responsible for payment of any and all federal, state and local taxes.

SECTION VIII - HOLD HARMLESS

Contractor agrees to defend, indemnify and hold harmless the City and its agents and/or employees, Mayor, and City Council members from any and all claims, settlements, and judgments including but not limited to those for bodily injury, physical property damage and/or death that are caused by the Contractor and within its control and that arise out of Contractor's or any of its agents, servants and/or employees' negligent acts, and/or failure to act in the performance of this Agreement. Neither acceptance of the completed work nor payment therefore or termination or expiration of this Agreement shall release Contractor of its obligation under this paragraph.

In the event of an proceeding (suit, claim, or action) against City arising from allegations that the hardware, software, or services, or part thereof, furnished by Contractor (hereinafter "Product") infringes on a U.S. patent, copyright, trade secret, intellectual property, or other proprietary right of any third-party, Contractor will, if such a proceeding does not result from modifications to the Product made by City use of any Product in combination with other products not furnished by Contractor, defend City's right, title, or interest in the Product, at Contractor's expense, provided City promptly notifies Contractor in writing of the allegation. Contractor shall make such defense by counsel of its own choosing, and City shall cooperate with said counsel.

In the event any Product furnished hereunder is, in Contractor's opinion, likely to or does become the subject of claim or infringement of any duly issued patent or copyright or any trade secrets or other intellectual property rights or other proprietary right of a third-party, Contractor may at its option and expense, procure for City the right to continue using the Product, or modify the Product to make it non-infringing but functionally the same, or replace the Product with a non-infringing equivalent.

SECTION IX - NON-DISCRIMINATION AND OTHER LAWS

A. Contractor agrees that:

1. Contractor shall observe the provisions of the Kansas act against discrimination and shall not discriminate against any person in the performance of work under the present Agreement because of race, religion, color, sex, disability, national origin ancestry or age;

2. In all solicitations or advertisements for employees, Contractor shall include the phrase, "equal opportunity employer," or a similar phrase to be approved by the Kansas Human Rights Commission ("Commission");

3. If Contractor fails to comply with the manner in which Contractor reports to the Commission in accordance with the provisions of K.S.A. 44-1031 and amendments thereto, Contractor shall be deemed to have breached the present Agreement and it may be canceled, terminated or suspended, in whole or in part, by the City;

4. If Contractor is found guilty of a violation of the Kansas Act Against Discrimination under a decision or order of the Commission which has become final, Contractor shall be deemed to have breached the present Agreement and it may be canceled, terminated or suspended, in whole or in part, by the City; and

5. Contractor shall include the provisions of subsections (A)(1) through (4) in every subcontract or purchase order so that such provisions will be binding upon such subcontractor or vendor.

   The provisions of this section shall not apply if:

   (a) Contractor employs fewer than four employees during the term of such contract; or

   (b) If Contractor contracts with the City cumulatively total $5,000 or less during the fiscal year of the City.

B. Contractor further agrees that Contractor shall abide by the Kansas Age Discrimination In Employment Act (K.S.A. 44-1111 et seq.) and the applicable provision in the Americans With Disabilities Act (42 U.S.C. 12101 et seq.) as well as all federal, state and local laws, ordinances and regulations applicable to this project and to furnish any certification required by any federal, state or local governmental agency in connection therewith.

SECTION X - PROHIBITION AGAINST CONTINGENT FEES

Contractor warrants that it has not employed or retained any person, firm, or corporation, other than a bona fide employee working solely for Contractor, to solicit or secure the awarding of this Agreement based upon an arrangement that the person, firm or corporation would receive any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award of this Agreement. For the breach or violation of the foregoing provision, the City shall have the right to terminate the Agreement without liability and, at its discretion to deduct from the contract price, or otherwise recover the full amount of such fee, commission, percentage, gift or consideration.

SECTION XI - APPLICABLE LAW, NONWAIVER, VENUE, ATTORNEYS' FEES

This Agreement is entered into under and pursuant to, and is to be construed and enforceable in accordance with, the laws of the State of Kansas. The waiver of or failure to enforce any term or condition of this Agreement shall not be construed as a waiver of any other term or condition. If any provision is held to be unenforceable by a court or other tribunal, the enforceability of the other provisions shall not be affected. Any litigation arising out of or related to this Agreement shall be brought only in the District Court of Johnson County, Kansas, and in no other Court or location. In any such litigation, the prevailing party shall be entitled to an award of reasonable attorneys' fees and expenses.

SECTION XII – SUBCONTRACTORS

Contractor shall not subcontract any of the work or services required by this Agreement without the prior written approval of the City. Should Contractor request and the City agree to work being subcontracted, Contractor shall be as fully responsible to the City for the acts and omissions of its subcontractors and of persons either directly or indirectly employed by said sub-contractors, as Contractor is for the acts and omissions of the persons it directly employs.

SECTION XIII – INCORPORATION BY REFERENCE

The following provisions of the RFQ are incorporated by refence and made a part of this Agreement:

1. RFQ Appendix E, Section 1.A., Termination For Cause.
2. RFQ Appendix E, Section 2, Limited Warranty.
3. RFQ Appendix E, Section 8, Amendments and Modifications.
4. RFQ Appendix E, Section 11, Application of Kansas Tort Claims Act.
5. RFQ Appendix B, Contractor's Insurance.

SECTION XIV – ADJUSTMENT TO CONTRACT TERMS

Changes to the terms of this Agreement may be made only in writing and must be approved by the City and Contractor. Should a decision be made to amend the terms of this Agreement, the City and Contractor must mutually agree in writing to the amended terms.

SECTION XV – CASH BASIS LAW

The City is obligated only to make payments under this Agreement as may be lawfully made from funds budgeted and appropriated for the purposes as set forth in this Agreement during the City's current budget year. In the event the City does not so budget and appropriate the funds, the parties acknowledge and agree that they shall be relieved from all obligations, without penalty, under this Agreement.

SECTION XVI - SEVERABILITY CLAUSE

Should any provision of this Agreement be determined to be void, invalid, unenforceable or illegal for whatever reason, such provision(s) shall be null and void; provided, however, that the remaining provisions of this Agreement shall be unaffected thereby and shall continue to be valid and enforceable.

SECTION XVII – NOTICES

Notices shall be deemed duly given upon hand-delivery, or upon mailing, first class or overnight delivery charge pre-paid, or upon emailing, addressed as below indicated.

If to the City:
City of Spring Hill, Kansas
401 North Madison Street
P.O. Box 424
Spring Hill, KS 66083
Attn: Glenda Gerrity, City Clerk
Email: gerrityg@springhillks.gov

If to Contractor:
CCS Presentation Systems
7820 Barton Street
Lenexa, KS 66214
913-948-6666
Attn: Joe Fandel
Email: jfandel@ccsprojects.com

SECTION XVIII - EXECUTION OF CONTRACT

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their authorized officials, effective on the day and year first above written.

CITY OF SPRING HILL, KANSAS

By:_____
Steven M. Ellis, Mayor

_____
Date:

ATTEST:

_____

Glenda Gerrity, City Clerk

APPROVED AS TO FORM:

_____

Frank H. Jenkins, Jr., City Attorney

CCS PRESENTATION SYSTEMS

By: Michael MacGee

Signature: _____

Title: Partner

Date: 10/06/2016

CORPORATE ACKNOWLEDGMENT

STATE OF Kansas)
) ss.
COUNTY OF Johnson)

BE IT REMEMBERED, That on this 7 day of October, 2016, before me, the undersigned, a Notary Public in and for the County and State aforesaid, came Michael E MacGee who is the the Partner of CCS DBA Midwest Presentation, a corporation duly organized, incorporated and existing under and by virtue of the laws of Kansas who is personally known to me to be the same person who executed as such officer the within instrument on behalf of said Corporation, and such person duly acknowledged the execution of the same to be the act and deed of said Corporation.

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

_____
Notary Public

My Commission Expires:
3/25/2018

NOTARY PUBLIC - State of Kansas
MAGDALENA STONE
My Appt. Expires 3/25/2018

EXHIBIT A

CITY OF SPRING HILL, KANSAS: REQUEST FOR COST PROPOSALS FOR CIVIC CENTER RENOVATION TECHNOLOGY DESIGN AND INSTALLATION

A. General Information

The City of Spring Hill is requesting a cost proposal for technology design and installation as part of the renovation project (the "Project") for the existing Civic Center/City Hall.

B. Project Description

The City of Spring Hill is renovating the existing Civic Center / City Hall to upgrade the interior space of the building. As part of this project, upgrades to existing technology in many of the rooms is required (Appendix D and Exhibit A). Rooms with technology needs include open office cubicle space, general purpose rooms, meeting rooms, data center, City Council chambers, gymnasium and stage, and a special event room.

C. Scope of Service: The project consists of two phases:

Design development, construction documents and product cost proposal

a. Perform necessary plan review of building renovation drawings. Site inspection available on request.
b. Provide design proposal(s) and project costs for review and final approval by the City.
c. Generate and prepare final design and construction/installation documents for inclusion in RFP for Construction of Civic Center renovation.
d. Price hardware and equipment as needed to complete the project as designed.
e. Order and track hardware and equipment purchase once approved by the City for delivery to meet project schedule for installation.

Installation of product / Project closeout

a. Coordinate the delivery of hardware and equipment with the Project schedule.
b. Perform final installation of hardware and equipment.
c. Coordinate any changes or change requirements with City.
d. Prepare and submit pay requests in accordance with negotiated contract terms.
e. Provide equipment documentation including model number, serial number, location install, manuals and warranty/service information.
f. Provide owner and user training as applicable.

D. Project schedule

September 27, 2016	Distribute RFQ/Cost proposal to vendors
October 4, 2016	Receive proposals back from vendors
October 13, 2016	City Council approve contract with vendor of preference
November 4, 2016	Technology design due back to City from Contractor

Renovation Construction schedule

November 1, 2016	Distribute RFP for construction of Civic Center/City Hall renovations
January 2017	Construction Notice to Proceed
February–August 2017	Construction of Project

Installation portion of Technology Project

August 2017	Contractor finish installation of hardware and equipment

E. Cost Proposal

Cost proposals should be submitted in the format provided in Appendix C. Cost of design, production of construction documents and product cost proposal should be detailed and totaled for the first phase. Installation of product and project closeout may be listed as an hourly rate with an estimated number of hours expected to complete the job.

F. Tax Exempt

The City is exempt from taxes as set forth in K.S.A. 79-3606 as a political subdivision. Proposals should be submitted with pricing based on this exemption.

G. Construction documents

The Proposer shall produce construction drawings illustrating the requirements for the Project.

a. Construction drawings shall be drawn to "D" size (36"/24") unless otherwise approved by the City. Construction drawings shall be provided in AutoCAD release 2014 or later format.
b. Provide system drawings showing all device locations, wiring and conduit.
c. Provide schematic control drawings giving specific data on all settings, ranges, action, adjustments and normal positions for each device.
d. Provide wiring ladder diagrams detailed adequately for field construction and include all related wiring. Ladder diagrams shall indicate terminal strip numbers, wiring logic for devices, and control interface (if applicable).

H. Submission of requested information

Proposers may submit their response no later than **4:00 p.m. Tuesday, October 4, 2016** via email, fax or US postal service to the following address:

City of Spring Hill
Attn: Antwone Smoot
PO Box 401
401 N Madison
Spring Hill, KS 66083
Fax: (913) 592-5040
Email: Antwone.Smoot@springhillks.gov

I. Notification of selection

The City will notify the Proposer of choice no later than 9:00 AM on Wednesday, October 5, 2016. Contract negotiations will begin at that time.

J. Insurance Requirements

Contracts with the City of Spring Hill require minimum insurance requirements to be met and insurance certificates to be provided prior to the contract approval. Insurance requirements are found in Appendix B.

K. Additional Provisions to Be In Contract

The written agreement to be entered between the City of Spring Hill and the person or entity whose proposal is accepted will include the provisions stated in attached Appendix E.

APPENDIX A: PROPOSER GUARANTEES

The Proposer certifies it can and will provide and make available, as a minimum, all services set forth in Section C, Scope of Services.

Signature of Official: _____

Name (typed): Michael MacGee

Title: Partner

Firm: CCS Presentation System

APPENDIX B: CONTRACTOR'S INSURANCE

CITY OF SPRING HILL MINIMUM INSURANCE REQUIREMENTS

Contractor shall acquire and maintain insurance as shown below for the duration of the contract, and the cost of such insurance shall be included in the rates charged by the Contractor.

1) COMMERCIAL GENERAL LIABILITY: A combined single limit of liability of $1,000,000 Per Occurrence / $2,000,000 Aggregate including products and completed operations, written on ISO occurrence form CG 0001 or its equivalent. Endorsements limiting contractual liability are not acceptable. Policy shall contain a "per job/per project" aggregate endorsement. If applicable, Pollution Liability must also be included or separate policy provided reflecting same limits.
2) BUSINESS AUTOMOBILE LIABILITY: A combined single limit of liability of $1,000,000 Per Occurrence / Accident to apply to all owned, hired, and/or non-owned autos used in the completion of the contract.
3) WORKERS COMPENSATION & EMPLOYERS LIABILITY: Workers Compensation coverage should be statutory for the State of Kansas and apply to all workers involved in the work, including the owner, sole proprietor, partners, members of an LLC, and officers of a corporation, regardless of whether or not such persons come under the statutory requirements to carry this coverage. Employers Liability limits must be at least $100,000/$500,000/$100,000.
4) OTHER INSURANCE REQUIREMENTS:
    a. Contractor agrees to name the City as an additional insured on a primary basis, for ongoing and completed operations in its Commercial General Liability policy with respect to the work performed under the contract. The certificate of insurance must reflect this requirement.
    b. Prior to commencing the work, Contractor's insurance agent shall furnish the City with an acceptable Accord 25 (2010/05) Certificate of Insurance form containing the above required provisions and containing a provision that obligates the insurance company(ies) issuing such policies to notify the City in writing at least 30 days prior to any cancellation (10 days for non-payment of premium), non-renewal, or material alteration which would have an adverse effect on the coverage pertaining to this contract. This cancellation provision shall be indicated on the certificate of insurance. Certificate holder should be: City of Spring Hill, Kansas
    Attn: Natalie Lazenby, HR-Risk Manager
    401 N. Madison, P.O. Box 424
    Spring Hill, KS 66083
    lazenbyn@springhillks.gov
    c. All insurance policies shall be written by insurance company (ies) acceptable to City and with a current A.M. Best's Guide Rating of A- and Class VIII or better, and authorized to do business in the state of Kansas.
    d. The fact that insurance is obtained by the Contractor shall not be deemed to release or diminish the liability of Contractor. Damages recoverable by City shall not be limited by the amount of required insurance coverage.
    e. Contractor shall notify a City Department Manager as soon as possible after:
        1. Receiving notice of, or knowledge of, any demand, claim, lawsuit, or action arising out of the work performed, or
        2. Any bodily injury or property damage occurrence that could potentially lead to any claim or lawsuit.

APPENDIX C: COST PROPOSAL FORM

Phase 1: Design development, construction documents and product cost proposal

Design Cost	$ _____
Cost of providing construction documents	$ _____
Cost of providing product cost proposal	$ _____
Total cost of Phase I	**$ _____**

Phase II: Installation of product / Project closeout

Hourly Rate	$ _____
Estimate number of hours to complete installation	_____
Guaranteed maximum price of Phase II	**$ _____**

APPENDIX D: PROJECT COMPONENTS

1. **Open office/cubicle space**
   A. Termination of ethernet cable and limited existing phone lines

2. **General purpose/recreational programming rooms**
   A. Review current layout for access points
   B. Make recommendations for purpose
   C. Termination of cables

3. **Conference/Meeting rooms**
   A. Review need and make recommendations to enhance two meeting rooms with audio and video capabilities.
   B. Conference phone and Skype for Business online technology already existing.

4. **Data Center**
   A. Punch down of data cables.
   B. Make recommendations for best use of space and organized cabling.

5. **City Council chambers**
   A. Review and make recommendation on addition of audio, visual, projectors and screens technology. May include use of flat panel monitors.
   B. Recommend uses of wireless technology.

6. **Gymnasium / Stage**
   A. Recommend use of audio technology for recreational programming.

7. **Special Event room**
   A. Review need and make recommendations to enhance two meeting rooms with audio and video capabilities.

APPENDIX E: ADDITIONAL PROVISIONS TO BE IN FINAL AGREEMENT

1. **Termination.**

A. Termination for Cause. If either party materially breaches any material obligation in the Agreement, and fails to remedy such breach (if such breach can be remedied) within thirty (30) days after receipt of written notice of such breach, the other party may terminate the Agreement.

B. Termination for Convenience. The City may terminate the Agreement for any reason, or no reason at all, upon seven (7) days' prior written notice. In the event of such termination, City shall pay Contractor for the reasonable value of the services rendered by the Contractor to City up to the date and time that the prior written notice of such termination is delivered to Contractor.

2. Limited Warranty.

Contractor represents and warrants to City that: (a) it will perform the services: (i) in a timely and professional manner by qualified and competent individuals familiar with the types of services; and (ii) consistent with industry practices for those professional service companies who are generally recognized as leaders in the services field; (b) deliverables that Contractor provides as part of the services: (i) have not, do not and will not infringe or misappropriate the intellectual property of any other person or entity; and (ii) will conform to and/or operate in all material respects with applicable specifications and/or documentation associated with the deliverables; (c) Contractor solely has the authority to make the representation and warranties set forth herein to City; and (d) the performance of the services at all times and in all ways will comply with all: (i) federal, state and local laws, rules and regulations; and (ii) City's written policies having any bearing on or relation to Contractor's services.

3. Assignment.

Contractor may not assign its rights or delegate its obligations under the Agreement without the City's prior written consent.

4. Choice of Law; Venue; Attorney Fees.

The Agreement will be made in Kansas and will be governed by and interpreted in accordance with the laws of Kansas. Any litigation arising out of or related to the Agreement shall be brought only in the District Court of Johnson County, Kansas, and in no other court or location. In any litigation arising out of or related to the Agreement, the prevailing party shall be entitled to an award of reasonable attorneys' fees and expenses incurred in such litigation.

5. Counterparts.

The Agreement may be executed in two or more counterparts, each of which shall be considered an original, but all of which together shall constitute one agreement.

6. Severability.

If any provision of the Agreement shall be held invalid or unenforceable, such provision shall be deemed deleted from the Agreement and replaced by a valid and enforceable provision which so far as possible achieves the parties' intent in agreeing to the original provision. The remaining provisions of the Agreement shall continue in full force and effect.

7. No Waiver.

A party's failure to insist upon or enforce strict performance of any provision of the Agreement shall not be construed as a waiver of such provision or right.

8. Amendments and Modifications.

The Agreement may not be amended, modified or superseded, except by a written instrument executed by the parties.

9. Entire Agreement.

The Agreement, together with the exhibits and appendices, will contain the entire understanding of the parties with respect to its subject matter, and will supersede and extinguish all prior oral and written communications between the parties about its subject matter.

10. Compliance With Kansas Acts Against Discrimination, and Other Discrimination Laws.

To the extent applicable, with respect to all services provided by Contractor under the Agreement, Contractor will agree to comply with the requirements of K.S.A. 44-1030 of the Kansas Acts Against Discrimination. Contractor will also agree to comply with all ADA, Civil Rights Act, and Age Discrimination and Employment Act (ADEA) requirements and obligations. Contractor will agree to indemnify and hold City harmless from all claims and damages, including but not limited to attorneys' fees and expenses, arising from any failure by Contractor to comply with all such requirements of this Section with respect to all work and services under the Agreement.

11. Application of Kansas Tort Claims Act.

The City is a governmental entity within the meaning of K.S.A. 75-6106 (Kansas Tort Claims Act). The liability for each of the acts and omissions of its officers, employees, agents, City Council members and Mayor shall be determined pursuant to the provisions of that Act. City shall not be deemed to have waived any defense available to it under the provisions of the Act, whether with respect to Contractor or to third parties.

EXHIBIT B

DESIGN AGREEMENT

CCS Presentation Systems

7820 Barton St
Lenexa, Ks 66214
913-948-6666

Agreement to Perform Audio-Visual Design Services

Date	Services Performed By:	Services Performed For:
October 4, 2016	CCS Presentation Systems 7820 Barton St Lenexa, KS 66214	City of Spring Hill Spring Hill, KS

This agreement is made between CCS Presentation Systems and City of Spring Hill.

City of Spring Hill desires to obtain the services of CCS for Design, Procurement and Installation of Audio-Visual Systems included in the Lenexa Civic Center project.

Services To Be Provided

- Audio-visual Systems Discovery Meetings / Conference Calls / Conceptual Development
- Design Process (to include AV systems, electrical and conduit plans)
- Final Design Delivery (Plan, RCP, coordinated electrical and conduit plans)
- Product Procurement and Installation

Design Scope

Design of support systems for the areas as specified below, designs will provide reliable and cost effective solutions for each space.

- Data Network Infrastructure
  - Data Drop Locations
  - Cable Pathways
  - Data Center Racks
- Conference Rooms (2)
  - AV System
  - Integration to Skype for Business
- City Council Chambers

        - AV System
        - Audio Recording System
    - Gymnasium
        - Audio System
    - Special Event Room
        - AV System

Design Deliverables

- Design: Power, Conduit, Thermal, LAN
- Program Guide: Scope, Budget
- Cost Estimation: Base, Alternates
- Coordination: Electrical, Carpentry, Other
- Drawings: Conduit, AC Power, LAN, Elevations, System
- Scheduling: Design, Procurement, Installation

Project Estimate

System	Parts	Labor	Total	Design
Data Infrastructure	$ 9,285.00	$ 7,200.00	$ 16,485.00	$ 659.40
Conference Rooms	$ 15,400.00	$ 6,600.00	$ 22,000.00	$ 880.00
Conference Rooms Skype Option	$ 9,300.00	$ 3,200.00	$ 12,500.00	$ 500.00
Council Chambers	$ 40,295.00	$ 17,226.00	$ 57,521.00	$ 2,300.84
Gymnasium	$ 11,515.00	$ 4,935.00	$ 16,450.00	$ 658.00
Special Event Room	$ 13,525.00	$ 5,786.00	$ 19,311.00	$ 772.44
Project Estimate	$ 99,320.00	$ 44,947.00	**$ 144,267.00**	**$ 5,770.68**

Design Fee Schedule

<u>This project has an estimated total value of $144,267.00 before discounts.</u>

The Design Rate is 4% of the estimated budget. And is billed as detailed below:

Due At Acceptance: 50% of Estimated Design Rate	$2,885.34.00
Due Upon Delivery of Design: Balance of Design (Based on Final Design)	$2,885.34.00
Estimated Total	$5,770.68

A 50% credit will be applied to the final installation invoice.

Product Procurement and Installation

This project qualifies for Kansas State Contract Pricing and Discounts. All product and labor will be provided in accordance with contact ID 36412.

Accepted by:

City of Spring Hill	CCS Presentation Systems
By: _____	By: _____
Name:	Name:
Title:	Title:

EXHIBIT C

SCOPE OF SERVICES AND
COMPENSATION FOR SERVICES PERFORMED

Services to be provided:

- Audio-visual systems discovery meetings / Conference calls / Conceptual Development
- Design Process (to include AV systems, electrical and conduit plans)
- Final Design Delivery (Plan, RCP, coordinated electrical and conduit plans)
- Product Procurement and Installation

Design Scope: Design of support systems for the areas as specified below, designs will provide reliable and cost effective solutions for each space.

- Data Network Infrastructure
  - Data Drop Locations
  - Cable Pathways
  - Data Center Racks
- Conference Rooms (2)
  - AV System
  - Integration to Skype for Business
- City Council Chambers
  - AV System
  - Audio Recording System
- Gymnasium
  - AV System
- Special Event Room
  - AV System

Design Deliverables:

- Design: Power, Conduit, Thermal, LAN
- Program Guide: Scope, Budget
- Cost Estimation: Base, Alternates
- Coordination: Electrical, Carpentry, Other
- Drawings: Conduit, AC Power, LAN, Elevations, System
- Scheduling: Design, Procurement, Installation

Compensation: Design charged at 4% of project cost including equipment, hardware and labor. A 50% credit will be applied to the final installation invoice.

Due at Acceptance: 50% of Estimated Design Rate	$2,885.34
Due Upon Delivery & Acceptance of Design: Balance of Design (Based on Final Design)	$2,885.34
Estimated Total Design	**$5,770.68**

EXHIBIT C (cont.)

SCOPE OF SERVICES AND
COMPENSATION FOR SERVICES PERFORMED

Product Procurement, Installation and Warranty/Support Scope:

- Order and track hardware and equipment purchase once approved by the City for delivery to meet project schedule for installation.
- Coordinate the delivery of hardware and equipment with the Project schedule.
- Install and test hardware and equipment.
- Test and label cables.
- Coordinate any changes or change requirements with City.
- Prepare and submit pay requests in accordance with negotiated contract terms.
- Provide equipment documentation including model number, serial number, location install, manuals and warranty/service information.
- Provide owner and user training as applicable.
- Provide workmanship warranty for three years from date of install at no additional cost to City.
- Provide one (1) year software/firmware upgrades and warranty repair/replacement work from date of install at no additional cost to City.

Project Estimate: Estimate is provided based on initial conversations prior to bidding of design. Actual cost of project will be determined by final design and product layout approved by City. Project estimate provided is not Guaranteed Maximum Price (GMP).

System	Parts	Labor	Total	Design
Data Infrastructure	$ 9,285.00	$ 7,200.00	$ 16,485.00	$ 659.40
Conference Rooms	$ 15,400.00	$ 6,600.00	$ 22,000.00	$ 880.00
Conference Rooms Skype Option	$ 9,300.00	$ 3,200.00	$ 12,500.00	$ 500.00
Council Chambers	$ 40,295.00	$ 17,226.00	$ 57,521.00	$ 2,300.84
Gymnasium	$ 11,515.00	$ 4,935.00	$ 16,450.00	$ 658.00
Special Event Room	$ 13,525.00	$ 5,786.00	$ 19,311.00	$ 772.44
Project Estimate	$ 99,320.00	$ 44,947.00	**$ 144,267.00**	**$ 5,770.68**

Compensation:

Product and labor costs will qualify for State of Kansas Contract Pricing and Discounts (Exhibit D). Purchase order for product will be provided by City prior to order being submitted along with tax exempt certificate. Invoicing for product purchase and installation labor may occur at fifty percent (50%) project completion and the remaining labor costs invoiced at final project completion.

Labor will be billed at $80/hour consistent with State of Kansas Contract Pricing (Exhibit D).

EXHIBIT D

CCS Presentation Systems, KC
7820 Barton Street
Lenexa, KS 66214

913-948-6666
913-948-6667 Fax
www.ccspresentationsystems.com

STATE of KANSAS CONTRACT AWARD

Contract ID: 36412
http://www2.da.ks.gov/purch/Contracts
FEIN: 26-3778974
Contact: Joe Fandel jfandel@ccsprojects.com

Manufacturer	Discount Off List
AMK	20%
Audio Technica - Microphones	25%
Audio Technica - Other	20%
AverMedia	20%
ElectroVoice - Bosch	20%
Cambridge	10%
Chief / Raxxess	25%
Covid	20%
Crestron	30%
Dalite	20%
Epson - Bulbs	10%
Epson - Doc Camera	20%
Epson - Projectors & Acc.	15%
FrontRow	20%
Hall Research	15%
InFocus	25%
Infocus - Accessories	20%
Infocus - Bulb	10%
Kramer	25%
Liberty	15%
Listen Tech	10%
Mid Atlantic	25%
Mistubishi - Bulb	10%
Mitsubishi	30%

Manufacturer	Discount Off List
NCast	10%
NEC - Bulbs & Accessories	10%
NEC - Projector/LCD/Plasma	15%
Peerless	25%
Polycom	20%
Polycom - Accessories	5%
Rapco-Horizon	30%
Recordex	20%
Roland	10%
Samsung	20%
Samsung - Bulb	10%
Sanyo	30%
Sanyo - Bulb	10%
Smart Tech - Bulb	10%
Smart Tech - Other	25%
Smart Tech - Whiteboards	30%
Sound Tube	20%
Spectrum	30%
SVSI	10%
Symetrix	20%

Labor Pricing: $80.00 hour
Labor Warranty: 3 Years

Additional Project Discounts	
$50K-$75K	2%
$75K- $100K	3%
$100K-$250K	4%
250K+	5%

From simple accessories to multi-million dollar integration projects, CCS serves all market segments including K-12 and higher education, local, state and federal government, military, medical, corporate, and non-profit.

AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: MELANIE LANDIS, FINANCE DIRECTOR
MEETING DATE: JULY 23, 2015
DATE: JULY 16, 2015

Consent - Issue: Microsoft Server and Cloud program enrollment

Background/Analysis: Over the past several months, staff has researched the options available to the City for offsite backup storage of data. Options explored were discussed with the City Council on Thursday, July 9th and included a local option or enrollment in the Microsoft server and cloud program. Based on discussion with the council and staff review, the security and redundancy offered through the government cloud option are best suited to the needs of the City of Spring Hill. Data backup will occur on a regular basis to a Microsoft server and when the city needs to retrieve that information then it is more readily available through an internet connection which offers reduced down times and more options for a relocation of administrative operations if needed.

As with all Microsoft services, enrollment and services are provided through an approved third party reseller which is SHI International Corp as provided within the server and cloud enrollment –state and local document.

Legal Review: The State of Kansas has entered into a negotiated agreement with Microsoft and local government has the benefit of receiving the same negotiated terms and prices that the State of Kansas has agreed to. The documents have been reviewed by Frank Jenkins, City Attorney.

Funding Review or Budgetary Impact: Services are billed against a pre-funded account each year based on approved appropriation which allows the City to stop using this service when needed. The initial level of annual funding is $4,945; however, if the City requires additional services due to the need to retrieve data then the difference will be billed at that time.

Alternatives:

1. Approve enrollment into the Microsoft government server and cloud program.
2. Deny enrollment into the Microsoft government server and cloud program.
3. Table the issue and direct staff to further research.

Recommendation: City staff and Alexander Open System staff recommend approving the enrollment into the Microsoft government server and cloud program.

Attachments:
Server and Cloud Enrollment – State and Local
Server and Cloud Enrollment – US Government Community Cloud
Server and Cloud Enrollment – Product Selection Form
Program Signature Form

Microsoft | Volume Licensing

Server and Cloud Enrollment

State and Local

Server and Cloud Enrollment number *Microsoft to complete*	57491949
Previous Enrollment number *Reseller to complete*	

Framework ID *(if applicable)*	

This Enrollment must be attached to a signature form to be valid.

This Microsoft Server and Cloud Enrollment is entered into between the entities identified on the signature form as of the effective date. Enrolled Affiliate represents and warrants it is the same Customer, or Customer's Affiliate, that entered into the Enterprise Agreement identified on the signature form.

This Enrollment consists of: (1) these terms and conditions, (2) the terms of the Enterprise Agreement identified on the signature form, (3) the Product Selection Form, (4) the Product Terms, (5) the Online Services Terms, (6) any Supplemental Contact Information Form, Previous Agreement/Enrollment form, and other forms that may be reuired, (7) the Online Services Supplemental Terms and Conditions if the Agreement is a version 2010 or earlier and Enrolled Affiliate is ordering Online Services, and (8) any order submitted under this Enrollment. By entering into this Enrollment, Enrolled Affiliate agrees to be bound by the terms and conditions of the Enterprise Agreement. If this Enrollment is entered into under an Enterprise Agreement version 2009 or earlier, the terms and conditions of this Enrollment supersede any conflicting terms and conditions in the Enterprise Agreement with respect to Products licensed under this Enrollment.

Effective date. If Enrolled Affiliate is renewing Software Assurance or Subscription Licenses from one or more previous Enrollments or agreements, then the effective date will be the day after the first prior Enrollment or agreement expires or terminates. Otherwise, the effective date will be the date this Enrollment is accepted by Microsoft. Any reference to "anniversary date" refers to the anniversary of the effective date each year this Enrollment is in effect.

Term. The initial term of this Enrollment will expire on the last day of the month, 36 full calendar months from the effective date of the initial term. If the Enrollment is renewed, the renewal term will expire on the last day of the month, 36 full calendar months after the effective date of the renewal term. Any reference in this Enrollment to "day" will be a calendar day.

Prior Enrollment(s). If renewing Software Assurance or Subscription Licenses from another Enrollment or agreement, the previous Enrollment or agreement number must be identified in the appropriate box above. If renewing from multiple Enrollments or agreements, or transferring Software Assurance or MSDN details, the Previous Agreement/Enrollment form must be used.

Terms and Conditions

1. Definitions.

Terms used but not defined in this Enrollment will have the definition in the Enterprise Agreement. The following definitions also apply:

"Additional Product" means any Product identified as such in the Product Terms, excluding any Server and Tools Product, and chosen by Enrolled Affiliate under this Enrollment.

Physically Submitted

“Azure Government Services” means one or more of the services or features Microsoft makes available to Enrolled Affiliate under this Enrollment and identified at http://azure.microsoft.com/en-us/regions/#services, which are Government Community Cloud Services.

“Baseline Agreements” means all Microsoft license agreements, including, without limitation, volume licensing agreements, OEM licenses and retail licenses, under which any Affiliate in the Enterprise uses the selected Server and Tools Products. Baseline Agreements do not include any Service Provider License Agreements or Independent Software Vendor Royalty License and Distribution Agreements under which the Enterprise has the right to provide software services or unified solutions to unaffiliated end users.

“Baseline Licenses” means Existing Baseline Licenses and New Baseline Licenses, collectively.

“Community” means the community consisting of one or more of the following: (1) a Government, (2) an Enrolled Affiliate using eligible Government Community Cloud Services to provide solutions to a Government or a qualified member of the Community, or (3) a Customer with Customer Data that is subject to Government regulations for which Customer determines and Microsoft agrees that the use of Government Community Cloud Services is appropriate to meet Customer’s regulatory requirements. Membership in the Community is ultimately at Microsoft’s discretion, which may vary by Government Community Cloud Service.

“Existing Baseline Licenses” means all Licenses in use by any Affiliate in the Enterprise for the selected Server and Tools Products that were obtained under any Baseline Agreement before this Enrollment.

“Expiration Date” means the date upon which the Enrollment expires.

“Federal Agency” means a bureau, office, agency, department or other entity of the United States Government.

“Government” means a Federal Agency, State/Local Entity, or Tribal Entity acting in its governmental capacity.

“Government Community Cloud Services” means Microsoft Online Services that are provisioned in Microsoft’s multi-tenant data centers for exclusive use by or for the Community and offered in accordance with the National Institute of Standards and Technology (NIST) Special Publication 800-145. Microsoft Online Services that are Government Community Cloud Services are designated as such in the Use Rights and Product Terms.

“Microsoft Azure Services” means one or more of the Microsoft Azure services or features made available to Enrolled Affiliate under this Enrollment by Microsoft and identified at http://www.windowsazure.com/en-us/home/features/overview/, except Microsoft Azure Marketplace (which is governed by separate terms).

“New Baseline Licenses” means the quantity of Licenses for Server and Tools Products ordered under this Enrollment in excess of the Existing Baseline Licenses.

“Product Family” or “Family” means the group of Products designated as a Product Family on the Product Selection Form.

“Product Selection Form” means the document provided by Microsoft or Enrolled Affiliate’s Reseller that (1) identifies all Baseline Licenses, (2) defines the Product Families, (3) establishes the Enrolled Affiliate’s price levels for each Product pool and (4) specifies the minimum quantity of Licenses that must be ordered to qualify for this Enrollment.

“Reseller” means an entity authorized by Microsoft to resell Licenses under this program and engaged by an Enrolled Affiliate to provide pre- and post-transaction assistance related to this agreement.

“Server and Tools Product” means any Product identified as such in the Product Selection Form and chosen by Enrolled Affiliate to be included under this Enrollment.

"State/Local Entity" means (1) any agency of a state or local government in the United States, or (2) any United States county, borough, commonwealth, city, municipality, town, township, special purpose district, or other similar type of governmental instrumentality established by the laws of Customer’s state and located within Customer’s state’s jurisdiction and geographic boundaries.

"Tribal Entity" means a federally-recognized tribal entity performing tribal governmental functions and eligible for funding and services from the U.S. Department of Interior by virtue of its status as an Indian tribe.

"Use Rights" means, with respect to any licensing program, the use rights or terms of service for each Product and version published for that licensing program at the Volume Licensing Site. The Use Rights supersede the terms of any end user license agreement (on-screen or otherwise) that accompanies a Product. The Use Rights for Software are published by Microsoft in the Product Terms. The Use Rights for Online Services are published in the Online Services Terms.

"Volume Licensing Site" means http://www.microsoft.com/licensing/contracts or a successor site.

2. Product Use Rights and Service Level Agreement.

Enrolled Affiliate and its Enterprise may download, install and use software Products and access and use Online Services ordered under this Enrollment subject to the terms of this Enrollment, the applicable Use Rights and the Product Terms. In addition to applicable use rights terms of the Enterprise Agreement, the following terms apply to this Enrollment:

a. All terms and conditions applicable to Microsoft Azure Services also apply to Azure Government Services, except as otherwise noted in the Use Rights and this Enrollment.

b. Use Rights for Server and Tools Products. For Server and Tools Products, if a new Product version has more restrictive use rights than the version that is current at the start of the applicable initial or renewal term of the Enrollment, those more restrictive use rights will not apply to Enrolled Affiliate's use of that Product during that term.

3. Order requirements.

a. Minimum order requirements.

(i) Server and Tools Products.

1) Existing Baseline Licenses. When ordering a Server and Tools Product other than Microsoft Azure, Enrolled Affiliate must identify all Existing Baseline Licenses for the applicable Server and Tools Product Family. Perpetual Licenses owned by the Enterprise but not identified as Existing Baseline Licenses in the applicable Product Family at the start of this Enrollment may not be used during this Enrollment term.

2) Initial Order. Enrolled Affiliate's initial order must meet the minimum purchase requirements for at least one Product Family. For every applicable Product Family except Microsoft Azure the initial order must also include the following:

A. Software Assurance on all perpetual Existing Baseline Licenses that have been continuously covered under Software Assurance;

B. License with Software Assurance or Subscription License for each Existing Baseline License that has not been continuously covered under Software Assurance; and

C. License with Software Assurance or Subscription Licenses for all New Baseline Licenses.

3) Effect of Subscription License coverage on Existing Baseline Licenses. If Enrolled Affiliate orders Subscription Licenses for any Existing Baseline Licenses, the following provisions will apply for the duration of this Enrollment, notwithstanding any provisions to the contrary in the Baseline Agreements:

A. The use rights for those Existing Baseline Licenses will be superseded and replaced by the use rights for the Subscription Licenses.

B. The Existing Baseline Licenses shall be non-transferrable.

C. The Enrolled Affiliate and its Affiliates must continue to perform any obligations under their Baseline Agreement(s), including but not limited to making payments for any of the Existing Baseline Licenses.

D. When this Enrollment expires or is terminated, the Enrolled Affiliate or its Affiliates, as applicable, will have the rights under the Baseline Agreement(s) that it had as of the effective date of this Enrollment, unless it exercises its buy-out option as provided in this Enrollment.

b. Additional Products. Upon satisfying the minimum order requirements above, Enrolled Affiliate may order Additional Products and Services.

c. Country of Usage. Enrolled Affiliate must specify the countries where Licenses will be used on its initial order and on any subsequent orders.

d. Resellers. Enrolled Affiliate must choose and maintain a Reseller authorized in the United States. Enrolled Affiliate will acquire its Licenses through its chosen Reseller. Orders must be submitted to the Reseller who will transmit the order to Microsoft. The Reseller and Enrolled Affiliate determine pricing and payment terms as between them, and Microsoft will invoice the Reseller based on those terms. Throughout this Agreement the term "price" refers to reference price. Resellers and other third parties do not have authority to bind or impose any obligation or liability on Microsoft.

e. Adding Products.

(i) Adding new Products not previously ordered.

1) New Server and Tools Products may be added by contacting a Microsoft Account Manager or Reseller.

2) New Server and Tools Products included in a previously ordered Product Family may be added at any time but must be included in the next annual true-up order.

3) Orders for new Additional Products, other than Online Services, must be placed in the month the Additional Product is first used.

4) Subscription Licenses for new Online Services other than Microsoft Azure Services must be ordered prior to use.

5) Microsoft Azure Services may be added as provided in the Product Terms.

(ii) Adding Licenses for previously ordered Products.

1) Additional Licenses for previously ordered Products may be added at any time but must be included in the next annual true-up order.

2) Additional Subscription Licenses for Online Services must be ordered prior to use unless the Online Services are (1) identified as eligible for true-up in the Product Terms or (2) included as part of other Licenses.

f. True-up requirements. Enrolled Affiliate must submit an annual true-up order that accounts for any changes since the initial order or last order. If there are no changes, then an update statement must be submitted instead of a true-up order.

(i) Annual order period. A true-up order or update statement must be received by Microsoft between 60 and 30 days prior to each Enrollment anniversary date. The third-year true-up order or update statement is due within 30 days prior to the Expiration Date. Enrolled Affiliate may submit true-up orders more often to account for increases in Product usage, but an annual true-up order or update statement must still be received by Microsoft during the annual order period.

(ii) True-up order. Enrolled Affiliate must determine the maximum number of Products used since the latter of the initial order, the last true-up order, or the prior anniversary date and submit a true-up order that accounts for any increase. For Subscription Licenses for Products other than Online Services, the true-up order must indicate the initial use date(s) for each additional Subscription License ordered.

(iii) Update statement. An update statement must be submitted if there has been no change in the number of Products used within Enrolled Affiliate's Enterprise since the latter of the initial order, the last true-up order, or the prior anniversary date. This update statement must be signed by Enrolled Affiliate's authorized representative.

(iv) Subscription License reductions. Enrolled Affiliate may reduce the quantity of Subscription Licenses only on the Enrollment anniversary date on a prospective basis if permitted in the Product Terms as follows:

1) For Server and Tools Products available as Subscription Licenses, Licenses may be reduced only as long as the minimum order requirements are maintained. If reducing Subscription Licenses that cover Existing Baseline Licenses, Enrolled Affiliate may not use or transfer those Existing Baseline Licenses for the remainder of the term.

2) For Online Services available as Additional Product Subscription Licenses, Enrolled Affiliate may reduce the Licenses. If the License count is reduced to zero, the applicable Subscription License will be cancelled.

Subscription Licenses added after the initial order may not be reduced on the anniversary date immediately following the order but must remain in effect at least until the subsequent anniversary date. Invoices will be adjusted to reflect any reductions in Subscription Licenses and will be effective as of the Enrollment anniversary date.

(v) Late true-up order. If the annual true-up order is not received when due:

1) Microsoft will invoice Enrolled Affiliate's Reseller for the following year for the quantity of Subscription Licenses ordered in the prior year; however, such invoice will not constitute a waiver of the annual order requirement; and

2) Subscription License reductions will not take effect until the following Enrollment anniversary date (or at Enrollment renewal, as applicable).

g. Step-up Licenses. For Licenses eligible for a step-up under this Enrollment, Enrolled Affiliate may step-up to a higher edition or suite as follows:

(i) For step-up Licenses included on an initial order, Enrolled Affiliate may order according to the true-up order process.

(ii) If step-up Licenses are not included on an initial order, Enrolled Affiliate may step-up initially by following the process described in the Section titled "Adding new Products not previously ordered," then for additional step-up Licenses, by following the true-up order process.

h. Clerical Errors. Microsoft may correct clerical errors in this Enrollment, and any documents submitted with or under this Enrollment, by providing notice by email and a reasonable opportunity for Enrolled Affiliate to object to the correction. Clerical errors include minor mistakes, unintentional additions and omissions. This provision does not apply to material terms, such as the identity, quantity or price of a Product ordered.

i. Verifying compliance. Microsoft may, in its discretion and at its expense, verify compliance with this Enrollment as set forth in the Agreement.

4. Pricing.

a. Price levels. Each Product is assigned to a Product pool as shown on the Product Terms. Price levels (A, B, C or D) are set separately for each pool. Price levels for the applicable

Product pools are set forth in the Product Selection Form. Enrolled Affiliate's price level for each Product pool under this Enrollment will be Level D.

b. Setting prices. Enrolled Affiliate's prices for each Product or Service will be established by its Reseller. Microsoft's prices for Resellers for each Product or Service ordered (except for Microsoft Azure Services) are fixed throughout the applicable Enrollment term.

5. Payment terms.

a. License with Software Assurance and Software Assurance. For the initial and any renewal order for License with Software Assurance and Software Assurance, Enrolled Affiliate may pay upfront or elect to spread its payments over the applicable Enrollment term. If an upfront payment is elected, Microsoft will invoice Enrolled Affiliate's Reseller in full upon acceptance of this Enrollment. If spread payments are elected, Microsoft will invoice Enrolled Affiliate's Reseller in three equal annual installments unless indicated otherwise. The first installment will be invoiced to Enrolled Affiliate's Reseller upon Microsoft's acceptance of this Enrollment and additional installments will be invoiced on each Enrollment anniversary date. Subsequent orders will be invoiced to Enrolled Affiliate's Reseller upon acceptance of the order and must be paid upfront.

b. Subscription Licenses (except Microsoft Azure Services). Microsoft will invoice Enrolled Affiliate's Reseller annually in full upon acceptance of each order. Microsoft will invoice Reseller for annual orders on each Enrollment anniversary date. Subsequent orders are invoiced upon acceptance of the order and Enrolled Affiliate may elect to pay annually or upfront.

c. Microsoft Azure services. Invoicing for Microsoft Azure Services is described in the Product Terms.

6. End of Enrollment term and termination.

a. General. At the Expiration Date, Enrolled Affiliate must immediately order and pay for Licenses for Products it has used but for which it has not previously submitted an order.

b. End of term rights for Server and Tools Products. Provided Enrolled Affiliate has paid for all required Licenses, including any Baseline Licenses, on the Expiration Date Enrolled Affiliate will have the following rights:

(i) Existing Baseline Licenses with continuous Software Assurance. For perpetual Existing Baseline Licenses continuously covered by Software Assurance, Enrolled Affiliate will have perpetual Licenses to use the latest version of the Product available (or any prior version) as of the Expiration Date, provided that the Existing Baseline Licenses are fully paid.

(ii) Existing Baseline Licenses without continuous Software Assurance. For perpetual Existing Baseline Licenses *not* continuously covered by Software Assurance, Enrolled Affiliate will have perpetual Licenses to use the version of the Product that its Existing Baseline License entitled it to use at the effective date of this Enrollment, unless the Enrolled Affiliate exercises one of the end of term options described below.

(iii) New Baseline Licenses. For New Baseline Licenses (excluding Subscription Licenses), Enrolled Affiliate will have perpetual Licenses to use the latest version of the Product available (or any prior version) as of the Expiration Date.

c. Renewal. Enrolled Affiliate can renew Subscription Licenses and Software Assurance by renewing the Enrollment for one additional 36 full calendar month term or by signing a new Enrollment. Microsoft must receive a Product Selection Form and renewal order by the Expiration Date. The renewal term will start on the day following the Expiration Date. Microsoft may make changes to this program that will make it necessary for Enrolled Affiliate to enter into new agreements and Enrollments at renewal.

d. If Enrolled Affiliate elects not to renew.

(i) Software Assurance. If Enrolled Affiliate elects not to renew Software Assurance for any Product under its Enrollment, then Enrolled Affiliate will not be permitted to order Software Assurance later without first acquiring a new License with Software Assurance.

(ii) Extended Term for eligible Online Services, including Microsoft Azure Services. For Online Services identified as eligible for an Extended Term in the Product Terms, the following options are available at the end of the Enrollment initial or renewal term.

1) Extended Term. If Enrolled Affiliate does not renew, Subscription Licenses for Online Services will automatically continue month-to-month for up to one year in accordance with the terms of the Enrollment ("Extended Term"). During the Extended Term, Online Services will be invoiced monthly (quarterly for Microsoft Azure Services) at the then-current published price (or Consumption Rate for Microsoft Azure Services) for Enrolled Affiliate's price level as of the Expiration Date plus a 3% administrative fee. If Enrolled Affiliate does not want an Extended Term, Microsoft must receive a request not to extend no later than 30 days before the Expiration Date.

2) Cancellation during Extended Term. If Enrolled Affiliate does not intend to continue with the Extended Term, Enrolled Affiliate must submit a notice of cancellation for each Online Service. Cancellation will be effective at the end of the month following 30 days after Microsoft has received the notice.

(iii) Subscription Licenses and Online Services without an Extended Term. If Enrolled Affiliate elects not to renew or exercise its buy-out rights for Products eligible for buy-out, Subscription Licenses will be cancelled and will terminate as of the Expiration Date. Any associated software must be uninstalled, media must be destroyed and the Enterprise must discontinue use. Microsoft may request written certification to verify compliance.

e. Buy-out option.

(i) For Subscription Licenses. Enrolled Affiliate may buy out active Subscription Licenses acquired under this Enrollment for Products other than Online Services and acquire perpetual Licenses for the latest version of the Product as of the Expiration Date by placing an order for such Licenses.

(ii) Buy-out order date. Microsoft must receive the buy-out order no more than 30 days prior to the Expiration Date. The Expiration Date will be the invoice date for the buy-out order.

f. Termination for cause. Any termination for cause of this Enrollment will be subject to the "Termination for cause" Section of the Agreement. In addition, the following will constitute a breach of this Enrollment: (1) Enrolled Affiliate or any Affiliate in the Enterprise fails to timely pay for any existing Baseline License, (2) any existing Baseline Agreement is terminated for cause prior to full payment, or (3) Enrolled Affiliate or any Affiliate in the Enterprise that uses Government Community Cloud Services fails to meet and maintain the conditions of membership in the definition of Community.

g. Early termination. If Enrolled Affiliate terminates this Enrollment as a result of a breach by Microsoft, or if Microsoft terminates this Enrollment because Enrolled Affiliate has ceased to be Customer's Affiliate, then Enrolled Affiliate will have the following options for Licenses, excluding Subscription Licenses:

(i) It may immediately pay the total remaining amount due, including all installments, in which case, Enrolled Affiliate will have perpetual rights (1) for Server and Tools Products, as described in the section entitled "End of Term rights for Server and Tools Products" and (2) for Additional Products, for all Licenses (excluding Subscription Licenses) it has ordered (for the latest version of Products ordered under Software Assurance coverage in an initial or renewal term); or

(ii) It may pay only amounts due as of the termination date, in which case Enrolled Affiliate will have perpetual Licenses (for the latest version of Products ordered under Software

Assurance coverage in an initial or renewal term) for (1) all copies of Products for which payment has been made in full, and (2) a proportional number of copies of Products it has ordered for which payment has been made.

h. Early termination for Subscription Licenses. Notwithstanding anything to the contrary in any of the documents that collectively constitute the Enterprise Agreement, if an Enrolled Affiliate terminates its Enrollment as a result of a breach by Microsoft, or if Microsoft terminates this Enrollment because Enrolled Affiliate has ceased to be Customer's Affiliate, then Enrolled Affiliate will have the following options with respect to Subscription Licenses:

(i) Enrolled Affiliate may obtain perpetual Licenses as described in the section entitled "Buy-out option," provided that Microsoft receives the buy-out order for those Licenses within 60 days after Enrolled Affiliate provides notice of termination.

(ii) If not exercising the buy-out option, Enrolled Affiliate will receive a credit for any amount paid in advance that would apply after the date of termination.

i. Early termination for Online Services. For Online Services, if an Enrolled Affiliate terminates its Enrollment as a result of a breach by Microsoft, or if Microsoft terminates this Enrollment for regulatory reasons or because Enrolled Affiliate has ceased to be Customer's Affiliate, then Microsoft will issue Reseller a credit for any amount paid in advance for the period after termination.

7. Government Community Cloud.

a. Community requirements. If Enrolled Affiliate purchases Government Community Cloud Services, Enrolled Affiliate certifies that it is a member of the Community and agrees to use Government Community Cloud Services solely in its capacity as a member of the Community and, for eligible Government Community Cloud Services, for the benefit of end users that are members of the Community. Use of Government Community Cloud Services by an entity that is not a member of the Community or to provide services to non-Community members is strictly prohibited and could result in termination of Enrolled Affiliate's license(s) for Government Community Cloud Services without notice. Enrolled Affiliate acknowledges that only Community members may use Government Community Cloud Services.

b. All terms and conditions applicable to non-Government Community Cloud Services also apply to their corresponding Government Community Cloud Services, except as otherwise noted in the Use Rights, Product Terms, and this Enrollment.

c. Enrolled Affiliate may not deploy or use Government Community Cloud Services and corresponding non-Government Community Cloud Services in the same domain.

d. Use Rights for Government Community Cloud Services. For Government Community Cloud Services, notwithstanding anything to the contrary in the Use Rights:

(i) Government Community Cloud Services will be offered only within the United States.

(ii) Additional European Terms, as set forth in the Use Rights, will not apply.

(iii) References to geographic areas in the Use Rights with respect to the location of Customer Data at rest, as set forth in the Use Rights, refer only to the United States.

Enrollment Details

1. Enrolled Affiliate's Enterprise.

a. Identify which Agency Affiliates are included in the Enterprise. (Required) Enrolled Affiliate's Enterprise must consist of entire offices, bureaus, agencies, departments or other entities of Enrolled Affiliate, not partial offices, bureaus, agencies, or departments, or other partial entities.

Check **only one box** in this section. If no boxes are checked, Microsoft will deem the Enterprise to include the Enrolled Affiliate only. If more than one box is checked, Microsoft will deem the Enterprise to include the largest number of Affiliates.

☒ Enrolled Affiliate only

☐ Enrolled Affiliate and the following Affiliate(s) (Only identify specific Affiliates to be included if fewer than all Affiliates are to be included in the Enterprise):

☐ Enrolled Affiliate and all Affiliates, with following Affiliate(s) excluded:

b. Please indicate whether Enrolled Affiliate's Enterprise will include all new Affiliates acquired after the start of this Enrollment: Exclude future Affiliates

.

2. Contact information.

Each party will notify the other in writing if any of the information in the following contact information page(s) changes. The asterisks (*) indicate required fields. By providing contact information, Enrolled Affiliate consents to its use for purposes of administering this Enrollment by Microsoft, its Affiliates, and other parties that help administer this Enrollment. The personal information provided in connection with this Enrollment will be used and protected in accordance with the privacy statement available at https://www.microsoft.com/licensing/servicecenter.

a. Primary contact. This contact is the primary contact for the Enrollment from within Enrolled Affiliate's Enterprise. This contact is also an Online Administrator for the Volume Licensing Service Center and may grant online access to others. The Primary contact will be the default contact for all purposes unless separate contacts are identified for specific purposes.

Name of entity (must be legal entity name)* City Of Spring Hill
Contact name: First* Antwone **Last*** Smoot
Contact email address* antwone.smoot@springhillks.gov
Street address* 401 N Madison St.
City* Spring Hill
State/Province* KS
Postal code* 66083-9155-
(For U.S. addresses, please provide the zip + 4, e.g. xxxxx-xxxx)
Country* United States
Phone* 913-592-3664
Tax ID
** indicates required field*

b. Notices contact and Online Administrator. This contact (1) receives the contractual notices, (2) is the Online Administrator for the Volume Licensing Service Center and may grant online

access to others, and (3) is authorized to reserve Licenses for eligible Online Services, including adding or reassigning Licenses and stepping-up prior to a true-up order.

☒ Same as primary contact (default if no information is provided below, even if box is not checked)

Name of entity*: City Of Spring Hill
Contact name: First* Antwone **Last*** Smoot
Contact email address* antwone.smoot@springhillks.gov
Street address* 401 N Madison St.
City* Spring Hill
State/Province* KS
Postal code* 66083-9155 -
(For U.S. addresses, please provide the zip + 4, e.g. xxxxx-xxxx)
Country* United States
Phone* 913-592-3664
Language preference. Choose the language for notices. English
☐ This contact is a third party (not Enrolled Affiliate). Warning: This contact receives personally identifiable information of the Customer and its Affiliates.
** indicates required field*

c. Online Services Manager. This contact is authorized to manage the Online Services ordered under the Enrollment.

☐ Same as notices contact and Online Administrator (default if no information is provided below, even if box is not checked)
Contact name: First* Antwone **Last*** Smoot
Contact email address* antwone.smoot@springhillks.gov
Phone* 913-592-3664
☐ This contact is from a third party organization (not the entity). Warning: This contact receives personally identifiable information of the entity.
** indicates required field*

d. Reseller information. Reseller's contact for this Enrollment is:

Reseller company name* SHI International Corp.
Street address (PO boxes will not be accepted)* 290 Davidson Ave
City* Somerset
State/Province* NJ
Postal code* 08873
Country* United States
Contact name* Nicole Bonante
Phone* 888-764-8888
Contact email address* msteam@shi.com
** indicates required field*

By signing below, the Reseller identified above confirms that all information provided in this Enrollment is correct.

Name of Reseller*SHI International Corp.

Signature*_____

Printed name*
Printed title*
Date*

** indicates required field*

Changing a Reseller. If Microsoft or the Reseller chooses to discontinue doing business with each other, Enrolled Affiliate must choose a replacement Reseller. If Enrolled Affiliate or the Reseller intends to terminate their relationship, the initiating party must notify Microsoft and the other party using a form provided by Microsoft at least 90 days prior to the date on which the change is to take effect.

e. If Enrolled Affiliate requires a separate contact for any of the following, attach the Supplemental Contact Information form. *Otherwise, the Notices Contact and Online Administrator remains the default.*

(i) Additional Notices Contact
(ii) Software Assurance Manager
(iii) Subscriptions Manager
(iv) Customer Support Manager (CSM) contact

3. Financing.

Is a purchase under this Enrollment being financed through MS Financing? ☐ Yes, ☒ No

4. Upfront Payment.

Does Enrolled Affiliate wish to pay upfront as allowed in the Payment terms section of this Enrollment? No

Enterprise Agreement State and Local

Not for Use with Microsoft Business Agreement or Microsoft Business and Services Agreement

This Microsoft Enterprise Agreement ("Agreement") is entered into between the entities identified on the signature form.

Effective date. The effective date of this Agreement is the earliest effective date of any Enrollment entered into under this Agreement or the date Microsoft accepts this Agreement, whichever is earlier. Any reference in this Agreement or an Enrollment to a "day" means a calendar day, except references that specify "business day".

This Agreement consists of (1) these Agreement terms and conditions, including any amendments and the signature form and all attachments identified therein, (2) the Product Terms applicable to Products licensed under this Agreement, (3) the Online Services Terms, (4) any Affiliate Enrollment entered into under this Agreement, and (5) any order submitted under this Agreement.

Please note: Documents referenced in this Agreement but not attached to the signature form may be found at http://www.microsoft.com/licensing/contracts and are incorporated in this Agreement by reference, including the Product Terms and Use Rights. These documents may contain additional terms and conditions for Products licensed under this Agreement and may be changed from time to time. Customer should review such documents carefully, both at the time of signing and periodically thereafter, and fully understand all terms and conditions applicable to Products licensed.

Terms and Conditions

1. Definitions.

"Affiliate" means

a. with regard to Customer,

(i) any government agency, department, office, instrumentality, division, unit or other entity of the state or local government that is supervised by or is part of Customer, or which supervises Customer or of which Customer is a part, or which is under common supervision with Customer;

(ii) any county, borough, commonwealth, city, municipality, town, township, special purpose district, or other similar type of governmental instrumentality established by the laws of Customer's state and located within Customer's state jurisdiction and geographic boundaries; and

(iii) any other entity in Customer's state expressly authorized by the laws of Customer's state to purchase under state contracts; provided that a state and its Affiliates shall not, for purposes of this definition, be considered to be Affiliates of the federal government and its Affiliates; and

b. with regard to Microsoft, any legal entity that Microsoft owns, that owns Microsoft, or that is under common ownership with Microsoft;

"Customer" means the legal entity that has entered into this Agreement with Microsoft;

"Customer Data" means all data, including all text, sound, software, image, or video files that are provided to Microsoft by, or on behalf of, an Enrolled Affiliate and its Affiliates through use of Online Services.

"Enrolled Affiliate" means an entity, either Customer or any one of Customer's Affiliates that has entered into an Enrollment under this Agreement;

Physically Submitted

"Enrollment" means the document that an Enrolled Affiliate submits under this Agreement to place its initial order;

"Enterprise" means an Enrolled Affiliate and the Affiliates for which it is responsible and chooses on its Enrollment to include in its enterprise;

"Fixes" means Product fixes, modifications or enhancements, or their derivatives, that Microsoft either releases generally (such as Product service packs) or provides to Customer to address a specific issue.

"License" means the right to download, install, access and use a Product. For certain Products, a License may be available on a fixed term or subscription basis ("Subscription License"). Licenses for Online Services will be considered Subscription Licenses;

"Microsoft" means the Microsoft Affiliate that has entered into this Agreement or an Enrollment and its Affiliates, as appropriate;

"Online Services" means the Microsoft-hosted services identified as Online Services in the Product Terms.

"Online Services Terms" means the additional terms that apply to Customer's use of Online Services published on the Volume Licensing Site and updated from time to time.

"Product" means all products identified in the Product Terms, such as all Software, Online Services and other web-based services, including pre-release or beta versions.

"Product Terms" means the document that provides information about Microsoft Products and Professional Services available through volume licensing. The Product Terms document is published on the Volume Licensing Site and is updated from time to time.

"SLA" means Service Level Agreement, which specifies the minimum service level for Online Services and is published on the Volume Licensing Site.

"Software" means licensed copies of Microsoft software identified on the Product Terms. Software does not include Online Services, but Software may be part of an Online Service;

"Software Assurance" is an offering by Microsoft that provides new version rights and other benefits for Products as further described in the Product Terms.

"Trade Secret" means information that is not generally known or readily ascertainable to the public, has economic value as a result, and has been subject to reasonable steps under the circumstances to maintain its secrecy;

"use" or "run" means to copy, install, use, access, display, run or otherwise interact.

"Use Rights" means the use rights or terms of service for each Product published on the Volume Licensing Site and updated from time to time. The Use Rights supersede the terms of any end user license agreement that accompanies a Product. The Use Rights for Software are published by Microsoft in the Product Terms. The Use Rights for Online Services are published in the Online Services Terms.

"Volume Licensing Site" means http://www.microsoft.com/licensing/contracts or a successor site.

2. How the Enterprise program works.

a. General. The Enterprise program consists of the terms and conditions on which an Enrolled Affiliate may acquire Product Licenses. Under the Enterprise program, Customer and its Affiliates may order Licenses for Products by entering into Enrollments.

b. Enrollments. The Enterprise program gives Customer and/or its Affiliates the ability to enter into one or more Enrollments to order Products. Subscription Enrollments may be available for some of these Enrollments. Notwithstanding any other provision of this Agreement, only Enrolled Affiliates identified in an Enrollment will be responsible for complying with the terms of that Enrollment, including the terms of this Agreement incorporated by reference in that Enrollment

c. Licenses. The types of Licenses available are (1) Licenses obtained under Software Assurance (L&SA), and (2) Subscription Licenses. These License types, as well as additional License Types, are further described in the Product List.

3. Licenses for Products.

a. License Grant. Microsoft grants the Enterprise a non-exclusive, worldwide and limited right to download, install and use software Products, and to access and use the Online Services, each in the quantity ordered under an Enrollment. The rights granted are subject to the terms of this Agreement, the Use Rights and the Product Terms. Microsoft reserves all rights not expressly granted in this Agreement.

b. Duration of Licenses. Subscription Licenses and most Software Assurance rights are temporary and expire when the applicable Enrollment is terminated or expires, unless the Enrolled Affiliate exercises a buy-out option, which is available for some Subscription Licenses. Except as otherwise noted in the applicable Enrollment or Use Rights, all other Licenses become perpetual only when all payments for that License have been made and the initial Enrollment term has expired.

c. Applicable Use Rights.

(i) Products (other than Online Services). The Use Rights in effect on the effective date of the Enrollment will apply to Enterprise's use of the version of each Product that is current at the time. For future versions and new Products, the Use Rights in effect when those versions and Products are first released will apply. Changes Microsoft makes to the Use Rights for a particular version will not apply unless the Enrolled Affiliate chooses to have those changes apply. The Use Rights applicable to perpetual Licenses that were acquired under a previous agreement or Enrollment are determined by the Agreement or Enrollment under which they were acquired. Renewal of Software Assurance does not change which Use Rights apply to those Licenses.

(ii) Online Services. For Online Services, the Use Rights in effect on the subscription start date will apply for the subscription term as defined in the Product Terms,

d. Downgrade rights. Enrolled Affiliate may use an earlier version of a Product other than Online Services than the version that is current on the effective date of the Enrollment. In that case, the Use Rights for the current version apply to the use of the earlier version. If the earlier Product version includes features that are not in the new version, then the Use Rights applicable to the earlier version apply with respect to those features.

e. New Version Rights under Software Assurance. Enrolled Affiliate must order and maintain continuous Software Assurance coverage for each License ordered. With Software Assurance coverage, Enterprise automatically has the right to use a new version of a licensed Product as soon as it is released, even if Enrolled Affiliate chooses not to use the new version immediately.

(i) Except as otherwise permitted under an Enrollment, use of the new version will be subject to the new version's Use Rights.

(ii) If the License for the earlier version of the Product is perpetual at the time the new version is released, the License for the new version will also be perpetual. Perpetual Licenses obtained through Software Assurance replace any perpetual Licenses for the earlier version.

f. License confirmation. This Agreement, the applicable Enrollment, Enrolled Affiliate's order confirmation, and any documentation evidencing transfers of perpetual Licenses, together with proof of payment, will be Enrolled Affiliate's evidence of all Licenses obtained under an Enrollment.

g. Reorganizations, consolidations and privatizations. If the number of Licenses covered by an Enrollment changes by more than ten percent as a result of (1) a reorganization,

consolidation or privatization of an entity or an operating division, (2) a privatization of an Affiliate or an operating division of Enrolled Affiliate or any of its Affiliates, or (3) a consolidation including a merger with a third party that has an existing agreement or Enrollment, Microsoft will work with Enrolled Affiliate in good faith to determine how to accommodate its changed circumstances in the context of this Agreement.

4. Making copies of Products and re-imaging rights.

a. General. Enrolled Affiliate may make as many copies of Products, as it needs to distribute them within the Enterprise. Copies must be true and complete (including copyright and trademark notices) from master copies obtained from a Microsoft approved fulfillment source. Enrolled Affiliate may use a third party to make these copies, but Enrolled Affiliate agrees it will be responsible for any third party's actions. Enrolled Affiliate agrees to make reasonable efforts to notify its employees, agents, and any other individuals who use the Products that the Products are licensed from Microsoft and subject to the terms of this Agreement.

b. Copies for training/evaluation and back-up. For all Products other than Online Services, Enrolled Affiliate may: (1) use up to 20 complimentary copies of any licensed Product in a dedicated training facility on its premises for purposes of training on that particular Product, (2) use up to 10 complimentary copies of any Products for a 60 day evaluation period, and (3) use one complimentary copy of any licensed Product for back-up or archival purposes for each of its distinct geographic locations. Trials for Online Services may be available if specified in the Use Rights.

c. Right to re-image. In certain cases, re-imaging is permitted using the Product media. If the Microsoft Product is licensed (1) from an original equipment manufacturer (OEM), (2) as a full packaged Product through a retail source, or (3) under another Microsoft program, then media provided under this Agreement may generally be used to create images for use in place of copies provided through that separate source. This right is conditional upon the following:

(i) Separate Licenses must be acquired from the separate source for each Product that is re-imaged.

(ii) The Product, language, version, and components of the copies made must be identical to the Product, language, version, and all components of the copies they replace and the number of copies or instances of the re-imaged Product permitted remains the same.

(iii) Except for copies of an operating system and copies of Products licensed under another Microsoft program, the Product type (e.g., Upgrade or full License) re-imaged must be identical to the Product type licensed from the separate source.

(iv) Enrolled Affiliate must adhere to any Product-specific processes or requirements for re-imaging identified in the Product Terms.

Re-imaged Products remain subject to the terms and use rights of the License acquired from the separate source. This subsection does not create or extend any Microsoft warranty or support obligation.

5. Transferring and reassigning Licenses.

a. License transfers. Enrolled Affiliate may transfer only fully-paid perpetual Licenses to:

(i) an Affiliate or

(ii) an unaffiliated third party in connection with (A) a privatization of an Affiliate or agency or of an operating division of Enrolled Affiliate or an Affiliate, (B) a reorganization, or (C) a consolidation.

Upon such transfer, Enrolled Affiliate must uninstall and discontinue using the licensed Product and render any copies unusable.

b. Notification of License Transfer. Enrolled Affiliate must notify Microsoft of a License transfer by completing a license transfer form, which can be obtained from http://www.microsoft.com/licensing/contracts and sending the completed form to Microsoft before the License transfer. No License transfer will be valid unless Enrolled Affiliate provides to the transferee, and the transferee accepts in writing, documents sufficient to enable the transferee to ascertain the scope, purpose and limitations of the rights granted by Microsoft under the licenses being transferred (including, without limitation, the applicable Use Rights, use and transfer restrictions, warranties and limitations of liability. Any License transfer not made in compliance with this section will be void.

c. Internal Assignment of Licenses and Software Assurance. Licenses and Software Assurance must be assigned to a single user or device within the Enterprise. Licenses and Software Assurance may be reassigned within the Enterprise as described in the Use Rights.

6. Term and termination.

a. Term. The term of this Agreement will be 36 full calendar months from the Effective date unless terminated by either party as described below. Each Enrollment will have the term provided in that Enrollment.

b. Termination without cause. Either party may terminate this Agreement, without cause, upon 60 days written notice. In the event of termination, new Enrollments will not be accepted, but any existing Enrollment will continue for the term of such Enrollment and will continue to be governed by this Agreement.

c. Mid-term termination for non-appropriation of Funds. Enrolled Affiliate may terminate this Agreement or an Enrollment without liability, penalty or further obligation to make payments if funds to make payments under the Agreement or Enrollment are not appropriated or allocated by the Enrolled Affiliate for such purpose.

d. Termination for cause. Without limiting any other remedies it may have, either party may terminate an Enrollment if the other party materially breaches its obligations under this Agreement, including any obligation to submit orders or pay invoices. Except where the breach is by its nature not curable within 30 days, the terminating party must give the other party 30 days' notice of its intent to terminate and an opportunity to cure the breach.

If Microsoft gives such notice to an Enrolled Affiliate, Microsoft also will give Customer a copy of that notice and Customer agrees to help resolve the breach. If the breach affects other Enrollments and cannot be resolved between Microsoft and Enrolled Affiliate, together with Customer's help, within a reasonable period of time, Microsoft may terminate this Agreement and all Enrollments under it. If an Enrolled Affiliate ceases to be Customer's Affiliate, it must promptly notify Microsoft, and Microsoft may terminate the former Affiliate's Enrollment. If an Enrolled Affiliate terminates its Enrollment as a result of a breach by Microsoft, or if Microsoft terminates an Enrollment because Enrolled Affiliate ceases to be Customer's Affiliate, then Enrolled Affiliate will have the early termination rights described in the Enrollment.

e. Early termination. If (1) an Enrolled Affiliate terminates its Enrollment as a result of a breach by Microsoft, or (2) if Microsoft terminates an Enrollment because the Enrolled Affiliate has ceased to be an Affiliate of Customer, or (3) Enrolled Affiliate terminates an Enrollment for non-appropriation of funds, or (4) Microsoft terminates an Enrollment for non-payment due to non-appropriation of funds, then the Enrolled Affiliate will have the following options:

(i) It may immediately pay the total remaining amount due, including all installments, in which case, the Enrolled Affiliate will have perpetual rights for all Licenses it has ordered; or

(ii) It may pay only amounts due as of the termination date, in which case the Enrolled Affiliate will have perpetual Licenses for:

1) all copies of Products (including the latest version of Products ordered under SA coverage in the current term) for which payment has been made in full, and

2) the number of copies of Products it has ordered (including the latest version of Products ordered under Software Assurance coverage in current term) that is proportional to the total of installment payments paid versus total amounts due (paid and payable) if the early termination had not occurred.

(iii) In the case of Early Termination under Subscription Enrollments, Enrolled Affiliate will have the following options:

1) For eligible products Enrolled Affiliate may obtain perpetual Licenses as described in the section titled "Buy-out option," provided that Microsoft receives the buy-out order for those Licenses within 60 days after Enrolled Affiliate provides notice of termination.

2) Where not exercising buy-out option, in the event of breach by Microsoft, Microsoft will issue Reseller a credit for any amount paid in advance that would apply after the date of termination.

Nothing in this section shall affect perpetual License rights acquired either in a separate agreement or in a prior term of the terminated Enrollment.

f. Effect of termination or expiration. When an Enrollment expires or is terminated,

(i) Enrolled Affiliate must order Licenses for all copies of Products it has run for which it has not previously submitted an order. Any and all unpaid payments or any order of any kind, including subscription services, remain due and payable. Except as provided in the subsection titled "Early termination," all unpaid payments for Licenses immediately become due and payable.

(ii) Enrolled Affiliate's right to Software Assurance benefits under this Agreement ends if it does not renew Software Assurance.

g. Modification or termination of an Online Service for regulatory reasons. Microsoft may modify or terminate an Online Service where there is any current or future government requirement or obligation that: (1) subjects Microsoft to any regulation or requirement not generally applicable to businesses operating there; (2) presents a hardship for Microsoft to continue operating the Online Service without modification; and/or (3) causes Microsoft to believe these terms or the Online Service may conflict with any such requirement or obligation.

h. Program updates. Microsoft may make changes to this program that will make it necessary for Customer and its Enrolled Affiliates to enter into new agreements and Enrollments at the time of an Enrollment renewal.

7. Use, ownership, rights, and restrictions.

a. Products. Unless otherwise specified in a supplemental agreement, use of any Product is governed by the Use Rights specific to each Product and version and by the terms of the applicable supplemental agreement.

b. Fixes. Each Fix is licensed under the same terms as the Product to which it applies. If a Fix is not provided for a specific Product, any use terms Microsoft provides with the Fix will apply.

c. Non-Microsoft software and technology. Enrolled Afiliate is solely responsible for any non-Microsoft software or technology that it installs or uses with the Products or Fixes.

d. Restrictions. Enrolled Affiliate must not (and must not attempt to) (1) reverse engineer, decompile, or disassemble any Product or Fix, (2) install or use non-Microsoft software or technology in any way that would subject Microsoft's intellecutal property or technology to obligations beyond those included in this agreement, or (3) work around any technical limitations in the Products or restrictions in Product documentation. Except as expressly permitted in this agreement, Customer must not (i) separate and run parts of a Product on more than one device, upgrade or downgrade parts of a Product at different times, or transfer parts

of a Product separately; or (ii) distribute, sublicense, rent, lease, lend, or use any Product or Fix to offer hosting services to a third party.

e. No transfer of ownership; reservation of rights. Products and Fixes are protected by copyright and other intellectual property rights laws and international treaties. Microsoft (1) does not transfer any ownership rights in any Products or Fixes and (2) reserves all rights not expressly granted in this Agreement.

8. Confidentiality.

"Confidential Information" is non-public information that is designated "confidential" or that a reasonable person should understand is confidential, including Customer Data. Confidential Information does not include information that (a) becomes publicly available without a breach of this agreement, (b) the receiving party received lawfully from another source without a confidentiality obligation, (c) is independently developed, or (d) is a comment or suggestion volunteered about the other party's business, products or services.

Each party will take reasonable steps to protect the other's Confidential Information and will use the other party's Confidential Information only for purposes of the parties' business relationship. Neither party will disclose that Confidential Information to third parties, except to its employees, Affiliates, contractors, advisors and consultants ("Representatives") and then only on a need-to-know basis under nondisclosure obligations at least as protective as this agreement. Each party remains responsible for the use of the Confidential Information by its Representatives and, in the event of discovery of any unauthorized use or disclosure, must promptly notify the other party.

A party may disclose the other's Confidential Information if required by law; but only after it notifies the other party (if legally permissible) to enable the other party to seek a protective order.

Neither party is required to restrict work assignments of its Representatives who have had access to Confidential Information. Each party agrees that the use of information retained in Representatives' unaided memories in the development or deployment of the parties' respective products or services does not create liability under this agreement or trade secret law, and each party agrees to limit what it discloses to the other accordingly.

These obligations apply (i) for Customer Data until it is deleted from the Online Services, and (ii) for all other Confidential Information, for a period of five years after the Confidential Information is received.

9. Privacy and Compliance and Laws.

a. Enrolled Affiliate consents to the processing of personal information by Microsoft and its agents to facilitate the subject matter of this Agreement. Enrolled Affiliate will obtain all required consents from third parties under applicable privacy and data protection law before providing personal information to Microsoft.

b. Personal information collected under this agreement (i) may be transferred, stored and processed in the United States or any other country in which Microsoft or its contractors maintain facilities and (ii) will be subject to the privacy terms specified in the Use Rights. Microsoft abides by the EU Safe Harbor and the Swiss Safe Harbor frameworks as set forth by the U.S. Department of Commerce regarding the collection, use, and retention of data from the European Union, the European Economic Area, and Switzerland.

c. U.S. export jurisdiction. Products and Fixes are subject to U.S. export jurisdiction. Enrolled Affiliate must comply with all applicable international and national laws, including the U.S. Export Administration Regulations and International Traffic in Arms Regulations, and end-user, end use and destination restrictions issued by U.S. and other governments related to Microsoft products, services and technologies.

10. Warranties.

a. Limited warranties and remedies.

(i) Software. Microsoft warrants that each version of the Software will perform substantially as described in the applicable Product documentation for one year from the date the Enterprise is first licensed for that version. If it does not and the Enterprise notifies Microsoft within the warranty term, then Microsoft will, at its option (1) return the price Enrolled Affiliate paid for the Software license, or (2) repair or replace the Software.

(ii) Online Services. Microsoft warrants that each Online Service will perform in accordance with the applicable SLA during the Enterprise's use. The Enterprise's remedies for breach of this warranty are in the SLA.

The remedies above are the Enterprise's sole remedies for breach of the warranties in this section. Customer waives any breach of warranty claims not made during the warranty period.

b. Exclusions. The warranties in this agreement do not cover problems caused by accident, abuse, or use in a manner inconsistent with this Agreement, including failure to meet minimum system requirements. These warranties do not apply to free, trial, pre-release, or beta Products, or to components of Products that Enrolled Affiliate is permitted to redistribute.

c. DISCLAIMER. Microsoft provides no other warranties or conditions and disclaims any other express, implied, or statutory warranties, including warranties of quality, title, non-infringement, merchantability, and fitness for a particular purpose.

11. Defense of third party claims.

a. By Microsoft. Microsoft will defend Enrolled Affiliate against any claims made by an unaffiliated third party (1) that any Product or Fix infringes its patent, copyright, or trademark or makes unlawful use of its Trade Secret; or (2) that arises from Microsoft's provision of an Online Service in violation of laws applicable to all online services providers. Microsoft will pay the amount of any resulting adverse final judgment or approved settlement. This does not apply to claims based on (i) Customer Data; (ii) non-Microsoft software; (iii) modifications to a Product or Fix Enrolled Affiliate makes or any specifications or materials Enrolled Affiliate provides; (iv) Enrolled Affiliate's combination of the Product or Fix with (or damages based on the value of) a non-Microsoft product, data, or business process; (v) Enrolled Affiliate's use of a Microsoft trademark without express, written consent or the use or redistribution of a Product or Fix in violation of this Agreement; (vi) Enrolled Affiliate's continued use of a Product or Fix after being notified to stop due to a third party claim; or (vii) Products or Fixes provided free of charge.

b. By Enrolled Affiliate. Enrolled Affiliate will defend Microsoft against any claims made by an unaffiliated third party that:

(i) any Customer Data or non-Microsoft software Microsoft hosts on Enrolled Affiliate's behalf infringes the third party's patent, copyright, or trademark or makes unlawful use of its Trade Secret; or

(ii) arises from use of an Online Service in violation of applicable laws and regulations; a violation of the legal rights of others; or unauthorized access to or disruption of any service, data, account, or network in connection with the use of the Online Services.

Enrolled Affiliate will pay the amount of any adverse final judgment or approved settlement resulting from a claim covered by this section titled "By Enrolled Affiliate."

c. Rights and remedies in case of possible infringement or misappropriation. If Microsoft reasonably believes that a claim under this section may result in a legal bar prohibiting Enrolled Affiliate's use of the Product or Fix, Microsoft will seek to obtain the right for Enrolled Affiliate to keep using it or modify or replace it with a functional equivalent, in which case Enrolled Affiliate must discontinue use of the prior version immediately. If these options are not

commercially reasonable, Microsoft may terminate Enrolled Affiliate's right to the Product or Fix and refund any amounts Enrolled Affiliate has paid for those rights to Software or Fixes and, for Online Services, any amount paid for a usage period after the termination date.

d. Other terms. The party being defended under this section 11 must notify the other party promptly of any claim subject to the subsection titled "By Microsoft," give the other party sole control over the defense or settlement, and provide reasonable assistance in defending the claim. The party providing the protection will reimburse the other party for reasonable out of pocket expenses that it incurs in providing assistance. Any settlement must be approved in writing by the defending party. The remedies provided in this section 11 are the exclusive remedies for the claims described in this section.

12. Limitation of liability.

For each Product, each party's maximum, aggregate liability to the other under this Agreement is limited to direct damages finally awarded in an amount not to exceed the amounts Enrolled Affiliate was required to pay for the applicable Products during the term of this Agreement, subject to the following:

a. Online Services. For Online Services, Microsoft's maximum liability to Enrolled Affiliate for any incident giving rise to a claim will not exceed the amount Enrolled Affiliate paid for the Online Service during the 12 months before the incident.

b. Free Products and Distributable Code. For Products provided free of charge and code that Enrolled Affiliate is authorized to redistribute to third parties without separate payment to Microsoft, Microsoft's liability is limited to direct damages finally awarded up to US$5,000.

c. Exclusions. In no event will either party be liable for indirect, incidental, special, punitive, or consequential damages, including loss of use, loss of profits, or interruption of business, however caused or on any theory of liability.

d. Exceptions. No limitation or exclusions will apply to liability arising out of either party's (1) confidentiality obligations (except for all liability related to Customer Data, which will remain subject to the limitations and exclusions above); (2) defense obligations; or (3) violation of the other party's intellectual property rights.

13. Verifying compliance.

a. Right to verify compliance. Enrolled Affiliate must keep accurate and complete records relating to all use and distribution of Products by Enrolled Affiliate and its Affiliates. Microsoft has the right, at its expense, to the extent permitted by applicable law, to verify Enrolled Affiliate and its Affiliates' compliance with the Product's license terms for the Products.

b. Verification process and limitations. Microsoft will provide Enrolled Affiliate at least 30 days' notice of its intent to verify compliance. Verification will take place during normal business hours and in a manner that does not interfere unreasonably with Enrolled Affiliate's operations. Microsoft will engage an independent auditor, which will be subject to a confidentiality obligation. Enrolled Affiliate must promptly provide the independent auditor with any information the auditor reasonably requests in furtherance of the verification, including access to systems running the Products and evidence of Licenses for Products Enrolled Affiliate hosts, sublicenses, or distributes to third parties. Enrolled Affiliate agrees to complete Microsoft's self-audit process, which Microsoft may require as an alternative to a third party audit. Any information collected in the self-audit will be used solely for purposes of determining compliance.

c. Remedies for non-compliance. If verification or self-audit reveals any unlicensed use or distribution, then within 30 days, (1) Enrolled Affiliate must order sufficient licenses to cover that use or distribution, and (2) if unlicensed use or distribution is 5% or more, Enrolled Affiliate must reimburse Microsoft for the cost Microsoft has incurred in verification and acquire the

necessary additional licenses at 125% of the price based on the then-current price list and Enrolled Affiliate price level. The unlicensed use percentage is based on the total number of licenses purchased compared to actual install base. If there is no unlicensed use, Microsoft will not subject Enrolled Affiliate to another verification for at least one year. By exercising the rights and procedures described above, Microsoft does not waive its rights to enforce this Agreement or to protect its intellectual property by any other means permitted by law.

14. Miscellaneous.

a. Notices. Notices to Microsoft must be sent to the Microsoft address on the signature form with a copy sent to the address below. Notices must be in writing and will be treated as delivered on the date shown on the return receipt or on the courier or fax confirmation of delivery. Microsoft may provide information to Enrolled Affiliate about upcoming ordering deadlines, services, and subscription information in electronic form, including by email to contacts provided by Enrolled Affiliate. Emails will be treated as delivered on the transmission date.

A copy of each notice should be sent to:
Microsoft Corporation Legal and Corporate Affairs Volume Licensing Group One Microsoft Way Redmond, WA 98052 USA

b. Assignment. Either party may assign this Agreement to an Affiliate, but must notify the other party in writing of the assignment. Any other proposed assignment must be approved by the other party in writing. Assignment will not relieve the assigning party of its obligations under the assigned agreement. Any attempted assignment without required approval will be void.

c. Severability. If any provision in this agreement is found unenforceable, the balance of the agreement will remain in full force and effect.

d. Use of contractors. Microsoft may use contractors to perform services, but will be responsible for their performance subject to the terms of this Agreement.

e. Waiver. Failure to enforce any provision of this agreement will not constitute a waiver. Any waiver must be in writing and signed by the waiving party.

f. Applicable law; dispute resolution. The terms of this Agreement will be governed by the laws of Customer's state, without giving effect to its conflict of laws. Disputes relating to this Agreement will be subject to applicable dispute resolution laws of Customer's state.

g. This Agreement is not exclusive. Customer and its Affiliates are free to enter into agreements to license, use or promote non-Microsoft products.

h. Management and Reporting. Customer and/or Enrolled Affiliate may manage account details (e.g., contacts, orders, Licenses, software downloads) on Microsoft's Volume Licensing Service Center ("VLSC") web site (or successor site) at: https://www.microsoft.com/licensing/servicecenter. Upon the effective date of this Agreement and any Enrollments, the contact(s) identified for this purpose will be provided access to this site and may authorize additional users and contacts.

i. Order of precedence. In the case of a conflict between any documents in this Agreement that is not expressly resolved in those documents, their terms will control in the following order from highest to lowest priority: (1) this Enterprise Agreement, (2) any Enrollment, (3) the Product Terms, (4) the Online Services Terms, (5) orders submitted under this Agreement, and (6) any

other documents in this Agreement. Terms in an amendment control over the amended document and any prior amendments concerning the same subject matter.

j. **Survival.** All provisions survive termination or expiration of this Agreement except those requiring performance only during the term of the agreement..

k. **Free Products.** It is Microsoft's intent that the terms of this Agreement and the Use Rights be in compliance with all applicable federal law and regulations. Any free Product provided to Enrolled Affiliate is for the sole use and benefit of the Enrolled Affiliate, and is not provided for use by or personal benefit of any specific government employee.

l. **Amendments.** Any amendment to this Agreement must be executed by both parties, except that Microsoft may change the Product Terms and the Use Rights from time to time in accordance with the terms of this Agreement. Any conflicting terms and conditions contained in an Enrolled Affiliate's purchase order will not apply. Microsoft may require Customer to sign a new agreement or an amendment before an Enrolled Affiliate enters into an Enrollment under this agreement.

m. **Voluntary Product Accessibility Templates.** Microsoft supports the government's obligation to provide accessible technologies to its citizens with disabilities as required by Section 508 of the Rehabilitation Act of 1973, and its state law counterparts. The Voluntary Product Accessibility Templates ("VPATs") for the Microsoft technologies used in providing the online services can be found at Microsoft's VPAT page. Further information regarding Microsoft's commitment to accessibility can be found at http://www.microsoft.com/enable.

n. **Natural disaster.** In the event of a "natural disaster," Microsoft may provide additional assistance or rights by posting them on http://www.microsoft.com at such time.

o. **Copyright violation.** Except as set forth in the section above entitled "Transferring and reassigning Licenses", the Enrolled Affiliate agrees to pay for, and comply with the terms of this Agreement and the Use Rights, for the Products it uses. Except to the extent Enrolled Affiliate is licensed under this Agreement, it will be responsible for its breach of this contract and violation of Microsoft's copyright in the Products, including payment of License fees specified in this Agreement for unlicensed use.

p. **Calendar days.** Any reference in this Agreement or an Enrollment to a "day" means a calendar day, except references that specify "business day".

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Supplemental Contact Information Form State and Local

This form can be used in combination with Agreement and Enrollment/Registration. However, a separate form must be submitted for each Enrollment/Registration, when more than one is submitted on a signature form. For the purposes of this form, "Entity" can mean the signing Entity, Customer, Enrolled Affiliate, Government Partner, Institution, or other party entering into a Volume Licensing program agreement. Primary and Notices contacts in this form will not apply to Enrollments or Registrations.

This form applies to: ☒ Enrollment/Affiliate Registration Form

Insert primary entity name if more than one Enrollment/Registration Form is submitted

Contact information.

Each party will notify the other in writing if any of the information in the following contact information page(s) changes. The asterisks (*) indicate required fields; if the Entity chooses to designate other contact types, the same required fields must be completed for each section. By providing contact information, entity consents to its use for purposes of administering the Enrollment by Microsoft and other parties that help Microsoft administer this Enrollment. The personal information provided in connection with this agreement will be used and protected according to the privacy statement available at https://licensing.microsoft.com.

1. Additional notices contact.

This contact receives all notices that are sent from Microsoft. No online access is granted to this individual.

Name of Entity*
Contact name*: First Last
Contact email*
Street address*
City* State* Postal code*
Country*
Phone* Fax

This contact is a third party (not the Entity). Warning: This contact receives personally identifiable information of the Entity.

2. Software Assurance manager.

This contact will receive online permissions to manage the Software Assurance benefits under the Enrollment or Registration.

Name of Entity*
Contact name*: First Last
Contact email*
Street address*
City* State* Postal code*
Country*
Phone* Fax

This contact is a third party (not the Entity). Warning: This contact receives personally identifiable information of the Entity.

3. Subscriptions manager.

This contact will assign MSDN, Expression, and TechNet Plus subscription licenses to the individual subscribers under this Enrollment or Registration. Assignment of the subscription licenses is necessary for access to any of the online benefits, such as subscription downloads. This contact will also manage any complimentary or additional media purchases related to these subscriptions.

Name of Entity*
Contact name*: First Last
Contact email*
Street address*
City* State* Postal code*
Country*
Phone* Fax
This contact is a third party (not the Entity). Warning: This contact receives personally identifiable information of the Entity.

4. Online Services manager.

This contact will be provided online permissions to manage the Online Services ordered under the Enrollment or Registration.

Name of Entity* City Of Spring Hill
Contact name*: First Antwone **Last** Smoot
Contact email* antwone.smoot@springhillks.gov
Street address* 401 N Madison St.
City* Spring Hill **State*** KS **Postal code*** 66083-9155
Country* United States
Phone* 913-592-3664 **Fax**
☐ This contact is a third party (not the Entity). Warning: This contact receives personally identifiable information of the Entity.

5. Customer Support Manager (CSM):

This person is designated as the Customer Support Manager (CSM) for support-related activities.

Name of Entity*
Contact name*: First Last
Contact email*
Street address*
City* State* Postal code*
Country*
Phone* Fax
This contact is a third party (not the Entity). Warning: This contact receives personally identifiable information of the Entity.

6. Primary contact information:

An individual from inside the organization must serve as the primary contact. This contact receives online administrator permissions and may grant online access to others. This contact also receives all notices unless Microsoft is provided written notice of a change.
Name of Entity* City Of Spring Hill
Contact name*: First Antwone **Last** Smoot
Contact email* antwone.smoot@springhillks.gov
Street address* 401 N Madison St.
City* Spring Hill **State*** KS **Postal code*** 66083-9155

Country*: United States
Phone* 913-592-3664 **Fax**

7. Notices contact and online administrator information:

This individual receives online administrator permissions and may grant online access to others. This contact also receives all notices.

☒ Same as primary contact
Name of Entity* City Of Spring Hill
Contact name*: First Antwone **Last** Smoot
Contact email* antwone.smoot@springhillks.gov
Street address* 401 N Madison St.
City* Spring Hill **State*** KS **Postal code*** 66083-9155
Country*: United States
Phone* 913-592-3664 **Fax**
☐ This contact is a third party (not the Entity). Warning: This contact receives personally identifiable information of the Entity.

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Server and Cloud Enrollment
Product Selection Form

This document must be attached to a signature form to be valid.

Terms used but not defined herein will have the meaning provided in the Enrollment.

Price Levels for Server and Tools Products and Additional Products:

Instructions: Include the agreement or enrollment name and number below that qualifies the Enrolled Affiliate for the price levels indicated in this Product Selection Form.

Agreement or Enrollment Name	Agreement or Enrollment Number
None	

Server Pool Price Level	Applications Pool Price Level	Systems Pool Price Level
D	D	D

Instructions: Fill out the Product Selection Form (PSF), and the associated Customer Price Sheet (CPS) according to the table below.

Baseline Licenses at Enrollment Effective Date	Product Selection Form	Customer Price Sheet SKUs
Licenses with Software Assurance	Existing Baseline Licenses with continuous Software Assurance	SA
Licenses only	Existing Baseline Licenses without continuous Software Assurance	MSU
New Subscription Licenses	New Subscription Licenses	MSU
New Licenses	New Licenses with Software Assurance	LicSAPk

Determining the number of Licenses and SKUs

Enter the actual number of licenses in the PSF. Some SKUs (SQL and Biztalk) include more than one license. For such SKUs, divide the number of licenses on the PSF by the number of licenses included in each SKU to determine the quantity of SKUs to enter on the Customer Price Sheet.

Product Selection Form					
Product selection		**Baseline Licenses**			
		Existing Baseline Licenses		New Baseline Licenses	
Product Family	Server and Tools Product	Existing Licenses with Software Assurance	Existing Licenses without Software Assurance	New Subscription Licenses	New Licenses with Software Assurance
SQL Server(1)	SQL Server Enterprise Per Core				
	SQL Server Standard Per Core				
	SQL Server Standard Server				
	SQL Server CAL				
BizTalk Server	BizTalk Server Enterprise Per Core				
	BizTalk Server Standard Per Core				
	BizTalk Server Branch Per Core				
Visual Studio	Visual Studio Ultimate with MSDN	N/A(2)	N/A(2)	N/A	N/A
	Visual Studio Premium with MSDN	N/A(2)	N/A(2)	N/A	N/A
	Visual Studio Enterprise with MSDN				
	Visual Studio Test Professional with MSDN				
	Visual Studio Team Foundation Server CAL				

Product Selection		Baseline Licenses			
		Existing Baseline Licenses		New Baseline Licenses	
Product Family	Server and Tools Product	Existing Licenses with Software Assurance	Existing Licenses without Software Assurance	New Subscription Licenses	New Licenses with Software Assurance
Visual Studio (Continued)	MSDN Platforms				
SharePoint Server	SharePoint Server				
Azure	Azure Monetary Commitment	The monetary commitment is tracked on the CPS if applicable			
Core Infrastructure Suite	CIS Datacenter				
	CIS Standard				
	Windows Server Datacenter	(3)	(4)	N/A	N/A
	System Center Datacenter	(3)	N/A	N/A	N/A
	Windows Server Standard	(3)	(4)	N/A	N/A
	System Center Standard	(3)	N/A	N/A	N/A

(1) SQL Server Enterprise Edition Server (non-core) licenses are not required as part of the baseline, however SA renewal is available as an additional product. If customers choose not to renew SA, it cannot be attached later.

(2) Visual Studio Premium with MSDN and Visual Studio Ultimate with MSDN Existing Baseline Licenses should be counted as Visual Studio Enterprise with MSDN Licenses.

(3) Quantities of Windows Server and System Center Licenses with continuous Software Assurance can be combined to renew CIS SA as described in the Product List, or added to the CPS using the appropriate L+SA CIS w/o SKU where the quantity of each is different. For example, 100 Windows Server and 100 System Center licenses with Software Assurance can be combined as 100 CIS SA renewals (of the equivalent edition). 100 Windows Server and 50 System Center licenses with Software Assurance can be combined as 50 CIS licenses (of the equivalent edition) and 50 L&SA CIS w/o Windows Server.

(4) Quantities of Windows Server and System Center without continuous Software Assurance will be added as full CIS subscriptions.

Minimum Purchase Requirements

Product Family	Minimum Initial Order
SQL Server	The quantity of SQL Per Core licenses needed for 50 cores OR 5 SQL Server editions with 250 CALs (SQL Server editions require CALs).

BizTalk Server	24 Cores of any combination of Biztalk Server Editions. The SQL Server product family must be selected in the above table.
Visual Studio	20 Licenses of any combination of: Visual Studio Enterprise with MSDN and MSDN Platforms. A Baseline License is required for each user of any software licensed through MSDN subscription. Use of MSDN Software includes, but is not limited to, developing and testing programs using the software as well as installing, configuring and managing the software. Examples of users include (but are not limited to): developers, testers, and other IT employees interacting with application development infrastructure.
SharePoint Server	5 Servers. The SQL Server product family must be selected in the above table.
Core Infrastructure Suites	All licensed Windows Server deployments must be licensed with an appropriate Core Infrastructure Suite SKU. Minimum order is 25 licenses for 50 processors (each license covers up to 2 physical processors) for Core Infrastructure Server Suites Standard or Datacenter (either edition or any combination of both)

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Program Signature Form

MBA/MBSA number	
Agreement number	E8732655

Note: Enter the applicable active numbers associated with the documents below. Microsoft requires the associated active number be indicated here, or listed below as new.

For the purposes of this form, "Customer" can mean the signing entity, Enrolled Affiliate, Government Partner, Institution, or other party entering into a volume licensing program agreement.

This signature form and all contract documents identified in the table below are entered into between the Customer and the Microsoft Affiliate signing, as of the effective date identified below.

Contract Document	Number or Code
Enterprise Agreement	X20-12056
Server and Cloud Enrollment	X20-12059
Product Selection Form	X20-12495

By signing below, Customer and the Microsoft Affiliate agree that both parties (1) have received, read and understand the above contract documents, including any websites or documents incorporated by reference and any amendments and (2) agree to be bound by the terms of all such documents.

Customer
Name of Entity (must be legal entity name)* City Of Spring Hill **Signature*** _____ **Printed First and Last Name*** **Printed Title** **Signature Date***
Tax ID

** indicates required field*

Microsoft Affiliate
Microsoft Corporation
Signature _____ **Printed First and Last Name** **Printed Title** **Signature Date** (date Microsoft Affiliate countersigns)
Agreement Effective Date (may be different than Microsoft's signature date)

Optional 2nd Customer signature or Outsourcer signature (if applicable)

Customer
Name of Entity (must be legal entity name)*
Signature* _____
Printed First and Last Name*
Printed Title
Signature Date*

** indicates required field*

Outsourcer
Name of Entity (must be legal entity name)*
Signature* _____
Printed First and Last Name*
Printed Title
Signature Date*

** indicates required field*

If Customer requires physical media, additional contacts, or is reporting multiple previous Enrollments, include the appropriate form(s) with this signature form.

After this signature form is signed by the Customer, send it and the Contract Documents to Customer's channel partner or Microsoft account manager, who must submit them to the following address. When the signature form is fully executed by Microsoft, Customer will receive a confirmation copy.

Microsoft Corporation
Dept. 551, Volume Licensing
6100 Neil Road, Suite 210
Reno, Nevada 89511-1137
USA

AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: JIM HENDERSHOT, COMMUNITY DEVELOPMENT DIRECTOR
MEETING DATE: OCTOBER 13, 2016
DATE: OCTOBER 05, 2016

Consent Agenda: Approval and authorization for the Mayor to execute an Improvement Agreement relating to the Dayton Creek, First Plat.

Issue: PV Investments, LLC has submitted a Final Plat for Dayton Creek Subdivision, First Plat. As required by code, an Improvement Agreement has been drafted and signed by the developer and is subject to execution by the Mayor.

Background: On September 01, 2016 the Planning Commission recommended approval for the Final Plat entitled, Dayton Creek, First Plat. Prior to approval and recording of the plat, an Improvement Agreement must be approved by the developer and city. This Agreement covers the construction of infrastructure, landscaping and erosion control BMP's that are not in a benefit district. The Agreement also determines the amount of excise tax due on the development.

Analysis: The Improvement Agreement for Dayton Creek, First Plat, has been drafted and approved by both staff and the developer. Authorization for the Mayor to execute the document is reasonable and recommended.

Alternatives: Approval, denial, remand for further study

Legal Review: City Attorney, Frank Jenkins has reviewed and assisted in the drafting of the proposed Improvement Agreement.

Funding Review or Budgetary Impact: N/A

Recommendation: Staff recommends authorizing the execution of an Improvement Agreement for Dayton Creek, First Plat.

Attachments: Improvement Agreement, Dayton Creek First Plat
Preliminary Plat, Dayton Creek

IMPROVEMENT AGREEMENT DAYTON CREEK FIRST PLAT

FP-06-16

THIS AGREEMENT made and entered into this ____ day of October, 2016, by and between the **CITY OF SPRING HILL, KANSAS**, (hereinafter "City") and **PV INVESTMENTS, LLC** (hereinafter, "Developer").

WITNESSETH:

WHEREAS, the Developer has applied to the City for final plat approval of a subdivision to be known as **DAYTON CREEK FIRST PLAT** ("Subdivision"); and

WHEREAS, the final plat document for the Subdivision has been prepared by the Developer such that certain of the following improvements, including but not limited to:

Streets, sanitary sewers, water lines, storm water facilities, improvements to creek, sidewalks, trails, landscaping, etc.

located within or about the Subdivision are to be dedicated as public improvements except the water lines which are to be dedicated to Johnson County Water District No. 1 (WaterOne), and constructed by the Developer; and

WHEREAS, pursuant to Section 17.378.C. of the Spring Hill Subdivision Regulations and as a condition to the approval of the Developer's final plat application for the Subdivision (Application No. **FP-06-16**), and also as a condition prior to the filing of the Developer's final plat document with the OFFICE OF RECORDS AND TAX ADMINISTRATION OF JOHNSON COUNTY, KANSAS, the Developer has been requested to enter into an agreement with the City concerning, among other things, the construction and maintenance of certain improvements in or about the Subdivision, and

NOW, THEREFORE, the City and the Developer hereby enter into this Agreement on the following terms and conditions and in consideration of the mutual covenants and agreements hereinafter set forth:

1. IMPROVEMENTS TO BE CONSTRUCTED/CONSTRUCTION STANDARDS.

In consideration of and as a condition for approval of Application No. **FP-06-16** regarding the Subdivision**,** which Subdivision can be more particularly, described as follows, to-wit:

See **EXHIBIT A** attached hereto and incorporated herein by reference.

Developer agrees to construct, install and complete, at its expense, and to the satisfaction of the City, all of the following improvements that are to be dedicated to the public, located within or about the Subdivision:

1. STREETS.
2. SANITARY SEWERS.
3. WATER LINES.
4. STORM WATER FACILITIES.
5. IMPROVEMENTS TO CREEK.
6. SIDEWALKS.
7. TRAILS.
8. LANDSCAPING.

The Developer further agrees to construct, install and complete the above described public improvements (hereinafter "Improvements") according to and in compliance with the City's applicable construction standards, specifications, design criteria, general policy and procedures as set forth in the Spring Hill Technical Specifications and Design Criteria, (hereinafter "City's Standards"); and in accordance with the applicable rules, regulations and statutes of the state of Kansas, including the Kansas Department of Health and Environment (KDHE); and applicable Federal rules, regulations, and statutes; (hereinafter, collectively, "Standards")

B. WaterOne Certification for Water Line Improvements to be constructed. In consideration of and as a condition for approval of the Developer's final plat application regarding the Subdivision, the Developer agrees to provide to the City Engineer a letter of certification from Johnson County Water District No. 1 ("WaterOne"), that the Developer has entered into a contract with WaterOne to construct, install and complete at the Developer's expense, and to the satisfaction of WaterOne, the waterlines necessary for providing water service within the Subdivision. The letter of certification is to be submitted to the City Engineer prior to commencement of construction of the other public improvements set forth in paragraph 1 (A) of the Agreement.

2. PERFORMANCE AND MAINTENANCE BONDS.

A. Performance Bond/ Improvements. The Developer further agrees to provide to the satisfaction of the City, security in the form of a Performance Bond to insure that the work,

construction, installation and completion of the Improvements are accomplished in a timely manner and according to and in compliance with the aforementioned Standards. The Performance Bond shall be in a form approved by the City Attorney and shall be in an amount not less than the approved estimate of the cost of constructing or completing the Improvements ("Estimate"), a copy of the approved Estimate being attached hereto as **EXHIBIT B** and incorporated herein by reference.

B. Maintenance Bond/Improvements. The Developer further agrees to provide to the satisfaction of the City, security in the form of a Maintenance Bond, approved by the City Attorney, to insure that once construction and installation of the Improvements are completed, that the Improvements shall be maintained to the City's Standards; that they shall be free of any defect in materials or workmanship; and that they shall endure without the need of any repair due to failure during construction to follow or comply with the City's Standards; said security to be in effect for a period of two (2) years following the acceptance of Improvements by the City Engineer. The Maintenance Bond shall be in an amount not less than the estimate as approved by the City Engineer.

C. Option of Developer to Provide Contractor Bonds. In lieu of providing performance and maintenance bonds required pursuant to paragraphs 2(A) and 2(B) above, the Developer may submit separate bonds from contractors for applicable public improvements as listed in paragraph 1 (A) above. In conjunction with providing separate bonds by the Contractor, the Contractor will be required to execute an Agreement with the City in substantially the form as set forth in **EXHIBIT D**, attached hereto, including streets, storm sewers and drainage systems, sanitary sewers, and sidewalks.

The City Engineer shall notify the Developer in writing when the City Engineer has determined that the Improvements have been completed in a manner satisfactory to the City and the Improvements are thereby approved. It is understood and agreed between the parties that the City Engineer shall be the sole judge of "any defects in materials or workmanship" or the need of "any repairs' concerning the Improvements, and also whether the Improvements have been "maintained to the City's Standards" or are "completed in a manner satisfactory to the City"; said judgment to be exercised reasonably.

3. APPROVAL OF BONDS.

The Performance and Maintenance Bonds provided to the City by the Developer must first receive the written approval of the City Attorney prior to the security being recorded with the Office of the City Clerk, and prior to the Developer causing any construction of the Improvements to begin. In the event security satisfactory to the City Attorney is not provided to the City within two (2) months from the date of the City Engineer's approved Estimate, the City Engineer may then revise and/or update the Estimate and require the Developer to provide to the City the additional or lesser amount of security, as may be necessary.

4. RECORDING THE SECURITY.

The Performance and Maintenance Bonds shall be recorded by the Developer with the Office of the City Clerk, after such time as the City Attorney has approved such security and both parties hereto have signed and acknowledged this Agreement; such costs as may be incurred by the recording of the security, if any, to be paid for by the Developer.

5. EXCISE TAX.

Pursuant to Ordinance No. 2004-26, and amendments thereto, the Developer agrees to contribute, at the time of final platting, an excise tax in the amount therein stated, for the purpose of raising general revenues to be used for general City projects or General Fund operations as approved by the Governing Body during the adoption of the city's annual budget. The area which shall be subject to the excise tax shall be determined by the Zoning Administrator in the manner set forth in Section Three of Ordinance No. 2004-26 and amendments thereto. A copy of the excise tax calculations, including allowed credits, are attached hereto as **EXHIBIT C** and incorporated herein by reference.

6. COMMENCEMENT OF CONSTRUCTION.

It is understood and agreed between the parties that prior to the Developer causing any construction of the Improvements to begin, the Developer must first receive written authorization from the City Engineer expressly stating that work on the Improvements may commence. It is further understood and agreed between the parties that the City Engineer may disapprove of, and may also require the removal or reconstruction of, any and all work, construction or installation of that part of the Improvements that begins prior to the Developer receiving written authorization from the City Engineer concerning the improvements, if any, if such work is not in conformance with the City's Standards.

7. COMPLETION OF CONSTRUCTION.

A. Time for Completing Construction. The Developer further agrees that the Improvements referenced herein shall be constructed, installed and satisfactorily completed by it, at its expense, according to and in compliance with the City's Standards within one (1) year from the effective date of the approved security required herein unless the City Engineer, at the City Engineer's sole discretion, agrees in writing to extend the completion date for the Improvements for an additional period of time not to exceed one (1) full year, said discretion to be exercised reasonably. Prior to seeking such an extension, the Developer shall submit to the City Engineer, at least sixty (60) days prior to the completion deadline, a written statement concerning the difficulty of completion, if any, that has been encountered regarding construction of the Improvements. Thereafter, the City Engineer may either approve or deny in writing any requested extension. In the event the City Engineer recommends extending the completion date, he or she may condition the extension upon the Developer providing extended security coverage in an additional or lesser amount necessary for the completion of the construction and maintenance of the Improvements. The Developer further agrees that in the event the required Improvements are not timely completed, for any reason, within said one (1) year period, unless extended as approved for herein;

or the Improvements are not constructed, installed or completed according to and in compliance with the City's Standards concerning the Improvements; or the Improvements, within one (1) year following their completed construction and written approval by the City Engineer, are not maintained to the City's Standards, free of any defects in materials or workmanship, or the Improvements do not endure without the need of any repairs due to failure during construction to comply with the City's Standards; then the City may, at its option exercise its rights, among others, by having constructed, installed, completed or maintained the Improvements referenced herein and recover the costs and expense so incurred by it from the Developer personally, or it also may, as the Obligee of the security, make demand on the security from the surety or its successor or such other applicable entity, or it may seek redress for the costs and expenses it incurred from both the Developer and the surety or other such applicable entity.

B. **Failure to Complete Construction**. It is further understood and agreed by the parties that the Estimate as approved by the City Engineer (**EXHIBIT B**), which establishes the amount of the Performance Bond required herein, is not a guarantee by the City the Improvements the Developer shall make to the Subdivision can be constructed, installed or completed for the amount set forth in the approved Estimate. Therefore, it is further agreed to by the parties that in the event the Developer fails to timely and satisfactorily construct, install and complete, for any reason, the Improvements required herein, the Developer shall remain responsible for the difference between the amount of the Performance Bond and the actual cost of the Improvements. Consequently, in the event the City draws upon the Performance Bond and thereafter determines the cost to satisfactorily construct, reconstruct, install or complete the Improvements will exceed the amount of the bond, the City Engineer shall mail written notice thereof to the Developer, along with its construction bids, construction contracts or such other supporting documents, setting forth the costs required to satisfactorily complete the Improvements pursuant to and in compliance with the City's Standards. Thereafter, the Developer agrees to pay the City, within thirty (30) days of the date such notice is received, the amount of costs in excess of the Performance Bond, which the City requires to satisfactorily complete the improvements.

8. PUBLIC IMPROVEMENTS SUBJECT TO SBD FINANCING.

The parties contemplate that certain of the Improvements may be financed and constructed utilizing municipal bond financing authorized under the General Improvement Assessment Law, K.S.A. 12-6a01, *et seq.* (so-called special benefit district financing or "SBD Financing"). It is acknowledged and understood that any Improvements financed with SBD Financing, shall NOT be subject to this Agreement.

9. WAIVER OF LIENS.

It is further understood and agreed between the parties that following the completion of the construction and installation of the Improvements, but prior to the written approval of same by the City Engineer, the Developer shall deliver to the City Attorney, complete and legally effective releases and waivers of all liens which could arise out of or be filed in connection with the construction, installation and completion of the Improvements referenced herein. The Developer

shall also provide the City Attorney with an affidavit signed by the both the Developer and its Contractor(s), that the releases or waivers provided include all labor, services, material and equipment for which a lien could be filed, and that the payrolls, material and equipment bills, and any other indebtedness connected with the Improvements, have been paid or otherwise satisfied. Any release, waivers or affidavits shall be in a form satisfactory to and approved by the City Attorney.

10. SIGNS AND BARRICADES.

The Developer further agrees that during the period of time the Improvements are being worked upon, constructed or installed, the Developer shall insure that any roads being worked upon will be closed and inaccessible to public travel. To that end, the Developer shall cause to be erected and maintained two (2) Type III barricades (10'), with a 48" x 30" "ROAD CLOSED" sign on each barricade, at each point where said roads intersect with a public road. The barricades may be staggered during work hours to allow entry of construction vehicles to the work site. During that period of time said Improvements are being worked upon, constructed or installed, if work takes place near or adjacent to public roads, the Developer shall erect and maintain warning signs on the public roads to adequately warn the traveling public. All signing of every kind required herein shall be designed, erected and maintained according to and in compliance with the latest edition of the Manual of Uniform Traffic Control Devices (MUTCD), and must be approved by the City Engineer in writing prior to being erected. Further, all barricades and related warning signs shall be erected by the Developer prior to the Developer causing commencement of any work, construction or installation of the Improvements to begin. All barricades and related warning signs shall be maintained by the Developer in good condition until the construction has been determined by the City Engineer, in writing, to have been completed in an acceptable manner.

11. PERMANENT TRAFFIC SIGNING.

The City Engineer shall cause a study to be made of the permanent traffic signing needed along the roads located in or about the Subdivision prior to completion of the road improvements and their written approval. The Developer agrees that prior to the opening of said roads to public traffic, the City Engineer shall cause to be erected any permanent traffic signs that, in the City Engineer's opinion, are needed on said roads, and shall bill the Developer for the costs of any labor, equipment and materials expended by the City Engineer and the City's Public Works Department regarding the same. Payment for the labor, equipment and materials shall be due the City and/or the City Engineer from the Developer within thirty (30) days from the date the bill is received.

12. BUILDING AND OCCUPANCY PERMITS.

It is understood and agreed between the parties that no building permit for buildings, structures or other similar construction will be considered for issuance by the City or any of its departments or employees, until such time as the work, construction and installation of the Improvements located in the Subdivision has progressed to the point that they will allow reasonable access for the construction equipment and/or personnel.

All questions of "reasonable access" shall be determined solely by the opinion of the City Engineer; said determination to be exercised reasonably. Further, no certificate of occupancy will be considered for issuance by the City or any of its departments or employees for any building, structure or other similar construction until the Improvements have been completed in accordance with the City's Standards, satisfactorily to the City and have been approved in writing by the City Engineer.

13. FIELD INSPECTIONS.

The City Engineer or his or her designee shall be responsible to inspect the construction to insure that the improvements are built according to the lines, grades and dimensions on the approved plans. The Contractor will be required to provide prior notice to the City Engineer so as to allow scheduling of inspections. The City Engineer or his or her designee may make unannounced visits to the job site during various stages of the construction to observe the progress and quality of the work being done and to determine in general if the work is proceeding according to and in compliance with the City's Standards. It is further agreed between the parties, that neither the City nor any of its officers, employees or agents shall be held liable or responsible, in any manner whatsoever by the Developer should it be determined by the City Engineer or his or her designee, at any time prior to final written approval of the improvements, that the Developer or it Contractors failed to cause the Improvements to be constructed and installed according to and in compliance with the City's Standards and the Improvements are therefore required to be removed and/or reconstructed in a manner satisfactory to the City, prior to receiving City approval.

14. ENGINEER AND SURVEYOR.

It is further understood and agreed between the parties that the Developer shall employ, at its own expense, a licensed professional engineer to design any and all Improvements according to and compliance with the City's Standards, and to inspect the construction to insure that the Improvements are built according to the lines, grades and dimensions on the approved plans. It is also understood and agreed that at the completion of construction of the Improvements, but prior to written approval of same by the City Engineer, the Developer shall employ, at its expense, a registered land surveyor to verify the location of all property markers shown on the final plat documents regarding the Subdivision.

15. INSPECTION COSTS.

It is further understood and agreed between the parties that the Developer shall pay the City, for the cost incurred by the City Engineer or that Department for inspections deemed reasonably necessary by the City Engineer to assure the City that the work, construction, installation and maintenance of the Improvements is being accomplished according to and in compliance with the City's standards and the approved plans. The costs charged for the inspections shall be determined from the fee schedule, which has been approved by the City and established by the City Engineer concerning such matters. Payment for the cost of the inspection shall be due the City from the Developer within thirty (30) days from the date the bill is received.

16. PROOF OF OWNERSHIP.

Prior to the filing of the Final Plat with the Office of Records and Tax Administration of Johnson County, Kansas, it is agreed the Developer shall exhibit to the City Attorney, proof of ownership and title to any real property that is being offered in dedication to the City for public purpose. The proof of ownership and title provided shall be in a form satisfactory to the City Attorney.

17. INDEMNITY.

The Developer further agrees to protect, defend indemnify and hold the City and its officers, employees and agents free and harmless from and against any and all losses, penalties, damages, settlements, costs, charges, professional fees (including attorney fees) or other expenses or liabilities, whether false, fraudulent, meritless, or meritorious, of every kind and character arising out of or relate to any and all claims, liens, demands, obligations, actions, proceedings or causes of action of every kind and character (hereinafter "Claims") in connection with, relating to or arising directly or indirectly out of the error, omission, or negligence of the Developer, its employee's, contractor's, subcontractor's, independent contractors, or other such similar entities' work, construction or installation of the Improvements referenced herein, during any period of time prior to satisfactory completion, installation and final written approval by the City Engineer of the Improvements construction and the formal acceptance of maintenance of the Improvements by the City Engineer. The Developer further agrees to investigate, handle, respond to provide defenses for and defend any such claims at its sole expenses and agrees to bear all other costs and expense related thereto, even if said claims are groundless, false or fraudulent.

18. SALE OF PROPERTY.

The Developer further agrees that the sale of any portion of the Subdivision shall in no way effect or change the Developer's or its successors' obligation to continue to comply with the terms of this Agreement unless and until any such purchaser(s) enters into a separate written agreement with the City to assume similar terms, covenants and obligations regarding the Improvements referred to herein.

19. STATUS OF PARTIES.

It is understood and agreed between the parties that this Agreement does not and shall not be construed, interpreted or argued by either of them, in a court of law or otherwise, to create any principal/agent, master/servant, employer/employee or partnership relationship of any kind between the Developer and the City and their successors and assigns.

20. MODIFICATION.

It is understood and agreed between the parties that there shall be no waiver or modification of the material terms of this Agreement unless such waiver or modification is first reduced to writing and signed by all parties herein.

21. COMPLETE AGREEMENT.

This Agreement is the complete agreement between the parties, contains all the terms and conditions agreed upon between them and shall, when signed by both parties, supersede all other agreement, oral or otherwise, entered into between them regarding the subject matter of the Agreement. No other agreement, oral or otherwise, regarding the subject matter of Agreement, shall have any validity or bind any of the parties hereto, unless executed pursuant to Paragraph 20 of the Agreement.

22. SEVERANCE.

If any clause or provision of this Agreement is held to be illegal, invalid or unenforceable by a court of competent jurisdiction, then in that event, it is the intention of the parties hereto that the remainder of the Agreement shall not be affected thereby.

23. SUCCESSORS AND ASSIGNS.

The terms, provisions, conditions, covenants and obligations contained in the Agreement shall be binding upon and inure to the benefit of the Developer's successors and assigns.

24. LAWS OF KANSAS.

It is understood and agreed between the parties that this Agreement, the performances required herein and all proceeding that flow therefrom shall be construed according to and controlled by the laws of the state of Kansas. In any proceeding that may be brought that are arising out of, in connection with, or by reason of this Agreement, the laws of the state of Kansas shall be applicable, controlling and shall govern to the exclusion of the law of any other forum, without regard to the jurisdiction in which any such proceeding may be instituted.

25. MATTERS DISREGARDED.

The titles of the several sections, subsections and paragraphs set forth in this Agreement are inserted for convenience of reference only and they shall be disregarded in construing or interpreting any of the provisions of the Agreement.

26. RECORDING OF THIS AGREEMENT.

The Developer further agrees that this Agreement shall be filed by the City with the Office of Records and Tax Administration of Johnson County, Kansas as soon as reasonably practical after it has been signed by all parties hereto. The City shall provide the Developer and City Attorney with file-stamped copies of the recorded Agreement immediately after it has been recorded.

27. SIGNATURE AUTHORITY.

The Developer hereby promises and states that in the event it is a corporation or partnership, the individual whose name and signature appear below for and on behalf of the corporation or partnership has in fact the authority to so bind the corporation or partnership to the terms and conditions of this Agreement.

28. COUNTERPARTS; FACSIMILE SIGNATURES. This Agreement may be executed in counterparts, each of which shall have the effect of and be considered as an original of this Agreement. Transmission of a facsimile or PDF version of any signed original document, and retransmission of any such transmission, will be the same as delivery of an original document. At the request of the other Party, each Party will confirm transmitted facsimile signatures by signing an original document.

29. TIME.

Time is of the essence.

30. NOTICES.

All notices required or desired to be given hereunder shall be in writing and shall be deemed to be an adequate and sufficient notice if given in writing and delivery is made either by (i) personal delivery, in which case the notice shall be deemed received the date of such personal delivery or refusal of receipt, (ii) nationally recognized overnight air courier service, next day delivery, prepaid, in which case the notice shall be deemed to have been received one (1) business day following delivery to such nationally recognized overnight air courier service or refusal of receipt, or (iii) email, provided that delivery thereof is acknowledged by the receiving party, evidenced by the sender's receipt of a receipt evidencing delivery from its email program, and to the following addresses or email addresses, as applicable:

If to the City: City of Spring Hill, Kansas
401 North Madison Street
P.O. Box 424
Spring Hill, KS 66083
Attn: Glenda Gerrity, City Clerk
Email: glenda.gerrity@springhillks.gov

If to Developer: PV Investments, LLC
10103 Metcalf
Overland Park, Kansas 66212
Attn: Brad Vince
Email: bvince@vinceandassociates.com

The remainder of this page is intentionally left blank. Signature pages to follow.

IN WITNESS WHEREOF, the parties hereto have set their hands below.

"CITY"

CITY OF SPRING HILL, KANSAS

_____
Steven M. Ellis, Mayor

ATTEST:

_____
Glenda Gerrity, City Clerk

(SEAL)

Approved as to Form:

_____
Frank H. Jenkins Jr., City Attorney

MUNICIPAL CORPORATION ACKNOWLEDGMENT

STATE OF _____, COUNTY OF _____, SS:

Before me, the undersigned, a Notary Public, within and for the County and State on this _____day of _____, 20_____, personally appeared Steven M. Ellis, Mayor, and Glenda Gerrity, City Clerk of the CITY OF SPRING HILL, KANSAS, a municipal corporation duly organized, incorporated and existing under and by virtue of the law of the state of Kansas, who are personally known to me to be the persons who executed, as such officers, the within instrument on behalf of said corporation and such persons duly acknowledged the execution of the same to be the voluntary act and deed of said corporation.

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

_____
Notary Public

My Commission Expires:
_____

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

"DEVELOPER"

PV INVESTMENTS, LLC

_____

Patricia Vince, Manager

LIMITED LIABILITY ACKNOWLEDGMENT

STATE OF_____, COUNTY OF_____, SS:

Before me, the undersigned, a Notary Public, within and for said County and State on the _____day of _____2016, personally appeared _____, who is the MANAGER of PV INVESTMENTS, LLC, a limited liability company duly organized, incorporated and existing under and by virtue of the laws of the State of Kansas, who is personally known to me to be the person who executed, as such officer, the within instrument on behalf of said company and such person duly acknowledged the execution of the same to be the voluntary act and deed of said company.

_____

Notary Public

My Commission Expires:

_____

"EXHIBIT A"

Legal Description of Subdivision

DAYTON CREEK, FIRST PLAT

LEGAL DESCRIPTION:

This is a survey and subdivision of a part of the SW 1/4 of Section 35, Township 14 South, Range 23 East in the City of Spring Hill, Johnson County, Kansas, more particularly described as follows: beginning at the Southwest corner of the SW 1/4 of said Section 35; thence N 2° 07' 16" W, along the West line of the SW 1/4 of said Section 35, a distance of 1050.39 feet; thence N 87° 49' 17" E, parallel with the South line of the SW 1/4 of said Section 35, a distance of 441.29 feet; thence S 2° 07' 16" E, parallel with the West line of the SW 1/4 of said Section 35, a distance of 216.08 feet; thence N 87° 49' 17" E, parallel with the South line of the SW 1/4 of said Section 35, a distance of 721.42 feet; thence Southerly, along a curve to the right, having a radius of 820 feet, a central angle of 12° 20' 08" and whose initial tangent bearing is S 14° 30' 43" E, a distance of 176.54 feet, to a point of tangency; thence S 2° 10' 35" E, a distance of 209.18; thence N 87° 49' 25" E, perpendicular to the last described course, a distance of 60 feet; thence Southerly, Southeasterly and Easterly, along a curve to the left, having a radius of 25 feet, a central angle of 90° and whose initial tangent bearing is S 2° 10' 35" E, a distance of 39.27 feet; thence S 2° 10' 35" E, a distance of 50 feet; thence Westerly, Southwesterly and Southerly, along a curve to the left, having a radius of 25 feet, a central angle of 90° and whose initial tangent bearing is S 87° 49' 25" W, a distance of 39.27 feet, to a point of tangency; thence S 2° 10' 35" E, a distance of 49.37 feet, to a point of curvature; thence Southerly, along a curve to the left, having a radius of 188 feet and a central angle of 16° 45' 51", a distance of 55.01 feet, to a point of reverse curvature; thence continuing Southerly, along a curve to the right, having a radius of 212 feet, a central angle of 16° 45' 51" and whose initial tangent bearing is S 18° 56' 26" E, a distance of 62.03 feet, to a point of tangency; thence S 2° 10' 35" E, a distance of 100.20 feet, to a point of curvature; thence Southerly, Southeasterly and Easterly, along a curve to the left, having a radius of 25 feet and a central angle of 90° 00' 08", a distance of 39.27 feet; thence S 2° 10' 43" E, a distance of 60 feet, to a point on the South line of the SW 1/4 of said Section 35; thence S 87° 49' 17" W, along the South line of the SW 1/4 of said Section 35, a distance of 1284.45 feet, to the point of beginning, containing 25.591 acres, more or less.

"EXHIBIT B"

DAYTON CREEK - PHASE 1

SPRING HILL, JOHNSON COUNTY, KANSAS

OPINION OF PROBABLE CONSTRUCTION COST

SANITARY SEWER IMPROVEMENTS

ITEM NO.	ITEM DESCRIPTION	UNIT	ITEM TOTAL	UNIT COST	TOTALS
1	8" PVC PIPE SDR-35 (INCLUDES TRENCH & BACKFILL)	L.F.	3081	$50.00	$154,050
2	6" PVC PIPE SDR-26 (INCLUDES TRENCH & BACKFILL)	L.F.	1632	$40.00	$65,280
3	STD. 4'-0" I.D. MANHOLE (12 V.F.)	EACH	15	$2,000.00	$30,000
4	EXTRA DEPTH IN MANHOLE	V.F.	8.1	$75.00	$608
5	CONNECTION TO EXISTING MANHOLE	EACH	2	$1,500.00	$3,000
6	CONCRETE ENCASEMENT	L.F.	40	$125.00	$5,000
	SANITARY SEWER TOTAL				**$257,938**

GRADING AND EROSION CONTROL (PUBLIC)

ITEM NO.	ITEM DESCRIPTION	UNIT	ITEM TOTAL	UNIT COST	TOTALS
1	EXCAVATION (CUT)	C.Y.	12060	$5.00	$60,300
2	EMBANKMENT (FILL)	C.Y.	8100	$6.00	$48,600
3	FINE GRADING	L.F.	3617	$5.00	$18,085
4	SEED/MULCH	ACRE	22	$1,000.00	$22,000
5	EROSION CONTROL	L.S.	1	$1,500.00	$1,500
	GRADING AND EROSION CONTROL TOTAL (PUBLIC)				**$150,485**

STREET AND STORM SEWER IMPROVEMENTS

ITEM NO.	ITEM DESCRIPTION	UNIT	ITEM TOTAL	UNIT COST	TOTALS
1	2" ASPHALTIC CONCRETE SURFACE COURSE (BM2)	S.Y.	8212	$12.00	$98,544
2	2" ASPHALTIC CONCRETE SURFACE COURSE (BM2) - 191st ST	S.Y.	2268	$12.00	$27,216
3	6" ASPHALTIC CONCRETE BASE COURSE (BM-2B)	S.Y.	6446	$30.00	$193,380
4	8" ASPHALTIC CONCRETE BASE COURSE (BM-2B)	S.Y.	1766	$35.00	$61,810
5	8" ASPHALTIC CONCRETE BASE COURSE (BM-2B) - 191st ST	S.Y.	2268	$35.00	$79,380
6	TYPE "A" CONCRETE CURB AND GUTTER	L.F.	4174	$27.00	$112,698
7	TYPE "B" CONCRETE CURB AND GUTTER	L.F.	812	$27.00	$21,924
8	TYPE "E" CONCRETE CURB AND GUTTER	L.F.	358	$27.00	$9,666
9	CONCRETE SIDEWALK RAMPS	EACH	9	$2,500.00	$22,500
10	8'x4' PRECAST REINFORCED CONCRETE BOX	L.F.	315	$370.00	$116,550
11	12" HDPE PIPE (INCLUDES TRENCH AND BACKFILL)	L.F.	214	$30.00	$6,420
12	15" HDPE PIPE (INCLUDES TRENCH AND BACKFILL)	L.F.	981	$38.00	$37,278
13	18" HDPE PIPE (INCLUDES TRENCH AND BACKFILL)	L.F.	397	$45.00	$17,865
14	24" HDPE PIPE (INCLUDES TRENCH AND BACKFILL)24	L.F.	514	$60.00	$30,840
15	12" HDPE FLARED END SECTION w/ CONCRETE TOEWALL	L.F.	1	$900.00	$900
16	15" HDPE FLARED END SECTION w/ CONCRETE TOEWALL	EACH	1	$1,100.00	$1,100
17	24" HDPE FLARED END SECTION w/ CONCRETE TOEWALL	EACH	2	$1,500.00	$3,000
18	ENERGY DISSIPATER FOR 12" PIPE	EACH	1	$1,500.00	$1,500
19	ENERGY DISSIPATER FOR 15" PIPE	EACH	1	$2,100.00	$2,100
20	ENERGEY DISSIPATER FOR 24" PIPE	EACH	1	$2,700.00	$2,700
21	MACHINE PLACED AND TRACKED RIP-RAP (150 LBS.)	C.Y.	73	$50.00	$3,650

STREET AND STORM SEWER IMPROVEMENTS (Continued)					
ITEM NO.	ITEM DESCRIPTION	UNIT	ITEM TOTAL	UNIT COST	TOTALS
22	4'x4' PRECAST YARD INLET (COMPLETE)	EACH	10	$4,000.00	40,000
23	5'x4' PRECAST YARD INLET (COMPLETE)	EACH	1	$4,500.00	4,500
24	12.5x6' PRECAST YARD INLET (COMPLETE)	EACH	1	$9,000.00	9,000
25	6'x4' PRECAST CURB INLET (COMPLETE)	EACH	4	$4,800.00	19,200
26	STD. 4'-0" I.D. PRECAST MANHOLE	EACH	1	$4,000.00	4,000
27	PAVEMENT MARKINGS (LINES AND SYMBOLS)	L.S.	1	$1,500.00	1,500
28	TRAFFIC SIGN (STOP SIGN & POST ASSEMBLY)	EACH	3	$275.00	825
29	TYPE III BARRICADE & END OF ROAD MARKERS	EACH	6	$1,500.00	9,000
	STREET AND STORM SEWER TOTAL				**939,046**
1	FINANCING AND BOND ISSUANCE COSTS	EACH	1	$180,000.00	180,000
	GRAND TOTAL				**1,527,469**

Note: Any additional cost for rock excavation is not included in the estimate above.

"EXHIBIT C"

COMMUNITY DEVELOPMENT DEPARTMENT
913-592-3657

Memo

To: Brad Vince, Curtis Holland

From: Jim Hendershot, Community Development Director

CC: File

Date: October 4, 2016

Re: Excise Tax, Dayton Creek Phase 1

Excise tax for Dayton Creek Phase 1 Final Plat has been calculated as follows:

Total Plat Area	26.131 ac. X 43,560 sq. ft./ac =	1,138,266.36 sq. ft
Credits:		
Open Space	Tract A .537 ac. X 43,560 = 23,391.72 sq. ft. Tract B .517 ac. X 43,560 = 22,520.52 sq. ft. Tract C 2.995 ac.x 43,560 =130,462.20 sq. ft Total Credit for Open Space	(176,374.44) sq. ft.
Street R-O-W (within subdivision)		(323,590) sq. ft.
Street R-O-W, Lone Elm Road		(39,615.6) sq. ft.
Street R-O-W, 191st St.		(81,824) sq. ft.
Net Area Subject to Excise Tax		516,862.32 sq. ft.
Excise Tax Per Square Ft.		x 0.158
Excise Tax Due (Subtotal)		$81,664.25
Credit for Cost of Construction, 191st St.		($130,896.00)
Total Excise Tax Due Phase 1		$0.00

1

"EXHIBIT D"

AGREEMENT

THIS AGREEMENT made and entered into the __ day of _____, 20 _____, by and between the **CITY OF SPRING HILL, KANSAS** (hereinafter "City") and ____ _____(hereinafter "Contractor").

WITNESSETH:

WHEREAS, on the _____ day of _____, 20___, the City and _____ _____ (hereinafter "Developer") entered into Improvement Agreement _____ _____ marked Exhibit A, attached hereto and incorporated by reference (hereinafter "Improvement Agreement") relating to the construction of the described public improvements with the subdivision; and

WHEREAS, _____ of the Improvement Agreement provides that the Developer has the option to provide to the City separate performance and maintenance bonds (required by paragraphs _____ of the Agreement) from contractors for the described public improvements; and

WHEREAS, the Developer has entered into an agreement with the Contractor to construct the public improvements.

NOW, THEREFORE, the City and Contractor hereby enter into the Agreement on the following terms and conditions, in consideration of the mutual covenants and agreements hereinafter set forth:

1. Contractor agrees to perform the obligations of the Developer to provide a performance bond and maintenance bond to the City in accordance with paragraph _____ and paragraph _____ of the improvements described in the Improvement Agreement.

2. Contractor agrees to require the bond surety to include the **attached Addendum** to its each of its bonds which confirms that the obligations of the surety include the obligations of the Contractor under the Improvement Agreement.

3. The City agrees to permit the Contractor to provide the performance and maintenance bond to the City in accordance with paragraph _____ of the Improvement Agreement.

IN WITNESS WHEREOF, the parties hereto have set their hands below.

CITY OF SPRING HILL, KANSAS	CONTRACTOR
_____	_____
Steven M. Ellis, Mayor	Authorized Representative

ATTEST:

_____
Glenda Gerrity, City Clerk

(SEAL)

Addendum

[Surety]

Re: Performance Bond No.:

Maintenance Bond No.:

Principal:

Obligee: City of Spring Hill, Kansas

Project:

To be attached to and form part of the above mentioned Bond in favor of the City of Spring Hill, Kansas, as Obligee and Owner.

It is agreed that the written agreement or written contract with the Obligee or Owner referenced in the attached Bond shall refer to the Improvement Agreement between the City of Spring Hill, Kansas and the Developer concerning the improvements referenced in the attached Bond, as well as the Agreement between the City of Spring Hill, Kansas and the Principal concerning the improvements referenced in the attached Bond, and that the obligation of the Surety under the attached Bond shall include the obligations of the Principal under the Improvement Agreement between the City of Spring Hill, Kansas and the Developer, and the obligations of the Principal under the Agreement between the City of Spring Hill, Kansas and the Principal.

It is further agreed that the Improvement Agreement between the City of Spring Hill, Kansas and the Developer concerning the improvements referenced in the attached Bond, and the Agreement between the City of Spring Hill, Kansas and the Principal concerning the improvements referenced in the attached Bond are incorporated by reference in this Addendum.

This Addendum shall be effective as of the time the attached Bond becomes effective.

[Surety]

By: _____
Attorney-in-Fact

By: _____
Kansas Agent

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

"DEVELOPER"

PV INVESTMENTS, LLC

Patricia Vince, Manager

LIMITED LIABILITY ACKNOWLEDGMENT

STATE OF Kansas, COUNTY OF Johnson SS:

Before me, the undersigned, a Notary Public, within and for said County and State on the 3rd day of October 2016, personally appeared Patricia Vince, who is the MANAGER of PV INVESTMENTS, LLC, a limited liability company duly organized, incorporated and existing under and by virtue of the laws of the State of Kansas, who is personally known to me to be the person who executed, as such officer, the within instrument on behalf of said company and such person duly acknowledged the execution of the same to be the voluntary act and deed of said company.

Notary Public

My Commission Expires:
5/22/20

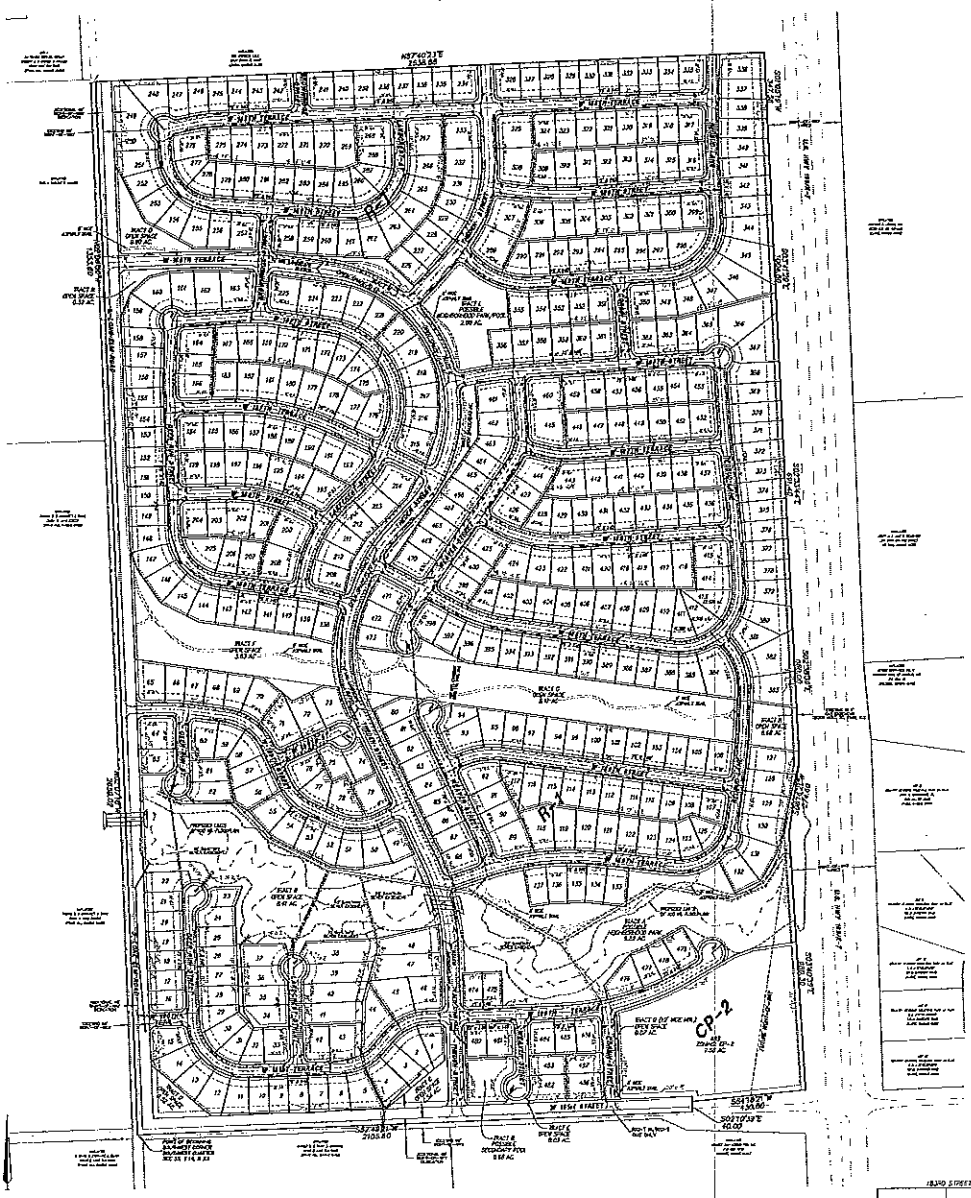
SHAWN A. SPRATLEY
Notary Public - State of Kansas
My Appt. Exp. 5/22/20

54653153.2

PRELIMINARY PLAT OF

DAYTON CREEK

CITY OF SPRING HILL, JOHNSON COUNTY, KANSAS



SCALE: 1"=150'

SITE INFORMATION

OWNER/DEVELOPER:
PV HOLDINGS, LLC.
ATTN: PATRICK C. VINCE
14950 SHERWOOD
LENEXA, KANSAS 66224
(913) 498-1933 (PHONE)
PVINCE@VINCEGLASSGALLES.COM (EMAIL)

ENGINEER, REP:
SHAFER, KLINE & WARREN, INC.
ATTN: GREG WATSON
11250 CORPORATE AVENUE
LENEXA, KANSAS 66219
(913) 888-7939 (PHONE)
GREG.WATSON@SKW-INC.COM (EMAIL)

ZONING:
R-1 (0.01 ± AC)
CP-2 (0.01 AC)

GROSS LOT SIZE:
77.9 ± AC (3,393,128 S.F.)

TOTAL NUMBER OF LOTS: 451

NON-RESIDENTIAL USE / OPEN SPACE (INCLUDING LANDSCAPE EASEMENT): 36.39 ± ACRES

STREET IMPROVEMENTS

1. IMPROVEMENTS TO 179th STREET AND LONE OAK WILL BE CONSTRUCTED AS CONDITIONS OF THE CONSTRUCTION AGREEMENTS FOR EACH PHASE. AS SHOWN ON THE CONSTRUCTION PHASE EXHIBIT, 179th STREET AND LONE OAK WILL BE REDEVELOPED WITH CURBS & GUTTER, SIDEWALK AND ASPHALT. ACCESS TO EXISTING HOMES FROM THE REDEVELOPMENT WILL CONSIST OF ASPHALT ROAD.

2. MAPLE STREET AND LINDA STREET CONNECTION TO LONE OAK WILL BE CONSTRUCTED WITH 28' WIDE (B-B) MAT AND 38' ROAD WIDTH (BACK OF CURB TO BACK OF CURB).

3. ALL OTHER INTERNAL STREETS WILL BE CONSTRUCTED WITH 28' WIDE (B-B) MAT AND 38' ROAD WIDTH (BACK OF CURB TO BACK OF CURB).

ELEVATION SCALE EXPANSION:
FRONT = 25 FEET
SECTION = 7 FEET
HEADWALL = 20 FEET

TOPOGRAPHY SHOWN HEREON WAS TAKEN FROM COUNTY MAPPING.

ZONING	GROSS ACRES	OPEN SPACE/LANDSCAPE PARK LANDSCAPE EASEMENT
R-1	225.77	34.39
CP-2	2.59	N/A
TOTAL	228.36	34.39

EASEMENT NOTES

1. WHEN IT IS ANY CONCERN TO SOUTHWESTERN BELL TELEPHONE COMPANY IT IS ESTIMATED THAT IN NORTHWEST, IN PHASE VIII, THERE IS A PORTION OF THE PROPERTY TO BE BUILTED, AS NOTE FIELD REVIEWED HEREON. SUPPLEMENTAL EASEMENT FILED IN VOLUME 1975, PAGE 2314.

2. ADDITIONAL EASEMENTS WILL BE PROVIDED WITH FUTURE PLAT & ENGINEERING PLANS ARE SUBMITTED AND APPROVED.

UTILITY NOTE

UTILITIES WILL BE PROVIDED BY:
ELECTRIC – KANSAS CITY POWER & LIGHT
TELEPHONE – SPRINT TELEPHONE 800-346-3030
WATER – WATER DISTRICT OF JOHNSON COUNTY 913-782-1500
SANITARY SEWER – CITY OF SPRING HILL 913-592-2197

FLOOD NOTE:

THIS PROPERTY LIES WITHIN FLOOD ZONE X, DEFINED AS AREAS TO BE DETERMINED TO BE OUTSIDE THE 500-YEAR FLOODPLAIN, AS SHOWN ON THE FLOOD INSURANCE RATE MAP, PREPARED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY FOR THE CITY OF SPRING HILL, JOHNSON COUNTY, KANSAS, COMMUNITY NO. 200178, PANEL 325, SUFFIX F AND DATED JUNE 17, 2010.

LEGAL DESCRIPTION

The South Half of the Northeast One-Quarter and all of the Southeast One-Quarter of Section 35, Township 14 South, Range 23 East in Johnson County, Kansas, except that part taken for highway right-of-way being more particularly described as follows:

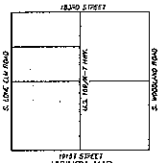
Beginning at the Southeast corner of the Southeast One-Quarter of said Section 35, Township 14 South, Range 23 East in Johnson County, Kansas; thence North 02° 07' 18" West, along the East line of the said Southeast One-Quarter, a distance of 1,323.12 feet to the Northeast corner of the said Southeast One-Quarter; thence North 02° 08' 50" West, along the East line of the South One-Half of the Northeast One-Quarter of Section 35, a distance of 1,323.60 feet; to a point; thence North 87° 57' 37" West, along the North line of the South One-Half of the said Northeast One-Quarter, a distance of 2,639.60 feet; to a point on the Westerly right-of-way line of U.S. Highway 169, said point being 100.00 feet West of the Northeast corner of said North One-Half; thence South 02° 02' 16" West, along the Westerly right-of-way of said U.S. Highway 169, a distance of 2,646.94 feet; to a point; thence South 02° 01' 13" East, and continuing along the Westerly right-of-way line of said U.S. Highway 169, a distance of 1,324.00 feet; to a point on the North line of said Southeast One-Quarter; said point being 99.50 feet West of the Northeast corner of said Southeast One-Quarter; thence South 02° 02' 16" East, along the Westerly right-of-way of said U.S. Highway 169, a distance of 99.50 feet; to a point; thence South 02° 30' 20" East and continuing along the said Westerly right-of-way of U.S. Highway 169, a distance of 1,323.51 feet; to a point; thence South 00° 12' 2" West, along the said Westerly right-of-way of U.S. Highway 169, a distance of 1,323.60 feet; to a point; thence South 02° 01' 13" East, and continuing along the Westerly right-of-way of U.S. Highway 169, a distance of 1,323.60 feet; to a point; thence South 02° 01' 13" East, along the Westerly right-of-way of U.S. Highway 169, a distance of 1,323.60 feet; to a point; thence South 02° 01' 13" East, along the Westerly right-of-way of U.S. Highway 169, a distance of 1,323.60 feet; to the point of beginning and containing 233.88 acres, more or less.

GENERAL NOTES

1. TRACTS A AND B RESERVED TO BE DEDICATED TO THE CITY OF SPRING HILL, KANSAS.
2. TRACTS E – H AND OUTLOTS 1 AND 2 TRACTS A AND B SHALL BE MAINTAINED BY A HOA / CONTRACTOR MAINTENANCE ASSOCIATION.
3. THE PUBLIC PARK TRACT WILL BE DEDICATED TO THE CITY OF SPRING HILL, KANSAS.
4. TRACTS D AND E SHALL BE THE LINE OF THE STREAM AND BUFFER.
5. ALL DEDICATIONS SHALL BE SUBJECT TO THE CITY DEDICATION PROCESS AND ACCEPTED BY THE CITY.

SYMBOL LEGEND

	PROPOSED SANITARY SEWER
	PROPOSED WATER LINE
	EXISTING CONTOUR MAJOR
B.L.	BUILDING LINE
L.E.	UTILITY EASEMENT
L.E.	LANDSCAPE EASEMENT



SCALE: 1"=2000'

VICINITY MAP
SEC. 35-14-23

SHEET 1 of 1
REV. JULY 26, 2016
REV. JULY 29, 2016
JUNE 7, 2016

REVISED PRELIMINARY PLAT
DAYTON CREEK
SEC. 35, TWP. 14, RNG. 23
CITY OF SPRING HILL
JOHNSON COUNTY, KANSAS

SHAFER, KLINE & WARREN, INC.
11250 Corporate Avenue, Lenexa, KS 66219
913.888-7939 FAX: 913.888-7948

SKW
FIELD OFFICE LOCATIONS
Lenexa, KS
Overland Park, KS
Wichita, KS
Dallas, TX
North Kansas City, MO
Kansas City, MO
Salina, KS
Tulsa, OK

PROJECT NO. 613311-030/113311-030/PV DW2 JUNE 7, 2016 SCL

AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: JIM HENDERSHOT, COMMUNITY DEVELOPMENT DIRECTOR
MEETING DATE: OCTOBER 13, 2016
DATE: OCTOBER 5, 2016

Consent Agenda: Final Plat, Dayton Creek, First Plat, FP-06-16.

Issue: PV Investments, LLC has submitted a Final Plat application for Dayton Creek, First Plat, located on the northeast corner of 191st Street and Lone Elm Road.

BACKGROUND: The applicant, PV Investments, LLC has submitted an application for the first phase of development in the Dayton Creek Subdivision located northeast corner of 191st Street and Lone Elm Road. The plat consists of 48 residential lots utilizing 22.082 acres and three common area tracts that contains 4.049 acres combined. The average size of the residential lots is 11,000 +/- square feet.

Analysis: (See attached staff report, PC minutes, Final Plat drawing) The Spring Hill Planning Commission reviewed the application at their September 01, 2016 meeting. After discussion, the PC voted unanimously to recommend approval of the Final Plat, Dayton Creek, First Plat.

Alternatives: Approval with the following conditions:

- The Final Plat will not be recorded until Improvement and Excise Tax Agreements are approved and signed.
- A revised landscape and sidewalk plan must be summited.
- All associated fees must be paid (if any) or,

Denial
Table
Remand to the PC for further study

Legal Review: All documents associated with the Final Plat, Dayton Creek, First Plat has been reviewed and approved by the City Legal Counsel.

Funding Review or Budgetary Impact: N/A

Recommendation: Staff and the Spring Hill Planning Commission recommend approval of the Final Plat, Dayton Creek, First Plat, file number FP-06-16.

Attachments: Planning Commission minutes, September 01, 2016
Staff Report, FP-06-16
Final Plat

1. Final Plat Application (FP-06-16) – Dayton Creek, First Plat

Beginning of Staff Report

End of Staff Report

Mr. Hendershot, Community Development Director, presented the staff report to the Planning Commission, as outlined above.

Commissioner Vaughan asked for clarification on the timeframe for road completion along 191st St. from Theden St. to Lone Elm Road. Mr. Hendershot stated that the road from Theden St. to Lone Elm Road would be completed with the second phase of development.

Commissioner Vaughan inquired about the Theden St. entrance. Mr. Hendershot stated that as the development progresses, Theden St. will not be a full access ingress/egress; it will be a right turn in/out access only.

Commissioner Vaughan asked if there was any concern with development in the floodplain. Mr. Hendershot explained that those areas have been addressed. He further explained that for those lots located in a floodplain, it does not mean they are not buildable. It's just that there are specific requirements that must be met. Mr. Hendershot noted that if the lot is developed according to these requirements, then the property owner can apply for a Letter of Map Amendment (LOMA), which would take the property out of the floodplain; thus, they would not be required to carry floodplain insurance.

Commissioner Mitchell asked for clarification regarding the road surface on 191st St. between US169 Highway to Theden St. Mr. Hendershot confirmed that this section of 191st St. would be full asphalt from US169 Highway to Lone Elm Road. He clarified that during the first phase of development, the road will be completed with an asphalt surface just past Theden St. Once they reach at least 50 homes, then the rest of 191st St. would be completed with asphalt. Then, Lone Elm Road will be improved with a chip seal surface just past the 190th Terr. entrance.

Motion by Ms. Squire, seconded by Ms. Pollom, to recommend approval of Final Plat Application, FP-06-16, Dayton Creek, First Plat with the following five conditions:

1. Traffic studies be reviewed with each future phase of development with emphasis on the intersection of 191st Street and US169/K7 Highway per KDOT recommendations.
2. Storm water studies will be reviewed with each future phases.
3. The applicant and the City will complete an Improvement Agreement as required by code.
4. Access to the subdivision from Lone Elm Road is required once 50 residential building permits have been issued for the development. Lone Elm Road is to be improved to chip seal standards from 191st Street to the second point of access.
5. All Staff Comments and Additional Staff Comments must be applied and complied with on the Plat and on future Plats.

Roll Call Vote: Squire-Aye, Mitchell-Aye, Sly-Aye, Pollom-Aye, Vaughan-Aye
Motion carried 5-0-0

The Final Plat application (FP-06-16) for Dayton Creek, First Plat will be forwarded to the City Council for consideration on September 22, 2016.

DRAFT

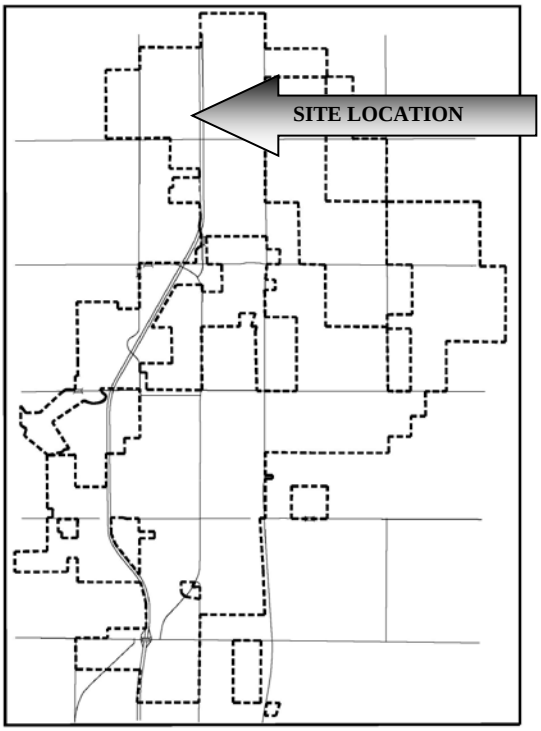
Agenda Item No. 2

SPRING HILL PLANNING COMMISSION
FINAL PLAT STAFF REPORT

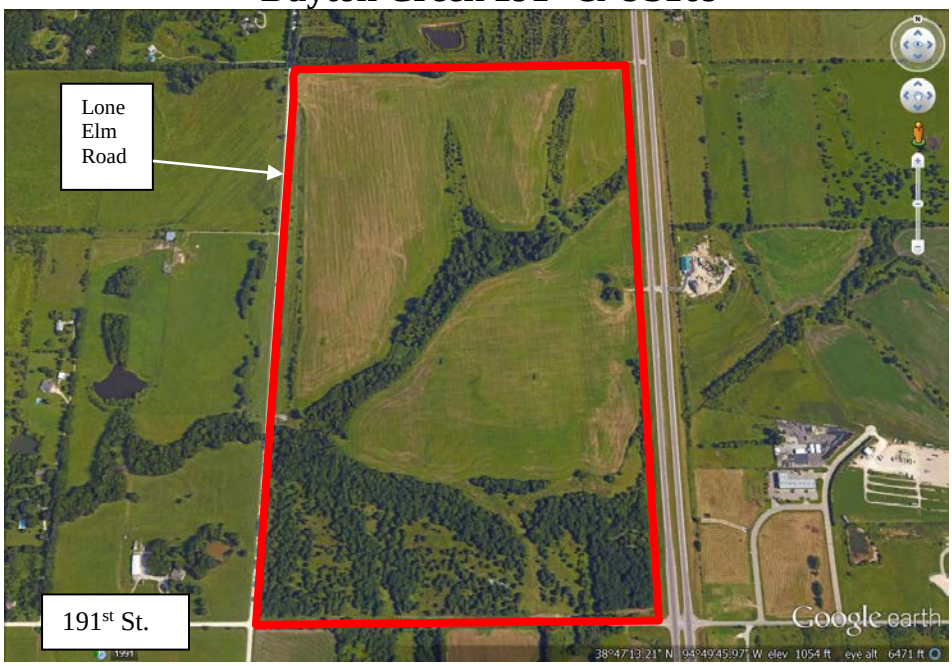
Case #:	FP-06-16	**Meeting Date:**	September 1, 2016
Description:	Dayton Creek First Plat		
Location:	Northwest corner 191st & US169 Highway		
Applicant:	Polsinelli, PC; **Owner**: PV Investments, LLC		
Engineer:	Shaffer, Kline & Warren		
Site Area:	26.131 acres more or less		

Minimum Lot Area:	9,000 sq. ft.	**Number of Lots:**	48 Residential Lots/Tracts 3 Common Area Tract

Current Zoning:	"R-1"	**Proposed Use:**	Single-Family Residential
Related Applications:	Z-01-16 and PP-02-16		



Dayton Creek 191st & US169



BACKGROUND:

Dayton Creek is a residential development first proposed for the June 2, 2016 Planning Commission meeting. At the applicant's request, the Final Plat (FP-03-16) was withdrawn so they could pursue a change in zoning and change the preliminary plat. This subdivision has a long history of different zonings, preliminary plats and final plats. The intended use of the property has always remained the same. The owners are ready to proceed with the project in a very viable and acceptable manner.

The Preliminary Plat (PP-02-16) was approved at the August 4, 2016 Planning Commission meeting, and the Rezoning (Z-01-16) was approved by the City Council on the August 25, 2016 Council Meeting. The Preliminary Plat consists of 233.35 acres of single-family

residential, commercial and open space areas. A copy of the approved Preliminary Plat is attached to this staff report for your review.

Final Plat of Dayton Creek, First Plat consists of 48 residential lots and 3 common area tracts. The average size of the residential lots is 11,066 +/- square feet. There is 4.049 acres or 176,374.440 square feet of open space. The amount of open space meets the requirement of 4% of the gross area to be reserved for active open space. Entry to the development is from 191st Street on Theden Street, and West 190th Terrace intersects with Lone Elm Road. The Lone Elm Road entrance to the subdivision will not be connected with this phase. Staff's recommendation at the end of this staff report will address the timing of the road completions.

With regards to US169 Highway, the assumption was made in the study that the interchange at 191st Street and US169 Highway would be completed in 2012. Obviously, that is not the case, but the recent traffic counts allow the timeframe for all the road improvements to be pushed out in the same manner as the 2007 approval. The approved Preliminary Plat greatly reduces the density that the Preliminary Plat from 2007 had proposed. The new Preliminary Plat has larger lots to accommodate the targeted size of houses that are anticipated to be built.

The comments from the consultants and City Staff have been applied as applicable per this phase. The reviews on the infrastructure improvements will be conducted per the adopted City Standards.

STAFF COMMENT:

Phase 1 consists of 48 residential lots and three common area tracts. Staff finds the final plat to be in compliance with the previously approved Preliminary Plat and offers the following review per Section 17.372.D of the Spring Hill Subdivision Regulations:

1. Separate drawings of profiles and cross section of streets and public use areas will need to be forwarded to the City Engineer for review.
2. Staff has verified the person or persons name on the plat are the owner(s) of the area subject to the final plat.
3. Staff has verified all due or unpaid taxes have been paid in full.
4. The description at the top of the page must read "Final Plat of Dayton Creek, First Plat".
5. It is required to have a 20 foot Utility Easement (U/E) around the entire plat.
6. Lots 1, 15, and 16 need to show the 25 foot side building on corner lots. On lot 46, the building line is mismarked. It should be 25 feet.
7. We would suggest that tract "C" be designated as a Utility Easement (U/E) also. If not then the 10 feet SS/E "Sanitary sewer Easement" need to be increase in size to 20 feet in width.
8. There are several SS/E's mismarked as S/E.
9. Tracts "A", "B", and "C" are subject to maintenance of adjoining homeowners or Dayton Creek homeowners association and any walking trails, parks or recreational amenities on these tracts can be used by the General Public.
10. Public facilities are adequate and available to the site. This plat is part of a benefit district.
11. Adequate control of storm water through appropriate BMP's will be detailed on drawings submitted to the City Engineer for approval.

12. Erosion control shall be installed and maintained per City Standards.
13. Several lots are effected by the defined FEMA Flood Zones. These lots will be reviewed at the building permit stage for elevation and building design compliancy by way of individual plot plan and building plan review.
14. Construction refuse will be disposed of in an appropriate manner.
15. The required Improvement Agreement is being prepared by staff and will be forwarded to the applicant, City Engineer and City Attorney for review and approval. This Agreement will be signed by the applicant prior to consideration of the final plat by the Governing Body. All required bonds and insurance documents will be submitted to the City prior to issuance of a Notice to Proceed from the City Engineer.
16. Staff finds the proposed final plat in substantial compliance with the preliminary plat for the subdivision approved by the Planning Commission on August 4, 2016, and with the Comprehensive Plan for the City of Spring Hill.

ADDITIONAL STAFF COMMENTS:

1. *Storm water Study*: The original 2007 submittal included a storm water study that was reviewed by staff and consultants. Adjustment were made to the plans according to comments received and the study was accepted with the approval of the preliminary and final plats. Staff required an update to the study be completed for the 2016 submittal. No revisions were required to the study for this phase.

2. *Road Improvements*: This plan duplicates the approval from 2007 including the following:
    - Improve 191st Street with full asphalt road surface from US169 Highway to just west of Theden Street with this phase.
    - Improve 191st Street with full asphalt road from Theden Street to Lone Elm Road when required with future phases of the development.
    - Second means of ingress/egress to Lone Elm Road required when building permits reaches a total of 50. Lone Elm Road may be improved with chip seal.

3. *Park Fees*: The total project meets the requirements for open space, and therefore park fees are not applicable.

STAFF RECOMMENDATION:

Staff recommends approval of final plat application FP-06-16, Dayton Creek, First Plat with the following conditions:

1. Traffic studies be reviewed with each future phase of development with emphasis on the intersection of 191st Street and US169/K7 Highway per KDOT recommendations.

2. Storm water studies will be reviewed with each future phases.

3. The applicant and the City will complete an Improvement Agreement as required by code.

4. Access to the subdivision from Lone Elm Road is required once 50 residential building permits have been issued for the development. Lone Elm Road is to be improved to chip seal standards from 191st Street to the second point of access.

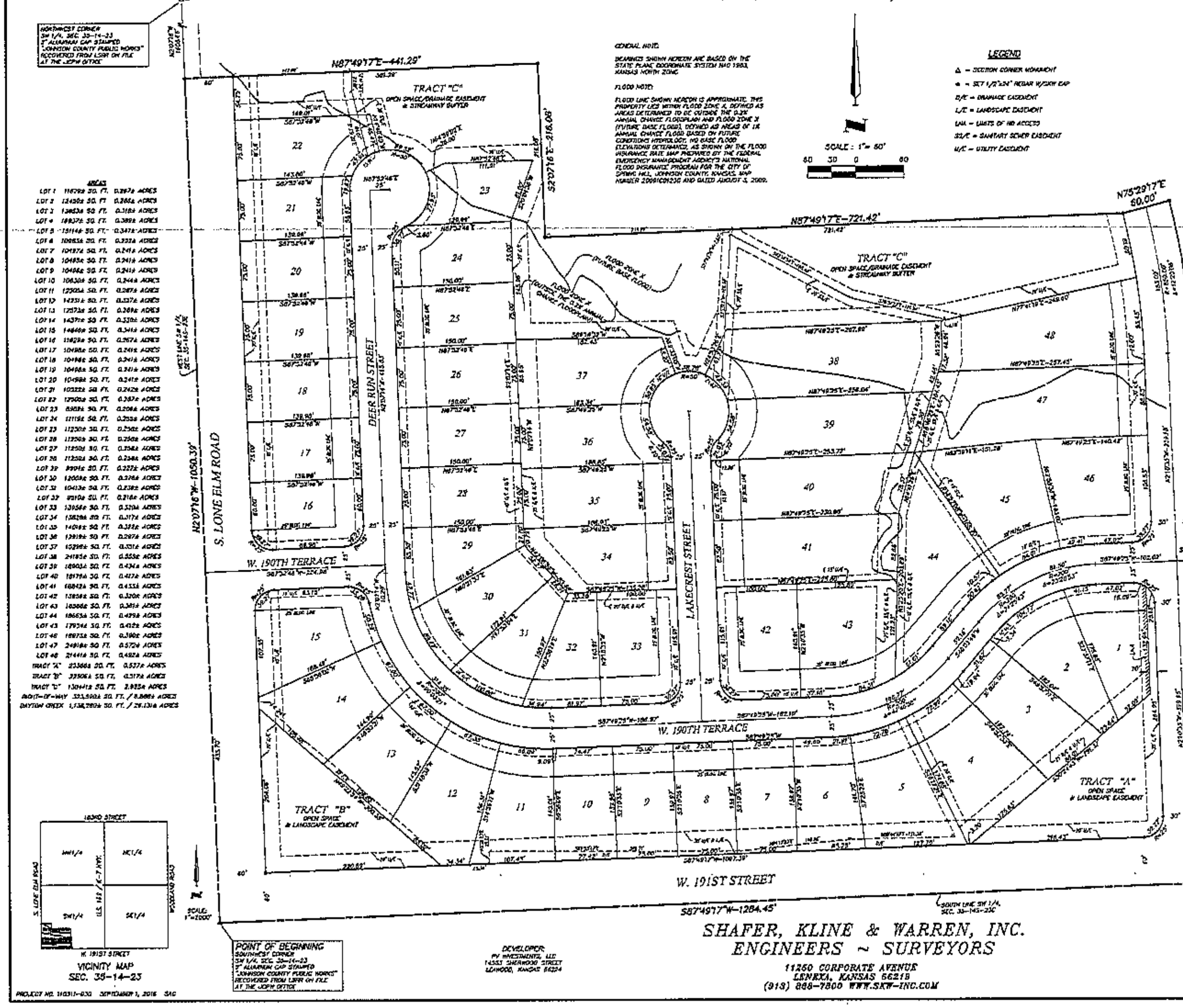
5. All Staff Comment and Additional Staff Comments must be applied and complied with on the Plat and on future Plats.

PLANNING COMMISSION REVIEW AND ACTION: Upon review of the final plat application, the Planning Commission may by a majority vote of those members present:

- Recommend approval of the application to the Governing Body, or
- Recommend denial of the application to the Governing Body and notify the applicant of such action, or
- Table action on the application to a specific date and notify the applicant of such action

Attachments: Final Plat
Preliminary Plat

FINAL PLAT OF
DAYTON CREEK, FIRST PLAT
A SUBDIVISION IN THE CITY OF SPRING HILL, JOHNSON COUNTY, KANSAS



AREAS

LOT 1	11629± SQ. FT.	0.267± ACRES
LOT 2	12450± SQ. FT.	0.286± ACRES
LOT 3	13853± SQ. FT.	0.318± ACRES
LOT 4	16937± SQ. FT.	0.389± ACRES
LOT 5	15114± SQ. FT.	0.347± ACRES
LOT 6	10065± SQ. FT.	0.232± ACRES
LOT 7	10497± SQ. FT.	0.241± ACRES
LOT 8	10495± SQ. FT.	0.241± ACRES
LOT 9	10496± SQ. FT.	0.241± ACRES
LOT 10	10630± SQ. FT.	0.244± ACRES
LOT 11	12505± SQ. FT.	0.287± ACRES
LOT 12	14331± SQ. FT.	0.327± ACRES
LOT 13	12573± SQ. FT.	0.289± ACRES
LOT 14	14371± SQ. FT.	0.330± ACRES
LOT 15	14846± SQ. FT.	0.341± ACRES
LOT 16	11629± SQ. FT.	0.267± ACRES
LOT 17	10498± SQ. FT.	0.241± ACRES
LOT 18	10496± SQ. FT.	0.241± ACRES
LOT 19	10496± SQ. FT.	0.241± ACRES
LOT 20	10498± SQ. FT.	0.241± ACRES
LOT 21	10552± SQ. FT.	0.242± ACRES
LOT 22	12506± SQ. FT.	0.287± ACRES
LOT 23	8988± SQ. FT.	0.206± ACRES
LOT 24	11119± SQ. FT.	0.255± ACRES
LOT 25	11250± SQ. FT.	0.258± ACRES
LOT 26	11250± SQ. FT.	0.258± ACRES
LOT 27	11250± SQ. FT.	0.258± ACRES
LOT 28	11250± SQ. FT.	0.258± ACRES
LOT 29	9904± SQ. FT.	0.227± ACRES
LOT 30	12006± SQ. FT.	0.276± ACRES
LOT 31	10413± SQ. FT.	0.239± ACRES
LOT 32	9510± SQ. FT.	0.218± ACRES
LOT 33	13956± SQ. FT.	0.320± ACRES
LOT 34	13826± SQ. FT.	0.317± ACRES
LOT 35	14096± SQ. FT.	0.324± ACRES
LOT 36	12919± SQ. FT.	0.297± ACRES
LOT 37	15296± SQ. FT.	0.351± ACRES
LOT 38	24185± SQ. FT.	0.555± ACRES
LOT 39	18903± SQ. FT.	0.434± ACRES
LOT 40	18176± SQ. FT.	0.417± ACRES
LOT 41	19842± SQ. FT.	0.455± ACRES
LOT 42	13938± SQ. FT.	0.320± ACRES
LOT 43	16588± SQ. FT.	0.381± ACRES
LOT 44	18663± SQ. FT.	0.429± ACRES
LOT 45	17934± SQ. FT.	0.412± ACRES
LOT 46	16973± SQ. FT.	0.390± ACRES
LOT 47	24916± SQ. FT.	0.572± ACRES
LOT 48	21441± SQ. FT.	0.492± ACRES
TRACT "A"	23366± SQ. FT.	0.537± ACRES
TRACT "B"	22506± SQ. FT.	0.517± ACRES
TRACT "C"	130441± SQ. FT.	2.995± ACRES
RIGHT-OF-WAY	323,500± SQ. FT. / 8.886± ACRES	
DAYTON CREEK	1,138,280± SQ. FT. / 26.131± ACRES	

Description:

This is a survey and subdivision of a part of the SW 1/4 of Section 35, Township 14 South, Range 23 East in the City of Spring Hill, Johnson County, Kansas, more particularly described as follows: beginning at the Southwest corner of the SW 1/4 of said Section 35; thence N 2° 07' 16" W, along the West line of the SW 1/4 of said Section 35, a distance of 1050.39 feet; thence N 87° 49' 17" E, parallel with the South line of the SW 1/4 of said Section 35, a distance of 441.29 feet; thence S 2° 07' 16" E, parallel with the West line of the SW 1/4 of said Section 35, a distance of 216.08 feet; thence N 87° 49' 17" E, parallel with the South line of the SW 1/4 of said Section 35, a distance of 721.42 feet; thence N 75° 28' 17" E, a distance of 60.00 feet; thence Southerly, along a curve to the right, having a radius of 830 feet, a central angle of 12° 20' 08" and whose initial tangent bearing is S 14° 30' 43" E, a distance of 180.46 feet, to a point of tangency; thence S 2° 10' 35" E, a distance of 209.18, to a point of curvature; thence Southerly, Southeasterly and Easterly, along a curve to the left, having a radius of 25 feet, a central angle of 90° and whose initial tangent bearing is S 2° 10' 35" E, a distance of 39.27 feet; thence S 2° 10' 35" E, a distance of 50 feet; thence Westerly, Southwesterly and Southerly, along a curve to the left, having a radius of 25 feet, a central angle of 90° and whose initial tangent bearing is S 87° 49' 25" W, a distance of 39.27 feet, to a point of tangency; thence S 2° 10' 35" E, a distance of 49.37 feet, to a point of curvature; thence Southerly, along a curve to the left, having a radius of 188 feet and a central angle of 16° 45' 51", a distance of 55.01 feet, to a point of reverse curvature; thence continuing Southerly, along a curve to the right, having a radius of 212 feet, a central angle of 16° 45' 51" and whose initial tangent bearing is S 18° 56' 26" E, a distance of 62.03 feet, to a point of tangency; thence S 2° 10' 35" E, a distance of 100.20 feet, to a point of curvature; thence Southerly, Southeasterly and Easterly, along a curve to the left, having a radius of 25 feet and a central angle of 90° 00' 08", a distance of 39.27 feet; thence S 2° 10' 43" E, a distance of 60 feet, to a point on the South line of the SW 1/4 of said Section 35; thence S 87° 49' 17" W, along the South line of the SW 1/4 of said Section 35, a distance of 1284.45 feet, to the point of beginning, containing 26.131 acres, more or less.

Dedications:

The undersigned proprietor of the described tract of land has caused the same to be subdivided in the manner as shown on the accompanying plat, which subdivision shall hereafter be known as "DAYTON CREEK, FIRST PLAT."

An easement or license to enter upon, locate, construct and maintain or authorize the location, construction or maintenance and use of conduits, water, gas, electrical, poles, wires, drainage facilities, ducts and cables, and similar utility facilities, upon, over and under these areas outlined and designated on this plat as "Utility Easement" or "U/E," is hereby granted to the City of Spring Hill, Kansas, and other governmental entities as may be authorized by state law to use such easement for said purposes.

An easement or license is hereby granted to the City of Spring Hill, Kansas, to enter upon, construct and maintain pipes, inlets, manholes and surface drainage facilities relative to storm water drainage upon, over, or under the areas outlined and designated on this plat as "Drainage Easement" or "D/E".

An easement or license to lay, construct, alter, repair, replace and operate one or more sewer lines and all appurtenances convenient for the collection of sanitary sewage, together with the right of ingress and egress, over and through those areas designated as "Sanitary Sewer Easement" or "SS/E" on this plat is hereby dedicated to the City of Spring Hill, Kansas.

An easement is hereby granted and reserved by the undersigned proprietor of the above described land unto itself and the Dayton Creek Homes Association to enter upon, plant, replace, replant, mow, clip, trim, spray, chemically treat, repair, and otherwise maintain, and to authorize any such maintenance, of any and all grass, trees, shrubs, plants and other landscaping and all fences and monuments installed by the undersigned proprietor and by the Dayton Creek Homes Association upon, over, or under those areas outlined and designated on this plat as "Landscape Easement" or "L/E".

The undersigned proprietor of said property shown on this plat does hereby dedicate those portions of the streets and roadways shown as W. 190th Terrace, Deer Run Street, Lakecrest Street, Theden Court, Theden Street, W. 191st Street and S. Lone Elm Road, together with all other parcels and parts of land indicated on this plat, and not heretofore dedicated, as streets, terraces, roads, drives, lanes, avenues, courts, places, etc., for public use as public ways or thoroughfares; subject to the right hereby reserved to the present owner and its successors and assigns for the location, construction and maintenance of conduits, water, gas and sewer pipes, poles and wires under, over and along said roadways.

The undersigned proprietor of said property shown on this plat hereby certifies that all prior existing easement rights on land to be dedicated for public use and public ways and thoroughfares running to any person, utility or corporation have been absolved except that same person, utility or corporation shall retain whatever easement rights they would have as if located in a public street.

The undersigned proprietor of the above described tract of land hereby consents and agrees that the Board of County Commissioners of Johnson County, Kansas, and the City of Spring Hill, Kansas, shall have the power to release such land proposed to be dedicated for public ways and thoroughfares, or parts thereof, for public use, from the lien and effect of any special assessments, and that the amount of the unpaid special assessment on such land dedicated shall become and remain a lien on the remainder of this land fronting or abutting on such dedicated public ways or thoroughfares.

RESTRICTIONS

Tracts "A", "B" and "C" are to be owned and maintained by the Dayton Creek Homes Association. Any walking trails, parks or recreational amenities on these tracts are hereby authorized for use by the General Public.

Vehicular access from Lot 1 to Theden Street is prohibited and shown hereon as LNA, Limits of No Access.

IN TESTIMONY WHEREOF, the undersigned proprietor has hereunto subscribed its name.

PV Investments, LLC, a Kansas limited liability company

By: ______________________ ______________________
Bradley D. Vince — Patricia C. Vince

STATE OF }
COUNTY OF } SS:

This instrument was acknowledged before me on ______________ by Bradley D. Vince and Patricia C. Vince, of PV Investments, LLC.

______________________ My Appointment Expires: __________
Notary Public

APPROVED BY, the Planning Commission of the City of Spring Hill, Kansas, this _____ day of ____________, 2016.

____
Stephen Sly, Chairman

APPROVED BY, the Governing Body of the City of Spring Hill, Kansas, this _____ day of ____________, 2016.

______________________ ATTEST: ______________________
Steven M. Ellis, Mayor — Glenda Gerrity, City Clerk

I HEREBY CERTIFY THAT THE INFORMATION SHOWN HEREON IS BASED ON A FIELD SURVEY PERFORMED UNDER MY SUPERVISION ON JANUARY 15, 2016.

BY: ______________________
SCOTT D. CONFER, KS LS-1249

SHAFER, KLINE & WARREN, INC.
ENGINEERS ~ SURVEYORS
11250 CORPORATE AVENUE
LENEXA, KANSAS 66219
(913) 888-7800 WWW.SKW-INC.COM

AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: JIM HENDERSHOT
MEETING DATE: OCTOBER 13, 2016
DATE: OCTOBER 6, 2016

Consent / Formal Action / Discussion Item: Consent

Issue: Acceptance of Permanent Utility and Drainage Easement and Dedication of Public Street for Blackhawk Apartments

Background: As part of the development of Blackhawk Apartments, there will be several sanitary sewers and storm sewers that will be on private property and will require permanent utility and drainage easements to allow the city access for maintenance. The extension of Harrison Street along the west side of the new apartment complex will require the dedication of public street right of way. After final approval of the construction drawings, the developer has submitted permanent utility and drainage easements and dedication of public street documents.

Analysis: The legal description for the permanent utility and drainage easements and dedication of public street were developed by Allenbrand Drews, engineers for the developer. Prior to having these documents executed, they were reviewed by the city attorney and recommended for acceptance and recording by the city.

Funding Review or Budgetary Impact: No fund will be expended as the developer is donating these permanent utility and drainage easements and dedication of public street right of way.

Recommendation: We recommend the City accept the permanent utility and drainage easements and dedication of public street right of way documents across Blackhawk Apartments and have them recorded at the Johnson County Courthouse.

Attachments: Permanent Utility and Drainage easements, Dedication of Public Street and Exhibits.

Tract No.
Parcel No.
Address:

PERMANENT UTILITY AND DRAINAGE EASEMENT

THIS AGREEMENT, made and entered into this 8 day of September, 2016, by and between **BLACKHAWK APARTMENT HOMES, LLC,** a Kansas Limited Liability Company, and **BLACKHAWK DEVELOPMENT, LLC,** a Kansas Limited Liability Company, both of P.O. Box 464, Spring Hill, Kansas 66083, and hereinafter called Grantors, and the **CITY OF SPRING HILL, KANSAS,** a Municipal Corporation, in the County of Johnson, State of Kansas, hereinafter called Grantee.

WITNESSETH:

WHEREAS, the Grantee desires to obtain a Permanent Utility and Drainage Easement in, on, over, under and through the Grantors' properties.

NOW, THEREFORE, for the consideration hereinafter described, the parties hereto agree as follows:

SECTION ONE
GRANT OF EASEMENT

In consideration of One Dollar ($1.00) in hand paid and other valuable consideration, receipt of which is hereby acknowledged, Grantors do hereby grant and convey unto Grantee, its successors, assigns, employees, agents, contractors, subcontractors, suppliers and other authorized users a Permanent Utility and Drainage Easement for:

(i) ingress and egress for the purposes set forth herein;

(ii) the installation, construction, reconstruction, maintenance, inspection, repair and removal of sidewalks, pedestrian and bicycle paths, sanitary sewers, storm drainage facilities, utilities (including electrical, water, telephone, communication and data transmission, distribution and service lines), traffic signals and any other purpose incidental to the construction, reconstruction, improvement, maintenance

or operation of any aspect of any utility service (including, without limitation, electricity, natural gas, water, sanitary sewer, storm drainage, telephone or cable television) or the construction, reconstruction, improvement, maintenance, inspection, repair and removal of any facilities or operations related to any aspect of any utility service; and

(iii) the purpose of constructing, using, replacing and maintaining a culvert, storm sewer, drainage ditch, or other drainage facility, tributary connections and appurtenances thereto in any part of the easement, including the right to maintain, repair and replace the drainage facility and for any reconstruction and future expansion of such facility within the area of the easement

on, in, over, under and through the following described land (such land is referred to herein as the premises):

Permanent Utility and Drainage Easement:
(See Exhibit A)

SECTION TWO
ADDITIONAL RIGHTS OF GRANTEE

(1) Grantee shall have the right to install additional facilities or improvements or to replace said facilities or improvements in the above-described easement at some future date and under the same conditions as the earlier facilities or improvements were installed, except no additional payment shall be made for the purchase of said right.

(2) The Grantee and its employees and agents shall at all times have free access to the facilities or improvements, using such reasonable route as Grantors may designate or approve.

(3) Grantee may assign its rights hereunder, in whole or in part, or may share, co-operate, or otherwise allow other public or private entities to use some or all of the rights granted hereunder, on such terms and conditions as Grantee may determine, without additional compensation to Grantors.

SECTION THREE
RIGHTS OF GRANTOR

Grantors reserve the right to fully use and enjoy the premises except for such use as may unreasonably interfere with the exercise by Grantee or any other authorized user of the rights granted herein. Grantors shall not construct nor permit to be constructed any house, structure, or obstruction on or over the premises or interfering with the construction, maintenance, or operation of any utility line, improvement, facility or appurtenance constructed pursuant to this

instrument or with any right granted to Grantee or any use by Grantee authorized by this instrument. Grantors may fence the whole or any part of the boundaries of the area within the Permanent Utility and Drainage Easement without approval of the Grantee as long as said fence does not interfere with Grantee's access rights to, across or over the said Permanent Utility and Drainage Easement. Grantors further agree that he will not change the grade of the area within the said Permanent Utility and Drainage Easement without approval of the Grantee.

SECTION FOUR
PROTECTION OF SURFACE

Any utility lines placed underground on the premises shall be constructed at a sufficient depth so that such utility lines will not interfere with the cultivation or drainage of the property.

SECTION FIVE
RESTORATION OF SURFACE

After any construction operations have been completed, Grantee shall restore the premises to as near as reasonably possible the condition that existed prior to construction and/or to conform to the design criteria of Grantee or other authorized user.

All of said restoration to be done within a reasonable time after construction completion.

SECTION SIX
WARRANTY OF TITLE

Grantors covenant and warrant that they are the owners of the premises and have the right, title and capacity to grant the easement herein conveyed.

SECTION SEVEN
EFFECT OF AGREEMENT

The easement granted herein shall run with the land. This Agreement shall be binding upon the heirs, legal representatives, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, Grantors have executed this agreement the day and year first above written.

GRANTOR:
BLACKHAWK APARTMENT HOMES, LLC, a limited liability company

GRANT MERRITT – Managing Member

STATE OF Kansas)
) ss:
COUNTY OF Johnson)

BE IT REMEMBERED that on this 8th day of September, 2016, before me, the undersigned, a notary public in and for the County and State aforesaid, came **GRANT MERRITT**, managing member of **BLACKHAWK APARTMENT HOMES, LLC,** a Kansas Limited Liability Company, who is personally known to me to be the same person who executed the within instrument of writing, and such person duly acknowledged the execution of the same on behalf of **BLACKHAWK APARTMENT HOMES, LLC.**

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

Notary Public

My Appointment Expires:
3-17-20

(SEAL)

NOTARY PUBLIC STATE OF KANSAS
TINA L. WEISHAAR
NOTARY PUBLIC
STATE OF KANSAS
My App. Exp.

GRANTOR:
BLACKHAWK DEVELOPMENT, LLC, a limited liability company

GRANT MERRITT – Managing Member

STATE OF Kansas)
) ss:
COUNTY OF Johnson

BE IT REMEMBERED that on this 8th day of September, 2016, before me, the undersigned, a notary public in and for the County and State aforesaid, came **GRANT MERRITT**, managing member of **BLACKHAWK DEVELOPMENT, LLC,** a Kansas Limited Liability Company, who is personally known to me to be the same person who executed the within instrument of writing, and such person duly acknowledged the execution of the same on behalf of **BLACKHAWK DEVELOPMENT, LLC.**

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

Notary Public

My Appointment Expires:
3-17-20

(SEAL)

NOTARY PUBLIC STATE OF KANSAS
TINA L. WEISHAAR
NOTARY PUBLIC
STATE OF KANSAS
My App. Exp.

EXHIBIT A

BLACKHAWK PERMANENT UTILITY EASEMENTS AND DRAINAGE EASEMENT

UTILITY EASEMENT 1

All that part of the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, described as follows: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 174.38 feet to the point of beginning; thence North 2 degrees 24 minutes 49 seconds West, a distance of 922.84 feet to the Southeast corner of the right-of-way for Harrison Street as dedicated by Blackhawk Plaza, a subdivision of land in the City of Spring Hill, Miami County, Kansas; thence Northerly along the East right-of-way line of said Harrison Street, along a curve to the right, having a radius of 1470.00 feet, a central angle of 0 degrees 44 minutes 57 seconds, a distance of 19.22 feet to a point on the South right-of-way line of 226th Street; thence North 88 degrees 15 minutes 26 seconds East, along the South right-of-way line of said 226th Street, a distance of 580.88 feet to a point on the West right-of-way line of Franklin Street; thence South 1 degree 44 minutes 34 seconds East, along said West right-of-way line of Franklin Street, a distance of 25.00 feet; thence South 88 degrees 15 minutes 26 seconds West, parallel with and 25.00 feet South of said South right-of-way line of 226th Street, a distance of 70.00 feet; thence North 1 degree 44 minutes 34 seconds West, a distance of 10.00 feet; thence South 88 degrees 15 minutes 26 seconds West, parallel with and 15.00 feet South of said South right-of-way line of 226th Street, a distance of 495.82 feet; thence Southerly along a curve to the left, having a radius of 1455.00 feet, an initial tangent bearing of South 2 degrees 15 minutes 16 seconds East, a central angle of 0 degrees 09 minutes 33 seconds East, a distance of 4.04 feet; thence South 2 degrees 24 minutes 49 seconds East, a distance of 907.88 feet; thence North 87 degrees 43 minutes 39 seconds East, parallel with and 15.00 feet North of the South line of the Northwest Quarter of said Section 26, a distance of 555.18 feet to a point on said West right-of-way line of Franklin Street; thence South 1 degrees 44 minutes 34 seconds East, along said West right-of-way line of Franklin Street, a distance of 15.00 feet to a point on the South line of the Northwest Quarter of said Section 26; thence South 87 degrees 43 minutes 39 seconds West, along the South line of the Northwest Quarter of said Section 26, a distance of 570.00 feet to the point of beginning, containing 31,644 square feet, more or less.

UTILITY EASEMENT 2

A tract of land 15.00 feet in width in the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, being 7.50 feet on each side of the following described centerline: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 379.36 feet; thence North 2 degrees 16 minutes 21 seconds West, a distance of 95.17 feet to the point of beginning; thence North 75 degrees 55 minutes 58 seconds East, a distance of 60.49 feet; thence South 79 degrees 05 minutes 33 seconds East, a distance of 48.89 feet to the point of termination, containing 1,641 square feet, more or less.

UTILITY EASEMENT 3

A tract of land 10.00 feet in width in the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, being 5.00 feet on each side of the following described centerline: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 174.38 feet; thence North 2 degrees 24 minutes 49 seconds West, a distance of 261.07 feet to the point of beginning; thence North 87 degrees 38 minutes 21 seconds East, a distance of 86.29 feet; thence North 53 degrees 38 minutes 21 seconds East, a distance of 102.95 feet to the point of termination, containing 1,892 square feet, more or less.

UTILITY EASEMENT 4

A tract of land 15.00 feet in width in the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, being 7.50 feet on each side of the following described centerline: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 174.38 feet; thence North 2 degrees 24 minutes 49 seconds West, a distance of 345.62 feet to the point of beginning; thence South 42 degrees 00 minutes 16 seconds East, a distance of 67.77 feet to a point hereinafter referred to as Point A; thence North 63 degrees 48 minutes 11 seconds East, a distance of 125.24 feet; thence North 57 degrees 56 minutes 17 seconds East, a distance of 125.56 feet to a point hereinafter referred to as Point B; thence North 51 degrees 16 minutes 49 seconds East, a distance of 111.31 feet; thence North 88 degrees 15 minutes 33 seconds East, a distance of 109.50 feet; thence North 13 degrees 41 minutes 04 seconds East, a distance of 87.86 feet to the point of termination…and also, a tract of land 15.00 feet in width, being 7.50 feet on each side of the following described centerline; beginning at said Point A; thence South 28 degrees 39 minutes 39 seconds East, a distance of 79.67 feet to the point of termination…and also, a tract of land 10.00 feet in width, being 5.00 feet on each side of the following described centerline; beginning at said Point B; thence South 33 degrees 31 minutes 17 seconds East, a distance of 78.00 feet to the point of termination, containing 11,202 square feet, more or less.

UTILITY EASEMENT 5

A tract of land 10.00 feet in width in the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, being 5.00 feet on each side of the following described centerline: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 174.38 feet; thence North 2 degrees 24 minutes 49 seconds West, a distance of 447.32 feet to the point of beginning; thence North 58 degrees 20 minutes 08 seconds East, a distance of 171.12 feet to the point of termination, containing 1,711 square feet, more or less.

UTILITY EASEMENT 6

A tract of land 10.00 feet in width in the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, being 5.00 feet on each side of the following described centerline: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 174.38 feet; thence North 2

degrees 24 minutes 49 seconds West, a distance of 662.65 feet to the point of beginning; thence South 89 degrees 19 minutes 04 seconds East, a distance of 70.00 feet to the point of termination, containing 700 square feet, more or less.

UTILITY EASEMENT 7
A tract of land 10.00 feet in width in the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, being 5.00 feet on each side of the following described centerline: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 174.38 feet; thence North 2 degrees 24 minutes 49 seconds West, a distance of 702.08 feet to the point of beginning; thence North 88 degrees 15 minutes 44 seconds East, a distance of 92.00 feet to the point of termination, containing 700 square feet, more or less.

UTILITY EASEMENT 8
A tract of land 10.00 feet in width in the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, being 5.00 feet on each side of the following described centerline: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 744.38 feet to the Southwest corner of the right-of-way for Franklin Street as dedicated by Blackhawk Estates III, a subdivision of land in the City of Spring Hill, Miami County, Kansas; thence North 1 degree 44 minutes 34 seconds West, along the West right-of-way line of said Franklin Street, a distance of 296.34 feet to the point of beginning; thence South 88 degrees 15 minutes 26 seconds West, a distance of 98.00 feet to the point of termination, containing 980 square feet, more or less.

UTILITY EASEMENT 9
A tract of land 10.00 feet in width in the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, being 5.00 feet on each side of the following described centerline: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 744.38 feet to the Southwest corner of the right-of-way for Franklin Street as dedicated by Blackhawk Estates III, a subdivision of land in the City of Spring Hill, Miami County, Kansas; thence North 1 degree 44 minutes 34 seconds West, along the West right-of-way line of said Franklin Street, a distance of 568.03 feet to the point of beginning; thence South 88 degrees 15 minutes 26 seconds West, a distance of 98.00 feet to the point of termination, containing 980 square feet, more or less.

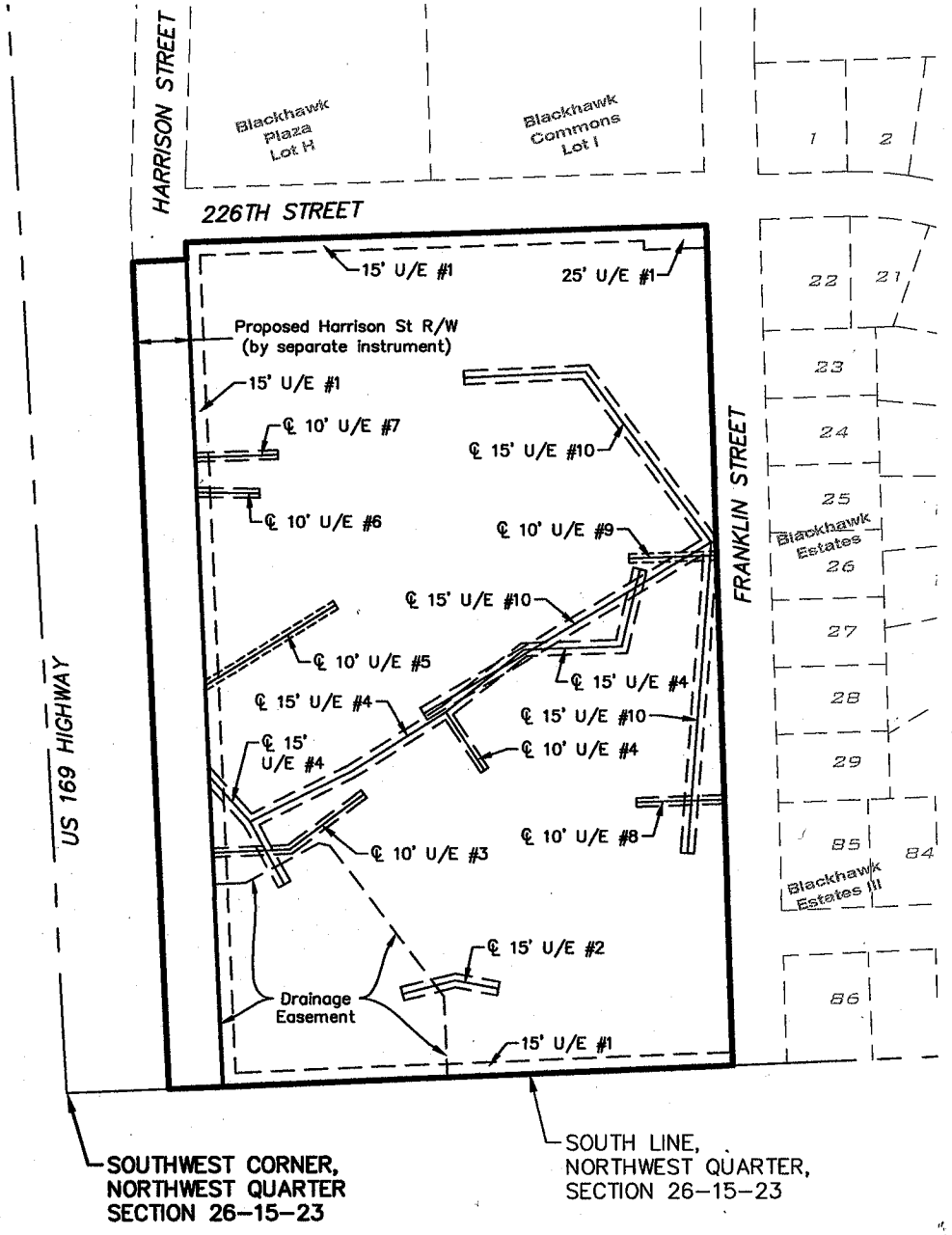
UTILITY EASEMENT 10
A tract of land 15.00 feet in width in the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, being 7.50 feet on each side of the following described centerline: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 744.38 feet to the Southwest corner of the right-of-way for Franklin Street as dedicated by Blackhawk Estates III, a subdivision of land in the City of Spring Hill, Miami County, Kansas; thence North 1 degree 44

minutes 34 seconds West, along the West right-of-way line of said Franklin Street, a distance of 583.43 feet to the point of beginning; thence South 88 degrees 15 minutes 26 seconds West, a distance of 5.54 feet to a point hereinafter referred to as Point A; thence South 59 degrees 16 minutes 07 seconds West, a distance of 373.50 feet to the point of termination...and also, a tract of land 15.00 feet of width, being 7.50 feet on each side of the following described centerline; beginning at said Point A; thence North 36 degrees 23 minutes 34 seconds West, a distance of 235.22 feet; thence South 87 degrees 35 minutes 27 seconds West, a distance of 136.09 feet to the point of termination...and also, a tract of land 15.00 feet of width, being 7.50 feet on each side of the following described centerline; beginning at said Point A; thence South 4 degrees 28 minutes 25 seconds West, a distance of 347.37 feet to the point of termination, containing 16,209 square feet, more or less.

DRAINAGE EASEMENT

All that part of the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, described as follows: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 174.38 feet to the point of beginning; thence North 2 degrees 24 minutes 49 seconds West, a distance of 225.62 feet; thence North 87 degrees 51 minutes 12 seconds East, a distance of 34.82 feet; thence North 61 degrees 36 minutes 22 seconds East, a distance of 93.49 feet; thence South 77 degrees 37 minutes 35 seconds East, a distance of 12.51 feet; thence South 37 degrees 07 minutes 31 seconds East, a distance of 211.39 feet; thence South 2 degrees 16 minutes 21 seconds East, a distance of 90.07 feet to a point on the South line of the Northwest Quarter of said Section 26; thence South 87 degrees 43 minutes 39 seconds West, along the South line of the Northwest Quarter of said Section 26, a distance of 251.12 feet to the point of beginning, containing 53,022 square feet, more or less.

EXHIBIT B
EASEMENT MAP



SCALE: 1"=200'

CIVIL ENGINEERS
LAND SURVEYORS - LAND PLANNERS

122 N. WATER STREET
OLATHE, KANSAS 66061
PHONE: (913) 764-1076
FAX: (913) 764-8635

14 W. PEORIA
PAOLA, KANSAS 66071
PHONE: (913) 557-1076
FAX: (913) 557-6904

EXHIBIT B
UTILITY EASEMENT 1

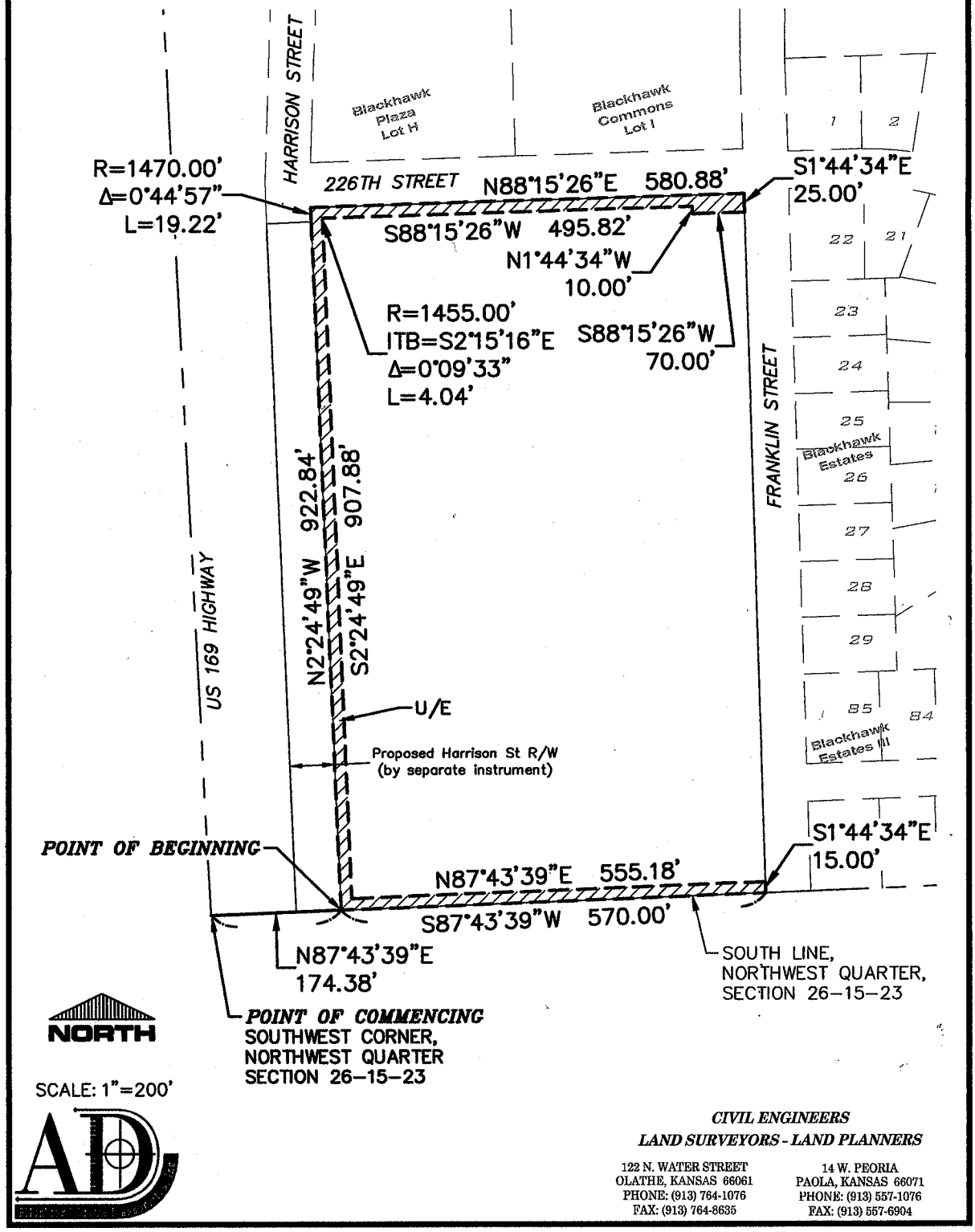


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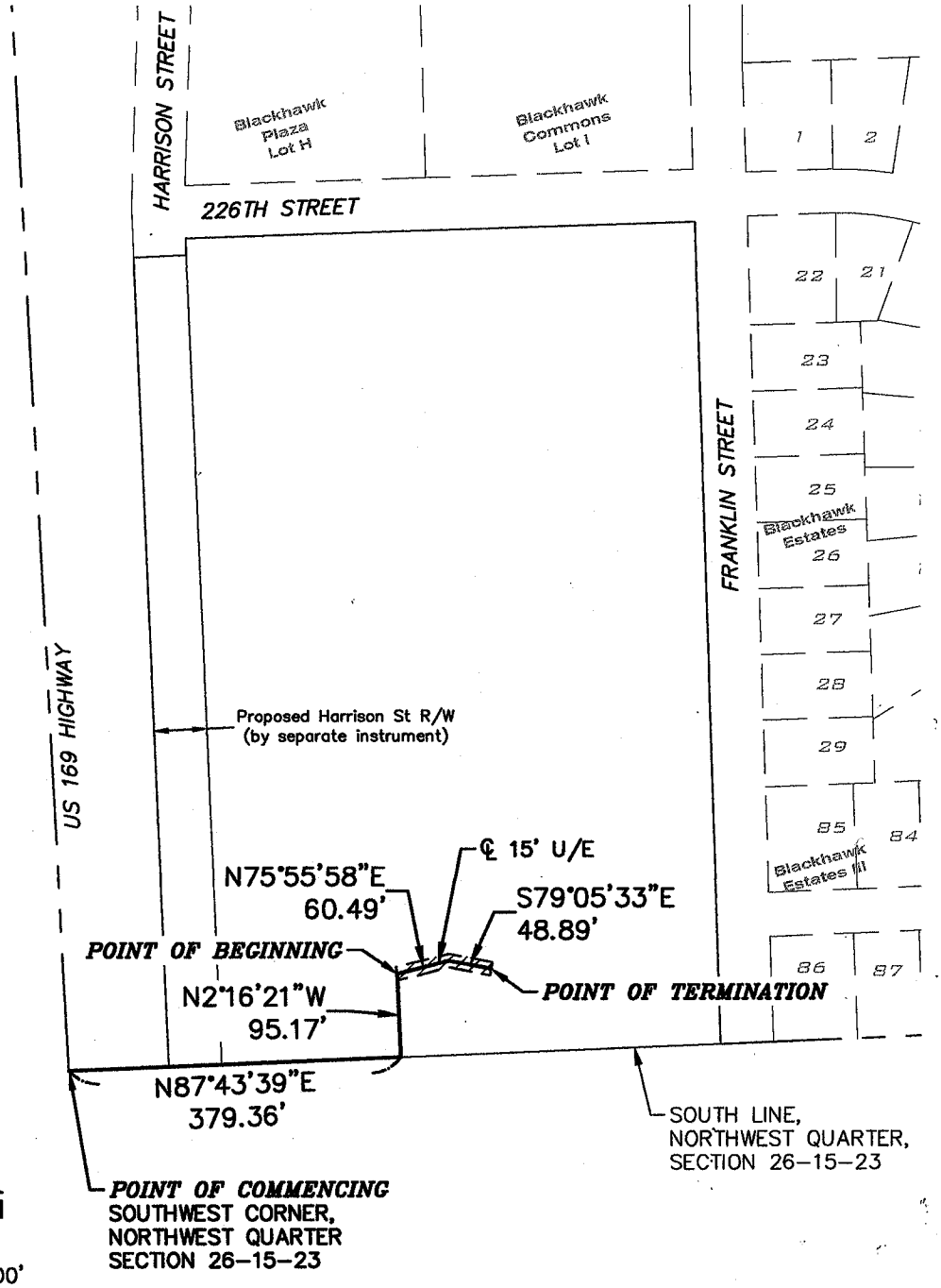
EXHIBIT B
UTILITY EASEMENT 2



NORTH

SCALE: 1"=200'

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EXHIBIT B
UTILITY EASEMENT 3

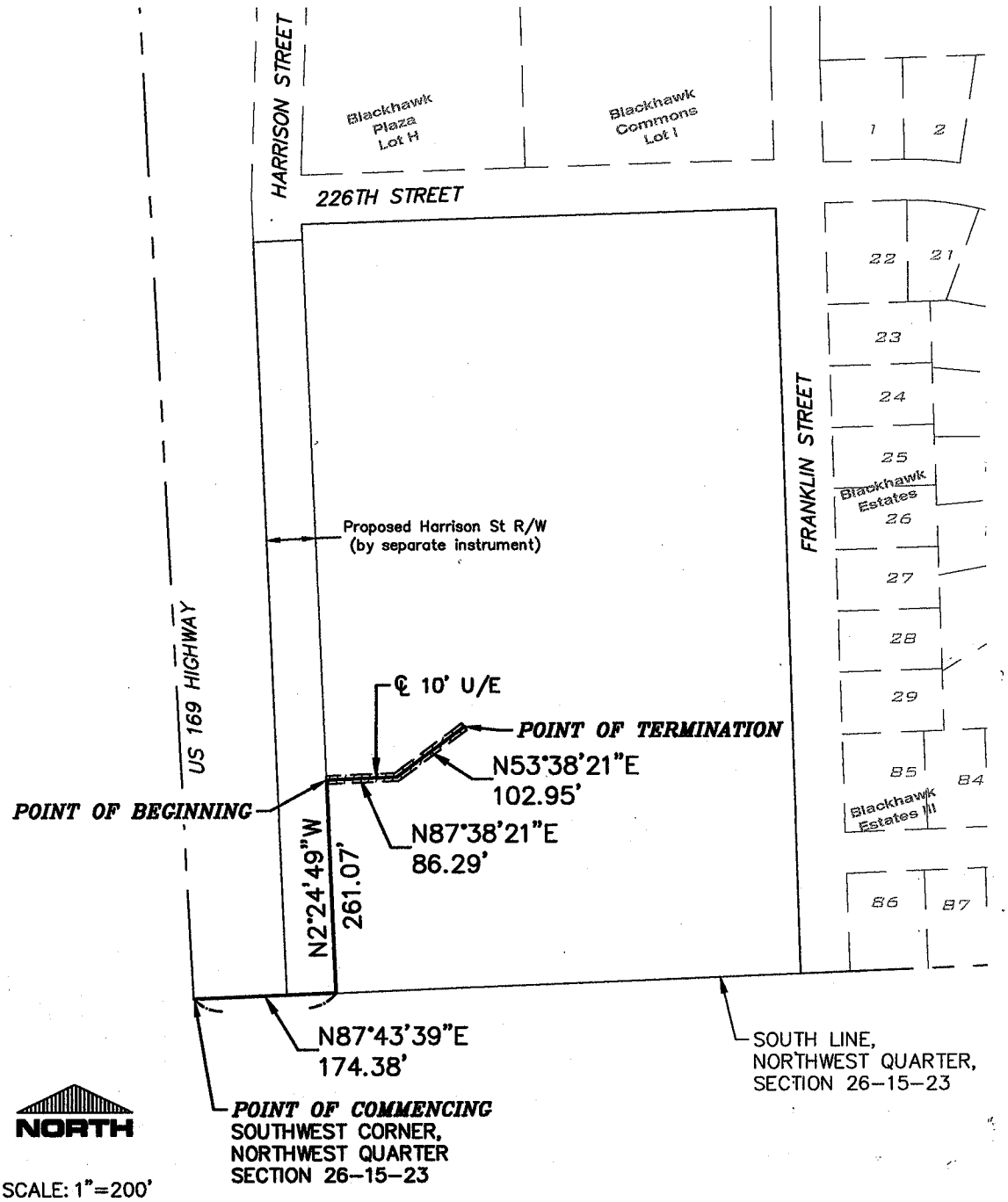

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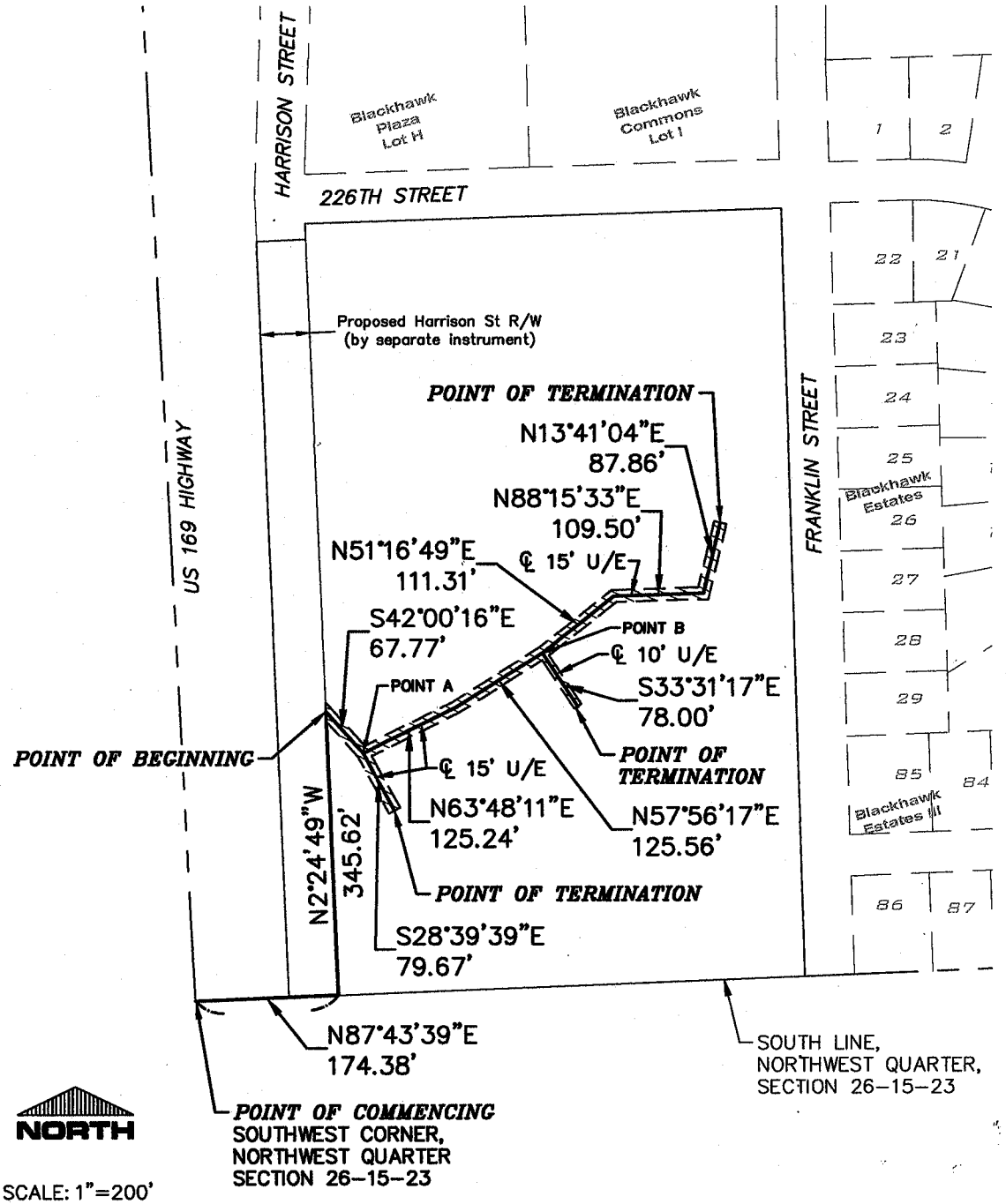
EXHIBIT B
UTILITY EASEMENT 4



NORTH

SCALE: 1"=200'

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EXHIBIT B
UTILITY EASEMENT 5

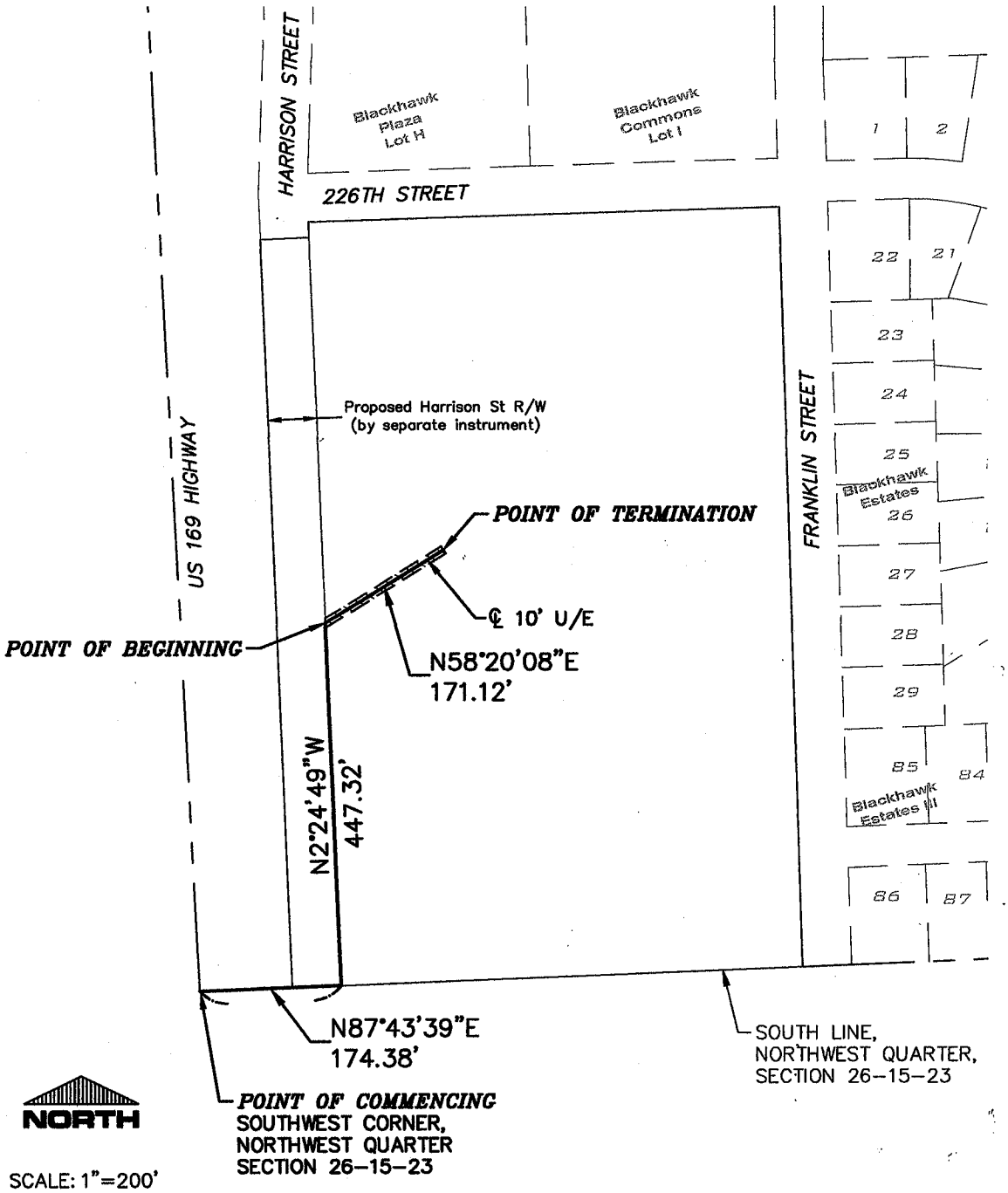

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EXHIBIT B
UTILITY EASEMENT 6

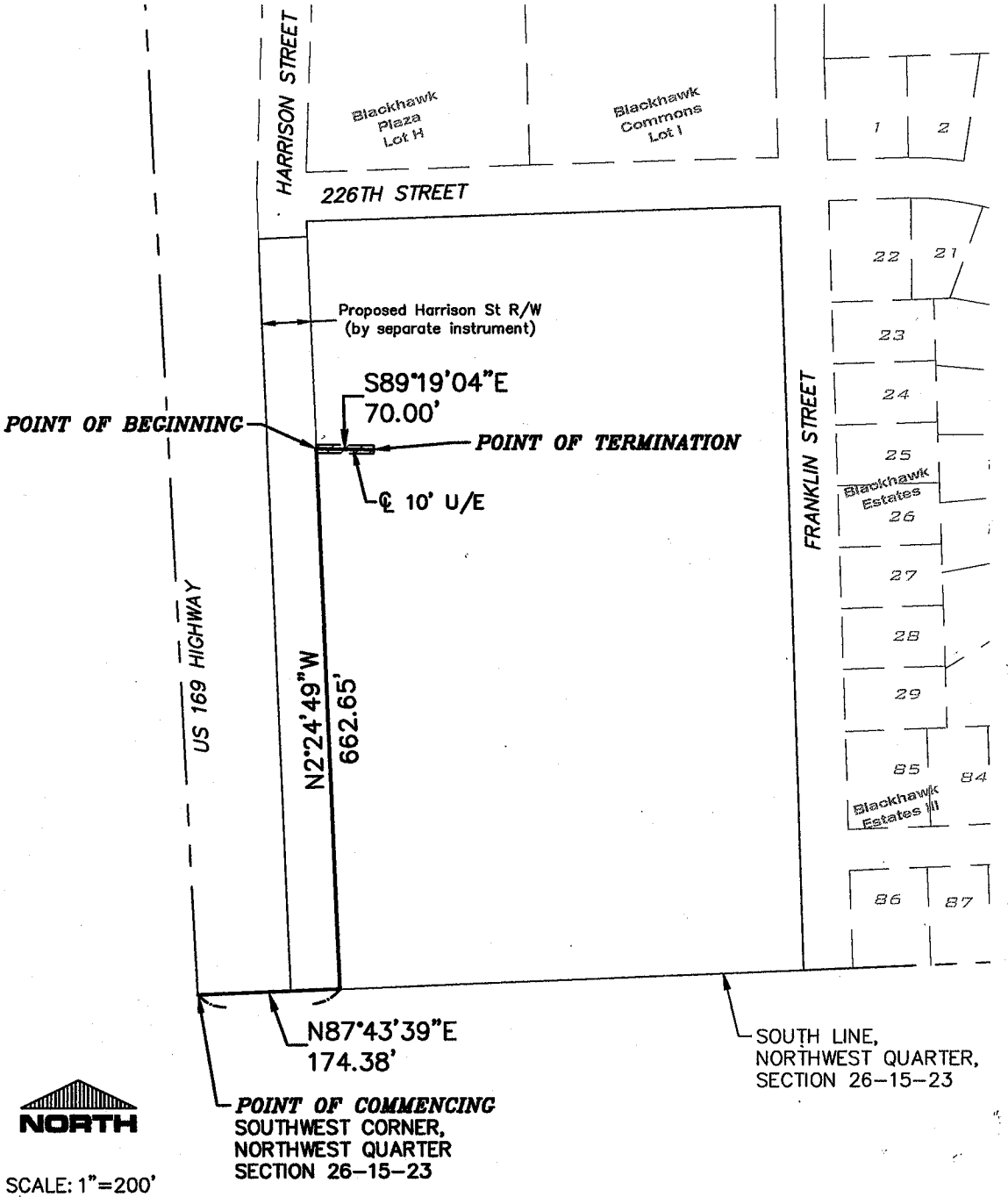

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EXHIBIT B
UTILITY EASEMENT 7

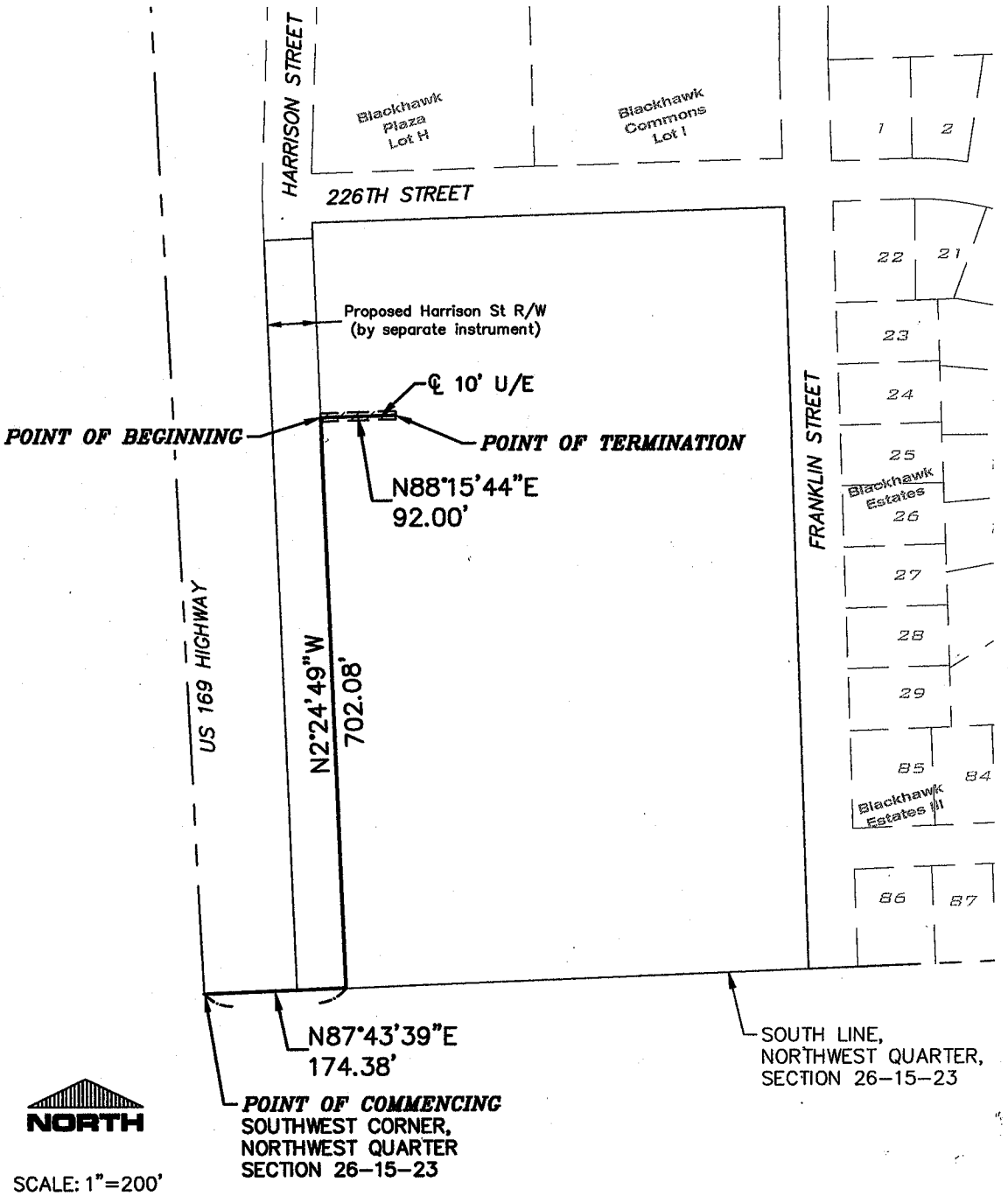

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EXHIBIT B
UTILITY EASEMENT 8

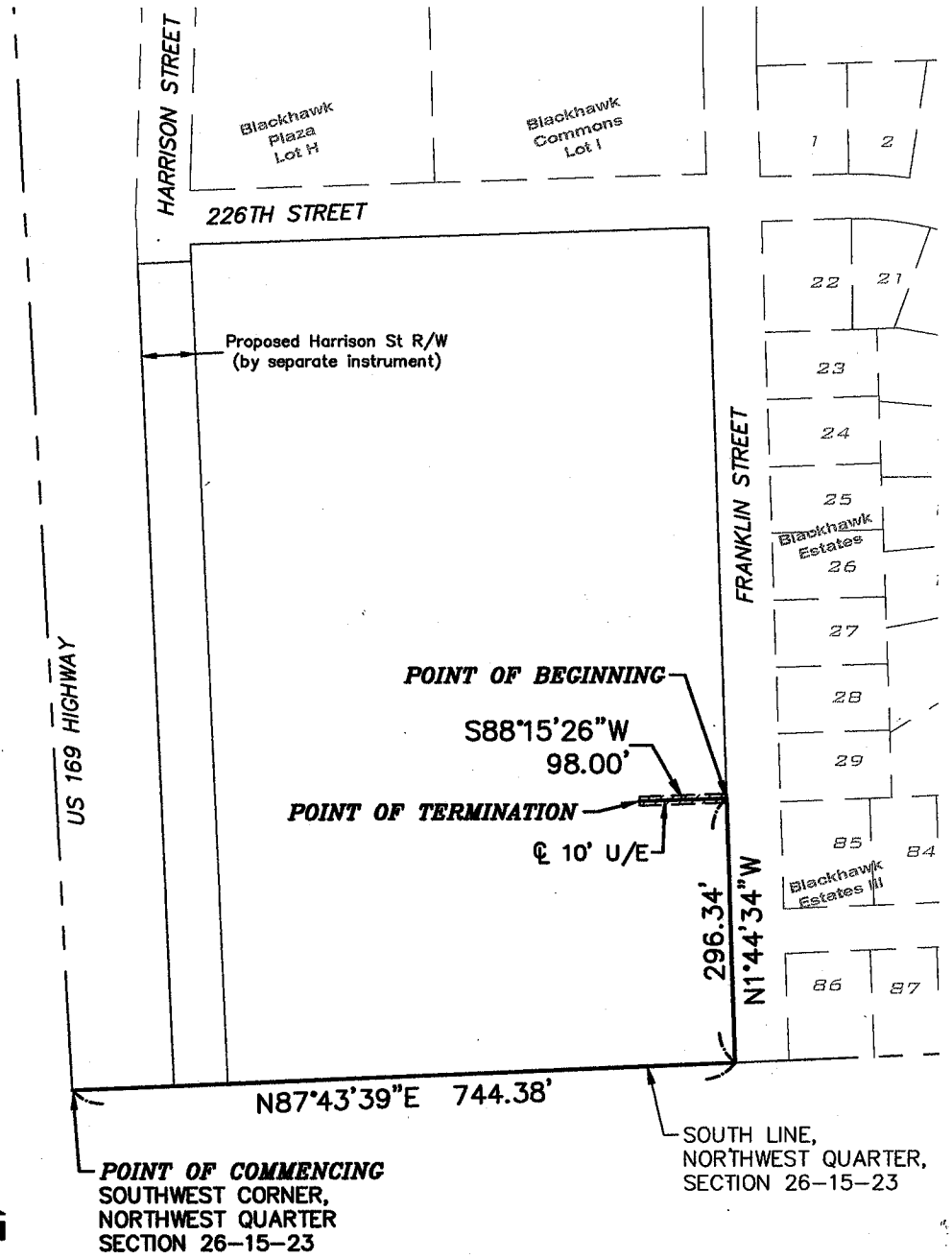

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EXHIBIT B
UTILITY EASEMENT 9

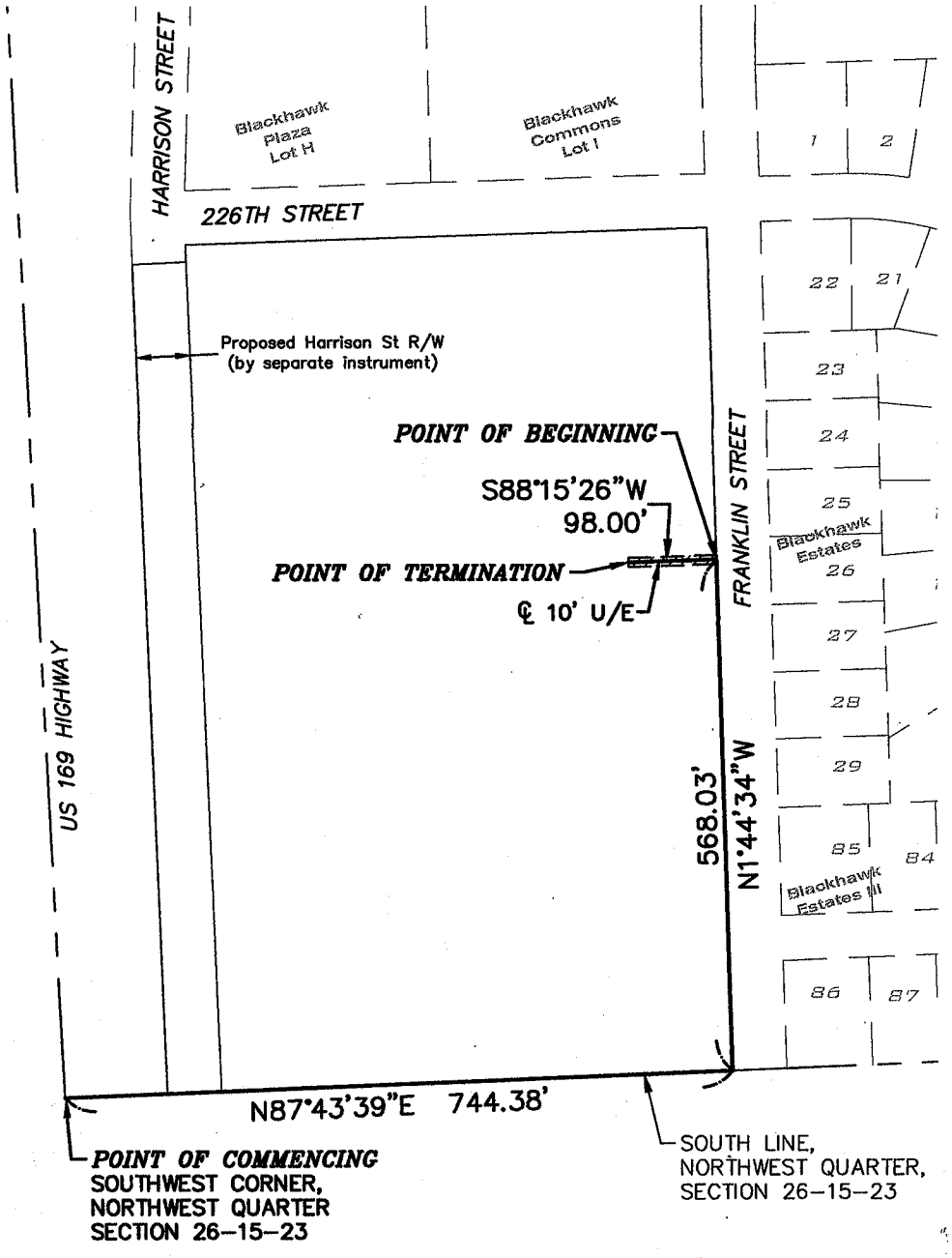

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EXHIBIT B
UTILITY EASEMENT 10

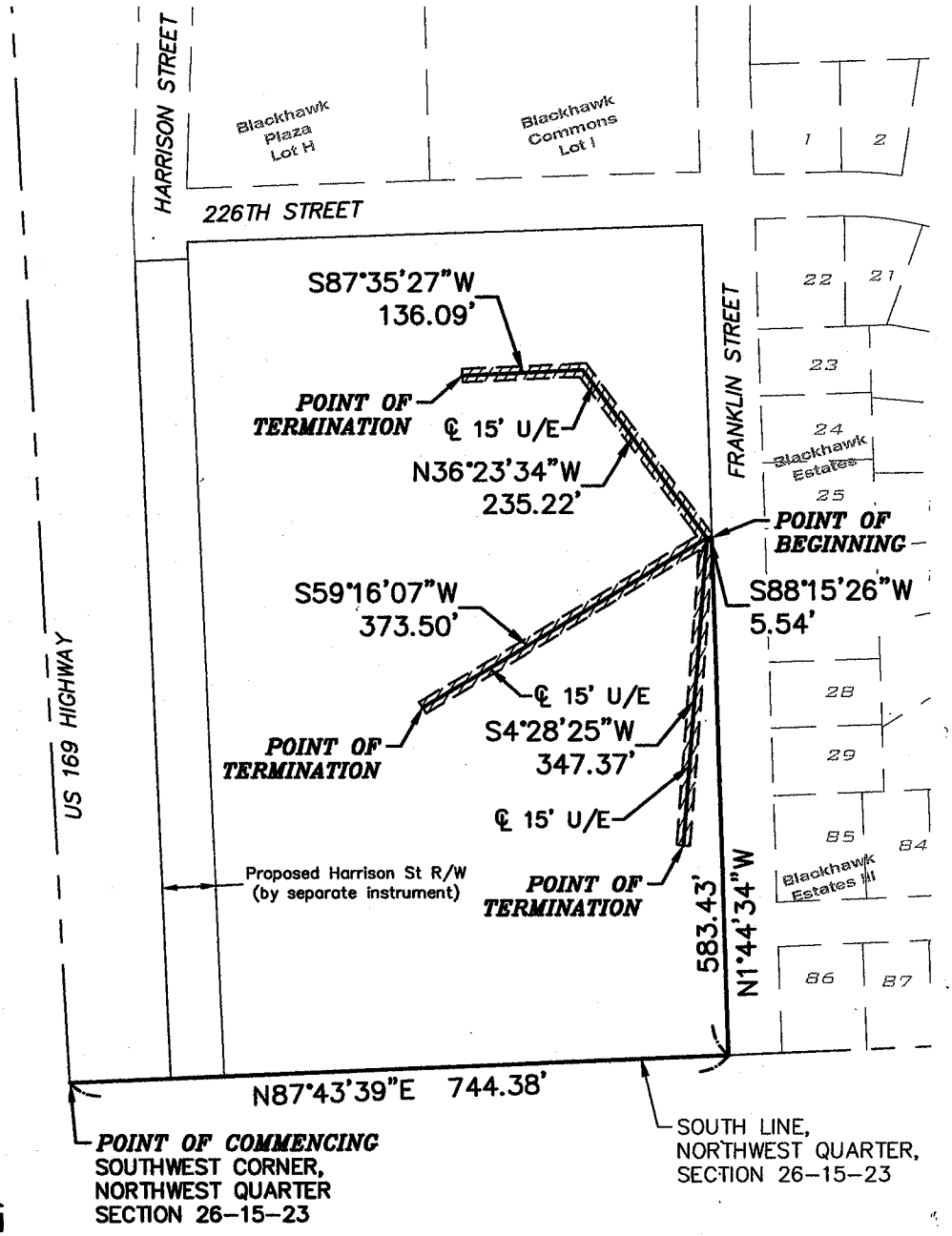

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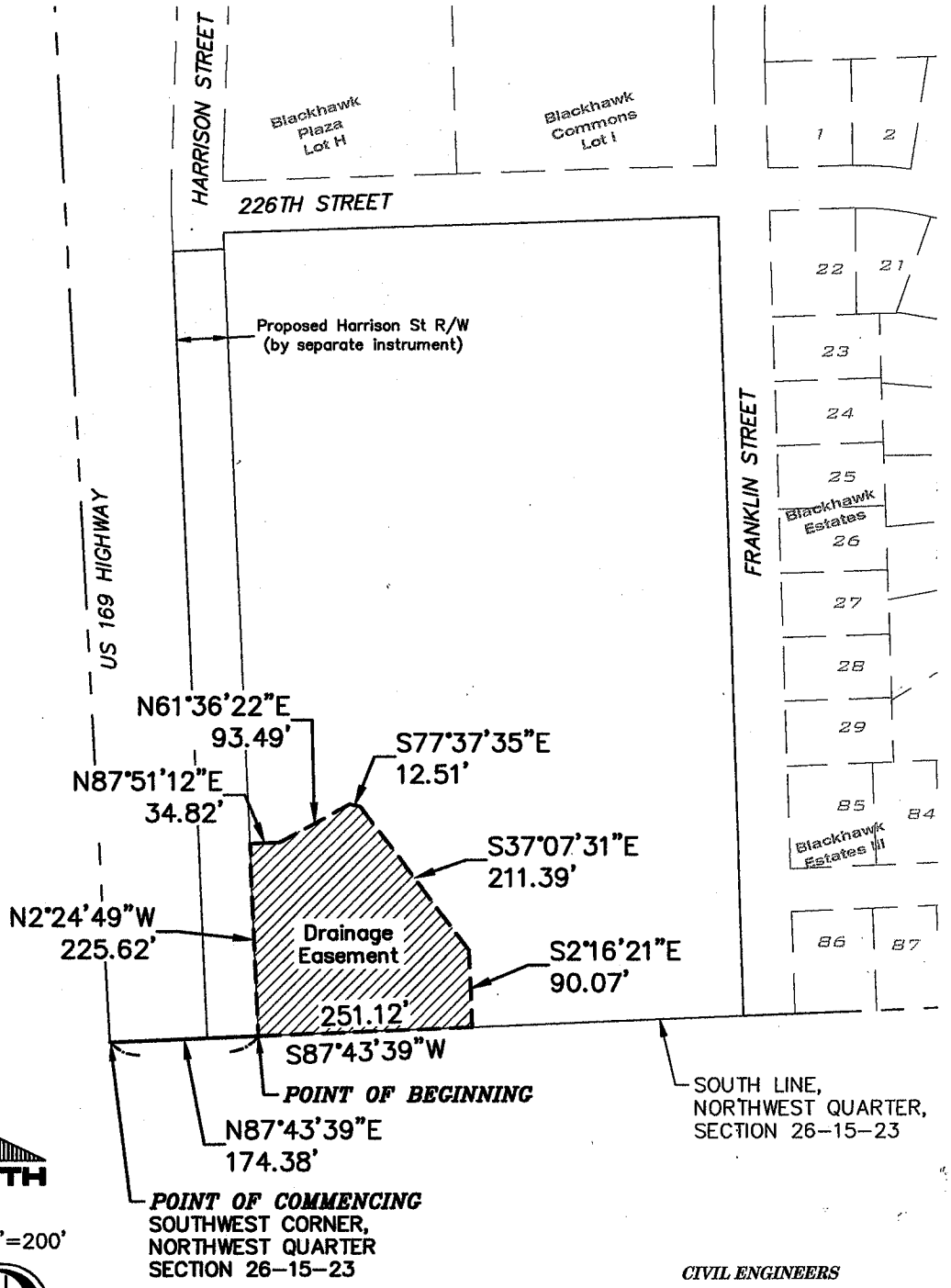
EXHIBIT B
DRAINAGE EASEMENT



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FAX: (913) 557-6904

Tract No.
Parcel No.
Address:

DEDICATION OF PUBLIC STREET

THIS AGREEMENT, made and entered into this 8 day of September, 2016, by and between **BLACKHAWK DEVELOPMENT, LLC,** a Kansas Limited Liability Company, P.O. Box 464, Spring Hill, Kansas 66083, hereinafter called Grantor, and the **CITY OF SPRING HILL,** a Municipal corporation, located in the Counties of Johnson and Miami, State of Kansas, hereinafter called Grantee.

WITNESSETH:

WHEREAS, the Grantor owns and has title to the following described property:

All that part of the Northwest Quarter of Section 26, Township 15, Range 23, now in the City of Spring Hill, Miami County, Kansas, described as follows: Commencing at the Southwest corner of the Northwest Quarter of said Section 26, thence North 87 degrees 44 minutes 25 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 114.38 feet to the point of beginning, said point being on the Easterly right of way line of US 169 Highway, thence North 2 degrees 24 minutes 49 seconds West, along said Easterly right of way line a distance of 922.51 feet [922.69 feet measured] thence North 87 degrees 35 minutes 11 seconds East, a distance of 60.00 feet, thence Northerly, along the Easterly right of way line of Harrison Street as now established, along a curve to the right having a radius of 1470.00 feet, an initial tangent bearing of North 2 degrees 24 minutes 49 seconds West, a central angle of 0 degrees 44 minutes 57 seconds, a distance of 19.22 feet, thence North 88 degrees 15 minutes 26 seconds East, along the Southerly right of way line of 226th Street as now established, a distance of 580.88 feet, thence South 1 degree 44 minutes 34 seconds East, along the Westerly right of way line of Franklin Street, as now established, a distance of 936.68 feet [936.72 feet measured] to a point on the South line of the Northwest Quarter of said Section 26, thence South 87 degrees 44 minutes 25 seconds West [South 87 degrees 43 minutes 39 seconds West measured], along the South line of the Northwest Quarter of said Section 26, a distance of 630.00 feet, to the point of beginning, in Miami County, Kansas.

NOW THEREFORE, for the consideration hereinafter described, the party hereto agrees as follows:

SECTION ONE
DEDICATION FOR PUBLIC STREET

In consideration of One and No/100 Dollars ($1.00) in hand paid and other valuable consideration, receipt of which is hereby acknowledged, the Grantor hereby grants and dedicates to the Grantee, for public use forever, with the right to ingress and egress hereto, the following described property to be used for public street, storm drainage and/or utility purposes. Grantor does hereby covenant and promise to the Grantee that the described real estate is free, clear, discharged and unencumbered of and from all former and other grants, titles, charges, estates, judgments, taxes, assessments and encumbrances, of whatsoever nature and kind:

All that part of the Northwest Quarter of Section 26, Township 15 South, Range 23 East, in the City of Spring Hill, Miami County, Kansas, described as follows: Commencing at the Southwest corner of the Northwest Quarter of said Section 26; thence North 87 degrees 43 minutes 39 seconds East, along the South line of the Northwest Quarter of said Section 26, a distance of 114.38 feet to a point on the East right-of-way line of US 169 Highway, said point also being the point of beginning; thence North 2 degrees 24 minutes 49 seconds West, along said East right-of-way line of US 169 Highway, a distance of 922.69 feet to the Southeast corner of the right-of-way for Harrison Street as dedicated by Blackhawk Plaza, a subdivision of land in the City of Spring Hill, Miami County, Kansas; thence North 87 degrees 35 minutes 11 seconds East, along the Southerly line of said Blackhawk Plaza, a distance of 60.00 feet; thence South 2 degrees 24 minutes 49 seconds East, parallel with and 60.00 feet East of said East right-of-way line of US 169 Highway, a distance of 922.84 feet to the South line of the Northwest Quarter of said Section 26; thence South 87 degrees 43 minutes 39 seconds West, a distance of 60.00 feet to the point of beginning, containing 55,366 square feet or 1.27 acres, more or less.

SECTION TWO
WARRANTY OF TITLE

Grantor covenants that he is the owner of the premises and has the right, title and capacity to convey the property described herein.

SECTION THREE
EFFECT OF AGREEMENT

This agreement shall be binding upon the heirs, legal representatives, successors and assigns of the party hereto.

IN WITNESS WHEREOF, the party hereto has executed this agreement the day and year first above written.

GRANTOR:
BLACKHAWK DEVELOPMENT, LLC
a Kansas Limited Liability Company

GRANT MERRITT – Managing Member

ACKNOWLEDGMENT

STATE OF KANSAS, COUNTY OF JOHNSON, SS:

BE IT REMEMBERED that on this 8th day of September, 2016, before me, the undersigned, a Notary Public in and for the County and State aforesaid, came **GRANT MERRITT,** managing member of **BLACKHAWK DEVELOPMENT, LLC,** who is personally known to me to be the same person who executed the within instrument of writing, and such person duly acknowledged the execution of the same on behalf of **BLACKHAWK DEVELOPMENT, LLC.**

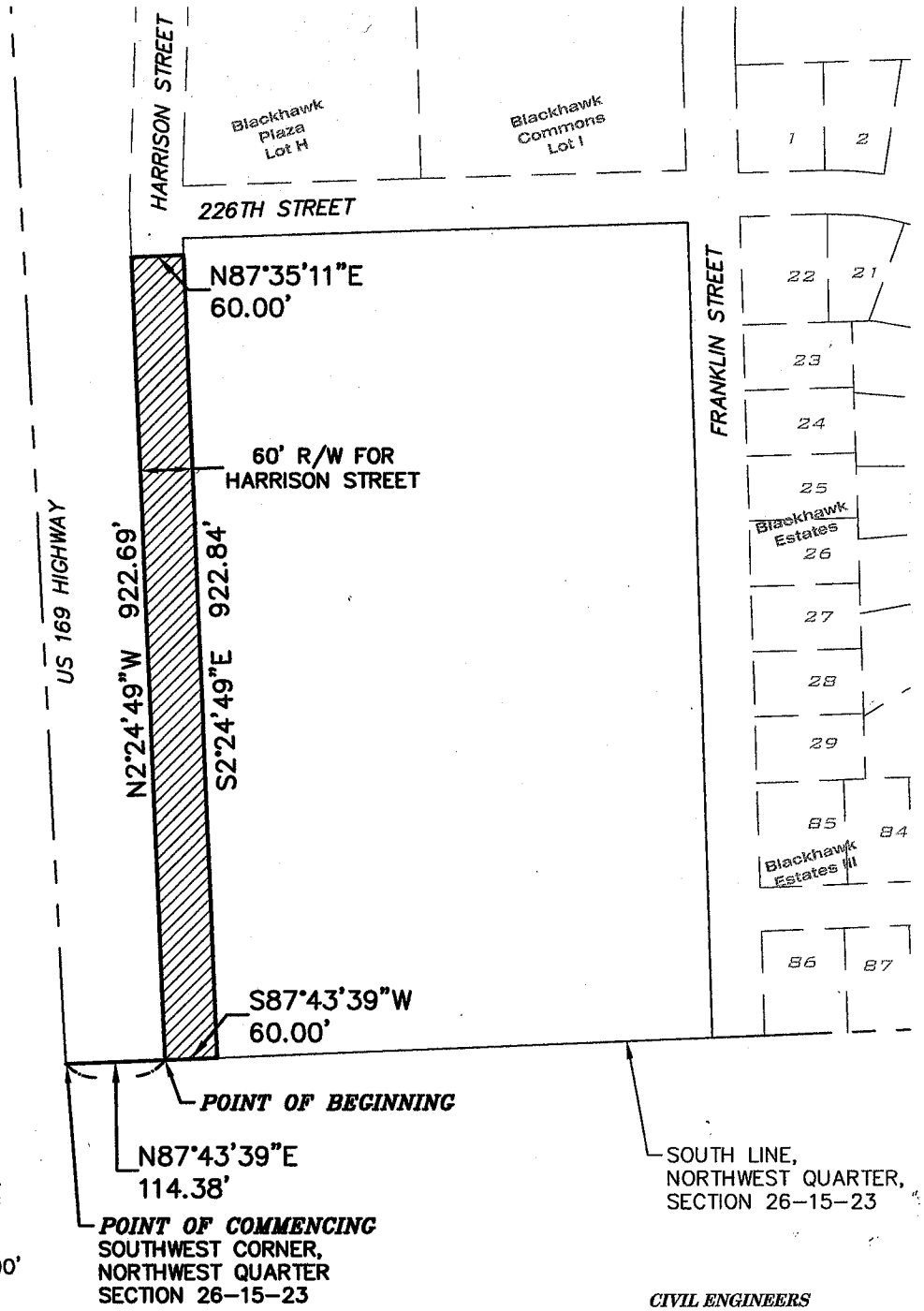
IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year last above written.

NOTARY PUBLIC

My Appointment Expires: 3/17/20

NOTARY PUBLIC STATE OF KANSAS
TINA L. WEISHAAR
NOTARY PUBLIC
STATE OF KANSAS
My App. Exp.

EXHIBIT B
HARRISON STREET RIGHT-OF-WAY



NORTH

SCALE: 1"=200'

Allenbrand-Drews & Associates, Inc.

CIVIL ENGINEERS
LAND SURVEYORS - LAND PLANNERS

122 N. WATER STREET
OLATHE, KANSAS 66061
PHONE: (913) 764-1076
FAX: (913) 764-8635

14 W. PEORIA
PAOLA, KANSAS 66071
PHONE: (913) 557-1076
FAX: (913) 557-6904

T:\DRAWINGS_31000\31308 Blackhawk Apt Phase 1\Easements\RW Exhibit.dwg Scale=1:1 Drawn September 07, 2016 - 9:14am By Matt

AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: GLENDA GERRITY, CITY CLERK
MEETING DATE: OCTOBER 13, 2016
DATE: OCTOBER 5, 2016

Consent Item: Consideration of Special Event Permit: Mother/Son Date Night, Spring Hill Recreation Commission (SHRC)

Background: The SHRC is sponsoring a Mother/Son Date Night on October 15, 2016 from 6:00pm – 8:00pm at the Spring Hill Civic Center Gymnasium. This event requires a Special Event Permit.

Analysis: The application and supporting documentation were received by the City Clerk's office. No issues were reported from the Spring Hill Public Works Dept., Spring Hill Police Dept. or Johnson County Fire District No. 2.

Legal Review: The certificate of insurance was approved by the Risk Manager.

Alternatives:
1. Approve the Special Event Permit
2. Deny the Special Event Permit

Funding Review or Budgetary Impact: There is no budgetary impact for this event.

Recommendation: Request to approve the Special Event Permit for the SHRC Mother/Son Date Night to be held on October 15, 2016 from 6:00pm – 8:00pm at the Spring Hill Civic Center Gymnasium.

Attachments: Application
Permit

RECEIVED

SEP 28 2016

CITY OF SPRING HILL, KS

SPECIAL EVENT APPLICATION

Name of Event: Mother/Son Date Night

Name of Business/Sponsor/Organization: Spring Hill Recreation Commission

Type of Event: Community Event

Address / Vicinity of Proposed Event /Route: Civic Center Gym

Application Date: 9-28-16 Start Date: 10-15-16 End Date: 10-15-16

Hours of Event: 6:00 - 8:00pm

APPLICANT / AUTHORIZED REPRESENTATIVE

Name: Erin Ritter

Address: 401 N Madison City: Spring Hill Zip: 66083

Phone: 913-592-2214 ext 102 Fax: _____ Email: erinr@springhillrec.org

PROPERTY OWNER

Name: _____

Address: _____ City: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

EVENT SUPERVISOR (If other than the applicant)

Name: _____

Address: _____ City: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

ATTACHMENTS INCLUDED:

____ List of Services requested to be provided by the City of Spring Hill
____ Site Plan showing the location of proposed activities and structures in relation to existing buildings, parking areas, streets and property lines.
____ Routes/Staging/Dispersal/Parking Plans
____ Flyer/Brochure/Advertisement of the event
____ If applicable, classification of dangerous and/or exotic animals
____ Sponsoring Agency's Certificate of Insurance
____ Operator's Certificate of Insurance
____ Completed Release

I UNDERSTAND THAT THE FACILITIES FOR THIS EVENT MUST BE INSPECTED PRIOR TO THE COMMENCEMENT OF OPERATION AND MUST CONFORM TO ALL REGULATIONS OF THE CITY OF SPRING HILL AS DESCRIBED IN THE SPRING HILL MUNICIPAL CODE TO INCLUDE BUT NOT LIMITED TO THE NATIONAL ELECTRICAL CODE. I UNDERSTAND THAT FAILURE TO COMPLY WITH THESE MAY RESULT IN PERMISSION TO OPERATE BEING WITHHELD UNTIL ALL CODES ARE MET.

Erin Ritter _____ 9/28/16 _____

APPLICANT'S SIGNATURE DATE

INDEMNIFICATION STATEMENT [Waiver of Liability]
INTERMEDIATE FORM:
COMPARATIVE FORM INDEMNITY OBLIGATION WITH DEFENSE OBLIGATION
To the fullest extent permitted by law,

Spring Hill Recreation Commission [hereafter referred to as OPERATOR and/or SPONSOR] shall indemnify, hold harmless and defend the city of Spring Hill, hereafter referred to as the CITY, and all of its appointed and elected officials, agents, officials and employees from and against all claims, damages, losses and expenses, including but not limited to reasonable attorneys' fees arising out of or resulting from the conduct or management of the Special Event, known as Mother/Son Date Night and any condition created in or about the Special Event or any accident, injury or damage whatsoever occurring in or at the Special Event, provided that any such claim, damage, loss or expense: (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including loss of use resulting there from, and (b) is caused in whole or in part by any alleged act or omission of the OPERATOR / SPONSOR or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether it is caused in part by the negligent act or omission of the CITY or any of its appointed and elected officials, agents, officials and employees. Notwithstanding the foregoing, the special event OPERATOR'S / SPONSOR'S obligation to indemnify the CITY or any of its appointed and elected officials, agents, officials and employees for any judgment, decree or arbitration award shall extend only to the percentage of negligence of the CITY in contributing to such claim, damage, loss and expense. In any and all claims against the CITY or any of its appointed and elected officials, agents, officials and employees, by any employee of the OPERATOR and/or SPONSOR, the indemnification obligation under this paragraph shall not be limited by any limitation on the amount or type of damages, compensation or benefits payable by or for OPERATOR and/or SPONSOR under workers compensation acts, disability benefit acts or other employee benefit acts. Such workers compensation policies or plans maintained on behalf of OPERATOR and/or SPONSOR shall waive subrogation against the CITY.

Date: 10/3/16

Joel Johnson
Board Chairman
Title

STATE OF Kansas)
) ss:
COUNTY OF Johnson)

BE IT REMEMBERED that on this 3rd day of October, 2016, before me, the undersigned, a notary public in and for the County and State aforesaid, came Joel Johnson (Name) Board Chairman (Official Capacity) of Spring Hill Rec Commission (Business/Sponsor/Organization) who is personally known to me to be the person who executed, as such officer, the within instrument on behalf of said entity and such person duly acknowledged the execution of the same to be the voluntary act and deed of said entity.

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

Jean Grob
Notary Public

My Commission Expires:
7/25/18

(SEAL)

NOTARY PUBLIC - State of Kansas
Jean M. Grob
My Appt. Expires 7/25/18

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/23/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER

The Reilly Company LLC
608 Delaware St.
P.O. Box 9
Leavenworth KS 66048-0009

CONTACT NAME: Shirley Phillips
PHONE (A/C, No, Ext): (913)682-1234 FAX (A/C, No): (913)682-8136
E-MAIL ADDRESS: shirley.phillips@reillyinsurance.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : West Bend Insurance Company	15350
INSURER B : AmTrust North America Inc.	15954
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

Spring Hill Recreation Commission
P.O. Box 26
401 N. Madison Street
Spring Hill KS 66083

COVERAGES CERTIFICATE NUMBER: 16-17 Master REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE / X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY / PRO-JECT / LOC OTHER:			NS5 2103046 02	7/1/2016	7/1/2017	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 200,000
							MED EXP (Any one person)	$ excluded
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS / SCHEDULED AUTOS X HIRED AUTOS / X NON-OWNED AUTOS			NS5 2103046 02	7/1/2016	7/1/2017	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
								$
A	UMBRELLA LIAB / X OCCUR EXCESS LIAB / CLAIMS-MADE DED / RETENTION $ 0			NS5 2103046 02	7/1/2016	7/1/2017	EACH OCCURRENCE	$ 2,000,000
							AGGREGATE	$ 2,000,000
								$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WWC3211946	7/1/2016	7/1/2017	X PER STATUTE / OTH-ER	
							E.L. EACH ACCIDENT	$ 500,000
							E.L. DISEASE - EA EMPLOYEE	$ 500,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Family Camping Night; Big Truck Event; Movie in the Park; Daffodil Days; and Fishing Derby. City of Spring Hill is as an additional insured as respects General Liablity with reference to the listed and non-listed events being held by Spring Hill Recreation Commission.

CERTIFICATE HOLDER

City of Spring Hill
401 N. Madison
Spring Hill, KS 66083

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Kevin O'Brien/SHIPHI Kevin O'Brien

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CALLING ALL HEROES!

Mother/Son Date Night

Saturday, October 15th
6:00-8:00pm
SH Civic Center Gym

Pizza

Music

SUPER MOM!

Games

Prizes

SHRC
www.springhillrec.org
913-592-2214

Register By October 7th

$30 per Couple $10 each Additional Son

We Thank Our Sponsors!

State Bank of Spring Hill

Pizza Hut

GREAT SOUTHERN BANK

COMFORT DESIGNS. HEATING AND AIR CONDITIONING, INC.

Cardinal BRUSH CORPORATION

CITY OF SPRING HILL, KANSAS
CERTIFICATE OF EVENT APPROVAL

Special Event: Mother/Son Date Night

Applicant: Erin Ritter

Sponsoring Organization: Spring Hill Recreation Commission

Event Supervisor: Erin Ritter

Contact Number: 913-592-2214 ext. 102

Date and Times of Event: Saturday, October 15, 2016 6:00pm – 8:00pm

Type of Event: Mother/Son Date Night

Location of Event: Spring Hill Civic Center Gymnasium, 401 N. Madison, Spring Hill, KS

Route (if applicable): N/A

Additional Comments or Conditions:

This form shall be in the possession of the event supervisor or their representative at the event site and shall be presented upon request to any officer of the Police Department prior to or during the event.

If Traffic Control assistance is required, it is the responsibility of the applicant/sponsor to make arrangements for traffic signs or personnel as directed by the City of Spring Hill Police Department, 913-592-2700, and Streets Department, 913-592-3317.

Failure to adhere to requirements of conditions contained herein will render this approval void.

The City of Spring Hill, Kansas, shall be held harmless from any liability resulting from the conduct of this event.

Issued by:

_____ Date: _____
Mayor

Attest:

_____
City Clerk

AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: GLENDA GERRITY, CITY CLERK
MEETING DATE: OCTOBER 13, 2016
DATE: OCTOBER 5, 2016

Consent Item: Consideration of Special Event Permit: Spooktacular, Spring Hill Recreation Commission (SHRC)

Background: The SHRC is sponsoring a Spooktacular on October 27, 2016 from 6:00pm – 8:30pm at the Spring Hill Civic Center. This event requires a Special Event Permit.

Analysis: The application and supporting documentation were received by the City Clerk's office. No issues were reported from the Spring Hill Public Works Dept., Spring Hill Police Dept. or Johnson County Fire District No. 2.

Legal Review: The certificate of insurance was approved by the Risk Manager.

Alternatives:
1. Approve the Special Event Permit
2. Deny the Special Event Permit

Funding Review or Budgetary Impact: There is no budgetary impact for this event.

Recommendation: Request to approve the Special Event Permit for the SHRC Spooktacular to be held on October 27, 2016 from 6:00pm – 8:30pm at the Spring Hill Civic Center.

Attachments: Application
Permit

SPECIAL EVENT APPLICATION

Name of Event: Spooktacular

Name of Business/Sponsor/Organization: Spring Hill Recreation Commission

Type of Event: Community Event

Address / Vicinity of Proposed Event /Route: Civic Center

Application Date: 9/28/16 Start Date: 10/27/16 End Date: 10/27/16

Hours of Event: 6-8:30pm

APPLICANT / AUTHORIZED REPRESENTATIVE

Name: Erin Ritter

Address: 401 N Madison City: Spring Hill Zip: 66083

Phone: 913-592-2214 ext 102 Fax: _____ Email: erinr@springhillrec.org

PROPERTY OWNER

Name: _____

Address: _____ City: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

EVENT SUPERVISOR (If other than the applicant)

Name: _____

Address: _____ City: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

ATTACHMENTS INCLUDED:

____ List of Services requested to be provided by the City of Spring Hill
____ Site Plan showing the location of proposed activities and structures in relation to existing buildings, parking areas, streets and property lines.
____ Routes/Staging/Dispersal/Parking Plans
____ Flyer/Brochure/Advertisement of the event
____ If applicable, classification of dangerous and/or exotic animals
____ Sponsoring Agency's Certificate of Insurance
____ Operator's Certificate of Insurance
____ Completed Release

I UNDERSTAND THAT THE FACILITIES FOR THIS EVENT MUST BE INSPECTED PRIOR TO THE COMMENCEMENT OF OPERATION AND MUST CONFORM TO ALL REGULATIONS OF THE CITY OF SPRING HILL AS DESCRIBED IN THE SPRING HILL MUNICIPAL CODE TO INCLUDE BUT NOT LIMITED TO THE NATIONAL ELECTRICAL CODE. I UNDERSTAND THAT FAILURE TO COMPLY WITH THESE MAY RESULT IN PERMISSION TO OPERATE BEING WITHHELD UNTIL ALL CODES ARE MET.

Erin Ritter _____ 9/28/16 _____

APPLICANT'S SIGNATURE DATE

INDEMNIFICATION STATEMENT [Waiver of Liability]
INTERMEDIATE FORM:
COMPARATIVE FORM INDEMNITY OBLIGATION WITH DEFENSE OBLIGATION
To the fullest extent permitted by law,

Spring Hill Recreation Commission [hereafter referred to as OPERATOR and/or SPONSOR] shall indemnify, hold harmless and defend the city of Spring Hill, hereafter referred to as the CITY, and all of its appointed and elected officials, agents, officials and employees from and against all claims, damages, losses and expenses, including but not limited to reasonable attorneys' fees arising out of or resulting from the conduct or management of the Special Event, known as Spook tacular and any condition created in or about the Special Event or any accident, injury or damage whatsoever occurring in or at the Special Event, provided that any such claim, damage, loss or expense: (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including loss of use resulting there from, and (b) is caused in whole or in part by any alleged act or omission of the OPERATOR / SPONSOR or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether it is caused in part by the negligent act or omission of the CITY or any of its appointed and elected officials, agents, officials and employees. Notwithstanding the foregoing, the special event OPERATOR'S / SPONSOR'S obligation to indemnify the CITY or any of its appointed and elected officials, agents, officials and employees for any judgment, decree or arbitration award shall extend only to the percentage of negligence of the CITY in contributing to such claim, damage, loss and expense. In any and all claims against the CITY or any of its appointed and elected officials, agents, officials and employees, by any employee of the OPERATOR and/or SPONSOR, the indemnification obligation under this paragraph shall not be limited by any limitation on the amount or type of damages, compensation or benefits payable by or for OPERATOR and/or SPONSOR under workers compensation acts, disability benefit acts or other employee benefit acts. Such workers compensation policies or plans maintained on behalf of OPERATOR and/or SPONSOR shall waive subrogation against the CITY.

Date: 10/3/16

Joel Johnson
Board Chairman
Title

STATE OF Kansas)
) ss:
COUNTY OF Johnson)

BE IT REMEMBERED that on this 3rd day of October, 2016, before me, the undersigned, a notary public in and for the County and State aforesaid, came Joel Johnson (Name) Board Chairman (Official Capacity) of Spring Hill Rec Commission (Business/Sponsor/Organization), who is personally known to me to be the person who executed, as such officer, the within instrument on behalf of said entity and such person duly acknowledged the execution of the same to be the voluntary act and deed of said entity.

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

Jean Grob
Notary Public

My Commission Expires:
7/25/18

(SEAL)

NOTARY PUBLIC - State of Kansas
Jean M. Grob
My Appt. Expires 7/25/18

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/23/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER

The Reilly Company LLC
608 Delaware St.
P.O. Box 9
Leavenworth KS 66048-0009

CONTACT NAME: Shirley Phillips
PHONE (A/C, No, Ext): (913)682-1234 FAX (A/C, No): (913)682-8136
E-MAIL ADDRESS: shirley.phillips@reillyinsurance.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : West Bend Insurance Company	15350
INSURER B : AmTrust North America Inc.	15954
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

Spring Hill Recreation Commission
P.O. Box 26
401 N. Madison Street
Spring Hill KS 66083

COVERAGES CERTIFICATE NUMBER: 16-17 Master REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE / X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY / PRO-JECT / LOC OTHER:			NS5 2103046 02	7/1/2016	7/1/2017	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 200,000
							MED EXP (Any one person)	$ excluded
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS / SCHEDULED AUTOS X HIRED AUTOS / X NON-OWNED AUTOS			NS5 2103046 02	7/1/2016	7/1/2017	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
								$
A	UMBRELLA LIAB / X OCCUR EXCESS LIAB / CLAIMS-MADE DED / RETENTION $ 0			NS5 2103046 02	7/1/2016	7/1/2017	EACH OCCURRENCE	$ 2,000,000
							AGGREGATE	$ 2,000,000
								$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WWC3211946	7/1/2016	7/1/2017	X PER STATUTE / OTH-ER	
							E.L. EACH ACCIDENT	$ 500,000
							E.L. DISEASE - EA EMPLOYEE	$ 500,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Family Camping Night; Big Truck Event; Movie in the Park; Daffodil Days; and Fishing Derby. City of Spring Hill is as an additional insured as respects General Liablity with reference to the listed and non-listed events being held by Spring Hill Recreation Commission.

CERTIFICATE HOLDER

City of Spring Hill
401 N. Madison
Spring Hill, KS 66083

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Kevin O'Brien/SHIPHI Kevin O'Brien

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Spooktacular

SHRC

www.springhillrec.org

913-592-2214

Thursday, October 27th

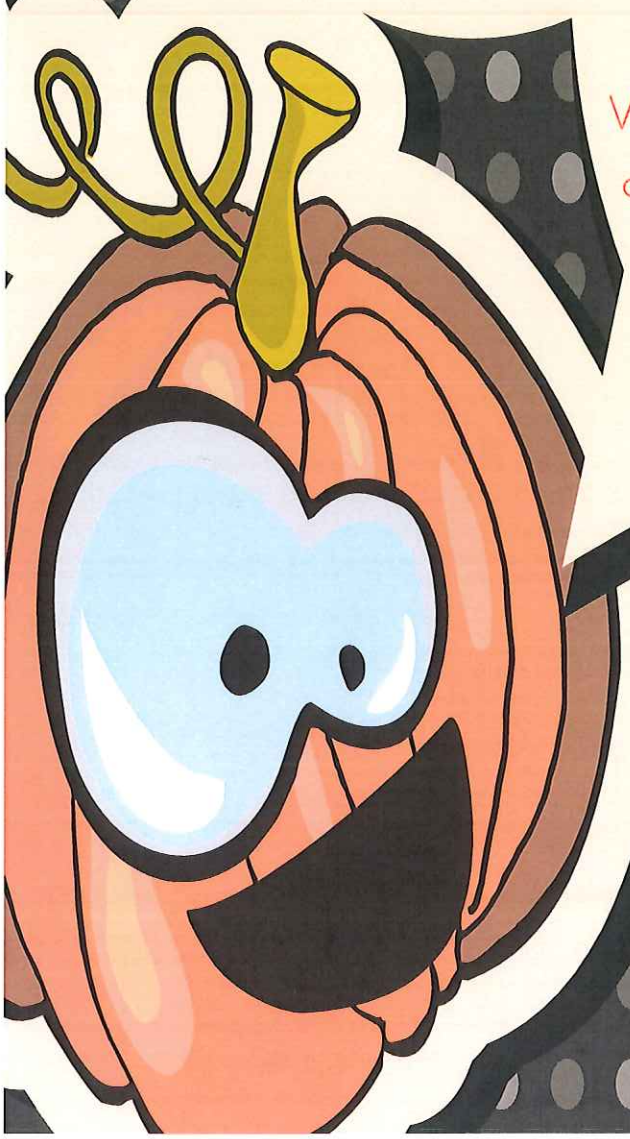
6:00-8:30pm

SH Civic Center

Visit booths for candy and fun activities!

Wear your costume!

Check out the stage, face painting, balloon animals, and cotton candy!



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Cardinal Brush Corporation

Niffie Printing Inc.
Full Service Print Provider With You In Mind!

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Spa & Tanning
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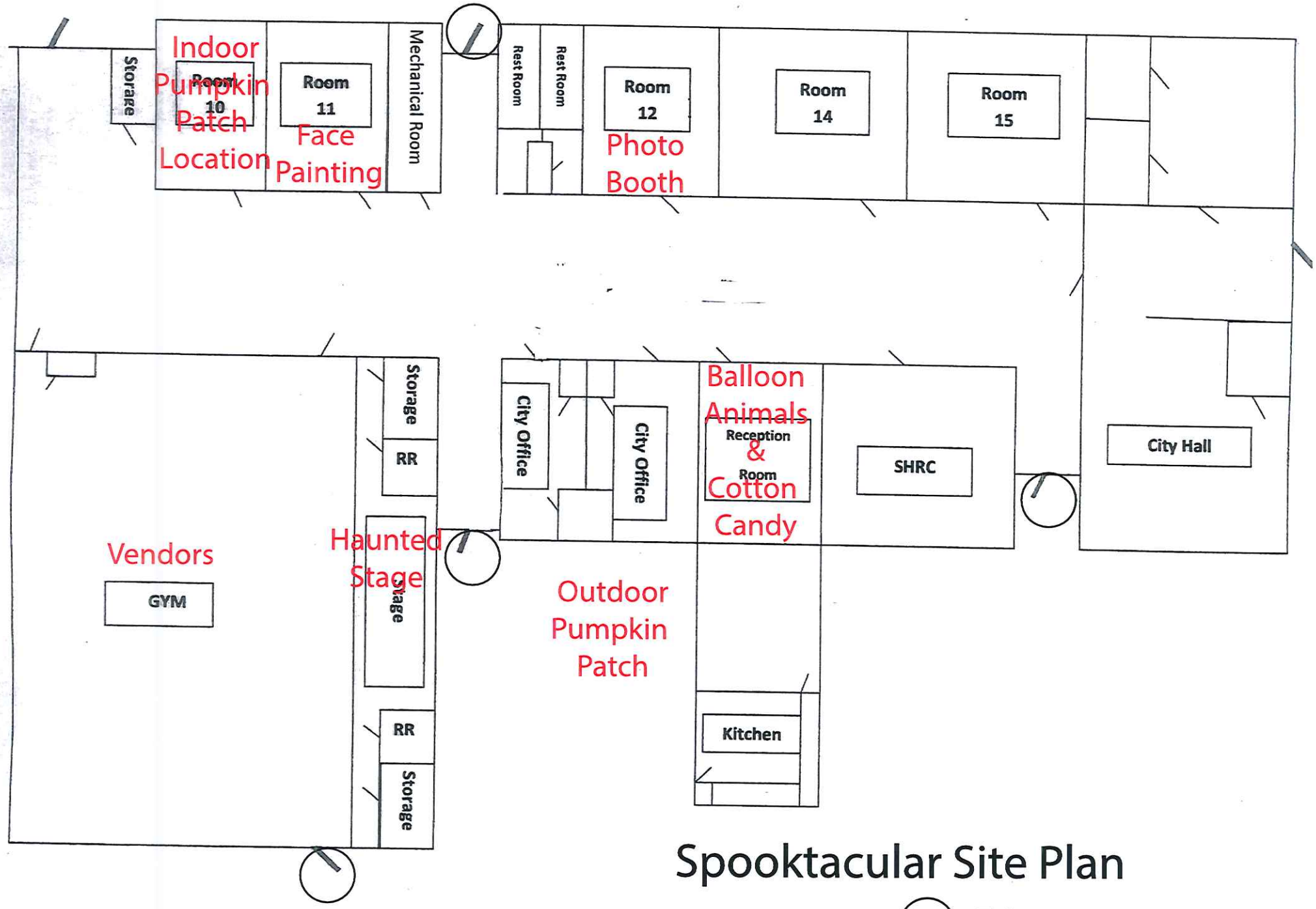
516 N. Webster • Spring Hill, KS 66083 • 913.592.5022

Great Southern Bank

Comfort Designs
Heating and Air Conditioning, Inc.

Spring Hill Chamber of Commerce

Whitesell Optometry
Vision Source



Spooktacular Site Plan

=Exit

CITY OF SPRING HILL, KANSAS
CERTIFICATE OF EVENT APPROVAL

Special Event: Spooktacular

Applicant: Erin Ritter

Sponsoring Organization: Spring Hill Recreation Commission

Event Supervisor: Erin Ritter

Contact Number: 913-592-2214 ext. 102

Date and Times of Event: Thursday, October 27, 2016 6:00pm – 8:30pm

Type of Event: Community Event

Location of Event: Spring Hill Civic Center, 401 N. Madison, Spring Hill, KS

Route (if applicable): N/A

Additional Comments or Conditions:

This form shall be in the possession of the event supervisor or their representative at the event site and shall be presented upon request to any officer of the Police Department prior to or during the event.

If Traffic Control assistance is required, it is the responsibility of the applicant/sponsor to make arrangements for traffic signs or personnel as directed by the City of Spring Hill Police Department, 913-592-2700, and Streets Department, 913-592-3317.

Failure to adhere to requirements of conditions contained herein will render this approval void.

The City of Spring Hill, Kansas, shall be held harmless from any liability resulting from the conduct of this event.

Issued by:

_____ Date: _____
Mayor

Attest:

_____
City Clerk

AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: GLENDA GERRITY, CITY CLERK
MEETING DATE: OCTOBER 13, 2016
DATE: OCTOBER 5, 2016

Consent Item: Consideration of Special Event Permit: Family Movie Night, Spring Hill Recreation Commission (SHRC)

Background: The SHRC is sponsoring a Family Movie Night on November 18, 2016 from 6:00pm – 9:00pm at the Spring Hill Civic Center Gymnasium. This event requires a Special Event Permit.

Analysis: The application and supporting documentation were received by the City Clerk's office. No issues were reported from the Spring Hill Public Works Dept., Spring Hill Police Dept. or Johnson County Fire District No. 2.

Legal Review: The certificate of insurance was approved by the Risk Manager.

Alternatives:
1. Approve the Special Event Permit
2. Deny the Special Event Permit

Funding Review or Budgetary Impact: There is no budgetary impact for this event.

Recommendation: Request to approve the Special Event Permit for the SHRC Family Movie Night to be held on November 18, 2016 from 6:00pm – 9:00pm at the Spring Hill Civic Center Gymnasium.

Attachments: Application
Permit

SPECIAL EVENT APPLICATION

Name of Event: Family Movie Night

Name of Business/Sponsor/Organization: Spring Hill Recreation Commission

Type of Event: Community Event

Address / Vicinity of Proposed Event /Route: Civic Center Gym

Application Date: 9/28/16 Start Date: 11/18/16 End Date: 11/18/16

Hours of Event: 6-9pm

APPLICANT / AUTHORIZED REPRESENTATIVE

Name: Erin Ritter

Address: 401 N Madison City: Spring Hill Zip: 66083

Phone: 913-592-2214 ext 102 Fax: _____ Email: erinr@springhillrec.org

PROPERTY OWNER

Name: _____

Address: _____ City: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

EVENT SUPERVISOR (If other than the applicant)

Name: _____

Address: _____ City: _____ Zip: _____

Phone: _____ Fax: _____ Email: _____

ATTACHMENTS INCLUDED:

____ List of Services requested to be provided by the City of Spring Hill
____ Site Plan showing the location of proposed activities and structures in relation to existing buildings, parking areas, streets and property lines.
____ Routes/Staging/Dispersal/Parking Plans
____ Flyer/Brochure/Advertisement of the event
____ If applicable, classification of dangerous and/or exotic animals
____ Sponsoring Agency's Certificate of Insurance
____ Operator's Certificate of Insurance
____ Completed Release

I UNDERSTAND THAT THE FACILITIES FOR THIS EVENT MUST BE INSPECTED PRIOR TO THE COMMENCEMENT OF OPERATION AND MUST CONFORM TO ALL REGULATIONS OF THE CITY OF SPRING HILL AS DESCRIBED IN THE SPRING HILL MUNICIPAL CODE TO INCLUDE BUT NOT LIMITED TO THE NATIONAL ELECTRICAL CODE. I UNDERSTAND THAT FAILURE TO COMPLY WITH THESE MAY RESULT IN PERMISSION TO OPERATE BEING WITHHELD UNTIL ALL CODES ARE MET.

Erin Ritter _____ 9/28/16 _____

APPLICANT'S SIGNATURE DATE

INDEMNIFICATION STATEMENT [Waiver of Liability]
INTERMEDIATE FORM:
COMPARATIVE FORM INDEMNITY OBLIGATION WITH DEFENSE OBLIGATION
To the fullest extent permitted by law,

Spring Hill Recreation Commission [hereafter referred to as OPERATOR and/or SPONSOR] shall indemnify, hold harmless and defend the city of Spring Hill, hereafter referred to as the CITY, and all of its appointed and elected officials, agents, officials and employees from and against all claims, damages, losses and expenses, including but not limited to reasonable attorneys' fees arising out of or resulting from the conduct or management of the Special Event, known as Family Movie Night and any condition created in or about the Special Event or any accident, injury or damage whatsoever occurring in or at the Special Event, provided that any such claim, damage, loss or expense: (a) is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, including loss of use resulting there from, and (b) is caused in whole or in part by any alleged act or omission of the OPERATOR / SPONSOR or anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether it is caused in part by the negligent act or omission of the CITY or any of its appointed and elected officials, agents, officials and employees. Notwithstanding the foregoing, the special event OPERATOR'S / SPONSOR'S obligation to indemnify the CITY or any of its appointed and elected officials, agents, officials and employees for any judgment, decree or arbitration award shall extend only to the percentage of negligence of the CITY in contributing to such claim, damage, loss and expense. In any and all claims against the CITY or any of its appointed and elected officials, agents, officials and employees, by any employee of the OPERATOR and/or SPONSOR, the indemnification obligation under this paragraph shall not be limited by any limitation on the amount or type of damages, compensation or benefits payable by or for OPERATOR and/or SPONSOR under workers compensation acts, disability benefit acts or other employee benefit acts. Such workers compensation policies or plans maintained on behalf of OPERATOR and/or SPONSOR shall waive subrogation against the CITY.

Date: 10/3/16

Joel Johnson
Board Chairman
Title

STATE OF Kansas)
) ss:
COUNTY OF Johnson)

BE IT REMEMBERED that on this 3rd day of October, 2016, before me, the undersigned, a notary public in and for the County and State aforesaid, came Joel Johnson (Name) Board Chairman (Official Capacity) of Spring Hill Rec Commission (Business/Sponsor/Organization) who is personally known to me to be the person who executed, as such officer, the within instrument on behalf of said entity and such person duly acknowledged the execution of the same to be the voluntary act and deed of said entity.

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

Jean Grob
Notary Public

My Commission Expires:
7/25/18

(SEAL)

NOTARY PUBLIC - State of Kansas
Jean M. Grob
My Appt. Expires 7/25/18

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 6/23/2016

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER

The Reilly Company LLC
608 Delaware St.
P.O. Box 9
Leavenworth KS 66048-0009

CONTACT NAME: Shirley Phillips
PHONE (A/C, No, Ext): (913)682-1234 FAX (A/C, No): (913)682-8136
E-MAIL ADDRESS: shirley.phillips@reillyinsurance.com

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : West Bend Insurance Company	15350
INSURER B : AmTrust North America Inc.	15954
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED

Spring Hill Recreation Commission
P.O. Box 26
401 N. Madison Street
Spring Hill KS 66083

COVERAGES CERTIFICATE NUMBER: 16-17 Master REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
A	X COMMERCIAL GENERAL LIABILITY CLAIMS-MADE / X OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY / PRO-JECT / LOC OTHER:			NS5 2103046 02	7/1/2016	7/1/2017	EACH OCCURRENCE	$ 1,000,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 200,000
							MED EXP (Any one person)	$ excluded
							PERSONAL & ADV INJURY	$ 1,000,000
							GENERAL AGGREGATE	$ 2,000,000
							PRODUCTS - COMP/OP AGG	$ 2,000,000
								$
A	AUTOMOBILE LIABILITY X ANY AUTO ALL OWNED AUTOS / SCHEDULED AUTOS X HIRED AUTOS / X NON-OWNED AUTOS			NS5 2103046 02	7/1/2016	7/1/2017	COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
							BODILY INJURY (Per person)	$
							BODILY INJURY (Per accident)	$
							PROPERTY DAMAGE (Per accident)	$
								$
A	UMBRELLA LIAB / X OCCUR EXCESS LIAB / CLAIMS-MADE DED / RETENTION $ 0			NS5 2103046 02	7/1/2016	7/1/2017	EACH OCCURRENCE	$ 2,000,000
							AGGREGATE	$ 2,000,000
								$
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y / N: N (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	N / A		WWC3211946	7/1/2016	7/1/2017	X PER STATUTE / OTH-ER	
							E.L. EACH ACCIDENT	$ 500,000
							E.L. DISEASE - EA EMPLOYEE	$ 500,000
							E.L. DISEASE - POLICY LIMIT	$ 500,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

RE: Family Camping Night; Big Truck Event; Movie in the Park; Daffodil Days; and Fishing Derby. City of Spring Hill is as an additional insured as respects General Liablity with reference to the listed and non-listed events being held by Spring Hill Recreation Commission.

CERTIFICATE HOLDER

City of Spring Hill
401 N. Madison
Spring Hill, KS 66083

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Kevin O'Brien/SHIPHI Kevin O'Brien

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Family Movie Night

Disney · PIXAR
FINDING DORY

Friday, November 18th
6:00pm
SH Civic Center Gym
Cost: FREE

Free Popcorn Provided

SHRC

Bring a chair or blanket and pillow!

www.springhillrec.org
913-592-2214

We Thank Our Sponsors

Spring Hill! Chamber of Commerce

Comfort Designs, Heating and Air Conditioning, Inc.

Neffie Printing Inc. Full Service Print Provider With You In Mind!

Great Southern Bank

Whitesell Optometry Vision Source

CITY OF SPRING HILL, KANSAS
CERTIFICATE OF EVENT APPROVAL

Special Event: Family Movie Night

Applicant: Erin Ritter

Sponsoring Organization: Spring Hill Recreation Commission

Event Supervisor: Erin Ritter

Contact Number: 913-592-2214 ext. 102

Date and Times of Event: Friday, November 18, 2016 6:00pm – 9:00pm

Type of Event: Family Movie Night

Location of Event: Spring Hill Civic Center Gymnasium, 401 N. Madison, Spring Hill, KS

Route (if applicable): N/A

Additional Comments or Conditions:

This form shall be in the possession of the event supervisor or their representative at the event site and shall be presented upon request to any officer of the Police Department prior to or during the event.

If Traffic Control assistance is required, it is the responsibility of the applicant/sponsor to make arrangements for traffic signs or personnel as directed by the City of Spring Hill Police Department, 913-592-2700, and Streets Department, 913-592-3317.

Failure to adhere to requirements of conditions contained herein will render this approval void.

The City of Spring Hill, Kansas, shall be held harmless from any liability resulting from the conduct of this event.

Issued by:

_____ Date: _____
Mayor

Attest:

_____
City Clerk

CITY OF SPRING HILL, KANSAS

APPROPRIATION ORDER
NUMBER 2016-10-13
PRESENTED: October 13, 2016

Be it ordered by the Governing Body of the City of Spring Hill that the above dated order is and shall be approved and all claims honored and paid by the City Clerk.

Section 1:
Claims paid prior to approval of the City Council as authorized by Ordinance 2001-08:

Accounts Payable:	$392,059.60
Payroll:	$60,603.81
	$452,663.41

Section 2:
Claims presented for approval of payment:

Accounts Payable:	
	$0.00

Total amount of the Appropriation Order: $452,663.41

INVOICE NO	DATE	VENDOR/DESCRIPTION	GL ACCT #	AMOUNT	CK #	CK DATE
		3CMA				
163009	9/30/2016	ANNUAL MEMBERSHIP DUES	01-01-7630	$ 390.00	78717	10/6/2016

		3CMA		$ 390.00		
		5 STAR PUMP & CONTROL				
1301	9/14/2016	EQUIPMENT MAINTENANCE	20-14-7670	$ 855.00	78718	10/6/2016
1302	9/14/2016	EQUIPMENT MAINTENANCE	25-15-7670	$ 5,800.00	78718	10/6/2016
				---		
		5 STAR PUMP & CONTROL		$ 6,655.00		
		AETNA				
PR20160923	9/23/2016	AETNA-457 PLAN	01-00-2035	$ 700.65	1283665	9/28/2016 E
PR20160923	9/23/2016	AETNA-457 PLAN	01-18-5120	$ 40.00	1283665	9/28/2016 E
PR20160923	9/23/2016	AETNA-457 PLAN	20-00-2035	$ 30.00	1283665	9/28/2016 E

		AETNA		$ 770.65		
		AFLAC				
10888	10/1/2016	BENEFITS	01-01-5120	$ 2,781.56	217109	9/20/2016
561822	9/1/2016	BENEFITS	01-01-5120	$ 2,781.56	217109	9/20/2016

		AFLAC		$ 5,563.12		
		ALAMAR UNIFORMS				
521726	8/30/2016	UNIFORMS	01-05-7680	$ 194.97	217110	9/20/2016

		ALAMAR UNIFORMS		$ 194.97		
		ALL-CITY MANAGEMENT				
44527	8/24/2016	CROSSING GUARD SERVICE	01-05-7742	$ 472.23	217111	9/20/2016

		ALL-CITY MANAGEMENT		$ 472.23		
		AMERICAN SWEEPING INC.				
69Q00004	9/26/2016	STREET SWEEPING	01-02-7140	$ 1,215.00	78719	10/6/2016
69f00004	9/15/2016	STREET SWEEPING	01-02-7140	$ 742.50	78719	10/6/2016

		AMERICAN SWEEPING INC.		$ 1,957.50		
		BECKY HENKLE				
2672	10/1/2016	DEPOSIT REFUND	01-00-2050	$ 75.00	78720	10/6/2016

		BECKY HENKLE		$ 75.00		
		BRENDA GARDUNO				
2789	9/17/2016	DEPOSIT REFUND	01-00-2050	$ 75.00	78721	10/6/2016

		BRENDA GARDUNO		$ 75.00		
		COPY CENTER OF TOPEKA				
132366	9/13/2016	OFFICE SUPPLIES	01-09-6110	$ 42.52	78722	10/6/2016

		COPY CENTER OF TOPEKA		$ 42.52		

INVOICE NO	DATE	VENDOR/DESCRIPTION	GL ACCT #	AMOUNT	CK #	CK DATE
		DIANA DEERING				
2016167	9/16/2016	COURT BOND	01-00-2200	$ 750.00	78723	10/6/2016

		DIANA DEERING		$ 750.00		
		DIGITAL CONNECTIONS INC				
39670	9/13/2016	CMPTR EQPT MNTCE/LICENSE	01-09-6130	$ 218.94	78724	10/6/2016
39670	9/13/2016	ADMINISTRATIVE SUPPLIES	01-13-6110	$ 68.27	78724	10/6/2016
39670	9/13/2016	EQUIPMENT MAINTENANCE	01-05-7670	$ 225.38	78724	10/6/2016

		DIGITAL CONNECTIONS INC		$ 512.59		
		E EDWARDS WORK WEAR				
9081662942	9/8/2016	PERSONAL PROTECTION EQUI	20-14-6370	$ 89.99	217112	9/20/2016

		E EDWARDS WORK WEAR		$ 89.99		
		FASTENAL COMPANY				
SKC1110532	6/25/2015	HAND EQUIPMENT AND TOOLS	01-02-6360	$ 94.65	217113	9/20/2016
SKC1113009	10/6/2015	EQUIPMENT MAINTENANCE	01-02-7670	$ 36.94	217113	9/20/2016
SKC1119607	8/31/2016	PARK SUPPLIES/MATERIALS	01-03-6330	$ 35.66	217113	9/20/2016
SKC1120077	8/23/2016	HAND TOOLS & EQUIPMENT	01-03-6360	$ 69.42	217113	9/20/2016
SKC1120268	8/31/2016	EQUIPMENT MAINTENANCE	01-02-7670	$ 32.11	217113	9/20/2016

		FASTENAL COMPANY		$ 268.78		
		FRY & ASSOCIATES INC				
FRYQ59111	9/13/2016	PARK SUPPLIES/MATERIALS	01-03-6330	$ 457.44	78725	10/6/2016

		FRY & ASSOCIATES INC		$ 457.44		
		GALLS/QUARTERMASTER				
6031854	9/9/2016	UNIFORMS	01-05-7680	$ 112.48	78726	10/6/2016

		GALLS/QUARTERMASTER		$ 112.48		
		GERKEN RENT-ALL				
328143-PA	9/15/2016	PARKS-MISCELLANEOUS	01-03-6090	$ 155.00	78727	10/6/2016

		GERKEN RENT-ALL		$ 155.00		
		GFOA				
160609	9/6/2016	LANDIS- GFOA DUES	01-11-7630	$ 160.00	78728	10/6/2016

		GFOA		$ 160.00		
		GRASS PAD, INC.				
135645	9/15/2016	CITY PARK FOUNTAIN	43-00-7220	$ 34.90	78729	10/6/2016
615859	9/15/2016	PARK SUPPLIES/MATERIALS	01-03-6330	$ 34.90	78729	10/6/2016

		GRASS PAD, INC.		$ 69.80		

INVOICE NO	DATE	VENDOR/DESCRIPTION	GL ACCT #	AMOUNT	CK #	CK DATE
		HELEN C BLACK				
2781	9/23/2016	DEPOSIT REFUND	01-00-2050	$ 50.00	78730	10/6/2016
		HOLLY SHUPERT				

		HOLLY SHUPERT		$ 50.00		
		HOLLY SHUPERT				
2791	9/25/2016	DEPOSIT REFUND	01-00-2050	$ 75.00	78731	10/6/2016

		HOLLY SHUPERT		$ 75.00		
		INTEGRITY LOCATING				
163107	7/31/2016	CONTRACTUAL SERVICES	20-14-7740	$ 726.68	217114	9/20/2016
163107	7/31/2016	CONTRACTUAL SERVICES	25-15-7740	$ 726.66	217114	9/20/2016
163107	7/31/2016	PROFESSIONAL SERVICES	01-02-7740	$ 726.66	217114	9/20/2016
163108	8/31/2016	CONTRACTUAL SERVICES	20-14-7740	$ 1,675.00	217114	9/20/2016
163108	8/31/2016	CONTRACTUAL SERVICES	25-15-7740	$ 1,675.00	217114	9/20/2016
163108	8/31/2016	PROFESSIONAL SERVICES	01-02-7740	$ 1,675.00	217114	9/20/2016

		INTEGRITY LOCATING		$ 7,205.00		
		INTERNAL REVENUE SERVICE				
PR20160923	9/23/2016	FED/FICA TAX	01-00-2020	$ 18,842.85	1283664	9/28/2016 E
PR20160923	9/23/2016	FED/FICA TAX	20-00-2020	$ 1,455.96	1283664	9/28/2016 E
PR20160923	9/23/2016	FED/FICA TAX	25-00-2020	$ 1,079.39	1283664	9/28/2016 E

		INTERNAL REVENUE SERVICE		$ 21,378.20		
		JANET McRAE				
2483	9/25/2016	DEPOSIT REFUND	01-00-2050	$ 150.00	78732	10/6/2016

		JANET McRAE		$ 150.00		
		JOHN NEVIUS				
2736	9/18/2016	DEPOSIT REFUND	01-00-2050	$ 75.00	78733	10/6/2016

		JOHN NEVIUS		$ 75.00		
		JOHNSON COUNTY TOPSOIL				
194058	9/15/2016	PARK SUPPLIES/MATERIALS	01-03-6330	$ 348.00	78734	10/6/2016

		JOHNSON COUNTY TOPSOIL		$ 348.00		
		KANSAS ONE-CALL				
6090461	9/30/2016	CONTRACTUAL SERVICES	20-14-7740	$ 13.59	78735	10/6/2016
6090461	9/30/2016	CONTRACTUAL SERVICES	25-15-7740	$ 13.58	78735	10/6/2016
6090461	9/30/2016	PROFESSIONAL SERVICES	01-02-7740	$ 13.58	78735	10/6/2016

		KANSAS ONE-CALL		$ 40.75		
		KANSAS PAYMENT CNTR				
PR20160923	9/23/2016	CHILD SUPPORT 1	01-00-2040	$ 158.31	78716	9/28/2016

		KANSAS PAYMENT CNTR		$ 158.31		

INVOICE NO	DATE	VENDOR/DESCRIPTION	GL ACCT #	AMOUNT	CK #	CK DATE
		KC BOBCAT				
19088583	9/27/2016	EQUIPMENT MAINTENANCE	01-02-7670	$ 694.12	78736	10/6/2016

		KC BOBCAT		$ 694.12		
		KEIVA JOECKEL				
2766	10/2/2016	DEPOSIT REFUND	01-00-2050	$ 75.00	78737	10/6/2016

		KEIVA JOECKEL		$ 75.00		
		KERRY'S KENNELS				
20160910	9/10/2016	KENNEL CHARGES	01-18-7110	$ 666.00	78738	10/6/2016

		KERRY'S KENNELS		$ 666.00		
		KP&F				
PR20160923	9/23/2016	KP&F	01-00-2030	$ 7,004.90	1283666	9/28/2016 E

		KP&F		$ 7,004.90		
		KPERS				
PR20160923	9/23/2016	KPERS TIER 1	01-00-2030	$ 3,734.35	1283663	9/28/2016 E
PR20160923	9/23/2016	KPERS TIER 1	20-00-2030	$ 524.12	1283663	9/28/2016 E
PR20160923	9/23/2016	KPERS TIER 1	25-00-2030	$ 350.35	1283663	9/28/2016 E
PR20160923	9/23/2016	KPERS post 7/09	01-00-2030	$ 2,748.17	1283663	9/28/2016 E
PR20160923	9/23/2016	KPERS post 7/09	25-00-2030	$ 688.42	1283663	9/28/2016 E
PR20160923	9/23/2016	KPERS TIER 3	01-00-2030	$ 766.73	1283663	9/28/2016 E

		KPERS		$ 8,812.14		
		KS DEPARTMENT OF REVENUE				
161509	9/15/2016	CEREAL MALT BEVERAGE STA FALL FEST-TEMP PERMIT	01-00-4260	$ 25.00	78739	10/6/2016

		KS DEPARTMENT OF REVENUE		$ 25.00		
		KS DEPT OF REV				
162510	10/25/2016	SALES TAX	20-00-2060	$ 1,669.92	1283670	10/04/2016 E

		KS DEPT OF REV		$ 1,669.92		
		KS HEAVY CONSTRUCTION				
160109	9/1/2016	VETERANS LANE	87-00-7760	$ 26,910.00	78740	10/6/2016
160109	9/1/2016	RIDGEVIEW SIDEWALK	82-00-7760	$ 41,116.50	78740	10/6/2016
160109	9/1/2016	VICTORY ROAD	10-02-7210	$ 134,042.85	78740	10/6/2016

		KS HEAVY CONSTRUCTION		$ 202,069.35		

INVOICE NO	DATE	VENDOR/DESCRIPTION	GL ACCT #	AMOUNT	CK #	CK DATE
		KS STATE TREASURER				
32317	9/1/2016	COURT REINSTATEMENT FEES	01-00-2206	$ 177.00	217115	9/20/2016
32317	9/1/2016	JUDICIAL BRANCH TRAINING	01-00-2202	$ 25.00	217115	9/20/2016
32317	9/1/2016	LAW ENFORCEMENT TRAINING	01-00-2201	$ 427.50	217115	9/20/2016
32317	9/1/2016	DUI FEES	01-00-2208	$ 750.00	217115	9/20/2016

		KS STATE TREASURER		$ 1,379.50		
		KS WITHHOLDING TAX				
PR20160923	9/23/2016	STATE TAX	01-00-2020	$ 2,577.34	1283662	9/28/2016 E
PR20160923	9/23/2016	STATE TAX	20-00-2020	$ 190.63	1283662	9/28/2016 E
PR20160923	9/23/2016	STATE TAX	25-00-2020	$ 126.79	1283662	9/28/2016 E

		KS WITHHOLDING TAX		$ 2,894.76		
		LEAGUE OF KS MUNICIPALITI				
16-2342	9/7/2016	TRAINING & SEMINARS	01-01-7640	$ 100.00	217116	9/20/2016

		LEAGUE OF KS MUNICIPALIT		$ 100.00		
		LISA HAYS				
160109	9/1/2016	SHAC REFUND	01-00-4610	$ 115.00	78741	10/6/2016

		LISA HAYS		$ 115.00		
		LOWE LAW FIRM, LLP				
160208B	9/2/2016	LEGAL SERVICES	01-09-7710	$ 1,388.60	217117	9/20/2016
160209	9/2/2016	LEGAL CONTRACT	01-01-7710	$ 3,000.00	217117	9/20/2016
160209C	9/1/2016	LEGAL SERVICES	81-00-7710	$ 190.70	217117	9/20/2016
160209D	9/2/2016	LEGAL SERVICES	01-09-7710	$ 250.00	217117	9/20/2016
160209DIVI	9/2/2016	LEGAL SERVICES	01-16-7710	$ 1,195.50	217117	9/20/2016
160209E	9/2/2016	LEGAL SERVICES	01-16-7710	$ 829.62	217117	9/20/2016
160209F	9/2/2016	LEGAL SERVICES	80-00-7710	$ 479.20	217117	9/20/2016
160209G	9/2/2016	LEGAL SERVICES	01-09-7710	$ 2,738.72	217117	9/20/2016
160209H	9/2/2016	LEGAL SERVICES	85-00-7710	$ 25.00	217117	9/20/2016
160209H	9/2/2016	LEGAL SERVICES	62-00-7710	$ 25.00	217117	9/20/2016
160209I	9/2/2016	LEGAL SERVICES	01-09-7710	$ 464.10	217117	9/20/2016
160209J	9/2/2016	CITY HALL PROJECT	31-31-8500	$ 614.30	217117	9/20/2016
160209L	9/2/2016	LEGAL SERVICES	80-00-7710	$ 37.50	217117	9/20/2016
160209M	9/2/2016	LEGAL SERVICES	01-09-7710	$ 62.50	217117	9/20/2016
160209N	9/2/2016	LEGAL SERVICES	01-09-7710	$ 87.50	217117	9/20/2016
160209O	9/2/2016	LEGAL SERVICES	01-16-7710	$ 1,133.60	217117	9/20/2016
160209P	9/2/2016	LEGAL SERVICES	01-05-7710	$ 191.70	217117	9/20/2016
160209Q	9/6/2016	LEGAL SERVICES	01-09-7710	$ 50.40	217117	9/20/2016
160209R	9/6/2016	LEGAL SERVICES	01-09-7710	$ 50.40	217117	9/20/2016
160209S	9/6/2016	LEGAL SERVICES	01-09-7710	$ 251.60	217117	9/20/2016
160209T	9/6/2016	LEAGAL SERVICE	80-00-7710	$ 33.65	217117	9/20/2016
160209T	9/6/2016	LEAGAL SERVICE	85-00-7710	$ 18.75	217117	9/20/2016
160209U	9/6/2016	LEAGAL SERVICE	01-16-7710	$ 490.80	217117	9/20/2016

		LOWE LAW FIRM, LLP		$ 13,609.14		

INVOICE NO	DATE	VENDOR/DESCRIPTION	GL ACCT #	AMOUNT	CK #	CK DATE
		MAJESTIC FRANCHSING				
SC09160682	9/1/2016	JANITORIAL SERVICES/SUPP	01-17-7610	$ 425.00	217118	9/20/2016
SC09160689	9/1/2016	JANITORIAL SERVICES	01-13-7610	$ 248.00	217118	9/20/2016

		MAJESTIC FRANCHSING		$ 673.00		
		MARTINA FERANDEZ				
2764	9/10/2016	DEPOSIT REFUND	01-00-2050	$ 100.00	78742	10/6/2016
		MARTINA FERANDEZ				

		MARTINA FERANDEZ		$ 100.00		
		MIAMI COUNTY SHERIFF OFFI				
20160831	9/1/2016	PRISONER BOARDING	01-06-7120	$ 160.00	78743	10/6/2016

		MIAMI COUNTY SHERIFF OFF		$ 160.00		
		MIDWEST PUBLIC RISK				
B01Y17	9/1/2016	INSURANCE PREMIUM	01-00-2060	$ 54,451.61	217119	9/20/2016
B01Y17	9/1/2016	INSURANCE PREMIUM	20-00-2061	$ 5,092.73	217119	9/20/2016
B01Y17	9/1/2016	INSURANCE PREMIUM	25-00-2060	$ 1,828.94	217119	9/20/2016

		MIDWEST PUBLIC RISK		$ 61,373.28		
		MIZE & HOUSER COMPANY PA				
153112B	9/28/2016	2015 AUDIT	01-09-7140	$ 14,875.00	78744	10/6/2016

		MIZE & HOUSER COMPANY PA		$ 14,875.00		
		MONICA WILSON				
2778	9/11/2016	DEPOSIT REFUND	01-00-2050	$ 100.00	78745	10/6/2016

		MONICA WILSON		$ 100.00		
		MOWER DOCTOR				
45412	8/25/2016	EQUIPMENT MAINTENANCE	01-03-7670	$ 54.96	217120	9/20/2016

		MOWER DOCTOR		$ 54.96		
		NAPA SPRING HILL, LLC				
318673	8/11/2016	EQUIPMENT MAINTENANCE	20-14-7670	$ 11.99	78746	10/6/2016
319598	9/6/2016	MISCELLANEOUS	25-15-6090	$ 20.22	78746	10/6/2016
319671	9/8/2016	VEHICLE MAINTENANCE	01-02-6150	$ 25.98	78746	10/6/2016
319974	9/16/2016	EQUIPMENT MAINTENANCE	01-03-7670	$ 6.79	78746	10/6/2016
320404	9/29/2016	VEHICLE MAINTENANCE	20-14-6150	$ 13.77	78746	10/6/2016

		NAPA SPRING HILL, LLC		$ 78.75		

INVOICE NO	DATE	VENDOR/DESCRIPTION	GL ACCT #	AMOUNT	CK #	CK DATE
		NPG NEWSPAPERS, INC				
1828920816	9/1/2016	ORD 2016-08 VAC PORTION	01-08-7120	$ 44.56	217121	9/20/2016
1828920816	9/1/2016	ORD 2016-09 CU201601 CHI	01-08-7120	$ 49.16	217121	9/20/2016
1828920816	9/1/2016	BUDGET HRG NOTICE	01-08-7120	$ 131.79	217121	9/20/2016
1828920816	9/1/2016	EST WC SPCBEN HRG NOTICE	80-00-7120	$ 177.66	217121	9/20/2016
1828920816	9/1/2016	ORD 2016-10 CUP CU201602	01-08-7120	$ 47.32	217121	9/20/2016
1828920816	9/1/2016	ORD 2016-11 REZONING RP1	01-08-7120	$ 51.00	217121	9/20/2016
1828920816	9/1/2016	ORD 2016-12 TRAFFICWAYS	85-00-7120	$ 157.80	217121	9/20/2016
1828920816	9/1/2016	EST WC SPCBEN RESCH HRG	80-00-7120	$ 181.48	217121	9/20/2016

		NPG NEWSPAPERS, INC		$ 840.77		
		OFFICE MAX				
818443	8/26/2016	OFFICE SUPPLIES	25-15-6110	$ 4.43	217122	9/20/2016
820612	8/29/2016	OFFICE SUPPLIES	20-14-6110	$ 13.42	217122	9/20/2016
821235	8/26/2016	OFFICE SUPPLIES	01-05-6110	$ 85.74	217122	9/20/2016

		OFFICE MAX		$ 103.59		
		OLATHE WINWATER WORKS				
114824 00	9/23/2016	DRAINAGE PIPE	10-02-6320	$ 50.00	78747	10/6/2016

		OLATHE WINWATER WORKS		$ 50.00		
		PACE ANALYTICAL SERVICES,				
1660012466	9/27/2016	LAB ANALYSIS	25-15-7250	$ 490.00	78748	10/6/2016
1660012468	9/27/2016	LAB ANALYSIS	25-15-7250	$ 401.00	78748	10/6/2016
1660012641	9/29/2016	LAB ANALYSIS	25-15-7250	$ 248.00	78748	10/6/2016

		PACE ANALYTICAL SERVICES		$ 1,139.00		
		PRAXAIR DISTRIBUTION INC.				
74244402	8/31/2016	EQUIPMENT RENTAL/LEASE	01-02-7660	$ 110.18	78749	10/6/2016

		PRAXAIR DISTRIBUTION INC		$ 110.18		
		QUILL				
8919977	9/7/2016	OFFICE SUPPLIES	01-05-6110	$ 27.98	78750	10/6/2016
9023972	9/9/2016	OFFICE SUPPLIES	01-05-6110	$ 42.97	78750	10/6/2016

		QUILL		$ 70.95		
		REJIS COMMISSION				
50411	9/14/2016	SUBSCRIPTION	01-05-7630	$ 39.86	78751	10/6/2016

		REJIS COMMISSION		$ 39.86		
		ROYAL METAL INDUSTRIES, I				
235436	9/15/2016	VEHICLE MAINTENANCE	01-02-6150	$ 81.00	78752	10/6/2016

		ROYAL METAL INDUSTRIES,		$ 81.00		

INVOICE NO	DATE	VENDOR/DESCRIPTION	GL ACCT #	AMOUNT	CK #	CK DATE
		RURAL WATER DISTRICT #2 M				
162809	9/28/2016	WATER PURCHASES	20-14-7200	$ 31.04	78753	10/6/2016

		RURAL WATER DISTRICT #2		$ 31.04		
		SHIRT HOLE				
162109	9/21/2016	UNIFORM - COMM DEV	01-16-7680	$ 260.00	78754	10/6/2016

		SHIRT HOLE		$ 260.00		
		SIGN HERE				
21233	9/9/2016	PARKS-MISCELLANEOUS	01-03-6090	$ 450.00	78755	10/6/2016
21233	9/9/2016	VEHICLE MAINTENANCE	01-02-6150	$ 225.00	78755	10/6/2016

		SIGN HERE		$ 675.00		
		SPRING HILL CEMETERY BOAR				
160610	10/6/2016	CEMETERY MAINTENANCE	04-00-7210	$ 7,500.00	78756	10/6/2016

		SPRING HILL CEMETERY BOA		$ 7,500.00		
		SPRING HILL OIL (CH)				
163108	8/31/2016	FUEL-2008 ESCAPE	01-16-6140	$ 63.48	217123	9/20/2016
163108	8/31/2016	FUEL-2005 ESCAPE	01-16-6140	$ 49.24	217123	9/20/2016
20160830	8/31/2016	GASOLINE	01-05-6140	$ 2,956.95	217123	9/20/2016
20160831	8/31/2016	GASOLINE	01-18-6140	$ 259.64	217123	9/20/2016

		SPRING HILL OIL (CH)		$ 3,329.31		
		SPRING HILL OIL (CITY)				
163108	8/31/2016	FUEL	20-14-6140	$ 483.56	217124	9/20/2016
163108	8/31/2016	FUEL	25-15-6140	$ 350.10	217124	9/20/2016
163108	8/31/2016	FUEL	01-02-6140	$ 806.81	217124	9/20/2016
163108	8/31/2016	FUEL	01-03-6140	$ 614.80	217124	9/20/2016
163108	8/31/2016	FUEL	01-13-6140	$ 229.14	217124	9/20/2016

		SPRING HILL OIL (CITY)		$ 2,484.41		
		STANTEC CONSULTING				
1095545	9/7/2016	STREET RATING SERVICES	01-02-7740	$ 5,500.00	78757	10/6/2016

		STANTEC CONSULTING		$ 5,500.00		
		TRI STAR SEED COMPANY				
119311	9/21/2016	SEED/SOD	01-02-6350	$ 1,029.90	78758	10/6/2016

		TRI STAR SEED COMPANY		$ 1,029.90		
		VICKI WEMPE				
2464	9/17/2016	DEPOSIT REFUND	01-00-2050	$ 50.00	78759	10/6/2016

		VICKI WEMPE		$ 50.00		

INVOICE NO	DATE	VENDOR/DESCRIPTION	GL ACCT #	AMOUNT	CK #	CK DATE
		WATER DISTRICT #7				
162609	9/26/2016	WATER UTILITIES	25-15-7620	$ 18.66	78760	10/6/2016

		WATER DISTRICT #7		$ 18.66		
		WESTAR ENERGY(ST. LIGHTS)				
160109	9/1/2016	ELECTRIC SERVICE	01-02-7626	$ 3,963.78	1283669	9/21/2016 E
		STREET LIGHTS				

		WESTAR ENERGY(ST. LIGHTS		$ 3,963.78		

		***** REPORT TOTAL *****		$ 392,059.60		

AGENDA ITEM REVIEW SHEET

TO:	GOVERNING BODY
SUBMITTED BY:	MELANIE LANDIS, FINANCE DIRECTOR
MEETING DATE:	OCTOBER 13, 2016
DATE:	OCTOBER 6, 2016

Formal Action Item: Reimbursement agreement for Dayton Creek *(pending review from Applicant)*

Background/Analysis: The City's benefit district policy and procedures require an approved benefit district petition in order to begin incurring expenses toward a proposed benefit district. The submission of a benefit district petition for Dayton Creek may be submitted only after the County has recorded the final plat. PV Investments and Bradley Vince have requested that the City engage professional services, including but limited to, legal, engineering, and consulting prior to the submission of the benefit district petition.

The reimbursement agreement will require a cash deposit of an approximate amount of the services plus staff time to be rendered prior to the engagement of those services in which the City will hold the funds until the benefit district petition is approved by City Council. If the professional service expenses are not reimbursed to the City by June 30, 2017, for any reason (whether it be because the Bonds are not issued, the Bonds proceeds are not used to reimburse the City, the application for the Benefit District is denied, or for any other reason), then the City will draw against the amount deposited by Vince or by PV Investments to reimburse the City.

If the City is reimbursed through Bonds issued for an approved benefit district, the City will reimburse to Vince and/or PV Investments, as applicable, to the extent of the amount the City is reimbursed, the amount paid the City.

Legal Review: Lowe Law Firm prepared the agreement and review is pending from legal counsel for PV Investments and Mr. Vince.

Funding Review or Budgetary Impact: The deposit made to the project fund will be held until either the benefit district petition is approved by City Council or the imposed date of June 30, 2017 in the case of a delayed project.

Alternatives:

1. Approve the agreement with PV Investments and Bradley Vince.
2. Deny the agreement with PV Investments and Bradley Vince.
3. Table the issue and direct staff to further research.

Recommendation: Staff recommends the approval of a reimbursement agreement with PV Investments and Bradley Vince related to the proposed Dayton Creek benefit district.

Attachments: Reimbursement agreement *(pending review from Applicant)*

DAYTON CREEK REIMBURSEMENT AGREEMENT

This Dayton Creek Reimbursement Agreement ("Agreement") is made and entered into this ____ day of _____, 2016, by and between the City of Spring Hill, Kansas, a municipality organized under the laws of the State of Kansas ("City"), PV Investments, L.L.C., a Kansas limited liability company ("PV Investments"), and Bradley D. Vince ("Vince").

WHEREAS, Vince, acting on behalf of PV Investments, has heretofore made request of the City to prepare and review documents for development and construction related to proposed benefit district infrastructure improvements for Dayton Creek residential development ("Dayton Creek") to be located on approximately 26 acres at the northeast corner of West 191st Street and South Lone Elm Road, in Spring Hill, Johnson County, Kansas (hereafter, the "Benefit District"); and

WHEREAS, under the City's special benefit district policy and procedures, the City will not expend funds toward a proposed benefit district until a finalized petition is accepted by the City Council; and

WHEREAS, Vince has requested that the City engage professional services, including but limited to, legal, engineering, and consulting prior to the submission of the benefit district petition; and

WHEREAS, the City will require a cash deposit of an approximate amount of the services and staff time to be rendered prior to the engagement of those services in which the City will hold the funds until the benefit district petition is approved by City Council; and

WHEREAS, if the application for the Benefit District is approved, it is anticipated that the City would issue general obligation bonds to finance the Benefit District improvements ("Bonds") and that the proceeds of such Bonds would, in part, be used to reimburse the City for the amount expensed for professional services; and

WHEREAS, if the professional service and staff time expenses are not reimbursed to the City by June 30, 2017, for any reason (whether it be because the Bonds are not issued, the Bonds proceeds are not used to reimburse the City, the application for the Benefit District is denied, or for any other reason), then the City will draw against the amount deposited by Vince or by PV Investments to reimburse the City.

NOW, THEREFORE, IT IS AGREED:

1. Deposit of Funds with City. Vince and PV Investments, jointly and severally, agree to deposit with the City an amount to be determined for engagement of professional services on October 17, 2016 or prior to engagement of services.

2. Subsequent Reimbursement to Vince or PV Investments. If the City is reimbursed through Bonds issued for an approved benefit district, the City will reimburse to Vince and/or PV Investments, as applicable, from and to the extent of the amount

the City is subsequently reimbursed, the amount that Vince and/or PV Investments paid the City.

3. Assignment. This Agreement shall not be assigned by any party without the prior written consent of the other parties.

4. No Third-Party Beneficiaries. City, Vince and PV Investments do not intend to create any right, title or interest in or for the benefit of any person not a party to this Agreement. No person shall claim any right, title or interest under this Agreement or seek to enforce this Agreement as a third-party beneficiary of this Agreement.

5. Amendment or Extension of Agreement. Any amendment or extension of the terms of this Agreement shall be in writing, signed by the City, Vince and PV Investments.

6. Integration. This Agreement constitutes the entire agreement between the City, Vince and PV Investments on this subject, and as such is intended to be the exclusive statement of the promises, representations and negotiations made in connection with the subject matter hereof.

7. Successors and Assigns. This Agreement shall be binding upon, and inure to the benefit of, the City, Vince and PV Investments, and their respective heirs, executors, administrators, successors and permitted assigns.

IN WITNESS WHEREOF, the parties have hereunto executed this Agreement.

"City"

CITY OF SPRING HILL, KANSAS,
A municipality organized under the laws of the State of Kansas

By:_____
Steven M. Ellis, Mayor

Attest:

_____
Glenda Gerrity, City Clerk

Approved As To Form:

_____
Frank H. Jenkins, Jr.
City Attorney

"Vince"

_____
Bradley D. Vince

"PV Investments"

PV Investments, L.L.C., a Kansas
limited liability company

By:_____
Patricia Vince, Sole Member

STATE OF KANSAS, COUNTY OF JOHNSON, SS:

Before me, the undersigned, a Notary Public, within and for the County and State on this _____ day of _____, 2016, personally appeared STEVEN M. ELLIS, Mayor, and GLENDA GERRITY, City Clerk, of the CITY OF SPRING HILL, KANSAS, a municipal corporation duly organized, incorporated and existing under and by virtue of the law of the state of Kansas, who are personally known to me to be the persons who executed, as such officers, the within instrument on behalf of said corporation and such persons duly acknowledged the execution of the same to be the voluntary act and deed of said corporation.

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

_____
Notary Public

My Commission Expires:
_____

STATE OF_____, COUNTY OF_____, SS:

Before me, the undersigned, a Notary Public, within and for said County and State on the _____ day of _____2016, personally appeared Bradley D. Vince, who is personally known to me to be the person who executed the within instrument and duly acknowledged the execution of the same to be his voluntary act and deed.

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

_____
Notary Public

My Commission Expires:
_____

STATE OF_____, COUNTY OF_____, SS:

Before me, the undersigned, a Notary Public, within and for said County and State on the _____ day of _____, 2016, personally appeared Patricia Vince, sole member of PV Investments, LLC, a limited liability company duly organized, incorporated and existing under and by virtue of the laws of the State of Kansas, who is personally known to me to be the person who executed, as such officer, the within instrument on behalf of said company and such person duly acknowledged the execution of the same to be the voluntary act and deed of said company.

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

_____
Notary Public

My Commission Expires:
_____

AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: JONATHAN S. ROBERTS, CITY ADMINISTRATOR
MEETING DATE: THURSDAY, OCTOBER 13, 2016
DATE: THURSDAY, OCTOBER 6, 2016

Formal Action:
A Resolution Approving and Authorizing Execution of Agreement with Richard Caplan and Associates for a Housing Needs Analysis of the City Relating to Oak Woods Subdivision Pursuant to the Kansas Rural Housing Incentive District Act

Issue:
The Applicant has recently purchased the Oakwood Subdivision and is investigating the possibility of approaching the City of Spring Hill to implement an RHID for the property in an effort to help diversify the Spring Hill Housing stock. This analysis is the first statutorily mandated step in such an effort.

Background:
Oakwood Subdivision was approved by the Spring Hill City Council over a decade ago. Prior to the opening of its first phase the owners backed out and eventually the property was taken over by its lender. The Applicant purchased the property several months ago and Staff has been in discussion with his team since then.

Analysis:
The subject Analysis will provide the Applicant, the City and eventually the State with the information necessary to determine what type and price level of housing stock would be most appropriate for the site. Both Staff and the Applicant share the same goal in diversifying the Spring Hill housing stock to include affordable new housing for the region.

Alternatives: N/A

Legal Review:
This resolution and accompanying attachments have been reviewed by the City Attorney

Funding Review or Budgetary Impact: This effort will be funded by the Applicant

Recommendation:
Council approval of Resolution No. 2016-R-29
Resolution Approving and Authorizing Execution of Agreement with Richard Caplan and Associates for a Housing Needs Analysis of the City Relating to Oak Woods Subdivision Pursuant to the Kansas Rural Housing Incentive District Act

Attachments:
Subject Resolution
Subject Agreement

RESOLUTION NO. 2016-R-29

A RESOLUTION APPROVING AND AUTHORIZING EXECUTION OF AGREEMENT WITH RICHARD CAPLAN AND ASSOCIATES FOR A HOUSING NEEDS ANALYSIS OF THE CITY RELATING TO OAK WOODS SUBDIVISION PURSUANT TO THE KANSAS RURAL HOUSING INCENTIVE DISTRICT ACT (K.S.A. 12-5241 ET SEQ.)

WHEREAS, Matt Thompson Development (Developer) has requested that the City of Spring Hill, Kansas (City) enter into an agreement with Richard Caplan and Associates (Agreement), marked Exhibit A, attached hereto, for the purpose of preparing a housing needs analysis (Study) pursuant to K.S.A. 12- 5244 (a) of the Kansas Rural Housing Incentive District Act (RHID) relating to the Oak Woods Subdivision; and

WHEREAS, the Developer has agreed to reimburse the City for the costs of the Study in the amount of $3,975.00.

NOW THEREFORE, BE IT RESOLVED by the Governing Body of the City of Spring Hill, Kansas:

SECTION ONE: Approval of Agreement. The Mayor is hereby authorized and directed to execute Exhibit A, in substantially the form as submitted to the City Council at this meeting; further that the Mayor and any other appropriate city officials are authorized and directed to take the necessary actions to effectuate the intent and purposes of this resolution.

SECTION TWO: Conditions to execution of the Agreement for Market Study. The issuance of the execution of the agreement is condition upon the following:

(i) Payment by the Company to reimburse the City of the cost of the Study in the amount of $3,975 prior to the execution of the agreement by the Mayor.

(ii) Payment of the Developer within thirty (30) days of receipt from any invoice from the City for any other costs relating to the Study; including, but not limited to, any other City fees and expenses and the fees and expenses of the City's Bond Counsel and City Attorney.

SECTION THREE: No obligation of the City to approve Housing Study or proceed with the RHID project for the Oakwoods Subdivision. Notwithstanding the City's agreement to proceed with the preparation of the Housing Study by Richard Caplan and Associates, and the payment of the Study by the Developer, the City is not obligated to approve the Housing Study or proceed with the RHID Project for Oakwoods Subdivision.

ADOPTED by the City Council this 13th day of October, 2016.

APPROVED by the Mayor this 13th day of October, 2016.

_____
Steven M. Ellis, Mayor

ATTEST:

_____
Glenda Gerrity, City Clerk

Approved by:

_____
Frank H. Jenkins, City Attorney

RICHARD CAPLAN & ASSOCIATES

September 26, 2016

City of Spring Hill
Attn: Jonathan Roberts, City Administrator
401 N. Madison St.
Spring Hill, KS 66083

Subject: Market Study for Housing Incentive District Proposal and Contract for Services

Dear Mr. Roberts

In response to the city's desire to secure approval from the State of Kansas to stimulate single family housing development in Spring Hill, Richard Caplan & Associates (RCA) is pleased to submit this proposal to prepare a housing market study for the city's effort to establish a Rural Housing Incentive District (HRID). This proposal will summarize our scope of work, qualifications, timing and fees and may be used as a contract for services to support the city's objective.

Scope of Work

This housing market study will be prepared to conform to the requirements of the State of Kansas Rural Housing Incentive District requirements for a specific vacant single family residential subdivision as identified by the city. To complete this study, the report will define the Spring Hill housing market area, present and analyze demographic and related income characteristics and trends that impact the city's housing market, and project the single family housing market supply and demand by price ranges, and evaluate the area's housing vacancy rate.

More specifically, to establish a Rural Housing Incentive District in Kansas, the study will also address the following state regulatory requirements:

1. Determine the housing shortage of various price ranges in the city;
2. Evaluate if the shortage can be addressed by additional financial incentives;
3. Evaluate and discuss how the shortage is a deterrent to the future of economic growth in the city;
4. Demonstrate that future economic well-being of the city depends on incentives for the construction of quality housing.

This study, documentation and findings will be presented in a comprehensive report for the city in pursuit of its housing and economic development objectives.

Firm Qualifications

Richard Caplan & Associates (RCA) is uniquely qualified to assist the city with this project. The firm has prepared more than 50 housing market studies over the last 20 years in Kansas for the State of Kansas Housing Resources Corporation on behalf of cities, developers, lenders and other investors. These housing market studies have included single family, rental housing and senior housing projects throughout the state, including projects in Johnson and Miami Counties.

Of particular importance, RCA completed the housing market study establishing Kansas' first successful Rural Housing District project in Ellis County in 2007. In addition, the firm has prior knowledge of the Spring Hill area market conditions assisting the city as a subcontractor preparing an economic and market analysis associated with the update to the Spring Hill Comprehensive Plan in 2008.

609 W. 70th Street Kansas City, MO 64113 (816) 745-3455 richcaplan@aol.com

Timing and Fees

We are prepared to initiate services immediately upon acceptance of this proposal. The total time required to complete this engagement will be three (3) weeks from written acceptance of this proposal and city approval to proceed.

The total professional fees and all routine expenses (mileage, report reproduction, etc.) for this study will be $3,975. If public presentations or other meetings are required to present and/or discuss this market study findings, additional fees will be charged on an hourly basis at the rate of $105.00 per hour.

We appreciate the opportunity to provide this assistance to the city. To indicate the City of Spring Hill's acceptance of this proposal, please have the Mayor and City Council authorize the acceptance of this agreement.

Respectfully submitted,

Richard Caplan

Rich Caplan
RICHARD CAPLAN & ASSOCIATES

AGENDA ITEM REVIEW SHEET

TO:	GOVERNING BODY
SUBMITTED BY:	JONATHAN S. ROBERTS, CITY ADMINISTRATOR
MEETING DATE:	THURSDAY, OCTOBER 13, 2016
DATE:	FRIDAY, SEPTEMBER 30, 2016

Formal Action: Ordinance No. 2016-14
Contract for Assignment of the City Solid Waste Contract to Waste Management of Kansas, Inc.; further approving amendments to the contract relating to the term of the contract and rates for services.

Issue:
The existing contract for waste collection for Spring Hill residents expires on December 31, 2016. There exists a need to sign a new contract for these services.

Background:
On December 11, 2011, the City of Spring Hill entered into a contract with L&K Services, Inc. for waste collection within its City limits. This contract will expire on December 31, 2016. L&K Group Holdings, LLC is the company that presently provides this service. It is the group that resulted since the original company's purchase by Deffenbaugh waste and eventual purchase by Waste Management of Kansas, Inc. Staff has been in negotiations with the hauler over the last couple of months regarding this contract.

Analysis:
This Amendment to the existing contract secures the very same level and quality of service that City residents presently enjoy with the following four agreements;

1) Formal assignment of the existing contract from L&K Holdings, LLC to Waste Management of Kansas, Inc.
2) Extend the terms of the contract for five years from January 1, 2017 until December 31, 2021.
3) The rates for the service will remain constant throughout 2017 and will increase by 2% each following year.
4) The Contractor, with consent of the City, may limit intakes of industrial sludge.

Alternatives: Further direction to Staff

Legal Review: This document has been reviewed by the City's legal counsel.

Funding Review or Budgetary Impact:
This service is provided for through user fees that are included in each resident's monthly water/sewer bill.

AGENDA ITEM REVIEW SHEET

Recommendation:
Motion to approve Ordinance No. 2016-14, Contract for Assignment of the City Solid Waste Contract to Waste Management of Kansas, Inc.; further approving amendments to the contract relating to the term of the contract and rates for services.

Attachments:
1) Subject Assignment and Amendment
2) Accompanying Contract for Services

ORDINANCE NO. 2016-14

AN ORDINANCE AUTHORIZING AND DIRECTING THE MAYOR TO EXECUTE A CONTRACT WITH L&K GROUP HOLDINGS, LLC AND WASTE MANAGEMENT OF KANSAS, INC., PROVIDING FOR THE CONSENT TO THE ASSIGNMENT OF THE CONTRACT FOR COLLECTION AND DISPOSAL OF SOLID WASTE BETWEEN THE CITY OF SPRING HILL, KANSAS, AND L&K GROUP HOLDINGS, LLC TO WASTE MANAGEMENT OF KANSAS, INC.; FURTHER AMENDING THE CONTRACT FOR COLLECTION OF SOLID WASTE WITHIN THE CITY TO EXTEND THE CONTRACT TERM FOR FIVE (5) YEARS; FURTHER ESTABLISHING RESIDENTIAL, COMMERCIAL AND INDUSTRIAL SERVICE RATES FOR THE TERM OF THE CONTRACT; AND REPEALING ANY ORDINANCES IN CONFLICT HEREWITH.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF SPRING HILL, JOHNSON AND MIAMI COUNTY, KANSAS AS FOLLOWS:

SECTION ONE. The Governing Body hereby authorizes and directs the Mayor to execute the contract between L&K Group Holdings, LLC, Waste Management of Kansas, Inc., and the City of Spring Hill, Kansas providing for the following:

A. Consent to Assignment. The consent by the City to the assignment of the contract for the collection and disposal of solid waste within the City between the City and L&K Group Holdings, LLC, to Waste Management of Kansas, Inc.

B. Amendment of Terms of Contract. Amendment of the terms of the contract between the City and L&K Group Holdings, LLC, as follows:

1. Extension of Term of Contract for 5 Years. The contract provides that the term shall be extended for five (5) years from December 31, 2016, to December 31, 2021, subject to a right to terminate the contract upon sixty (60) days notice by either party.

2. Service Rates for the 5-Year Term of the Contract. The residential, commercial and industrial service rates for the collection and disposal of solid waste of the City of Spring Hill, Kansas, as established by the existing contract and designated in Exhibit A (attached hereto and incorporated herein by reference) shall continue to be the rates until December 31, 2017.

   Thereafter, for the remaining term of the contract, the rates set forth in attached Exhibit A shall be subject to an annual rate increase of two percent (2%) each year.

Additionally, the Waste Management of Kansas, Inc. may request rates be increased to cover increased disposal rates, fuel costs and other uncontrollable circumstances. Any increase must be agreed upon, in writing, by the City and Waste Management of Kansas, Inc.

SECTION TWO. All ordinances in conflict with this ordinance are hereby repealed.

SECTION THREE. This Ordinance shall take effect and be in force from and after its passage, approval and publication, as provided by law.

PASSED BY THE GOVERNING BODY this _____ day of _____, 2016.

APPROVED BY THE MAYOR this _____day of _____, 2016.

_____
Steven M. Ellis, Mayor

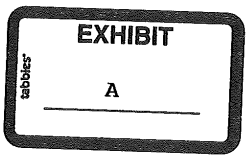
ATTEST:

_____
Glenda Gerrity, City Clerk

(SEAL)

APPROVED AS TO FORM:

_____
Frank H. Jenkins, Jr., City Attorney



RATES FOR THE CITY OF SPRING HILL, KANSAS

RESIDENTIAL:	RATE
Single family dwellings, duplexes, and apartments	$10.90 + 6% fuel surcharge
Dwellings occupied by persons over the age of 65	$ 7.32 + 6% fuel surcharge

ALTERNATES:

Large Item Pick-Up (monthly)	$ 1.30 + 6% fuel surcharge
Curbside Recycling (weekly-includes bin)	$ 3.00 + 6% fuel surcharge
Yard Waste / Compost Pick-Up (40 to 42 week schedule)	$ Included in Residential Rate
Spring Clean Up Day (once a year)	$ Landfill + fuel & employee wages (Donation of trucks)

COMMERCIAL & INDUSTRIAL:
(All commercial containers are subject to a 6% fuel surcharge)

Container size monthly rates based of weekly frequency

COMMERCIAL REFUSE COLLECTION:

CONTAINER SIZE	1 P/U	2 P/U	3 P/U	4 P/U	5 P/U
1 Cubic Yard	$46.41	$66.62	$99.93	$122.32	$144.70
2 Cubic Yard	$55.13	$89.13	$126.14	$155.09	$188.39
3 Cubic Yard	$66.46	$111.79	$164.37	$197.67	$242.45
4 Cubic Yard	$77.79	$131.37	$184.67	$230.33	$271.39
6 Cubic Yard	$100.46	$161.25	$230.44	$310.16	$377.32

Loose Pickup (3 bag limit per week)	$ 15.00 + 6% fuel surcharge
Loose Pickup (up to 1 cubic yard maximum per week)	$ 20.00 + 6% fuel surcharge

COMMERCIAL RECYCLING COLLECTION:

CONTAINER SIZE	1 P/U
2 Cubic Yard	$30.32
3 Cubic Yard	$45.47
4 Cubic Yard	$51.25
6 Cubic Yard	$69.00
8 Cubic Yard	$91.80

	RATE
Weekly recycling with a 23 gallon recycling bin:	$3.00 + 6% fuel surcharge
Weekly recycling with a 65 gallon toter:	$5.50 + 6% fuel surcharge
Weekly recycling with a 95 gallon toter:	$6.00 + 6% fuel surcharge

* Rates include coverage for City required Pollution Insurance at Contractor's expense.

ASSIGNMENT AND AMENDMENT TO THE CONTRACT
BETWEEN
THE CITY OF SPRING HILL, KANSAS
AND
L&K GROUP HOLDINGS, LLC

This Assignment and Amendment to the Contract is made and entered into effective as of the ____ day of _____, 2016 ("**Effective Date**"), between the City of Spring Hill, Kansas, a Kansas municipal corporation (the "**City**"), L&K Group Holdings, LLC ("**L&K Group**"), and Waste Management of Kansas, Inc., a Kansas corporation ("**Contractor**").

WHEREAS, the City and L&K Services, Inc. entered into a Contract dated December 8, 2011, for trash removal/disposal and recycling services, which Contract expires on December 31, 2016 ("**Contract**"); and

WHEREAS, the Contract was assigned on December 16, 2013, to L&K Group, which entity became the successor-in-interest to L&K Services, Inc., under the Contract; and

WHEREAS, L&K Group desires to assign any and all its interest, responsibilities, liabilities, and obligations in and under the Contract to its affiliate, Waste Management of Kansas, Inc. (hereafter "**Contractor**"); and

WHEREAS, the parties now desire to confirm the assignment to Contractor, and to amend the terms of the Contract in the manner set forth below, with all other terms of the Contract to remain in full force and effect.

NOW, THEREFORE, IT IS AGREED:

1. Paragraph 11 of the Contract prohibits the assignment of the Contract without the express written consent of the City. L&K Holdings and Contractor request, and the City consents, to such assignment by L&K Holdings to Contractor of all L&K Holdings' interest, responsibilities, liabilities, and obligations in and under the Contract, as herein amended, *subject however to Contractor providing City, no later than the date City executes this Assignment and Amendment, with proof, satisfactory to City, that Contractor has procured, has met, and will maintain for the remaining duration of the Contract (including the extension of the Term set forth in this Assignment and Amendment) all insurance and insurance requirements as outlined in Appendix "C" of the Contract.* Contractor agrees to assume all interest, responsibilities, liabilities and obligations of L&K Holdings under the Contract, as amended by this Assignment and Amendment.

2. In accordance with Paragraph 21 of the Contract, Paragraph 20 of the Contract is amended to state that the Term shall be extended an additional five (5) years ending on December 31, 2021. As stated in Paragraph 20, either party may terminate the Contract, for any reason or no reason at all, upon sixty (60) day's prior written notice to the other party.

3. Paragraph 6 (A) of the Contract is amended as follows: All rates for residential, commercial, and industrial collection listed in Appendix A to the Contract shall remain as the rates charged under the Contract, beginning on the Effective Date of this Assignment and Amendment and continuing to and including December 31, 2017. Thereafter, beginning January 1, 2018, and continuing to and including the remaining extended Term

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of the Contract (i.e., to and including December 31, 2021), all rates for residential, commercial and industrial collection set forth in Appendix A to the Contract will be subject to an annual rate increase of two percent each year. ~~For clarification, for each of those 4 years, this annual rate of increase is two percent of the rate currently in effect at the signing of this Assignment and Amendment, and is not a compounded two percent annual increase.~~

~~4. Paragraph 6 (B) of the Contract is amended to read as follows: The Contractor may request the rates be increased to cover increased disposal costs, fuel costs, and cost increases due to uncontrollable circumstances, including, without limitation, changes in local, state or federal laws or regulations, imposition of taxes, fees or surcharges or acts of God such as floods, fires, hurricanes and natural disasters. Any such increase must be agreed upon between the City and Contractor, in writing signed by both parties and before the increase takes effect.~~

~~6.~~5. Paragraph 15 of the Contract is ~~modified so as to require communication with the City to be directed to~~ amended to read as follows:

"15. **COMPLAINTS AND COMMUNICATIONS.** All complaints, dealings, contacts and communications with the City shall be directed to the following:

City of Spring Hill, Kansas
401 North Madison Street
P.O. Box 424
Spring Hill, KS 66083
Attn: Glenda Gerrity, City Clerk
Email: gerrityg@springhillks.gov

All complaints, dealings, contacts and communications with the Contractor shall be directed to the following:

Waste Management of Kansas, Inc.
Address:
P.O. Box:
City, State and Zip Code:
Attn:
Email:

The complaints and communications shall be given prompt and courteous attention. In the case of alleged missed schedule collection, the Contractor shall investigate and, if such allegations are verified, shall arrange for the collection of the refuse not collected within forty-eight (48) hours after the complaint is received."

~~7.~~6. Paragraph 16 of the Contract is hereby amended to read as follows:

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"16. **NOTICE.** A letter addressed and sent by certified United States mail to either party at the following addresses shall be sufficient notice whenever required in this Contract:

City: City of Spring Hill, Kansas
401 North Madison Street
P.O. Box 424
Spring Hill, KS 66083
Attn: Glenda Gerrity, City Clerk

Contractor: Waste Management of Kansas, Inc.
Address:
P.O. Box:
City, State and Zip Code:
Attn: "

IN WITNESS WHEREOF, the parties acknowledge the Assignment and Amendment to the Contract by their respective executions below.

[Signature page follows]

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CITY OF SPRING HILL, KANSAS

~~By: _____~~

By: _____
Steven M. Ellis, Mayor

Attest:

_____
Glenda Gerrity, City Clerk

Approved as to Form:

_____
Frank H. Jenkins, City Attorney

L&K GROUP HOLDINGS, LLC

By: _____
Name: _____
Title: _____
~~Date: _____~~

WASTE MANAGEMENT OF KANSAS, INC.

By: _____
Name: _____
Title: _____
~~Date: _____~~

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CITY OF SPRING HILL, KANSAS

By:_____
Steven M. Ellis, Mayor

Attest:

_____
Glenda Gerrity, City Clerk

Approved as to Form:

_____
Frank H. Jenkins, City Attorney

L&K GROUP HOLDINGS, LLC

By: _____
Name: Micah Hamstra
Title: Legal Counsel and Assistant Secretary

WASTE MANAGEMENT OF KANSAS, INC.

By: _____
Name: Carl J. Niemann
Title: Director - Public Sector

AGENDA ITEM REVIEW SHEET

TO: GOVERNING BODY
SUBMITTED BY: JOHN BRANN
MEETING DATE: OCTOBER 13, 2016
DATE: OCTOBER 6, 2016

Consent / Formal Action / Discussion Item: Formal

Issue: Adoption of an ordinance for the updated/revised Spring Hill Uniform Technical Specifications and Design Criteria.

Background: The city staff has made a comprehensive review of the current Uniform Technical Specification and Design Criteria and find that many of the section need to be updated to assure adherence to the changing industry standards.

Analysis: With the assistance of the City Engineer, staff made several revisions to the Uniform Technical Specifications and Design Criteria (attached). These revisions are required to be adopted by ordinance.

Alternatives:

1. Motion approving Ordinance No. 2016-__ to amend the City of Spring Hill's Uniform Technical Specifications and Design Criteria.
2. Motion to deny the approval of the ordinance.
3. Motion to table the matter.

Legal Review: The city attorney has provided the attached ordinance.

Recommendation: Staff recommends the City Council adopt Ordinance No. 2016-__ Adopting the 2016 Spring Hill Uniform Technical Specifications and Design Criteria and further amending Chapter XVII (18) of the Spring Hill Municipal Code.

Attachments: Copy of the ordinance, red lined copies of the Technical Specification and Design Criteria.

ORDINANCE NO. 2016-_15_

AN ORDINANCE AMENDING CHAPTER XVIII OF THE SPRING HILL MUNICIPAL CODE AND INCORPORATING BY REFERENCE THE CITY OF SPRING HILL UNIFORM TECHNICAL SPECIFICATIONS AND DESIGN CRITERIA FOR PUBLIC IMPROVEMENT PROJECTS, FIRST EDITION 2016, PREPARED AND PROMULGATED BY THE CITY OF SPRING HILL, KANSAS, SUCH INCORPORATION BEING AUTHORIZED BY SECTION 12-3009, ET SEQ., KANSAS STATUTES ANNOTATED, PROVIDING FOR PENALTIES FOR VIOLATIONS OF SAID SPECIFICATIONS AND DESIGN CRITERIA INCLUDING ANY AMENDMENTS THERETO, AND KANSAS ANNOTATED 12-3301 ET SEQ., FURTHER REPEALING ORDINANCE NO. 2014-01 AND ALL OTHER ORDINANCES IN CONFLICT THERETO.

WHEREAS, the Governing Body of the city of Spring Hill, Kansas, finds and determines that it is necessary to amend its technical specifications and design criteria provisions.

NOW THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF SPRING HILL, KANSAS:

SECTION ONE: Chapter XVIII of the Spring Hill Municipal Code is hereby amended to read as follows:

"A) **Uniform Technical Specifications and Design Criteria For Public Improvement Projects.** There is hereby incorporated by reference for the purpose of establishing Uniform Technical Specifications and Design Criteria for the City of Spring Hill, Kansas the "City of Spring Hill Uniform Technical Specifications and Design Criteria for Public Improvement Projects First Edition 2016", prepared and promulgated in booklet form by the City of Spring Hill, Kansas. At least one copy of said Uniform Technical Specifications and Design Criteria for Public Improvement Projects marked or stamped "Official Copy as shall be incorporated by Ordinance No. 2016-___" and shall be filed with the city clerk to be open to inspection and available to the public at all reasonable hours."

The Police Department, Municipal Judge and all administrative departments of the City charged with the enforcement of the Uniform Technical Specifications and Design Criteria for Public Improvement Projects shall be supplied, at the cost of the City, such number of official copies of the Uniform Technical Specifications and Design Criteria for

Public Improvement Projects similarly marked as may be deemed expedient.

B) **Penalty Provision.** Any person violating the provisions of these specifications and design criteria shall upon conviction thereof be fined a minimum of One Hundred Dollars ($100.00) and a maximum amount of Twenty Five Hundred Dollars ($2,500.00) or confined to the county jail for a period not to exceed one (1) month or both such fine and confinement.

Each day any violation of these specifications and design criteria continue shall constitute a separate offense.

In addition to proceeding under authority of this section, the city shall further have the authority to maintain suits or actions in any court of competent jurisdiction for the purpose of enforcing any provisions of these specifications and design criteria and to abate, in addition to other remedies, institute injunction, mandamus, or other appropriate actions or proceedings to prevent such violations."

SECTION TWO: Ordinance No. 2014-01 and all other Ordinances or sections of ordinances in conflict herewith are hereby repealed.

SECTION THREE: This Ordinance shall take effect and be in force from and after its passage, approval and publication as provided by law.

PASSED BY THE CITY COUNCIL this ____ day of October, 2016.

APPROVED BY THE MAYOR this _____ day of October, 2016.

_____
Steven M. Ellis, Mayor

ATTEST:

_____
Glenda Gerrity, City Clerk

(SEAL)

Approved as to form:

_____
Frank H. Jenkins, Jr., City Attorney

Note to the Publisher: Please publish one (1) time in the official newspaper; after the publication, please send three proofs of publication to the City Clerk:

Glenda Gerrity, City Clerk
CITY OF SPRING HILL, KANSAS
P. O. Box 424
Spring Hill, Kansas 66083

and one (1) proof of publication to the City Attorney:

Frank H. Jenkins, Jr.
LOWE LAW FIRM, LLP
105 South Kansas Avenue
Olathe, Kansas 66061

TECHNICAL SPECIFICATIONS FOR PUBLIC IMPROVEMENTS PROJECTS

Revised ~~January~~ October 201~~6~~4

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GENERAL PROVISIONS

The provisions in this section shall be considered as applicable to all parts of these specifications including all revisions or supplements.

A. DEFINITIONS. Whenever the following words, phrases, or abbreviations appear in these specifications, they shall have the following meanings:

1. City shall mean the City of Spring Hill, Kansas, a municipal corporation, acting by and through its duly elected governing body and its duly appointed officials.

2. Engineer shall mean the City Engineer of the City of Spring Hill or his authorized representatives acting on behalf of the City.

3. Design Engineer shall mean a licensed engineer under contract to the developer or the City of Spring Hill for the purpose of preparing and sealing engineering design drawings for a specific public improvement project.

4. Inspector shall mean an authorized representative of the City Engineer who has been assigned to assure conformance to the requirements of these specifications by the contractor.

5. Contractor shall mean a person, partnership, or corporation duly licensed and bonded to the City of Spring Hill performing construction operations within the City of Spring Hill.

6. Bond shall mean performance and maintenance bonds and other instruments of security furnished by the contractor and his surety in accordance with these specifications.

7. Day shall mean a calendar day of twenty-four (24) hours measured from midnight to the next midnight.

8. Whenever the words "as directed", "as required", "as permitted", or words of like meaning are utilized it shall be understood that the directions, requirements, or permission of the City Engineer is intended. Similarly, the words "approved", "acceptable", and "satisfactory" shall refer to approval of the City Engineer.

B. REFERENCED STANDARDS. Whenever references are made to standard specifications, methods of testing, materials codes, practices, and requirements, it shall be understood that the latest revision of said references shall govern unless a specific revision is stated. Wherever any of the following abbreviations appear they shall have the following meaning:

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction, Inc.
ASA	American Standards Association
ISO	Insurance Services Office
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
ANSI	American National Standards Institute, Inc.
KHS	Standard Specification for State Road and Bridge Construction, Kansas Department of Transportation, latest edition

Where the words "these specifications" appear or where words of similar connotation are used it shall be understood that such reference refers to the Technical Specifications and Design Criteria for Public Improvement Projects of the City of Spring Hill.

C. PERMIT FOR CONSTRUCTION. No construction of any private street or public improvement project shall be undertaken until the following criteria and requirements have been fully met.

1. Contract plans and specifications have been submitted to and approved by the City Engineer and Director of Public Works. Along with approved contract drawings and specifications, the City shall have received all copies of permit applications required by the project. These permits include but are not limited to Kansas Department of Health and Environment (KDHE) sanitary sewer extension permit, Notice of Intent to Discharge Stormwater (NOI), Kansas Department of Transportation (KDOT) permits, Johnson County or Miami County road crossing permits, and any other applicable permits.

2. A suitable performance and maintenance bond has been submitted and approved by the City Engineer and placed on file with the City.

3. For development projects, the final plat and development agreement have been approved and recorded by the City.

4. A contract for City inspection, executed by the developer, and a copy of the bid proposal for construction has been submitted to and approved by the City Engineer.

5. A preconstruction conference has been held and a Notice to Proceed has been issued. The Notice to Proceed will not be issued until all erosion control devices have been installed and approved by the City.

6. Five (5) working days advance notification from the contractor prior to actual start of work must be received by the Director of Public Works and the City Engineer.

Compliance with the above shall constitute a permit for construction activities. Work discovered underway not complying with these requirements shall be ordered to cease and shall not be allowed to commence until such requirements have been met.

D. AUTHORITY OF THE ENGINEER / DIRECTOR OF PUBLIC WORKS. The City Engineer and Director of Public Works are designated by the City of Spring Hill to exercise all authority on behalf of the City to ascertain that all construction of facilities is equal to or better than the minimum construction requirements set forth in these specifications. The City Engineer and Director of Public Works shall be represented by a project inspector or designated representative to check any and all work performed, including all materials to be incorporated in the work, and all construction methods and practices. The City Engineer and Director of Public Works shall have the authority to issue, in writing, any deviations from the provisions of these specifications or changes to any previously approved drawing.

E. OBSERVATION OF THE WORK.

1. General:

   a. All materials and workmanship shall be subject to observation, examination, or test by the City of Spring Hill and the City Engineer or his representative at any and all times during construction and at any and all places where such construction is carried on. The City of Spring Hill shall have the authority to reject defective material and workmanship or require its correction. Unacceptable workmanship shall be satisfactorily corrected. Rejected material shall

be promptly segregated and removed from the project area and replaced with material of the specified quality to the satisfaction of the City Engineer or Director of Public Works. If the contractor fails to proceed at once with correction of rejected workmanship or defective material, the City of Spring Hill may contract or otherwise have the defects remedied or rejected materials removed from the project area and charge the cost of the same against the contractor, without prejudice to any other rights or remedies of the City of Spring Hill.

b. The contractor shall have available on the work site at all times one copy of the approved plans and these Technical Specifications. He shall give the work the constant attention necessary to facilitate the progress thereof and shall cooperate with the City Engineer, his inspectors, and other contractors in every way possible. The contractor shall designate and have on the work site at all times, as his agent, a competent superintendent capable of reading and thoroughly understanding the plans and specifications, who shall receive instructions from the engineer or his authorized representatives. The superintendent shall have full authority to execute the orders or directions of the engineer without delay and to supply promptly such materials, tools, plant equipment, and labor as may be required. Such superintendent shall be furnished irrespective of the amount of work sublet.

c. The contractor shall at all times employ sufficient labor and equipment for prosecuting the several classes of work to full completion in the manner and time, as applicable, required by these specifications.

All workmen shall have sufficient skill and experience to perform properly the work assigned to them. Workmen engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform all work properly and satisfactorily.

Any person employed by the contractor or by any subcontractor who, in the opinion of the City Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the City Engineer, be removed forthwith by the

contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without the approval of the City Engineer.

Should the contractor fail to remove such person or persons as required above, or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the City Engineer may suspend the work by written notice until such order(s) is/are complied with.

d. The contractor shall furnish promptly all materials reasonably necessary for any tests which may be required. All tests by the City of Spring Hill will be performed in such manner as not to delay the work unnecessarily and will be made in accordance with the provisions of the Technical Specifications.

e. The contractor shall notify the City of Spring Hill sufficiently in advance of backfilling or concealing any facilities to permit proper observation. If any facilities are concealed without approval or consent of the City of Spring Hill, the contractor shall uncover for observation and recover such facilities all at his own expense, when so requested by the City of Spring Hill.

f. Neither observing, testing, approval nor acceptance of the work, in whole or in part, by the City of Spring Hill or its agents shall relieve the contractor or his sureties of full responsibility for materials furnished or work performed not in strict accordance with the specifications.

g. Any change or deviation from the approved plans and specifications that has been approved by the City Engineer and Director of Public Works must be received by the City’s inspector in writing prior to implementing the change. The City’s inspectors are not authorized to alter any provisions or to issue instructions contrary to these specifications, or to make any revisions to any previously approved drawing.

2. Defective Work:

a. The term "defective" is used in these documents to describe work that is unsatisfactory, faulty, not in conformance with the requirements of the specifications, or not meeting the requirements of

any observation, test, approval, or acceptance required by law or the specifications.

b. Any defective work may be disapproved or rejected by the City at any time before final acceptance, even though it may have been overlooked and included in a previous pay estimate.

c. Contractor shall furnish samples of questionable equipment or materials from completed work for testing purposes when required by the City Engineer or Director of Public Works. All costs in connection with the testing of equipment and materials proven to be defective shall be paid by the contractor.

3. Uncovering Work:

a. If any work is covered without concurrence of the City's inspector, it must, if requested by the City's inspector, be uncovered for his observation. Such work will be at the contractor's expense unless the contractor has given the City's inspector timely notice and the City's inspector has not acted within a reasonable time.

b. Should it be considered necessary or advisable by the City of Spring Hill, at any time before final acceptance of the entire work to make an examination of work already completed by uncovering the same, the contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any important or essential respect, the contractor shall defray all the expenses of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of the specifications, the actual cost of labor and materials necessarily involved in the examination and replacement, plus 15% of such cost to cover superintending, general expenses and profit, shall be allowed the contractor and he shall, in addition, if completion of the work of the entire contract has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.

F. HOURS OF WORK, WEEKEND OR HOLIDAY WORK. Work on Saturdays or legal holidays shall be as approved by the Director of Public Works. Requests for permission to work on legal holidays shall be considered upon advance notification of a minimum of five (5) working days prior to the anticipated

date of the work to be performed. Sunday work shall not be permitted under any circumstance. The use of artificial light to permit night work shall not be permitted except in emergency situations.

Work will not be permitted prior to 7:00 a.m. and all work shall be completed prior to 5:00 p.m. No work will be permitted after sunset or before sunrise and the City's inspector must be present to observe or inspect such work. In addition, if after hours work is approved the developer or contractor shall be charged an observation/inspection fee equal to 1.5 times the inspector's current hourly rate to be paid to the City Engineer upon completion of the after hours activities. Additionally, no paving operations will be permitted to start after 3:00 p.m. which cannot be completed by 5:00 p.m. Requests for permission to work overtime (beyond 5:00) shall be made directly to the attending project inspector by 12:00 noon that day. Requests for permission to work on Saturdays shall be received no later than 3:00 p.m. the Thursday prior to the Saturday in question.

Legal holidays observed by the City of Spring Hill are New Year's Day, Martin Luther King Day, Presidents' Day, Good Friday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day including the following Friday, and Christmas. The actual days off for these holidays may vary and in certain situations additional days may be a part of the amount of time granted as an official holiday by the City of Spring Hill. It shall be the contractor's responsibility to obtain these days prior to the actual request for inspection services.

G. **BONDS**. Suitable performance, maintenance and statutory bonds shall be furnished to the City of Spring Hill on approved Spring Hill documents guaranteeing the proper completion and maintenance of the construction involved in the public improvement project. The bonds shall be in an amount equivalent to the full cost of the improvements. Once the Final Inspection has been completed and a Letter of Acceptance issued, the maintenance bond will be in effect for a 2-year time period from the date the Acceptance letter is issued. This is for all public improvement projects. The statutory bond shall be filed by the City at the Johnson County or Miami County Courthouse prior to commencing any construction activity.

No project shall be accepted by the City prior to the submittal and acceptance of the maintenance bond by the City Engineer or City Attorney.

H. **CHANGES IN THE WORK**. Changes in the work from the approved project plans shall be made only upon the written consent of the City Engineer or Director of Public Works. All proposed

changes must be submitted to the City Engineer and Director of Public Works (by the design engineer) to receive written approval by the City. Said written approval shall be received by the City's inspector prior to implementing the deviation. Any change in the work made without the consent of the City Engineer and Director of Public Works shall be subject to removal by the contractor at his expense.

I. TRAFFIC CONTROL. Prior to construction, the developer or contractor shall provide to the Director of Public Works or his representative a Traffic Control Plan to include the following:

1. The flow of traffic in streets and access to private property shall be reasonably maintained at all times.

2. The contractor shall provide a safe roadway, and shall erect and maintain warning signs, barricades and sufficient safeguards around all excavations, embankments, and obstructions.

3. The contractor shall provide suitable warning lights or flares and shall keep them lighted from one-half hour prior to sunset until one-half hour after sunrise and all other times when visibility is limited.

4. The contractor shall further provide such flagmen and watchmen as required by the City Engineer or Director of Public Works or inspector for the protection of the public.

5. The design, placement and maintenance of traffic control devices shall correlate with and so far as possible conform to the system set forth in the most recent edition of the Manual on Uniform Traffic Control Devices for Streets and Highways.

6. The roadway shall be properly maintained and the contractor shall coordinate his operations with the Director of Public Works or his designated representative in order that suitable arrangements may be made for detours, parking, and access to private property, etc.

7. Whenever a street is closed or partially closed, the City of Spring Hill Public Safety Department shall be notified of the closing, and also when normal service is resumed.

In the event it is determined that the contractor is not maintaining a safe roadway, the City Engineer may improve the roadway conditions at the contractor's expense.

J. **DAMAGES**. The contractor hereby expressly binds himself or itself to indemnify and save harmless the City and its officers and employees against all suits or actions of every kind and nature brought or which may be brought, or sustained by any person, firm, or corporation, or persons, firms or corporations, in connection with or on account of the contractor's work or in consequence of any negligence in connection with same, or an account of any poor workmanship, or on account of any act of commission or omission of the contractor or his, its, or their agent or employees, or for any cause arising during the course of construction.

K. **CLEANING UP**. The contractor shall frequently clean up all refuse, rubbish scrap materials, and debris as a result of his operations, so that at all times the site of the work shall present a neat, orderly, and workmanlike appearance. In addition all streets and roadways adjacent to the project must be cleaned and cleared of all dirt, mud and gravel that are a result of the activities taking place upon and in the project area, daily. Upon completion of the work, the contractor shall remove from the site and any occupied adjoining property, all plants, buildings, rubbish, unused materials, form lumber, and other materials belonging to him or his subcontractor. Any costs incurred by the City due to failure by the contractor to clean up to the City's satisfaction will be charged to the account of the contractor or his surety.

L. **PROTESTS**. If the contractor considers any work demanded of him by the City’s inspector to be outside the requirements of the specifications, he shall immediately ask for a written decision or instructions and shall proceed to perform the work to conform with the City’s inspector's ruling. If the contractor considers such instructions unsatisfactory, he shall, within 24 hours after their receipt, file a written protest with the City Engineer, stating his objections and the reasons therefore. Unless protests or objections are made in the manner specified and within the time limit stated herein, the contractor hereby waives all grounds for protest.

M. **ACCEPTANCE OF WORK**.

1. Partial Acceptance. The City reserves the right to accept and make use of any completed section of the work without obligating the City to accept the remainder of the work or any portion thereof; however, the warranty period shall start when the project is complete and the City has issued the Project Completion Certificate.

2. Final Acceptance. When the final clean-up has been performed, the contractor shall notify the inspector in writing that all work has been completed. At the same

time, the contractor shall notify the design engineer that the project has been completed and should forward to the City Engineer all changes he has noted on his plans during the course of the work. Upon receiving such notification, the design engineer shall compute any changes in the original contract amount and send a letter to the City verifying the final contract amount. Within a reasonable time the City's inspector shall perform all necessary inspection procedures on the completed work. The contractor shall receive written notification of any defects in the project. The Project Completion Certificate will be issued after all defects have been corrected and all fees for inspection services have been paid.

The City will re-inspect the project prior to the expiration of the maintenance bond. Any defects noted as a result of this inspection shall be corrected by the contractor at his expense upon written notification by the City Engineer.

N. SHOP DRAWINGS AND ENGINEERING DATA.

Engineering data covering all equipment and fabricated materials, which will become a permanent part of the work, shall be submitted to the City Engineer for review. This data shall include drawings and descriptive information in sufficient detail to show the kind, size, arrangement, and operation of component materials and devices; the external connections, anchorages, and supports required; performance characteristics; and dimensions needed for installation and correlation with other materials and equipment.

All submittals, regardless of origin, shall be stamped with the approval of the contractor and identified with the City project number, contractor's name, and references to applicable specification paragraphs and drawings. Each submittal shall indicate the intended use of the item in the work. When catalog pages are submitted, applicable items shall be clearly identified. The current revision, issue number, and date shall be indicated on all drawings and other descriptive data.

The contractor's stamp of approval is a representation to the City and the City Engineer that the contractor accepts full responsibility for determining and verifying all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, and that he has reviewed or coordinated each submittal with the requirements of the work.

Each submittal shall include a statement prepared by the originator of the drawings and data certifying compliance

with the City Technical Specifications except for deviations, which are specifically identified.

All deviations from the City Technical Specifications shall be identified on each submittal and shall be tabulated in the contractor's letter of transmittal. Such submittals shall, as pertinent to the deviations, indicate essential details of all changes proposed by the contractor (including modifications to other facilities that may be a result of the deviation) and all required piping and wiring diagrams.

The contractor shall accept full responsibility for the completeness of each submission, and, in the case of re-submission, shall verify that all exceptions previously noted by the City Engineer have been taken into account. In the event that more than one re-submission is required because of failure of the contractor to account for exceptions previously noted, the contractor may be required to reimburse the City Engineer for the charges of the City Engineer for review of the additional re-submissions.

Any need for more than one re-submission, or any other delay in obtaining the City Engineer's review of submittals, will not entitle the contractor to extension of the contract time unless delay of the work is directly caused by a change in the work authorized by a Change Order or by failure of the City Engineer to return any submittal within 21 days after its receipt in the City Engineer's office.

The City Engineer's review of drawings and data submitted by the contractor will cover along general conformity to the drawings and specifications, external connections, and dimensions, which affect the layout. The City Engineer's review does not indicate a thorough review of all dimensions, quantities, and details of the material, equipment, device, or item shown. The City Engineer's review of submittals shall not relieve the contractor from responsibility for errors, omissions, or deviations, nor responsibility for compliance with the City Technical Specifications.

Three (3) copies (or one reproducible copy) of each drawing and necessary data shall be submitted to the City Engineer. The City Engineer will not accept submittals from anyone but the contractor. Submittals shall be consecutively numbered in direct sequence of submittal and without division by subcontracts or trades. Re-submittals shall bear the number of the first submittal followed by a letter (A, B, etc.) to indicate the sequence of the re-submittal.

When the drawings and data are returned marked NOT ACCEPTABLE or RETURNED FOR CORRECTION, the corrections shall be made as noted thereon and as instructed by the City

Engineer and three (3) corrected copies (or one corrected reproducible copy) resubmitted.

When corrected copies are resubmitted, the contractor shall, in writing, direct specific attention to all revisions and shall list separately any revisions made other than those called for by the City Engineer on previous submissions.

When the drawings and data are returned marked EXCEPTIONS NOTED, NO EXCEPTIONS NOTED, or RECORD COPY, no additional copies need be furnished. Distribution of acceptable submissions shall be as follows: Two (2) copies to the City and one (1) copy to the contractor.

END OF SECTION

SECTION 1000 - SITE PREPARATION

1001 SCOPE.

This section covers the necessary clearing, grubbing, demolition, and other appurtenant work at the locations shown on the contract drawings.

All Clearing and Grubbing activities will require a Land Disturbance permit, a Sediment and Erosion Control plan and a copy of the KDHE NOI (Notice Of Intent). *See - Spring Hill City Code Article 2 Chapter 18 and Spring Hill Zoning Ordinance Section 17.352*

1002 DEFINITIONS.

a. Clearing. Clearing shall consist of the removal of all vegetable matter, such as trees, brush, down timber, rotten wood, sod, rubbish, and other objectionable combustible materials found on or above the surface of the site. It shall include the removal of wood buildings, fences, lumber, waste dumps, abandoned utilities, and trash, the salvaging of such materials as may be specified, and the disposal of the debris.

b. Grubbing. Grubbing shall consist of the removal of all stumps, roots, buried trees and brush, and other objectionable combustible materials appearing on or below the surface of the ground which has not been included under the definition of "Clearing" above.

c. Demolition. Demolition shall consist of the destruction and removal or incorporation into embankment all non-vegetable matter appearing above, on, or below the ground surface. This shall include, but not be limited to, all material derived from the demolition of portland cement concrete items such as base courses, curbs, curb and gutters, sidewalks, floors, steps, driveways, drainage structures of all sorts, guard fences, and other miscellaneous items such as foundations or walls of any sort, and iron or steel items, and asphalt items such as pavement and base courses.

d. Trees. Vegetable growth 40 inches or greater in circumference, measured 2 feet above the ground, shall be classified as a tree.

e. Brush. Vegetable growth less than 40 inches in circumference, measured 2 feet above the ground, shall be classified as brush.

1003 UTILITY COORDINATION.

The contractor shall be responsible for protecting any improvement of any agency, public or private, in the vicinity of clearing, grubbing or demolition operations. The contractor shall contact Kansas One Call and all other utility providers and provide to the City of Spring Hill verification prior to any land disturbance activities. The contractor may be responsible for the cost to any agency for assistance in the location of its facilities, but he shall be responsible for the cost of all damage to such facilities arising from his carelessness or negligence.

1004 LIMITS OF CONSTRUCTION.

In developed and semi-developed areas, the limits for clearing, grubbing, and demolition shall be as defined on the plans or specified in the Special Conditions but in no case shall work extend beyond the limits of the right-of-way, City property lines, or easements.

In undeveloped areas where improvements are limited or non-existent, clearing, grubbing, and demolition shall not extend beyond the right-of-way, City property lines, or easement, unless otherwise shown on the contract drawings or specified in the Special Conditions.

1005 PROGRESS OF CONSTRUCTION.

a. Clearing. Clearing shall proceed well in advance of the construction operation so as not to delay the progress of the work. The refuse resulting from clearing may be hauled to a waste site secured by the contractor or shall be burned or buried in such a manner as to meet all laws, regulations, and requirements of any governing authority regarding health, safety, and public welfare. When authorized by the fire department, the contractor may dispose of such refuse by burning on the site of the project, provided all requirements as determined by the Fire Marshall are met. Under no circumstances will the authorization to burn on the site relieve the contractor in any way from damages that may result from his operations. In no case shall any materials be left on the project site, shoved into abutting properties, or buried in embankments or trenches on the site.

b. Grubbing. **Erosion control measures shall be in place prior to the start of grubbing operations.** Grubbing shall parallel the clearing as nearly as the sequence of operations will permit. Except for the special circumstances enumerated below, all stumps, roots, and other objectionable matter within the construction area

shall be removed to a minimum depth of 12 inches below the subgrade or the original ground, whichever is lower. All stumps, roots, and other objectionable matter outside the limits of the construction area but within the right-of-way shall be cut off flush with the ground.

All stumps, roots, and other objectionable matter within the specified limits of embankments having a depth of 2 feet or less shall be removed and disposed of. Piling and butts of utility poles within the limits shall be removed to a minimum depth of 2 feet below the subgrade or the original ground, whichever is lower.

All stumps, roots, and other objectionable matter found within borrow material to be used for embankment or fill material shall be removed.

All stumps, roots, and other objectionable matter found within the bottoms or sidewalls of excavation and trenching areas shall be completely removed from the respective bottom areas, and removed to a minimum depth of 12 inches below the respective sidewalls.

c. Demolition. Demolition work shall occur well in advance of the construction operation. Masonry and concrete walls, miscellaneous foundations, or other objects extending below ground shall be removed to a depth of at least 12 inches below the original ground or the subgrade, whichever is lower.

When explosives are used in demolition, the contractor shall comply with the provisions of Specification Section 6100 “Blasting.”

In removing items such as portland cement concrete pavement, base courses, curbs, curb and gutters, gutters, sidewalks, and similar objects where portions of said objects are to be left in place, they shall be removed to an existing joint or to a new joint sawed to a minimum depth of 1 inch with a true line and vertical face. Sufficient portions of these objects shall be removed to provide for the proper grade and connection to the new work.

1006 PROTECTION OF TREES AND SHRUBS.

During his construction operation, the contractor shall leave in place and protect from damage all trees, shrubbery, and flower beds unless shown on the drawings to be removed. Where trees existing on the project site are not to be removed, it shall be the responsibility of the contractor to trim low branches that would interfere with the normal

operation of his equipment. The trimming shall be performed in ~~a professional manner prior to any machine operation~~ accordance with ANSI A300 standards for tree care operations.

1007 CONSTRUCTION STAKING.

The engineer shall, unless otherwise provided for, set construction stakes establishing lines, slopes, profile grades in roadway work, and center line and bench marks (hubs) for structure work and appurtenances as he may deem necessary and shall furnish the contractor with all necessary information relating to lines, slopes and grades. These stakes and marks shall constitute the field control by and in accordance with which the Contractor shall establish other necessary controls and perform the work.

The contractor shall be responsible for giving the engineer reasonable notice of intent to perform work in a particular area of the project in order to afford the engineer sufficient time to set construction stakes establishing, lines, slopes and profile grades. For roadway work, the engineer will set construction stakes establishing, lines, slopes and profile grades and will furnish the contractor with all necessary information relating to these lines, slopes and grades. These stakes and marks will constitute the field control by and in accordance with which the contractor shall establish other necessary controls and perform the work. For structures, the engineer will stake and reference those centerlines and layout lines used as dimensional references on the plans and provide a benchmark (hubs) at each structure location. The contractor shall be responsible for all other lines, locations, alignment, grade elevations and any other necessary control by use of engineering instruments or other tools or methods as required to build the structure.

The contractor shall be responsible for the preservation of all stakes and marks, and if any construction stakes or marks are carelessly or willfully destroyed or disturbed by the contractor, the cost of replacing them may be charged against him and deducted from the payment for the work.

END OF SECTION

SECTION 1100 - GRADING

1101 SCOPE.

This section covers the performance of all the work and appurtenances required for grading the project in coordination with all previous work performed at the locations shown on the contract drawings.

1102 MATERIALS AND DEFINITIONS.

a. Grading. Grading shall be defined as meaning the performance of all excavation, embankment and backfill in connection with the construction of all improvements.

b. Excavation. Excavation is defined as the removal of materials from the construction area to the lines and grades as shown on the contract drawings.

   Unless otherwise provided for in the Special Conditions and included in the proposal, all excavation shall be unclassified excavation and the contractor shall satisfactorily remove and dispose of all materials encountered regardless of their nature.

   When provided for in the Special Conditions and included in the proposal, the excavation may be classified according to the following categories.

   1. Common Excavation. Suitable materials shall include all earth free of rock, sod, weeds, roots and other debris, and containing the soil characteristics and moisture content to obtain the required compaction.

   2. Rock Excavation. Rock excavation will be so classified when sandstone, limestone, blue shale or other similar material is encountered and, in the opinion of the City Engineer, requires drilling or blasting to remove the material.

c. Embankment. Embankment is defined as the placing and compacting of material in the construction area to the lines and grades as shown on the contract drawings. In no case will the side slopes exceed 3:1.

Material suitable for use as embankment shall be entirely imperishable and shall be determined as acceptable by the City Engineer.

Materials suitable for earth embankment shall be free of waste material, contain less than 10% by volume of rock and gravel, and contain no particles having a dimension greater than 3 inches.

Materials suitable for rock embankment shall be free of waste material and contain 10% or greater by volume of rock or gravel containing particles ranging in size from a minimum dimension of 3 inches to a maximum of 24 inches.

Material not suitable for use as embankment material shall include, but shall not be limited to, frozen material, organic material, topsoil, rubbish, rock, broken concrete, brick, asphalt concrete, and other debris and soil not containing the characteristics and moisture content to obtain the required compaction.

d. Structures. Structures, as used herein, refer to bridges, basins, street drainage structures, headwalls, retaining walls, and similar construction.

1103 CONSTRUCTION - GENERAL.

During excavation and embankment grading operations, the work shall be performed in a manner and sequence that will provide drainage at all times. Soft spots or areas that develop during grading operations shall be removed, the area then backfilled with suitable material and compacted to obtain the required density. No additional payment will be made to the contractor for this work.

1104 EXCAVATION - GRADING.

Excavation of every character and of whatever materials encountered within the construction limits shall be performed to the lines and grades indicated on the contract drawings. In no case will the side slopes exceed 3:1.

All suitable material removed by excavation shall be used as far as practicable in the formation of embankments or elsewhere when and as directed by the City Engineer. It shall be the responsibility of the contractor to handle excavation in any manner he sees fit, provided that suitable materials will be available when required. No additional

compensation will be allowed for any special sequence of excavating or placing of such materials or any re-handling of materials.

Excavation materials in excess of the amount needed to complete the grading shall be considered as waste material, which shall be removed from the site by and at the expense of the contractor.

Any additional fill material required, which is not available from excavation within the construction limits, shall be supplied by the contractor at no expense to the owner unless provided for in the proposal and Special Conditions. All such material brought to the site and incorporated in the work shall be subject to the approval of the City Engineer. In the event during grading operations materials are encountered below grade or otherwise, which are determined as being unsuitable or unstable by the City Engineer or his representative, they shall be removed to the depth required to reach stable material. The area involved shall then be backfilled with suitable material, as determined by the City Engineer, and compacted to obtain the required density.

All roadway excavation in rock (shale, sandstone, limestone) shall be undercut no less than 12 inches for the full width of the roadway and backfilled with suitable soil or granular material. Undercut shall be unclassified excavation.

1105 EMBANKMENT – GRADING.

The embankments shall be formed with suitable materials, as herein defined, procured from excavations made on the project site, or from borrow pits as required to complete the grading work.

Where embankments, regardless of height, are placed against hillsides or existing embankments, either of which have a slope steeper than 1 vertical to 6 horizontal (1:6), the existing slope shall be benched or stepped in approximately 18-inch rises as the new fill is brought up in 8-inch lifts. Benching shall be of sufficient width to permit operations of placing and compacting equipment. Each horizontal cut shall begin at the intersection of the original ground and the vertical sides of the previous cuts. Materials thus cut out shall be re-compacted to the required density along with the new embankment material. Material cut out, bladed into place, and compacted shall not be measured and paid for directly but will be considered as incidental work.

The existing surface upon which embankment material is to be placed shall have all unstable and unsuitable material, such as topsoil, peat, mulch, coal seams, disintegrated shale, rubbish, logs or stumps, and unconfined saturated soils, removed to the depths shown before starting the embankment work.

Where embankments 2 feet or less in depth are to be placed on areas covered by existing pavement, the existing pavement shall be removed and the cleared ground surface shall be compacted at optimum moisture to the specified density. Where embankments greater than 2 feet in depth are to be placed on areas covered by existing pavement, the existing pavement shall be broken into pieces not larger than 24 inches maximum dimension, left in place and the embankment started thereon.

Earth embankment shall be placed in successive horizontal layers distributed uniformly over the full width of the embankment area. Each layer of material shall not exceed 8 inches in thickness (loose measurement) and shall be compacted to the density specified in Section 1106 before the next layer is placed hereon. As the compaction of each layer progresses, continuous blading will be required to level the surface and to ensure uniform compaction. Embankment construction shall not be performed when material contains frost, is frozen, or a blanket of snow prevents proper compaction.

Successive horizontal layers of rock embankment not exceeding 2 feet in depth, shall be made by placing larger stones uniformly over the embankment area. Small stone fragments, sand, earth, or gravel shall be placed between the larger stones to fill all voids. Each layer shall be thoroughly compacted before the next layer is placed.

Large rocks shall be withheld from the top 1 foot or more of the embankment and only crushed stone or earth used in this layer. The crushed stone shall be well graded to form a dense mass when compacted and maintain adequate cohesive and interlocking characteristics.

1106 EMBANKMENT – BACKFILL AND COMPACTION.

Each successive lift of backfill material shall be rolled with a tamping or sheep-foot roller, except as provided below for sand and gravel, making a sufficient number of trips over the entire surface to compact all material thoroughly and uniformly. Compaction shall be continued

until 95% of maximum density is obtained at the optimum moisture content as determined by ASTM D698.

Sand and gravel, which cannot be compacted satisfactorily with a sheep-foot roller, shall be rolled with a pneumatic-tired roller. Each lift shall be rolled until no further consolidation is evident.

All the work involved in either adding moisture to, or removing moisture from embankment materials shall be considered incidental to the completion of the grading operation.

Backfilling behind curb or curb and gutter shall not be done within seven (7) days after being laid unless otherwise approved by the City Engineer. All fill material placed behind the curb and gutter beneath and either side of sidewalks within the right-of-way shall be brought to 95% of maximum density at the optimum moisture content as determined by ASTM D698. The material used to fill the void behind curb or curb and gutter shall be free of rock and debris and shall be of a type that will leave no voids to pocket water and that will self-compact. Unless otherwise shown on the contract drawings, the finish grading from the back of the curb to the right-of-way line and/or utility easement line or construction easement line shall be performed to provide a smooth transition between existing yard grades at the right-of-way line and/or easement line to the curb so that positive drainage will exist.

The top portion of the backfill within right-of-way areas shall be finished with at least 12 inches of topsoil corresponding to, or better than, that underlying adjoining sodded areas. Topsoil shall be approved by the engineer prior to placement, and unless otherwise directed, shall be material previously excavated and stockpiled for the purpose during excavating and grading operations.

Grades on areas to receive topsoil shall be established and maintained as a part of the grading operations. Immediately prior to dumping and spreading topsoil, the surface shall be loosened by disking or scarifying to a depth of 2 inches to permit bonding of the topsoil to the underlying surface.

1107 STRUCTURE BACKFILL.

Backfill around and outside of structures shall be deposited in layers not to exceed 8 inches in non-compacted thickness and brought to 95% of maximum density at optimum moisture

content as determined by ASTM D698. Compaction of structure backfill by rolling will be permitted provided the desired compaction is obtained and damage to the structure is prevented. Compaction of structure backfill by inundation with water will not be permitted.

Material for structure backfill shall be composed of earth only and shall contain no organic materials, broken concrete, stones, trash, or debris of any kind.

No tamped, rolled, or otherwise mechanically compacted backfill shall be deposited or compacted in water.

All backfill material shall consist of loose earth having a moisture content such that maximum density of the compacted soil will be obtained. Moisture content shall be distributed uniformly and water for correction of moisture content shall be added sufficiently in advance that proper moisture distribution and compaction will be obtained.

Backfill around and outside of structures that will ultimately lie under proposed pavements shall be compacted to the requirements of Section 1205 "Compaction Requirements".

1108 SHEETING AND SHORING.

Except where banks are cut back on a stable slope, excavation for structures shall be properly and substantially sheeted, braced, and shored, as necessary, to prevent caving or sliding, to provide protection for workmen and the work, and to provide protection for existing structures and facilities. Sheeting, bracing, and shoring shall be designed and built to withstand all loads that might be caused by earth movement or pressure and shall be rigid, maintaining shape and position under all circumstances.

1109 FINAL GRADING.

After other outside work has been finished, and backfilling and embankments completed and settled, all areas on the site of the work which are to be graded shall be brought to grade at the indicated elevations, slopes, and contours, including shoulder, berm, and sidewalk spaces. In no case will the final side slope exceed 3:1. Use of graders or other power equipment will be permitted for final grading and dressing of slopes, provided the result is uniform and conforming to the lines and grades shown on the plans. The contractor

shall repair any damaged surface and shall not use any equipment that will leave a marred surface.

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1110 CLEANUP.

Cleanup shall follow the work progressively and final cleanup shall follow immediately behind the finishing. The contractor shall remove from the site of the work all equipment, tools, and discarded materials, and other construction items. The entire right-of-way or easement shall be left in a finished and neat condition. Cleanup shall be considered a subsidiary obligation of the grading work.

In the event the contractor does not promptly comply with the terms of such instructions, the City may have the defective work corrected or the rejected work removed and replaced and all direct and indirect cost of such removal and replacement, including compensation for additional professional services, shall be paid by the contractor. The contractor will also bear the expenses of repairing work of others destroyed or damaged by his correction, removal or replacement of defective work.

1111 SETTLEMENT.

The contractor shall be responsible for all settlement of backfill, fills, and embankments that may occur within 2 years after final completion of the contract under which the work was performed.

The contractor shall make, or cause to be made, all repairs or replacements made necessary by settlement within 30 days after notice from the City Engineer.

1112 TEMPORARY SURFACING.

If during construction activities it is deemed necessary to provide ingress and egress to the public by placement of temporary surfacing, the contractor shall do so at the direction of the City Engineer or his authorized representative. Temporary surfacing shall meet the requirements of the Kansas Department of Transportation classification CA-5, for aggregates, as shown below. Larger aggregates, meeting the requirements of KDOT CA-1, may be used if, in the opinion of the City Engineer additional stabilization is necessary. Temporary surfacing shall be supplied by the contractor at no expense to the owner unless provided for in the proposal and Special Conditions.

Grading Requirements for Temporary Surfacing								
	% Retained – Square Mesh Sieve							
CA-1	1½″	1″	¾″	½″	⅜″	No. 4	No. 8	No. 30
	0	0-10	30-65	--	70-93	--	95-100	--
CA-5	--	0	0-5	--	40-60	--	95-100	--

END OF SECTION

SECTION 1200 - SUBGRADE PREPARATION

1201 SCOPE.

This section governs the furnishing of all labor, equipment, tools, and materials, and the performance of all work connected with subgrade preparation, prior to constructing pavements for streets, alleys, parking areas, sidewalks, drive approaches and the construction of concrete curb and curb and gutters. This section does not include the construction of any base courses.

1202 DEFINITIONS.

a. Sub-grade. Sub-grade is defined as a well-graded and compacted surface, constructed as specified herein to the grades, lines, and cross-section shown, bladed and compacted to the specified density, preparatory to constructing pavements, or other improvements thereon.

b. Sub-grade Preparation. Sub-grade preparation is the repeated operation of fine grading and compacting the subgrade until the specified lines, grades, and cross-sections have been obtained and the materials are compacted to the specified depth and density.

1203 CONSTRUCTION REQUIREMENTS.

a. General. All underground work contemplated, including clearing, grubbing, and demolition, shall be completed in accordance with the requirements of Section 1100 “Grading” prior to commencement of any subgrade preparation.

Prior to beginning any work on street subgrade, the contractor shall secure the services of a qualified testing agency to acquire samples of the material to be used for subgrade construction. These samples shall be analyzed to determine proctor values, liquid limits, and plasticity index. Copies of the analysis shall be provided to the City Engineer for review prior to commencing any subgrade preparation. If it is determined that fly ash modification is required, the following guidelines shall be followed.

(1) The contractor’s testing agency shall determine the areas to be modified, the amount of fly ash to be used (% by weight), and the depth to be tilled.

(2) Construction of pavements on high plasticity soils shall be modified with Class C" fly ash, or replaced with lower plasticity soils. High plasticity soils shall be defined as soils with a liquid limit greater than 50 and a plasticity index greater than 30. (See Section 1209.)

The subgrade surface shall be brought to the specified lines, grades, and cross-sections by repeatedly adding or removing material and compacting to the specified density with a suitable roller to perform these operations.

b. Foundation Treatment. Unless otherwise specified or shown on the contract drawings, the soil below grade line in cut sections shall be scarified, broken up, adjusted to a moisture content within the designated moisture range and compacted to the designated type of compaction.

When the depth of compaction in cut sections is shown to be more than 9 inches, all material shall be removed to within 9 inches of the lower limit of the compaction. The layer of material left in place shall be scarified, broken up, adjusted to a satisfactory moisture content and compacted to the designated type of compaction. This process shall be repeated until the cut section is compacted to the grade as shown on the contract drawings.

All roadway excavation in rock (shale, sandstone, limestone) shall be undercut no less than 12 inches for the full width of the roadway and backfilled with suitable soil or granular material. Undercut shall be unclassified excavation.

c. Moisture Control Requirements. The moisture content of the soil at the time of compaction shall be as necessary to obtain the density as designated on the contract drawings unless it is determined by the City Engineer that the soil is unstable with that moisture content.

When the moisture content of the soil is not satisfactory to the City Engineer, water shall be added or the material aerated, whichever is needed to adjust the soil to the proper moisture content. In no case, shall water be added without the consent of the City Engineer.

d. Compaction Control Requirements. Roadway embankment earth (fill) materials shall be placed in horizontal layers not exceeding 8 inches unless otherwise approved by the City Engineer and shall be compacted as specified in Section 1205 "Compaction Requirements" before the next layer is placed. Effective spreading equipment shall be used on each lift to obtain uniform thickness prior to compaction. Water shall be added or removed on the approval of the City Engineer, in order to obtain the required density.

1204 MOISTURE CONTENT REQUIREMENTS.

The moisture content of the soil at the time of compaction shall be uniform and shall be such that the soil can be compacted to the requirements of the type of compaction as designated on the contract drawings or as directed by the City Engineer.

If Type B compaction is specified with this moisture control, the content shall be sufficient to produce a uniform mixture of the soil and moisture. It will be determined by the City Engineer whether or not satisfactory compaction and moisture content is obtained.

1205 COMPACTION REQUIREMENTS.

a. Pavements. The subgrade for pavements shall be compacted to a density of at least 95% of the maximum density for the material used for a depth of at least 9 inches below the finished subgrade elevation and within the tolerance of the moisture for the type of material at 95% of maximum density, as determined by the standard proctor test (ASTM D698) for cohesive soils. Any further compacted layers shall be accomplished in the same manner as specified.

When Type B compaction is specified or shown on the contract drawings, the compacted density is to be such that the tamping or sheep-foot roller, while rolling the layer or lift will walk out of the material and ride the top portion of the lift.

Sub-grade compaction for curbs and pavements shall be accomplished by use of sheep-foot rollers. The roller may be self-propelled or machine drawn. The sheep-foot roller shall be fully loaded with liquid or solid ballast to produce adequate compaction energy to the tamping foot. The roller shall have a minimum drum

diameter of 30 inches and a 6-inch minimum length of tamping feet.

Compaction of low plasticity or non-plastic, fine-grained material shall be considered adequate when additional passes of the roller do not bring the tamping feet closer to the surface of the lift, provided the entire weight of the roller is supported on the tamping feet and none by material directly in contact with the drum.

Construction of pavements on high plasticity soils shall be modified with hydrated lime or class "C" fly ash or replaced with lower plasticity soils. High plasticity soils shall be defined as soils with a liquid limit greater than 50 and a plasticity index greater than 30. Determination of the soil plasticity shall be provided by the contractor at the direction of the City Engineer.

Sand and gravel, which cannot be compacted satisfactorily with a sheep-foot roller, shall be rolled with a pneumatic-tired roller. Each lift shall be rolled until no further consolidation is evident.

b. Sidewalks. The subgrade for sidewalk pavements shall be compacted to a density equivalent to the density of the immediately surrounding soil in areas not requiring fill. In areas where fill is required, the subgrade shall be compacted to 95% of the maximum dry density as determined by ASTM D698 for cohesive soils or to 70% relative density as determined by ASTM D2049 for non-cohesive soils.

c. Drive Approaches and Concrete Curb & Gutter. The subgrade for drive approaches and concrete curb and gutter shall be compacted to the same requirements as stated above in part a. “Pavements.”

1206 PROTECTION AND MAINTENANCE OF SUBGRADE.

The newly finished subgrade shall be repaired from action of the elements. Any settlement or washing that occurs prior to the acceptance of the work shall be repaired and the specific lines, grades, and cross-section re-established.

The contractor shall protect all pavements, curbs, curb and gutters, and sidewalks from his subgrade operation with an earth cushion, timber planking, or both, where tractors, graders, rollers, or other equipment are required to pass,

or turn around. All resulting damage shall be repaired. Any damaged work, which cannot be repaired to the satisfaction of the City Engineer, shall be replaced by the contractor at his own expense.

1207 COMPACTION TESTING.

At the option of the City Engineer, compaction testing may be performed in the field using a nuclear density-moisture measuring device to determine the density of the subgrade. If as a result of this field-testing the City Engineer determines that further compaction is required, the contractor shall revise his methods or procedures to obtain the specified density.

1208 PROOF ROLLING.

Proof rolling shall be performed with a heavy rubber-tired roller ***or tandem axel dump truck loaded within 1,000 pounds of its GVW (minimum load of 16 tons).*** A weight ticket must be provided at the time of the proof rolling. Proof rolling shall be done after specified compaction has been obtained. Areas found to be weak (exhibit excessive pumping) and those areas which fail shall be ripped, scarified, wetted or dried if necessary and re-compacted to the requirements for density and moisture or excavated ~~to a minimum depth of 9 inches~~ below subgrade and backfilled with asphalt, AB-3 or concrete at the contractor's expense. A second proof roll will be required for all sections that fail the initial proof roll including any sections repaired using asphalt, AB-3 or concrete. No curb and gutter or asphalt will be installed until the entire street has passed the proof roll.

If the subgrade for the curb and gutter or the pavement has been approved and there is a rainfall event before all of the curb and gutter or pavement has been laid, the subgrade will need to be dried by scarifying and recompacting and scheduling another proof roll with the city. The City Engineer and Public Works Director have sole discretion in determining the need for repair of the subgrade after a rainfall event.

1209 FLY ASH SUBGRADE TREATMENT.

The purpose of this specification is to secure a completed section of treated material which contains a uniform mixture of fly ash and pulverized material with no loose or segregated areas, has a uniform density and moisture content, and is well bound for its full depth. It shall be the responsibility of the contractor to regulate the

sequence of his work, to process a sufficient quantity of material to provide full depth as shown on the Plans, to use the proper amounts of fly ash, to maintain the work, and to rework areas as necessary to meet requirements.

a. The contractor shall secure the services of a qualified testing agency to perform on-site testing. A qualified field technician shall monitor placement, mixing, moisture content and in-place density. Copies of the test results shall be provided to the City Engineer for review prior to pavement placement. All costs incurred through the use of the testing agency shall be borne by the contractor/developer.

b.

b. A sample of the fly ash intended for use on the project will be submitted to the testing laboratory for the purpose of developing a fly ash proctor. The fly ash supplier will submit certified laboratory analysis indicating that fly ash used on the project conforms to ASTM C618, Class C, except the supplementary optional physical requirements in Table 4 will not apply and the minimum calcium oxide (CaO) content of the fly ash shall be 25%. Fly ash shall be sampled and tested in accordance with ASTM C311.

Fly ash furnished by the contractor shall comply with the requirements of ASTM C618 Class C. The minimum calcium oxide (CaO) content of the fly ash shall be 25%. Fly ash shall be stored and handled in closed waterproof containers prior to distribution on a roadway or fill. Fly ash that has been partially caked or set shall not be used. A certification indicating compliance to these Specifications shall be attached to or be part of the scale ticket for each load delivered. The certification shall be signed by the producer or his assigned representative.

c. Construction Requirements.

~~1)~~a. Preparation of Roadbed. The subgrade shall be trimmed as near as possible to finish subgrade elevations as shown on the plans. The contractor shall allow for potential swell of material to minimize waste during final trimming. This may require the subgrade to be trimmed to slightly below proposed finished grade, depending on the soil characteristics.

~~2)~~b. Equipment. The machinery, tools and equipment necessary for proper execution of the work shall be on the project and approved by the City Engineer prior to beginning of construction operations. Pulverization of existing subgrade and blending of the mixture shall be accomplished by use of a drum-rotary type tiller equipped with an adjustable water proportioning system. Initial compaction shall be achieved using a self-propelled sheepsfoot compactor having a minimum operating weight of 12 tons with a minimum centrifugal force of 24 tons. Rubber-tired or smooth-wheeled rollers shall be used for final

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compaction of the stabilized section. All machinery, tools and equipment used shall be maintained in satisfactory and workmanlike manner. Fly ash shall be stored and handled in closed weatherproof containers until immediately before distribution. Fly ash exposed to moisture prior to mixing with recycled material shall be discarded.

~~3)~~c. Application. The fly ash shall be spread in an approved manner at the rate specified. Care shall be taken to prevent the fly ash from flowing off the area to be treated. The fly ash shall be distributed at a uniform rate in such a manner as to minimize the scattering of fly ash by wind. Fly ash shall not be applied when wind conditions, in the opinion of the City Engineer, are such that blowing fly ash becomes objectionable to adjacent property owners or significantly reduces the amount of fly ash incorporated in the work.

~~4)~~d. Moisture Control. The required moisture content will be established by the contractors testing agency based on laboratory tests on the materials and specific fly ash content to be used for the treatment. Water shall be introduced directly into the rotary mixing drum during the tilling procedure. Final moisture content of the mix, immediately prior to compaction, shall be uniform and not exceed plus or minus 3% of the optimum moisture content of the mix. If the moisture content exceeds the specified limits, additional fly ash may be added to lower the moisture content to required limits. Lowering the moisture content by aeration following addition of fly ash will not be allowed. If the moisture contents are below the specified limits, additional water shall be added and uniformly blended with the mixture. Additional fly ash added to lower the moisture content shall be at the expense of the contractor.

~~5)~~e. Mixing. The pulverized subgrade material and fly ash shall be thoroughly mixed and the mixing continued until a homogenous, friable mixture of pulverized subgrade material and fly ash meeting the specified size requirements is obtained. The subgrade material shall be pulverized through use of the specified equipment. Depth of pulverization shall be as designated. The pulverized subgrade material and fly ash shall be

mixed thoroughly until a uniform mixture is obtained. All clods shall be reduced in size by mixing until the pulverized subgrade material-fly ash mixture meets the following size requirement when tested.

Sieve Size	Percent Retained
1″	0
1/2″	50

~~6)~~f. Compaction. Compaction of the mixture shall begin immediately after mixing and confirmation that the moisture content is within the specified range. The specified compaction shall be obtained within 1 hour after incorporation of the fly ash. The material shall be sprinkled as necessary to maintain the specified moisture content. Compaction of the mixture shall begin at the bottom and shall continue until the entire depth of mixture is uniformly compacted to the specified density.

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All non-uniform (too wet, too dry or insufficiently treated) areas which appear shall be corrected immediately by scarifying the areas affected, adding or removing material as required and reshaping and recompacting.

The stabilized section shall be compacted to a minimum of 95% of the combined materials maximum dry density.

In addition to the requirements specified for density, the section shall be compacted to the extent necessary to remain firm and stable under construction equipment. After each section is compacted, tests will be made by the testing agency field technician. If the material fails to meet the density requirements, the City Engineer may require it be reworked as necessary to meet those requirements and/or require the contractor to change his construction methods to obtain required density on the next section. Additional fly ash will be added to the areas that are reworked at no additional cost to the Owner, and the amount required shall be determined by the testing agency field technician. Should the section, due to any reason or cause, lose the required stability, density and finish before the surface is placed or the work is accepted, it shall be reprocessed, recompacted and refinished

at the sole expense of the Contractor. Reprocessing shall follow the same patterns as the initial stabilization, including the addition of fly ash.

~~7)~~g. Finishing and Curing. Following compaction of the stabilized section, the treated section will be trimmed to the required lines and grade by means of equipment which is automatically controlled with regard to grade. The surface shall then be compacted with a smooth wheel or pneumatic tired roller.

The City Engineer may waive the use of automatically controlled equipment on projects containing narrow or irregular dimensions where operation of the automated equipment is impractical. Finishing of these areas may be as set forth above or the surface will be lightly scarified during finishing operations and bladed to a uniform grade and cross-section to eliminate any imprints left by the equipment.

After the fly ash treated section has been finished as specified herein, the surface shall be protected against rapid drying by either of the following curing methods.

a) Maintain in a thorough and continuously moist condition by sprinkling.

b) Apply an asphaltic prime coat.

~~8)~~h. Weather Limitations. Fly ash mixing operations shall not be performed when the subgrade is frozen or when the ambient air temperature is less than 50° F. The contractor shall be responsible for protection and quality of the fly ash modified subgrade mixture under any weather conditions.

At cooler temperatures, additional passes may be required to reduce the nominal size of the soil agglomerates to less than 1 inch. Multiple passes of rollers may also be required to achieve specified densities in cooler weather conditions.

~~9) Proof Rolling. Proof rolling with a loaded tandem dump truck carrying a minimum load of 16 tons will be required before acceptance of finish grade. Subgrade failures will be repaired by incorporating additional fly ash into the subgrade. The use of fly ash trimmings to correct areas of failure will not be permitted.~~

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SECTION 1300 - ASPHALTIC CONCRETE PAVEMENT

1301 SCOPE.

This section covers asphalt concrete pavement for roadways and parking areas.

1302 GENERAL.

Pavement shall be constructed to the lines, grades, dimensions, and details contained herein or as shown on the plans.

Except as modified herein, asphalt concrete pavement shall conform to Division 600 of the latest edition of Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, ~~1980 Edition, or latest revision,~~ and shall be as follows:

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Surface Course Mix.....BM-2, BM-2FR
Base Course Mix.....BM-2B, BM-2BFR

Alternate mix designs may be used only where approved by the City Engineer.

Erosion control devices located at the back of curb and gutter or at the right of way must be installed before paving operations will be permitted. The devices shall be installed immediately after the curb has been backfilled. An exception will be granted when one or more lifts of base asphalt need to be placed before the curb and gutter can be poured. The placement of subsequent lifts of asphalt will not be permited until the curb is backfilled and erosion control devices are in place.

Paving will not be permitted until the compressive strength of the concrete used for curb and gutter construction has reached seventy five (75) percent of its design strength unless otherwise approved by the City Engineer.

a. Composition of Mix. Mix designation BM-2 or BM-2B shall be composed of a combination of aggregates and mineral filler supplements meeting the requirements of ~~Table 5,~~ Section 1103 of the referenced state specifications~~, providing the mix meets the following composition limits. Not more than 25% of the mineral filler shall be present in uncrushed aggregate. The remaining mineral filler shall be present in crushed aggregate or shall be obtained by adding mineral filler~~

~~supplements. Not more than 8% by weight of the total mix shall be volcanic ash.~~

~~When specified for use in the surface course, mix designation BM-2 shall contain a natural sand of such grading that the portion passing the No. 8 sieve and retained on the No. 200 sieve will not be less than 15% of the total mix. For this purpose, only sand from an alluvial deposit shall be used.~~

For mix designations BM-2FR and BM-2BFR Fractionated Reclaimed Asphalt Pavement (FRAP) may be added as an aggregrate source. FRAP in defined as having two or more stockpiles, where Reclaimed Asphalt Pavement (RAP) is processed into coarse and fine fractions. The fine FRAP shockpile will contain only material passing the ¼ inch screen. The coarse FRAP stockpile will contain material retained on the ¼ inch screen and passing the ¾ inch screen. No mix shall contain greater than 25% FRAP. RAP shall not be used regardless of mix designation.

If FRAP is used, include the percent of added FRAP, extracted gradation, asphalt content, source and type of FRAP on the mix design submittal. The FRAP percentage contribution to the mix must be included in the design single point gradation.

b. Production Requirements. After the mix design is approved by the City Engineer, the asphalt supplier must maintain combined single point gradation (FRAP, if any, and virgin aggregate), stability, flow and asphalt content within the required tolerances shown in the approved mix design. The ratio of % minus No. 200 material to % effective asphalt must be maintained within the range of 0.6 to 1.6 for field samples. FRAP stockpiles will be inspected and must meet the approval of the City Engineer.

c. Field Density Requirements. BM-2,BM-2FR, BM-2B and BM-2BFR pavements shall have a minimum in place density of ninety-five percent (95%) of Standard established by the Marshall Density Procedure, using a fifty blow method. At the option of the City Engineer, compaction testing may be performed in the field using a nuclear density gauge to determine the density of the mixture as placed. If as a result of this testing the City Engineer determines that further compaction is required, the Contractor shall revise his rolling procedure to obtain the density as specified. Failure

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to achieve the required density shall result in rejection of the pavement.

d. Non-conforming Test Results. When the results of the field sampling and testing confirm the delivered mix has failed to meet the required specifications, the asphalt supplier shall be required to make any and all adjustments necessary to regain compliance. Paving operations shall be suspended if the supplier cannot bring the mix into compliance within an acceptable period of time as decided by the City Engineer. A non-conforming asphalt mix will result in a corrective action up to and including removal and replacement as decided by the City Engineer. A new mix design submittal will be required if changes to the mix beyond the specified allowances are necessary to regain conformance.

Immediately prior to the addition of the asphalt, the combined aggregate shall meet the following grading and plasticity requirements:

Tolerances	Percent Retained	
	Master Grading Sieve Size	Design Job-Mix Limits
1″	0*	
3/4"	0-5*	
½″	---	0-8
3/8″	10-30**	+6
4	--	+6
8	42-72	+6
16	--	+5
30	640-88	+5
50	--	+4
100	--	+4
200 (Wash & Scr.)	920-987	+2

Plastic Index, Max. 6
Moisture in Final Mix, Max. 0.5%

*For base construction only. For surface courses, 100% shall pass the ¾″ sieve.
**For base construction only. For surface courses, 8-22% shall be retained on 3/8″ sieve.

In addition, there shall not be less than three (3) nor more than 23% material between any two of the following successive sieves:

Numbers 4, 8, 16, 30, and 50.

The asphalt content for each bituminous mix shall be the optimum content +/- 0.5%, as determined by the City Engineer and shall be based on the Marshall Method test property curves for hot-mix design, to be submitted by the contractor a minimum of five days in advance of the paving operation.

b. Permissive Recycling. The contractor may use all new materials or a blend of new materials in combination with a maximum of 10% reclaimed asphalt pavement (RAP) in conformance with Section 1103.02(d) of the Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation.

1303 SUBGRADE PREPARATION.

Sub-grade preparation for pavement shall be as specified in Section 1200.

1304 TRANSPORTATION OF MIX.

The mix shall be transported to the jobsite in vehicles cleaned of all foreign material that may affect the mix. The inside of the truck beds shall be lubricated with a thin oil to prevent the mix from adhering to the bed, but an excess of lubricant will not be permitted. Vehicles shall be provided with covers of sufficient size and weight to protect the load and to prevent cooling of the mix during transportation to the site in cold weather when required by the City Engineer. The contractor shall provide a sufficient number of haul vehicles of the proper size, speed, and condition to ensure an orderly and continuous placement operation.

1305 PLACING REQUIREMENTS.

The bituminous mixture shall be spread and finished reasonably true to crown and grade by a mechanical, self-propelled paving machine. Bituminous mixtures may be spread and finished by other methods only where machine methods are impractical as determined by the City Engineer.

All bituminous mixtures shall be delivered to the paver at a temperature between 250°F and 325°F. Delivery of the material to the paver shall be at a uniform rate and in an amount well within the capacity of the paving and compacting equipment. No asphalt concrete shall be placed on frozen or wet subgrade.

The maximum depth of any individual lift shall be 5 inches. A minimum of one leveling course shall be placed prior to placement of the surface course for asphalt pavements, which consist of a total depth of 10 inches or less. A minimum of two leveling courses shall be placed for asphalt pavements greater than 10 inches.

When bituminous materials are being applied, the surface of all structures, curb and gutters, and other roadway appurtenances shall be protected in a satisfactory manner to prevent them from being splattered with bituminous material or marred by equipment operation. In the event that any appurtenances become splattered or marred, the contractor shall, at his own expense, remove all traces of bituminous material and repair all damage, and leave the appurtenances in as good condition as they were before the work began.

All mixed material shall be delivered to the paver in time to permit completion of spreading, finishing, and compaction of the mixture during the daylight hours. Nighttime work on projects will not be permitted.

Hot-mix asphalt paving shall not be placed when the ambient temperature is below 35°F for base pavements and 50°F for surface pavements or when there is frost in the subgrade or at any other time when weather conditions are unsuitable for the type of material being placed without the expressed consent of the City Engineer. When the ambient temperature falls below 55°F, precautions shall be taken to compact the mix before it cools too much to obtain the required density. In no case shall successive lifts of asphalt be placed until the previous lift has cooled to 175°F or less.

1306 MECHANICAL PAVING MACHINES.

Mechanical pavers shall be capable of spreading the mix, within the specified tolerances, true to the line, grade, and crown indicated on the contract drawings.

Pavers shall be equipped with quick and efficient steering devices and shall be capable of traveling both forward and in reverse. They shall be equipped with hoppers and distributing screws, which place the mix evenly in front of adjustable screeds. They shall be equipped with either a vibrating screed or with a tamping bar immediately preceding a static screed.

The screed shall include any strike-off device operated by cutting, crowding, or other action which is effective on mixes at workable temperatures without tearing, shoving, or gouging them and which produces a finished surface of an even and uniform texture. The screed shall be adjustable as to height and crown and shall be equipped with a controlled heating device for use when required.

Pavers shall be capable of spreading mixes without segregation or tearing. They shall also be capable of placing courses in thicknesses of from 1/2 inch to at least 3 inches, and from widths of 8 feet to at least 13 feet. Extensions and cut-off shoes shall permit changes in widths by increments of 6 inches, or smaller.

1307 COMPACTION REQUIREMENTS.

Rollers and other compacting devices shall be operated by competent and experienced roller personnel and shall be kept in operation continuously if necessary so that all parts of the pavement will receive substantially equal compaction. The City Engineer shall order the mixing plant to cease operations at any time proper rolling is not being performed.

After spreading and strike-off and as soon as the temperature and mix conditions permit the compacting to be performed without excessive shoving or tearing, the mixture shall be thoroughly and uniformly compacted.

Compacting equipment shall consist of both steel-wheeled and pneumatic-tired rollers and shall be on the site of the work prior to placement of the pavement. The compaction equipment shall be self-propelled and capable of smooth starting, stopping and reversing without backlash. Generally, the number and weight of rollers shall be sufficient to compact the pavement mixture to the required density while it is still in a workable condition.

Two-axle tandem steel rollers shall weigh not less than 8 tons or more than 12 tons. Three-axle tandem steel rollers shall not weigh less than 12 tons. Three-wheeled steel rollers shall weigh not less than 8 tons or more than 12 tons. All rollers shall be equipped with water tanks and sprinkling devices that shall be used for wetting the rollers to prevent adherence of the placed material.

Light pneumatic-tired rollers shall be constructed to allow loading to provide a gross weight of at least 225 pounds per inch of tire tread. Heavy pneumatic-tired rollers shall be constructed to allow loading to provide a gross weight of not less than 8 tons and not more than 12 tons. The tires on the front and rear axles of all pneumatic-tired rollers shall have smooth treads and shall be staggered to provide complete coverage over the entire area over which the roller travels.

The selection of the type of roller to be utilized in breakdown rolling may be varied to suit mix characteristics and shall be acceptable to the City Engineer. The final rolling of the top or surface course shall be accomplished with a steel roller unless otherwise approved by the City Engineer. In the event a vibratory roller is used for finish rolling, it shall be operated with the vibratory unit in its off position.

During rolling, the roller wheels shall be kept moist with only sufficient water to avoid picking up the material. The

speed shall not exceed 3 miles per hour for steel-wheeled rollers and 5 miles per hour for pneumatic-tired rollers.

The line of rolling shall not be changed suddenly or the direction of rolling reversed suddenly. If rolling causes displacement of the material, the affected areas shall be loosened at once with lutes or shovels and restored to the original grade of the loose material before being re-rolled. Heavy equipment or rollers shall not be permitted to stand on the finished surface before it has been compacted and has thoroughly cooled.

In laying a surface mix adjacent to any finished area, it shall be placed sufficiently high so that, when compacted, the finished surface will be true and uniform.

Any mixture that becomes loose, broken, mixed with foreign material, or which is in any way defective in finish or density, or which does not comply in all other respects with the requirements set forth herein, shall be removed, replaced with suitable material, and finished by and at the expense of the contractor in accordance with these Specifications.

1308 BITUMINOUS TACK COAT.

Prior to the distribution of bituminous materials, the contractor shall remove all loose materials from the surface by means of approved mechanical sweepers or blowers and/or hand brooms until it is as free from dust as is practicable. Side roads to receive bituminous treatment shall be shaped and bladed at the same time the sub-base is cleaned.

Contact surfaces of curbing, gutters, manholes, and similar structures shall be coated with a thin uniform coating of asphalt material. The bituminous mixture shall be so placed so that after compaction it will be 1/4 inch above the edge of the contact surfaces of such structures.

Joints between old and new pavements or between successive days' work shall be made so as to ensure thorough and continuous bond between the old and new mixtures.

Prior to placing the new pavement against a cut joint or against old pavement, the contact surface shall be sprayed or painted with a thin uniform coat of asphalt material.

The tack coat shall be applied to the areas to be surfaced as soon as practicable after they have been prepared and are sufficiently dry at the rate of from 0.2 to 0.5

gallons/square yard at application temperature. Tack coat shall not be applied in the early morning or in the late afternoon. Bituminous materials shall be applied by means of approved pressure distributors operated by skilled workmen.

The spray nozzles and spray bar shall be so adjusted and frequently checked that uniform distribution is ensured. The distribution shall cease immediately upon any clogging or interference of any nozzle and corrective measures taken before distribution is resumed. Hand sprays shall be used in tacking small patches or inaccessible areas that have been missed by the distributor.

The asphalt tack shall be entirely fogged over the base course and therefore require no sand blot. If, however, it has not been uniformly distributed, sufficient sand shall be spread over the surface to blot up the excess asphalt and prevent it from picking up. Prior to laying an intermediate or surface course, all loose or excess sand shall be swept from the base.

The contractor shall maintain the tack coat treatment and the surface of the sub-base intact until it has been covered by the surface course. Areas that have been damaged by traffic shall be repaired and shall receive applications of tack coat material in compliance with these Specifications. The maintenance and repair of the tack coat shall be done at the contractor's expense.

1309 DENSITY AND SURFACE REQUIREMENT.

The completed asphalt concrete pavement shall have a density of greater than or equal to 95% of Standard established by the Marshall Density procedure, using a 50-blow method.

All unsatisfactory work shall be repaired, replaced, or corrected. The surface of the final course shall be of a uniform texture and conform to line and grade shown on the plans.

Both density and thickness shall be carefully controlled during construction and shall be in full compliance with plans and specifications. During compaction, preliminary tests, as an aid for controlling thickness shall be made by means approved by the City Engineer.

Upon request by the City Engineer, representative samples of the compacted asphalt paving shall be obtained by the contractor under the supervision of the City Engineer and

shall be tested by a suitable independent or municipal testing laboratory as necessary to verify compliance with respective density requirements.

Selection of the independent testing laboratory, the number, timing, location and testing procedures for the representative samples shall be approved by the City Engineer. The testing laboratory shall submit to the City Engineer four copies of each report covering the details and results of the tests. All costs for the testing laboratory and all other costs of testing shall be borne by the contractor, unless otherwise specified.

The surface of the final surface course shall not vary from a 10-foot straight edge, applied parallel to the centerline, by more than 1/4 inch.

1310 PROTECTION OF PAVEMENT.

The contractor shall protect all sections of newly compacted base and surface courses from traffic until they have hardened properly, or as directed by the City Engineer.

1311 COMPACTION TESTING.

At the option of the City Engineer, compaction testing may be performed in the field using a nuclear density-moisture measuring device to determine the density of the mixture as placed. If as a result of this field-testing the City Engineer determines that further compaction is required, the contractor shall revise his rolling procedure to obtain the density as specified.

1312 BITUMINOUS SEALING.

Construction Requirements:

a. Temperature of Bituminous Materials at the Time of Application. Bituminous materials shall be applied at a temperature within the range shown: Cutback Asphalt (MC 3000 Spraying: Minimum temperature 1500°F - Maximum Temperature 2500°F. Except for minor fluctuations, all asphalt cements reheated to temperatures above 500°F higher than the maximum shown above will be considered as overheated and may be rejected pending resampling and retesting of the material at the discretion of the City Engineer.

b. Preparation of Road Surfaces. Prior to the distribution of bituminous material, the surface to be

treated shall be cleaned with approved mechanical sweepers, blowers and/or hand brooms until it is free from dust, dirt and loose materials as practicable. If necessary, a blade or hand method may be used to remove materials such as packed mud, etc.

c. Application of Bituminous Material. Bituminous material shall be applied by means of a pressure distributor in a uniform, continuous spread over the section to be treated and within the temperature range specified. The quantity of bituminous material to be spread at the rate of .30 gallons per square yard or as directed.

Any skipped areas or deficiencies shall be corrected. All radiuses shall be sealed. Junctions of spreads shall be carefully made to assure a smooth riding surface.

The length of spread of bituminous material shall not be in excess of that which the spreader can immediately cover.

The spread of bituminous material shall not be more than 6 inches wider than the width covered by the cover material from the spreading device. Under no circumstances shall operations proceed in such a manner that bituminous material will be allowed to chill, setup dry, or otherwise impair retention of the cover coat.

The bituminous distributor shall be equipped with positive shut-off and fittings to prevent the spray bar or other mechanisms from dripping bituminous materials on the surface of the traveled roadway.

Distribution of the bituminous material shall be so regulated, and sufficient bituminous material left in the distributor at the end of each application to insure a uniform distribution of the bituminous material. In no case should the distributor be allowed to "blow".

The angle of the spray nozzles and the height of the spray bar shall be adjusted and frequently checked to insure uniform distribution. The distribution of material shall cease immediately upon clogging or interference of any nozzle and corrective measures taken before distribution is resumed.

d. Application of Aggregate. Immediately following the application of the bituminous material, cover material consisting of 3/8-inch Joplin Chat or CM-5 Baxter Springs Area Chat shall be spread with a self-propelled aggregate spreader at the rate of 25 lbs. per square yard.

Spreading shall be accomplished in such a manner that the tires of the trucks or aggregate spreader at no time contact the bituminous material.

If directed, the cover material shall be moistened to reduce the dust coating on the aggregate. Moistening shall be done the day before chip-sealing operations begin. In no case shall free moisture be draining from the truck bed.

The operation of distributing bituminous material shall no be in excess of 500 lineal feet ahead of the spreading of the aggregate.

Procedures of starting, stopping or turning of any piece of equipment which results in displacement of the cover material or damage to the seal coat shall be prohibited.

The spreading equipment shall be of such width and arrangement so that as the aggregate is placed, complete coverage will be obtained. No brooming, dragging or blading of the material shall be permitted prior to the initial rolling. Any rearrangement of the cover material shall be done using hand methods. Overlapping the application of cover material shall be avoided and all spillage shall be carefully removed from the surface. The bituminous material shall be uniformly covered before beginning the rolling operation.

e. Manipulation. Following the application of bituminous material and aggregate to the road surface, the cover material shall be imbedded by rolling.

A sufficient number of pneumatic or steel rollers shall be furnished so that the initial rolling consisting of two complete coverage’s shall be completed within 30 minutes after the cover material is applied. Rolling shall continue until satisfactory coverage with the roller is obtained.

All rollers shall be self-propelled, and shall operate on coverages so that each succeeding trip of the roller

will overlap slightly the coverage of the proceeding trip. The rollers shall be operated at a speed at which the aggregate will not be displaced.

The weight of the rollers shall be varied as directed to obtain the most satisfactory embedment of the cover material without crushing the aggregate.

The entire surface shall be kept completely covered at all times to prevent traffic from damaging the seal coat. When ordered by the City Engineer, additional cover material shall be applied and the additional material shall receive rolling per above specifications.

All loose aggregate shall be broomed from the surface of the road by the contractor. Brooming may commence as soon as the surface has cured sufficiently to prevent damage to the seal and shall continue until excess aggregate is removed. Aggregates likely to cause damage when picked up by vehicular traffic shall be broomed prior to opening any section to normal traffic. Aggregate is not likely to cause damage when picked up by vehicle wheels may be opened to traffic prior to brooming. Any section may be opened to traffic as soon as it has cured sufficiently to prevent cover material from being picked up by vehicular traffic.

f. Maintenance of Completed Work. When ordered by the City Engineer, the contractor will be required to add bituminous material, or aggregate or both, to completed portions of the project when deemed necessary.

After all other work has been completed and prior to final acceptance of the road surfaces and providing there is insufficient vegetation on the shoulder to properly outline and define the edge of the driving surface, the excess loose cover material along the edges of the surface shall be broomed and/or bladed to provide a definite and distinct line along the edge of the sealed surface.

g. Working Period. All work on the roadway will be completed during the time from sunrise to sunset and under favorable weather conditions.

h. Weather and Seasonable Limitations. Bituminous sealing shall be constructed between May 1 and October 15 and operations carried out only when surface is dry, when

ambient temperature is above 60°F., and when the weather is not foggy, rainy or humidity is above 80%. The above requirements may be waived, but only when directed by the City Engineer.

END OF SECTION

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SECTION 1400 - PORTLAND CEMENT CONCRETE PAVEMENT

1401 SCOPE.

This section governs the furnishing of all labor, equipment, tools, and materials and the performance of all work necessary to construct portland cement concrete pavement.

1402 MATERIALS.

Except as modified herein, all materials used for construction of portland cement concrete pavement shall conform to the requirements stipulated in applicable sections of this Technical Specification for Public Improvement Projects of the City of Spring Hill.

a. Concrete. The concrete for use in construction of Portland cement concrete pavement shall be classified s JCCB-4K and mix designs shall be approved by the Johnson County Concrete Board prior to use.

b. Reinforcing Steel.

   Bars. Bars shall conform to ASTM A615, A616, and A617.

   Welded Steel Wire Fabric ASTM A185.

   Supporting Elements. Representative samples of supporting elements shall be submitted and approved by the City Engineer prior to their use in the project.

c. Expansion Joint Fillers. Expansion joint fillers shall conform to ASTM D994, D1751 or D1752.

d. Joint Sealing Compound. Joint sealing compounds shall meet Federal Specification TT-S-1543 and have the following minimum properties:

   Durometer, Shore A 15-25 ASTM D 2240 Tensile stress 45 max. ASTM D 412 @ 150% Elongation, Die C psi Elongation, % 1200 min. ASTM D 412

e. Curing Membrane. All material to be used or employed in curing portland cement concrete must be approved by the City Engineer prior to its use. It shall be of the liquid membrane type and shall conform to ASTM C309.

1403 CONSTRUCTION DETAILS.

The portland cement concrete pavement shall be constructed to the configuration, and to the lines and grades shown on the plans.

a. Grading and Sub-grade Preparation. All excavation or embankment required shall be as defined in Sections 1100 and 1200 of these Technical Specifications entitled "Grading" and "Sub-grade Preparation".

b. Forms. All forms shall be in good condition, clean, and free from imperfections. Each form shall not vary more than 1/4 inch in horizontal and vertical alignment for each 10 feet in length.

1) Material & Size. Forms shall be made of metal and shall have a height equal to or greater than the prescribed edge thickness of the pavement slab.

2) Strength. Forms shall be of such cross-section and strength, and so secured as to resist the pressure of the concrete when struck off, vibrated, and finished, and the impact and vibration of any equipment that they may support.

3) Installation. Forms shall be set true to line and grade, supported through their length and, joined neatly in such a manner that the joints are free from movement in any direction.

4) Preparation. Forms shall be cleaned and lubricated prior to each use and shall be so designed to permit their removal without damage to the new concrete.

5) Paving Machine. A slip-form paving machine may be used in lieu of forms. The machine must be equipped with mechanical internal vibrators, and be capable of placing the portland cement concrete pavement to the correct cross-section, thickness, line and grade within the allowable tolerances.

1404 JOINTS.

Generally joints shall be formed at right angles to the true alignment of the pavement and to the depths and configuration specified by the standard drawings or as modified by the plans and specifications.

a. Expansion Joints. Expansion joints shall be placed at all locations where shown on the plans and standard details or as directed by the City Engineer.

1) General. Expansion joints shall extend the entire width of the pavement and from the subgrade to 1 inch below the surface of the pavement or the material will have a suitable tear strip provided to allow for the application of the joint sealer.

2) Under no circumstances shall any concrete be left across the expansion joint at any point.

3) Material. Expansion joints shall be formed by a one-piece, 1-inch thick preformed joint filler cut to the configuration of the correct pavement section.

4) Stability. Expansion joints shall be secured in such a manner that they will not be disturbed during the placement, consolidation and finishing of the concrete.

5) Dowels. If expansion joints are to be equipped with dowels, they shall be of the size and type specified, and shall be firmly supported in place by means of a dowel basket which shall be installed in such a position that the center line of the joint assembly is perpendicular to the center line of the slab and the dowels lie parallel to the slab surface and parallel the center line of the slab. One-half of each dowel shall be painted in accordance with the directions shown on the Plans, and then thoroughly coated with hard grease, or an approved lubricant, to prevent the concrete from bonding to that portion of the dowel. As an option, a dowel sleeve of the dimensions shown on the plans or standard drawings may be used in lieu of grease.

b. Contraction Joints. Contraction joints shall be of the type and dimensions and at the spacing shown on the Plans or standard drawings.

1) Templates. The templates shall be removed as soon as the concrete has attained its initial set and finished as outlined for tooling joints.

2) Sawing. Sawed contraction joints shall be cut by means of wet sawing with an approved concrete saw. The joints shall not be sawed until the concrete

has hardened to the extent that tearing and raveling is precluded.

3) All joints shall be sawed during the initial curing period and the sawing shall begin before the pavement starts shrinking and before uncontrolled cracking takes place.

4) Any procedure which results in premature and uncontrolled cracking shall be revised immediately by adjusting the sequence of cutting the joints or the time interval involved between the placing of the concrete or the removal of the curing media and the cutting of the joints. In no case shall the pavement be left overnight without having the joints sawed.

5) The standard contraction joint configuration is a 1/8-inch – 3/16-inch wide joint sawed to a depth of 1/3 the thickness of the slab. Material created by sawing shall be flushed from the pavement before it has had time to dry or set. The spacing shall be as shown on the plans but should generally not exceed 15 feet.

6) The joint shall be thoroughly cleaned by approved methods prior to the placing of the joint material. This is accomplished by sandblasting the dry joint in two passes, one for each joint face. This sand, as well as dust and dirt deposited by wind and traffic, must be blown out of the joint and away from the area around it using a high-pressure air blast prior to placing backer rod and joint material.

7) Pre-Molded Strip Joints. Pre-molded strip joints shall be of the proper dimensions as shown on the plans and standard drawings and shall be secured at the proper location so as not to be disturbed by the finishing of the concrete.

c. Longitudinal and Construction Joints. Longitudinal joints or construction joints shall be placed as shown on the plans or where the contractor's construction procedure may require them to be placed.

1) Center Joints. Longitudinal center joints shall be constructed using the methods specified in Section 1404b "Contraction Joints".

2) Longitudinal Construction Joints. Longitudinal construction joints (joints between construction lanes) shall be keyed joints or shall be constructed with tie bars. Joint configuration shall conform to the dimensions shown on the plans or standard drawings.

3) Transverse Construction Joints. Transverse construction joints of the type shown on the plans or standard drawings shall be placed wherever concrete placement is suspended for more than 30 minutes or for such a time that the concrete has begun to take its initial set. No construction joint shall be placed within 10 feet of an expansion, contraction, or other construction joint.

4) Tie bars. Tie bars shall be of deformed steel of the dimensions specified by the plans or standard drawings. Tie bars shall be supported in the proper position and at the specified spacing and be firmly secured so as not to be disturbed by the construction procedure. They shall be free from dirt, oil, paint, grease, loose mill scale, and thick rust, which could impair bond of the steel with the concrete.

1405 PLACING, FINISHING, CURING, AND PROTECTION.

Concrete shall be furnished in quantities required for immediate use and shall be placed in accordance with the requirements of Section 2000 of these Technical Specifications and as specified herein.

a. Concrete Placement. Prior to placement of the concrete pavement, all debris and foreign material shall be removed from the inner surfaces of the forms and all forms and subgrade properly moistened. All required reinforcement and other special metal parts shall be properly and firmly set into position to preclude movement during placement of the concrete.

The concrete shall be deposited over the entire width of the prepared subgrade between the forms in such a manner to prevent segregation and to require as little re-handling as possible. The pour shall be made to the required depth and width of the construction lane in successive batches and in a continuous operation without the use of intermediate forms or bulkheads. Concrete shall be thoroughly vibrated along the forms

or sides and along expansion and key type longitudinal joints. Attachments on finishing machines to vibrate the concrete adjacent to forms and longitudinal joints will be permitted provided satisfactory results are attained. Care shall be taken that the vibrator does not penetrate the subgrade or dislodge or move the joints. The vibrating shall be sufficient to produce a smooth pavement edge. Over vibrating will not be permitted, as it will cause segregation. Insufficient vibrating can cause honeycomb. Honeycomb in the edge may be cause for rejection of the pavement.

The concrete shall be well vibrated and tamped against the forms and along all joints. Care shall be taken in the distribution of the concrete to deposit a sufficient volume along the outside form lines so that the curb section can be consolidated and finished simultaneously with the slab.

No concrete shall be placed around manholes or other structures until they have been brought to the required grade, alignment, and cross slope. All utility appurtenances shall be boxed out and isolated using expansion joint material. The minimum size of a boxed out section shall be 2 feet x 2 feet.

Concrete shall not be allowed to extrude below the forms.

b. Concrete Finishing. The pavement shall be struck off and consolidated with a mechanical finishing machine or by hand-finishing methods.

When a mechanical finishing machine is used, the concrete shall be struck off at such a height that after consolidation and final finishing it shall be at the exact elevations as shown on the plans. A depth of at least 2 inches of concrete shall be carried in front of the strike-off screed for the full width of the slab, whenever the screed is being used to strike off the pavement. The finishing machine shall be provided with a screed, which will consolidate the concrete by pressure. The concrete shall, through the use of this machine, be brought to a true and even surface, free from rock pockets, with the least possible number of passes of the machine. The edge of the screeds along the curb line may be notched out to allow for sufficient concrete to form the integral curb. Hand-finishing tools shall be kept available for use in case the finishing machine breaks down.

When hand finishing is used, the pavement shall be struck off and consolidated by a vibrating screed to the exact elevation as shown on the plans. When the forward motion of the vibrating screed is stopped, the vibrator shall be shut off; it shall not be allowed to idle on the concrete. Internal mechanical vibration shall be used along all formed surfaces.

1) Longitudinal Floating. After the concrete has been struck off and consolidated, it shall be further smoothed by means of a mechanical longitudinal float or float finishers using a longitudinal hand float. If a longitudinal hand float is used, it shall be operated from footbridges spanning the pavement and shall be worked with a wiping motion parallel to the centerline, and passing from one side of the pavement to the other. Movement ahead along the centerline of the pavement shall be in successive advances of not more than 1/2 of the length of the float. The float shall not be less than 12 feet in length and 6 inches in width, and shall be properly stiffened and provided with handles at each end. This operation may be eliminated if specified tolerances can be attained by some other approved method.

   In cases where the longitudinal floating operation has been eliminated, the pavement shall be scraped with a straight edge 10 feet long, equipped with a handle to permit it to be operated from the edge of the pavement. The longitudinal float and straightedge shall be operated so that any excess water and laitance are removed from the surface of the pavement. After the scraping operation, the surface of the pavement shall be within the specified tolerances.

2) Straight Edging. While the concrete is still plastic, the slab surface shall be tested for smoothness with a 10-foot straightedge swung from handles 3 feet longer than one-half the width of the slab. The straightedge shall be placed on the surface parallel to the centerline of the pavement and at not more than 5-foot intervals transversely. After each test the straightedge shall be moved forward one-half its length and the operation repeated. When irregularities are discovered, they shall be corrected by adding or removing concrete. All disturbed places shall be smoothed with a float not less than 3 feet long

and not less then 6 inches wide, and again straight edged. The pavement surface shall have no depression in which water will stand.

3) Edging. Before final finishing is completed and before the concrete has taken its initial set, the edges of the slab and curb shall be carefully finished with an edger of the radius shown on the plans or standard details.

4) Final Surface Finish. A burlap drag or a broom finish shall be used as the final finishing method. When a drag is used it shall be at least 3 feet in width and long enough to cover the entire pavement width. It shall be kept clean and saturated while in use. It shall be laid on the surface of the pavement and dragged in the direction in which the pavement is being laid. When broom finishing, a hard bristle broom shall be used. The broom shall be kept clean and used in such a manner as to provide a uniform textured surface. The curb shall have the same final finish as the pavement.

   The final surface of the concrete pavement and curb shall have a uniform gritty texture free from excessive harshness and true to the grades and cross section shown on the plans. The City Engineer may require changes in the final finishing procedure as required to produce the desired final surface texture.

c. Curing. Curing shall conform to the requirements set forth in Section 2000 “Concrete,” with the exception that waterproof paper or polyethylene sheeting shall not be acceptable as curing methods for concrete pavement. The use of straw or burlap for curing shall be as approved by the City Engineer.

   As soon as practical after the concrete is finished, it shall be cured with one of the acceptable methods. If a liquid curing membrane is used, it shall be according to the manufacturer's directions.

   A nozzle producing a uniform mist pattern will be used on all spray equipment when applying the liquid curing membrane. Rate of application to the pavement shall be 1 gallon per 175 feet with a wet thickness of 6 to 10 mils.

If the forms are removed from finished concrete pavement within a period of 72 hours or if a slip form paving machine has been used, these surfaces shall also be cured.

d. Protection. The contractor shall, at his own expense, protect the concrete work against damage or defacement of any kind until it has been accepted by the City. Concrete pavement, which is not acceptable to the City Engineer because of damage or defacement, shall be removed and replaced, or repaired to the satisfaction of the City Engineer, at the expense of the contractor.

All vehicular traffic shall be prohibited from using the new concrete pavement until it has attained the proper strength. The concrete pavement shall not be opened for light traffic until the concrete is at least 72 hours old and has attained a minimum compressive strength of 3000 pounds per square inch. The pavement shall not be opened to all types of traffic until the concrete is at least 120 hours old and has attained a minimum compressive strength of 3500 pounds per square inch. If high early strength concrete is used, the pavement may be opened to all types of traffic when the concrete has attained a compressive strength of 3500 pounds per square inch.

e. Temperature Limitation. Concrete work shall proceed in accordance with the requirements established in Section 2000 “Concrete.”

1406 BACKFILL.

A minimum of 24 hours shall lapse before forms are removed and 5 days shall lapse before pavement shall be backfilled unless otherwise approved by the City Engineer.

Backfill shall be accomplished in accordance with Sections 1100 and 1200 entitled "Grading" and "Sub-grade Preparation".

The contractor shall be responsible for the repair of any existing street pavement disturbed by the construction to the satisfaction of the City Engineer.

1407 JOINT SEALING AND CLEANUP.

All joints shall be sealed with an approved joint sealer and backer rod applied in accordance with the manufacturer's directions and City Specifications, Standards and Design

Criteria. The joints shall be sealed within 7 days of the placement of the concrete and prior to the opening of the pavement to traffic.

The contractor shall be responsible for the removal of excess dirt, rock, broken concrete, concrete splatters and overspray from the area of the construction.

1408 CONCRETE CURB.

Concrete curb will be constructed as shown on the plans unless otherwise approved by the City Engineer. The three options available for concrete curb are as listed below and detailed in standards 14-1, 2, 3, and 4.

a. Integral curb. Integral curb shall be constructed immediately following the finishing operation unless otherwise shown on the plans. Special care shall be taken so that the curb construction does not lag the pavement construction and form a "cold joint".

   Steel curb forms shall be required to form the backs of all curbs except where impractical because of small radii street returns or other special sections.

   In placing curb concrete, sufficient spading shall be done to secure adequate bond with the paving slab and eliminate all voids in the curb.

   Curbs shall be formed to the cross section as shown on the drawings with a mule or templates supported on the side forms and with a float not less than 4 feet in length.

   The finished surface of the curb and gutter shall be checked by the use of a 10-foot straightedge and corrected if necessary. Where grades are flat and while the concrete is still plastic, the drainage of the gutter should be checked with a 4-foot level.

b. Separate Curb and Gutter with Tie bars. Separate curb and gutter may be poured prior to pouring the remaining pavement. Tie bars 5/8 inches in diameter and 24 inches long shall be cast in the curb and gutter at 30-inch centers as shown on the standard details.

c. Separate Curb and Gutter with Keyway. Separate curb and gutter may be poured prior to pouring the remaining pavement. A keyway of the configuration and dimensions

shown on the standard details shall be cast in the curb and gutter section.

1409 SURFACE TOLERANCES.

Concrete pavement shall have a surface tolerance in all directions of 1/4-inch in 10 feet when checked with a 10-foot straightedge.

1410 THICKNESS TOLERANCES.

It is the intent of these Specifications that pavement shall be constructed strictly in accordance with the thickness shown on the plans. The thickness of the pavement may be measured by coring, and where any pavement is found deficient in thickness, it may be compensated for at an adjusted unit price or shall be removed and replaced.

In removing pavement, it shall be removed from the outside edge of the curb and gutter (curb and gutter with tie bars or keyway may remain if in good condition) to a longitudinal joint, or between longitudinal joints, and on each side of the deficient measurement until no portion of the exposed cross sections are more than 2/10 inch deficient, except that there shall not be less than 5 linear feet of pavement removed. If there remains less than 10 feet of acceptable pavement between the section that has been removed and a transverse contraction, expansion, or construction joint, the contractor shall remove pavement to the joint.

END OF SECTION

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SECTION 2000 - CONCRETE

2001 SCOPE.

This section covers all cast-in-place concrete, including reinforcing steel, forms, finishing, curing, and other appurtenant work.

2002 GENERAL.

All cast-in-place concrete shall be accurately formed, and properly placed and finished as shown on the drawings and specified herein.

Where governing specifications are referred to, material and construction requirements shall conform to the governing specification as modified herein. "KHS" shall refer to Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, 1980 edition, or latest revision.

The contractor shall inform the City Engineer at least 24 hours in advance of the times and places at which he intends to place concrete.

2003 MATERIALS.

All material used in the manufacture of concrete shall conform to the following:

Cement	ASTM C150, Type I, II or III For concrete pavement see Section 1400.
Water	Clean and free from deleterious substances.
Fine Aggregate	KHS Section 1102, Type FA-A, except that artificial or manufactured sand will not be acceptable.
Coarse Aggregate	KHS Section 1102. Additionally, all crushed stone used as aggregate for concrete requiring a 4000 psi strength shall be obtained from quarries and beds designated by the Kansas Department of Transportation as meeting durability requirements of Class 1 or Class 6, as shown on the current

listing on file in the office of the City Engineer. Certification by an independent testing laboratory that the aggregates used were obtained from an approved source and identifying the name and location of the quarry and bed number shall be filed, at the contractor's expense, with the City Engineer.

All concrete used to construct PCC pavement and concrete curb shall be classified as ~~JCCB~~KCMMB-4K and mix designs approved by the ~~Johnson County Concrete Board~~Kansas City Metropolitan Materials Board prior to use.

Curing Membrane	Type 2-White Pigmented compound, AASHTO Designation M148
Air-Entraining Agent	ASTM C260
Admixtures	ASTM C494
Reinforcing Steel	ASTM A615; Bars – Grade 60; Beamstirrups and column ties - Grade 40
Welded Wire Fabric	ASTM A185, and AASHTO Designation M55

2004 PRELIMINARY REVIEW.

A report shall be submitted to the City Engineer prior to the placement of concrete and shall include data on proposed use, design strength, concrete mix proportions, maximum water/cement ratio, slump designated at the point of delivery, the percent of air in the concrete for air-entrained concrete, and the fine and coarse aggregate gradation. Mix proportions shall be selected preferably on the basis of field experience and may be adjusted upon approval of the City Engineer where required to produce concrete of proper workability, uniform consistency, and acceptable density and strength. Failure to get a mix design approved from the City Engineer prior to concrete placement is just cause for removal of the concrete.

When specifically required by the City Engineer, a tentative concrete mix shall be designed and tested for each

size and gradation of aggregate and for each slump intended to be used on the work. Design quantities and test results of each mix shall be submitted to the City Engineer for review and approval.

2005 CONCRETE MIX DESIGNATIONS.

The following tabulation indicates minimum strengths for the various types of concrete, which will be accepted.

Class	Minimum Compressive Strength		Slump
	7 Days	28 Days	
I	2000 psi	3000 psi	4 inches max.
II	2650 psi	4000 psi	2-4 inches max.

All cast-in-place or pre-cast construction, unless otherwise stated in these Specifications or allowed by the City Engineer, shall be of Class II concrete. When high-early strength cement is to be used for concrete, the mix shall obtain a 7-day strength not less than the minimum 28-day strength specified to concrete of the same class.

2006 LIMITING REQUIREMENTS.

Each concrete mix shall be designed and concrete shall be controlled within the following limits.

	Slump	Max. Size Coarse Aggregate	Cement Content Lbs./C.Y.	Max. Water Cement Weight Ratio	Max. Gals. Water Per Cement (Sack)
Class I (3000 psi)	4″	1″	480	.542	6.12
Class II (4000 psi)	2″	1″	558	.421	4.75
	3″	1″	558	.421	4.75
	4″	1″	618	.421	4.75

The quantity of portland cement shall be not less than that shown in the preceding table.

Concrete slump shall be kept as low as possible, consistent with proper handling and thorough compacting. Maximum slump for portland cement concrete pavement shall be 2 inches. Slumps for concrete work other than pavement construction

shall not exceed 4 inches. Use of slumps in excess of those specified shall be only when authorized by the City Engineer. The use of water to obtain so-called "improved workability" shall not be permitted.

The initial set as determined by ASTM C403 shall be attained 5 1/2 hours, plus or minus one hour, after the water and cement are added to the aggregates. If such use has been approved by the City Engineer, the quantity of retarding or accelerating admixture shall be adjusted to compensate for variations in temperature and job conditions.

The use of admixtures other than air-entraining agents is discouraged and shall not be allowed without the express approval of the City Engineer. When approved for specific purposes, the admixture content shall be in accordance with the recommendations of the manufacturer for compliance with these Specifications.

The total volumetric air content of concrete after placement shall be 6%, plus or minus 1.0%.

The minimum acceptable compressive strengths shall be as determined by ASTM C39.

As the work progresses, the City Engineer reserves the right to change the proportions from time to time if conditions warrant such changes to produce a satisfactory job. Any such changes may be made within the limits of the specifications at no additional compensation to the contractor.

2007 BATCHING AND MIXING.

Concrete shall be furnished by an acceptable ready-mixed concrete supplier and shall conform to ASTM C94.

The consistency of concrete shall be suitable for placement conditions. Aggregates shall float uniformly throughout the mass and the concrete shall flow sluggishly when vibrated or spaded. The slump shall be kept uniform.

2008 PLACEMENT.

The limits of each concrete pour shall be predetermined by the contractor and shall be acceptable to the City Engineer. All concrete within such limits shall be placed in one continuous operation.

Before concrete is placed, forms, reinforcements, and embedment shall be rigidly secured in proper position and all dirt, mud, water and debris shall be removed from the space to be occupied by the concrete. Bonding surfaces shall be cleaned of all foreign material and shall be free from laitance. Concrete shall not be placed on frozen subgrade or in excavations, which have not been dewatered.

Placement of concrete shall conform to requirements of ACI 304. Concrete shall be placed within 45 minutes of mixing operations, with the exception that the City Engineer may extend the period to 90 minutes (maximum), dependent upon weather conditions.

Concrete shall be placed so as to avoid segregation of the materials and the displacement of the reinforcement. Concrete shall not be placed in horizontal layers exceeding 18 inches and shall not be deposited in large quantities at any point in the forms and then run or worked along the forms, thus causing segregation of the materials. During and immediately after placement, concrete shall be thoroughly compacted and worked around all reinforcements and embedment and into the corners of the forms. The concrete shall be vibrated or spaded to produce a solid mass without honeycomb or surface air bubbles.

Where steep slopes are required for placing concrete with chutes, the chutes shall be equipped with baffle boards or be in short lengths that reverse the direction of movement. Chutes, troughs and pipes shall not be made of aluminum.

Concrete shall not be dropped in the forms a distance of more than 5 feet, unless confined by chutes of pipes; and care shall be taken to fill each part of the form by depositing the concrete as near final position as possible. After initial set of the concrete, the forms shall not be jarred and no strain shall be placed on the ends of projecting reinforcement.

2009 COLD WEATHER CONCRETING.

Unless authorized in writing by the City Engineer, mixing and concreting operations shall be discontinued when the descending air temperature in the shade and away from artificial heat reaches 40°F or when forecast to drop below 40°F within 24 hours of placement, and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F.

When concrete work is authorized during cold weather, the aggregates may be heated by methods approved by the City Engineer prior to being placed in the mixer. No ingredient that is frozen or contains ice shall be placed in the mixer. The temperature of the concrete shall be not less than 60°F and not more than 80°F at the time of placement in the forms. Under no circumstances shall concreting operations continue when the air temperature is less than 20°F. No concrete shall be placed on frozen subgrade. Sudden cooling of concrete shall not be permitted. Concrete injured by frost action or freezing weather shall be removed and replaced at the contractor's expense.

2010 HOT WEATHER CONCRETING.

The provisions of this section shall apply to all concrete work, which is done when the air temperature is above 80°F at the time of placement.

The temperature of the concrete, when placed, shall not be high enough to cause excessive loss of slump, flash set or cold joints. In no case shall the temperature of the concrete, when placed, exceed 90°F. Forms, reinforcing and subgrade surfaces against which the concrete is to be placed shall be wetted down immediately before placement.

When the air temperature exceeds 90°F and as soon as practicable without causing damage to the surface finish, all exposed concrete shall be kept continuously moist by means of fog sprays, wet burlap, cotton mats, or other means acceptable to the City Engineer. This cooling with water shall be in addition to the initial sealing by membrane curing compound.

2011 CURING AND PROTECTION.

Concrete shall be cured by protecting it against loss of moisture, rapid temperature changes and mechanical injury for at least four days after placement. Acceptable methods shall be moist curing, white polyethylene sheeting, liquid membrane-forming compounds, or a combination thereof. After concrete finishing operations have been completed, the entire surface of the newly placed concrete shall be covered by the curing medium applicable to local conditions and acceptable to the City Engineer. The contractor shall have the necessary equipment for adequate curing on hand and be ready to install prior to concrete placement.

Moist curing shall be accomplished by a covering of burlap or other approved fabric mat used singly or in combination. Curing mats shall be thoroughly wet when applied and kept continuously wet and in intimate contact with the surface for the duration of the moist-curing period. Burlap or fabric mats shall be long enough to cover the entire surface of the work and lapped at joints to prevent drying between adjacent sheets.

White polyethylene sheets shall be large enough to cover the entire surface of the work and shall be lapped not less than 18 inches. The sheets shall be adequately weighted to prevent displacement or billowing due to wind. Tear holes appearing in the material during the curing period shall be immediately repaired or replaced with material in acceptable condition.

White membrane curing compound shall be applied after finishing operations have been completed and immediately after the free water has left the surface. The surface of the work shall be completely coated and sealed with a uniform layer of the curing compound at a rate of not less than 1 gallon per 150 square feet. The compound shall not be thinned and shall be kept agitated to prevent settlement of pigment. On surfaces where forms are removed prior to the end of the specified curing period, the entire exposed surface shall be coated at the specified rate of coverage. If rain falls on the newly coated surface before the film dries sufficiently to resist damage, or if the film is damaged in any other way, the contractor will be required to apply a new coat of compound to the affected area.

During cold weather concreting when the ambient air temperature is expected to drop below 40°F, a sufficient supply of burlap, straw, hay, or other blanketing material shall be provided along the work to protect the concrete and maintain a minimum temperature of 40°F in the concrete as measured on the surface. An approved moisture barrier such as wet burlap or plastic sheeting shall be placed on the concrete prior to placement of the blanketing material. This type of curing shall be maintained for a period of 6 days as the initial cure.

Sidewalks, curb and gutter, and miscellaneous concrete shall be protected and cured for a period of not less than 72 hours after the placing of the concrete by covering with wet burlap or by the application of a membrane curing compound as specified above.

2012 FORMS.

Forms shall be designed to produce hardened concrete having the shape, lines, and dimensions shown on the drawings. They shall be sufficiently tight to prevent leakage of mortar and shall be braced or tied to maintain the desired position, shape, and alignment during and after concrete placement.

Forms may be of wood or metal and shall be designed to permit easy removal without injury to the concrete. Forms for all exterior exposed surfaces which will be visible after backfilling shall be prefabricated plywood panel forms, job-built plywood forms, or forms that are lined with plywood or fiberboard. Forms shall be coated with an approved light oil to prevent concrete from adhering and shall be thoroughly cleaned and re-oiled before re-use.

Forms shall not be removed or disturbed until the concrete has attained sufficient strength to safely support all dead and live loads. Care shall be taken in form removal to avoid surface gouging, corner or edge breakage, and other damage to the concrete. The following table gives the approximate minimum time that forms shall be left in place.

Structural Member	**Average air temperature greater than**				
	70°	**60°**	**50°**	**40°**	**Time in Place (24-hr days)**
Slab Shoring	10	12	14	21	
Slab Forms	7	7	7	7	
Beams, Soffits and Shoring	10	12	14	21	
Beam Side Forms	1	1	2	3	
Wall Side Forms	2	2	3	4	

2013 FINISHING FORMED SURFACES.

Fins and other surface projections shall be removed from all formed surfaces except exterior surfaces that will be in contact with backfill. A power grinder shall be used, if necessary, to remove projections and provide a flush surface. Surfaces to be damp-proofed shall have fins removed and tie holes filled, but no additional finishing will be required.

Tie holes in all formed surfaces shall be cleaned, wetted, and filled with an expansive cement mortar. Tie hole patches shall be left flush, sound, smooth, even and shall match the texture and color of the adjacent concrete.

Unless provided otherwise in the plans all exposed edges shall be beveled by using dressed, triangular molding, having 3/4-inch sides.

2014 REPAIRING DEFECTIVE AND DAMAGED CONCRETE.

Any concrete found not to be formed as indicated on the plans, or out of alignment or level, or having a defective surface, or damaged prior to acceptance of the project by the City, shall be considered as not conforming to the intent of these Specifications and may be ordered removed and replaced by the contractor at his expense unless the City Engineer authorizes patching of the defective or damaged area. Surface defects such as ridges and bulges shall be removed by grinding.

Honeycombed and other defective concrete that does not affect the structural integrity of the structure shall be chipped out and the vacated area shall be filled. The methods used in this type of repair shall be approved by the City Engineer. Material used for patching shall be a non-shrink, non-metallic grout with a minimum 28-day compressive strength of 5000 psi or a similar material approved by the City Engineer. Prior to placement of the repair filling, the contact surface of the affected area shall be thoroughly cleaned of all loose and foreign material and shall be coated with an epoxy bonding agent.

Concrete repair work shall conform to Chapter 9 of ACI 301 and shall be performed in a manner that will not interfere with thorough curing of surrounding concrete. Repair work shall be adequately cured and protected from further damage.

2015 REINFORCEMENTS.

The metal reinforcement shall be protected by the thickness of concrete indicated on the construction drawings. Where not otherwise shown, the thickness of concrete over the reinforcement shall be as follows:

Location of Reinforcement	Cover (in Inches)
Surfaces where concrete is deposited directly against the ground	3
Formed surfaces exposed to the ground, to water, or to weathering	2
Beams, girder, and columns not exposed to ground, water, or weathering	1 ½
All surfaces other than those above	1

Reinforcing steel shall be accurately placed and positioned on supports, spacers, hangers, or other reinforcing steel as approved by the City Engineer and shall be secured in place with wire ties or suitable clips. The minimum clear distance between parallel bars shall not be less than 1-1/2 times the diameter of round bars, except that in no case shall clear spacing between parallel bars be less than 2 inches or less than 1-1/2 times the nominal size of the coarse aggregate.

Splices in reinforcing steel will not be permitted at points of maximum stress. When it becomes necessary to splice reinforcing steel at points other than those shown on the contract drawings, the character and location of the splice shall be approved by the City Engineer. Welding or tack welding of reinforcement will not be permitted. Reinforcements upon which unauthorized welding has been done shall be removed and replaced as directed by the City Engineer. Spliced bars shall be placed in contact and securely tied together.

Metal reinforcement at the time concrete is placed shall be free from rust, scale, or other contaminants that will destroy or reduce the bond.

2016 CONSTRUCTION JOINTS.

Construction joints shall be made at locations indicated on the drawings or specified, and shall conform to the requirements of ACI 318. When the contractor desires to make construction joints at other locations, he shall anticipate such changes far enough in advance of the construction operations to allow the City Engineer to investigate such changes and approve additional construction joints.

2017 EXPANSION AND CONTRACTION JOINTS.

Expansion and contraction joints shall be at locations indicated on the drawings or as specified.

Contraction joints shall consist of planes of weakness created by forming or cutting grooves in the surface of the concrete. Formed grooves shall be made by depressing an approved tool or devise into the plastic concrete. Sawed joints shall be constructed by sawing through the surface of the concrete with an approved concrete saw. Sawing of the joints shall begin as soon as the concrete has hardened sufficiently to prevent excessive raveling.

Expansion joints shall be formed with pre-formed expansion joint filler of the non-extruding and resilient types which shall include the following: Cork, self-expanding cork, sponge rubber, cork rubber, and bituminous fiber. These materials shall meet the requirements of ASTM D994, D1751 and D1752.

2018 REINFORCED CONCRETE BOX FORMING SEQUENCE.

Wall forms may be placed the day following the placement of the bottom slab, as long as care is taken to protect the slab against rough or abusive handling of forms and or placing equipment. The actual placement of concrete shall not occur prior to the fifth day after placing the bottom slab. Top forms may be placed with wall forms if the walls and top are to be monolithic construction; otherwise top forms are not to be placed until the third day after placing the walls. The actual placement of concrete for the top shall not occur prior to the fifth day after placing the walls (for base to top shoring) or until the walls have reached their design strength for slab forms shored by the walls. Wall forms shall remain in place a minimum of two days after the walls are poured. Supports for the top slab shall be left in place according to the schedule shown in Section 2012 “Forms.”

The above guidelines for placing forms for reinforced concrete boxes are based on the use of standard forming procedures and with the use of concrete containing no admixtures to achieve high early strength. Variations in forming techniques and/or the use of high early strength concrete shall only be allowed after the contractor obtains the written approval of the City Engineer.

END OF SECTION

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SECTION 2100 - CONCRETE CURB, CURB AND GUTTER, SIDEWALK, AND DRIVEWAY ENTRANCES

2101 SCOPE.

This section covers concrete curb, curb and gutter, concrete sidewalk and concrete driveway entrances, including reinforcing steel, forms, joints, finishing, curing, and other appurtenant work.

2102 MATERIALS.

All items of material included in this work shall conform to the requirements of Section 2000 “Concrete.”

2103 GENERAL.

All construction covered in this section shall conform to the requirements of Section 2000 “Concrete.” All curb or curb and gutter construction shall be performed prior to placement of pavement or sidewalk, except when otherwise approved by the City Engineer. All forms shall be in good condition with not more than 1/4 inch variation in horizontal and vertical alignment for each 10 feet in length.

2104 GRADING AND SUBGRADE PREPARATION.

All excavation required in the grading and sub-grading preparation shall be considered as "Unclassified Excavation" as defined in Section 1100 “Grading.” All grading shall be done in conformance with Sections 1100 “Grading” and 1200 “Subgrade Preparation.”

See notes on Details 21-4, 21-5, 21-9, 21-10, 21-10A and 21-11 for an alternative to laboratory testing for subgrade preparation.

2105 EXPANSION AND CONTRACTION OR CONSTRUCTION JOINTS.

Expansion and contraction or construction joints shall be as herein specified on the standard detail sheets or as otherwise specified by the City Engineer.

2106 FINISHING.

Finishing shall be performed as follows:

a. Curb and Curb and Gutter. The curb shall be tooled to the required radii as soon as possible after the

concrete takes its initial set. After the forms and templates are removed, the joints shall be tooled and the curb surface finished with a wood or cork float to remove all imperfections without additional mortar. In all cases the resulting surface shall be smooth and of uniform color with all rough spots, projections, and form stakes removed. No plastering of the concrete will be allowed. The finished curb shall have a true surface, free from sags, twists, or warps, and shall have a uniform appearance, and shall be true to the specified lines, grades, and configurations shown on the drawings.

b. Sidewalk and Driveway Entrances. After the concrete has been thoroughly consolidated and leveled, and the initial set has taken place, the surface shall be finished with a soft wood or cork float and either burlap or broom finished with no other mortar than that contained in the concrete. The resulting surface shall be uniform in color and contain no imperfections. The edges shall be rounded with a tooling edge. Special care shall be taken to ensure a straight, neat appearance along the edges of the sidewalk or driveway entrance and at the joints.

2107 REINFORCEMENT (Curb and Gutter).

Reinforcement for concrete curb and gutter shall be as designated on Standard Details and 21-2. The exception to this shall be when the curb and gutter is to be constructed on an asphalt concrete base with a minimum depth of 3 inches. In this case, no reinforcement shall be required unless otherwise determined by the City Engineer.

2108 REINFORCEMENT (Other).

Reinforcement for all other work shall be as shown on the contract drawings or as depicted on details contained in this specification.

2109 REPAIRS TO DEFECTIVE WORK.

Any defective work shall be replaced at the expense of the contractor. The defective area shall be removed to the nearest construction joint by saw cutting to produce a clean, smooth joint. The replacement section shall be dowelled into the existing concrete using #4 bars. The bars shall be drilled and grouted into the existing concrete a minimum of 4-inches. The contractor will be allowed to use

a smooth dowel/rod with greased caps on one end for the driveway approach section of the driveway.

END OF SECTION

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SECTION 3000 - SANITARY SEWERS

3001 SCOPE.

This section applies to sanitary sewer construction and shall consist of furnishing all labor, materials, and equipment for the complete installation of sewers and appurtenances.

3002 GENERAL.

It is understood that throughout this section these Specifications may be modified or deleted by appropriate items in the contract documents.

When reference is made to a standard specification (ASTM, AWWA, etc.), the specification referred to shall be understood to mean the latest revision of said specification except as otherwise noted in the contract documents.

3003 MATERIALS.

A. Reinforced Concrete Pipe

Pipe	ASTM C76, except as modified herein.
Fine Aggregate	Clean natural sand, ASTM C33. Artificial or manufactured sand will not be permitted.
Cement	ASTM C150, containing not more than 5% tricalcium aluminate.
Gaskets	ASTM 361 polymer shall be neoprene or other synthetic rubber. Natural rubber will not be acceptable.
Liner	A PVC T-Lock liner shall be installed on the entire inside perimeter, 360°. The liner shall be pre-manufactured plastic lining material for application to reinforced concrete sewer pipe and employing a plastic sheet with T-Lock ribs for mechanical bond to the interior surface of the pipe. The lining shall be a minimum of 65 mils thick. Manufacturer’s recommendations for installing, sealing joints, testing and inspection of the plastic lining

shall be considered as incorporated in and forming a part of these Specifications. The pipe supplier shall furnish to the Engineer the manufacturer's lining recommendation prior to fabrication of any pipe. The PVC liner shall be white in color.

B. Ductile Iron Pipe

Pipe	ANSI A21.51; ASTM A536, Grade 60-42-10, Thickness Class 50 unless otherwise required by the City Engineer.
Mechanical and Push-On Joint	ANSI 21.11, except gaskets shall be neoprene or synthetic rubber. Natural rubber will not be acceptable.
Flanged Joints	ANSI A21.10.
Fittings	ANSI A21.10, pressure rating of not less than that specified for pipe.
Lining and Coating	Lining application shall be performed by pipe manufacturer only. On-site application will not be allowed. All lining shall be done at point of pipe manufacture.

1) Calcium Aluminate Lining: Before lining the pipe with cementitious material, a portion of the gasket cavity and a portion of the pipe barrel shall be coated with a minimum of 8 mils of Tnemec Series 61-D1182 black epoxy. The bell end portion to be epoxy coated starts with the gasket seating area, continues through the bell shoulder, and concludes with the first 4 inches of the pipe barrel interior. The spigot end shall be epoxy coated on the interior and exterior surfaces.

The lining shall be a pure fused calcium aluminate mortar comprised of fused calcium aluminate cement combined with fused calcium aluminate aggregates. A seal coat shall be applied to the lining.

The thickness of the lining shall be a minimum of 0.125 inches (125 mils) for 6″ through 12″ pipe, and 0.187 inches (187 mils) for 14″ through 24″ pipe. The lining thickness may taper to less than the specified minimum at the ends of the pipe.

Field-cut end repairs are to be done in accordance with the pipe manufacturer's recommendations. End repairs are limited to exposed metal within the pipe joint. The calcium aluminate cement lining does not require sealing or protection.

Cracks, other than closed hairline cracks and/or fine crazing, shall not be acceptable. Loose areas of cement are not allowable. Visual inspection of the lining is sufficient.

2) Ceramic Epoxy Lining: Within 8 hours of abrasive blasting, and with no evident stains or rust, the interior of the pipe shall be lined with 40 mils dry film thickness of amine-cured epoxy containing at lest 20% by volume of ceramic quartz pigment. The gasket area and spigot end must be coated with 6 mils nominal, 10 mils maximum, after the application of the liner, due to the tolerances involved.

   A certification of the following standards should be available from the manufacturer upon request:

a) Permeability rating of 0.00 according to Method A of ASTM E-96 66.

b) ASTM B-117 Salt Spray – results to equal 0.0 undercutting after 2 years.

c) Immersion Testing rated using ASTM D-714-87: 120° F Tap Water – 0.0 undercutting after 2 years.

Lining material shall be re-coatable without roughening the surface. The manufacturer shall furnish a touch-up and repair kit.

Ceramic epoxy lined pipe and fittings must be handled only from the outside of the pipe and fittings. No forks, chains, straps, hooks, etc., shall be placed inside the pipe and fitting for lifting, positioning, or laying. The line pipe shall not be dropped, hammered, or allowed to strike fixed or hard objects while being moved.

Protecto 401 Ceramic Epoxy is an acceptable ceramic epoxy lining.

C. Polyvinyl Chloride (PVC) Pipe

Pipe	Pipe material shall conform to ASTM D 1784 and shall have a minimum cell classification of 12364A, 12454B, 12454C or 13364B. Pipe sizes less than 18-inch shall conform to ASTM D 3034 or ASTM F-789. Pipes 18-inch or larger shall conform to ASTM F-679 or F-794. Minimum pipe stiffness for pipe used for stub-lines shall be SDR 23.5.
Joints	All gasket joints shall be compression, bell and spigot push on conforming to ASTM D 3212-89 "Standard Specification for Joints for Drain and Sewer Plastic Pipes

Using Flexible Elastomeric Seals", conforming to ASTM F 477. Lubricant shall be as recommended by the pipe manufacturer.

Fittings — Fittings defined as tee connections suitable for assembly to 6-inch house or building sewers shall be saddle-type fittings molded of PVC materials conforming to ASTM D 1784. All fittings shall utilize Elastomeric seals and shall be suitable for use with the respective ASTM PVC pipe standard or molded PVC. Insert-A-Tee is acceptable for service connections on 12-inch and larger service mains.

D. Cured In Place Pipe (CIPP)

Occasionally, a development must include part of an existing sewer system that is in need of substantial repair and the sewer will not handle the impact of increased flow without replacement. The City Engineer may approve CIPP as an alternative to sewer replacement.

Lining — CIPP lining material shall be a polyester fiber felt tubing, lined on one side with polyethylene and fully impregnated with liquid thermosetting resin. Minimum lining thickness shall be:

Diameter of Original Pipe	**Minimum CIPP Thickness**		
(inches)	mm		inches
8 – 12	6.5	&	.256
15	9.5	&	.374
18	12.0	&	.472
24	15.0	&	.591
30	18.0	&	.709

The cured lining material shall conform to ASTM D 790 for the minimum structural standards. Liner tube

shall also meet the requirements of ASTM F 1216, Section 5-1.

3004 ALIGNMENT.

Piping shall be laid to the lines and grades indicated on the drawings using laser beam equipment, surveying instruments or batter boards to maintain alignment and grade. If batter boards are used, they shall be erected at intervals not exceeding 25 feet. Not less than three batter boards shall be maintained in proper position at all times during the trench grading operation.

3005 HANDLING.

Pipe, fittings, and appurtenances shall be transported, unloaded, stockpiled, distributed, and installed or otherwise handled in a manner which prevents damage thereto and which will ensure the delivery and installation thereof in a sound and acceptable condition. Hooks shall not be permitted to contact joint surfaces. Damaged pipe shall be removed from the site.

3006 CLEANING.

The interior of all pipe and fittings shall be thoroughly cleaned before installation and shall be kept clean until the work has been accepted. All joint contact surfaces shall be kept clean until the joint is completed.

Whenever pipe laying is stopped, the open end of the pipe must be closed by using a pipe plug to prevent trench water, sand, and earth from entering the pipe. In no case shall said plug be removed and water allowed to enter the sewer until the City Engineer is satisfied that the sewer will not be injured by water coming in contact with the pipe, pipe backfill or subgrade. The City Engineer may require the contractor to pump the water from the trench before continuing trenching or pipe laying operations.

Every precaution shall be taken to prevent foreign material from entering the pipe during installation. No debris, tools, clothing, or other materials shall be placed in the pipe.

3007 LAYING PIPE.

Lateral displacement of the pipe shall be prevented during embedment operations. Pipe shall not be laid in water, or under unsuitable weather or trench conditions.

Pipe laying shall begin at the lowest elevation with bell ends facing the direction of laying except when reverse laying is permitted by the City Engineer.

3008 JOINTING.

All joint preparation and jointing operations shall comply with the instructions and recommendations of the pipe manufacturer. Immediately before joints are pushed together, all joint surfaces shall be coated with the lubricant furnished with the pipe. The position and condition of each rubber gasket (unbounded gaskets) shall be checked with a feeler after the joint is completed.

Joints for reinforced concrete pipe shall conform to Section 7 of ASTM C361, except that gaskets shall have a circular cross section and shall be confined in a groove in the pipe spigot. Pipe with collars in lieu of integral bells will not be acceptable.

Joints for PVC pipe shall comply with all recommendations and instructions of the pipe manufacturer.

3009 TEMPORARY PLUGS.

Provide and install plugs as manufactured by pipe supplier or as fabricated by contractor of approved construction. Plugs shall be watertight against heads up to 20 feet of water. Secure plugs in place in a manner to facilitate removal when required to connect pipe.

Mechanical plugs, braced with a 4x4 timber wedged against the opposite wall of the manhole, shall be installed at the downstream end (connection with existing line) on all sanitary sewer extension projects under construction and shall be verified by the contractor at the completion of each working day. Also, the open end of the sewer shall be plugged at the end of the work day with a suitable mechanical plug to prevent entry of foreign material until work is resumed.

3010 CONNECTIONS TO EXISTING PIPELINES AND STRUCTURES.

Connect pipe to existing structures and pipelines where indicated. Observe pertinent articles of specifications pertaining to joint locations.

Core drill opening in structure so that the size of opening is compatible with the size of field-applied pipe connector to be used with the pipe being connected to the structure. Refer to 3102 for the acceptable product to be used. Follow the manufacturer's recommendation for field installation that will provide a watertight seal around the pipe.

Lateral sewer service line tap connections into manholes is prohibited.

Manholes to be built on an existing sewer shall be constructed in such a manner as will not disrupt service of the existing sewer. In the case where it is anticipated that the sewage flow will be interrupted for a significant period of time, as determined by the City Engineer, a by-pass pumping plan shall be submitted that includes type of pump, flow capacity of pump and names and phone numbers of emergency contact persons. The manhole base, walls, and invert shall be completed before the top half of the sewer pipe is cut or broken away. Water stops shall be required for all connecting sewer pips to be cast into the base. Rough edges of the pipe thus exposed shall be covered with expansive grout, in such a manner as to produce a smooth and acceptable finish. Any portion of the existing sewer damaged by the contractor shall be repaired or replaced by the contractor at no expense to the City.

Connections between different pipe materials shall be made using proprietary transition coupling, unless otherwise specified on the drawings.

3011 TEE BRANCHES AND SADDLES.

Tee branches and saddles shall be pitched at 45° and installed at locations designated on the plans. The contractor shall verify that tee branch or saddle locations have been marked in advance of the construction of sewers serving any property which will require sewer service and, if the locations have not been designated, shall stop the sewer construction until the necessary tee branch or saddle locations have been obtained.

Provisions for temporary pumping or bypass pumping may be required depending on flow conditions. Depending on flow conditions, placing sand bags in the upstream manhole for a

short period of time while the connection is made may also be a method selected by the contractor.

Tee branches and saddles shall be installed with the lower lip not more than 2 inches below the outside top of the pipe. Tee branches or saddles shall not be covered until each location has been recorded.

Each tee branch or saddle shall be marked with a wooden strip extending from the tee vertically to within 1 foot of the ground surface. Markers shall be securely anchored and maintained vertical until backfilling has been completed. Tee branches or saddles shall be closed with a suitable plug held in place by an approved joint sealing compound.

3012 SERVICE CONNECTIONS.

Service connections made to the sanitary sewer main prior to backfilling shall not be installed as vertical risers but shall be laid on a slope not to exceed 1 foot vertical to 1 foot horizontal. A 45° bend shall be used to join the tee branch to the service connection or stub line. The service pipe shall make such a horizontal angle with the sewer line that a proper connection to the 45° bend or stub line is obtained without trimming the pipe. Each service connection pipe shall have a solid bearing on rock backfill.

A stub line shall be provided for all service lines and shall extend a minimum of one pipe joint distance from the 45° riser. All stubs that are not connected immediately to the structure shall be plugged to prevent any inflow/infiltration into the sewer. The service line shall be installed to provide a minimum slope in the service line of 1%, taking into account at least 3 feet Minimum Serviceable Floor Elevation (MSFE) at the structure to be served. Where the service crosses the street, the stub line shall be extended from the tee on the main across the street to the right-of-way line of the property to be served.

3013 CONCRETE ENCASEMENT.

Concrete encasement shall be installed where and as shown on the drawings and where, in the opinion of the City Engineer, such pipe encasement is necessary because of unforeseen conditions encountered in the work. All pipe which is to be encased shall be suitably supported and blocked in proper position and shall be anchored against flotation. The pipe shall be encased with Controlled Low Strength Material (CLSM). The CLSM mix design shall consist of a per cubic

yard mixture of 100 lb of Portland Cement, 100 lb of Fly Ash, 2760 lb of Sand, 386 lb of Water, 5% Air Entraining Agent and have a minimum compressive strength at 56 days of 202 psi. Unless otherwise required, CLSM shall be placed to 1 foot below subgrade elevation if the subgrade elevation is not more than 5 feet over the top of the pipe. If the subgrade is more than 5 feet over the top of the pipe, CLSM shall be placed to an elevation 2 feet over the top of the pipe, and the remainder shall be backfilled with soil designated by the City Engineer.

3014 WATER LINE CLEARANCES.

A. Gravity Sanitary Sewers.

When potable water pipes and gravity sanitary sewers are laid parallel to each other, the horizontal distance between them shall not be less than 10 feet. The distance shall be measured from edge of pipe to edge of pipe. 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, the City, with concurrence from KDHE, will consider proposals providing equivalent protection by other methods on a case-by-case basis, if supported by data from the Design Engineer. Equivalent protection may require sanitary sewer construction with one of the following additional protective features: concrete encasement, vacuum sewers or jointless pipe such as polyethylene or cured-in-place.

When water and sanitary sewer pipes cross, and the sewer is 2 feet or more (clear space) below the water pipe, no special requirements or limitations are provided herein. At all other crossings, the sanitary sewer is to be constructed of one of the following materials (or approved equal) and pressure tested to assure water tightness pursuant to Chapter VI of the KDHE Minimum Standards of Design of Water Pollution Control Facilities.

1) Ductile iron pipe conforming to ASTM A536 or ANSI/AWWA C151/A21.51 with minimum pressure Class 350 for 3”-12” Class 250 for 14”-20”, Class 200 for 24”, and Class 150 for 30”-64”, and gasketed, push-on or mechanical joints in conformance with ANSI/AWWA C110/A21.10 or ANSI/AWWA C111/A21.11.

2) PVC pipe conforming to ASTM D3034 with minimum wall thickness of SDR35, ASTM F679, ASTM F789, or ASTM F794, with gasketed push-on joints in conformance with ASTM D3212.

3) Reinforced concrete pipe conforming to ASTM C76 with gasketed joints in conformance with ASTM C361 or ASTM C443.

Where a water main is laid across or through an area where there is an existing sanitary sewer, which is not constructed of one of the above specified materials and is 2 feet or less below the water pipe, the existing sewer shall be encased in concrete, using CLSM as described above in Section 3013, for a 10-foot distance on each side of the crossing or the crossed section of sewer replaced to meet the above specified construction requirements. KDHE will consider proposals providing equivalent protection by other means on a case-by-case basis, if supported by data from the Design Engineer.

Where sanitary sewer lines are to be installed under and across water lines and a 2-foot clearance cannot be obtained because of limiting grades or grades of existing structures, then the sewer line shall be constructed of ductile iron pipe for a distance of a least 10 feet in each direction from the crossing.

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

B. Sewer Connections.

There are to be no physical connections between any parts of the potable water system with building sewers, sanitary sewers, storm sewers or wastewater treatment facilities by means of which it would be possible for sewage, even under exceptional circumstances, to reach the wells, storage reservoirs or distribution systems.

C. Pressure Sewer Lines.

When force mains run parallel to water lines, the separation distance shall be as far as practical, but at least a 10-foot horizontal separation shall be maintained. There shall be at least a 2-foot vertical separation at crossings with the water main crossing above the sewer force main. In cases where it is not practical to maintain the required vertical or horizontal separation distance between a water line and

a sanitary sewer force main, the City Engineer will consider proposals providing equivalent protection by other methods on a case-by-case basis, if supported by data from the Design Engineer.

D. Sewer Manholes.

No water pipe shall pass through or come in contact with any part of a sewer manhole.

E. Storm Sewers.

Required separation distances between water mains and storm sewers are equivalent to those for water mains and gravity sanitary sewers.

F. Drains.

Underground drains from fire hydrants or valve pits should not be directly connected to sanitary or storm drains.

All of the above recommended protective measures shall apply to water and sewer service lines.

All special protective measures outlined herein shall be required in the final design and implemented during the construction phase when it is impractical, for geotechnical reasons, to cross water lines over sewer lines.

3015 SEWER MANHOLES.

Manhole construction shall comply with all of the applicable requirements of Section 3100 “Sanitary Sewer Manholes.”

3016 ACCEPTANCE TEST.

Each reach of sewer shall meet the requirements of the following acceptance tests. All defects shall be repaired to the satisfaction of the City Engineer by and at the expense of the contractor.

a. Video Camera Recording. The Contractor will be required to provide videos in DVD medium to the City after all testing of the sewer line is complete. The video camera shall be placed in the downstream manhole for each section and pulled to the upstream manhole or by using a self-propelled camera unit which typically travels in a downstream direction. The video shall

clearly show the interior of the manhole and the construction of the invert along with the appropriate verbal “audio” and/or video typed on the monitor screen. If service lines or service stubs have been installed with the project, each service must be noted as a distance in feet from the downstream manhole. The completed video must include monitoring of distance in feet from the downstream manhole for all sections of pipe installed. The City will complete a second video of the sewer pipe prior to the expiration of the 2-year maintenance bond. If any maintenance is required during the 2-year maintenance period, the Contractor will be required to video all repaired sections of pipe to verify corrections.

b. Infiltration Test. An infiltration test will be required when the sewer line is below the ground water level. The amount of water leaking into the sewer shall be measured and it shall not be more than 50 gallons per day per mile of pipe, per inch nominal diameter.

c. Air Test. The contractor shall perform a low-pressure air test for pipe between successive manholes. The section of pipe between successive manholes shall be sealed with suitable plugs. One of the plugs shall have an orifice through which to pass air into the section of pipe being tested. The air supply line shall have a positive on-off valve and suitable means for readily disconnecting it at the control panel. A second orifice in the plug shall be used for constantly reading the internal pressure of the pipe. This orifice shall be continuously connected to a pressure gauge having a range from 0 to 10 psi. The gauge shall have minimum divisions of 0.10 psi, and shall have an accuracy of +0.04 psi. The gauge will be calibrated with an expiration (or recalibration) date on the gauge. If the gauge calibration date has expired, a different gauge shall be used that is within its calibration timeline.

The testing methods and air leakage rates shall conform to the requirements of ASTM F1417-92 or the latest revision thereof. Each reach of sewer pipe between manholes shall be tested after completion of the installation of the pipe and appurtenances and the backfill of the sewer trench.

Internal air pressure shall be monitored so that it will not exceed 9.0 psig. After reaching 4.0 psig, the

air supply shall be maintained at 4.0 psig for at least 2 minutes in order to allow equilibrium between air temperature and pipe walls. During this time all plugs shall be checked to detect any leakage. If any of the plugs are found to leak, air shall be bled and the plugs retightened prior to re-supplying air. After temperature has stabilized, the pressure is to be maintained at 4.0 psig. Upon reaching a stabilized pressure of 4.0 psig, timing shall begin to determine the time required for the pressure to drop to 3.0 psig. If the time, in seconds, for the air pressure to decrease from 4.0 psig to 3.0 psig is greater than that shown in the following table, the pipe shall be presumed to be free of defects.

Pipe Size	**Required Time per 100 LF**	**Maximum Required Time**
8″	70 seconds	227 seconds
10″	110 seconds	283 seconds
12″	158 seconds	340 seconds
15″	248 seconds	425 seconds
18″	356 seconds	510 seconds
21″	485 seconds	595 seconds
24″	634 seconds	680 seconds
27″	765 seconds	765 seconds
30″	851 seconds	851 seconds
33″	935 seconds	935 seconds

If the air test fails to meet the above prescribed requirements, the test shall be repeated as necessary after all leaks and defects have been repaired. Prior to acceptance, all constructed sewer lines shall satisfactorily pass the low-pressure air test.

In areas where ground water is known to exist, a 1/2 inch diameter capped pipe nipple approximately 10 inches long is to be installed through the manhole wall on top of one of the sewer lines entering the manhole. This installation is to be done at the time the sewer line is constructed. Immediately prior to the performance of the line acceptance test, the ground water level shall be determined by removing the pipe cap, blowing air through the pipe nipple into the ground to clear it and then connecting a clear plastic tube to the pipe nipple. The tube shall then be held vertically and a measurement of height in feet of water

shall be taken after the water height has stabilized in the tube. The height in feet shall be divided by 2.3 to establish the pounds of pressure to be added to all readings.

All pressure sewage force mains shall have hydrostatic pressure and leakage tests performed prior to acceptance. No pressure sewer line shall be accepted unless passing the prescribed requirements. All tests shall conform to AWWA C600 procedures as modified herein and shall be applicable to all pressure sewers. The test shall be conducted after line installation and trench backfilling is complete.

The test shall be performed separately in segments between sectionalizing valves and a test plug, or between test plugs. Test segments shall be selected so that adjustable seated valves are isolated for individual checking. The contractor shall furnish and install test plugs at no additional cost to the owner, including all required anchors, braces and other devices to withstand hydrostatic pressure on the plugs. Any damage to public or private property caused by failure of the plugs shall be the responsibility of the contractor. The fill rate of the line shall be limited to the available venting capacity.

The pressure test shall be conducted at 150 psi.

All joints shall be watertight and free from leaks as determined by the test.

If any of the above tests fail to meet the above-prescribed requirements, the test shall be repeated as necessary after all leaks and defects have been repaired.

d. Deflection Test. A deflection test shall be required on all installations involving flexible or semi-rigid pipe after said pipe has been laid and backfilled. The maximum allowable deflection shall not exceed 5.0% of the pipe's actual internal diameter as measured in the field. The deflection test shall consist of guiding a device of the appropriate size for the pipe involved to accurately measure any deflection in the pipe. The device to be used shall be approved by the City Engineer prior to its use. Attention is directed to the fact that the pipe's nominal diameter is greater than the actual internal diameter of the pipe. Lamping

will not be approved as a substitution for deflection testing.

Upon completion of the testing, all piping showing a deflection greater than 5.0% shall be excavated, replaced, backfilled, and retested to the satisfaction of the City Engineer.

3017 BORING WITH CASING PIPE.

Steel casing for bored and jacked construction shall have a smooth wall and a minimum yield strength of 35,000 psi, conforming to ASTM A-139 with a minimum diameter as shown on Standard Detail 50-7. Steel casing for bored and jacked construction shall be steel pipe conforming to ASTM A-139 with a minimum diameter as shown on Standard Detail 50-7. Steel shall be Grade B under railroads and Grade A on all other uses. Steel pipe shall have welded joints in accordance with AWWA C-206 and shall have minimum wall thickness as indicated on the following table.

Diameter of Casing (inches)	**Nominal Wall Thickness (inches)**	
	Under Railroads	**All Other Uses**
12	0.282	0.188
14	0.282	0.188
16	0.282	0.188
18	0.312	0.250
20	0.344	0.281
22	0.375	0.281
24	0.406	0.281
26	0.438	0.312
28	0.469	0.312
30	0.469	0.312
32	0.500	0.344
34	0.531	0.344
36	0.531	0.344
38	0.531	0.344
40	0.563	0.375
42	0.563	0.375
44	0.563	0.375
48	0.563	0.375
50	0.625	0.406
52	0.625	0.406

54	0.625	0.406
60	0.650	0.450

Boring and jacking operations shall be performed by experienced crews using a rotary type boring machine designed especially for this purpose. The casing shall be jacked as the boring proceeds. Steel casing or carrier pipe shall be cleaned of all debris after its installation is complete. Casing spacers with plastic runners shall be secured to the barrel of the pipe with metal bands in such a manner as to support the weight of the pipe along its full barrel length on the skids without any of the weight supported by the pipe bell, and in such a manner as to properly position the carrier pipe to the specified elevations and alignment. 304 Stainless Steel casing spacers with plastic skids shall be as manufactured by PSI, Cascade, or APS.

End seals shall be used at each end of the casing and shall be the wrap-around, synthetic rubber type, using stainless steel bands. There shall be no voids between the earth and the casing. Any voids that do occur shall be filled by pressure grouting.

END OF SECTION

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SECTION 3100 - SANITARY SEWER MANHOLES

3101 SCOPE.

This section covers standard, drop, and special sewer manholes. Manholes shall be constructed complete with covers, steps, fittings, and other appurtenances, in accordance with the details indicated on the construction drawings.

At the option of the contractor, standard and drop manholes shall be constructed of precast concrete sections or cast-in-place concrete.

Only manholes, which are required to have outside pipe and fittings for dropping sewage into the lower line, will be designated as drop manholes. Inside drop manholes where the incoming line discharges directly into the manhole and which do not require special fittings will be considered standard manholes. Note: Drop manholes should only be considered as a last resort. Design Engineers shall design gravity sewer mains for continuous, uninterrupted flow lines of the wastewater from one sewer line segment, crossing a manhole and into another sewer line segment.

3102 MATERIALS.

Concrete	Materials, handling, forms, finishing, curing, and other work as specified in Section 2000 “Concrete.”
Pre-cast Sections	Circular pre-cast concrete; ASTM C478, except as modified. Joints shall be of a bitumastic material or preformed flexible joint sealant applied in accordance with manufacturer's recommendation.
Minimum Thickness	As indicated on the drawings.
Reinforcement	As indicated on the drawings.
Openings	Openings with manhole/pipe connectors that are cast into the wall are required. If a straddle manhole is approved, and the straddle manhole is placed over an existing sewer line, the opening

	shall be closed with a cast-in-place waterstop, or a field-applied pipe connector, as specified in Manhole/Pipe Connectors.
Portland Cement	ASTM C150
Sand	Concrete sand (fine aggregate) sieved through 8 mesh screen.
Shrinkage-Correcting Aggregate	Master Builders "Embeco", Sika "Kemox", or Sonneborn "Ferrolith G—DS".
Mortar	One part portland cement Type II, 3 parts sand, 1/4 part hydrated lime, ASTM C-207.
Non-Shrinking Mortar Premixed or Job mixed	Job mixed shall be one part shrinkage-correcting aggregate, one part portland cement, one part sand.
Gaskets	
Mastic	Hamilton-Kent "Kent-Seal No. 2" (minimum two-1" or one-2" beads per joint), or approved equal. Enough material shall be applied to fill the joint so that a minimum of 1/4—inch bead is visible, to be smoothed off after completion.
Flexible Joint	Preformed "0" ring, butylrubber or bituminous polymer are acceptable. Natural rubber is not acceptable
Coal Tar Paint	Koppers "Bitumastic Super-Service Black", Porter "Tarmastic 103", Tnemec "450 Heavy Tnemecol", or approved equal.
Castings	ASTM A48, with asphalt varnish coating applied at the foundry.
Manhole/Pipe Connectors	Flexible gaskets shall conform to ASTM C923. For connectors pre-cast into the concrete, A-Lok products

	Z-Lok for sizes 8″ through 18″ ID pipe diameters and X-cel for greater than 18″ diameter pipes. Connections to existing manholes shall use PSX-Direct Drive, or G-3 Boot System.
External Joint Sealing	Adhesive tape shall conform to ASTM C877 Type III and shall be EZ Wrap Rubber or Plastic as supplied by PRESS-SEAL Gasket Corp., Ft. Wayne, Indiana.

3103 STANDARD MANHOLES.

All manholes shall be constructed, complete with covers and ladder steps, in accordance with the details shown on the drawings and found herein. Standard manholes above the foundations, unless otherwise required by the plans, shall be constructed of poured-in-place concrete or solid, pre-cast, curved segmental concrete masonry units of circular sections specially cast for use in manhole construction. Manholes shall be constructed with eccentric cones unless otherwise approved by the City Engineer.

Foundations for all standard manholes shall have a minimum 28-day compressive strength of 4000 psi.

Pre-cast concrete manholes shall have a wall thickness of not less than 1/12 of the outside diameter plus 1 inch, or 5 inches, whichever is greater.

Pre-cast concrete sections shall be inspected when delivered and all cracked or otherwise visibly defective units rejected.

3104 CONSTRUCTION.

Manhole inverts shall be constructed of concrete conforming to the requirements of Section 2000 “Concrete,” with the exception that the concrete shall have a minimum 28-day compressive strength of 3000 psi. In no case shall the invert section through a manhole be greater than that of the outgoing pipe. The shape of the invert shall conform exactly to the lower half of the pipe it connects. Side branches shall be connected with as large of a radius of curve as practicable. All inverts shall be troweled to a smooth clean surface.

Circular pre-cast sections shall be provided with a mastic gasket or preformed flexible joint to seal joints between sections. The space between connecting pipes and the wall of precast sections shall be closed by a manhole pipe connector (See 3108 and 3108A for Connections to Manholes). The connecting pipe for installation with resilient connectors shall be plain-end, square-cut spigots and shall not protrude more than 2 inches inside the manhole wall. A clear distance of at least 1 inch from the end of each connecting pipe and around the pipe shall be provided when the concrete invert fill is installed. After completion of the manhole, the boxout shall be filled with mastic filler material, completely filling the space beneath the pipe and extending to at least the spring line. The filler material, Kent-Seal No. 2, shall provide a smooth, uniform surface between the outside diameter of the pipe and the manhole invert.

All manholes under construction shall be covered in an appropriate manner to prevent the entry of any stormwater runoff, trench water, sand, earth or any other foreign substances at any time during construction or while the manhole is unattended.

3105 DAMPPROOFING AND EXTERNAL JOINT SEALING.

A. Dampproofing. Surfaces to receive coat shall be dry. Before backfilling is started, the exterior surfaces of precast and poured-in-place manholes shall be coated with 14 mils dry film thickness of coal tar epoxy. Application shall be in accordance with the manufacturer’s specifications and instructions.

B. External Joint Sealing. Adjustment ring and manhole joints below grade shall be sealed with joint tape that meets or exceeds ASTM C877 Type III. Manhole surface to be covered shall be free of dirt, sharp points and moisture. The tape and primer shall be applied according to the manufacturer’s recommendations, not stretched, and shall include the joints between sections and the entire surface of the adjustment rings and overlapping onto the manhole ring 4 to 6 inches. The butyl component of the tape shall consist of 50% (minimum) butyl rubber, contain 2% or less volatile matter, and shall be 0.030 inches thick. Rubber or plastic backing can be used.

3106 CASTINGS.

Manhole rings and covers shall be Clay and Bailey No. 2008 BV, Deeter No. 1315, GCI Castings SM2202, or approved equal. The exception shall be for use on shallow manholes where manhole covers shall be Clay & Bailey No. 2020, Deeter No. 2016, GCI Castings SM 2100, or approved equal.

When bolt-down type manhole rings and covers are required and specified, Clay and Bailey No. 2014 M, GCI Casting SB 2200STD, or approved equal, with rubber gaskets and stainless steel cover bolts 5/8-inch diameter with hexagonal-head bolts shall be furnished. Bolt-down type manhole rings shall be anchored to the manhole with not less than four 3/4-inch diameter stainless steel anchor bolts having a minimum of 14 inches of embedment, except in concrete manholes in which the ring is embedded in concrete.

If castings arrive on the job without a foundry coating, one coat of coal tar paint shall be applied. Before painting, all castings shall be thoroughly cleaned and properly supported. All loose rust shall be removed by wire brushing. Castings shall not be handled until the paint is dry and hard. All castings shall be interchangeable with the Clay and Bailey model numbers.

3107 STUBLINES.

Stub-lines for future connections shall be provided in manholes at the locations indicated on the drawings and shall terminate in a bell and plug.

3108 CONNECTIONS TO MANHOLES.

A pipe to manhole connector using an ASTM C923 resilient device that provides a positive, flexible watertight seal for pipes entering and exiting pre-cast concrete manholes shall be installed by the pre-cast concrete manhole manufacturer.

Approved products are listed in Section 3102.

A. Connections to Existing Manholes. A pipe to manhole connector using an ASTM C923 resilient device that provides a positive, flexible watertight seal for pipes entering and exiting manholes shall be installed by the contractor from outside the manhole. All openings to accommodate these connectors shall be core drilled.

Approved products are listed in Section 3102. **Lateral service line tap connections to existing manholes are prohibited.**

B. Connections to Existing Sewer Lines. Dog House or Straddle manholes are approved only with the authority of the City Engineer. All other cases require placement of a new, pre-cast manhole and replacement of the sewer to the first downstream joint.

3109 PLASTIC MANHOLE STEPS.

Polypropylene coated steel reinforced steps "plastic steps" shall be M.A. Industries, Inc., model PS-2-PF or approved equal manhole step for pre-cast concrete manholes.

3110 GRADE RINGS.

All manholes shall be fitted with an adjusting ring or rings providing a minimum adjustment of 1½ inches and a maximum adjustment of 12 inches, and one adaptor ring between the cone section and the casting in conformance with Detail 31-6. Concrete grade rings shall meet requirements of ASTM C478 #4 wire – ASTM A82 and 4000 psi concrete. HDPE adjustment rings shall be manufactured from polyethylene plastic as described in ASTM D1248, and as manufactured by Ladtech, Inc. Tapered grade rings may be used on a case by case basis under the approval of the City Engineer, Public Works Director or their representative.

3111 ACCEPTANCE TESTING.

Vacuum tests shall be conducted on all newly constructed manholes and existing manholes that have been repaired or restored or manholes constructed over existing sewers.

All lift holes shall be plugged with a non-shrinking mortar, as approved by the City Engineer. The contractor shall plug all pipes connected to the manhole using pneumatic plugs. The pneumatic plugs should be placed into the pipe after the inside surface has been cleaned. Air shall be introduced into the plugs to 25 psig. Bracing can be used to ensure that the plugs are not pulled into the manhole during vacuum testing. After the manhole has been properly prepared, the vacuum tester shall be installed. The test head shall be placed on top of the casting or fit inside the casting in a manner that incorporates the casting and all adjusting and adaptor rings into the vacuum test. The vacuum pump shall be connected to the outlet port with the valve open. The

outlet valve shall be closed after a vacuum draw of 10 inches of Hg. has been obtained. The test shall pass if the vacuum remains at 10 inches Hg. or drops to 9 inches Hg. in a time greater than one minute. If the manhole fails, the contractor shall locate the leak and make proper repairs and then re-test.

The manhole vacuum tester shall be as manufactured by P.A. Glazier, Inc., or approved equal. The vacuum gauge shall be calibrated with an expiration date on the gauge. The pneumatic plugs, a part of Cherne Air—Loc Equipment as manufactured by Cherne Industrial of Hopkins, MN., or approved equal. These plugs shall have a sealing strength equal to or greater than the diameter of the connecting pipe to be sealed. A visual inspection will be performed for each manhole by the City Engineer after the manhole has met the requirements of the vacuum test and is considered in its final state. The inspection shall determine the completeness of the manhole. Any defects identified shall be repaired to the City Engineer's satisfaction.

END OF SECTION

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SECTION 4000 - STORM SEWERS

4001 SCOPE.

This section covers the furnishings of all labor, materials, and equipment for the complete installation of storm sewers and appurtenances in accordance with the contract documents. The work shall consist of the construction of storm sewers for the removal of water from collection points, in accordance with these Specifications and in reasonably close conformity with the lines and grades shown on the contract drawings or established by the City Engineer. Unless otherwise indicated in these Specifications, the phrase "Storm Sewer" shall refer to pipe sewers, box culvert sewers, or paved or rock lined channels.

4002 REINFORCED CONCRETE PIPE.

All reinforced concrete pipe shall conform to ASTM C76, Class III. This Specification covers reinforced concrete pipe of 15 to 108 inches in diameter and is intended for use in conveyance of storm water and for the construction of culverts.

Installation shall conform to the requirements of Section 6000 “Excavation,” Trenching, and Backfilling. No pipe culverts shall be placed until the embedment below the proposed reinforced concrete pipe have been approved by the City Engineer.

4003 CORRUGATED METAL PIPE.

Corrugated metal storm sewer pipe shall be furnished with connecting bands, elbows, and fittings. Corrugated metal storm sewer pipe shall have annular ends. The same type of pipe base metal (steel or aluminum) shall be used throughout any individual run or installation of pipe or for pipe extensions. Materials shall conform to the requirements provided in the current edition of the Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation. All Ultra-Flo pipe shall be aluminized Type 2.

Corrugated metal culvert pipe gauge requirements shall conform to Design Aid 4-9 of the Design Criteria. In no case shall any pipe be lighter than 16 gauge.

Corrugated metal storm sewer pipe shall be handled in such a manner that it is not chipped, dented, or bent. If in handling the culvert the base metal is exposed in any way, then it shall be rejected or repaired to the satisfaction of the City Engineer.

The excavation, trenching, and backfilling of corrugated metal pipe storm sewers shall be performed in accordance with the requirements of Section 6000 of these Specifications. No pipe culverts shall be placed until the embedment below the pipe has been approved by the City Engineer.

A. Corrugated Metal Pipe; Alumized Type 2. Sheet steel for aluminized CMP shall conform to ASTM A929 or AASHTO M274. Pipe manufacture shall conform to ASTM A760 or AASHTO M36. Fittings shall be fabricated from the same material as the pipe.

4004 SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE.

This specification applies to high-density polyethylene corrugated pipe with an integrally-formed smooth interior. This specification is applicable to nominal sizes 12- to 60-inch diameter. **HDPE pipe shall be used unless the recommended pipe size is not available in which case CMP or RCP will be used.** Requirements for test methods, dimensions, and markings are those found in AASHTO Designation M-294 Type S. Pipe and fittings shall be made of polyethylene compounds which meet or exceed the requirements of Type III, Category 4 or 5, Grade P33 or P34, Class C per ASTM D-1248 with the applicable requirements defined in ASTM D-1248. Clean rework material may be used.

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Minimum parallel plate pipe stiffness values at 5% deflection shall be as follows:

Diameter	**Pipe Stiffness**
12″	50 psi
15″	42 psi
18″	40 psi
24″	34 psi
30″	28 psi
36″	22 psi
42″	20 psi
48″	18 psi
54″	16 psi
60″	14 psi

* Per ASTM Test Method F-2306

The pipe and fittings shall be free of foreign inclusion and holes, and visible defects. The ends of the pipe shall be cut squarely and cleanly so as not to adversely affect joining.

The nominal size for the pipe and fittings is based on the nominal inside diameter of the pipe. Corrugated fittings may be either molded or fabricated by the manufacturer. Fittings produced by manufacturers other than the supplier of the pipe shall not be permitted without the approval of the City Engineer. Joints shall be made with split couplings, corrugated to match the pipe corrugations, and shall engage a minimum of four corrugations. A neoprene gasket shall be utilized with the coupling to provide a soil-tight joint. Installation shall be in accordance with Section 6000 of these Specifications. A manufacturer's certification that the project was manufactured, tested, and supplied in accordance with this specification shall be furnished.

4005 CATCH BASINS, INLETS, AND JUNCTION BOXES.

The methods of excavation and backfilling for catch basins, inlets, and junction boxes shall conform to the requirements of Section 6000 "Excavation, Trenching, and Backfilling" and Standard Details of these Specifications.

Reinforced concrete catch basins and inlets shall conform to the standard concrete inlet drawings and shall be constructed of concrete having a minimum 28-day compressive strength of 4000 psi. Concrete cover over steel reinforcement shall be not less than 1-1/2 inches for covers and 1-1/2 inches for walls and floors. All exposed concrete shall have smooth steel trowel or brushed finish. Interiors of structures shall have the forms removed and surface voids filled.

Foundations for all standard catch basins and inlets shall have a minimum 28-day compressive strength of 3000 psi.

The floors of all catch basins, inlets, and junction boxes shall have inverts. Inverts shall be constructed of concrete conforming to the requirements of Section 2000 "Concrete," with the exception that the concrete shall have a minimum 28-day compressive strength of Class I 3000 psi.

All catch basins, inlets, pipes, and junction boxes shall be thoroughly cleaned of any accumulation of silt, debris or foreign matter of any kind, and shall be free from such accumulations at the time of final inspection.

4006 REINFORCED CONCRETE BOX CULVERTS.

The work performed herein covers the installation of concrete work in strict accordance with the applicable provisions of Section 2000 “Concrete,” Section 6000 “Excavation, Trenching, and Backfilling,” Standard Details, all of these Specifications, the current edition of the Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation, and the applicable contract drawings.

4007 PAVED DITCHES AND RIPRAP.

Paving concrete for paved ditches shall conform to the applicable provisions of Section 2000 “Concrete” of these Specifications and shall conform to the standard drawings or approved equal.

The concrete shall be placed beginning at the lower end of the portion of the ditch to be lined and progressing toward the upper end. If required on the contract drawings, the concrete shall be reinforced with the type of reinforcement and in the manner indicated. Contraction or construction joints shall be spaced and formed as indicated on the contract drawings.

The surface shall be finished with a wooden float. A light brooming may be required for a more acceptable finish. Immediately after the finishing operations are completed, the concrete shall be protected and cured in conformance with the requirements specified in Section 2000 “Concrete.”

Riprap shall be placed at the locations and to the dimensions shown on the contract drawings in accordance with the specified requirements.

Riprap shall be graded as necessary to form a dense blanket. The finished surface shall present an even surface conforming to the lines, grades, and sections given. Riprap shall be placed to a minimum depth of 18 inches.

Riprap shall be placed in such a manner that voids created by larger pieces are filled in by smaller pieces and no voids extend directly through the riprap to the surface below. The riprap shall be placed in rows transversely to the centerline of the ditch and in the manner indicated on the drawings. The riprap shall be placed with ends and sides abutting and the joints between rows breaking with the joints in the preceding row.

Riprap shall consist of durable field or quarry stones. Riprap pieces shall range in weight from 5 pounds to 200 pounds. Not less than 75% shall be within the range of 100 pounds to 200 pounds.

Stone for riprap shall be free from earth, soapstone, shale, shale-like or other easily disintegrated material that will tend to decrease the durability of the material after placement.

When grouted stone riprap is indicated, the spaces between stones of grouted riprap shall be filled with grout consisting of one part Portland cement and three parts of fine aggregate with sufficient water to form a plastic mix. The grout shall be poured and broomed into the spaces until they are completely filled.

All rip rap and grouted rip rap shall be installed with weed guard under the rip rap for weed control.

4008 HEADWALLS, WINGWALLS, ENDWALLS, AND END SECTIONS.

Construction will be according to details in the approved plans. Pre-cast concrete or fabricated metal end sections may be used in place of cast-in-place concrete structures with the City Engineer's approval. Shop drawings will be submitted for pre-cast box culvert pieces.

Materials will be in accordance with Section 2000 “Concrete” and Section 4000 “Storm Sewers” and Standard Details of this Specification. The same type of pipe base metal (steel or aluminum) shall be used throughout any individual run or installation of pipe or for pipe extension, including end sections.

The end sections for pipe culverts shall be installed in accordance with the requirements specified in Section 6000 of these Specifications.

The area excavated for the pipe and headwalls shall be backfilled with suitable material and the material shall be compacted in accordance with the provisions of Section 6000 of these Specifications.

4009 RESTORATION OF SURFACE CONSTRUCTION.

The restoration of concrete and asphalt pavement, gravel surfacing, walks, drives, curbs, and other surface construction removed or damaged during the progress of the work covered by this section shall conform to the applicable provisions of Section 7000 “Restoration of Surface Construction” of these Specifications.

END OF SECTION

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SECTION 5000 - WATER LINES

5001 SCOPE.

This section covers all labor and materials for the construction of water lines including all thrust blocks, plugs, valves, pipe encasement, valve boxes, hydrants, connections to existing mains and other appurtenant work.

Unless otherwise noted on the drawings, all water mains shall be AWWA C900, Class 200 (DR 14)or AWWA C905, class 235 (DR 18) PVC pipe.

5002 DUCTILE IRON PIPE.

Unless otherwise shown on the drawings, joints in ductile iron piping shall be mechanical or push-on type. If mechanical joints are used, all T-Bolts shall be stainless steel.

The ductile iron pipe shall conform to ANSI A21.51; ASTM A536, Grade 60-42-10; AWWA C151. The minimum pressure class for ductile iron pipe 6-inch through 12-inch diameter shall be Class 350; 14-inch through 20-inch diameter shall be Class 250; and 24-inch diameter shall be Class 200, unless otherwise directed by the City Engineer.

A. Polyethylene Encasement for Ductile Iron Pipes. All ductile iron water mains shall be polyethylene encased and shall conform to ASTM A674l

1. Polyethylene Film. Tubular or sheet form without tears, breaks or defects, conforming to the following requirements shall be used to encase the DIP. Linear low-density film manufactured from virgin polyethylene material conforming to ANSI/AWWA C105/A21.5.

2. Polyethylene Tape. Provide 1½-inch wide, plastic-backed, adhesive tape. Acceptable tapes are Fulton No. 355, Polyken No. 900 or Scotchwrap No. 50. Fulton tie Strips are an approved alternative to tape. Duct tape or other tape not specified shall not be used.

   Installation shall be as described in detail in ASTM A674.

3. Repairs. Repair any cuts, tears, punctures, or damage to polyethylene with adhesive tape or short length of polyethylene sheet or cut open tube,

wrapped around pipe to cover damaged area, and secured in place.

4. Backfill. Prevent damage to film by assuring that backfill material is free from cinders, refuse, boulders, rocks, stones or other material that could damage the film. Follow AWWA C600 for backfilling.

5. Certification. The Contractor shall provide written certification that he has furnished polyethylene material that meets the ANSI/AWWA C105/A21.5 specification and written certification that he has installed this material according to ASTM A674. This certification shall be provided in duplicate to the City Inspector and the City Engineer.

5003 PLASTIC PIPE.

AWWA C900 (4-inch through 12-inch) and AWWA C905 (16-inch) pipe and fittings shall be fabricated from a raw virgin compound meeting the requirements of ASTM D1784: PVC 12454-B, 12454-C, or 12454-D. Gasketed joint pipe shall be fabricated in conformance with Dimension Rating DR14 (AWWA C900) and DR18 (AWWA C905). All pipe shall pass rigid quality control tests from a dimensional standpoint in accordance with the standard dimensions and tolerances for pressure rating.

All joints shall be the boltless, gasketed, slip-on type, meeting ASTM D3139 requirements and nSf approval. The male end of each section of externally-coupled plastic pipe shall be marked with a line around the circumference which can be used to check the depth of socketing after the pipe is coupled. Pipe may be furnished with plain ends, for use with gasketed couplings, or with gasketed bell on one end. Plain ends shall be factory beveled. All joints shall provide for expansion and contraction. Jointing of PVC pipe to CIP or others shall be with factory manufactured slip-on or mechanical joint fittings.

Restrained joints for PVC shall be boltless, gasketed, coupling-type Certainteed C900/RJ, C905/RJ or equal. The joints shall be capable of holding together under the pushing or pulling forces generated by the insertion or removal of the continuous joined length in a casing pipe without causing undue stress on the joint or the pipe itself.

Fittings for buried PVC pipe (4 inches and larger) shall be cast or ductile iron fittings conforming as specified under

iron pipe. They shall be mechanical joint cast or ductile iron fittings with gaskets and stainless steel T-bolts. Fittings for buried PVC pipe less than 4 inches in diameter shall be gasketed PVC, unless otherwise shown. Provide equal to Harco Plastiline type, or as provided by pipe manufacturer (200 psi minimum pressure rating), with compatible tolerances to fit the pipe. PVC couplings for plain end pipe shall be furnished by the pipe manufacturer and shall be manufactured with compatible tolerances to fit the pipe, shall have a minimum pressure rating of 200 psi or the rating of the PVC pipe, whichever is greater, and shall bear the nSf seal of compliance.

Gasketed joint PVC pipe shall be provided with thrust blocking at all fittings in accordance with blocking details.

All PVC pipe shall be provided with a locator tone wire made from insulated copper. Insulation shall be blue color, type TW or better and a minimum wire size of #12 stranded AWG. All splices are to be made with a 3M splice kit or approved kit.

Locator tone wires shall be accessible to utility line locating equipment at all valve box locations. The 12 gauge stranded Type TW copper tracer wire shall be attached to the outside of the valve box and shall surface at every valve. The PVC valve box riser shall have a ¼″ slot from the top to just below the top hat and 18 inches of tracer wire left inside the PVC riser. Wires shall not be brought up inside the PVC riser valve box.

5004 GATE VALVES.

The type, size, and location of valves shall be as indicated on the plans. Except as modified or provided herein, all gate valves in ductile iron water mains shall be 200 psi, resilient seated valves of the waterworks type. All gate valves shall have ductile iron bodies and buried valves shall have non-rising stems with O-ring stem seals. Buried valves shall not be installed with the stem vertical unless the bonnet will be below the frost line. Valves used for potable water service shall have a working pressure rating for 250 psi. Valves installed inside a structure shall be of the rising stem type.

Resilient-seated gate valves shall conform to all applicable requirements of AWWA A509 and shall be American 80 "CRS", Mueller A2370-20, or Kennedy "Ken-Seal" or Mullen "Waterous" series NRS.

Valve ends shall be of the mechanical joint type conforming to ANSIA21.10 except where flanged ends are required by the drawings and specifications. The end flanges of flanged gate valves shall be compatible with the connecting pipe as required by ANSI/AWWA 500.

All valves shall be provided with manual operators equipped with a wrench type square operating nut conforming to the requirements of AWWA C509.

The direction of rotation of the wrench nut to open the valve shall be to the left (counterclockwise). Each valve body or operator shall have cast thereon the word "Open" and an arrow indicating the direction to open.

All exposed T-bolts below grade shall be 304 stainless steel with Teflon coated nuts. As an alternative the T-bolt and nuts can be low alloy corrosion resistant high strength steel (Core-Ten) in accordance with ANSI/AWWA C153/A21.53.

The manufacturer shall provide written certification that the valve meets the requirements of the City's Technical Specifications. The certification shall be shipped with the valve(s) to the job site and the contractor shall provide the certification for viewing by the City Inspector.

5005 BUTTERFLY VALVES.

Butterfly valves shall be of the rubber-seat, tight-closing type. Valve discs shall seat at 90° with the pipe axis. Flanged end valves shall be of the short-body type. For buried service, shaft shall be O-ring type.

All butterfly valves and operators shall conform to AWWA C504. Metal mating seat surfaces shall be 18-8 stainless steel or nickel copper alloy. Each valve shall be provided with an operator with a torque rating at least equal to the torques listed in AWWA C504, Table 1.

Butterfly valve shall be Kennedy 50C, American C-150B, Mueller "Line Seal III" or approved equal.

All exposed T-bolts below grade shall be 304 stainless steel with Teflon coated nuts. As an alternative the T-bolts and nut can be low alloy corrosion resistant high strength steet (Core-Ten) in accordance with ANSI/AWWA C153/A21.53.

The manufacturer shall provide written certification that the valve meets the requirements of the City's Technical Specifications. The certification shall be shipped with the valve(s) to the job site and the contractor shall provide the certification for viewing by the City Inspector.

5006 TAPPING SLEEVES AND VALVES.

Tapping sleeves and valves shall be furnished and installed where required by the drawings. The valves shall be 200 psi, resilient-seated, cast or ductile iron body, non-rising stem gate valves conforming to all applicable requirements of AWWA C509 and shall be Mueller "No. A-2307-16" or an approved equal. Each tapping valve shall be provided with a flanged inlet end designed, faced, and drilled for connection to the outlet end of the tapping sleeve. The outlet end of the tapping valve shall be provided with a tapping flange for attachment of a standard drilling machine and also with a mechanical joint-type bell end for connection of the branch main. The tapping sleeve must have a pipe tap connection for hydrostatic pressure testing (water pressure only). The tapping sleeve and valve will be tested in place with water prior to making the actual tap in the water main. Test pressure must not exceed the rated working pressure of the pipe (150 psi on 16-inch, 200 psi on sizes 4-inch through 12-inch). No leaks will be permitted. The hydrostatic pressure test shall be conducted for one (1) hour in duration and a city representative shall be on site to witness the test.

Tapping sleeves shall be of the flanged-outlet type designed for attachment to the flanged inlet end of the tapping valve, and shall be provided with mechanical joint ends at each end of the run and shall be Mueller "No. H-615" for ductile iron pipe, Mueller "No. H—619" or PowerSeal Model 3490 for asbestos-cement pipe, PowerSeal Model 3490 for sandcast iron pipe, JCM model heavy duty stainless steel, with full neoprene gasket or approved equals.

5007 VALVE COATINGS.

All ferrous metal surfaces of valves and accessories, both interior and exterior, shall be shop-painted with epoxy coating that meets or exceeds all applicable requirements of ANSI/AWWA C550 standard and said coating shall be certified by ANSI/NSF61.

5008 AIR RELEASE AND VACUUM RELIEF VALVES.

Combination air release and vacuum relief valve assemblies shall be installed in the locations indicated on the drawings. Each valve assembly shall be installed complete with appurtenant piping and valves as specified or shown.

Combination air release and vacuum relief valves shall be of the integral type with a valve assembly which functions as both an air and vacuum valve and an air release valve.

Relief valves shall be sized for each situation and shall have a minimum 2-inch inlet connection.

The valves shall be designed for a water working pressure of 150 psi, shall have stainless steel floats, and all working parts shall be brass, stainless steel, or other non-corroding materials. Valves shall be as manufactured by Valmatic, APCO or ARI.

Isolation valves shall be provided in the piping to each combination air release and vacuum relief valve assembly. Isolation valves shall be 2-inch solid wedge gate valves. The 2-inch vent shall be provided with #24 mesh, non-corrodible screen on the end. A pre-cast concrete vault will be positioned at air release location conforming to Standard Detail 50—3.

5009 EXTENSION STEMS.

Extension stems and stem guides shall be provided where shown, specified, or required for proper operation. Extension stems shall be fabricated from solid steel shafting not smaller in diameter than the stem of the valve or from galvanized steel piping having an ID not smaller than the OD of the valve stem. Extension stems shall be connected to the valve by a flexible, socket-type coupling. All connections shall be pinned, keyed, or socket type. Pipe couplings will not be acceptable.

Extension stems shall be provided for buried valves when the operating nut is more than 3 feet below finished grade. Each extension stem for a buried valve shall extend to within 3 feet of the ground surface, shall be provided with spacers, which will center the stem in the valve box, and shall be equipped with a wrench nut.

5010 VALVE BOXES.

All buried valves shall be provided with valve boxes. Valve boxes shall be of Class 200 PVC with a CI top hat and lid, suitable for the depth of cover required by the drawings and as shown on Standard Detail 50-1. The valve box must fit securely on and around the valve bonnet. Covers shall have cast thereon the word "Water."

Valves and valve boxes shall be set plumb. Each valve box shall be placed directly over the valve it serves, with the top of the box brought flush with the finished grade. After being placed in proper position, earth shall be filled in around each valve box and thoroughly tamped on each side of the box. 12 gauge stranded Type TW copper tracer wire shall be attached to the outside of the valve box and shall

surface at every valve. The PVC shall have a ¼″ slot from the top to just below the top hat and 18 inches of tracer wire left inside the PVC. Where two or more valves surface at the same location, they will be backfilled with CA5 if within 5 feet of curb or edge of pavement. Fill with 1/2-inch clean rock if more than 5 feet behind curb or edge of pavement.

5011 FIRE HYDRANTS.

Fire hydrants shall be Mueller Model A-423 5¼-inch, Kennedy Model K-81D 5¼-inch or American Darling B-84-B 5¼″-inch or approved equal, and shall be furnished with a 6-inch auxiliary gate valve. The fire hydrants shall be pressure rated at 150 psi working pressure and 300 psi test pressure. Hydrants shall be traffic model with breakaway flange or coupling. Fire hydrants shall conform to AWWA C502 with information required by Section 2 as follows:

Type of Shutoff	Compression
Size of Hydrant	5 ¼ inches
Inlet Connection	6 inches
Outlet Nozzles	Two (2) 2½-inch hose and One (1) 4½-inch pumper
Outlet Nozzle Threads	ANSI B-26
Direction to Open	Counterclockwise
Stem Seals	O-Ring
Outlet Nozzle Cap Chains	Required
Drain Outlet	Required
Finish Paint	Factory painted above the ground line with red enameled paint. Exterior of hydrant below the bury line shall be coated with asphalt varnish.
Weather Cap on Operating Nut	Required

Hydrants shall be restrained joint, furnished with all joint glands, gaskets, bolts, and nuts required for installation. Hydrants shall be set so that at least the minimum pipe cover is provided for the branch supply line. Each hydrant shall be set on a concrete foundation at least 18 inches square and 6 inches thick. Each hydrant shall be suitably anchored. All exposed T-bolts below grade shall be 304 stainless steel with Teflon coated nuts. As an alternative

the T-bolt and nuts can be low alloy corrosion resistant high strength steel (Core-Ten) in accordance with ANSI/AWWA C153/A21.53.

Hydrant drainage shall be provided by installing around the hydrant, and below the top of the hydrant supply pipe, at least 1/2-cubic yard of 3/4-inch rock.

Fire hydrant installations shall conform to Standard Detail 50-2. All hydrants shall stand plumb. The exact direction the nozzles will be facing shall be determined by the City Engineer.

The hydrant barrel and shoe shall be secured by means of stainless steel nuts and bolts. All exposed nuts and bolts below the ground level shall be stainless steel. The lower seat shall be threaded into a bronze insert, which is threaded into a shoe to form a bronze-to-bronze assembly. Cross arm shall be all bronze.

Immediately before installation of a hydrant, the following operations shall be performed: (a) the hydrant shall be thoroughly inspected; (b) the hydrant interior shall be thoroughly cleaned; (c) the hydrant shall be opened and closed as many times as may be necessary to determine if all parts are in proper working order, with valves seating properly and the drain valve operating freely; and (d) the packing gland checked to determine if the packing is in place and the gland nut properly tightened; (e) all bolts that secure sections of the fire hydrant together shall be checked and any loose bolts tightened before the fire hydrant is installed and the excavation site is backfilled.

5012 CORPORATION COCKS.

One-inch corporation cocks shall be furnished by the contractor for installation along the pipelines where necessary to vent the lines during filling. The number and location of the corporation cocks shall be as determined by the contractor. After testing and disinfection of the lines, the corporation cocks shall be removed and a suitable plug installed in each opening.

5013 FLUSHING ASSEMBLIES.

Flushing assemblies shall be provided at the locations shown on the drawings. Each installation shall be complete with all piping, the gate valve, valve box, covers and lids as required, and shall conform to Standard Detail 50-3 or Standard Detail 50-3A for end of cul-de-sac flushing assemblies.

5014 MECHANICAL JOINT PIPE AND FITTINGS.

Gray iron mechanical joint fittings shall conform to ANSI A21.10, 250 psi pressure rating. Ductile iron mechanical joint fittings shall conform to ANSI A21.10, 350 psi pressure rating, ASTM A536, Grade 80-60-03 or 70-50-05. Pipe sockets, socket flanges, packing glands, gaskets, and bolts shall conform to ANSI 21.11. All T-bolts shall be 304 stainless steel with Teflon coated nuts. As an alternative the T-bolts and nuts can be low allow corrosion resistant high strength steel (Cor-Ten) in accordance with ANSI/AWWA C153/A21.53.

The mechanical joint shall be used only where shown on drawings or called for in the specifications. The rubber gasket and packing gland shall, after proper joint cleaning, be in position on the spigot before shoving the pipe to its final position. It is important that the entering spigot is centered in and that the gland or follower ring is parallel to the face of the connection bell. At joints where angular deflections are required, the gasket should be shoved home and the gland properly positioned with respect to the connecting bell with the connection pipes being in as nearly perfect alignment as practicable. The bolts shall be slightly and uniformly tightened as specified hereinafter.

Immediately prior to connecting any two mechanical joint piping units, the gasket shall be coated with odorless, tasteless and non-toxic gasket lubricant and all surfaces of the bell, spigot and gland which will come in contact with the gasket at any time during assembly shall be wire brushed, wiped clean, coated with odorless, tasteless and non-toxic gasket lubricant and the gland and gasket slipped over the spigot end of the pipe. The spigot shall then be inserted to the full depth of the socket and then retracted (a) 1/8-inch in straight runs, or (b) one-half of the amount of the calculated joint opening in the plane of deflection (assuming that the pipe is shoved home and the amount of the retraction assured with the two connecting pipes in alignment).

The gasket shall then be carefully pushed into position and evenly seated in the bell. The gland shall be shoved into place against the gasket, the bolts inserted and the nuts tightened with the fingers until snug. Final tightening of the bolts shall be done with a ratchet torque wrench.

It is essential that the gland be brought toward the pipe flange (bell face) evenly, maintaining approximately the same distance between the gland and the face of the bell at all points around its circumference. This may be done by partially tightening the bottom bolt, then the top bolt,

next the bolts on either side, and finally the remaining bolts, alternately tightening bolts 180° apart. This cycle is then to be repeated until all bolts are tightened to a torque for:

5/8" bolts	40 to 60 foot pounds
3/4" bolts	60 to 90 foot pounds

If effective sealing is not obtained at the maximum torque specified for the size of bolt used, the joint shall be disassembled, thoroughly cleaned and reassembled. Over-stressing of bolts to compensate for poor installation practice will not be permitted.

5015 PUSH-ON JOINT PIPE AND FITTINGS.

Push-on joints shall be ductile iron in accordance with ANSI/AWWA C153/A21.53, 250 psi pressure rating. Gaskets shall be neoprene or other synthetic rubber. Natural rubber will not be acceptable.

In the case of the push-on joint, the gasket seat in the bell shall be wiped clean with a cloth after which the gasket should be sprung into place. Thereafter a thick film of lubricant should be applied to the entire inner surface of the gasket that will come into contact with the entering pipe.

The lubricant and the gaskets shall be as recommended and supplied by the manufacturer of the pipe being used. The lubricant shall be odorless, tasteless, and shall be non-toxic.

The plain end of the pipe shall be wiped clean and a thin film of lubricant shall be applied to the outside of the plain end of the pipe and its beveled edge. The plain end of the pipe should then be placed in approximate alignment with the bell of the pipe to which it is to be joined. The joint can be made up with the entering pipe deflected at an angle, but this angle should not exceed the recommended maximum of the manufacturer. The plain end of the pipe should then be lifted and started into the socket so that it is in contact with the gasket.

The joint is made up by exerting sufficient force on the entering pipe so that its plain end is moved past the gasket (which is thereby compressed) until it makes contact with the base of the socket of the bell. This force can be applied by means of a jack-type tool or backhoe.

Field cut pipe, in the case of the push-on joint, shall be bevel-filed to remove any sharp or rough edges that might otherwise injure the gasket.

5016 FLANGED JOINTS.

Flanges shall conform to ANSI B16.1, 125 pound or U.S. Pipe "Flange-Tyte." Bolts shall be Grade 8, ASTM A307, chamfered or rounded ends projecting 1/4- to 1/2-inch beyond the outer face of the nut, which shall be ASTM A307, hexagonal, ANSI B18.2, heavy semi-finished pattern. Gaskets shall conform to ASTM D1330, Grade I, red rubber, ring type, 1/8-inch thick or U.S. Pipe "Flange-Tyte", 1/8-inch thick.

The pipe end and flange face shall be machine-finished in a single operation. Flange faces shall be flat and perpendicular to the pipe centerline.

When bolting flanged joints, care shall be taken to ensure that there is no restraint on the opposite end of the pipe or fitting which would prevent uniform gasket compression or which would cause unnecessary stress in the flanges. One flange shall be free to move in any direction while the flange bolts are being tightened. Bell and spigot joints shall not be packed or assembled until all flanged joints affected thereby have been tightened. Bolts shall be tightened gradually and at a uniform rate, so that gasket compression is uniform.

5017 RESTRAINED JOINTS.

Restrained joints for pipe larger than 12 inches shall be American "Lockfast", U.S. Pipe "Lok-Tyte", or Clow "Super-Lock". Restrained joints for pipe 12 inches and smaller shall be American "Lock-Fastite" (ductile iron pipe), U.S. Pipe "Loc-Tyton", or Clow "Super-Lok".

Restrained joint pipe shall be used where shown on the drawings and shall be installed in accordance with the recommendations of the pipe manufacturer. Each restrained joint shall be capable of resisting the thrust of the pressures to be applied.

5018 SHOP COATING AND LINING.

The interior surfaces of all pipe, regardless of length or type of joint, and the interior surfaces of all 14-inch or larger fittings shall be lined with cement conforming to ANSI A21.4. Flange faces shall be shop-coated with Rust-Oleum "R—9" or Houghton "Rust Veto 344" rust preventative compound. All other surfaces of pipe and fittings shall be coated with a bituminous coating.

5019 HANDLING.

Pipe, fittings, and accessories shall be handled in a manner that will ensure installation in sound, undamaged condition. Equipment, tools, and methods used in unloading, reloading, hauling, and laying pipe and fittings shall be such that the pipe, pipe coating, and fittings are not damaged. Hooks inserted in ends of pipe shall have broad, well-padded contact surfaces. Under no circumstances shall pipe or accessories be dropped or dumped into the trench.

The final decision regarding the integrity of the cement lining shall reside with the City Engineer's field inspector.

Pipe and fittings in which the cement lining has been broken or loosened shall be replaced by and at the expense of the contractor. Where the damaged areas are small and readily accessible, the contractor may be permitted to repair the lining.

All pipe coating, which has been damaged, shall be repaired by the contractor before installing the pipe.

5020 CUTTING PIPE.

Cutting shall be done in a neat manner, without damage to the pipe or to the cement lining. Cuts shall be smooth, straight, and at right angles to the pipe axis. After cutting, the end of the pipe shall be dressed with a file to remove all roughness and sharp corners.

5021 CLEANING.

The interior of all pipe and fittings shall be thoroughly cleaned of foreign matter before being installed and shall be kept clean until the work has been accepted. Before jointing, all joint contact surfaces shall be wire brushed if necessary, wiped clean, and kept clean until jointing is completed.

5022 INSPECTION.

Pipe and fittings shall be carefully examined for cracks and other defects immediately before installation. Spigot ends shall be examined with particular care since they are vulnerable to damage from handling. All defective pipe and fittings shall be removed from the site of the work.

5023 ALIGNMENT.

Pipelines or runs intended to be straight shall be laid straight. Deflections from a straight line or grade shall not exceed the quantities stipulated in Table 1 or Table 2 of AWWA C600.

Either shorter pipe sections or fittings shall be installed where the alignment or grade requires them.

5024 THRUST BLOCKING.

The contractor shall furnish and construct complete in place in accordance with Standard Detail 50-4 the thrust blocks as indicated on the contract drawings. The minimum 28-day compressive strength of concrete used for thrust blocking shall be 3000 psi.

Concrete blocking shall extend from the fitting to solid undisturbed earth and shall be installed so that all joints are accessible for repair. If adequate support against undisturbed ground cannot be obtained, metal harness anchorages, consisting of steel rods across the joint and securely anchored to pipe and fitting or other adequate anchorage facilities, shall be installed to provide the necessary support.

The additional cost of furnishing and installing metal harness anchorages will not be allowed as an increase in contract price where reaction blocking, anchorages or other supports for fittings are installed in fills or other unstable ground or where there is a lack of suitable solid vertical excavation.

5025 DEAD END LINES.

At the termination of all water mains or at locations indicated on the drawings, the contractor shall furnish and construct complete, in accordance with Standard Detail 50-5, the fittings and valves necessary to allow for future water main extensions. Flushing assemblies as described in Section 5012 shall be furnished and installed at locations as required to allow for complete flushing of all water mains within the project area.

5026 CONNECTIONS TO EXISTING WATER MAINS.

The contractor shall furnish and install all of the fittings necessary for connections between new water mains and existing water mains. The fittings shall be as indicated on the plans unless otherwise authorized by the City Engineer.

When the fittings consist of tapping sleeves and valves, the contractor shall perform the actual tapping operation of the

mains under the direction of the Public Works Department. (The Public Works Department will not perform any tapping operations of the water mains unless specified otherwise in the construction drawings).

No connections to existing mains shall be started without prior approval of the Public Works Department, and each connection with an existing main shall be made at a time and under conditions which will least interfere with service to customers affected thereby.

In all cases where it is necessary to take an existing main or service line out of service in order to accomplish the work to be performed, the contractor shall notify the Public Works Department at least 24 hours in advance as to the approximate length of time the main or service line will be out of service. The contractor shall also be responsible for notifying all customers to be affected by loss or interruption of service by means of printed information sheets 24 hours in advance of taking the main or service line out of operation.

When the closing of a valve to make the connections affects a customer who cannot be without service, the contractor shall arrange to supply a temporary service and schedule the time that is most convenient to the customer for making the connection to the existing mains.

Facilities shall be provided for proper dewatering and for disposal of all water removed from the dewatered lines and excavations without damage to adjacent property.

Special care shall be taken to prevent contamination when dewatering, cutting into, and making connections with existing pipe. No trench water, mud, or other contaminating substances shall be permitted to get into the lines.

It shall be the responsibility of the contractor to make any and all excavations and backfill as required and furnish all labor, equipment, and material necessary to complete the connection as detailed on the plans.

5027 SEWER LINE CROSSINGS.

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. The distance shall be measured from edge of pipe to edge of pipe. The laying of water and sewer pipes shall be in separate trenches with undisturbed earth between them. In cases where it is not practical to maintain a 10-foot separation, the City, in conjunction with KDHE, will consider proposals providing

equivalent protection by other methods on a case-by-case basis. Equivalent protection may require sanitary sewer construction with concrete encasement, vacuum sewer or jointless pipe such as HDPE or cured in place liner.

When a water pipe and a sanitary sewer cross, and the sewer is 2 feet or more (clear space) below the water pipe, no special requirements or limitations are provided herein. At all other crossings, the sewer is to be constructed of one of the following materials and pressure tested to assure water tightness pursuant to the most recent revision of KDHE's Minimum Standards for Design of Water Pollution Control Facilities.

A. Ductile iron pipe conforming to ASTM A536 or ANSI/AWWA C151/A21.51 with minimum thickness Class 50, and gasketed, push-on or mechanical joints in conformance with ANSI/AWWA C110/A21.10 or ANSI/AWWA C111/A21.11.

B. PVC pipe conforming to ASTM D3034 with minimum wall thickness of SDR35, ASTM F679, ASTM F789, or ASTM F794, with gasketed push-on joints in conformance with ASTM D3212.

C. Reinforced concrete pipe conforming to ASTM C76 with gasketed joints in conformance with ASTM C361 or ASTM C443.

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

Where a new water main is laid across or through an area where there is an existing sanitary sewer, which is not constructed of one of the above specified materials and is 2 feet or less below the water pipe, the existing sewer shall be encased in concrete with a minimum thickness of 6″ for a 10-foot distance on each side of the crossing or the crossed section of sewer replaced to meet the above specified construction requirements. The above requirements shall also apply where a water main must cross under an existing sanitary sewer. The City in conjunction with KDHE will consider proposals providing equivalent protection by other means on a case-by-case basis, if supported by data from the design engineer.

When a water main and a sanitary sewer must cross, it is preferred that the water main cross over the sanitary sewer, regardless of whether the sanitary sewer is new or existing.

Special provisions may be required to ensure adequate structural support for, and to maintain minimum pipe-to-pipe clearances between, a water main and a sanitary sewer at a water main and sanitary sewer crossing.

Other situations relative to the proximity of water and sewer lines should be taken case by case and brought to the attention of the City Engineer, Johnson County Environmental Department and KDHE for design guidance, for example, where a new water line is to be installed near an existing septic system absorption field.

5028 SEWER CONNECTIONS

There are to be no physical connections between any parts of a potable water system and building sewers, sanitary sewers, or wastewater treatment facilities by means of which it would be possible for sewage, even under exceptional circumstances, to reach a well, storage reservoir or distribution system.

5029 PRESSURE SEWER LINES

When pressure sewer lines (force mains) run parallel to water lines, the separation distance shall be as far as practical, maintaining a minimum horizontal separation distance of at least 10 feet. There shall be at least a 2 foot vertical separation at crossings with the water main always crossing above the sewer force main. Where it is not practical to maintain the required horizontal or vertical separation distance between a water line and a sanitary sewer force main, the City in conjunction with KDHE will consider proposals providing equivalent protection by other methods on a case-by-case basis, if supported by data from the design engineer.

5030 SEWER MANHOLES

No water pipe shall pass through or come in contract with any part of a sewer manhole. Required horizontal separation distances between water mains and manholes are equivalent to those for water mains and gravity sanitary sewers.

5031 STORM SEWERS

The separation distance between a storm sewer (which is not a combined storm/sanitary sewer) and a water main should be based on geotechnical considerations. Required separation distances between water mains and combined storm/sanitary sewers are equivalent to those for water mains and gravity sanitary sewers.

5032 DRAINS

Underground drains from fire hydrants, pits or underground structures in general (valve pits, meter pits, underground pump stations, etc.) shall not be directly connected to sanitary or storm drains.

5033 SEPARATION OF WATER MAINS AND OTHER POLLUTION SOURCES

It is of the utmost importance that potable water lines be protected from any source of pollution. The following shall pertain to instances where septic tanks, absorption fields, waste stabilization ponds, feedlots or other sources of pollution are encountered.

A. A minimum distance of 25 feet shall be maintained between all potable water lines and all pollution sources, e.g., septic tanks, septic tank absorption fields, waste stabilization ponds, sewage contamination, wastewater, landfill leachate and all CAFO facilities.

B. Under no circumstances shall a water line be extended through an area that is a real or potential source of contamination to the water line or water supply.

C. Under no circumstances shall the encasement of a water line be considered as adequate protection of a water line or a water supply for the purposes of extending the water line through a real or potential source on contamination.

5034 CROSS CONNECTIONS

There shall be no physical connection between the PWSS and any pipes, pumps, hydrants, tanks or non-potable water supplies whereby unsafe water or other contaminating materials may be discharged or drawn into the system. KDHE approval shall be obtained for interconnections between potable water supplies.

5035 SURFACE WATER CROSSINGS

For above water crossings, the waterline shall be adequately supported, protected from damage and freezing and accessible for repair or replacement.

For underground crossings on navigable streams, underground waterlines shall be buried at a minimum depth of 7 feet beneath the streambed, whereas, on all other streams, underground waterlines shall be buried at a minimum depth of 5 feet beneath the streambed.

When crossing water courses which are greater than 15 feet in width, the waterline should be of special construction, having flexible, restrained or welded watertight joints. Valves should be provided at both ends of the water crossing so that the section can be isolated for testing and repair; the valves should be easily accessible, and not subject to flooding. Permanent taps or other provisions to allow

operators to determine leakage and obtain water samples should be made.

5036 RAILROAD CROSSING AND MAINS NEAR TRACKS

Where a waterline crosses under railroad tracks, all joints lying within 10 feet of the rails shall be either mechanical joints with rubber gaskets or pipe with bell joints. Also, local requirements should be investigated. Some railroads require that the waterline be enclosed in a culvert, tunnel or conduit to reduce the effects of vibration, to provide drainage in case of leakage or rupture of the pipe, or reduce damage to the track and to facilitate repairs.

5037 MECHANICAL ENCASEMENT

Where a waterline must be sleeved within a pipe in order to protect the waterline, such as at road, railroad or pipe way crossings, the waterline must be sleeved with seamless, jointless pipe of equal or greater mechanical strength for distance of at least 10 feet beyond the crossing in both directions, kept separate from the sleeve pipe with plastic spacers or wooden skids, and the annular spaces formed at the ends of the carrier/sleeve pipes must be made watertight with flexible boot type end seals.

5038 ROCK EXCAVATION.

Where rock is encountered, either dug or shot, the pipe shall be bedded with a minimum of 6 inches of granular material, as indicated on Standard Detail 60-1, between the pipe and trench bottom. Granular embedment shall be used at locations directed by the City Engineer and shall be considered a subsidiary obligation unless specifically provided for as a bid item in the proposal.

5039 RESTORATION OF SURFACE CONSTRUCTION.

The restoration of concrete and asphalt pavement, gravel surfacing, walks, drives, curbs, and other surface construction removed or damaged during the progress of the work covered by this section shall conform to the applicable provisions of Section 7000 “Restoration of Surface Construction” of these Specifications.

5040 END OF CUL-DE-SAC.

All cul-de-sacs shall include 2-inch Class 200 Yellowmine pipe with a flushing assembly (SD 50-3A) as shown in Standard Detail 50-8R.

5041 BORING WITHOUT CASING PIPE.

Borings for water main construction without casing pipe will be permitted only with the approval of the City Engineer.

5042 BORING WITH CASING PIPE.

Steel casing for bored and jacked construction shall have a smooth wall and a minimum yield strength of 35,000 psi, conforming to ASTM A-139 with a minimum diameter as shown on Standard Detail 50-7. Steel shall be Grade B under railroads and Grade A on all other uses. Steel pipe shall have welded joints in accordance with AWWA C-206 and shall have minimum wall thickness as indicated on the following table.

Diameter of Casing (inches)	**Nominal Wall Thickness (inches)**	
	Under Railroads	**All Other Uses**
12	0.282	0.188
14	0.282	0.188
16	0.282	0.188
18	0.312	0.250
20	0.344	0.281
22	0.375	0.281
24	0.406	0.281
26	0.438	0.312
28	0.469	0.312
30	0.469	0.312
32	0.500	0.344
34	0.531	0.344
36	0.531	0.344
38	0.531	0.344
40	0.563	0.375
42	0.563	0.375
44	0.563	0.375
48	0.563	0.375
50	0.625	0.406
52	0.625	0.406
54	0.625	0.406
60	0.650	0.450

Boring and jacking operations shall be performed by experienced crews using a rotary type boring machine designed especially for this purpose. The casing shall be jacked as the boring proceeds. Steel casing or carrier pipe shall be cleaned of all debris after its installation is complete. Casing spacers with plastic runners shall be secured to the barrel of the pipe with metal bands in such a manner as to support the weight of the pipe along its full barrel length on the skids without any of the weight

supported by the pipe bell, and in such a manner as to properly position the carrier pipe to the specified elevations and alignment. Casing spacers with plastic skids shall be 304 stainless steel spacers, as manufactured by PSI, Cascade, or APS.

End seals shall be used at each end of the casing and shall be the pull over, one piece, synthetic rubber type, using stainless steel bands. There shall be no voids between the earth and the casing. Any voids that do occur shall be filled by pressure grouting.

END OF SECTION

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SECTION 5100 - TESTING

5101 GENERAL.

This section covers hydrostatic pressure testing and leakage testing of the pipelines. All pipelines installed under this contract shall be tested as specified herein.

All testing work shall be done in the presence of the City Engineer. The contractor shall notify the City Engineer at least 24 hours in advance of the times and places at which testing work is to be done.

Temporary discharge piping shall be provided for wasting test water at a suitable remote location where such water will drain away from the work. Discharge of test water into sanitary sewers will not be permitted.

5102 TESTING EQUIPMENT AND FACILITIES.

The contractor shall provide all necessary piping and piping connections between the pipeline to be tested and the nearest available source of water supply, together with test pumping equipment, pressure gauge, and other equipment, materials, and facilities required for the specified tests.

Test pressures shall be applied by means of a force pump of such design and capacity that the required pressure can be applied and maintained without interruption for the duration of each test.

The pressure gauge used shall be tested, accurately calibrated, and acceptable to the City Engineer.

All pipe, fittings, valves, pipe joints, and other materials, which are found to be defective shall be removed immediately and replaced with new and acceptable material, by and at the expense of the contractor.

Materials shall be replaced as necessary and the test shall then be repeated until the line and all parts thereof withstand the test pressure in a satisfactory manner.

5103 PRESSURE AND LEAKAGE TEST.

The hydrostatic pressure during testing shall be at least 150 psi or 1.5 times the maximum static pressure at the lowest point of the line, whichever is greater. Maximum static pressure in PSI, shall be calculated by subtracting the lowest USGS elevation of the waterline from the maximum hydraulic grade line and then dividing by 2.31 to convert to PSI.

$$\text{Maximum Static Pressure, PSI} = \frac{1200 \text{ ft} - \text{lowest elevation}}{2.31 \text{ ft/PSI}}$$

The selected pressure shall be maintained constant within a maximum variation of plus or minus 5 psi during the entire time that line leakage measurements are being made.

Leakage measurements shall not be started until a constant test pressure is established; compression of air trapped in un-vented pipes or fittings will give false leakage readings under changing pressure conditions. After the selected test pressure is stabilized, the line leakage shall be measured by means of a suitable water meter installed in the pressure supply piping on the line side of the force pump. The water meter shall be furnished and installed by the contractor.

Line leakage shall be the total amount of water introduced into the line as measured by the meter during the leakage test.

Each leakage test shall have a duration of ~~2~~ one (1) hour~~s~~ plus whatever additional period is necessary to accurately determine leaking in the opinion of the City Engineer.

No pipeline or section thereof, will be acceptable if the leakage indicated by the test meter is in excess of that determined by the following formula or as indicated on Standard Detail 51-1.

Where $L = (S*D*P^{1/2})/148{,}000$
L = Allowable leakage, in gallons per hour
D = Nominal diameter of pipe in inches
S = Length of pipe tested, in feet
N = Average test pressure during leakage test, in psi

In the event that the line under test contains pipe of more than one size, the allowable leakage shall be calculated separately for each size and corresponding length of line and then added to obtain the total allowable leakage from the entire line.

5104 DEFECTS.

It is the intent of these Specifications and the contract based thereon that (a) all joints in piping shall be watertight and free from visible leaks during the prescribed leakage test and (b) each and every leak which may be discovered at any time prior to the expiration of 2 years from and after the date of final acceptance of the work by

the owner shall be located and repaired by and at the expense of the contractor, regardless of any amount that the total line leakage rate during the specified leakage test may be below the specified maximum rate.

If the specified leakage test is made after the pipeline has been backfilled and the joints covered, and such test shows a leakage rate in excess of the permissible maximum, the contractor shall make all necessary surveys in connection with the location and repair of leaking joints to the extent required to reduce the total leakage to an acceptable amount. Where evidence of leaking joints does not appear on the ground surface above or near the leaks, the contractor shall prospect the line by sinking a hole, with an auger or otherwise, at the location of each joint and determine any undue saturation of the soil which would indicate a leak at such joint; such prospecting shall be done after pressure has been maintained in the line a sufficient time to provide adequate soil saturation for locating leaks by this method. Leaks in mechanical joints shall be repaired by dismantling, cleaning, realigning gland and gasket, and re-bolting. Under no circumstances shall gland bolts be tightened beyond the specified and allowable torque limits in an attempt to reduce or stop leakage from a defective joint or for any other purpose.

5105 TAPPING SLEEVES AND VALVES.

The tapping sleeve and valve will be tested in place with water. Test pressure must not exceed rated working pressure (150 psig on 16-inch, 200 psig on Sizes 4-inch through 12-inch). A hydro-static pressure test shall be conducted for one (1) hour and n~~N~~o leaks will be permitted. A city representative shall be on site to witness the test.

END OF SECTION

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SECTION 5200 - DISINFECTION

5201 SCOPE.

This section covers the disinfection of all new water lines, valves, and appurtenant items.

5202 GENERAL.

Materials, methods, and procedures for disinfection work shall conform to the requirements of AWWA C651, "Standard for Disinfecting Water Mains" except as modified herein.

All disinfection work shall be acceptable to the Kansas Department of Health and Environment, and any and all requirements thereof, which may be in conflict with any provision of the specification, shall govern.

Water in reasonable amounts for proper completion of flushing or disinfection work will be furnished at existing fire hydrants by the owner without charge to the contractor. The contractor shall furnish all necessary pipe, hose, nozzles, and tools and shall perform all necessary labor. Contractor shall make arrangements with the Department of Public Works (who will fix the time, rate, and duration of each withdrawal from the distribution system) as to the amount of water required and the time when the water will be needed. Unnecessary waste of water will not be tolerated. Special hydrant wrenches shall be used for opening and closing fire hydrants. In no case shall pipe wrenches be used for this purpose.

When required by the City Engineer, the contractor shall submit a detailed outline of the proposed procedure relative to sequence of operations, manner of filling and flushing disinfected lines, and the disposal of wasted water.

5203 FLUSHING.

Immediately prior to disinfection, the main to be disinfected shall be flushed at the maximum velocity, which can be developed. The flushing velocity shall be at least 2.5 feet per second. All flushing shall be performed after the hydrostatic test is completed and accepted.

All flushing work shall be done in the presence of the City Engineer. The contractor shall notify the City Engineer at least 24 hours in advance of the times and places at which flushing work is to be done.

5204 DISINFECTION.

Admission of disinfectant solution into or the flushing thereof through existing mains shall be held to a minimum possible, and then only after proper and adequate measures have been taken to effectively prevent any such solution or wastewater from entering branch service connections to water customers.

The pipelines shall be disinfected by either the continuous feed method.

In using the continuous feed method, chlorine feed shall be proportional to the rate of flow into the pipe so that the entering water contains at least 50 mg/l of available chlorine. Chlorine application shall be continuous until the entire pipeline is filled with the chlorine solution. The treated water shall be retained in the pipeline for at least 24 hours and the chlorine residual at the end of the period shall be at least 25 mg/l.

Prior to flushing the line free of chlorine, a test shall be conducted to verify the chlorine residual. Such test shall be performed by the City using the drop dilution method in accordance with AWWA C651. The contractor shall dispose of chlorine and flushing water in a proper manner at no additional cost to the owner.

Prior to flushing the pipe of chlorinated water, the discharge environment shall be inspected. If there is any possibility that the chlorinated discharge will damage the environment, sodium biosulfite or an equal, neutralizing chemical shall be applied to the water to assure the thorough neutralization of the chlorine residual. This work shall be in conformance with the latest revision of AWWA C651.

During disinfection, all valves and hydrants shall be operated to ensure that all appurtenances are disinfected. During final flushing operations, valves shall be manipulated in such a manner that the strong chlorine solution in the line being chlorinated will not flow back into the supply line.

5205 BACTERIOLOGICAL TESTS.

The contractor shall be responsible for collecting samples or a certified independent testing laboratory shall collect samples to confirm the presence or absence of coliform organisms. The samples shall be collected and tested in accordance with AWWA C651 and EPA sampling and preservation

techniques. Tests shall be made at the expense of the contractor. Results shall be provided to the City Inspector, City Water Superintendent and the City Engineer.

5206 REPETITION.

If initial disinfection fails to produce satisfactory bacteriological samples, the disinfection shall be repeated at the expense of the contractor until satisfactory bacteriological samples have been obtained.

END OF SECTION

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SECTION 5300 - WATER SERVICE RECONNECTIONS

5301 GENERAL.

The contractor shall supply all materials, labor and equipment necessary for water service reconnection as indicated on the plans. This shall include tapping of the main, boring of road crossings, compaction and resodding of the established lawns.

All other applicable sections of these Specifications shall also apply to water service reconnections.

The contractor shall notify the City of their intent to perform this work a minimum of 24 hours in advance and shall notify any customers that will be affected by such a minimum of 24 hours in advance.

5302 APPROVED MATERIALS.

a. Meter Setter ~~components~~ for a single service application – AY McDonald ~~4642 BYT Yoke Angle Ball Valve, 14-2 Yoke Bar, 14-2 EHG Yoke Expander and 4779 YWG ¾" x 02 1/4 Bend W/Test Port~~722-218WX2233 or equivalent.

b. Meter Tile - 18-inch x 3~~0~~6-inch PVC Meter Pit.

c. Copper Pipe - Soft "K" copper, 3/4-inch and larger.

d. Corporation Stop – AY McDonald 4701-22 ¾-inch Ball Corp Stop with cc thread or equivalent.

e. Meter Tile Ring and Lid – Sigma 2210 Ring and Lid or approved equal.

f. Service Saddles - 1½-inch to 2-inch Mueller (H105); Rockwell 313 or 317, and Ford 101N with stainless steel straps or approved equal.

5303 METER INSTALLATION.

All meter setters shall be located at the direction of the Public Works Department.

Water meter pits shall be placed at the property/right-of-way line of the service address and in the front yard. Alternate locations must have prior approval by the City Engineer or at the direction of the Public Works Department.

All meter setters shall be set in the meter tile so that the face of the meter is at least 12 inches, but not more than 18 inches, below the finished grade.

Meter pits shall not be located in driveways, walkways or cast-in concrete without prior approval from the Public Works Department. Traffic model rings and lids shall be installed when required for these instances.

All meter tiles shall be set plumb, backfilled and compacted with earth.

Each meter tile shall be centered directly over the meter that it serves.

The top of the tile cover shall be flush with the finished grade.

5304 SEWER ONLY METER INSTALLATION

a. DEFINITION: The “sewer only” meter primarily measures water used for domestic purposes and any part of the process or manufacturing purposes for all non-residential facilities; these flows are discharged into the City’s sanitary sewer collection system. The “sewer only” meter measures the “sewer billable” water used that enters the sanitary sewer collection system.

b. All meter pits shall be located at the direction of the Public Works Department.

c. Water meter pits shall be placed downstream of the customer’s main meter and beyond any tee connection that serves lawn irrigation appurtenances at the property/right-of-way line of the service address, and/or alternate locations must have prior approval by the direction of the Public Works Department.

d. OPTIONS

1) Option 1: On existing water service that has tee connections to irrigation lawn sprinklers beyond the main water meter, the sewer only meter is installed beyond any tee connection that serves lawn irrigation or other non-sewer related appurtenance.

2) Option 2: On new construction, a wye connection may be installed from one service which serves both domestic and other non-sewer related appurtenances. The sewer only meter and the meter that measures flow to other non-sewer related appurtenances that does not enter the sewer

collection system shall be constructed so that both meters are in one meter pit.

e. On all water services, design flows and water demand shall be considered and designed accordingly.

f. All meter setters shall be set in the meter pit so that the face of the meter is at least 12-inches but not more than 18-inches below the finished grade; meter and service pipeline sizing and placement shall be determined by the direction of the Public Works Department.

g. Meter pits shall not be located in driveways, walkways or cast in concrete without prior approval from the Public Works Department. Traffic model rings and lids shall be installed when required for these instances.

h. All meter pits shall be set plumb, service piping bedded in clean rock, then backfilled and compacted with earth.

i. Each meter pit shall be centered directly over the meter that it serves.

j. The top of the meter ring and lid cover shall be flush with the finished grade.

5305 COPPER SERVICE LINES.

Copper service lines shall be composed of no more than ~~two~~ one continuous ~~separate~~ length~~s~~ between the corporation stop and the meter connection.

All connections to the copper tubing shall be made with pack joint fittings or compression fittings. No field or shop soldered connection will be permitted. All soldered fittings shall be factory soldered using silver solder.

The water service line will be installed in a different ditch from the gas service line and must be at least ten (10) feet from the sewer ditch.

All service lines from the water main to water meter must be the same diameter or larger (3/4-inch minimum) than the water meter. Residential water service lines replaced between the water main and the water meter may be constructed with polyethylene plastic pipe by the direction of the Public Works Department.

5306 STREET AND DRIVE CROSSINGS.

All street and/or drive crossings shall be made by means of boring, pushing or tunneling. Unless otherwise approved by the City Engineer, all street borings shall be 48 inches below the finished grade.

No fitting shall be installed under pavement unless approved by the City Engineer.

5307 TAPPING.

The contractor shall make all taps on the new water main.

The contractor shall expose the water main immediately prior to tapping.

Excavation and backfilling of the main must be done in the same 8-hour day between 8 A.M. and 5 P.M. It must be filled immediately after the tap is made and inspected.

All barricades and warning devices shall be provided and maintained by the contractor.

5308 SALVAGE MATERIALS.

All usable salvaged items including fittings, valves, meters, etc. shall be field cleaned and transported by the contractor to the City's designated storage yard and shall remain the property of the City.

5309 EXCAVATION.

a. Copper Piping.

1) Mechanical equipment used for trench excavation shall be of a type, design, and construction, and shall be so operated that the rough trench widths of approximately 12 inches maximum width and vertical sidewalls can be obtained at least from an elevation 1 foot above the top of the installed pipe to the bottom of the trench.

2) The use of mechanical equipment will not be permitted in locations where its operation would cause damage to trees, buildings, culverts or other existing property, utilities or structures above or below ground. In all such locations, hand excavating methods shall be used.

3) Cutting trench banks on slopes to reduce earth load to prevent sliding and caving will be permitted only in areas where the increased trench width will not interfere with surface features or encroach on

right-of-way limits. Slopes shall not extend lower than one foot above the top of the pipe.

4) Where pipe grades or elevations are not definitely fixed by the contract drawings, trenches shall be excavated to a depth sufficient to provide a minimum depth of backfill cover over the top of the pipe of 42 inches. This includes vertical backfill depths as well as horizontal backfill separation such as when the water pipe is constructed near a storm box or vault. In this case there shall be 42-inchs of backfill between the outside edge of the pipe and the outside edge of the concrete storm box or vault. Greater pipe cover depths may be necessary on vertical curves or to provide necessary clearance beneath existing pipes, conduits, drains, drainage structures, or other obstructions encountered at normal pipe grades, but shall be limited to no more than 48 inches of cover. Measurement of pipe cover depth shall be made vertically from the outside top of pipe to finished ground or pavement surface elevation.

5310 BACKFILL, COMPACTION AND SODDING.

Compaction of backfill shall be done immediately after placement of backfill. Under no circumstances shall there be more than eight uncompacted meter locations at one time. Compacted backfill will be required for the full depth of the trench. All sections of this specification concerning backfill, compaction and sodding shall apply to the service line reconnections and replacements.

END OF SECTION

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SECTION 6000 - EXCAVATION, TRENCHING AND BACKFILLING (Pipeline Construction)

6001 SCOPE.

This section covers excavation and trenching work and shall include the necessary clearing, grubbing, and preparation of the site; removal and disposal of all debris; excavation and trenching as required; the handling, storage, transportation, and disposal of all excavated material; all necessary sheeting, shoring, and protection work; preparation of subgrades; pumping and dewatering as necessary or required; protection of adjacent property, backfilling, pipe embedment, surfacing and grading, and other appurtenant work.

Attention is directed to the additional requirements set forth in the General Conditions, Supplemental General Conditions or Special Conditions.

6002 GENERAL REQUIREMENTS.

Excavation work shall be performed in a safe and proper manner with appropriate precautions being taken against all hazards. Excavations shall provide adequate working space and clearances for the work to be performed therein. In no case shall excavation faces be undercut for extended footings.

Sub-grade surfaces shall be clean and free of loose material of any kind when concrete is placed thereon.

Excavations for manholes and similar structures shall have such horizontal dimensions that sufficient clearance is provided for outside work such as installation of piping or tape wrapping of manhole section joints.

Backfilling and construction of fills and embankments during freezing weather shall not be done except by permission of the City Engineer. No backfill, fill, or embankment materials shall be installed on frozen surfaces, nor shall frozen materials, snow, or ice be placed in any backfill, fill, or embankment.

6003 CLASSIFICATION OF EXCAVATED MATERIALS.

When specifically indicated in the proposal and contract, classification of excavated materials will be made as follows:

a. Rock. Rock excavation will be so classified when sandstone, limestone, blue shale or other similar material is encountered and, in the opinion of the City

Engineer, requires drilling or blasting to remove the material.

b. Earth. All material not classified as rock.

6004 CLEARING.

The contractor shall do all clearing necessary for access, stringing of pipeline materials, and construction of the pipeline and appurtenant structures.

At the option of the contractor, all trees, underbrush, stumps, roots, and other combustible materials may be stacked and burned on the site at such locations as permitted by the Fire Marshall and City Engineer or removed entirely from the site and disposed of at such locations as determined by the contractor. All materials to be burned shall be piled neatly and, when in suitable condition, shall be burned completely. Piling for burning shall be done in such a manner and in such locations as to cause the least fire risk. All burning shall be so thorough that the materials are completely reduced to ashes. Great care shall be taken to prevent the spread of fire beyond the permanent site limits. Fireguards of adequate width shall be provided wherever there is surface vegetation around any brush pile. No burning of trimmings or brush shall be done when the direction or velocity of the wind is such that there would be any danger of fire being carried into adjacent areas. All governmental requirements relative to burning, fire prevention, and air pollution shall be complied with. See Specification Paragraph 1005a.

6005 DEWATERING.

The contractor shall provide and maintain adequate dewatering equipment to remove and dispose of all surface and ground water entering excavations, trenches, or other parts of the work. Each excavation shall be kept dry during subgrade preparation and continually thereafter until the pipe to be installed therein is completed to the extent that no damage from hydrostatic pressure, flotation, or other cause will result.

All excavations for trenches which extend down to or below ground water shall be dewatered by lowering and keeping the ground water level beneath such excavations 12 inches or more below the bottom of the excavation.

Surface water shall be diverted or otherwise prevented from entering excavated areas or trenches to the greatest extent practicable without causing damage to adjacent property.

The contractor will be held responsible for the condition of any pipe or conduit which he may use for drainage purposes,

and all such pipes or conduits shall be left clean and free of sediment.

6006 SHEETING AND SHORING.

Except where banks are cut back on a stable slope, excavation for structures and trenches shall be properly and substantially sheeted, braced, and shored, as necessary, to prevent caving or sliding, to provide protection for workmen and the work, and to provide protection for existing structures and facilities. Sheeting, bracing, and shoring shall be designed and built to withstand all loads that might be caused by earth movement or pressure and shall be rigid, maintaining shape and position under all circumstances.

Trench sheeting shall not be pulled before backfilling unless the pipe strength is sufficient, in the opinion of the City Engineer, to carry trench loads based on trench width to the back of sheeting; nor shall sheeting be pulled after backfilling. When ordered by the City Engineer, sheeting shall be left permanently in the trench. Payment for such sheeting will be made in accordance with the contract provisions for extra work.

When trench sheeting is left in place, such sheeting shall not be braced against the pipe, but shall be supported in a manner, which will preclude concentrated loads or horizontal thrusts on the pipe. Cross braces installed above the pipe to support sheeting may be removed after pipe embedment has been completed.

6007 ALIGNMENT AND GRADE.

The alignment and grade or elevation of each pipeline shall be maintained as shown on the contract drawings by overhead grade lines parallel to the pipe invert.

6008 MINIMUM COVER (Water Mains).

Where pipe grades or elevations are not definitely fixed by the contract drawings, trenches shall be excavated to a depth sufficient to provide a minimum depth of backfill covering the top of the pipe of 42 inches. Greater pipe cover depths may be necessary on vertical curves or to provide necessary clearance beneath existing pipes, conduits, drains, drainage structures, or other obstructions encountered at normal pipe grades. Measurement of pipe cover depth shall be made vertically from the outside top of pipe to finished ground or pavement surface elevation and/or made horizontally from the outside edge of the pipe to the outside edge of the concrete storm box or vault, or other below ground appurtenance.

6009 STABILIZATION.

Trench bottoms which become soft, mucky, or otherwise unstable during construction operations shall be stabilized, by and at the expense of the contractor, with one or more layers of crushed rock or other suitable material, where and as necessary to provide a firm and stable base for granular fill pipe foundation material to be placed thereon. Not more than 1/2 inch depth of mud or muck shall be allowed to remain on the stabilized trench bottom when the granular fill pipe foundation material is installed.

6010 TRENCH EXCAVATION.

The contractor shall not open more trench in advance of pipe laying than is necessary to expedite the work. One block or 400 feet (whichever is the shorter) shall be the maximum length of open trench on any line under construction. The contractor shall backfill all open trench by the end of the day's work, except that which is necessary for inspection or immediate continuation of the following day's work.

Except where tunneling is shown on the drawings, is specified, or is permitted by the City Engineer, all trench excavations shall be open cut from the surface.

The alignment, depth, and grade of all trenches shall be maintained as shown on the drawings by overhead grade lines parallel to the pipe invert.

All open trenches shall be provided with adequate protective devices.

If any water line, storm sewer or sanitary sewer is proposed to be installed with the top of the pipe above existing grade, the contractor shall first install compacted fill. The compacted fill shall be installed to an elevation of 24″ above the top of the proposed pipe and shall extend a minimum of 24″ beyond the outside edge of the proposed line prior to trenching operations. The side slopes of the compacted fill shall be no greater than 4:1 to match existing grade. See Detail 60-4.

6011 LIMITING TRENCH WIDTHS.

Trenches shall be excavated to a width, which will provide adequate working space and pipe clearances for proper pipe installation, jointing, and embedment. Ledge rock, boulders, and large stones shall be removed to provide a clearance of 6 inches below and on each side of all pipe. These distances are minimum clear distances, which will be permitted between any part of the pipe and appurtenances being laid on any part, projection, or point of such rock, boulder, or stone.

Cutting trench banks on slopes to reduce earth load to prevent sliding and caving will be permitted only in areas where the increased trench width will not interfere with surface features or encroach on right-of-way limits. Slopes shall not extend lower than 1 foot above the top of the pipe.

Limiting trench widths below an elevation of 1 foot above the exterior top of the installed pipe shall be not less than 15 inches or more than 24 inches greater than the nominal outside diameter of the pipe.

6012 UNAUTHORIZED TRENCH WIDTHS.

Where, for any reason, the width of the lower portion of the trench as excavated at any point exceeds the maximum permitted in Section 6011 of these Specifications, either special pipe embedment or arch concrete encasement (see Detail 60-1), as required by loading conditions and as determined by the Design Engineer, shall be furnished and installed by and at the expense of the contractor.

6013 MECHANICAL EXCAVATION.

The use of mechanical equipment will not be permitted in locations where its operation would cause damage to trees, buildings, culverts, or other existing property, utilities, or structures above or below ground.

Mechanical equipment used for trench excavation shall be of a type, design, and construction, and shall be so operated, that the rough trench excavation bottom elevation can be controlled, that uniform trench widths and vertical sidewalls are obtained at least from an elevation 1 foot above the top of the installed pipe to the bottom of the trench, and that trench alignment is such that pipe when accurately laid to specified alignment will be centered in the trench with adequate clearance between the pipe and sidewalls of the trench. Undercutting the trench sidewall to obtain clearance will not be permitted.

If the contractor prefers to undercut the bottom of the trench and bring to grade with 1/2-inch-crushed rock, he may do so, provided the depth of undercut and backfill with crushed rock shall not exceed 4 inches. Where crushed rock is used, it shall be placed in the trench, spread uniformly, and graded prior to placing the pipe in the trench.

6014 ARTIFICIAL FOUNDATIONS IN TRENCHES.

Whenever so ordered by the City Engineer, the contractor shall excavate to such depth below grade as the City Engineer may direct and the trench bottom shall be brought to grade with such material as the City Engineer may order

installed. All concrete, or other foundations made necessary by unstable soil shall be installed as directed by the City Engineer. Compensation for extra excavation and timber, concrete, or other foundations, except where provided by contract unit prices, shall be made in accordance with the contract provisions for extra work.

6015 PIPE BEDDING.

The pipe shall be laid in a flat-bottom trench that has been carefully graded and shaped so that the barrel of the pipe will have bearing for its full length. Blocking of the pipe will not be permitted.

a. Water Mains. Bell holes shall be excavated in the bottom and sides of the trench to provide ample working space and ensure proper pipe support. No part of the bell shall be in contact with the trench bottom.

   The contractor, at his option, may use granular embedment material in the trench bottom in lieu of bell holes. The granular material shall be spread and the surface graded to provide a uniform bearing and continuous support for each section of pipe along its entire length.

   If rock is encountered in the trench foundation, granular bedding material is required and shall conform to the requirements of Standard Detail 60-1.

b. Sanitary Sewers. Granular material shall be used for pipe embedment and shall conform to requirements of Standard Detail 60-1. Granular material is required for the embedment on PVC, DIP and RCP pipe installations.

   Bell holes shall provide adequate clearance for tools and methods used in installing pipe. No part of any bell or coupling shall be in contact with the trench bottom, trench walls, or granular embedment when the pipe is jointed.

   Embedment materials both below and above the bottom of the pipe, classes of embedment to be used, and placement and compaction of embedment materials shall conform to the following supplementary requirements.

   Embedment material shall contain no cinders or other material, which may cause pipe corrosion.

   1) Class A Arch Encasement. Class A arch encasement shall be used where required by the drawings and where trench conditions require its use as determined by the City Engineer.

2) Class B Bedding. Class B bedding shall be used for all PVC sewer pipe. Granular embedment materials shall meet the requirements on Standard Detail 60-1 or meet the requirements in ASTM D2321. Granular embedment will extend from 6 inches below the pipe to 12 inches minimum above the top of the pipe.

3) Class C Bedding. Class C bedding shall be used for all reinforced concrete and ductile iron pipelines.

Granular embedment material shall be spread and the surface graded to provide a uniform and continuous support beneath the pipe at all points between bell holes or pipe joints. It will be permissible to slightly disturb the finished subgrade surface by withdrawal of pipe slings or other lifting tackle.

After each pipe has been graded, aligned, and placed in final position on the bedding material and shoved home, sufficient pipe embedment material shall be deposited and compacted under and around each side of the pipe and back of the bell or end thereof to hold the pipe in proper position and alignment during subsequent pipe jointing and embedment operations.

Embedment material shall be deposited and compacted uniformly and simultaneously on each side of the pipe to prevent lateral displacement.

Class C embedment shall be compacted to the top of the pipe in all areas where compacted backfill is specified.

Continuity of embedment material shall be interrupted by compacted soil around each manhole to impede passage of water through the embedment. Barrier material may be finely divided suitable job excavated material, free from stones, organic matter and debris, and compacted to 95% of maximum density.

c. Storm Sewers. The pipe shall be laid in CA-5 or approved equal, which has been carefully graded and shaped so that the barrel of the pipe will have bearing for its full length. Blocking of the pipe will not be permitted. Granular backfill is then required to the spring line of the pipe unless the pipe is within four feet of either side of the curb requiring complete granular backfill of the trench. All HDPE storm sewer piping shall be bedded with Class B bedding extending 12 inches minimum above the top or crown of the pipe.

Where rock is encountered, either dug or shot, the pipe shall be bedded with a minimum of 6 inches of rock between the pipe and trench bottom. Granular embedment shall be used at locations directed by the City Engineer and shall be considered a subsidiary obligation unless specifically provided for as a bid item in the proposal.

6016 PIPE INSTALLATION.

All work shall be in accordance with the following standards or as specified herein.

a. All Water, Sewer and HDPE lines shall be installed with 12-gauge stranded type TW copper tracer wire attached at each pipe joint.

b. Flexible Thermoplastic Pipe; ASTM D2321.

c. Ductile Iron Water Mains; AWWA C600.

d. Reinforced Concrete Pipe.

1) Joints for reinforced concrete pipe shall conform to Section 7 of ASTM C361, except that gaskets shall have a circular cross section and shall be confined in a groove in the pipe spigot. Pipe with collars in lieu of integral bells will not be acceptable.

2) Core holes and handling holes in concrete pipe shall be repaired by cementing a properly-shaped concrete plug in place with epoxy cement or by other methods acceptable to the City Engineer.

e. Corrugated Steel Pipe.

1) Corrugated metal storm sewer pipe shall be laid with the separate sections joined firmly together, with the outside laps of the circumferential joints pointed upstream, and with the longitudinal laps on the side.

Lateral displacement of the pipe shall be prevented during embedment operations. Pipe shall not be laid in water, or under unsuitable weather or trench conditions.

All joint preparation and jointing operations shall comply with the instructions and recommendations of the pipe manufacturer.

Hooks shall not be permitted to contact joint surfaces. Care shall be exercised in handling all pipes to prevent

damage to pipe ends. Damaged pipe or pipe damaged in laying shall be replaced by and at the expense of the contractor.

6017 TRENCH BACKFILL.

All trench backfill above pipe embedment shall conform to the following requirements:

Compacted backfill shall be required for the full depth of the trench above the embedment where beneath structures, street, road, or highway right-of-way, driveways, walks, parking areas, and at all locations shown on the plans or as directed by the City Engineer during the progress of the work. The trench backfill shall consist of the follows and for street and road crossings shall extend from 4' back of curb to 4' back of curb:

Asphalt Pavement – Varies from 8"-12"

Stabilized Subgrade – 9"

Removable Flowable Fill (200 psi) – bottom of subgrade to 10' below bottom of subgrade or to top of bedding, whichever is less.

Granular Backfill – greater than 10' to top of pipe bedding

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The top portion of the backfill beneath established sodden areas shall be finished with at least 12 inches of topsoil corresponding to, or better than, that underlying adjoining sodded areas. Topsoil shall be approved by the City Engineer prior to placement, and unless otherwise directed, shall be material previously excavated and stockpiled for the purpose during excavating and grading operations. Grades on areas to receive topsoil shall be established and maintained as a part of the grading operations. Immediately prior to dumping and spreading topsoil, the surface shall be loosened by disking or scarifying to a depth of 2 inches to permit bonding of the topsoil to the underlying surface.

~~At the option of the contractor, compacted backfill may be job-excavated material or graded gravel. Embedment shall be graded gravel Type CA-5 3/4-inch or 1-inch washed aggregate and shall be brought to the spring-line of all ***concrete and corrugated*** storm sewer conduits. ***Embedment for corrugated polyethylene pipe shall be brought to a level 12 inches above the top of the pipe.*** *All* street crossings (existing or proposed) shall have total aggregate backfill from 4 feet back of the curb to 4 feet back of curb. Above embedment, job-excavated material may be used for compacted backfill when the job-excavated material is finely divided and free~~

~~from debris, organic material, cinders, or other corrosive material, and stones larger than 3 inches in greatest dimension. Large masses of moist, stiff clay shall not be used. Job-excavated material shall be compacted to 95% of maximum density at optimum moisture content as determined by ASTM D698 when the test is appropriate, or to 70% relative density as determined by ASTM D2049 when that test is appropriate.~~

Gravel for compacted backfill, other than for street crossings, shall conform to the following gradation:

Sieve Size	Percent Passing by Weight
1-inch	100
3/4-inch	85–100
3/8-inch	50-80
No. 4	35–60
No. 40	15-30
No. 200	5-10

The gravel mixture shall contain no clay lumps or organic matter. The fraction passing the No. 4 sieve shall have a liquid limit not greater than 25 and a plasticity index not greater than 5.

The backfill shall be compacted by a suitable vibratory roller or platform vibrator to not less than 85% relative density as determined by ASTM D4253 and D4254.

Continuity of embedment material shall be interrupted by low-permeability groundwater barriers to impede passage of water through the embedment. Groundwater barriers for sewer lines shall be compacted soil consisting of one 4-foot long soil plug by the full width of the trench at approximately the half-way point between manholes were the distance between manholes exceeds 280 feet. The 4-foot soil plug shall extend the full depth of the trench to the bottom of the trench. Compacted soil shall be classified as CL, compacted to 90% of maximum density. Material may be finely divided, suitable job-excavated material, free from stones, organic matter, and debris. Low-permeability groundwater barriers shall be required as follows:

Location	Dimensions	Material
Along sewer alignment, half-way between manholes for manholes 280 to 400 feet apart.	4-foot long x full trench width x grade to bottom of trench.	CL – Inorganic clays of low to medium plasticity, gravelly/sandy/silty/lean clays compacted to 90% of maximum density at optimum moisture.

The 4-foot soil plug shall not be located within a proposed street.

The method of compaction and the equipment used shall be appropriate for the material to be compacted and shall not transmit damaging shocks to the pipe.

The combination of the thickness of the layer, the method of compaction and the type of compaction equipment used shall

be at the discretion of the contractor subject to obtaining the densities as specified above.

Backfill shall not be placed when material contains frost, is frozen, or a blanket of snow prevents proper compaction. Backfill shall not contain waste material, organic material, or debris of any kind.

Trench backfill above pipe embedment in locations other than those specified shall be compacted to 90% of maximum density at optimum moisture content as determined by ASTM D698, unless otherwise permitted by the City Engineer.

Uncompacted earth backfill material to be placed above embedment shall be free of brush, roots more than 2 inches in diameter, debris, cinders, or other corrosive material, and junk, but may contain rubble and detritus from rock excavation, stones, and boulders in certain portions of the trench depth. Uncompacted backfill material above embedment may be placed by any method acceptable to the City Engineer which will not impose excessive concentrated or unbalanced loads, shock, or impact on and which will not result in displacement of installed pipe. Non-compacted backfill shall be placed to the extent necessary to prevent excessive future settlement.

Compact masses of stiff clay or other consolidated material more than 1 cubic foot in volume shall not be permitted to fall more than 5 feet into the trench unless cushioned by at least 2 feet of loose backfill above pipe embedment.

No non-compacted trench backfill material containing rocks, or rock excavation detritus, shall be placed in the upper 18 inches of the trench except with specific permission of the City Engineer, nor shall any stone larger than 8 inches in its greatest dimension be placed within 3 feet of the top of pipe. Large stones may be placed in the remainder of the trench backfill only if well separated and so arranged that no interference with backfill settlement will result.

6018 STRUCTURE BACKFILL.

Backfill around structures shall be compacted to the extent necessary to prevent future settlement by tamping or other means acceptable to the City Engineer.

Material for backfill shall be composed of earth only and shall contain no wood, grass, roots, broken concrete, stones, trash, or debris of any kind. No tamped or otherwise mechanically-compacted backfill shall be deposited or compacted in water.

6019 DENSITY TESTING.

At the option of the City Engineer, in-place field density testing to determine compliance with specified compaction requirements may be performed using a nuclear moisture-density-measuring device. If, as a result of this field-testing, the City Engineer determines that further compaction is required, the contractor shall revise his compaction procedures to obtain the results specified.

6020 BLANK SECTION.

6021 DRAINAGE MAINTENANCE.

Trenches across roadways, driveways, walks, or other traffic ways adjacent to drainage ditches or water courses shall not be backfilled prior to completion of backfilling the trench on the upstream side of the traffic way, to prevent impounding water after the pipe has been laid. Bridges and other temporary structures required to maintain traffic across such unfilled trenches shall be constructed and maintained by the contractor. Backfilling shall be done so that water will not accumulate in unfilled or partially-filled trenches. All material deposited in roadway ditches or other watercourses crossed by the line of trench shall be removed immediately after backfilling is completed and the original section, grades, and contours of ditches or water courses shall be restored. Surface drainage shall not be obstructed longer than necessary.

6022 PROTECTION OF TRENCH BACKFILL IN DRAINAGE COURSES.

Where trenches are constructed in ditches or other watercourses, backfill shall be protected from surface erosion. When the grade of the ditch exceeds 1%, ditch checks shall be installed. Unless otherwise shown on the drawings or directed by the City Engineer, ditch checks shall be concrete. Ditch checks shall extend not less than 2 feet below the original ditch or watercourse bottom for the full bottom width and at least 18 inches into the side slopes and shall be at least 12 inches thick.

6023 DISPOSAL OF EXCESS EXCAVATED MATERIALS.

Except as otherwise permitted, all excess excavated materials shall be disposed of away from the site of work by the contractor.

Broken concrete and other debris resulting from pavement or sidewalk removal, excavated rock in excess of the amount permitted to be and actually installed in trench backfill, junk, and debris encountered in excavation work and other similar waste materials shall be disposed of away from the site of the work.

Excess earth from excavations located in unimproved property shall be distributed directly over the pipe trench and within the pipeline right-of-way to a maximum depth of 6 inches above the original ground surface elevation at and across the trench and sloping uniformly. Drag with blade machine, or other suitable tool to a smooth, uniform surface without obstructing drainage at any point. Wasting of excess excavated material in the above manner will not be permitted where the line of trench crosses or is within a railroad, public road, or highway right-of-way. The disposal of waste and excess excavated materials, including hauling, handling, grading, and surfacing shall be a subsidiary obligation of the contractor and no separate payment will be made therefore.

6024 SETTLEMENT.

The contractor shall be responsible for all settlement of backfill, fills and embankments which may occur within 2 years of time after final acceptance of the contract under which the work was performed.

A suitable maintenance bond in an amount approved by the City Engineer shall be furnished to the City of Spring Hill by the contractor guaranteeing the maintenance of the construction under which the contract was performed. Said bond shall remain in effect for the period mentioned above from the date of completion and acceptance of the work by the City.

The contractor shall make, or cause to be made, all repairs or replacements made necessary by settlement within 30 days after notice from the City Engineer.

END OF SECTION

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SECTION 6100 - BLASTING

6101 GENERAL.

a. Blasting will be permitted. Blasting shall be done only by people experienced in the handling of explosives, and in accordance with the recommendations of the AGC Manual of Accident Prevention in Construction and OSHA regulations. In locations where flying rock may be present, additional overburden shall be ready for use and/or in place before denotation. All trenching operations utilizing explosives shall be suitably backfilled to prevent any fly rock endangerment to persons or property. The use of these procedures does not relieve the contractor of responsibility for damage to life and property but acts only as an added assurance to the owner that damage will not occur.

b. The South Johnson County Fire Department, Fire Marshall's office will be known as the "authority having jurisdiction" regarding the storage, handling, use and control of explosives used in construction projects. All permits for this use will be issued by the Fire Marshall's office. The control of the right of way remains with the City Engineer.

   Requirements of the Uniform Fire Code, Article 77 regarding explosives and blasting agents shall be considered part of these Specifications. All explosives and related material shall be in conformity with the requirements of the authority having jurisdiction and the specifications contained herewith whichever is more stringent. Blasting will not be permitted within 80 feet of any building structure.

   All blasting operations shall be conducted under the direction of a Kansas certified blaster. Certificates of blaster certification shall be carried by blasters or shall be on file at the Fire Department during blasting operations. A blaster and at least one other person shall be present at the firing of a blast. Persons responsible for blasting operations at a blasting site shall, as a minimum, conform to the criteria as outlined.

   The contractor shall be responsible for all damage caused by his blasting operations and shall be responsible for responding to all complaints. Suitable methods shall be employed to confine all materials lifted by blasting within the limits of the excavation or trench. All rock which cannot be handled and compacted as earth shall be kept separate from other excavated materials and shall not be mixed with

backfill or embankment materials except as specified or directed.

All blasting by the contractor and his subcontractors shall be in conformity with the requirements having jurisdiction over the right-of-way, or the specifications contained herewith, under the Uniform Fire Code and Fire Marshall's office, whichever is more stringent.

The blast design shall be submitted to the Fire Marshall for review prior to any blasting operations. The blast design shall contain sketches of the drill patterns, delay periods, and decking and shall indicate the type and amount of explosives to be used, critical dimensions, and the location and general description of structures to be protected, as well as a discussion of design factors to be used, which protect the public and meet the applicable air blast and ground vibration standards. The blast design shall be prepared and signed by a certified blaster. The Fire Marshall may request changes to the design submitted.

6102 PREBLASTING SURVEY.

At least 30 days before initiation of blasting, the surveyor shall notify, in writing, all residents or owners of dwellings or other structures located within 600 feet of the blasting area of the intent to conduct a pre-blasting survey. The Fire Marshall may identify alternate pre-blast survey distances.

The surveyor shall promptly conduct a pre-blasting survey of the dwellings or structures and promptly prepare a written report of the survey. An updated survey of any additions, modifications, or renovations shall be performed by the surveyor if requested by the contractor or Fire Marshall.

The surveyor shall determine the condition of the dwelling or structure and shall document any existing damage and other physical factors that could reasonably be affected by the blasting. The surveyor shall examine the interior as well as the exterior structure and shall document any damage by means of photographic or digital recording methods. Structures such as pipelines, cables, transmission lines, cisterns, wells, and other water systems warrant special attention; however, the assessment of these structures may be limited to surface conditions and other readily available data. The interior of the existing sanitary sewer shall be surveyed by means of a permanently recorded closed circuit video camera prior to blasting operations and after blasting has been concluded in the area of the existing sewer.

The written report of the survey shall be signed by the person who conducted the survey. Copies of the report shall be promptly provided to the contractor and to the Fire Marshall. All surveys shall be completed by the surveyor before the initiation of blasting. All surveys shall be conducted by a disinterested third party, regularly engaged in performing pre-blast surveys.

The contractor shall submit with the bid, a detailed pre-blast survey method to be reviewed by the Fire Marshall. The pre-blast survey shall not commence until the survey method has been reviewed by the Fire Marshall for completeness.

6103 PUBLIC NOTIFICATION.

Before blasting is started, the contractor shall inform all residents within a radius of 1,500 feet of the blasting location by means of printed information sheets, news releases and/or public meetings.

6104 WARNING SYSTEM.

The contractor shall provide suitable warning by siren or whistle prior to all blasts.

6105 OVER-BLASTING.

The requirements presented herein shall not relieve the contractor from responsibility to avoid disturbing earth or rock beyond indicated and specified lines and levels.

6106 NOTIFICATION.

The contractor shall notify the owner of all gas, water, and petroleum pipe lines in any area where blasting will be utilized. A representative of the pipeline owner shall be allowed to be present to observe preparations and blasting.

6107 TECHNICAL ASSISTANCE.

When necessary, the Fire Marshall's office can render technical assistance in controlling ground vibration and fly rock at the request of the blaster and/or the City Engineer.

6108 BLASTING SCHEDULE.

The contractor shall conduct blasting operations at times approved by the Fire Marshall and City Engineer, and announced in the blasting schedule.

All blasting shall be conducted between 8:30 a.m. and 4:30 p.m. The Fire Marshall or City Engineer may specify more restrictive time periods for blasting.

6109 BLASTING SIGNS, WARNINGS, AND ACCESS CONTROL.

Blasting signs shall meet the specifications of this section. The contractor shall:

a. Conspicuously place signs reading "Blasting Area" along the edge of any blasting area that comes within 100 feet of any public road right-of-way, and at the point where any other road provides access to the blasting area; also, conspicuously place signs reading "Blasting Area - Turn Off Two-Way Radios" along the edge of any blasting area that comes within 500 feet of any public road right-of-way and 1000 feet on either end of the blasting area; and

b. At all entrances to the permit area from public roads or highways, place conspicuous signs that state "Warning! Explosives In Use," which clearly list and describe the meaning of the audible blast warning and all-clear signals that are in use, and which explain the marking of blasting areas and charged holes awaiting firing within the permit area.

Warnings and all-clear signals of different character or pattern that are audible within a range of 1000 feet from the point of the blast shall be given. Each person within the permit area and each person who resides or regularly works within 1000 feet of the permit area shall be notified of the meaning of the signals.

Access within the blasting area shall be controlled to prevent presence of livestock or unauthorized persons during blasting and until an authorized representative of the contractor has reasonably determined that no unusual hazards, such as imminent slides or un-detonated charges, exist; and access to and travel within the blasting area can be safely resumed.

6110 CONTROL OF ADVERSE EFFECTS.

Blasting shall be conducted to prevent injury to persons, damage to public or private property outside the permit area, adverse impacts on any underground mine, and change in the course, channel, or availability of surface or ground water outside the permit area.

a. Air blast. Air blast shall not exceed the maximum limits listed on the next page at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area, except as provided in this section.

Lower Frequency Limit of Measuring System, in Hz (+3 dB)	Maximum Level, in dB
0.1 Hz or lower; flat response [1]	134 peak
2 hz or lower; flat response	133 peak
6 Hz or lower; flat response	129 peak
C-weighted; slow response	105 peak dbc

[1] Only when approved by the Fire Marshall.

If necessary to prevent damage, the Fire Marshall or City Engineer can specify lower maximum allowable air blast levels than those of listed in this section for use in the vicinity of a specific blasting operation.

The contractor shall conduct periodic monitoring to ensure compliance with the air blast standards. The measuring systems shall have an upper-end flat frequency response of at least 200 Hz.

b. Ground Vibration. The maximum ground vibration for protected structures listed in this section shall be established in accordance with either the maximum peak-particle-velocity limits, the scaled-distance equation, the blasting level chart, or by the Fire Marshall. All structures in the vicinity of the blasting area, such as water towers, pipelines and other utilities, tunnels, dams, impoundments, and underground mines, shall be protected from damage by establishment of a maximum allowable limit on the ground vibration, 1.0 inches per second, the Fire Marshall may specify a more restrictive limit in the interest of the public safety, or the Fire Marshall may approve a higher limit if justified by the contractor.

The maximum ground vibration shall not exceed the following limits at the location of any dwelling, public building, school, church, or community or institutional building outside the permit area.

Distance (D) From the Blasting Site (feet)	Maximum Allowable Particle Velocity (Vmax) for Ground Vibration (inches/second)[1]	Scaled Peak Factor to be Applied Without Seismic Monitoring (Ds) [2]
0 to 300	1.00	50
301 to 5,000	1.00	55
5,001 and beyond	0.75	6

[1] Ground vibration shall be measured as the particle velocity. Particle velocity shall be recorded in three mutually perpendicular directions. The maximum allowable peak particle velocity shall apply to each of the three measurements.

[2] Applicable to the scaled-distance equation.

A seismographic record shall be provided for each blast.

A contractor may use the scaled-distance equation, W=(D/Ds), to determine the allowable charge weight of explosives to be detonated in any 8-millisecond period, without seismic monitoring; where W=the maximum weight of explosives, in pounds; D=the distance, in feet, from the blasting site to the nearest protected structure; and Ds=the scaled-distance factor, which may initially be approved by the City Engineer using the values for scaled-distance factor listed.

The contractor may use the ground-vibration limits in Figure 1 at the end of this Section. to determine the maximum allowable ground vibration.

If the Figure 1 limits are used, a seismographic record including both particle velocity and vibration-frequency levels shall be provided for each blast. The method for the analysis of the predominant frequency contained in the blasting records shall be approved by the Fire Marshall before application of this alternative blasting criterion.

The maximum allowable ground vibration can be reduced by the Fire Marshall beyond the limits otherwise provided by this section, if determined necessary to provide damage protection.

The contractor shall conduct seismic monitoring of all blasts.

6111 RECORDS OF BLASTING OPERATIONS.

The contractor shall retain a record of all blasts for at least 3 years. Upon request, copies of these records shall be made available to the City Engineer and to the public for inspection. Such records shall contain the following data:

a. Name of the contractor conducting the blast.

b. Location, date, and time of the blast.

c. Name, signature, and certification number of the blaster conducting the blast.

d. Identification, direction, and distance, in feet, from the nearest blast hole to the nearest dwelling, public building, school, church, community or institutional building outside the permit area, except those described herein.

e. Weather conditions, including those which may cause possible adverse blasting effects.

f. Type of material blasted.

g. Sketches of the blast pattern including number of holes, burden, spacing, decks, and delay pattern.

h. Diameter and depth of holes.

i. Types of explosives used.

j. Total weight of explosives used per hole.

k. The maximum weight of explosives detonated in an 8-millisecond period.

l. Initiation system.

m. Type and length of stemming.

n. Mats or other protections used.

o. Seismographic and air blast records, shall include:

1) Type of instrument, sensitivity, and calibration signal or certification of annual calibration;

2) Exact location of instrument and the date, time and distance from the blast;

3) Name of the person and firm taking the reading;

4) Name of the person and firm analyzing the seismographic record; and

5) The vibration and/or air blast level recorded.

6112 BLASTER.

The blaster shall be trained and be knowledgeable in the applications of all sections.

The blaster shall be responsible for:

a. Explosives, including:

1) Selection of the type of explosive to be used

2) Determination of the properties of explosives which will produce desired results at an acceptable level of risk, and

3) Handling, transportation, and storage;

b. Blast designs, including:

1) Geologic and topographic considerations

2) Design of a blast hole, with critical dimensions;

3) Pattern design, field layout, and timing of blast holes, and

4) Field applications;

c. Loading blast holes, including priming and boostering;

d. Initiation systems and blasting machines;

e. Blasting vibrations, air blast, and fly rock, including:

1) Monitoring techniques, and

2) Methods to control adverse effects;

f. Secondary blasting applications;

g. Current federal and state rules applicable to the use of explosives;

h. Blast records;

i. Schedules;

j. Pre-blasting surveys, including

1) Availability

2) Coverage, and

3) Use of in blast design;

k. Blast-plan requirements;

l. Certification and training;

m. Signs, warning signals, and site control;

n. Unpredictable hazards, including

1) Lightning

2) Stray currents

3) Radio waves, and

4) Misfires;

The blaster shall be licensed by the appropriate licensing authority. The blaster shall be responsible for obtaining all necessary permits required for blasting operations.

END OF SECTION

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SECTION 7000 - RESTORATION OF SURFACE CONSTRUCTION

7001 SCOPE.

This section covers restoration of concrete and asphalt pavement, gravel surfacing, walks, drives, curbs, and other surface construction removed or damaged during construction.

7002 GENERAL.

All pavements or other surface construction, which is removed or damaged during the progress of the work, shall be restored to its original or better condition by the contractor. All restoration work shall be subject to acceptance by the City Engineer and the owner or the agency having jurisdiction thereof. All materials used for restoration work shall be new.

7003 REFERENCE STANDARDS.

Materials and construction methods, as referred to herein, shall conform to the Standard Specifications for State Road and Bridge Construction, Kansas Department of Transportation (Current Edition), and to applicable sections of these Technical Specifications.

7004 PAVEMENT REPLACEMENT.

The replacement of all street surfacing shall be in accordance with the pavement replacement detail shown on Standard Detail 70-1. The replacement concrete and asphalt pavement shall be composed of a concrete base course at least 7 inches thick and an asphalt concrete overlay at least 2 inches thick. Materials and workmanship shall conform to the following:

Concrete	As specified in Section 2000
Asphalt Aggregate	Type BM-2, Section 11-3, “Kansas Highway Specification”
Trench Backfill	Graded Gravel, Type CA-5, Section 1102, “Kansas Highway Specification”

All temporary surfacing placed on public streets will consist of cold mix asphalt at a minimum. Maintenance of the temporary patch is the responsibility of the contractor and is considered a subsidiary item unless noted otherwise in the contract documents.

All drives, parking areas, and other pavement or asphalt surfaces that are removed or damaged shall be replaced to at least their original thickness. Materials used shall be new and shall match the existing surfacing as closely as

possible in type, kind and quality, with the exception of drive approaches which shall be constructed of 4000 psi portland concrete as per Sections 2000 and 2100.

7005 CONCRETE WALKS.

Concrete walks removed in connection with, or damaged as a result of, construction operations shall be replaced with new construction. Such walks shall be constructed of concrete on a thoroughly compacted subgrade, shall have a vertical thickness at least as thick as the existing walks, but not less than 4 inches thick, shall be constructed with expansion joints spaced not exceeding 50 feet apart, and shall be sloped for drainage at right angles to the longitudinal centerline in the amount of approximately 1/4 inch per foot of walk width.

Concrete materials and workmanship shall conform to the applicable requirements of Section 2000 “Concrete” of these Specifications.

Surface finish of concrete walks replaced shall conform to, and shall match as closely as possible, that of existing concrete walk surfaces.

7006 CONCRETE CURBS AND GUTTERS.

Concrete curbs and gutters, which have been removed or damaged by reason of construction operations or any other cause, shall be replaced with new concrete construction. New curb and gutter sections shall be as designated on the drawings and detailed on Standard Details 21-1 and 21-2.

Concrete materials and workmanship shall conform to the applicable requirements of Section 2100 “Concrete Curb, Curb and Gutters, Sidewalk, and Driveway Entrances” of these Specifications.

Construction and expansion joints, dimensions, elevations and surface finish of curb and gutter replacements shall conform to, and shall match as closely as possible, that of adjacent existing concrete curbs and gutters.

7007 GRAVEL SURFACING.

Existing gravel drives, parking and surfacing which is removed or damaged during the progress of the work shall be replaced with an aggregate surfacing at least as thick as that removed, but in no case less than 4 inches.

New aggregate surfacing shall match existing surfacing as nearly as possible in size, gradation, color, and compaction.

7008 MISCELLANEOUS REPAIR WORK.

All existing items and construction, whether or not indicated by the drawings but which are removed or damaged as a result of construction operations under this contract, shall be repaired or replaced unless otherwise required by the drawings.

Repair or replacement shall be with materials similar to those existing, and shall in each case restore the item to its original or better condition as acceptable to the City Engineer and the owner thereof.

END OF SECTION

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SECTION 7100 - CHAIN LINK FENCING

7101 SCOPE.

This specification covers chain link fencing and gates.

7102 FENCE TYPE.

Fencing shall conform to the alignment and details shown on the drawings and shall consist of galvanized or aluminum-coated steel fabric, steel posts, top rail, and bottom rail or tension wire. Posts shall be set in concrete.

7103 MATERIALS.

All steel or malleable iron parts and accessories shall be hot-dip galvanized or aluminum coated after fabrication.

Fabric	9-gauge, 2-inch mesh; galvanized ASTM A392, Class II or aluminum-coated ASTM A491, Class II
Posts	Steel H-Section, 0.35% carbon; steel pipe, ASTM A120, standard weight (Schedule 40); or steel hollow structural tubing, ASTM A500 or A501
Line Posts	
For 6-foot Fencing	H-Section, 4.10 pounds per foot; 2⅜-inch OD pipe, 3.65 pounds per foot; or 2-inch square, 3.85 pounds per foot
For 42-inch Fencing	H-Section, 2.70 pounds per foot; or 1⅞-inch OD pipe, 2.72 pounds per foot
Terminal Posts	End, corner, and pull posts
For 6-foot Fencing	2⅞-inch OD pipe, 5.79 pounds per foot; or 2 1/2-inch square, 5.59 pounds per foot.
For 42-inch Fencing	2 3/8 inch OD pipe, 3.65 pounds per foot; or 2 inch square, 3.85 pounds per foot
Gate Posts	Gate or leaf 6-foot or less, 2⅞-inch OD pipe, 5.79 pounds per foot; or 2½-inch square, 5.59 pounds per foot; gate or leaf over 6 foot, 4-inch OD pipe, 9.10 pounds per foot; or 3-inch square, 9.10 pounds per foot

Top Rail	1⅝-inch OD steel tubing, 1.40 pounds per foot
Rail Couplings	Sleeve type, 6 inches long
Post Tops (when barbed wires are required at the top of the fence)	Pressed steel, malleable iron, with pressed steel extension arm, or hole for top rail; designed to prevent entry of moisture into tubular posts
Post Tops	Pressed steel, malleable iron, or cast aluminum; designed to prevent entry of moisture into tubular posts
Barbed Wire	Galvanized, ASTM A121, Class 2 or aluminum coated ASTM A585, Class II; two 12½-gauge steel wires with 4-point barbs
Stretcher Bars	Steel, 3/16-inch by 3/4-inch, or equivalent area
Fabric Ties	Aluminum bands or wires
Gate Frames	Steel tubing, 1⅞-inch OD, 2.09 pounds per foot; or 2-inch square, 2.10 pounds per foot
Tension Wire	Galvanized or aluminum coated coil spring wire, 7 gauge
Handrail-Setting Cement	Hallemite “Por-Rok Cement”

7104 GATES.

Gates shall be swing type, hinged to swing 90° from closed to open, complete with frames, latches, stops, keepers, hinges, and fabric. Gate leaves shall have intermediate members and diagonal truss rods as required for rigid construction. Joints between frame members shall be made by welding or by means of heavy fittings, and shall be rigid and water tight. Gate fabric shall be same as fence fabric and shall be attached to frame ends by stretcher bars, bolt hooks, or other mechanical means.

Hinges shall be heavy pattern with large bearing surfaces and shall not twist or turn under the action of the gate. Latches shall be plunger bar type, full gate height, and arranged to engage the gate stop, except single gates less than 10 feet wide may be provided with a forked latch. Latches shall be arranged for padlocking with the padlock accessible from both sides of the gate. Stops shall consist of a roadway plate with anchor set in concrete and arranged to engage the plunger. Keepers shall consist of mechanical devices for securing and supporting the free end of gates when in the full-open position.

Gates shall be installed so that they cannot be removed without disassembly of the hardware. Hardware attachment bolts shall be peened so that removal will be difficult.

7105 FENCE CONSTRUCTION.

The installed fence shall conform to the alignment and finish grade indicated. All posts shall be plumb and unless otherwise shown or required shall be spaced 10 feet apart for 6-foot fencing and 6 feet apart for 42-inch fencing. Where necessary, the fence grade shall be adjusted to fit the ground contour by slipping the fence fabric links. Ground surface irregularities shall be graded as required to maintain not more than a 2-inch clearance below the bottom of the fence fabric.

Where posts are set in earth, concrete foundations 36 inches deep shall be provided. If bedrock is encountered, post excavation shall be continued to the 36-inch depth or 18 inches into the rock, whichever is less. Concrete foundations shall be circular in horizontal section, not less than 10 inches in diameter for line posts, and with a diameter not less than the post OD plus 9 inches for terminal and gate posts, except that foundations in bedrock shall be a minimum of 6 inches larger than the outside dimension of the post. Foundations shall extend above the ground surface and shall be crowned approximately 1 inch. Concrete for foundations shall conform to the requirements of Section 2000 “Concrete.” Each foundation shall be cured for at least 72 hours before further work is done on the post.

Top rails and bottom tension wires shall be installed before the fabric. Top rails shall be furnished in at least 18-foot lengths and shall be securely connected to gate and terminal posts. Tension wires shall be installed approximately 6 inches above grade and shall be attached to each post and securely anchored at terminal and gateposts. Straight runs between braced posts shall not exceed 1500 feet. A terminal post shall be provided at each change in slope.

Fabric shall be attached to the top rail, bottom rail, and bottom tension wire at 24-inch centers and to the line posts at 15-inch centers. Barbed wire shall be fastened to each extension arm by internal clips or external fabric ties. Each stretcher bar shall be threaded through the fabric and anchored to the post at 15-inch center by positive mechanical means.

Each gate and terminal post shall be braced by horizontal pipe brace and an adjustable truss extending to an adjacent line post. Corner posts shall be braced in both directions.

Fabrics shall be stretched taut and anchored so that a pull of 150 pounds at the middle of a panel will not lift the bottom of the fabric more than 6 inches.

END OF SECTION

SECTION 7200 - HYDROSEEDING AND SODDING

7201 SCOPE.

This section covers the furnishings of all labor, equipment, tools and materials, and the performance of all work for hydroseeding or sodding as designated on the contract drawings.

7202 GENERAL.

The hydroseeding work shall consist of furnishing and hydraulically applying~~drilling in or sowing~~ seed, fertilizer, mulch and tackifiers by an experienced seeding contractor having approved equipment manufactured expressly for the purpose intended.~~, such as a seed drill with fertilizer attachment, mulch chopper and blower for the application of hay or straw mulch, mulch puncher or straight serrated disc for punching mulch into soil and a cult packer that may be used for final compaction.~~

For public improvement projects hydroseeding shall be required at all non-residential locations shown on the plans and for all grass covered areas that are disturbed by construction operations, either by grading, parking of equipment, temporary roads, or any other operation that has destroyed the existing grasses of the original site, and that is not designated on the drawings to be replaced with sod. All residential locations disturbed by construction will be restored with sod.

For all other types of construction, including that work done under a work within right-of-way permit, sod shall be required where areas are disturbed by construction within the right-of-way in established yards or as directed by the City Engineer.

Sod work shall be performed by an experienced sod-laying contractor.

7203 MATERIAL.

The sod shall be densely-rooted Kentucky Bluegrass. The sod shall contain a growth of not more than 10% of other grasses and clovers, shall be free from all prohibited and noxious weeds, and shall be ¾-inch to 1¼-inch; each strip containing at least 1 square yard. Sod shall be cut in strips not less than 12 inches wide.

Commercial fertilizer for hydroseeded or sodden areas shall contain 12% (by weight) nitrogen, 12% (by weight) phosphoric acid, and 12% (by weight) potash. It shall be uniform in composition, free flowing, and delivered to the site in standard size bags, showing weight, analysis, and name of

manufacturer. It shall be stored until use in a weatherproof storage place in such a manner that it will be kept dry and its effectiveness will not be impaired.

Seeds for cover crops shall be the kind and mixture of seeds specified herein. Seeds shall be free of prohibited weed seeds and shall not have more than 1% of noxious weed seeds. Seeds shall be delivered to the site in convenient containers, each fully labeled, bearing the name, or trademark and a warranty of the producer and a certificate of the percentage of the purity and germination of each kind of seed specified. The tags shall be made available to the City Engineer for filing.

The following formula shall be used to determine the amount of commercial seed required to provide for each kind of seed the specified quantities of pure live seeds.

$$\text{Pounds of Commercial Seed Required} = \frac{10{,}000 \times \text{Rate of Pure Live Seed (lbs/acre)}}{\text{Purity \% x Germination \%}}$$

Where hydroseeding is required in areas of ~~established yards,~~ shoulders and slopes in street right-of-way, and any other areas where a high-quality seeding is deemed necessary, the seed mixture will be as follows:

Kind of Seed	**Minimum Pure Live Seed, %**	**Rate of Pure Live Seed, Pounds/Acre**
Perennial Rye (Derby or equivalent)	80	65
Turf-type Tall Fescue (Rebel II or equivalent)	80	175
Annual Rye	85	10
Total		250# / Acre

Where hydroseeding is required in vegetation-covered medians, the seed mixture will be as follows:

Kind of Seed	**Minimum Pure Live Seed, %**	**Rate of Pure Live Seed, Pounds/Acre**
Buffalo grass	85	90
Annual Rye	85	110
Total		200# / Acre

Where hydroseeding is required in areas off street right-of-way that are not maintained periodically, the seed mixture will be as follows:

Kind of Seed	Minimum Pure Live Seed, %	Rate of Pure Live Seed, Pounds/Acre
Alta Fescue or Kentucky 31 Fescue (Festuca Elatior Var. Arundinces)	75	90
Rye Grass (Lolium Perenne or L. Multiflorum)	80	50
Total		140# / Acre

Mulch for application in hydroseed mixtures shall consist of shredded paper fibers. ~~to seedbed areas shall include wheat straw, oat straw, smooth brome grass hay, Sudan grass hay or prairie hay. Prairie hay shall consist chiefly of Bluestem grasses, switch grass, Indian grass and other desirable native perennial grasses. Mulch shall be free of prohibited and noxious weed seeds.~~

7204 TIME OF HYDROSEEDING OR SODDING.

HydrosSeeding and fertilizing shall be performed between August 15 and October 15 for Fall planting and between February 15 and April 30 for Spring planting, unless otherwise acceptable to the City Engineer. HydrosSeeding and fertilizing shall not be done during periods of such severe drought, high winds, or excessive moisture, as determined by the City Engineer, that satisfactory results are not likely to be obtained.

Sod shall not be placed between June 15 and September 15 or on frozen ground or during the period from October 15 to March 15, unless authorized by the City Engineer.

Any hydroseeding or sodding to be performed during periods other than those previously designated will require a written request to extend the permissible period for performing such work. Said request shall explain the reason for the variance and shall include a guarantee (by the general contractor) of satisfactory results by the end of the first four (4) weeks of the following growing season as previously defined, or the necessary re-hydroseeding or re-sodden work performed at that time. The request shall be initiated by the general contractor and directed to the City Engineer for consideration for approval.

~~**7205 APPLICATION OF FERTILIZER.**~~

~~Before tilling of the soil for seeded areas, the commercial fertilizer of the type specified shall be uniformly distributed over the entire site at the rate of 600 pounds per acre, and incorporated into the soil to a depth of at least 2 inches by disking or harrowing methods or with a~~

~~fertilizer drill. The fertilizer may be applied with the seeding operation only if a seed drill with a fertilizer attachment is used. (The above fertilizer rate is equivalent to 7 pounds to 500 square feet).~~

72056 PREPARATION OF SOD BED.

The sod bed shall have a uniform surface free from washes and depressions and shall conform to the finished grade profile or cross section shown on the plans. The soil, except where fresh topsoil has just been applied and compacted, shall be thoroughly tilled to a depth of 2 inches. Freshly-graded areas, which have set long enough to become dry and crusted over, shall be tilled as specified above, preparatory to placing the sod.

Sod placed next to existing grassy areas, curbs, sidewalks or like boundaries shall be cut-in to match like grades.

72067 PLACEMENT OF SOD.

Sod shall be transplanted within 24 hours from the time it is harvested. All sod in stacks shall be kept moist and protected from exposure to the sun and from freezing.

The fertilized sod beds shall be in a firm but not too compacted condition with relatively fine texture at the time of sodding. Sod shall be moist when it is placed. The use of dry sod will not be permitted. Sod strips shall be laid along contour lines by hand, commencing at the lowest point of the area and working upward. The transverse joints of sod strips shall be staggered and the sod carefully placed to reduce tight joints. The sod shall be firmed, watered, and re-firmed immediately after it is placed. The "firming" shall be accomplished by application of a roller weighing not less than 60 nor more than 90 pounds per linear foot of roller. On steep slopes, the sod may be firmed by compacting with hand shovels. The firming process shall pack the sod roots firmly into the prepared soil.

The contractor shall water installed sod within 24 hours and shall water all sod twice daily for a minimum of 21 days from initial laying, except on those days where a minimum of 1/4-inch of rain falls in a 24-hour period.

72078 PREPARATION OF THE HYDROSEEDBED.

The area to be hydroseeded shall be thoroughly tilled to a depth of at least 3 inches by disking, harrowing or other approved methods until the soil is well pulverized. After completion of the tilling operation, the surface shall be cleared of all stones, stumps, or other objects larger than 1½ inches in thickness or diameter, and of roots, wire, grade stakes, and other objects that might be a hindrance to

maintenance operations. Areas tilled shall then be brought to the desired line and grade and maintained until hydroseeding ~~and mulching~~ is complete to ensure a smooth area with no gullies or depressions.

Any objectionable undulations or irregularities in the surface resulting from tillage or other operations shall be removed before planting operations are begun. Hydros~~S~~eedbed preparation shall be performed only during periods when satisfactory results are likely to be obtained. When results are not satisfactory because of drought, excessive moisture or other causes, the work shall be stopped until such conditions have been corrected to the satisfaction of the City Engineer.

7208~~9~~ PLACEMENT OF HYDROSEED.

Hydros~~S~~eeding may be accomplished by means of approved equipment. ~~mechanical power-drawn drills followed by packer wheels, or by broadcast-type seeders or hydraulic type seeders in small areas not accessible to machine methods, or as approved by the City Engineer. Mechanical power-drawn drills shall have depth bands set to maintain a planting depth of at least 1/4 inch but not to exceed 1/2 inch. All seed sown by broadcast-type seeders shall be "raked in" or otherwise covered with soil to a depth of at least one-quarter inch and rolled to obtain a firm seed bed. Water shall be applied when necessary.~~

Hydro~~aulic~~ seeding equipment shall include a pump capable of being operated at 100 gallons per minute and at 100 psi, unless otherwise directed. The equipment shall have an acceptable gauge and a nozzle adaptable to hydro~~aulic~~ seeding requirements. Storage tanks shall have a means of agitation and a means of estimation of the volume used, or remaining in the tank. Storage tank shall have a minimum capacity of 250 gallons. Hydroseeding equipment shall be equipped with suitable spray tips to ensure distribution of the material at the application rate of not less than 3,000 pounds/acre.

Hydros~~S~~ shall not be performed~~eed shall not be drilled or sown~~ during windy weather or when the ground is frozen or otherwise not tillable. ~~When a seed drill is used, it shall be set to space the rows not more than 4 inches apart.~~

~~**7210 MULCHING.**~~

~~Straw or hay mulch shall be applied uniformly to seeded areas at the rate of not less than 2 tons per acre. Baled straw or hay shall be broken up and loosened sufficiently before being fed into the blower hopper to avoid the placing~~

~~of matted or unbroken clumps. The use of wet straw or hay is prohibited.~~

~~Mulching shall be performed within 24 hours after seeding, but not be done during windy or rainy weather or when such weather is imminent. Mulching shall be started at the windward side of relatively flat areas, or at the upper part of steep slopes and shall continue uniformly until each area is covered.~~

~~The mulching material shall be disked or punched into the soil so that it is partially covered. Several passes may be required, if a straight disc is used, in order to mix the mulching material with the topsoil sufficiently to ensure protection from erosion by either wind or water. The mulch tilling operation shall be performed parallel to the ground contours.~~

~~7211~~7209 MAINTENANCE.

All hydroseeded areas shall be protected against damage by vehicle and pedestrian traffic by the use of barriers and appropriate warning signs. If at any time before completion and acceptance of the hydroseeding work any portion of the hydroseeded area becomes gullied or otherwise damaged, such damaged areas shall be repaired by filling with soil to original grade~~,~~ and re-hydroseeding~~ and re-mulching~~. All costs of repair work shall be borne by the contractor.

Contractor shall be responsible for watering areas hydroseeded for a period of 5 weeks after the time of hydroseeding, except when thoroughly wetted by rain. Sprinkling of the hydroseeded areas shall be carefully done in such manner as to avoid standing water, surface wash, or scour.

All sodded areas shall be thoroughly watered twice daily for a period of 20 after placing, except when thoroughly wetted by rain of 1/4-inch or more in a 24-hour period.

~~7212~~7210 GUARANTEE.

The contractor shall guarantee all work and materials for a period of one full growing season (Spring to Fall) after the date of final payment under the contract. During the guarantee period, all turf, which dies, shall be replaced, by and at the expense of the contractor, with like material.

END OF SECTION

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SECTION 7300 – EROSION CONTROL

7301 SCOPE.

This section covers all labor and materials for the construction of erosion control measures. It includes the installation of erosion control devices that result in the reduction of soils leaving the construction site. Measures shall address but are not limited to inlet protection, stream protection, adjacent property protection, and public right-of-way protection.

7302 GENERAL.

Erosion control measures will be required on all construction plans submitted to the City of Spring Hill Public Works Department. All projects which disturb an accumulative area of more than one acre will be temporarily hydroseeded and mulched to the requirements of Section 7200 "Hydros~~S~~eeding and Sodding" immediately after street construction is complete. No other work will be allowed to begin until the seeding and mulching is complete unless approved by the City Engineer.

Erosion control measures will be required to be installed in accordance with the approved erosion control plan prior to any grading or construction activities. Erosion control methods include, but are not limited to, the following techniques: settling basins, sediment traps, rock entrance construction and perimeter controls.

During construction, the City Engineer or his representative may require, or the applicant may request, that the construction of the erosion control facilities and the associated designs be modified. Modifications to the erosion control plan shall be submitted to the City Engineer prior to any construction activities if physical conditions are discovered on the site that are inconsistent with the assumptions upon which the approval was based, including, but not limited to, unexpected soil conditions, runoff patterns, general weather generated problems, or changes in the design of the improved areas.

7303 MATERIALS.

Materials shall consist of waddles (as shown in Detail 73-1), rock ditch checks (as shown in Detail 73-2), inlet protection (as shown in Detail 73-3), rock construction entrance (as shown in Detail 73-4), OR any combination of method s as approved by the City Engineer or his representative.

Temporary seeding will be a combination of annual and perennial rye. Total seeding rate will be 200 lbs/acre and

shall consist of 130 lbs/acre of annual rye and 70 lbs/acre of perennial rye. All seeding shall meet the requirements set forth in Section 7200 “Seeding and Sodding.”

7304 MAINTENANCE.

On any property where grading or other work has been permitted, it shall be up to the permittee or owner to maintain and repair erosion control facilities. Whenever the City Engineer or his representative find that any existing grading, drainage, or ground condition is defective or deficient under the requirements of this division, all work shall cease until measures have been taken to meet the conditions of this division.

Failure to make repairs to erosion control facilities shall result in fines and penalties as outlined in Chapter XVIII, paragraph B, of the Spring Hill City Code.

END OF SECTION

SECTION 8000 - MATERIALS TESTING

8001 SCOPE.

This section shall apply to all required testing services for soils, asphalt and concrete.

8002 GENERAL.

All materials testing shall be conducted by a testing laboratory qualified and approved by the City to perform the required sampling, analysis, testing and report writing services. Reports shall be prepared by or under the supervision of and bear the seal and signature of a professional engineer licensed in the State of Kansas. Improperly completed or certified reports will not be accepted.

8003 RESPONSIBILITIES OF THE CONTRACTOR OR DEVELOPER.

The contractor or developer shall provide all the required tests as herein specified at his expense. The contractor shall allow the testing agency access to the job site as may be required and shall furnish any labor as may be required by the testing agency to obtain and handle samples at the source of the material and at the site of the work. Adequate facilities shall be provided at the project site for the safe storage and proper curing of specimens requiring such facilities. The use of a testing agency's service does not relieve the contractor of the responsibility to furnish the required materials and to perform the required construction in full compliance with the City of Spring Hill Technical Specifications. The successful passing of a test does not constitute acceptance of the work or materials represented by the test or any portion of the work or materials. Final acceptance of the project shall be granted only through the issuance of a Project Completion Certificate by the City of Spring Hill and the expiration of the 2-year maintenance period as established in these Specifications.

8004 RESPONSIBILITIES OF THE TESTING AGENCY.

All testing agencies shall meet the requirements of ASTM E329. A representative shall inspect, sample and test the materials and work as required by the City Engineer. Any material furnished or work performed by the contractor failing to conform to the specification requirements shall be immediately brought to the attention of the City Engineer and the contractor. Preliminary written field reports of all tests and inspection results shall be given to the contractor immediately after they are performed. A copy of all reports shall be forwarded to the City Engineer as they are made available. Results of all tests taken, including

failing tests, shall be reported. The testing agency and its representative are not authorized to revoke, alter, relax, enlarge or release any requirement of the specifications, nor to approve or accept any portion of the work.

8005 ASPHALT TESTING.

Sampling and testing of the asphalt mix shall be required on all asphalt paving projects constructed in the City of Spring Hill.

Samples of the actual asphalt mix being used on a paving project shall be acquired by a qualified testing laboratory technician at either the construction site or the batching plant per ASTM Standards D979 and D3665. These samples shall be used to perform an aggregate gradation test (ASTM C136), asphalt extraction test (ASTM D2172), stability and flow test (ASTM D1559) and bulk specific gravity test (ASTM D2726). One complete group of tests shall be conducted on both the base material and the surface material for each paving project.

In-place density tests shall be conducted with a nuclear testing device during the course of the work. Density tests shall be performed by the testing agency to verify that the performance specifications in Section 1309 “Density and Surface Requirements” of this Specifications manual have been achieved. The number of tests to be taken and the locations thereof shall be determined by the inspector based upon his observation of the paving process. A minimum of two tests per 1500 feet of street improvement shall be taken unless otherwise directed by the City Engineer. Tests performed with a nuclear device shall be conducted as per the requirements of ASTM D2950.

8006 CONCRETE TESTING.

Sampling and testing shall be required on all concrete work including curb and gutter, sidewalk, slope paving, retaining walls, inlets, manholes or any other structures.

During the progress of the work, compression tests of the concrete used shall be made as directed by the City Engineer in accordance with the requirements of ASTM C31, C143, and C172. At least one sample, consisting of four cylinders minimum, shall be taken from each 100 cubic yards of concrete placed or fraction thereof. In the event that the total amount of concrete on a project does not exceed 200 cubic yards, a minimum of four specimens (consisting of four cylinders each) shall be submitted for the project. In the case of a reinforced concrete box, a minimum of one sample shall be taken for each day's pour. The cylinders shall be cast in the field and transported to the laboratory 24 hours

after the concrete was placed. Each set of compression test cylinders shall be marked or tagged with the date and time of day the cylinders were made, the location in the work where the concrete represented by the cylinders taken was placed, the delivery truck or batch number, the air content, and the slump. From each sample consisting of four cylinders, one shall be broken at 7 days, one at 14 days and two at 28 days noting the compressive strength of each break.

Slump tests (ASTM C143) and air tests (ASTM C231) shall be made for each 25 cubic yards of concrete placed or fraction thereof. A minimum of two slump and air tests shall be taken per day. Slump and air tests shall be taken with each cylinder series.

If samples of fresh concrete have not been obtained and tested, a minimum of three cores shall be taken per ASTM C42 and broken as directed by the City Engineer. Air content (ASTM D457) and cement content (ASTM C85) shall also be determined. Concrete in the portion of the structure from which the core was taken will be considered adequate if the average strength of the cores is equal to a minimum of 95% of the specified strength (f'c) and if the strength of any single core is not less than 80% of f'c. All core holes shall be completely filled with a low-slump, high strength concrete at the expense of the contractor.

All reports by testing laboratories shall include the type of structure and information on obtaining, transporting, storing, curing, time between obtaining and casting cylinders (when applicable), supplier, finisher and batch as well as the specific test data.

8007 SOIL TESTING.

Sampling and testing shall be required on all subgrade preparation for street construction and all trench backfilling operations within the City of Spring Hill.

Prior to the contractor commencing subgrade compaction for any street improvement project, the City Engineer shall designate the locations and depths at which a qualified technician shall acquire samples of soil for performing a moisture density test (ASTM D698 for cohesive soils and ASTM D2049 for non-cohesive soils). A minimum of one density test and maximum of two density tests shall be performed for every 1000 feet of street construction.

Reports for moisture-density tests shall include the date, the location of the tests, the elevation or depth at which the test was taken, the maximum dry density, and the optimum moisture content as well as properly constructed moisture-density curves for each sample. Also included

shall be a determination of the soils plastic index (PI) and liquid limit and classification in accordance with ASTM D2487.

During the progress of the subgrade preparation, in-place density tests shall be performed with a nuclear density tester by a qualified technician approved by the City of Spring Hill. The number of tests to be taken and the location thereof shall be determined by the inspector based upon his observation of the subgrade preparation. A minimum of two tests per lift per 1500 feet of street improvement shall be taken unless otherwise directed by the City Engineer. Results of these tests shall indicate whether or not the performance specifications stated in Section 1205 “Compaction Requirements” of this specification manual have been achieved.

If the tests indicate the compaction is not sufficient, the contractor shall increase the compaction effort on all such inadequately compacted areas. Tests performed with a nuclear device shall be conducted as per the requirements of ASTM D2922.

During the progress of the work of trench backfilling, in-place density tests shall be performed with a nuclear density tester by the testing agency. The number of tests to be taken and the locations thereof shall be determined by the inspector based upon his observation of the backfilling process. A minimum of two tests per 1000 feet of trench shall be taken unless otherwise directed by the City Engineer. Results of these tests shall indicate whether or not the performance specifications stated in Section 6017 “Trench Backfill” of this Specification manual have been achieved. If the tests indicate the compaction is not sufficient, the contractor shall increase the compaction effort on all such inadequately compacted areas.

END OF SECTION

SECTION 9000 - STREET LIGHTS

9001 SCOPE.

This work shall consist of furnishing all labor, materials and equipment to complete in place the street lighting system as shown on the plans and as specified in the following specifications, as directed by the City Engineer, and in those sections of the standard specifications of the City of Spring Hill, Kansas, and the Kansas Department of Transportation, that are either directly, or by reference, included herewith.

9002 GENERAL.

All incidental parts which are not shown on the plans or specified herein and which are necessary to complete the street lighting system shall be furnished and installed as though such parts were shown on the plans or specified herein. All systems shall be complete and in operation to the satisfaction of the City Engineer at the time of acceptance of the work.

All electrical equipment shall conform to the standards of the National Electrical Manufacturers Association (NEMA). In addition to the requirement of these Specifications, the plans, and the lighting specifications, all material and work shall conform to the requirements of the National Electric Code, the Standards of the American Society for Testing Materials (ASTM), the American Standards Association (ASA), and local ordinances.

Wherever reference is made in these Specifications or in the standard provisions to the code, the safety orders, the general order, or the standards mentioned above, the reference shall be construed to mean the code, order, or standard that is in effect at the date of advertising of these Specifications.

All existing signal conduit/conductor runs and other utility information were obtained from existing office records. It shall be the contractor's responsibility to locate all utilities, whether above, on or below the ground, and to protect the City against any and all damages arising from work under this project.

9003 MATERIALS.

A. Shaft: The shaft shall be spun from one piece of seamless tubing: Aluminum Association Alloy 6063; and after fabrication, it shall have mechanical strength of not less than T6 temper. The cross section of the pole shall be round, and the shaft shall be fabricated in a continuous true taper. The shaft shall have no

longitudinal or circumferential welds, except at the lower end joining the shaft to the base.

Poles for single arm, 40-foot luminaire mounting height shall have a minimum nominal wall thickness of .219 inch, 37- to 38-foot shaft length, 8-inch minimum diameter at the base and an 11- to 12-inch bolt circle.

Poles for twin arm, 40-foot luminaire mounting height shall have a minimal nominal wall thickness of .219 inch, 37- to 38-foot shaft length, 10-inch minimum diameter at the base and a 14- to 15-inch bolt circle.

Poles for 30-foot luminaire mounting height shall have a minimum nominal wall thickness of .188 inch, 27- to 28-foot shaft length, 7-inch minimum diameter at the base and a 10- to 11-inch bolt circle.

An opening shall be furnished near the top of the shaft to provide a cable entrance from the shaft into the bracket arm. Bracket arms shall be securely fastened to the pole with stainless steel bolts and rivnuts. The top of the shaft shall be equipped with a cast aluminum removable pole top held securely in place by means of setscrews. Lighting standards shall have a minimum 4-inch x 6-inch hand hole with frame and a cover and a grounding lug opposite the hand hole. Standards shall have internally-mounted vibration dampers. The pole and arm, when equipped with the specified luminaire and installed on a standard foundation, shall withstand an 80 mph wind with gusts to 104 mph while covered with 1/2 inch of ice. The manufacturer, supplier and contractor shall guarantee that the poles and arms provided on this project shall remain without defect for a period of 5 years.

B. Base: A one-piece cast aluminum, Aluminum Association Alloy 356-T6, anchor base of adequate strength, shape and size shall be secured to the lower end of the shaft by two continuous welds. The base shall telescope the shaft; and the one weld shall be on the inside of the base at the end of the shaft, while the other weld shall be on the outside at the top of the base. The two welds shall develop the design strength of the pole assembly. The base shall be a safety-type, which will fracture upon vehicle impact, causing no greater momentum change than 1100 lb-sec. to a vehicle or 400 lb-sec. to a standard rigid mass. The base shall be provided with four slotted holes to receive the anchor bolts and eight tapped holes for attaching the four removable bolt covers provided with each pole, which shall attach to the upright portion of the body of the

base. The bolt covers (and hand holes) will be secured to the pole by means of 300-series stainless steel, Allen head fasteners. A grounding lug capable of accommodating up to a No. 6 A.W.G. ground wire shall be provided on the inside of the shaft adjacent and accessible to the pole hand hole.

C. Mastarm: Single member-type mastarms shall consist of a tapered aluminum arm, ovaliptic in shape at the pole end and tapering to 2-3/8 inch O.D. at the luminaire end, made of Aluminum Association Alloy 6063-T6 tubing.

Truss-type mast arms shall consist of an upper and lower member securely joined by means of vertical struts. The lower member shall be 2-inch IPS aluminum pipe, Aluminum Association Alloy 6063-T6. The upper member shall be tapered aluminum, ovaliptic in shape at the pole end and tapering to 2⅜-inch O.D. at the luminaire end.

D. Finish: All hardware (bolts, nuts, washers, but not including anchor bolts) not otherwise specifically designated in these Specifications shall be aluminum or stainless steel. All materials shall be furnished in natural aluminum color. The pole shaft shall be furnished with a polished surface. The pole shall have a factory-applied protective paper wrapper conforming to the manufacturer's standard practice, and shall not be removed until after erection. Pole shall be kept dry and out of the weather until time for erection.

E. Cobra Head Luminaire: Cobra head style luminaries shall have a housing of single piece aluminum alloy casting with integral slip fitter for 2-inch bracket mounting. The mounting device shall allow the luminaire to be mounted absolutely level and shall have no more than two fasteners serving both the leveling and clamping functions. It shall allow one person to install the luminaire by simultaneously holding it in position and tightening the fasteners, such that the luminaire will be properly level at the first attempt.

The reflector shall be secured to the top housing. The luminaire is to be integral ballast type with shielded optical system and a heat and impact resistant flat or refractive style glass lens. The luminaire shall provide I.E.S. Medium Distribution. The luminaire shall be pre-wired, requiring only connection of service wires to a terminal board. The entire ballast, including condensers, shall be easily removable and replaceable with gloved hands and without tools through the use of quick disconnecting mechanical devices and electrical plugs. The ballast shall be a regulator type, high power factor, for high-pressure sodium at a

voltage of 120/240 volts. The ballast shall be capable of reliably operating the lamp with a line voltage varying +10% from normal.

F. Lamps:

1) 400 watt lamps shall be high-pressure sodium (HPS), rated 50,000 lumens, with a 24,000-hour rated life;

2) 310 watt lamps shall be HPS, rated 37,000 lumens, with a 24,000-hour rated life;

3) 250 watt lamps shall be HPS, rated 30,000 lumens, with a 24,000-hour rated life;

4) 200 watt lamps shall be HPS, rated 22,000 lumens, with a 24,000-hour rated life;

5) 150 watt lamps shall be HPS, rated 16,000 lumens, with a 24,000-hour rated life;

6) 100 watt lamps shall be HPS, rated 9,500 lumens, with a 24,000-hour rated life; and

7) 70 watt lamps shall be HPS, rated 5,800 lumens, with a 24,000-hour rated life;

G. Secondary Cable: Secondary cable shall be #4 A.W.G. stranded annealed copper, single conductor cable for operation at 600 volts maximum. Material shall meet the applicable requirements of I.P.C.E.A. Standard S-19-81, with thermoplastic insulation of GRS-Rubber base meeting Appendix K (A) of I.P.C.E.A. and listed by Underwriters Laboratory (U.L.) as Type U.S.E. for direct burial; or material shall meet the applicable requirements of I.P.C.E.A. Standard S-66-524, interim standard #2, with thermo setting insulation of cross link polyethylene meeting requirements of Column "A" of I.P.C.E.A. and listed by U.L. as Type U.S.E. RHW-75oC.

H. Pole and Bracket Cable: Pole and bracket cable above hand hole in pole to luminaire(s) shall be single conductor with minimum 600 volt rating, No. 10 A.W.G. Type THHN/THWN. Conductor shall be stranded annealed copper.

I. Service Pedestal: Service pedestal shall be an underground service type, rated for 100 A, 240 volts. Pedestal shall be heavy gauge steel, rain tight construction with individual meter, panel, contractor, and rear service pull "compartments." Meter and panel compartments shall have piano-hinged doors with

padlocking provisions. Meter base shall be of the type used by the local utility.

Panel board shall have copper buss and shall accept twelve 1-inch, plug-in breakers manufactured by G.E., Westinghouse, ITE, or equal. Panel board compartment shall contain convenience receptacle, and test switch. All factory-installed wire shall be copper. Service pedestal shall be U.L. listed. Pedestal finish shall be environmental green baked enamel conforming to ASTM-B17 Specifications over corrosion-resistant primer. Service pedestal shall be Meyers #MEUGQ-M100-OPK or approved equal. Pole mounted service panels shall be Myers #ME-MP100-OPK or approved equal.

J. Metallic Conduit: Rigid metallic conduit shall be hot-dip galvanized and all threads shall be galvanized after cutting. The conduit shall bear a U.L. label and shall conform to Federal Specification WWC-581 (latest version) and American National Standards Institute (ANSI) Specification C80.1.

K. Nonmetallic Conduit: Rigid nonmetallic conduit shall be Schedule 40 polyvinyl chloride (PVC) conduit. The conduit shall bear a U.L. label and shall conform to Federal Specification WC-1094A (latest version).

9004 REPLACING DAMAGED IMPROVEMENTS.

Improvements such as sidewalks, curbs, gutters, portland cement concrete and asphalted concrete pavement, bituminous surfacing base material and any other improvements removed, broken or damaged by the contractor shall be replace or reconstructed with the same kind of material as found on the work or with materials or equal quality. The new work shall be left in a serviceable condition satisfactory to the City Engineer. Whenever a part of a square or slab of existing concrete sidewalk, driveway or pavement is broken or damaged, the entire square or slab shall be removed and the concrete reconstructed as above specified.

9005 FOUNDATIONS.

The bottom of the concrete foundations shall rest on firm ground; foundations shall be poured monolithic. The exposed portions shall be formed to present a neat appearance. Forms shall be true to line and grade. Top of footing for standards, except special foundations, shall be finished to curb, or sidewalk grade, or as directed by the City Engineer. Forms shall be rigid and securely braced in place. Conduit ends and anchor bolts shall be placed in proper position, to proper heights, and held in place by means of a template until the concrete sets. Anchor bolts

shall be provided with hex head nut, flat washer and lock washer. Both forms and ground which will contact the concrete shall be thoroughly moistened before placing concrete.

Pole base and control center foundations shall be 4,000 psi, air entrained, 28-day compressive strength portland cement concrete. Aggregate shall be Kansas Class 1 or Class 6.

Concrete shall not be placed until forms and reinforcing steel have been checked and approved by the City Engineer. Placement of concrete shall be witnessed by the City Engineer.

Concrete pole bases shall be consolidated by an internal-type vibrator. The vibrator shall operate at frequencies of vibration not less than 4,500 cycles per minute under load. The amplitude of vibration shall be adequate to consolidate concrete properly. The concrete shall be cured with an approved moisture barrier such as wet burlap, polyethylene, etc., for a period of 72 hours. Cold weather curing shall be such that the concrete temperature shall be maintained above freezing for the entire curing period. Forms shall not be removed until the concrete is thoroughly set.

9006 CONDUIT.

Conduit, when used, shall be of a rigid type conforming to the provisions specified in and on the plans. Installation shall conform to the appropriate articles of the National Electric Safety Code. The size of the conduit used shall be as shown on the plans.

It shall be the privilege of the contractor, at his own expense, to use larger size conduit if desired; and where larger size conduit is used, it shall be for the entire length of the run from outlet to outlet. No reducing couplings will be permitted.

The ends of all conduits shall be well reamed to remove burrs and rough edges. Field cuts shall be made square and true so that the ends will butt or come together for the full diameter thereof. Slip joints or running threads will not be permitted for coupling conduit. All couplings shall be fitted and tightened until the ends of the conduits are brought together. Where coating on conduit has been injured in handling or installing, such injured places shall be thoroughly painted with rust preventative paint. All conduit ends shall be provided with approved conduit bushings.

Conduit bends, except factory bends, shall have a radius of not less than six times the inside diameter of the conduit.

Where factory bends are not used, conduit bends shall be made without crimping or flattening, using the longest radius practicable.

Conduit shall be jacked under pavement sections at a depth not less than 24 inches below the top of pavement for 2-inch or smaller conduit or at a depth not less than 48 inches below top of pavement for conduit sizes larger than 2 inches in diameter; and where laid in trenches on shoulders and in park areas, conduit shall be laid to a depth of not less than 24 inches below natural ground level.

Conduit shall be placed under existing pavement by approved jacking or drilling methods. Pavement shall not be disturbed without the written permission of the City Engineer and then only in the event insurmountable obstructions are encountered. Jacking or drilling pits shall be kept 2 feet clear of the edge of any type of pavement whenever possible. Excessive use of water such that pavement might be undermined or subgrade softened will not be permitted.

Conduit set in standard bases shall extend approximately 3 inches above the foundation vertically. Conduit entering through the bottom of a pull box shall be located near the ends to leave the major portion of the box clear. Conduit entering concrete pull boxes shall terminate 2 inches inside the box wall and not less than 2 inches above the bottom and shall be sloped to facilitate pulling of cable. At all outlets, conduit shall enter from the direction of the run.

Existing underground conduit to be incorporated into a new system shall be cleaned with a mandrel and blown out with compressed air.

9007 PULL AND SPLICE BOXES.

Pull and splice boxes shall be installed at the locations shown on the plans. The contractor may install, at his own expense, such additional boxes as may be desired to facilitate the work upon approval of the City Engineer.

Pull and splice boxes shall be installed on crushed rock as shown on the plans or as directed by the City Engineer. Boxes shall be installed so that the covers are level with the curb or sidewalk grade, or level with the surrounding ground with no grade is established.

9008 WIRING.

The roadway lighting conductor system shall generally be direct burial cables, wired and installed as a 240-volt system where indicated and as required. Wiring shall conform to the appropriate articles of the National Electric

Code. Cable shall be laid to a depth of 24 inches and be installed in continuous lengths. No splices of cable will be permitted in or out of conduit or outside of pull boxes, splice boxes or pole bases.

Powdered soapstone, talc or other approved lubricant shall be used when inserting conductors in conduit. All cable to be installed in one conduit shall be pulled by contractor in one operation, and all ends shall be taped to exclude moisture and shall be so kept until the splices are made or terminal appliances attached. Ends of spare conductors shall be taped.

All splices in slice boxes and pull boxes shall be made with appropriate compression "C" type connectors and two-way connectors. Such splices shall be carefully wrapped with successive layers of Scotch No. 23 "Electrical Tape," and then wrapped with three layers of Scotch No. 88 "All Weather Electrical Tape." The total diameter of the taped slice shall be approximately 1-1/2 times the diameter of the spliced conductor covering.

One foot of slack shall be left at all control centers, splice boxes, and pull boxes for splicing and connecting wires. Wiring within boxes shall be neatly arranged and laced up. Wires shall be color-coded (black=hot, white=neutral, green=ground) and circuits permanently identified in accordance with designations used on the plans.

All splices in light pole bases shall be made with Fargo No. GO-32 multiple tap connectors. Slip-over plastic boots shall be provided for the hot leads. The contractor shall install in-line fused disconnects in each pole base. Fuse holders in 30 and 40-foot poles shall be Buss Tron-type HEB-AW-RLC-C for the hot leads and HET-AW-RLC-C for the ground. Fuses shall be type KTK 8 amp, high interrupting fuses. Fuse holders in 14-foot poles shall be Buss-type HRK with 5 amp fuses. The multiple tap connectors and fuse holders shall be installed convenient to the hand hole at the base of the pole. One foot of surplus cable shall be coiled at the line side of the multiple tap connector, between the multiple tap connector and the fused disconnect, and on the load side of the fused disconnect.

9009 GROUNDING.

All poles shall be bonded to form a continuous system. At each multiple service point, a ground electrode shall be installed. The electrode shall be a copper rod not less than 1/2-inch in diameter and 10 feet in length, unless otherwise noted on the plans, driven to a depth so the top is 6 inches below the surface of the ground. The service

equipment shall be bonded to the driven ground rod by a No. 6 A.W.G. copper wire enclosed in a 1-inch diameter conduit.

9010 TESTING.

The contractor shall contact the City for an electrical inspection as soon as the control center is ready. The power company should be notified in advance as to when the system would need to be energized.

All street lighting system elements shall function properly as a complete system for a minimum period of 15 days before acceptance by the City. The 15-day test period shall be continuous. Any malfunction observed or recorded shall stop the test period as of the time of the malfunction, and the test period shall not resume until all components are satisfactorily operating.

END OF SECTION

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DESIGN CRITERIA
FOR PUBLIC IMPROVEMENT PROJECTS

Revised ~~January~~ October 201~~6~~4

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PROCEDURE FOR PUBLIC IMPROVEMENT PROJECT PLAN SUBMITTAL

A. General. All developers and engineering consultants submitting plans for public improvement projects to the City for review are required to follow the procedures outlined in this section. No public improvement projects may be constructed in the City of Spring Hill without prior approval of the City Engineer, Director of Public Works and the Planning Coordinator.

The majority of all public improvement projects are funded by either private developer, benefit district, or the City at large. The procedure to follow and the amount of time involved, in approving plans is dependent on the source of funding for the project.

B. Public Improvements Funded by Private Developers. Projects funded by private developers do not ordinarily need City Council approval of final plans prior to construction. The plan review process for this type of project is as follows:

1. The first submittal should contain three (3) sets of plans, draft easements to include water, sanitary sewer, storm water, electric, phone, cable TV and street lighting, and a final plat showing all proposed easements being granted by the plat. This and all subsequent submittals are dated and recorded in the development checklist. Typically, each project will have three (3) separate sets of drawings: One set for sanitary sewers, one set for water lines, and one set for streets and storm sewers.

2. The normal time for review of the first submittal is ten (10) working days. In the case of abnormally large sets of plans (greater than twenty sheets) or of extremely complicated drawings, a longer time may be required for review.

3. The plans will be routed through the appropriate City departments and/or divisions to obtain a complete review of all facilities, which may be affected by the construction. They will also be reviewed to confirm conformance with City Standards and Design Criteria. In each review, comments and necessary revisions will

be noted on the plans (first submittal check set). Subsequent to the review of the plans, the consulting engineer will be notified by telephone that the submittal is ready for return and may be picked up at the office of the City Engineer.

4. The consultant will be required to make all necessary corrections and/or revisions, as noted on the check set of plans or as noted in the comment letter from the City Engineer. Upon completion of the corrections and/or revisions the consultant will submit a new set of plans (second submittal check set) to the City Engineer along with a response letter indicating how all comments were addressed. Review time is approximately ten (10) working days. Revised sheets shall contain a revision block with identifying notations and date of revisions. Accompanying the second submittal should be the first submittal check set, the consultant's response letter, and any necessary application forms such as Kansas Department of Health and Environment sewer extension permit, Kansas Department of Transportation permits, Department of Agriculture channel change permit, Notice of Intent for stormwater discharge (NOI), etc. All previous check sets must accompany each re-submittal. **If the check sets and consultant's response letter are not submitted with the revised plans, they shall be returned to the consultant without action until such time as they are included with the submittal**.

5. The third and any subsequent submittals shall contain all previous check sets and the mylar of the cover sheet for the City Engineer's and Director of Public Works' signatures. The City reserves the right to charge the designer for all costs incurred by the City for review and processing of the third and subsequent check sets if the third submittal is not approved as final. Three (3) sets of plans need to be submitted for water and sanitary sewer, along with three (3) extra cover sheets. Four (4) sets of plans must be submitted for the street and storm sewer plans.

6. Once a submittal is approved, the City Engineer and Director of Public Works will verify that all

necessary state permits are obtained and all plats and easements are filed and recorded before signing the mylar cover sheet for the plans. This mylar cover sheet with the City Engineer’s and Director of Public Works’ signatures and date shall be utilized for all further cover sheets in bid documents sent out for proposals.

7. Public improvement plans and engineering reports are approved initially for one year after the date signed on the mylar cover sheet next to the City Engineer’s signature. After one year, the plans or report shall become null and void and must be re-submitted prior to approval of construction of that project. Such plans and/or reports shall be re-submitted to the City Engineer in accordance with the foregoing outlined procedure and requirements.

8. The design engineer shall send one set of plans to each of the private and public utility companies having territorial jurisdiction in the area of the improvement upon notification that the plans have been approved.

C. Public Improvements Funded by Benefit District and/or City at Large. Projects funded by benefit district and/or City at large need City Council approval at various times during the plan approval process. Plan review as outlined in Section B above remains the same up to final approval of the City Engineer and Director of Public Works. Once the City Engineer and Director of Public Works have approved the plans, the following events occur which involve the City Council.

1. For approval of final plans by the City Council the Public Works Department must receive the final submittal fifteen (15) working days prior to a regularly scheduled City Council meeting. This allows five days to review and approve plans, two days to prepare a Council Transmittal Memorandum (CTM) and eight days for the City Administrator's office to review and approve the CTM and place it on the Council agenda.

2. Once bids are received for a project, if they are in order, the design engineer will make a recommendation to the City for award of the bid. A CTM is then prepared by City staff for the City Council to approve the bid award. This information must be submitted ten (10) working days in advance of a regularly scheduled City Council meeting to allow two days to prepare the CTM and eight days for the City Administrator's office to review for the Council agenda.

3. Lastly, a pre-construction meeting shall be held prior to construction. A minimum of one week's notice shall be given to notify all parties involved, including utility companies, of the date, time and location of the meeting. Upon completion of the pre-construction meeting, a Notice to Proceed will be issued to the developer or the developer’s designated representative. The Notice to Proceed shall be approved by the City Engineer, Director of Public Works and Planning Coordinator. Construction on any public improvement project prior to issuance of the Notice to Proceed will be in violation of City Code.

END OF SECTION

GENERAL PLAN REQUIREMENTS FOR PUBLIC IMPROVEMENT PROJECTS

A. GENERAL. All plans and reports submitted shall be prepared by, or under the direction of, a professional engineer, licensed in the State of Kansas, and shall be reviewed by the City for compliance with the minimum design requirements as established in the Design Criteria Manual for Public Improvement Projects of the City of Spring Hill and with all other applicable City Codes and Standards.

Attention is directed to the design engineer that whenever extraordinary or unusual problems are encountered in conjunction with a proposed project, additional information and analysis beyond the minimum requirements of these Standards and criteria will be required.

The City of Spring Hill is not responsible for the accuracy and the adequacy of the design or dimensions and elevations as depicted on the plans (which shall be confirmed and correlated at the site of the work). The City of Spring Hill, through the approval of the plans and/or report, assumes no responsibility for the completeness and/or accuracy of the public improvement plan or report.

B. REQUIRED NOTES. The following general notes will be required as a minimum on all plans submitted for public improvement projects. These notes are not meant to be all-inclusive, and in certain situations the use of additional notes may be required by the City Engineer or Director of Public Works.

WATER MAINS

1. Development plans are approved initially for one (1) year. After one year, if construction of the improvements has not begun, they automatically become void and must be updated and re-approved by the City Engineer and Director of Public Works before any construction will be permitted.

2. The City of Spring Hill plan review is only for general conformance with City of Spring Hill Design Criteria and the City Code. The City is not

responsible for the accuracy and adequacy of the design, or dimensions and elevations that shall be confirmed and correlated at the job site. The City of Spring Hill, through approval of this document, assumes no responsibility other than that stated above for the completeness and/or accuracy of this document.

3. The contractor shall have one (1) signed copy of the plans (approved by the City of Spring Hill) with a state approval stamp on the title sheet and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.

4. Construction of the improvements shown or implied by this set of drawings shall not be initiated or any part thereof undertaken until the City Engineer or Director of Public Works are notified of such intent, and all required and properly executed bonds, contract agreements and permits are received and approved by the City Engineer, a pre-construction conference has been held and Notice to Proceed has been issued.

5. The City of Spring Hill Technical Specifications, latest edition, shall govern construction of this project.

6. All existing utilities indicated on the drawings are according to the best information available to the engineer; however, all utilities actually existing may not be shown. Utilities damaged through the negligence of the contractor to obtain the location of same shall be repaired or replaced by the contractor at his expense.

7. All backfill shall be tamped. Backfill within the right-of-way shall be to 95% compaction at optimum moisture.

8. All excavation beneath streets shall be backfilled with CA-5 rock to 4 feet back to curb.

9. Contractor shall not be allowed to work on Sundays. Holiday or Saturday work shall be as approved by the Director of Public Works.

10. All water required for the construction of this project shall be purchased from the City Utilities Department through the use of a fire hydrant water meter. Meters can be obtained from the Public Works Department for a nominal deposit, refundable upon the return of the meter.

11. Relocation of any water line, sewer line or service line thereof required for the construction of this project shall be the responsibility of the contractor at his expense.

12. The proposed waterline improvements shown by this set of drawings have been designed to provide for the following fire flow requirements as determined by the South Johnson County Fire Chief GPM. (Note to be placed on development drawings that contain areas zoned for higher densities than R-2.)

13. As requested by the Kansas State Historical Society (KSHS), if construction work uncovers buried archeological materials, work in the area will cease and KSHS will be contacted.

14. The contractor shall provide at least one (1) chemically treated, portable toilet unit, for every 20 workmen on the job site (in no case shall less than one (1) unit be provided). The units shall remain on the site during all active phases of construction of the sanitary sewers. The contractor shall enforce the use of the facilities by all personnel at the site. The unit shall be obscured from the public view to the greatest extent possible.

15. All MJ fittings to have Type 304 stainless steel T-Bolts and Teflon coated nuts.

16. All valves to have stainless steel hardware.

17. Install #12 copper type TW stranded tracer wire with all water lines. Tracer wire shall surface at all valves on the outside of the PVC valve box.

18. Valve boxes will be 6-inch Class 200 PVC with cast iron tops. Pipe must fit over valve bonnet or a bell end/increaser will be used.

19. T-posts shall be installed at each valve, 6 feet above finished grade.

20. All fire hydrants to have Type 304 stainless steel bolts below grade.

21. Inspection of the water line installation shall be the responsibility of the City Engineer. Any time the contractor is laying water line, the contractor will be required to provide prior notice to the City Engineer so as to allow scheduling of inspection.

SANITARY SEWERS

1. Development plans are approved initially for one (1) year. After one year, if construction of the improvements has not begun, they automatically become void and must be updated and re-approved by the City Engineer and Director of Public Works before any construction will be permitted.

2. The City of Spring Hill plan review is only for general conformance with City of Spring Hill Design Criteria and the City Code. The City is not responsible for the accuracy and adequacy of the design, or dimensions and elevations that shall be confirmed and correlated at the job site. The City of Spring Hill, through approval of this document, assumes no responsibility other than as stated above for the completeness and/or accuracy of this document.

3. The contractor shall have one (1) signed copy of the plans (approved by the City of Spring Hill) with a state approval stamp on the title sheet and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.

4. Construction of the improvements shown or implied by this set of drawings shall not be initiated or any part thereof undertaken until the City Engineer or Director of Public Works is notified of such intent and all required and properly executed bonds, contract agreements and permits are received and approved by

the City Engineer, a pre-construction conference has been held and Notice to Proceed has been issued.

5. The City of Spring Hill Technical Specifications, latest edition, shall govern construction of this project.

6. All existing utilities indicated on the drawings are according to the best information available to the engineer; however, all utilities actually existing may not be shown. Utilities damaged through the negligence of the contractor to obtain the location of same shall be repaired or replaced by the contractor at his expense.

7. All backfill shall be tamped. Backfill within the right-of-way shall be 95% compaction of optimum moisture.

8. All excavation beneath existing and proposed streets shall be backfilled with CA-5 rock to 4 feet back of curb.

9. All stub lines shall be laid on 1.00% grade unless approved otherwise.

10. 1000° denotes Minimum Basement Floor Elevation.

11. All water required for the construction of this project shall be purchased from the City Public Works Department through the use of a fire hydrant water meter. Meters can be obtained from the Public Works Department for a nominal deposit, refundable upon the return of the meter.

12. Contractor shall not be allowed to work Sunday. Holiday or Saturday work shall be as approved by the Director of Public Works.

13. Relocation of any water line, sewer line, or service line thereof, required for the construction of this project shall be the responsibility of the contractor and shall be at his expense.

14. The contractor shall install and properly maintain a mechanical plug at all connection points with existing

lines until such time that the new line is tested and approved.

15. To prevent damage to main sewer line, all blasting required for laterals (stub lines) shall be performed during blasting for the main line.

16. A pre-blast survey must be approved by the City Engineer or Public Works Director prior to the initiation of blasting operations.

17. As requested by the Kansas State Historical Society (KSHS), if construction work uncovers buried archeological materials, work in the area will cease and KSHS will be contacted. (This applies to all construction.)

18. For all manholes the developer will be required to install a minimum of one (1) green utility marker equal to Model CRM30, as manufactured by Carsonite International. The markers shall be a minimum of 6′-6″ in length and shall be provided with the following identification:

    CITY OF SPRING HILL, KANSAS
    SANITARY SEWER
    BEFORE DIGGING CALL
    1-800-344-7233 (KANSAS ONE-CALL)
    AND
    913-592-3317 (SPRING HILL PUBLIC WORKS)

    The marker shall be maintained by the developer until an occupancy permit is issued on the residence.

19. The contractor shall provide at least one (1) chemically treated, portable toilet unit for every 20 workmen on the job site (in no case shall less than one (1) unit be provided). The units shall remain on the site during all active phases of construction of the sanitary sewers. The contractor shall enforce the use of the facilities by all personnel at the site. The unit shall be obscured from the public view to the greatest extent possible.

20. No spoil (any material) will be placed as to cover or block access to manholes or cleanouts.

21. Inspection of the sanitary sewer line installation shall be the responsibility of the City Engineer. Any time the contractor is laying sanitary sewer line or setting manholes, the contractor will be required to provide prior notice to the City Engineer so as to allow scheduling of inspection.

STREETS AND STORM DRAINAGE

1. The City Engineer approves development plans and drainage reports initially for one (1) year. After one year, if construction of the improvements has not begun, they automatically become void and must be updated and re-approved before any construction will be permitted.

2. The City of Spring Hill plan review is only for general conformance with City of Spring Hill Design Criteria and the City Code. The City is not responsible for the accuracy and adequacy of the design, or dimensions and elevations, which shall be confirmed and correlated at the job site. The City of Spring Hill, through approval of this document, assumes no responsibility other than as stated above for the completeness and/or accuracy of this document.

3. The contractor shall have one (1) signed copy of the plans (approved by the City of Spring Hill) and one (1) copy of the appropriate Design and Construction Standards and Specifications at the job site at all times.

4. Construction of the improvements shown or implied by this set of drawings shall not be initiated or any part thereof undertaken until the City Engineer or Director of Public Works is notified of such intent, and all required and properly-executed bonds, contract agreements and permits are received and approved by the City Engineer, a pre-construction conference has been held and Notice to Proceed has been issued.

5. The City of Spring Hill Technical Specifications, latest edition, shall govern construction of this project.

6. All existing utilities indicated on the drawings are according to the best information available to the engineer; however, all utilities actually existing may not be shown. Utilities damaged through the negligence of the contractor to obtain the location of same shall be repaired or replaced by the contractor at his expense.

7. All backfill shall be tamped. Backfill within the right-of-way shall be to 95% compaction at optimum moisture.

8. All excavation beneath streets for drainage pipe less than 4 feet 0 inches in diameter shall be backfilled with CA-5 rock to 4 feet back of curb.

9. All sidewalks shown are for information purposes only. Sidewalks shall not be built as a part of this project; however, contractor shall be responsible for sidewalk ramp construction.

10. A minimum of one (1) compaction test and a maximum of two (2) compaction tests shall be performed by a qualified testing laboratory for every 1000 feet of street construction. Laboratory technicians shall collect soil samples for such tests. The contractor shall pay for all testing laboratory expenses.

11. All water required for the construction of this project shall be purchased from the City Public Works Department through the use of a fire hydrant water meter. Meters can be obtained from the Public Works Department for a nominal deposit, refundable upon the return of the meter.

12. Contractor shall not be allowed to work Sundays. Holiday or Saturday work shall be as approved by the Director of Public Works.

13. Relocation of any water line, sewer line or service line thereof required for the construction of this project shall be the responsibility of the contractor and shall be at his expense.

14. If pre-cast concrete storm sewer structures are to be used on this project, the contractor shall submit shop

drawings and have them approved by the City Engineer prior to fabrication of the structures. Failure to do so shall be cause for rejection.

15. A certification that all concrete to be used on the project will not contain fly ash or other pozzolans shall be submitted to the City Engineer prior to placing any concrete.

16. Monument boxes conforming to Standard Detail 13-5 shall be installed at all quarter section corners as involved in the street construction.

17. Where a new street is to connect to an existing street, all deteriorated or cracked asphalt within five (5) feet of the connection point shall be removed to a depth where sound material is found. If full depth pavement removal is required, the subgrade shall be re-compacted to 95% of standard maximum density.

18. As requested by the Kansas State Historical Society (KSHS), if construction work uncovers buried archeological materials, work in the area will cease and KSHS will be contacted.

19. During construction of new streets, proof rolling of the subgrade will be required prior to installation of the curb and gutter and prior to laying asphalt or concrete pavement. Proof rolling shall be done with a tandem dump truck loaded to within 1,000 pounds of its GVW with a weight ticket provided.

20. The contractor shall provide at least one (1) chemically treated, portable toilet unit, for every 20 workmen on the job site (in no case shall less than one (1) unit be provided). The units shall remain on the site during all active phases of construction of the sanitary sewers. The contractor shall enforce the use of the facilities by all personnel at the site. The unit shall be obscured from the public view to the greatest extent possible.

21. Bike and walking trails as per City of Spring Hill Design Criteria will require a proof roll.

22. Inspection of the street or storm water installation shall be the responsibility of the City Engineer. Any time the contractor is installing streets or storm water, the contractor will be required to provide prior notice to the City Engineer so as to allow scheduling of inspection.

23. Erosion control measures will be required to be installed prior to any grading or construction activities.

24. All projects which disturb an accumulative area of more than one (1) acre will be temporarily seeded and mulched to the requirements of Section 7200 “Seeding and Sodding” immediately after street construction (paving) is complete.

C. **APPROVAL BLOCK**. A signature block shall be required on the cover sheet of all plans or reports submitted for review and approval. All plans require the signatures of the City Engineer and Director of Public Works and the date of such signing for formal approval by the City.

The general form of the approval block shall be as follows:

APPROVED _____

APPROVED FOR ONE YEAR FROM THIS DATE _____

D. **PRIVATE IMPROVEMENTS**. Private improvements, if any, shown on public improvement plans, shall be clearly defined and marked as such. The City of Spring Hill will not maintain these improvements and, as such, an appropriate note shall be included on the drawings. These improvements, nonetheless, shall be designed and constructed to City Standards.

END OF SECTION

DESIGN CRITERIA FOR SANITARY SEWERS AND APPURTENANCES

A. DESIGN FACTORS. Sanitary sewers shall be designed for the ultimate tributary population. Due consideration should be given to current zoning regulations and approved planning and zoning reports where applicable. Sewer capacities shall be adequate to handle the anticipated maximum hourly quantities of sewerage and industrial waste together with reasonable consideration given to infiltration/inflow.

B. SEWER DESIGN. Sewers shall be designed for the total tributary area using the following minimum criteria:

The table below should be used to establish the Peak Flow for a project. Low density residential shall be considered as up to and including 3.5 residences/acre. Above that value will be considered high density residential. Extrapolations to determine the Peak Flow/Acre may be made for the specific size of the development (acres).

Area (acres)	**Residential**		**Commercial/ Industrial** (cfs/acre)
	High Density (cfs/acre)	**Low Density** (cfs/acre)	
Up to 100	0.022	0.019	0.0175
200	0.021	0.018	0.0165
500	0.017	0.014	0.0125
1,000	0.014	0.0118	0.01
1,500	0.0135	0.0108	0.009
2,000	0.013	0.01	0.008

Peak Flows can be increased by outside circumstances, such as other watershed contributions flowing by gravity or being pumped into the design watershed. If this is the case, the system design shall include these external factors.

Using this criteria, interceptor or main sewers and relief interceptor sewers 18-inch and larger pipes are to be sized flowing three-fourths full; up to 18-inch pipes are to be sized flowing two-thirds full. Lateral sewers may be designed to flow at capacity. All sewers are to be

designed for anticipated flows from a 50-year return interval storm. Design calculations shall be included on the general layout sheet of the project drawings.

C. **MAXIMUM SIZE**. The diameter of sewers proposed shall not exceed the diameter of the existing or proposed outlet, whichever is applicable.

D. **MINIMUM SIZE**. No public sewer shall be less than eight (8) inches in diameter. Stub-lines for service connections shall not be less than 6 inches in diameter.

E. **MATERIALS OF CONSTRUCTION**. Sanitary sewers shall be constructed of pipe material resistant to or protected from bacterial degradation, acid and alkaline solutions, normal sewer temperature variation, abrasion, and industrial wastes or other materials which may be transmitted by the collection system.

The following types of commercial pipe are approved for gravity sanitary sewer systems constructed in the City of Spring Hill:

PVC Pipe: See Standard Specifications Section 3000 for material and lining specifications.

Reinforced Concrete Pipe: See Standard Specifications Section 3000 for material and lining specifications.

Ductile Iron Pipe: See Standard Specifications Section 3000 for material and lining specifications.

The use of PVC pipe, ASTM D3034, shall be limited to residential or commercial areas as approved by the City Engineer and shall not be used for pipelines exceeding 21 inches in diameter, unless approved by the City Engineer or Director of Public Works. Concrete pipe shall be approved on a per project basis as recommended by the design engineer and approved by the City Engineer and Director of Public Works.

F. **MINIMUM SLOPE**. All sewers shall be designed to give mean velocities when flowing one-half full of not less than 2.0 feet per second.

All velocity and flow calculations shall be based on the Manning Formula using an N value of 0.013. The following slopes shall be minimum for the size indicated.

SEWER SIZE	MINIMUM SLOPE IN PERCENT FULL AND HALF-FULL FLOW
8″	0.40
10″	0.28
12″	0.22
15″	0.15
18″	0.12
21″	0.10
24″	0.08
27″	0.065
30″	0.058

Exceptions to these minimum slopes shall be made at the upper end of the lateral sewers serving under 30 houses. Said sewers shall have a minimum slope of 0.76%. All sewers larger than 30 inches in diameter shall have the slope approved by the City Engineer.

Where lateral sewers serve less than 10 houses, the minimum slope shall not be less than 1%.

G. **INCREASING PIPE SIZE**. When a sewer joins a larger one, the invert of the larger sewer should be lowered sufficiently to maintain a continuous energy gradient.

H. **HIGH VELOCITY PROTECTION**. In situations where flow is continuous and grit is a problem, or where velocities greater than 10 feet per second are possible, special provisions shall be made to protect against abrasion damage to the pipe and manhole. Such protection may be attained utilizing ductile iron pipe.

At a minimum, the lift station wet well and the discharge manhole at the end of the force main shall be lined with a protective coating, as well as other situations related to abrasive materials and flow velocity. The new concrete in these manholes shall be cured prior to application of the

protective coating (minimum of 28 days). The lining shall cover all interior surfaces from the bottom to the top, including the adjustment rings just under the cast iron ring and lid.

Approved manufacturers are:

- Quadex Aluminaliner – Quadex, Inc.
- SuperCoat - LaFarge Calcium Aluminates
- 405 Coating System - Raven Lining Systems, Inc.
- PLS-650 Perpetu Wall Liner System - Protective Liner Systems

An acceptable mechanical liner system installed by the precast manhole manufacturer is T-Lock Lining by Ameron International Corporation. Installers of these materials must be trained and certified according to the manufacturer's specifications. Installer certification shall be submitted to the City for review and approval prior to commencement of any work.

I. **ALIGNMENT**. All sewers shall be laid with straight alignment between manholes.

J. **MANHOLE CONSTRUCTION**. Manholes shall be installed at the end of each line; at all changes in grade, size, or alignment; at all intersections; and at a distance not greater than 400 feet for sewers 18 inches or less in diameter and not greater than 600 feet for larger sewers.

K. **MANHOLES**. The construction of all manholes shall conform to the details shown on Standard Details 31-1 through 31-4.

The minimum horizontal clear distance within the barrel of standard manholes should not be less than 4 feet. Manholes with connecting pipe diameters greater than 24 inches shall have a minimum inside clear dimension of 5 feet.

Drop manholes should be avoided as much as possible. However, an outside drop pipe shall be provided for a sewer entering a manhole at an elevation of 24 inches or more above the manhole invert. The outside drop pipe shall be protected against breaking or settling by the use of

concrete encasement. When PVC pipe is used for the drop pipe, gravel may be substituted for the concrete encasement around the drop pipe and fittings. The drop pipe shall have the same nominal diameter as that of the incoming sewer.

Without utilizing drop manholes, the difference in elevation between the invert of any incoming sewer and the invert of the outgoing sewer should not exceed 24 inches except where required to match crowns. When a sewer joins a larger one, the crown of the smaller sewer shall not be lower than the crown of the larger one. The minimum drop through manholes shall be 0.2 foot for manholes with greater than 45° turns and 0.1 foot for straight-through trough and up to 45° turns.

Where manholes are to be built in close proximity to streets, the top of manhole elevation shall be set within the following limits:

Minimum Elevation	1/4" per foot rise above top back of curb
Maximum Elevation	1/2" per foot rise above top back of curb

All sanitary sewer manholes shall be provided with green utility markers equal to Model CRM30, as manufactured by Carsonite International. The markers shall be a minimum of 6’-6” in length and shall be provided with the following identification:

CITY OF SPRING HILL, KANSAS
SANITARY SEWER
BEFORE DIGGING CALL
1-800-344-7233 (KANSAS ONE-CALL)
AND
913-592-3317 (SPRING HILL PUBLIC WORKS)

The marker shall be maintained by the developer until an occupancy permit is issued on the residence.

All manholes on unplatted land shall have the tops set 6-inches above existing ground elevation or 1.0 feet above the 100-year flood elevation, whichever is greater.

Any variation from the above top of manhole criteria will require a letter of explanation to be submitted with the drawings and be subject to approval by the City Engineer.

L. **SEWER CONSTRUCTION – GROUNDWATER BARRIERS.** Continuity of embedment material shall be interrupted by low-permeability groundwater barriers to impede passage of water through the embedment. Groundwater barriers for sewer lines shall be compacted soil consisting of one 4-foot long, solid plug by the full width of the trench at approximately the half-way point between manholes where the distance between manholes exceeds 280 feet. The 4-foot soil plug shall extend the full depth of the trench to the bottom of the trench. Refer to Section 6017 for soil and compaction requirements of the barriers.

M. **SEWER LOCATIONS**. Sanitary sewers shall be located within street or alley rights-of-way unless topography dictates otherwise. When located in easements on private property, access shall be provided to all manholes. A manhole shall be provided at each street or alley crossing. End lines shall be extended to provide access from street or alley rights-of-way where possible. Imposed loading shall be considered in all locations. Not less than 8 feet of cover shall be provided over top of pipe in street and alley rights-of-way and 5 feet in all other areas.

N. **CLEANOUTS AND LAMPHOLES**. Cleanouts and lamp holes will not be permitted.

O. **PROTECTION OF WATER SUPPLIES**. There shall be no physical connection between a public or private potable water supply system and a sewer, or appurtenance thereto, which would permit the passage of any wastewater or polluted water into the potable water supply.

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. The distance shall be measured from edge of pipe to edge of pipe. 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, the City will consider proposals providing equivalent protection by other methods on a case-by-case basis. Equivalent protection may require sanitary sewer construction with concrete encasement using controlled low strength material (CLSM).

When a water pipe and a sanitary sewer cross, and the sewer is 2 feet or more (clear space) below the water pipe, no special requirements of limitations are provided herein. At all other crossings, the sanitary sewer is to be constructed of one of the following materials:

a. Ductile iron pipe conforming to ASTM A536 or ANSI/AWWA C151/A21.51 with minimum thickness Class 50, and gasketed, push-on or mechanical joints in conformance with ANSI/AWWA C 110/A21.10 or ANSI/AWWA C111/A21.11.

b. PVC pipe conforming to ASTM D3034 with ;minimum wall thickness of SDR35, ASTM F679, ASTM F789, or ASTM F794, with gasketed push-on joints in conformance with ASTM D3212.

c. Reinforced concrete pipe conforming to ASTM C76 with gasketed joints in conformance with ASTM C361 or ASTM C443.

Where a new water main is laid across or though an area where there is an existing sanitary sewer, which is not constructed of one of the above specified materials and is 2 feet or less below the water pipe, the existing sewer shall be encased in concrete (using CLSM as specified in Section 3013) with a minimum thickness 6 inches for a 10-foot distance on each side of the crossing or the crossed section of sewer replaced to meet the above specified construction requirements.

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

P. **AERIAL CROSSINGS**. Adequate support shall be provided at all joints in pipes utilized for aerial crossings. All aerial crossings shall be approved by the City Engineer.

Q. **UNSEWERED DWELLINGS**. All existing addresses that will be provided access to the sewer that previously did not have sewer service available shall be identified. This identification shall include the approximate distance from the dwelling to the sewer.

R. **MAXIMUM SLOPE**. All sewers, which are designed to flow at 10 feet per second or greater, shall be reviewed by the City Engineer for approval or alternate design considerations.

S. **STUB LINES. Stub lines for service laterals will not be permitted in manholes.** Stub lines will be provided for all service lines requiring street crossings. Service lines for properties not requiring street crossings will be tapped and connected to the sanitary sewer main pipe at the time of building construction.

T. **LIFT STATIONS**. Acceptable lift stations are as follows:

1. Submersible Pump Lift Stations for all applications.

2. Before a lift station will be approved by the City, the City Engineer must receive and approve a **Design Memorandum** providing the following minimum required information:

   a. Introduction.

   b. Service Area and Land Use.

   c. Design Flows.

      1) Average daily flow.

      2) Peak flows.

   d. Site Design.

      1) Map, exhibits.

2) Location from 100-year flood plain.

3) Access (hard surface road with adequate sloping).

4) Fencing (protection/screening).

e. Hydraulic Design.

1) System curve(s).

a) Design point(s).

b) Static and total dynamic head.

c) System losses.

d) Hydraulic grade line of the pump and force main.

f. Pump Station.

1) Pump station’s design must provide firm pumping capacity to pump between a 10-year and 25-year storm event based on ultimate development with largest pump out of service. The overall capacity difference between the selected design pumping rate to the calculated flow from a 50-year storm event shall be maintained on-site.

2) Pump selection and components.

a) Type and model.

i) Submersible pumps manufactured by Flygt are the only acceptable pumps.

b) Pump curves.

c) Operating point(s).

d) Pump and motor efficiencies.

i) Maintain pump efficiency >60% over the design points.

e) Variable frequency drive (depending on application and size of pumps).

3) Controls (Multitrode as standard).

a) Level controls with Multitrode as primary and backup.

b) HOA standard package.

4) Wet well sizing. Design pump start/stop per the following criteria.

a) Motors less than 30 HP – Less than 10 start/stops per hour.

b) Motors greater than 30 HP – Less than 6 start/stops per hour.

5) Emergency overflow storage.

a) Minimum of 2 hours storage for the development’s ultimate design flow is required.

6) Emergency bypass pumping.

a) Above-ground, 6-inch Bauer connections are standard.

7) Odor control.

a) As required, depending on flows and length of force main.

8) Hoist system.

a) As applicable.

9) Heating, ventilation, air-conditioning.

a) As needed, based on complexity of the building.

10) Electrical supply.

a) Transfer switch for 3-phase generator.

b) Power feed from utility (3-phase).

c) Emergency disconnect (located outside pump station on post).

d) Utility power meter (located outside fenced area).

11) Monitoring system.

a) MicroComm system is required. The following summarizes minimum monitoring requirements.

i) Standard package alarms required.

ii) Power failure “built in.”

iii) High water (transducer is analog) backup system.

iv) Amp meter (analog).

v) Generator failure (digital).

vi) Communication “built in.”

vii) Pump failure (digital) – “Can have all combined to one alarm.”

viii) Excess pump starts “built in.”

ix) Flow monitoring (as applicable; flow meter rate “flow of day” analog).

x) Rain gauge (as required; in a pulse counter that is added when purchased.

xi) Seal failure (as required; digital) “Can have all combined to one alarm.”

xii) Fuel (analog) “Can be digital if only want a low-level alarm.”

xiii) Temperature monitoring (motor temperature is digital; outside temperature is analog).

g. Force Main Design.

1) Class 200 ASTM D-2241 PVC is standard.

2) Velocities at average daily flow and peak flow.

a) Maximum velocity – 8 feet per second, unless otherwise approved.

b) Minimum velocity – 2.5 feet per second, unless otherwise approved.

3) Identify minimum and maximum pumping pressures.

4) Air release valves.

5) Control valves (as required).

a) Gear-operated plug valve.

h. Emergency Power.

1) Systems by Kohler, Caterpillar, Gnerac, Onan, or approved equal.

a) Sound attenuation.

2) Fuel requirements (minimum tank size to provide 24-hour supply).

a) Natural gas (preferred).

b) Propane.

c) Diesel.

i. Safety.

1) Site lighting.

2) Concrete mounting pad for base mounting of davit arm.

a) The unit built by Unique Concepts, ltd., rated at 450 lbs.

b) Part number for base is 16190.

c) Available through American Riggers.

d) General information about the base dimensions and mounting requirements is available.

U. LOW PRESSURE SEWER SYSTEM. Low pressure sewer systems are not recommended. If a low pressure sewer system is necessary, the Design Engineer must submit plans and specifications along with a cost/benefit analysis prior to approval. All low pressure sewer systems must be approved by the City Engineer and Public Works Director.

END OF SECTION

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DESIGN CRITERIA FOR STREET IMPROVEMENTS

A. GENERAL. Proposed street improvements within the City shall conform to the pattern as established in the Spring Hill Comprehensive Plan as adopted by the governing body of the City of Spring Hill. Regarding transportation, the major goal stated in the plan is to "provide a safe and efficient transportation system which facilitates the movement of people and goods within the City."

To this end, street improvements within the City of Spring Hill shall be designed to conform with all applicable codes, regulations, and ordinances as established by the City. Plans for said improvements shall be submitted to the City Engineer and Director of Public Works for approvals, and all plans shall include all information as may be required or described hereafter.

B. FUNCTIONAL CLASSIFICATION OF STREETS. In fulfilling the goal of creating a "safe and efficient transportation system," the City must define geometric design standards for streets and highways, which would afford both adequate traffic mobility and suitable access to abutting property.

The Spring Hill Comprehensive Plan states that "the efficient movement of vehicles within any urban community is dependent on a balance between all types of street facilities..." Therefore, design standards must be defined by functional classification; i.e., expressways, major arterials, minor arterials, collectors, and local streets:

1. Arterial

   a. Expressway or Freeway: Since its main purpose is to carry through traffic movement, expressways and freeways are properly classified as arterials. However, owing to their unique geometric and access design, they are more appropriately the function of federal or state control. High operating speeds and controlled or limited access (usually confined to above- or below-grade interchanges) arterial

classifications. As a result, geometric design shall conform to those criteria defined by state or federal transportation agencies.

b. Major Arterial: A major arterial shall mean a street or highway that provides for rapid and efficient movement of large volumes of through traffic between sections of the City and across the urbanized area. It is not primarily intended to provide land access service. Therefore, the number of curb cuts on a planned major arterial shall be held to a minimum where they can be controlled and adequately protected.

   In general, the major arterial has full or partial access control, but is not restricted to controlled access facilities. Major arterials can be four to six lanes wide, with or without medians, and commonly can be found on the mile section lines of the City. Signalized intersections along major arterials should be spaced far enough apart to permit efficient two-way progressive movement of traffic between intersections at the desirable off-peak and peak hour operating speeds.

c. Minor Arterial: As does the major arterial, a minor arterial provides for the through traffic movement between areas and across the City. However, the minor arterial provides direct access with the abutting property. As a result, the minor arterial accommodates trips of moderate length at a somewhat lower level of service and lower operating speeds than the major arterial. Also, traffic signal progression may be less systematic than on the major arterial.

   The minor arterial interconnects residential, shopping, employment, and recreational activities at the community level. Although the minor arterial offers access to the abutting land uses, it does not penetrate identifiable neighborhoods. Furthermore, it is subject to required controls of entrances, exits and curb use.

2. Collector Street: The collector street provides traffic circulation within residential areas. Land access is a secondary function of the collector. The collector distributes trips from the arterials to the local street network. Collectors penetrate but should not have direct continuity through residential areas.

   Operating speeds should be 25 to 30 mph. Since speeds are slower and turning movements are anticipated, closer intersection/access spacing can be used than on arterials. Because land access is a secondary function of collectors, the number of lots fronting onto a collector should be held to a minimum in order to reduce the number of driveways, and thus, the number of friction points.

3. Service Street: The service street provides traffic circulation within commercial and industrial buildings and complexes from the arterial street system. Service streets should not have direct continuity with residential areas.

   Operating speeds should be 25 to 30 mph. Since speeds are slower and turning movements are anticipated, closer intersection/access spacing can be used than on arterials.

   Because service streets facilitate truck-related land uses, the special provisions associated with truck accessibility shall be considered within design. Wider turning radii and turning lanes shall be considered. Service streets shall not be utilized for backing or loading maneuvers. All such trucking maneuvers shall be handled on-site of the adjacent land uses.

4. Local Street: The major purpose of the local street is to provide direct traffic access to abutting land. Local streets can and do exist within residential, commercial, and industrial areas.

   Traffic movement on local streets is incidental and involves traveling to or from a collector facility. Therefore, trip length on the local street is short,

and as a result, both traffic volumes and operating speeds are usually low. Generally, through traffic is deliberately discouraged.

The development of a street system based on functional classes has numerous benefits, including the following:

1. The arterials can be designed to safely accommodate the high traffic volumes and high speeds.

2. Traffic control is simplified.

3. The pavement of designated streets can be designed to carry the high number of repetitions and heavy wheel loads. Other streets can be designed for a low number of repetitions and light wheel loads. Consequently, total maintenance costs are reduced.

4. Residential areas are not subject to through traffic, which makes them more desirable and safer places to live. Commercial office and retail land uses are concentrated in fewer but larger and better-designed developments. Strip development is reduced.

   Implementation of Design Criteria based on functional class will help ensure that the traffic capacity and level of service is maintained. This, in turn, will help preserve the regional accessibility (market area) of private development and help stabilize land use patterns and property values. Thus, preservation of the levels of service on all functional classes of the City's street system is mutually advantageous to the public and private sectors.

   Typical cross sections of these classifications are shown on Standard Details 13-1, 13-2, 13-2a, and 13-3.

C. STREET DESIGN STANDARDS

	Major Arterials	Minor Arterials	Collectors	Service Roads	Local Streets
	"B" & "E" Curb 12"Asphalt	"B" Curb 12" Asphalt 6"Crown	"B" Curb ~~12~~10"Asphalt ~~6~~4"-5"" Crown	"B" Curb 10"Asphalt ~~4~~4 ½""Crown	"B" Curb 8"Asphalt 3"Crown
Number of Traffic Lanes	4 - 6	2 – 5	2 – 5	2 – 5	2
Width of Traffic Lanes	12′	12′	12′	12′	12′
Left Turn Lanes	Double at Signals	Single or Continuous	N/A	N/A	N/A
Minimum R/W Width (FT)	120 FT	100 FT	60 FT	60 FT	50 FT
Design Volume (VPD) Range	28,000 to 42,000	12,000 to 28,000	1,500 to 12,000	1,500 to 12,000	Less than 1,500
Minimum Design Speed (MPH)	50 MPH	45 MPH	40 MPH	40 MPH	30 MPH
Operating Speed (MPH)	45 MPH	40 MPH	35 MPH	35 MPH	25 MPH
Stopping Sight Distance (FT)	400-475 FT	325-400 FT	275-325 FT	275-325 FT	200 FT
Minimum Radii Horizontal Curve	750 FT	500 FT	250 FT	250 FT	200 FT
Sidewalks*	5 FT (both sides)	5 FT (both sides)	4 FT (both sides)	Commercial: Both sides 4 FT Industrial: None Req'd	4 FT (one side)
On Street Parking	Prohibited	Prohibited	Permitted	Permitted	Permitted
Maximum Grade (percent)**	5%	6%	8%	8%	10%
Minimum Grade	.8%	.8%	.8%	.8%	.8%
Curb Radii (FT)	50 FT	50 FT	30 FT	30 FT	25 FT
Minimum Spacing					

of Similar Roadways	1 Mile	½ Mile	400 FT	400 FT	300 FT
Intersection* R-O-W Line to Near Edge of Curb Cut**	250 FT	200 FT	100 FT	150 FT	50 FT Minimum 75 FT Desirable

Street Design Standards footnotes:

***** See Section I regarding industrial and commercial zoning stipulations.

****** The maximum grade may be exceeded only upon written approval of the City Engineer. Such approval will be granted only in unusual cases where the grades within the acceptable limits cannot be obtained.

******* Curb cuts are not allowed on controlled access routes. For other major arterials, minimum distance to curb cuts shall be 200 feet.

D. **RIGHT-OF-WAY GRADING**. Within the limits of the right-of-way, the finished grade shall slope from 1/4-inch vertical to 1 foot horizontal (1/4" vert.:1' horiz.) minimum, to one-half-inch vertical to one foot horizontal (1/2" vert.:1' horiz.) maximum measured above the back of the curb. These gradients may be varied only upon written approval of the City Engineer.

E. **TANGENT LENGTH**. The minimum tangent length between reverse curves shall be 50 feet for local streets. No tangent will be required for radii longer than 500 feet. Because the minimum radii requirement for horizontal curves exceeds 500 feet, tangents are not required for arterials, collectors or frontage roads.

F. **OFF-CENTER STREET INTERSECTIONS**. Off-center street intersections shall be separated by a minimum centerline to centerline dimension of 150 feet.

G. **CONNECTIONS TO EXISTING PAVEMENTS**. Where new street construction is to connect to an existing street, a minimum of 5 feet of the existing pavement is to be removed to subgrade. This subgrade is to be prepared with that of the new improvement and repaved with the new construction. Existing pavement is to be removed at a saw cut for entire

width of street from curb face to curb face. If full-depth pavement removal is required, the subgrade shall be re-compacted to 95% of standard density.

H. **MINIMUM ANGLE OF INTERSECTION.** It is desirable for all intersections to meet at approximately a 90° angle. Skewed intersections should be avoided and in no case should the angle be less than 75°.

I. **SIDEWALKS.** Sidewalk construction shall typically follow the requirements in Standard Details 21-4 thru 21-8.

J. **STORM DRAINAGE.** All storm drainage works constructed in connection with street improvements shall be designed in accordance with APWA Section 5600.

K. **CUL-DE-SACS.** At locations where streets are to be terminated and a vehicular connection between adjacent streets is not required, a cul-de-sac may be permitted. Such cul-de-sac shall be constructed with a minimum radius of 39 feet to the back of the curb.

L. **TEMPORARY TURN-AROUNDS.** At locations where streets are to be temporarily terminated which will be extended at a later date, and said street extends beyond the intersection of an adjacent street more than five lots, a temporary cul-de-sac shall be constructed with a minimum radius of 35 feet. The temporary cul-de-sac shall be constructed of asphalt concrete with a minimum depth of 6 inches. Curb and gutter will not be required. The cul-de-sac shall be constructed within the limits of a permanent construction easement.

M. **MONUMENT BOXES.** Monument boxes conforming to Standard Detail 13-5 shall be installed at all quarter section corners as an element of the street construction.

N. **SIGHT DISTANCES.**

1. Stopping Sight Distance--Sight distance is the length of roadway ahead visible to the driver. The minimum sight distance available on a roadway should be sufficiently long to enable a vehicle driving at or

near the design speed to stop before reaching a stationary object in its path.

Stopping sight distance represents the sum of the brake reaction distance and the braking distance. These distances are measured from the height of the driver's eye to the height of the object (3.5 feet and 0.5 feet above the road surface, respectively). Design controls for stopping sight distances vary slightly for crest vertical curves and sag vertical curves, and are dependent on the algebraic difference in the grades as well as the design speed. Design Aids 3-1 and 3-2 illustrate the minimum stopping sight distances to be used in design of roadways.

2. Intersection Sight Distance--Sight distances at intersections vary from stopping sight distance. The intersection sight distance should be sufficient to permit a vehicle on the minor leg of the intersection to cross the traveled way without requiring the approaching through traffic to slow down. To allow this, an area free of visual obstruction is required at every corner of an intersection. This area is known as the sight triangle.

   An obstruction to vision shall be defined as an obstacle (i.e., a parked vehicle, a wall or commercial sign, bush or hedge, guardrail or fence, etc.) which forms a restriction to an assumed line of sight measured from the driver's eye height to a target some distance along the cross street.

   Every effort shall be made to select intersection locations so that the maximum sight distance is possible. As an element of this, location of intersections shall always consider the grade changes along the adjacent street in terms of possible sight obstructions.

3. Sight triangle requirements vary based on the type of intersecting streets and are summarized in the following table. All measurements are taken from the point of intersection of the extended curb lines of each intersecting street. The values in the table are

dependent on the travel speed of the vehicles on the intersecting street and on the typical vehicle which will approach the intersection. The standard assumed height of the driver's eye for a passenger vehicle is 3.75 feet above the roadway surface (6.0 feet above the pavement for a single unit truck or large semi). This relates to the line of sight required to detect an approaching vehicle on the cross street (regarded as a point 4.25 feet above the roadway surface.

Major Road Type	Required Clear Distance (ft)
Arterial	215
Collector	170
Residential	130

4. All corner lots within the City limits of Spring Hill (except those in the Central Business District) shall have a sight triangle free of visual obstructions from a point 20 feet back long the minor leg as measured from the point of intersection of the extended curb lines of each intersecting street to a point that varies with the street type and is stated in the table above. Such an area shall be and remain free of visual obstructions higher than 3 feet and lower than 10 feet above the roadway surface. Within the Central Business District, the sight distance triangle shall conform as closely as possible to the above specification for sight distance, as approved by the City Engineer and Public Works Director.

O. UNDERDRAIN. In areas that have known subsurface moisture problems, under-drains will be required. They shall be built as shown in Standard Detail 40-11.

All projects that are being designed and bid with City funds shall have a line item for 50-100 linear feet of under-drain. This will provide an established unit price for under-drain should it become necessary during construction. The plans shall note that the under-drain line item is a contingency item that may not be constructed with the project if it is not necessary. Projects not bid with City funds will not be required to have a contingency under-drain line item.

If during construction it does becomes apparent that there is a need for under-drain in a location that was not previously designed for under-drain, the City Engineer can require that the consultant submit a revised plan including under-drains that will provide for subsurface drainage. The standard detail is a minimum. Upon approval of the City Engineer alternate details for increased capacity may be allowed.

P. **PRIVATE STREETS**. All streets and roadways within any development, which are classified as “Private Streets”, shall conform to the Standards and specifications for public streets, as stipulated in the Technical Specifications and Design Criteria for Public Improvement Projects for the City of Spring Hill.

Q. **BICYCLE-PEDESTRIAN TRAIL SYSTEM**. Sidewalks constructed, as part of this system shall be 8 feet in width. If they are to be located within street right-of-way, they shall be constructed with concrete 4 inches in depth with all of the joints saw cut instead of tooled. If they are to be located on City property but not within the street right-of-way, they may be constructed, at the City Engineer’s or Director of Public Works discretion, of asphalt 4 inches in depth with a 4-inch crushed rock (AB-3) base underneath. The base must be Proof Rolled and meet or exceed 95% compaction.

END OF SECTION

DESIGN CRITERIA FOR
STORM DRAINAGE FACILITIES

A. GENERAL. This section sets forth the minimum technical criteria for the analysis and design of drainage systems in the City of Spring Hill. All development plans submitted for approval to the City of Spring Hill must be accompanied by an adequate storm drainage system analysis and design in accordance with the criteria as hereinafter described.

B. MINIMUM STANDARDS OF ANALYSIS. Unless otherwise approved by the City Engineer, Section 5600, "Storm Drainage Systems and Facilities," from the Standard Specifications and Design Criteria, Kansas City Metropolitan Chapter of the American Public Works Association, latest edition, shall be used for all storm drainage analysis and design.

C. ADDITIONAL REQUIREMENTS. The following requirements shall also be incorporated into all storm drainage analysis and design:

~~1. Where an enclosed storm drainage system is located along a side property line, it shall remain enclosed to a point 5 feet (minimum) beyond the rear property line.~~

~~2. The last inlet upstream of the point of discharge for an enclosed drainage system shall be equipped with a sedimentation device for removal of solids prior to discharge into the receiving stream.~~

~~3. If enclosed storm drainage systems and/or energy dissipation devices are located outside of the developer's property, the developer shall be responsible for acquiring the necessary permanent and temporary construction easements for proper construction and installation of these facilities. If the developer is unable to negotiate the required easements, the City will, upon written request from the developer, assist in acquisition of these easements. All costs associated with the easement acquisition will be the sole responsibility of the developer.~~

1. The interior slopes of all wet bottom detention/retention basins shall be lined with rip rap from 2' below the normal pool elevation to 2' below the top of the berm.

2. All piping for detention/retention basins shall have rip rap at the inlets and outlets to protect against erosion.

3. During each phase of a development, consideration shall be given to the need for installation of a temporary sedimentation basin. The final decision on the need for this basin will be made by the City Engineer.

END OF SECTION

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DESIGN CRITERIA FOR WATER LINE CONSTRUCTION

A. GENERAL. Proposed extensions of the water distribution system shall, in general, follow the pattern of constructing 12-inch water lines along all section lines and 8-inch water lines along all half-section lines. Deviations from this general policy may be deemed necessary by the City Engineer should the provision of adequate service to prospective customers or fire protection needs, existing or anticipated, in the area to be served warrant said deviations.

Hydraulic calculations shall be submitted for review with all commercial and industrial plans. Upon request by the Engineer, hydraulic calculations shall be submitted for review with residential plans. Typically, these calculations shall be shown on a drawing sheet included in the plans, near the front of the drawing set.

All commercial and industrial water lines shall be designed with a minimum of two (2) feed lines (looped system). Dead end lines will not be allowed without approval from the City Engineer and Public Works Director.

No public water line shall be constructed less than 6 inches in diameter. Where water lines less than 6 inches exist, it may be required by the City to upgrade the pipe size to conform to the 6-inch minimum requirement.

B. LOCATION OF WATER MAINS AND APPURTENANCES. Proposed water mains shall be so located within street right-of-way or a dedicated 10-foot water line easement to provide the least interference with the location of other utility lines. Street grades and elevations of proposed main shall be taken into consideration so that once constructed they will not require re-grading or relocation.

C. DEPTH. All water mains shall have a minimum cover of 42 inches. **Note**: Water main depths exceeding minimum cover should be avoided.

D. MATERIALS OF CONSTRUCTION. Ductile iron pipe or AWWA C900 Class 200 DR 14 PVC shall be used for all mains constructed in the City of Spring Hill.

The ductile iron shall conform to ANSI A21-51; ASTM A536, Grade 60-42-10; AWWA C151. The minimum pressure class for ductile iron pipe shall be 350 for 3-inch to 12-inch, 250 for 14-inch to 20-inch and 200 for 24-inch, unless otherwise designated by the City Engineer. All water mains shall be polyethylene encased and shall conform to ASTM A674.

AWWA C900 PVC, conforming to ASTM D1784; PVC 12454-B, 12454-C or 12454-D; cast iron pipe OD; Pressure class and wall thickness as specified herein. Pressure Class 200 and wall thickness of DR 14.

E. **FIRE HYDRANTS**. Fire hydrants shall conform to AWWA C502, and shall be, American Darling B-84-B, Kennedy K-81D or Mueller A-423.

Hydrants shall be traffic models with breakaway flanges and shall have one 4½-inch pump nozzle and two 2½-inch nozzles. All hydrants shall be furnished with auxiliary gate valves. All bolts below grade shall be Type 304 stainless steel.

Hydrants should be placed at or near street intersections, and at the end of permanent dead end lines (including cul-de-sacs), and at intermediate points when block lengths become long. Under no circumstances shall the spacing of fire hydrants exceed 500 feet in residential areas or 300 feet in commercial areas. Fire hydrant spacing in industrial areas shall be determined by the fire marshal. Fire hydrant installations shall conform to Standard Detail 50-2.

F. **LINE VALVES**. Gate valves shall be of the resilient-seated configuration and shall conform to the applicable requirements of AWWA C509. All valves shall be supplied with Type 304 stainless steel bolts.

Resilient-seat gate valves shall be American-80 "CRS" or Mueller A-2370-20 or approved equal.

Gate valves shall be used in all water mains 12 inches in diameter and smaller.

Butterfly valves shall conform to AWWA C504 and shall be Kennedy 50C, American C-1508, Mueller "Line Seal III", or approved equal. Butterfly valves shall be used in mains larger than 12 inches in diameter or where otherwise approved by the City Engineer.

Valves shall be placed in all straight runs of pipe at intervals not to exceed 800 feet. Where two lines intersect, a valve should be placed in each pipe on each side of the intersection. Valves should be so placed that any pipe line segment two (2) blocks long can be isolated from the general circulation without interrupting service in the rest of the system.

G. CONNECTIONS TO EXISTING WATER MAINS. Connections to existing water mains shall be made in such a manner as to provide the least amount of interruption to water service. In the event closing of valves to make a connection will affect a customer who cannot be without service, provisions shall be made on the plans for a temporary service. Where possible, connections to existing mains shall be made using tapping sleeves and valves as approved in the Technical Specifications of the City of Spring Hill.

When connections are made to an existing system under normal conditions, the exposed pipe and fitting interiors shall be wetted with 500 mg/L chlorine solution before closure. In emergency situations, the exposed interiors of the pipe and fittings are to be swabbed with a 1% chlorine solution.

Wetting and/or swabbing are not considered effective methods of disinfection when there is a potential for significant contamination of the main; i.e., sewage is detected in the trench during repairs. Therefore, in this case, disinfection by normal methods shall be required; that is, flushing, chlorinating and testing as described in Section 5200.

H. PROVISIONS FOR FUTURE EXTENSIONS OF WATER MAINS. At the termination of all water mains or at locations as specified by the City Engineer or Director of Public Works, a dead end assembly in accordance with Standard Detail 50-5 of the Technical Specifications of the City of Spring Hill shall be provided to allow for future water main extensions.

Fire hydrants shall be used at locations as required to provide for thorough flushing of all water mains in the project area. Water mains 8 inches and larger shall be provided with a fire hydrant for flushing, in accordance with Detail 50-3A.

I. THRUST BLOCKING. Reaction blocking of adequate size shall be provided at all tees, elbows and bends to resist all resultant thrusts due to hydrostatic pressure.

J. **HIGHWAY AND RAILROAD CROSSINGS**. All crossings of highways or railroads shall be made by boring or tunneling. Casing pipe shall be greater than or equal to the strength and integrity of the carrier pipe. This installation shall comply with all Federal, State and local regulations. The work shall be in conformity with all requirements and regulations and be under the control of the authority owning or having jurisdiction over and control of the right-of-way in each case.

K. **STREET CROSSINGS**. Open cutting of streets shall be allowed only where permitted by the Director of Public Works. At locations where open cutting is not permitted, the crossing shall be made by boring or tunneling. Crossings made by boring or tunneling shall require a casing pipe, as described in Section 3017, unless otherwise approved by the City Engineer or Director of Public Works. All work and materials shall be in conformity with all requirements of the Technical Specifications of the City of Spring Hill. The diameter and length of the casing pipe to be used shall be as determined by the City Engineer. All casings shall be supplied with mechanical casing spacers.

All temporary surfacing shall consist of cold-mix asphalt as a minimum.

L. **BORINGS WITHOUT CASING PIPE**. Borings without casing pipe are used only with the recommendation of the design engineer and approval of the City Engineer or Director of Public Works. The bore size shall conform to the following table.

Pipe Size	O.D.	Push-On Joint	Bore Size
6″ DIP	6.0	9.13	14″
8″ DIP	9.05	11.50	16″
10″ DIP	11.10	13.63	18″
12″ DIP	13.20	15.75	20″

Controlled low strength material (CLSM) shall be pumped into the borehole to fill the remaining voids.

M. **FIRE FLOW REQUIREMENTS**. Public improvement plans for waterline projects serving development sites other than single-family or duplex subdivisions shall be reviewed for fire protection sufficiency as determined by the Fire Marshal for the City of Spring Hill. The Fire Marshal shall determine the amount of water that is required for fire protection based on I.S.O. guidelines for the proposed type of structures to be built

within the development. The design engineer shall obtain the flow requirement and then determine if the existing and proposed waterlines can provide this flow based on existing operating conditions. Calculations verifying that the required flows can be met shall accompany the drawings when submitted for approval.

N. **END OF CUL-DE-SAC**. All cul-de-sacs shall be designed in conformance with Technical Specification 5030.

O. **PRIVATE FIRE LINES.** All water lines and fire hydrants within a development which are classified as "private fire lines" shall conform to the design and specifications of water mains, as stipulated in the Technical Specifications and Design Criteria for Public Improvement Projects for the City of Spring Hill. A private fire line shall be defined as a fire protection water main which only has connections to hydrants and/or building fire sprinklers.

1. Construction of all private water fire lines requires installation of an isolation valve and a backflow prevention device. If the point of connection of the private water fire line to the public water main is 75 feet or less, the backflow prevention device can be inside the building. If the distance of the point of connection of the private fire line to the water main is a greater distance than 75 feet, then the backflow prevention device must be located at the point of connection to the main. Variances from this policy must be approved by the City Engineer. Maintenance of the backflow prevention device and private water fire line shall be the responsibility of the property owner.

   A private fire line shall be defined as a fire protection water main which only has connection to fire hydrants and/or building fire sprinklers.

2. Public water service lines **shall not be connected** to private fire lines.

3. Cross-connections between a private water line used for fire protection and a public "potable" water main or water service line **shall be prohibited**. Private water fire lines are for fire protection only and are considered non-potable.

END OF SECTION

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REQUIREMENTS FOR
PUBLIC IMPROVEMENT PROJECT PLAN PREPARATION

A. INTRODUCTION. The following criteria is being established to provide a uniform system of plan preparation that will aid the engineer in preparing plans for work within the City of Spring Hill. It is not intended that the criteria be an iron-clad set of rules that would restrict the engineer from utilizing imaginative design; however, all items as described below shall be shown on the plans in some manner.

B. GENERAL. All plans and specifications for public improvement construction within either publicly-financed districts or privately-financed developments shall be prepared by a professional engineer licensed in the State of Kansas and submitted to the offices of the City Engineer and Director of Public Works for review. Subsequent to the review, the engineer will be notified of the approval of the plans as submitted, or of any necessary changes. (Refer to the section "Public Improvement Project Plan Submittal" for plan review procedures.)

Upon completion of the review and approval of the plans by the City Engineer and Director of Public Works, the following number of sets of plans (as approved) must be submitted for signing and distribution:

Sanitary Sewer and Water Projects.....3 sets *(with 3 extra cover sheets)*

All Other Improvement Projects.....4 sets

In addition, one set of approved plans shall be sent to each of the utility companies providing service in the proposed construction area.

The suggested plan sheet size is 22" x 36" or 24" x 36" with all sheets in a given set of plans being of the same size. Plan and profile shall be drawn on double or single plan and profile sheets to scales of 1 inch = 50 feet (horizontal) by 1 inch = 10 feet (vertical), unless otherwise approved by the City Engineer for special cases.

The plans shall consist of:

1. Title Sheet

2. General Layout Sheets

3. Plan and Profile Sheets

4. Cross-Section Sheets (Street Improvement Plans only unless otherwise required by the City Engineer.)

5. Standard and Special Detail Sheets to include street lighting layout/plan with corresponding easements

Each sheet should contain a sheet number, including the individual sheet number and the total number of sheets, the engineer's seal, proper project identification and date.

Where feasible, storm sewer construction details shall be incorporated into street construction drawings and shall include a sediment and erosion control design/plan.

C. TITLE SHEET. The following items shall be included on the title sheet.

1. Name of project

2. City project number

3. Index of sheets included in plans

4. A location map adequately showing project location in relation to major streets

5. A summary of plan quantities of principal items, such as:

   a. Pipe sizes, number of manholes, etc. (sanitary sewers)

   b. Length of curb and gutter, square yardage or tonnage of asphalt concrete pavement, etc. (streets)

   c. Pipe sizes, number of inlets, etc. (storm sewers)

   d. Pipe sizes and lengths, number of valves, etc. (water lines)

6. The project control benchmark shall be identified as to location and elevation; USGS datum. (Not required on water line plans.)

7. Name, address and telephone number of the consulting engineer and owner/developer.

8. List containing name and telephone number of each utility company.

9. Zoning

10. City Engineer’s and Director of Public Works’ signature line

11. Signature and stamp of Professional Engineer registered in the State of Kansas

D. GENERAL LAYOUT SHEET. The following items shall be included on the general layout sheet for all improvement projects.

1. A legend of symbols shall be shown which shall apply to all sheets.

2. North arrow and scale. Scale of the general layout map shall be 1 inch = 100 feet, unless otherwise approved.

3. Layout shall include names of subdivision, block designation, if any, lot designation, or proposed block and lots, all street names, and an accurate tie to at least one quarter section corner. An unplatted tract shall have an accurate tie to at least one quarter section corner.

4. Boundary line of project area.

5. A list of general notes to the contractor to include at least those notes indicated in the "Procedure For Public Improvement Project Plan Submittal" section of this manual.

6. Existing and final grading contours drawn at intervals not to exceed 2 feet in Johnson County and not to exceed 5 feet in Miami County. Intervals of less than 5 feet in Miami County may be required by the City Engineer, dependent on the character of the topography.

In addition, the following items shall be included on the general layout sheet for the particular type of improvement stated below.

7. Storm Drainage

   a. Drainage calculation summary table containing the following information.

      1) Pipe size and slope

2) Pipe capacity

3) Velocity

4) Time of concentration

5) Runoff coefficient

6) Incremental tributary acreage

7) Accumulative acreage

8) Rainfall intensity

9) Rainfall runoff

b. A site-grading plan, including the following information.

1) Property lines identified as to existing or proposed lot and block number

2) Elevation and location of nearest benchmark (USGS datum)

3) Final grading spot elevations shown for all corners of each lot

4) 100-year flood plain line with elevation

5) Sediment and Erosion Control design/plan

8. Sanitary Sewer and Water Lines

a. Location of all existing (water or sewer) lines properly designated within or adjacent to the project area (list City project name and number).

b. Connection point or points to existing facilities (tied to a known point on existing facility) and the type of connection to be utilized.

c. Location of all proposed (water or sewer) lines and appurtenances with designation and sheet number on which they appear in plan and profile.

d. Pre-blast survey limits.

E. PLAN AND PROFILE SHEETS. The following items shall be included on the plan and profile sheets for all improvement projects.

1. North arrows and scale.

2. Elevation and location of all applicable bench marks (USGS datum).

3. Existing and proposed streets with names and widths.

4. Property lines properly identified as to existing or proposed lot, block and subdivision.

5. All existing and proposed utilities (such as power, gas, oil, water, telephone, sewer, and other items) shall be properly located in conformance with the best information available in the records of the owner of such facilities, or field location, and identified as to size, material, and type of construction.

6. All existing and known proposed improvements within 75 feet each side of center line shall be shown at their proper locations. This shall include such existing items as paved streets, curbs and gutters, driveways, culverts, fire hydrants, utility poles, trees, shrubs, fences, walls, houses, and other such items, and shall be identified as to type, size, material, etc., as may be applicable. In case of new developments, some irrelevant items may be omitted.

7. All existing easement and right-of-way information recorded with the county.

8. Minor construction notes shall appear on the proper plan and profile sheets.

9. Locations and widths of existing and proposed sidewalks.

In addition, the following items shall be included on the plan and profile sheets for the particular type of improvement stated below.

10. Streets

    a. Horizontal curve data, vertical curve data, stopping sight distances and design speed.

    b. Gradient between vertical curves.

    c. Center line stations.

    d. Stations and grade at curb returns (at 1/4 points).

e. Profile shall show existing grade above center line as a dashed line, proposed finish grades or established street grades by solid lines.

f. Location of monument boxes.

11. Storm Drainage

a. Detailed alignment of the storm sewer, appurtenances, sizes of line, capacity, and other details relating to the storm drainage system, including inlet station and top and invert elevations.

b. Proper ties into existing permanent facilities.

c. Distances between the storm sewer and other existing or future utilities in the right-of-way or drainage easement.

d. Drainage channel, slope and cross-sections.

e. Existing and proposed street grades.

f. Proper elevations, slopes and lining for existing outfall ditches.

g. Locations of all bends and appurtenances.

h. Show size, slope and gauge (class) of each line on the profile.

i. Location, cross-section, capacity of, overflow swales. Show velocity in swale and erosion protection where necessary.

12. Sanitary Sewer

a. Detailed alignment of the proposed sewer with the manhole designation, either by station and angle shown at each manhole or dimensioned ties to property lines at reasonable frequent control points to provide unquestionable locations of the sewer within street right-of-way or on private property.

b. The channel centerline of waterways within 50 feet either side of centerline of sewer shall be shown.

c. All manholes shall be shown with manhole designation station and invert elevations. Drop manholes shall be designated as such. Invert elevations shown shall be the invert of the pipe in and out of the manhole. Proposed finish grade elevation of top of manhole shall be shown. Distance between manholes shall be shown as well as the gradient, pipe size, and type of material.

d. Results of all rock borings shall be shown at the proper locations.

e. Accurate elevations of either the first-floor surface or the basement floor surface shall be shown and identified for all existing and/or proposed structures for all building sites to be served by the proposed sewer system.

f. A uniform system of line and manhole designation shall be used subject to the approval of the City Engineer's office.

g. Station, slope and length of each stub-line.

h. Profile shall show existing grade above centerline as a solid line, proposed finish grades or established street grades by dashed lines, and shall show the flow line of any drainage channel, either improved or unimproved, within 50 feet either side of centerline. Each line shall be properly identified. The proposed sewer shall be shown as double solid lines properly showing the height of the pipe.

i. All utility crossings shall be shown on the profile view with approximate elevations given.

13. Water Lines

a. Alignment of the proposed water line dimensioned from curb lines or right-of-way lines.

b. Designation by station of all fire hydrants, line valves and fittings.

c. Results of all rock borings shall be shown at the proper locations.

d. All utility crossings shall be shown on the profile view with approximate elevations given.

F. CROSS-SECTION SHEETS. The following items shall be included on the cross-section sheets.

1. Street cross-section at each station showing existing grade by dashed lines and proposed grade by a solid line. Cross-sections to show existing grade lines a minimum of 10 feet beyond right-of-way lines. Show cut and/or fill quantities at each cross-section.

2. Center line elevation of top of pavement.

3. Cross-sections shall be shown at all intersecting streets and driveways.

4. Channel cross-sections shall be shown for all drainage channel improvements.

5. Additional cross-sections shall be shown as required to clearly describe the extent of the grading operations.

G. STANDARD AND SPECIAL DETAIL SHEETS. Detail sheets shall be included to show all details of appurtenances, materials and construction, whether or not covered by the Spring Hill, Kansas' Standards. Details shall conform to the City of Spring Hill Standards and are to be drawn clearly and neatly with proper identifications, dimensions, materials, and other information necessary to ensure the desired construction.

H. CONSTRUCTION RECORD DRAWINGS. Construction record drawings and digital copies of the construction record drawings (AutoCAD format) shall be submitted to the City Engineer and Director of Public Works upon completion of the project and prior to final acceptance of the project by the City of Spring Hill. The design engineer shall provide the Director of Public Works with two (2) sets of prints and the City Engineer with one (1) set of prints and one (1) copy of the digital files for all public improvement projects, corrected to show the project "as constructed" and shall accurately and completely denote all changes made during the course of the work. Each sheet within the plans shall be clearly marked as "Conforming to Construction Records" and shall include the date of revision and certifications by the design engineer.

These record drawings will not require field surveys unless significant changes were made to the design during construction. Typically, the only record drawings that will require field surveying will be record grading plans. The record grading plans shall include record elevations for all property corners, including the front corners, and all curb notches.

END OF SECTION

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PRIVATE IMPROVEMENT
DESIGN CRITERIA

A. GENERAL. Private improvement construction in the City of Spring Hill shall in all respects be designed to conform to applicable codes, regulations and ordinances as established by the City of Spring Hill. Plans for private improvements being made in conjunction with building construction shall be submitted through the Code Enforcement Department. All street, roadway, driveway, and sidewalk construction, public or private, shall conform to the Technical Specifications and Design Criteria for public improvements as stipulated herein.

Private improvements that are not being constructed in conjunction with new building construction or an addition to an existing building shall submit plans to the City Engineer for review and approval. Improvements for water line, sanitary sewer line, storm sewer line and street construction shall conform to the Design Criteria of the City of Spring Hill and/or the applicable sections of the Uniform Building Code, latest edition.

B. PARKING LOT CONSTRUCTION. Parking lot construction shall conform to the following Design Criteria and shall abide by all City of Spring Hill ordinances.

1. Materials for Construction. The following materials are acceptable for parking lot construction in the City of Spring Hill:

   a. Pavement. The pavement cross-section shall consist of full depth asphalt concrete (minimum of 4 inches); a combination of asphalt concrete surface (minimum of 2 inches) over a crushed rock base (minimum of 6 inches); or, portland cement concrete pavement (minimum of 5 inches) with 10 gauge welded wire mesh, on 6-inch centers each way, embedded 2 inches from the bottom surface of the slab.

   b. Driveway Entrances and Curbing Within Public Right-of-Way. These items shall meet the requirements of Section 1400, 2000, and 2100 of the Technical Specifications of the City of Spring Hill. They will be constructed of Class II air-entrained concrete.

c. Curbing. Parking lot curb shall be of 4000 psi air-entrained concrete.

2. Curb and Curb and Gutter. Concrete curbing shall be provided along the perimeter of parking areas and along drives connecting parking areas with public streets. Curbing shall have a 6-inch vertical face above the surface of the pavement. Curbs shall be constructed as cast-in-place. In areas of the lot adjacent to proposed future expansion, asphalt concrete curb may be used if approved by the City Engineer. The proposed future expansion shall be shown on the plans.

   All work within public right-of-way shall conform to applicable City of Spring Hill Standards. Driveway approaches shall be constructed with integral curb and gutter conforming to City of Spring Hill Type "B" curb and gutter. Transition to existing curb and gutter shall be made at saw joints in existing curb or at existing expansion joints. Construction and expansion joints, dimensions, elevations and surface finish shall match as closely as possible to that of existing adjacent curb and gutter. Expansion joints shall be placed where new curbing abuts existing curbing.

3. Drainage Facilities. All parking areas shall be provided with adequate drainage facilities as approved by the City Engineer. Enclosed storm sewers shall be used to collect and convey drainage on, across and through public right-of-way. All effort will be made, within the limits of the existing topography, to prevent stormwater runoff from parking lots from exiting through driveway entrances. If the design engineer can justify the need for stormwater to exit through a drive entrance, the maximum flow of water allowed shall be governed by the Design Criteria for storm drainage facilities for the City of Spring Hill for gutter flow. If the flow is in excess of the gutter capacity then it must all be picked up by a curb inlet prior to entering public right-of-way.

   Runoff calculations shall be in accordance with APWA Section 5600. All calculations shall be submitted to the City Engineer for review and approval. The City Engineer shall determine if stormwater detention will be required. Drainage structures located in the public right-of-way used and constructed as a portion of the storm drainage

facilities for parking lots shall be in accordance with the Technical Specifications of the City of Spring Hill.

4. Driveway Entrances. All commercial driveway entrances constructed within the public right-of-way shall be constructed of concrete with a minimum thickness of 7 inches (see detail in Section 2100). Each commercial or industrial property shall be allowed at least one driveway approach but may have more as long as the total maximum summation of the widths of all driveway approaches upon the property does not exceed 20% of the length of the real property that fronts the abutting City street. Should more than one driveway approach be desired, there shall not be less than 90 feet between the center lines of each driveway approach. In addition to the above, the following dimensions shall govern construction of driveway approaches:

   a. Width of Driveway Approach

      1) Commercial Driveway Approach - The width of commercial driveway approaches shall not exceed 35 feet or be less than 25 feet measured parallel to the center line of the street at the property lines for two-way driveway approaches; provided, however, that commercial property may be allowed to have a driveway approach not exceeding 52 feet, if said driveway approach does not exceed 20% of the length of the real property abutting the adjacent City street and a 4-foot raised median is placed within such driveway approach to divide the entrance and exit lane(s). The minimum width of a one-way driveway shall be 16 feet.

      2) Industrial Driveway Approach. The width of industrial driveway approaches shall not exceed 65 feet or be less than 25 feet measured parallel to the centerline of the street at the property lines for two-way approaches; provided that the minimum width for a one-way driveway shall be 16 feet.

   b. Corner of Adjacent Property Line Offset.

      1) Commercial or Industrial Driveway Approaches. When commercial or industrial driveway approaches

are located at or near a street intersection, in no case shall the distance from the property corner at the intersection be less than 75 feet to the near line of the nearest driveway approach, as extended to the street curb or pavement edge.

2) No commercial of industrial driveway approach shall be constructed having a tangent length between the curb return and the property line extended, of less than 12½ feet.

c. Driveway Offset. Either centerlines of opposing driveways shall align, or shall be offset no less than 75 feet. This condition shall not apply where a permanent median exists without break for these driveways.

d. Turning Radii.

1) Commercial Driveways. Commercial driveway approaches shall have a minimum radii of 15 feet.

2) Industrial Driveways. Industrial driveway approaches shall have a minimum radii of 25 feet. When a private improvement is determined to serve trucks with longer wheelbases, the City Engineer may require a greater minimum radii for driveway approaches.

3) Common Driveways. Driveways that are shared by adjacent property owners require that a common driveway (ingress/egress) easement be filed and on record at the County Register of Deeds office.

5. Construction on Public Right-of-Way Under State Jurisdiction or Control. All construction within right-of-way under the control or jurisdiction of the State of Kansas shall be reviewed and approved by the appropriate state agency prior to submittal of the plans to the City of Spring Hill. Plans submitted to the City of Spring Hill for review shall reflect all changes or corrections as required by that state agency and also outlined on the approved state permit.

~~5.~~ END OF SECTION

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PRIVATE IMPROVEMENT
PLAN PREPARATION

A. INTRODUCTION. The following criteria are being established to provide a uniform system of plan preparation for work within the City of Spring Hill related to private improvements.

B. GENERAL. All plans for private improvements shall be prepared by a professional engineer licensed in the State of Kansas and submitted to the City Engineer for review. Subsequent to the review, the engineer will be notified of the approval of the plans as submitted, or of any necessary changes.

Private improvements plans that involve water lines, sanitary sewer lines, storm sewer lines, or street construction shall be prepared in accordance with the plan preparation requirements detailed in Section 7 of the Design Criteria.

Private improvements involving parking lot construction shall meet the requirements outlined in Section 6 of the Design Criteria.

C. PARKING LOT PLANS. The following items shall be contained on the plans submitted for review for the construction of a new parking lot or an addition to and existing parking lot.

1. A location map, with north arrow, adequately showing project location in relation to major streets.

2. General site layout to include: Building location (if applicable), street names, lot and block designation, and an accurate tie to at least one quarter section corner. Unplatted tracts shall have an accurate tie to at least one quarter-section corner.

   All existing property lines, lot lines, street right-of-way lines and temporary and permanent easement lines shall be shown at their proper location. Street right-of-way lines and existing driveways shall be shown on both sides of the street that falls on the perimeter of the lot.

   All existing and proposed utilities, such as electric, gas, oil, water, telephone, sanitary sewer, storm sewer, and other applicable items located in conformance with the best information available in the records of the owner of such

facilities, or field location, and identified as to size, material and type of construction.

3. Include existing and proposed site contours for the site. Supplement the proposed contours with spot elevations at critical locations.

4. Show limits of paving and perimeter curbing. Indicate the location of parking stalls, including handicapped parking, and show all dimensions, radii and other significant geometric details.

5. The plans shall include a legend for the site layout detail and a sheet of standard details. The standard details shall include a profile view of the proposed curb(s), a section through the proposed pavement detailing pavement composition, a driveway entrance detail (use the City detail from Section 2100 if the entrance is from a public street), proposed drainage structures, and any other appropriate details as may be required for clarity or by request of the City Engineer.

6. Storm drainage facilities shall be shown in both plan and profile view. These views shall show inlet and pipe locations, size, material, gage, slope of pipe, and all invert and top of structure elevations. Include on the plan sheets a drainage calculation summary table containing information on: pipe size and slope, pipe capacity, velocities, time of concentration, runoff coefficient, incremental and accumulated tributary acreage, rainfall intensity, and the total rainfall runoff.

7. General construction notes as required.

END OF SECTION

STREET LIGHTING CONSTRUCTION
DESIGN CRITERIA

A. GENERAL. Proposed street lighting construction in the City of Spring Hill shall in all respects conform to the technical criteria for analysis and design of street lighting as set forth in this section. Plans shall be submitted to the office of the City Engineer for approval and shall include all information as may be required or described hereinafter. Plans shall be submitted concurrently with the street plans using the same project number but under separate submittal. Since street lights are installed by KCPL/Westar, the design engineer shall also provide a letter from KCPL/Westar indicating that all easements required for the street lighting are included on the final plat.

B. DESIGN PROCESS. The illumination design process involves the selection of the proper lighting equipment and the establishment of the geometry of the system in order to provide the most effective lighting system to satisfy the needs. The major steps of the design process are outlined as follows:

1. Existing Conditions. Determination of roadway facility and land use area classifications.

2. Selection of Illumination Level. The recommended average intensity of horizontal illumination may be determined based upon the classifications of roadway facility and area type.

3. System Characterization. Detailed calculations using selected light source types and sizes and luminary mounting height and spacing locations are employed in order to determine the average intensity of horizontal illumination.

   Based upon the selected equipment and geometrics, an isocandle diagram or computer program equivalent is employed to determine the minimum illumination level.

   The uniformity of illumination is checked by comparing the ratio of average maintained illumination to minimum maintained illumination, commonly referred to as the uniformity ratio, with the recommended criteria in order to determine optimal effectiveness of lighting system.

C. DESIGN CONDITIONS. Maximum spacing, consistent with good illumination design, should be emphasized. Luminary supports

are hazardous roadside objects and the total number should be minimized and/or strategically located behind sidewalks for safety considerations. Supports shall be set back as far as practical. In general, the pole setback distance from the face of the curb shall be 6 or more feet. In locations where the proper setback distance cannot be achieved, the use of breakaway pole bases is required.

Determination of light source size and type and luminary mounting height and spacing shall be based upon the required illuminance levels when the luminaries are at their lowest output. This condition occurs just prior to lamp replacement and luminary washing. Therefore, formulas calculating average illuminance shall include light loss factors relating to lamp lumen depreciation and luminaire dirt depreciation.

D. AREA CLASSIFICATION. The classification of urbanized areas shall be generally defined as follows:

1. Commercial. That portion of a municipality in a business development where ordinarily there are large numbers of pedestrians during business hours. This definition applies to densely developed business areas outside, as well as within, the central part of a municipality. The area contains land use, which attracts a relatively heavy volume of nighttime vehicular and/or pedestrian traffic on a frequent basis.

2. Intermediate. That portion of a municipality often characterized by a moderately heavy nighttime pedestrian activity such as in blocks having libraries, community recreation centers, large apartment buildings or neighborhood retail stores.

3. Residential. A residential development, or a mixture of residential and commercial establishments, characterized by a few pedestrians at night. This definition includes areas with single-family homes, town houses, and/or small apartment buildings.

E. ROADWAY CLASSIFICATION. The classification of roadways shall be generally defined as follows:

1. Freeway. A divided major roadway with full control of access and with no crossings at grade. This definition applies to toll as well as non-toll roads.

2. Expressway. A divided major roadway for through traffic with partial control of access and generally with interchanges at major crossroads. Expressways for non-commercial traffic within parks and park-like areas are generally known as parkways.

3. Arterial. The part of the roadway system that serves as the principal network for through traffic flow. The routes connect areas of principal traffic generation and important rural highways entering the City.

4. Collector. The distributor and collector roadways serving traffic between major and local roadways. These are roadways used mainly for traffic movements within residential, commercial and industrial areas.

5. Local. Roadways used primarily for direct access to residential, commercial, industrial, or other abutting property. They do not include roadways carrying through traffic. Long local roadways will generally be divided into short sections by collector roadway systems.

6. Alleys. Narrow public ways within a block, generally used for vehicular access to the rear of abutting properties.

F. RECOMMENDED ROADWAY AVERAGE MAINTAINED HORIZONTAL ILLUMINATION (IN FOOTCANDLES).

AREA CLASSIFICATION			
Vehicular Roadway Classification	**Commercial**	**Intermediate**	**Residential**
Freeway	0.6	0.6	0.6
Expressway	1.4	1.2	1.0
Major (Arterial)	2.0	1.4	1.0
Collector	1.2	0.9	0.6
Local	0.9	0.6	0.4
Alley	0.6	0.4	0.4

These are the recommended minimum values for average maintained horizontal illumination for the given type of roadway facility and land use area.

G. LUMINAIRE TYPE AND PLACEMENT. The following table and figure should be employed as a general guide for selection of lateral light distribution types, luminary placement and mounting heights:

GUIDE FOR LUMINAIRE LATERAL LIGHT TYPE AND PLACEMENT					
Side of Roadway Mounting			**Center of Roadway Mounting**		
One Side or Staggered	**Staggered or Opposite**	**Grade Inter-section**	**Single Roadway**	**Twin Roadways (Median) Mounting**	**Grade Inter sections**
Width up to 1.5 MH	Width beyond 1.5 MH	Width up to 1.5 MH	Width up to 2.0 MH	Width up to 1.5 MH (Each Pavement)	Width up to 2.0 MH
Types II-III-IV	Types III & IV	Type II 4-way	Type I	Types II & III	Types I 4-way & V

Street Lights are installed to either KCP&L or Westar specifications.

H. CALCULATING AVERAGE ILLUMINANCE. The basic formula for determination of average horizontal illuminance is as follows:

$$\text{Average Illuminance} = \frac{(\text{Lamp Lumens}) \times (\text{Coefficient of Utilization}) \times (\text{Light Loss Factor})}{(\text{Spacing Between Luminaries}) \times (\text{Width of Roadway})}$$

The spacing between the luminaries is the longitudinal distance if spaced in staggered or one-sided arrangement. This distance is one-half the longitudinal distance if luminaries are arranged in opposite spacing.

The light loss factor represents the luminary conditions at their lowest output level. The total factor is based upon the contribution of individual light loss factors such as lamp lumen depreciation, luminary dirt depreciation, ambient temperature, in-service voltage, ballast, lumen component depreciation, physical surroundings and burnouts. The light loss factor can be determined by tables from the equipment manufacturer for the given luminary type.

The coefficient of utilization is equal to the total of street side and house side coefficients of utilization as determined from the equipment manufacturer coefficient of utilization curves for the given luminary type, placement and mounting height.

I. DETERMINATION OF MINIMUM ILLUMINANCE. Minimum illumination is determined from the isofoot candle diagram or computer program

equivalent from the equipment manufacturer for the given luminary type, placement and mounting height.

J. **UNIFORMITY RATIO**. The basic formula for determination of the uniformity ratio is as follows:

$$\text{Uniformity Ration} = \frac{\text{Average Maintained Illumination}}{\text{Minimum Maintained Illumination}}$$

The uniformity ratio shall not exceed 4:1 and preferably should not exceed 3:1 except on residential streets, where 6:1 may be acceptable.

K. **CUTOFF**. The control of candlepower distribution shall be based upon engineering judgment and the area classification. The following table should be employed as a general guide for the selection of the cutoff type:

Area Classification	**Cutoff Type**
Commercial	Full Cutoff or Semi Cutoff
Intermediate	Full Cutoff or Semi Cutoff
Residential	Full Cutoff

L. **ELECTRICAL SYSTEM**. The electrical system shall comply with the Standards as listed in the American National Standard Practice for Roadway Lighting, the National Electrical Code and the National Electrical Safety Code.

END OF SECTION

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Agenda Item Review Sheet

To: Mayor and City Council
From: Frank H. Jenkins, Jr., City Attorney
Date: October 5, 2016
Meeting: October 13, 2016

Formal Item: Transition of elections and terms of office of the Governing Body from April election cycle to November election cycle.

Issue: Adoption of charter ordinance and regular ordinance necessary to implement mandated election changes.

Background: Effective January 1, 2017, the election law changes are as follows:

1. The general election of the Governing Body will be changed from April 2017 to the Tuesday following the first Monday in November 2017 and each such date thereafter. [K.S.A. 25-2107 (a)]
2. The term of members of Governing Body that expire in April 2017 will be extended to the second Monday in January of 2018 and on such date thereafter. [K.S.A. 25-21a01 (b)]

The new terms of office of the Governing Body are summarized as follows:

A. Mayor Steven M. Ellis elected April 11, 2013, elected term was to expire on April 2017.

   Term extended to 2nd Monday of January 2018 – General election of office Tuesday succeeding first Monday in November 2017.

B. Council Member Chris Leaton elected April 11, 2013, which elected term was to expire April 2017.

   Term extended to 2nd Monday of January 2018 – General election of office Tuesday succeeding first Monday in November 2017.

C. Council Member Scott Snavely, appointed on July 14, 2016 to the unexpired term of Council Member Chad Eckert was to expire on April 2017.

   Term extended to 2nd Monday of January 2018 – General election of office Tuesday succeeding first Monday in November 2017.

D. Council Member Clint Gillis, Jr. elected April 23, 2015, elected term was to expire April 2019.
   Term extended to 2nd Monday of January 2020 – General election of office Tuesday succeeding first Monday in November 2019.

E. Council Member Floyd Koder elected April 23, 2015, elected term was to expire April 2019.

   Term extended to 2nd Monday of January 2020 – General election of office Tuesday succeeding first Monday in November 2019.

F. Council Member Andrea Hughes elected April 23, 2015, elected term was to expire April 2019.
   Term extended to 2nd Monday of January 2020 – General election of office Tuesday succeeding first Monday in November 2019.

Analysis: To comply with the new law, the following ordinance is submitted for consideration of the Governing Body:

1. Charter Ordinance that provides for procedures for implementing the November Election Cycle. The changes are summarized as follows:

   A. Provides for the adoption the November Election Cycle.
   B. Affirms that it has adopted Charter Ordinance No. 26 which establishes the City has adopted the Mayor/Council of government; that the terms of office are four years; and it has adopted a vacancy filling procedure.
   C. Affirms that it has adopted Charter Ordinance No. 28 which establishes the procedures for appoint of the President of the Council.
   D. States that candidates are to file for office with the Johnson County Election Officer and not the City Clerk.
   E. Nomination petitions (write-in candidates) must be signed by 100 qualified elector or number of qualified electors of the City or equal to 1% of the ballots cast at the last general City Election, whichever is less. Note: The required number of signers of the petition is to be established by each individual city.
   F. Deletes Section 5 in Charter Ordinance No. 26 relating to vacancy in City Council due to military service. This provision was added to permit the appointment of former Councilmember Beck during his tour of duty in Iraq.

2. Regular Ordinance amending Rule 1 establishing an additional regular meeting for the second Monday in January following certification of the election mandated by House Bill 2104.

   Rule No. 1 of the Governing Body's Order of Business (Chapter One, Article 2 of the Municipal Code) presently states that the only regular meetings are held on the second and fourth Thursday of each month. K.S.A. 25-21a01 (b) now provides that the terms of office commence "the second Monday in January following certification of odd-year. The Act requires the City to conduct a regular meeting on the second Monday in January following certification of the election. This is the date the terms of office now begin as a result of shift of the elections to November. To allow elected officials to take office on the day their terms begin, it is recommended the City consider the adoption of the attached regular ordinance that amends its regular meeting ordinance (Rule No. 1 of the Governing Body's Order of Business - Chapter One, Article 2 of the Municipal Code) so that there is a regular meeting held on the second Monday in January following certification of odd-year elections.

Recommendation: Adoption of Charter Ordinance and regular ordinance to implement the changes in election cycle to November 2017 and such dates thereafter.

Alternatives:
1. Motion to adopt Charter Ordinance relating to the elections of the Governing Body and terms of office.
2. Motion to adopt Ordinance amending Rule 1 of the Governing Body's Order of Business establishing an additional regular meeting for the second Monday in January to comply with change to a November election cycle.
3. Motion to continue the ordinances pending further information from City staff.

Attachment: Charter Ordinance – Exhibit 1
Regular Ordinance – Exhibit 2

cc: Jonathan Roberts, City Administrator
Glenda Gerrity, City Clerk
Melanie Landis, Finance Director

Jim Hendershot, Director of Community Development and Interim Public Works Director
Richard Mann, Chief of Police
Natalie Lazenby, Human Resources Specialist

THE CITY OF SPRING HILL, KANSAS

CHARTER ORDINANCE NO. 36

A CHARTER ORDINANCE RELATING TO THE ELECTIONS FOR THE OFFICES OF MAYOR, COUNCIL MEMBER, AND COUNCIL PRESIDENT; EXEMPTING THE CITY OF SPRING HILL, KANSAS, FROM K.S.A. 12-104a; AMENDING SECTIONS 2, 3 AND 4 OF CHARTER ORDINANCE NO. 26 AND REPEALING EXISTING SECTION 5 OF CHARTER ORDINANCE NO. 26.

BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF SPRING HILL, KANSAS:

SECTION ONE. Charter Ordinance No. 26, exempting the City from the provisions of K.S.A. 14-103 and K.S.A. 14-207, is hereby affirmed, which provides the Mayor and five Council Members shall constitute the Governing Body of the City and shall be elected for four-year terms or until their successors are qualified.

SECTION TWO. Section 2 of Charter Ordinance No. 26 is hereby amended to read as follows:

"**Section 2. Election of City Council and Mayor, Terms of Office and ~~Vacancies~~Nonpartisan Elections.**

A. Nonpartisan Elections. City elections shall be nonpartisan. Laws applicable to elections occurring at the same time as city elections shall apply to city elections to the extent that the same are not in conflict with the provisions of Article 21 of Chapter 25 of the Kansas Statutes Annotated.

B. Election of City Council and Mayor, Terms of Office. The mayor and five council members shall constitute the governing body of the city and shall be elected for four-year terms or until their successors are qualified. ~~The mayor position shall be filled by election on the first Tuesday in April of 2013. Two council member positions shall be filled by election on the first Tuesday in April of 2013. The remaining three council member positions shall be filled by election on the first Tuesday in April of 2015.~~ The term of the mayor and those council members whose terms were to expire in April 2017 shall expire on the second Monday in January of 2018, when the succeeding mayor and council members elected in the November 2017 general election take office. Those council members whose terms were to expire in April 2019 shall expire on the second Monday in January 2020, when the succeeding council members elected in the November 2019 general election take office. The November general election shall take office the second Monday in January of the following year and after certification of the election."

SECTION THREE. Section 3 of Charter Ordinance No. 26 is hereby amended to read as follows:

"**Section 3. Existing Mayor and City Council Positions.** ~~The members of the Governing Body holding office at the time of the Governor's proclamation shall hold office for their existing terms and until their successors have been elected and qualified as provided for in Section 2 of this Charter Ordinance.~~ The incumbent members of the governing body shall continue in office for the duration of their terms as heretofore established."

SECTION FOUR. The City of Spring Hill, Kansas, by the power vested in it by Article 12, Section 5, of the Constitution of the State of Kansas, hereby elects to exempt itself from and make inapplicable to it, the provisions of K.S.A. 12-104a relating to failure in filling vacancies in office. Such referenced provisions are either enactments or a part thereof which are applicable to this City but are not applicable uniformly to all cities.

SECTION FIVE. Section 4 of Charter Ordinance No. 26, which reads as follows, is hereby reaffirmed:

"**Section 4. Vacancies.**

1. Vacancy in Office of Mayor. In case of a vacancy in the office of mayor, the president of the council shall become mayor until the next regular election for that office and a vacancy shall occur in the office of the council member becoming mayor.

2. Vacancy in City Council. In case of vacancy in the council occurring by reason of resignation, death or removal from office or from the city, the mayor, by and with the advice and consent of the remaining council members, shall appoint some ~~suitable~~qualified elector to fill the vacancy until the next election for that office.

3. In case any person elected as a council member neglects or refuses to qualify within 30 days after election, the council member shall be deemed to have refused office and a vacancy shall exist. The mayor may, with the consent of the remaining council members, appoint a suitable elector to fill the vacancy."

SECTION SIX. Existing Section 5 of Charter Ordinance No. 26 is hereby repealed.

SECTION SEVEN. **President of City Council.** Charter Ordinance No. 28, exempting the City from the provision of K.S.A. 14-204 is hereby affirmed, which provides that the City Council shall, at its regular meeting following any City election, elect one of its members as "President of the

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Council." When any vacancy shall happen in the office of Mayor, the President of the Council for the time being shall exercise the office of Mayor, and all the rights, privileges and jurisdiction of the Mayor, other than the appointment of officers or employees, until such vacancy be filled at the next City election or until such disability be removed, or in the case of temporary absence, until the Mayor shall return.

SECTION EIGHT. Any person desiring to become a candidate for City office shall file with the Johnson County Election officer, before the filing deadline established in K.S.A. 25-205, and amendments thereto, a declaration of candidacy on a form furnished by the Johnson County Election Officer as specified by the Secretary of State. The nomination petition must be signed by 100 qualified electors of the City of Spring Hill or a number of qualified electors of the City equal to 1% of the ballots cast at the last general City election, whichever is less.

SECTION NINE. It is hereby declared to be the intention of the Governing Body that the sections, subsections, paragraphs, sentences, clauses and phrases of this ordinance are severable, and if any phrase, clause, sentence, paragraphs, subsection or section of this charter ordinance shall be declared unconstitutional or otherwise invalid by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality or invalidity shall not affect any of the remaining phrases, clauses, sentences, paragraphs, subsections and sections of this charter ordinance, since the same would have been enacted by the Governing Body without the incorporation into this charter ordinance of any unconstitutional or otherwise invalid phrase, clause, sentence, paragraph, subsection or section.

SECTION TEN. Effective Date. This Charter Ordinance shall be published once each week for two consecutive weeks in the official city newspaper and shall take effect 61 days after final publication unless a sufficient petition for a referendum is filed, requiring a referendum to be held on this Charter Ordinance as provided in Article 12, Section 5, Subsection (c)(3) of the Constitution of the State of Kansas. If a sufficient petition for a referendum is filed, this Charter Ordinance shall become effective upon approval by a majority of electors voting thereon.

This Charter Ordinance, upon becoming effective, shall be recorded by the City Clerk in a book maintained for that purchase with a statement of the manner of adoption and a certified copy shall be filed with the secretary of state, who shall keep an index of the same.

Passed by the Governing Body, not less than two-thirds of the members elect voting in favor thereof, this _____ day of _____, 2016.

_____

Steven M. Ellis, Mayor

Attest:

_____

Glenda Gerrity, City Clerk

(SEAL)

Approved as to form:

_____

Frank H. Jenkins, Jr. City Attorney

DRAFT

ORDINANCE NO.

AN ORDINANCE AMENDING RULE 1 OF THE ORDER OF BUSINESS OF THE GOVERNING BODY, CHAPTER 1, ARTICLE 2 OF THE SPRING HILL MUNICIPAL CODE RELATING TO THE SCHEDULE OF THE MEETINGS OF THE GOVERNING BODY AND THE DEFINITION OF A QUORUM OF THE CITY COUNCIL.

WHEREAS, the City of Spring Hill is a city of the second class; and

WHEREAS, the 2015 Kansas Legislature enacted L. 2015, Chapter 88, House Bill 2104 which moved city elections from April of odd-years to November of odd-years and created new terms for the Governing Body and new election dates for those officials; and

WHEREAS, because of the change in election cycle, the terms of office must now begin on the second Monday in January following the certification of the election. The previous language of K.S.A. 25-2120 stated that the terms of office began at the "first regular meeting of the governing body following certification of the election results"; and

WHEREAS, the creation by the City of an additional regular meeting on the second Monday in January following certification of an election would allow all newly elected officials to take their oaths of office on the day that their terms begin; and

WHEREAS, because Rule 1 of the Order of Business of the Governing Body presently provides that all regular meetings commence at 7:00 P.M. on the second and fourth Thursday of each month, the Governing Body determines that it is necessary to amend Rule 1 to provide for an additional regular meeting on the second Monday in January following the certification of an election of Mayor and City Council members; and

WHEREAS, Rule 1 conflicts with K.S.A. 14-111, which defines the number of City Council members that constitute a quorum, the Governing Body determines Rule 1 should be amended to define a quorum to be a majority of the councilmen elect.

NOW, THEREFORE, BE IT ORDAINED BY THE GOVERNING BODY OF THE CITY OF SPRING HILL, KANSAS:

Section 1. <u>Amendment of Rule 1 of the Order of Business of the Governing Body</u>. Rule 1 of Section 1-202 of the Spring Hill Municipal Code Rule 1 is hereby amended to read as follows:

"Rule 1. The mayor and council members shall have regular sessions as follows:

A. On the second Monday in January following the certification of the election of the mayor or a city council member; and

B. On the second and fourth Thursdays of each month.

~~commencing~~The regular meetings shall commence at the hour of seven (7:00) p.m., and adjourned sessions at any other time they may deem proper.

The city council may conduct any business of the city during any of the regular meetings.

Special meetings may be called by the mayor, or acting mayor, on the written request of any three members of the council, specifying the object and purpose of such meeting, which shall be read at the meeting and recorded in the journal of minutes of the meetings of the council. In all cases it shall require ~~four of the five councilmembers elect~~ a majority of the membership of the city council to constitute a quorum to do business; but a smaller number may adjourn from day to day and may compel the attendance of absent members in such manner and under such penalties as the council, by ordinance, may have previously prescribed."

Section 2. Effective Date. This Charter Ordinance shall be published once each week for two consecutive weeks in the official city newspaper and shall take effect 61 days after final publication unless a sufficient petition for a referendum is filed, requiring a referendum to be held on this Charter Ordinance as provided in Article 12, Section 5, Subsection (c)(3) of the Constitution of the State of Kansas. If a sufficient petition for a referendum is filed, this Charter Ordinance shall become effective upon approval by a majority of electors voting thereon.

This Charter Ordinance, upon becoming effective, shall be recorded by the City Clerk in a book maintained for that purchase with a statement of the manner of adoption and a certified copy shall be filed with the secretary of state, who shall keep an index of the same.

Passed by the Governing Body by not less than two-thirds of the members-elect voting in favor thereof this _____ day of _____, 2016.

Approved by the Mayor this ____ day of _____, 2016.

_____

Steven M. Ellis, Mayor

Attest:

_____

Glenda Gerrity, City Clerk

(SEAL)

Approved as to form:

_____

Frank H. Jenkins, Jr., City Attorney