SUPPLEMENTAL AGREEMENT NO. 6
FOR PROFESSIONAL SERVICES
City of Olathe, Kansas

This Supplemental Agreement made this _____ day of _____, 202__, by and between the City of Olathe, hereinafter referred to as the "City", and HDR Engineering Inc., hereinafter referred to as the "Consultant".

WITNESSETH:

WHEREAS, the City and Consultant have previously entered into an Agreement, dated November 7, 2017 ("the Agreement"), FOR Professional Services Agreement for the Lone Elm Road, Old 56 Highway to 151st Street Improvements Project; **3-C-084-17** hereinafter referred to as the "Project"; and

WHEREAS, PARAGRAPH/SECTION B – Services Beyond the Scope of Services of the Agreement provides that Consultant will provide, with City's concurrence, services in addition to those listed in the Professional Services Agreement, when such services are requested or authorized in writing by the City.

WHEREAS, this Supplemental Agreement No. **6** between the parties heretofore is to provide Additional Professional Services for providing bridge construction drawings not included in the original contract, design of 8 decorative bridge column aesthetics, and field observation services for the Lone Elm Road bridge over the BNSF and project retaining walls for the Project as outlined in **Exhibit A** of this Supplemental Agreement No. **6**, attached hereto and incorporated herein by reference; and

WHEREAS, the City is desirous of entering into Supplemental Agreement No. **6** to pay the Consultant for additional services rendered to the City related to the Project; and

WHEREAS, the City is authorized and empowered to contract with the Consultant for the necessary additional professional services under the Agreement, and necessary funds for the payment of said services related to the Project are available and authorized under the Agreement.

NOW THEREFORE, the parties hereby agree as follows:

A. The SERVICES in EXHIBIT B of the Agreement is hereby amended as follows: See Exhibit A.

B. The total fee for the aforementioned additional professional services provided pursuant to this Supplemental Agreement No. **6** is **$278,811,** which raises the total fee for all services provided under the Agreement from **One million, three hundred and seventeen thousand, and six-hundred and sixty dollars ($1,317,660.00)** to **One million, five hundred and ninety-six thousand, and four-hundred and seventy-one dollars ($1,596,471.00)**.

IN ALL OTHER RESPECTS, the terms and conditions of the Agreement will remain in full force and effect, except as specifically modified by this Supplemental Agreement No. **6,** including all policies of insurance which will cover the work authorized by this Supplemental Agreement No. **6.**

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Agreement No. **6** to be executed as of the day and year first above written.

CITY OF OLATHE, KANSAS

By: _____.
Michael E. Copeland, Mayor

ATTEST:

_____
City Clerk

(Seal)

APPROVED AS TO FORM:

_____
City Attorney/Deputy City Attorney/
Assistant City Attorney

HDR Engineering, Inc.

By: Joseph Drimmel (Jan 21, 2020)

Joseph E. Drimmel, Senior Vice President
10450 Holmes Road, Suite 600
Kansas City, MO 64131

EXHIBIT A

Description of Services for Supplemental Agreement No. 6

This scope of services includes additional services to the original Design Consultant contract Project No. 3-C-084-17 "Lone Elm Road, Old 56 Highway to 151st Street Improvements" executed on November 7th, 2017. The additional services include providing bridge construction drawings and design effort not included in the original contract, design and construction documents for decorative bridge column aesthetics, and field observation services during 2020 construction of the Lone Elm Road bridge over the BNSF and the project retaining walls. The additional services are outlined below.

General Design Requirements

The consultant shall design the Project in conformity with the City of Olathe, KDOT, and federal design criteria appropriate for the Project in accordance with parameters outlined in the Original Agreement.

The additional services include:

Task 1: Supplement to Original Contract (Lone Elm Bridge over BNSF Final Design)

A. During the final design and detailing phase of the Lone Elm Bridge widening, the sheet list and design tasks increased above the original Scope of Services and Supplement #3. The original sheet list included 14 bridge sheets plus an extra 2 sheets for column aesthetics in Supplement #3 for a total of 16 sheets. The Final Plan submittal totaled in 35 bridge sheets plus two sheets of bridge approach slabs requiring modification to accommodate the concrete barrier and fence.

Additional tasks required during final design but also not identified in the Original Agreement include:

1) Fencing and handrail details for the bridge,

2) Roadway approach slab and abutment modifications,

3) Moment slab and barrier located adjacent to the NW corner of the bridge and approach roadway,

4) Abutment modifications for bridge sidewalk posts and approach slab seat and

5) Required pier cap strengthening.

These components were not identified until following Field Check design and were not assumed during the Original Agreement. Due to the complexities of the bridge design (widening an existing shallow steel girder bridge without adding additional foundation elements below ground and by the RR tracks), it was necessary for HDR to use more experienced senior staff during the steel framing and post tensioned pier cap design. Below is a description of each additional task that corresponds to the requested hour supplement.

1. **Bridge General Notes and Quantity Sheet.** Only one sheet included in original agreement, but two sheets were needed due to the amount of necessary KDOT standard notes and pay items in the summary table. *(1 additional sheet)*
2. **Construction Layout Sheet** *(no change)*
3. **(Items 3 and 4 from fee sheet) Abutment Modification Detail Sheets.** Two sheets were originally contracted and a total of four sheets for the abutments were necessary for the final plans. A sheet for bridge demo limits, including the abutments, and an abutment strip drain were added. Since the City and HDR concluded new approach slabs were required to provide a smoother ride transition at the ends of the bridge, the approach slab pedestal was added to the abutment as well as a strip drain behind the abutment per KDOT standards. Pipe penetrations thru the abutment were needed for the two conduits at each side of the bridge. Also the sidewalk column posts added additional detailing needs at the abutments and the wingwall extensions to accommodate the revised grading around the abutment wingwalls *(2 additional sheets).*
5. **Steel Girder Framing Plan Sheet** *(no change)*

6-7. Steel Design and Detailing. The original agreement assumed two steel detail sheets, but only one sheet was required for the details. However, the amount of additional effort required to design the steel framing overhang brackets used the hours allotted for this extra sheet. Also, additional engineer design time was needed since the capacity of the existing girders was closely maxed out and design steps were needed

to satisfy Design Code requirements for the bridge widening. This effort was not anticipated in the original agreement and this work required senior staff due to complexities and interpretation of the AASHTO Design Code.

8. **Slab Plan Sheets.** One sheet assumed in original agreement. In order to properly detail both the top and bottom mattes of rebar in the deck, the typical section of the bridge, and sidewalk overhang, two sheets were added. Additional sheets will aid the field construction process in interpreting rebar layout in the deck specifically around the aesthetic columns at the corners of the bridge. *(2 additional sheet)*

9. **Slab Repair Detail Sheet.** *(no change)*

10. **Concrete Barrier Sheets.** Only one sheet was assumed in original agreement, assuming dual dimensioning to cover both the left and right barrier. However, since the barrier limits were extended to include the concrete approach slabs and moment slab (not originally scoped) additional sheets were needed. A sheet for both left and right barrier were needed plus cross sections and other barrier details that were specific to the layout of the guardrail at each corner of the bridge. *(3 additional sheets)*

11. **Decorative Fence Detail Sheets, Outside Edges of Bridge.** One sheet was assumed for the fence with dual dimensioning assumed in original agreement. Fence limited eliminated the ability to use dual dimensions, and in the final plans a sheet for both left and right was required in addition to the fence details. The lengths and heights of each fence were different, requiring the need to show the aesthetic bridge/sidewalk columns on fence details. *(2 additional sheets)*

12. **Handrail on Top of Concrete Barrier Detail Sheets.** Original agreement assumed one sheet for the handrail also assuming dual dimensioning. But with the barrier extended onto the approach slabs and moment slab, a sheet for both left and right was required in addition to a fence detail sheet. The lengths and heights of each fence were different, requiring the need to show the aesthetic columns with the fence details. *(2 additional sheets)*

13. **Utility Support Detail Sheet** *(no change)*

14. **Rebar Bar Bill Sheet** *(no change)*

B. Bridge Final Plans – Sheets not assume or listed in the original agreement

1. **Pier Overhang Post Tensioning Detail Sheet.** Due to the additional dead load added to the bridge with the sidewalk overhang, it was determined during final design that the pier cap overhangs needed to be strengthened to carry this load. A post tensioning design was completed and detailed on one additional sheet. *(1 additional sheet)*

2. **Moment Slab Sheet.** None assumed in original agreement. Cast-in-place retaining wall was needed at the NW corner of the bridge to keep additional side slope fill surcharge off the existing MSE retaining wall by private property, a concrete barrier along the roadway and limits of the wall is required to protect the drop off at the wall. The concrete barrier is required anchorage to a foundation to resist traffic impact loads and moment slab is a standard method of design. *(1 additional sheet).* Moment slab detailing for the retaining wall in the NW quadrant of the CFI intersection was also not assumed during the original agreement.

3. **Standard Bridge Sheets.** Five additional KDOT Standard Bridge drawings/details were required in the final plans that were not assumed in the original agreement. *(5 additional sheets)*

4. **Bridge Approach Slab Sheets.** The original agreement did not include bridge approach slab sheets. Following the a field evaluation of the bridge HDR, the City and HDR both agreed that approach slabs at each end of the bridge are needed. This added 4 sheets to the plans with 2 of those sheets detailing required modifications with concrete barrier, handrail, fencing over the RR and sidewalk column posts. The approach slab rebar plan view layout was modified to accommodate the project requirements on the bridge. *(4 additional sheets)*

C. **Additional Bridge Quantity Calculations.** Additional effort was required for quantity calculations for additional plan sheets and bridge components in Task 1.01. A. 1-14 and B. 1-4.

D. **Quality Control and Quality Assurance.** Additional effort was required for the quality control and assurance for the additional plan sheets and details in Task 1.01. A. 1-14 and B. 1-4.

Task 2: Bridge Column Aesthetics

Bridge and Sidewalk Column (8 total) Aesthetics Details. Development of bridge aesthetic features was requested by the City prior to the Office Check submittal stage. Several options were developed and edited during this period, and a final concept was developed and selected by the City prior to the submittal of final plans. Task 2 includes scope of services not assumed in the original agreement including column decorative graphics, graphic details, column lighting system design and details, power source details, concrete forming details, specification of materials and components, bidding services, and submittal reviews. Detailed tasks include:

A. Develop single option for column graphics and lighting. Option will be based on Lone Elm tree graphic on the traffic and sidewalk approach sides for each of the 8 bridge sidewalk columns. Graphics for columns will be created using concrete formliner and decorative lighting of the 8 columns.

B. Prepare construction drawings for column graphics

C. Modify existing bridge column drawings and detail sheets from PS&E Plans

D. Bridge Column Lighting - modify street lighting plans to include column lighting

E. Prepare specifications and bidding phase services

F. Construction phase - review submittals

Task 3: Construction Phase Field Observation Services (Bridge and Retaining Walls)

Supplement the Olathe construction administration staff by providing daily field construction observation for the Lone Elm Roadway bridge, bridge approach pavement, barrier, guardrail, column aesthetics, and bridge components. HDR will provide daily observation of the proposed improvements shown in the bridge plans for the above mentioned bridge and bridge components of work. (City of Olathe will observe the remainder of the roadway and overall project improvements). Field observation for the structural construction will include performing daily diary, verification of contractor quantities, approval of pay application (for bridge and structural work), and observation of the work and performance per the project/Olathe/KDOT specifications and construction manual requirements. (Does not include materials testing for field services beyond observation staff manpower)

HDR's field observation services and service time will be limited to the anticipated schedule for the bridge construction. The schedule for the bridge construction observation is assumed to be four (4) months at 10 hours/day. It is assumed that the contractor will begin the bridge demolition by 4/2020, and be completed with the bridge construction by 8/2020. Approximately one week of both construction observation mobilization and close-out completion are assumed for the field staff.

A. 1/2 Month: Bridge start-up & pre-construction services

1. Pre-construction meeting, miscellaneous coordination with City construction administration staff, with BNSF, and contractor
2. Field Observation mobilization and pre-construction services

B. Month 1 - Field Observation (22 working days)

1. Daily Field observation of bridge and retaining walls. Attend field progress meetings.

C. Month 2 - Field Observation (22 working days)

1. Daily Field observation of bridge and retaining walls. Attend field progress meetings.

D. Month 3 - Field Observation (21 working days)

1. Daily Field observation of bridge and retaining walls. Attend field progress meetings.

E. Month 4 - Field Observation (22 working days)

1. Daily Field observation of bridge and retaining walls. Attend field progress meetings.

F. 1/2 Month: Bridge completion and close-out - Field Observation

1. Post-construction meeting, coordination with City, final preparation of field record set drawings for as-built preparation, BNSF and contractor final coordination.
2. Closeout

G. Project Management

1. Communication and Coordination with City of Olathe
2. Invoicing/Scheduling/Budgeting
3. Public Meeting - pre-construction "meet the contractor"

Item of Work	Sr. Project Manager	Senior Engineer	Project Engineer	Engineer / Landscape Arch.	CADD / Survey Technician II	Surveyor	CADD / Survey Technician I / Admin.	Total
Task 1: Structural Fee - Supplement to Original Contract								
1.01. Bridge Final Plans								
A. (R.) Bridge Final Plans (Original Contract ~ 14 Sheets. Supplemental No. 3 added 2 sheets for column aesthetic = to Olathe past bridge projects. Total contracted sheets = 16)(Actual total sheets for bidding plans = 35)								
1. General Notes and Quantity Sheet (1 additional sheet)			6	12	6			24
2. Construction Layout Sheet (no change)								0
3. Abutment No. 1 Modification Details for Sidewalk Sheet (1 additional sheet)			4	10	12			26
4. Abutment No. 2 Modification Details for Sidewalk Sheet (1 additional sheet)			2	6	6			14
5. Steel Girder Framing Plan Sheet								0
6. Steel Details Sheet (1 of 2)								0
7. Steel Details Sheet (2 of 2) (Did not use this sheet)			-8	-16	-4		-12	-40
8. Slab Plan, Light Blister and Typical Section Sheet (2 additional sheets)		2	18	20	20			60
9. Slab Repair Detail Sheet								0
10. Concrete Barrier Detail Sheet (3 additional sheets)			18	20	28			66
11. Decorative Fence Detail Sheet (2 additional sheets)			14	14	44			72
12. Handrail on Concrete Barrier Detail Sheet (2 additional sheets)			14	14	20			48
13. Utility Support Detail Sheet (work performed, but added to abutment details and structural steel details)								
14. Rebar Bar Bill Sheet								
B. (R.) Bridge Final Plans - Sheets not listed or assumed in Original Contract								
1. Pier Overhang Post Tensioning Detail Sheet (1 extra sheet)	12	20	12		24			68
2. Moment Slab Detail Sheet (1 additional sheet at bridge. Barrier, moment slab, bridge approach pavement location. 1 additional sheet for moment slab on roadway, CFI in the NW quadrant. Moment slab, MSE wall, concrete barrier location).	8	8	20	20	30			86
3. KDOT Standard Drawings - Customized for project (5 total sheets)				12	28			40
4 Bridge approach slab sheets (4 additional sheets)(24 hrs per sheet)	9	9	18	24	36			96
C. (Z.) Additional Quantities and Recapulation Tables	6	8	8	8	8			38
D. (BB.) Quality Control/Review of the Additional 19 Structural Sheets	11	11	12	10	10			54
2.1 Roadway								
A. PSE submittal - Remove the Ott Street and Parking Lot plans and quantities from the main project set.		4	8	32	40			84
B. Office check & PSE submittals - Modify the traffic control plans from Field Check to change from a 2 - construction season to a single construction season project.		8	4	24	24			60
	46	**70**	**150**	**210**	**332**	**0**	**-12**	**796**

Labor	
Sr. Project Manager @ $235.00/hr.	$10,810
Senior Engineer @ $225.00 /hr.	$15,750
Project Engineer @ $175.00 /hr.	$26,250
Engineer / Landscape Arch @ $120.00 /hr.	$25,200
CADD / Survey Tech II @ $115.00 /hr.	$38,180
Surveyor @ $140.00 /hr.	$0
CADD / Survey Tech I / Admin. @ $90.00 /hr.	-$1,080
Total Estimated Labor Costs:	**$115,110**
Expenses	
Printing and Reproduction	$0
Travel / Miscellaneous	$0
Total Estimated Expenses:	**$0**
Task 1: Estimated Fee (Expense + Labor)	**$115,110**

Item of Work	Sr. Project Manager	Senior Engineer	Project Engineer	Engineer / Landscape Arch.	Sr. Lighting Engineer	CADD Technician	Experiential Graphic Designer	Total
Task 2. Bridge Column Aesthetics								
A. Develop single option for column graphics and lighting. Option will be based on Lone Elm tree graphic on the traffic and sidewalk approach sides for each of the 8 bridge sidewalk columns. Graphics for columns will be created using concrete formliner and decorative lighting of the 8 columns.	16	6	6	6	8		30	72
B. Prepare construction drawings for column graphics	4	4	6	6	8		22	50
C. Modify existing bridge column drawings and detail sheets from PS&E Plans		8	4	4		8		24

D. Bridge Column Lighting - modify street lighting plans to include column lighting					8	8		16
E. Prepare specifications and bidding phase services		2	6	4	2	2		16
F. Construction phase - review submittals		2	4					6
	20	**22**	**26**	**20**	**26**	**18**	**52**	**184**

Labor

Sr. Project Manager @ $210.00/hr.	$4,200
Senior Engineer @ $240.00 /hr.	$5,280
Project Engineer @ $145.00 /hr.	$3,770
Engineer / Landscape Arch @ $130.00 /hr.	$2,600
Sr. Lighting Engineer @ $170.00 /hr.	$4,420
CADD Technican @ $110.00 /hr.	$1,980
Experiental Graphic Designer @ $98.00 /hr.	$5,096
Total Estimated Labor Costs:	**$27,346**

Expenses

Printing and Reproduction	$0
Travel / Miscellaneous	$0
Total Estimated Expenses:	**$0**

Task 2: Estimated Fee (Expense + Labor) **$27,346**

Item of Work	Sr. Project Manager	Senior Engineer	Field Observation Engineer	Engineer / Landscape Arch.	CADD / Survey Technician II	Surveyor	Administration	Total
Task 3. Field Observation Services (Bridge and Retaining Walls)								
1.01. Daily Field Observation of Structures								
A. 1/2 Month: Bridge start-up & pre-construction services								
1. Pre-construction mtg, misc. coordination with City, BNSF, and contractor	2		12	12				26
2. Field Observation mobilization and pre-construction services	2		32	10				44
B. Month 1 - Construction Field Observation (22 working days)								
1. Daily Field observation of bridge and retaining walls			220					220
C. Month 2 - Construction Field Observation (22 working days)								
1. Daily Field observation of bridge and retaining walls			220					220
D. Month 3 - Construction Field Observation (21 working days)								
1. Daily Field observation of bridge and retaining walls			210					210
E. Month 4 - Construction Field Observation (22 working days)								
1. Daily Field observation of bridge and retaining walls			220					220
F. 1/2 Month: Bridge completion and close-out - Field Inspection								
1. Post-construction mtg, misc. coordination with City, BNSF, and contractor			12					12
2. Closeout			32					32
G. Project Management								
1. Communication and Coordination with City of Olathe	12		12	12				36
2. Invoicing/Scheduling/Budgeting	4						8	12
3. Public Meeting - pre-construction "meet the contractor"	4		3	12				19
	24	**0**	**973**	**46**	**0**	**0**	**8**	**1051**

Labor

Sr. Project Manager @ $225.00/hr.	$5,400
Senior Engineer @ $240.00 /hr.	$0
Field Observation Engineer @ $125.00 /hr.	$121,625
Engineer / Landscape Arch @ $125.00 /hr.	$5,750
CADD / Survey Tech II @ $115.00 /hr.	$0
Surveyor @ $140.00 /hr.	$0
Administration. @ $110.00 /hr.	$880
Total Estimated Labor Costs:	**$133,655**

Expenses

Printing and Reproduction	$200
Travel mileage to project and miscellaneous expense	$2,500
Total Estimated Expenses:	**$2,700**

Task 3: Estimated Fee (Expense + Labor) **$136,355**

Total Fee (Tasks 1,2, & 3) **$278,811**