JAMES MADISON UNIVERSITY.

CONTRACT RENEWAL LETTER

Date:	February 18, 2020	
Contract #:	UCPJMU5507	
Service:	Vehicle Count Systems	
Renewal Period:	5/8/2020 to 5/7/2021	
Renewal #:	1 of 4 One-Year	
Issued By:	James Madison University Michael Morrison, Buyer Senior	Ph: 540-568-6181 Fx: 540-568-7935
Contractor:	Q-Free TCS Inc. 55 Union Avenue Sudbury, MA 01776	
Contract Administrator:	Bill Yates, Parking	

Description of Renewal Notice:

In accordance with the renewal provision of the original contract all terms, conditions, and specifications of the original contract remain the same during the contract renewal period, along with any modifications that have been incorporated up until this point. The contract pricing will remain the same and is attached to this renewal.

All invoices shall be submitted within sixty days of contract renewal term expiration as well as for each subsequent contract renewal period. Any invoices submitted after the sixty day period will not be processed for payment.

Return one executed renewal notice to my attention within ten days.

Q-Free TCS Inc.

By: [signature]

Dave Radford

Name (print)

EXECUTIVE VP — FEB. 19/20

Title — *Date Signed*

James Madison University

By: [signature]

Michael Morrison, MS, VCCO, CUPO

Name (print)

Buyer Senior — 2/18/2020

Title — *Date Signed*

JAMES MADISON UNIVERSITY

Contract #: UCPJMU5507
Contractor: Q-Free TCS Inc.
Renewal Period: 05/08/2020 - 05/07/2021
Commodity: Vehicle Count Systems

Renewal 1

Pricing Schedule	Discount/Rate
All Zones	See Attached Rate Sheet for products to be offered to the University
Charge Card Processing Fees: 0%	
No travel-related costs or travel time shall be charged.	

F. System Hardware Breakdown

The proposal is the recommended system design based on a typical garage as currently installed at the James Madison University:

F.1 Vehicle Count System Equipment

ADA SINGLE SPACE SENSOR SYSTEM:

QTY	PART#	DESCRIPTION	UNIT COST
1	HC TUS-100	**ADA Single Space Sensors:** • Smart design located at the end of each ADA parking space for higher visibility; • Measuring vehicle occupancy through ultrasonic distance measurement; • Occupancy status indicating LEDs: o ADA spaces units with blue status for available ADA space and red status for occupied space provided. • RS-485 multi-drop communications to area controller; and • Max. mounting height 3 m.	$65.00
1	SS-CP	**Communication Enclosures:** All components for local network wireless clusters connected to communication points (CP): • Single space communication point enclosure provided including: o Single space zone controllers: • Configured to manage inputs from all facility single space sensors; • Monitors single space sensors, maximum 96 single space sensors per area controller (3 bus lines); • Bus line maximum cable length 100 meters; • Total quantity depending on floor plan layouts; • Offline operation if communication to server fails; • Wireless communication chip & antenna; o Peripheral equipment (i.e. power supplies, etc.). • Equipment pre-configured in 18" x 16" x 8" NEMA 4 PVC indoor enclosure.	$1,435.00

ULTRASONIC DIRECTIONAL SENSORS FOR LEVEL/ZONE COUNTING:

QTY	PART#	DESCRIPTION	UNIT COST
1	**USDS**	**Ultrasonic Directional Sensors:** • Three (3) unit cluster configuration at wide garage/level entrances/exits and single unit standard configuration at standard width garage/level entrances/exits provided; • Built in central processing unit to control sensor logic; • Built in self-test diagnostics; • Maximum mounting height 8 ft; • Directional counting of vehicles; • Maximum effective speed 12 mph; • 24 VDC low voltage; • Output: plus-minus pulses and/or serial interface via RS-485; • Max. 24'/Delineation required for optimal cluster counting accuracy; • Max. 12'/Delineation required for optimal standard counting accuracy; • Dimensions: 74" L x 2.75" H x 2.5" W; and • Weight: 15.5 lbs. *NOTE:* • *Patent pending;* • *Proximity of vehicles under sensor can skew accuracy;* • *Spacing of sensors depends on garage floor layout and is customized per installation; and* • *Q-Free is not responsible for accurate system counts if proper lane delineation, if required, is not implemented, and maintained by others.*	**$885.00**

1	**USDS-CP**	**Communication Point Enclosures:**
		All components for local network wireless clusters connected to USDS communication points (CP).
		• Ultrasonic directional sensor communication point enclosures provided including:
		  ○ Wireless communication equipment (i.e. modems, power supplies, etc.);
		  ○ Power supplies for USDS and/or signs; and
		  ○ Peripherals, etc.
		• Equipment pre-configured in 14" x 12" x 6" NEMA 4 PVC indoor enclosures.
			$874.00

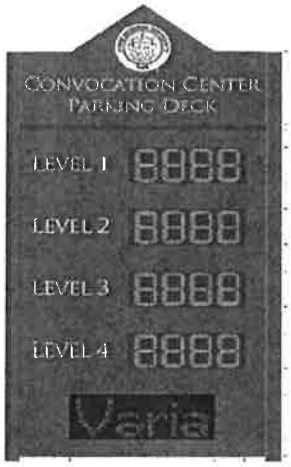
ADDITIONAL COMMUNICATION EQUIPMENT:

QTY	PART#	DESCRIPTION	UNIT COST
1	RP	**Repeater Communication Point Enclosure:** All components for local network wireless clusters connected to repeater communication points (RP) to ensure proper wireless communication. • Repeater point enclosure provided including: o Wireless communication equipment (i.e. modems, power supplies, etc.) • Equipment pre-configured in 14" x 12" x 6" NEMA 4 PVC indoor enclosures	**$795.00**
1	GW	**Gateway Enclosure:** All components for local network wireless clusters connected to wireless gateway (GW). o Wireless gateway enclosure provided including: ▪ Wireless communication equipment (i.e. gateways, power supplies, etc.). o Equipment pre-configured in 14" x 12" x 6" NEMA 4 PVC indoor enclosure *NOTE: Wireless gateway (GW) must be physically connected to the existing customer network or directly to the PGS server.*	**$1,242.00**

PERIPHERAL EQUIPMENT:

QTY	PART#	DESCRIPTION	UNIT COST
1	DP	**Directional Delineation Posts:** • Lane delineation equipment used to ensure proper vehicle counts; • Used to properly channel traffic under count sensor; • 36" standard post; • Includes two (2) reflector stripes; • Adhesive pads provided; • Installation by others; • Max. 24'/Delineation required for optimal cluster counting accuracy; and • Max. 12'/Delineation required for optimal standard counting accuracy. *NOTE:* • *Final quantity of required units is subject to site evaluation due to traffic flow concerns* • *Q-Free does not accept any responsibility for replacement of delineators if damaged or destroyed due to traffic flow. The delineators are placed to ensure proper system performance and are not designed to sustain extensive abuse due to traffic flow or abuse.*	**$49.00**

GARAGE ENTRY SIGN:

QTY	PART#	DESCRIPTION	UNIT COST
1	**L4MP/VMS**	**Garage Entry Sign (Sample Sign Design):**  *Sample Sign Design* • 4-Level garage entry sign indicating space availability for each garage level at garage entrance/s; • VMS display for custom messages; • Approximate dimensions: 9'6" H x 48" W x 6" D; • Single sided sign; and • Total of (4) space availability displays per sign cabinet: o 4-Digit double stroke seven segment display; o 7.5" LED Character height; o Number of spaces and OPEN in green; and o FULL in 6" single stroke red LEDs. • Total of (1) variable message display per sign: o Ability to display 2 lines of 4.4" text with up to 12 characters per line; o Amber color LEDs. • White reflective vinyl lettering; • 120 VAC; • Will match existing single corporate color if required. • Includes transport and installation on footers provided by others *NOTE:*	**$28,707.00**

QTY	PART#	DESCRIPTION	UNIT COST
		• Sign price only for quoted sign dimensions, design and mounting. Changes to sign design, dimensions, mounting etc. will require a new quote. • Footers by others	
1	PM	**Double Post Mount**	**Incl.**
1	XBEE-SIGN	**Wireless Communication Equipment for Sign Location:** • Includes 120 VAC wireless modem, antenna, peripherals, etc. for sign location	**$712.00**

QTY	PART#	DESCRIPTION	UNIT COST
1	ITS-420	**ParQSense Smart Sensors:** • Dual detection smart in-ground sensors ○ Radar and magnetic field detection • Accuracy at 99%+ • Robust sensor for every environment • Quick installation of 4 min per sensor estimated depending on site conditions • Super long range proprietary RF communication to centralized communication gateways • Dimensions: 4 1/3" diameter; and • Weight: 1 lbs.	**$134.00**
1	MP55	**Component Epoxy for Sensor Installation**	**$47.00**
1	ITS-950	**ParQSense Base Station** • ParQSense Base Station/s for ParQSense Smart Sensors ▪ Proprietary RF network for sensor communication • Base stations centrally installed may service more than (1) lot based on location	**$1,725.00**
1	ITS-950/CP	**Communication Enclosure for ParQSense Base Station** • Includes cellular modem & peripherals for cellular communication to central software system	**$1,575.00**

QTY	PART#	DESCRIPTION	UNIT COST
1	LOOP-CP/2	**Communication Point Enclosures:** All components for local network wireless clusters connected to area controller/loop detector communication points: • Loop counting communication enclosure provided including: o Area controller: ▪ Configured to manage inputs from all loop counting locations; ▪ Manages all dynamic signage; and ▪ Power supply. o (2) Anti-tailgating loop detectors including calibration loop & harness per enclosure; o External antenna & cable; and o Wireless communication equipment (i.e. modems, power supplies, etc.). • Equipment pre-configured in 20" x 20" x12" NEMA 4X grey fiberglass enclosure.	**$5,095.00**
1	LOOP-CP/1	**Communication Point Enclosures:** All components for local network wireless clusters connected to area controller/loop detector communication points: • Loop counting communication enclosure provided including: o Area controller: ▪ Configured to manage inputs from all loop counting locations; ▪ Manages all dynamic signage; and ▪ Power supply. o Anti-tailgating loop detector including calibration loop & harness per enclosure; o External antenna & cable; and o Wireless communication equipment (i.e. modems, power supplies, etc.). • Equipment pre-configured in 20" x 20" x12" NEMA 4X grey fiberglass enclosure.	**$3,860.00**
1	SC	**Pre-Formed Loops:** • Pre-formed in-ground loops provided.	**$106.00**
1	BL-D	**Loop Sealant:** • Includes tubes of loop sealant for in-ground saw-cut loops.	**$25.00**

SOFTWARE LICENSE PER ADDITIONAL LOT FOR EXISTING PGS SERVER:

QTY	PART#	DESCRIPTION	TOTAL COST
1	SL	**Software License:** • Software license to integrate the new PGS equipment into existing PGS server. • Per new garage/surface lot *Note: Customer is responsible for network connection between garages.*	**$2,880.00**

SYSTEM DESIGN, REMOTE PROJECT MANAGEMENT & SYSTEM COMMISSIONING

QTY	PART#	DESCRIPTION	HOURLY RATE
1	DES	**System Design:** • Standard in-house system design; and • Includes documentation, drawings, and all related design work.	**$140.00**
1	PM	**Remote Project Management:** • Perform all off-site coordination and remote project management to supply the PGS system.	**$150.00**
1	SC	**System Commissioning & Training:** • Provide on-site technician for final commissioning support; • Perform all testing for PGS system; • Labor related expenses for up to (3) contiguous days during the system commissioning phase of the project included; and • Provide on-site user training on the PGS System as part of the on-site system commissioning efforts, including: o System overview; o Hardware training; o System troubleshooting; and o General system maintenance & repair. *Note:* • Travel related expenses not included and will be billed in accordance with the Commonwealth of Virginia's per diem allowance for lodging, meals, and incidental expenses at the time of travel • All additional services and supporting expenses will be billed per standard rates if delays are caused by customer or a third party.	**$140.00**
1	FR	**Standard Freight & Handling**	**N/A**

SOFTWARE LICENSE PER ADDITIONAL LOT FOR EXISTING PGS SERVER:

QTY	PART#	DESCRIPTION	TOTAL COST
1	SL	**Software License:** • Software license to integrate the new PGS equipment into existing PGS server. • Per new garage/surface lot *Note: Customer is responsible for network connection between garages.*	**$2,880.00**

SYSTEM DESIGN, REMOTE PROJECT MANAGEMENT & SYSTEM COMMISSIONING

QTY	PART#	DESCRIPTION	HOURLY RATE
1	DES	**System Design:** • Standard in-house system design; and • Includes documentation, drawings, and all related design work.	**$140.00**
1	PM	**Remote Project Management:** • Perform all off-site coordination and remote project management to supply the PGS system.	**$150.00**

1	**SC**	**System Commissioning & Training:**
		• Provide on-site technician for final commissioning support;
		• Perform all testing for PGS system;
		• Labor related expenses for up to (3) contiguous days during the system commissioning phase of the project included; and
		• Provide on-site user training on the PGS System as part of the on-site system commissioning efforts, including:
		  ○ System overview;
		  ○ Hardware training;
		  ○ System troubleshooting; and
		  ○ General system maintenance & repair.
		Note:
		• Travel related expenses not included and will be billed in accordance with the Commonwealth of Virginia's per diem allowance for lodging, meals, and incidental expenses at the time of travel
		• All additional services and supporting expenses will be billed per standard rates if delays are caused by customer or a third party.
			$140.00

1	**FR**	**Standard Freight & Handling**	**N/A**

F.2 Exclusions:

DESCRIPTION
Exclusions: **The following is excluded in this proposal:** • Required digging, trenching, coring, etc. other than for in-ground loops or in-ground sensors; • Any type of penetrating survey/initiatives to any structure required to install PGS equipment, signage, conduit, etc. • A/P connection/s to customer network; • Wireless interference; • Bonds, insurance, permits, engineering drawings, certifications, foundation design, foundation, delineation, etc.; • Traffic control; and • Lost revenue. *NOTE: All additional services and supporting expenses will be billed per standard rates if delays are caused by customer or a third party.*