Discover.

TO:	All Plan Holders
FROM:	City of St. Charles, MO
PROJECT:	Kingshighway Signalization Improvement
DATE:	January 15th, 2016
SUBJECT:	Bid No. 4163 Addendum No. 1
FEDERAL PROJECT NUMBER:	CMAQ-7302(630)
CITY PROJECT NUMBERS:	C12STREETS021

This addendum forms a part of the Contract Documents for the Kingshighway Signalization Improvement Project. Contractors are required to acknowledge the receipt of addenda by signing and including all addenda with each bid form. **FAILURE TO ACKNOWLEDGE RECIEPT OF ADDENDUM MAY SUBJECT BIDDER TO DISQUALIFICATION.**

Notice to Bidders:

1. Sealed bids for CMAQ-7302(630) Kingshighway Signalization Improvement Project will be received at City Hall, Conference Room B on the 4th Floor, 200 North Second Street, St. Charles, Missouri until **2:00 p.m.** local time, on **January 28th**, 2016, and at that time will be publicly opened and read. Please note this is a different room than usually used for bid openings for the City.

2. JSP M – An outdated JSP was mistakenly inserted into the plans that called for optional detection at the signalized intersections. A new JSP has been uploaded which calls out the Iteris VantageNext video detection which will be utilized as part of this project. This new JSP M is to be used in place of the old JSP M.

3. The plans show two hydrants on site to be removed and relocated. One is located at Watson and the second is at Sibley. No pay item was created to account for this work. A new item is being added. Remove and Relocate Hydrant – 2 EA. The contractor may reuse existing equipment with approval of the Engineer. Replacement parts or new equipment required to complete this item will be considered incidental. A new itemized bid form has been uploaded which includes this new item. Please use it when submitting your bid.

Department of Public Works

Engineering Division

City of Saint Charles
200 North Second Street
Saint Charles, MO 63301
636.949.3237
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	Name and Title of Signer (Print or type)
	Contractor / Bidder Signature _____ (Signature of person authorized to sign)
	Date Signed:

End of Addendum No. 1

M. ITERIS VANTAGE NEXT TRAFFIC SIGNAL DETECTION

1.0 Description. The contractor shall furnish, install, and configure the Iteris VantageNext detection system to provide detection for all movements at the intersection and all turning movement traffic counts in all lanes at the intersections indicated in the plans.

1.1 Provide camera assemblies and cables, mounting brackets, camera control unit, surge protection, cabling, bracket poles and/or extension poles, and all other equipment required for a fully operational detection system as indicated on the plans.

1.2 Provide cables connecting the camera to the equipment in the cabinet and to ground, set up the camera assembly, and test for proper operation. All software and licensing required to deliver a fully operational detection system shall be included. The number of detection camera assemblies shown in the plans is for informational purposes only.

2.0 Materials. Detection camera assemblies and cables, mounting brackets, camera control unit, surge protection, cabling, bracket pole and/or extension pole, and all other equipment required for a fully operational detection system will be provided by the Contractor. All equipment shall be installed to manufacturer's specification.

2.1 The video detection system (VDS) shall consist of up to four video cameras, up to four video detection processors (VDP) capable of processing one video source each, one Central Control Unit (CCU), input/output extension modules, video surge suppressors and a pointing device, or any combination thereof.

2.2 The system shall include software that discriminately detects the presence of individual vehicles and bicycles in a single or multiple lanes using only the video image. Detection zones shall be defined using only an embedded software application. A monitor, a keyboard and a pointing device are used to place the zones on a video image. A minimum of 32 detection zones per camera view shall be available. A separate computer shall not be required to program the detection zones.

2.3 For the video input, each VDP will be supplied with video from the VDS Camera Sensor. The interface connector shall be an RJ-45 type and shall be located on the back of the CCU unit.

3.0 VDP, EM Power and Operating Temperature. The VDP and EM shall be powered by 12 or 24 volts DC. VDP and EM modules shall automatically compensate for either 12 or 24 VDC operation. VDP power consumption shall not exceed 7.5 watts. The EM power consumption shall not exceed 3 watts. The VDS shall operate satisfactorily in a temperature range from -30° F to +165° F (-34° C to +74° C) and a humidity range from 0%RH to 95%RH, non-condensing as set forth in NEMA specifications.

4.0 VDS CUU – CCU Sensor. This shall be supplied by the VDS manufacturer

4.1 Hardware, Power & Surge Suppression: The CCU shall be supplied in a standard one (1) Rack Unit (1U) 19" rack format. There shall be brackets to allow the CCU to be mounted under shelves where a 19" frame is not available. The CCU shall be powered from an 110V or 230V, 50Hz or 60Hz supply. CCU power consumption shall not exceed 20 Watts. CCU shall incorporate video surge suppression for each video input. The CCU shall be appropriately grounded to the cabinet ground rod using 14 AWG (2.5mm2) minimum. The CCU shall incorporate power surge suppression both on the input power and on the power supplied to the cameras. The CCU shall be grounded to the cabinet ground rod using 14 AWG (2.5mm2) minimum.

4.2 Communications – Ethernet, SDLC, Wi-Fi, Display, USB Ports, HDMI Ports & Interface: An Ethernet communications port with a RJ-45 type connector shall be provided on the front panel of the CCU. The Ethernet communications interface shall allow the user to remotely configure the system and/or to extract vehicle/roadway information. The CCU shall provide an SDLC connection to the Traffic Controller. The connector shall be a 'D-15' type, in compliance with NEMA TS-2 specifications. The CCU shall provide a Wi-Fi connection. The Wi-Fi connection shall be enabled and disabled by a switch on the CCU and have an indicator when the Wi-Fi connection is active. The CCU shall provide system status via an on-board LED display. The display shall indicate various system parameters, such as camera health, VDP health, firmware version and camera air temperature. The CCU shall have 2 USB 'A' ports on the front panel. These ports are for: keyboard and mouse functions, USB storage devices for bin data and video collection. The USB ports shall not require special mouse software drivers. The CCU shall provide an output to a monitor on an HDMI port. Extension modules (EM) shall be available to plug an extension module into the appropriate slot in the detector rack to provide additional open collector outputs. The Extension modules shall be available in both 2- and 4-channel configurations. The CCU shall provide four ports for connection to VDS camera sensors. The connector shall be an RJ-45 type. The CCU shall provide four ports for connection to VDPs. The connector shall be an RJ-45 type.

5.0 VDS Camera Sensor. This shall utilize a single shielded CAT5E or CAT6 cable for power and video. Cable termination at the camera shall not require crimping or special tools and shall only require a standard wire stripper and a screw driver. No connectors (e.g. BNC) shall be allowed. The camera sensor shall allow the user to set the focus and field of view via the VDS software. Camera sensor control from the controller cabinet shall communicate over a single Cat-5e or CAT6 cable. No additional wires shall be required. Please refer to manufacture specification for additional requirements.

6.0 VDS Software. Detection zones shall be programmed via an embedded application displayed on a video monitor and a keyboard and a pointing device connected to the CCU. The menu shall facilitate placement of detection zones and setting of zone parameters or to configure system parameters. A separate computer shall not be required for programming detection zones or to view system operation. All programming function shall occur on live video images, no snapshots or still images are allowed. Please refer to manufacture specification for additional requirements.

7.0 Construction Requirements.

7.1 The cable to be used between the camera and the CCU in the traffic cabinet shall be Cat-5e, shielded, direct burial. This cable shall be suitable for installation in conduit or overhead with appropriate span wire. Shielded RJ-45 connectors shall be used where applicable. The Cat-5e cable, RJ-45 connector, stripping and crimping tool shall be approved by the supplier of the video detection system, and the manufacturer's instructions must be followed to ensure proper connection. All installation work shall be completed per manufacturer specification and as indicated on the plans. Camera assemblies shall be installed and configured as required to provide full turning movement traffic counts in all lanes at each location.

7.2 The video detection camera shall be installed by factory-certified installers as recommended by the supplier and documented in installation materials provided by the supplier. Proof of factory certification shall be provided.

8.0 Acceptance Testing.

8.1 Develop a proposed test procedure for the installed Iteris VantageNext detection system and submit it to the Engineer for approval. It must include visual verification of vehicle detections being received at the signal cabinet as well as verification of traffic counting accuracy during peak traffic periods. Revise the proposed test procedure until it is acceptable to the Engineer.

8.2 Contractor shall confirm to the satisfaction of the Engineer that each detector's live status is viewable through the Commission's communication network before acceptance.

8.3 If the installed Iteris VantageNext detection system fails to operate properly, and the problem cannot be fixed, the contractor shall coordinate with the manufacturer to determine whether the camera assemblies, control units, or other equipment is defective. The contractor shall return defective equipment to the manufacturer for replacement. The cost of replacement shall be borne entirely by the contractor.

8.4 Provide all equipment and personnel needed to safely conduct the tests. Arrange for the Engineer's representative to witness the tests. Give the Engineer a report documenting the result of the tests.

9.0 Warranty. The supplier shall provide a limited three-year warranty on the video detection system. During the warranty period, technical support shall be available from the supplier via telephone within 4 hours of the time a call is made by a user, and this support shall be available from factory-certified personnel or factory-certified installers. During the warranty period, updates to VDP software shall be available from the supplier without charge.

10.0 Basis of Payment. Measurement and payment for all equipment required to provide a complete operational Iteris VantageNext detection system shall be paid for by the pay item of each Video Detection System. Note that the number of detection camera assemblies shown in the plans is for informational purposes only. No additional payment will be made for installation of additional camera assemblies if required at an intersection shown in the plans.

10.1 Additionally, extension poles may be required to achieve adequate mounting height for detection cameras at some locations. Any extension poles shall be installed as directed by the Engineer and, where required, painted ebony black to match existing signal equipment. No additional payment will be made for the provision and installation of extension poles. Payment will be made as follows: 902-49.75 Video Detection System, EACH.

KINGSHIGHWAY SIGNALIZATION IMPROVEMENT PROJECT

ITEMIZED BID: The bidder should complete the following section in accordance with Sec 102.7. The bidder proposes to furnish all labor, materials, equipment, services, etc. required for the performance and completion of the work, as follows:

ITEMIZED BID FORM

ITEM NO.	*DESCRIPTION*	*QUANTITY (REIMB.)*	*QUANTITY (NON-REIMB.)*	*TOTAL QUANTITY*	*UNIT*	*UNIT PRICE*	*UNIT PRICE WRITTEN IN WORDS*	*TOTAL COST*
	ROADWAY ITEMS							
201-20.10	CLEARING AND GRUBBING	0.35	0.65	1	LS			
202-20.10	REMOVAL OF IMPROVEMENTS	0.35	0.65	1	LS			
202-22.95	SAW CUT (ANY DEPTH/MATERIAL)	3857	170	4027	LF			
203-50.00	UNCLASSIFIED EXCAVATION	431	-	431	CY			
203-60.00	COMPACTING EMBANKMENT	102	-	102	CY			
304-05.04	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	1940	513	2453	SY			
309-13.08	CONCRETE BASE WIDENING (8" NON-REINFORCED)	183.8	30.5	214.3	SY			
405-30.10	TYPE "C" BITUMINOUS PAVEMENT (BP-1)	475.9	250.4	726.3	TONS			
405-30.30	TYPE "X" BITUMINOUS CONCRETE (BASE)	60.1	6.3	66.4	TONS			
407-10.10	TACK-LIQUID ASPHALT	180	110	290	GAL			
408-10.10	PRIME-LIQUID ASHALT	80	10	90	GAL			
412-10.04	PAVEMENT SURFACING AND TEXTURING (0" TO 4"), CONCRETE OR ASPHALT	3091	1936	5027	SY			
502-11.07	CONCRETE PAVEMENT (7 IN. NON-REINF)	38.6	34.2	72.8	SY			
603-10.30	ADJUST WATER SERVICE VALVE AND BOX TO GRADE	5	1	6	EA			
603-10.40	ADJUST WATER METER TO GRADE	8	1	9	EA			
603-10.99	ADJUST GAS SERVICE VALVE TO GRADE	9	1	10	EA			
603-10.99	RELOCATING HYDRANT	2	-	2	EA			
607-30.20	HANDRAIL FOR STEPS (ALUMINUM)	27	5	32	LF			
608-10.10	CONCRETE MEDIAN	9	-	9	SY			
608-50.07	PAVED APPROACH (7")	197.2	38.9	236.1	SY			
608-70.00	CONCRETE STEPS	1	-	1.0	LS			
609-10.10	CONCRETE CURB TYPE "S"	557	-	557	LF			
609-10.51	CURB AND GUTTER, TYPE A, 6" HIGH	94	44	138	LF			
609-10.51	CURB AND GUTTER, TYPE A, 8" HIGH	798	1018	1816	LF			
616-10.05	CONSTRUCTION SIGNS	49	-	49	SF			
616-10.25	CHANNELIZER (TRIMLINE)	85	-	85	EA			
616-10.34	DIRECTIONAL INDICATOR BARRICADE WITH LIGHT	7	-	7	EA			

ITEM NO.	DESCRIPTION	QUANTITY (REIMB.)	QUANTITY (NON-REIMB.)	TOTAL QUANTITY	UNIT	UNIT PRICE	UNIT PRICE WRITTEN IN WORDS	TOTAL COST
	ROADWAY ITEMS (CONTINUED)							
616-10.40	FLASHING ARROW PANEL	1	-	1	EA			
619-10.00	MOBILIZATION	1	-	1	LS			
627-40.00	CONTRACTOR FURNISHED SURVEYING AND STAKING	0.35	.65	1	LS			
703-50.20	FULL DEPTH PAVEMENT REPAIR	4340	-	4340	SF			
703-90.15	MODULAR BLOCK WALL (H<4')	354	32	386	SF			
JSP-1	REMOVE AND RESET PAVERS	1	-	1	LS			
JSP-2	BRICK PATTERN RAIDUS PROTECTOR	1	-	1	LS			
JSP-5	REMOVE AND REPLACE WALL AND FENCE AT KINGSHIGHWAY / WATSON INTERSECTION	1	-	1	LS			
JSP-6	DECORATIVE BOLLARDS AND CHAIN	1	-	1	LS			
	SUBTOTAL ROADWAY ITEMS							
	DRAINAGE ITEMS							
603-10.99	ADJUST CLEANOUT TO GRADE	2	-	2	EA			
604-20.30	ADJUST MANHOLE TO GRADE	8	-	8	EA			
604-25.40	CONVERT INLET TO MANHOLE AND ADJUST TO GRADE	5	-	5	EA			
604-21.95	REPLACE PRECAST INLET STONE AND ADJUST TO GRADE	2	-	2	EA			
604-90.52	REPLACE INLET SILL	2	-	2	EA			
604-12.01	SINGLE CURB INLET, UNTRAPPED	2	-	2	EA			
604-12.02	DOUBLE CURB INLET, UNTRAPPED	4	-	4	EA			
604-12.03	MULTIPLE CURB INLET, UNTRAPPED	1	-	1	EA			
604-18.01	GRATE INLET WITH SIDE INTAKE	1	-	1	EA			
726-13.12	12 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	88	-	88	LF			
726-13.15	15 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	55	-	55	LF			
726-13.18	18 IN. CLASS III REINFORCED CONCRETE PIPE CULVERT	22	-	22	LF			
	SUBTOTAL DRAINAGE ITEMS							
	SIGNING/STRIPING/SIGNAL ITEMS							
620-51.30	TYPE 2 PREFORMED MARKING TAPE (GROOVED) LEFT/RIGHT ARROW	3	7	10	EA			
620-51.32	TYPE 2 PREFORMED MARKING TAPE (GROOVED) COMBINATION STRAIGHT-LEFT/RIGHT ARROW	5	3	8	EA			
620-60.00B	4 IN. WHITE ACRYLIC WATERBORNE PAVEMENT MARKING PAINT	256	135	391	LF			
620-60.01B	4 IN. YELLOW ACRYLIC WATERBORNE PAVEMENT MARKING PAINT	1020	1884	2904	LF			
620-61.24	ACRYLIC WATERBORNE PAVEMENT MARKING PAINT, 24., WHITE	159	-	159	LF			

ITEM NO.	DESCRIPTION	QUANTITY (REIMB.)	QUANTITY (NON-REIMB.)	TOTAL QUANTITY	UNIT	UNIT PRICE	UNIT PRICE WRITTEN IN WORDS	TOTAL COST
	SIGNING/STRIPING/SIGNAL ITEMS (CONTINUED)							
620-61.25	ACRYLIC WATERBORNE PAVEMENT MARKING PAINT, 24., YELLOW	14	-	14	LF			
620-70.01	PAVEMENT MARKING REMOVAL	145	267	412	LF			
620-99.02	TYPE 2 SHARED LANE SYMBOL	3	5	8	EA			
620-99.02	TYPE 2 PREFORMED WHITE MIDBLOCK (GROOVED) 24"	83	10	93	EA			
902-02.13	SIGNAL HEAD, TYPE 3S	5	-	5	EA			
902-05.14	SIGNAL HEAD, TYPE 4B	5	-	5	EA			
902-08.11	SIGNAL HEAD, TYPE 1S, PEDESTRIAN	16	-	16	EA			
902-27.08	POST, SIGNAL 8 FT. OR 2.4 M	10	-	10	EA			
902-49.20	DETECTOR, PUSHBUTTON	16	-	16	EA			
902-49.75	ITERIS VANTAGENEXT VIDEO DETECTION SYSTEM	2	-	2	EA			
902-53.00	CONDUIT, 3 IN., TRENCH	291	-	291	LF			
902-73.00	CONDUIT, 3 IN., PUSHED	256	-	256	LF			
902-83.08	CABLE, 16 AWG 2 CONDUCTOR	1940	-	1940	LF			
902-83.10	CABLE, 16 AWG 5 CONDUCTOR	1950	-	1950	LF			
902-83.11	CABLE, 16 AWG 7 CONDUCTOR	920	-	920	LF			
902-88.11	PULL BOX, PREFORMED CLASS 2	9	-	9	EA			
902-88.12	PULL BOX, PREFORMED CLASS 3	2	-	2	EA			
902-91.00	BASE, CONCRETE	4	-	4	CUYD			
902-99.02	PULL BOX, PREFORMED FIBER OPTIC	1	-	1	EA			
902-99.02	SIGNAL CONTROLLER BASE WRAP	2	-	2	EA			
902-99.02	IMPLEMENT CITY/MODOT PROVIDED COORDINATED TIMING PLANS	2	-	2	EA			
902-99.03	CONDUIT, 1.25" HDPE	12	-	12	LF			
902-99.06	PAINTED INTERSECTION SIGNALS	1	-	1	LS			
903-50.68	SIGNAL SIGN, TYPE SHR2L-1	53	-	53	SF			
904-95.40	ADJUST PULLBOX TO GRADE	4	-	4	EA			
JSP-3	PERMANENT SIGNING	6.2	7.5	13.7	SF			
	SUBTOTAL SIGNING/STRIPING/SIGNAL ITEMS							
	BICYCLE/PEDESTRIAN FACILITIES ITEMS							
608-60.04	CONCRETE SIDEWALK (4" THICK)	521.4	173.1	694.5	SY			
608-60.98	TRUNCATED DOMES FOR CURB RAMPS (NEW CONSTRUCTION)	217.6	24.7	242.3	SF			
JSP-4	CURB RAMP	1	-	1	LS			

	SUBTOTAL BICYCLE/PEDESTRIAN FACILITIES ITEMS							
ITEM NO.	**DESCRIPTION**	**QUANTITY (REIMB.)**	**QUANTITY (NON-REIMB.)**	**TOTAL QUANTITY**	**UNIT**	**UNIT PRICE**	**UNIT PRICE WRITTEN IN WORDS**	**TOTAL COST**
	ROADSIDE ITEMS							
803-10.00	SODDING	726	262	988	SY			
804-10.00	TOPSOIL	363	131	494	CY			
806-45.99	INLET PROTECTION DEVICE	9	-	9	EA			
	SUBTOTAL ROADSIDE ITEMS							
	TOTAL PRICE (BASE BID) (ADD ROADWAY ITEMS TOTAL, DRAINAGE ITEMS TOTAL, SIGNING/STRIPING/SIGNAL ITEMS TOTAL, BICYCLE/PEDESTRIAN FACILITIES ITEMS TOTAL, AND ROADSIDE ITEMS TOTAL)							

_____ _____

COMPANY PHONE NUMBER

_____

ADDRESS

_____

BY:

_____

TITLE DATE