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CLERK OF THE BOARD
OF COUNTY COMMISSIONERS
MIAMI-DADE COUNTY, FLORIDA

Memorandum

MIAMI-DADE COUNTY

Date: July 1, 2014

To: Honorable Chairwoman Rebeca Sosa
and Members, Board of County Commissioners

Agenda Item No. 8(L)(8)

From: Carlos A. Gimenez
Mayor

Resolution No. R-612-14

Subject: Amendment No. 3 to an Existing Contract between Miami-Dade County and Kimley-Horn and Associates for the People's Transportation Plan Project Entitled Advanced Traffic Management System Extending the Contract for an Additional Two (2) Years

RECOMMENDATION

It is recommended that the Board of County Commissioners (BCC) approve the attached resolution authorizing Amendment No. 3 to an existing contract between Miami-Dade County (County) and Kimley-Horn and Associates (KHA) extending the contract for an additional two (2) year period to provide communications and system integration services for the countywide Advanced Traffic Management System (Project).

SCOPE

This Project is countywide; therefore it will benefit all Commission Districts. The Project is listed in Exhibit 1 of the PTP Ordinance under Major Highway and Roadway Improvement Projects.

FISCAL IMPACT/FUNDING SOURCE

This amendment has no fiscal impact. This contract's total compensation is $15,060,000; the Contract Award was for $9,000,000 (BCC Resolution #876-05) and increased by $2,160,000 under Amendment #1 (BCC Resolution #42-10) and $3,900,000 under Amendment#2 (BCC Resolution #97-12). This contract has a balance of $1,687,637, of which $1,131,774 is currently assigned to ongoing work orders. Funding is available from Charter County Transportation Surtax 2010 Bond Proceeds as programmed within Public Works and Waste Management's (PWWM) Multi-Year Capital Budget (FY 2013-14 Adopted Capital Project No. 608400). There are no recurring operation or maintenance costs anticipated through the amendment of this agreement. The funding index code for this Project is CPEPTP500ATM.

DELEGATION OF AUTHORITY

No additional authority is being requested within the body of this contract.

TRACK RECORD/MONITOR

The County is supervising, monitoring, and inspecting all aspects of the Project's implementation, deployment, and administration. Mr. Frank Aira, P.E. Chief, Traffic Signals & Signs Division, PWWM, is responsible for this Project.

BACKGROUND

Traffic Control Systems or Traffic Management Systems are tools for traffic engineers to effectively and efficiently manage and coordinate traffic signals to allow for a more efficient use of an existing road's capacity. The goal of coordinating traffic signals is to create the progression of vehicle platoons through a corridor at the prevailing speed and have the traffic signals "cascade" in sequence so that the platoons do not need to stop or slow down.

In the early 1970's, as one of the Country's fastest growing urban areas, Miami-Dade County determined that the most effective manner to move traffic without expanding the roadway network was to develop and implement a centralized Traffic Control System. In November 1972, Miami-Dade County voters approved funding for this effort as part of the Decade of Progress Bond issue. The

design of the system began in 1973, and construction began in 1974. The Urban Traffic Control System (UTCS) was the largest and most modern central computer traffic control system in the United States at its inception. The UTCS reached its capacity of 2,000 traffic signals in the late 1980's, and efforts to replace the system began in the 1990's. In November 2002, the voters of Miami-Dade County again approved the development and implementation of a new and modern Traffic Management System as part of the People's Transportation Plan. In 2004, PWWM determined that identifying and purchasing a product that was already successfully operating in a major metropolitan area over a period of a few years would be the most practical and expeditious approach. As a result, PWWM conducted an extensive study of existing traffic management system products including: reviewing responses to a Request for Information (RFI), lengthy telephone interviews, and field-visits to jurisdictions around the country with similar systems already installed. Based on PWWM's findings, the system known as KITS® was determined to be the best system available. The KITS® system was developed and is owned by KHA.

On July 7, 2005, the BCC adopted Resolution No. R-876-05 authorizing a contract with KHA to replace the obsolete UTCS with a modern ATMS platform, and to migrate all of the County's traffic signals to the new system. The new ATMS project was scheduled to begin in (2) two initial phases. Phase I was the pilot test of the system at 16 signalized intersections. If successful, the County would undertake Phase II; the deployment of the system to the remaining 2,605 traffic signals existing at that time and implement a new traffic signal communication system. However, in 2006 the County undertook a separate effort to develop a broadband wireless (WIFI) network to cover the entire County. Since the proposed system would also serve the traffic signal systems, the development of a new communications system for the ATMS did not proceed at that time. When the County's WIFI effort did not proceed, PWWM re-initiated the development of the communications system by the establishment of Phases IIA and Phase IIB. Phase IIA, the migration of all traffic signals to the ATMS, was completed on August 30, 2012. The ongoing Phase IIB addresses the development of a Countywide hybrid traffic signal communications network to improve communications.

This Amendment will allow KHA to continue working with PWWM's Traffic Signals and Signs Division, and Miami-Dade County Information Technology Department (ITD) staff to provide additional critical services, until such time as a Request for Proposals for the next phase of the Project can be developed and awarded. KHA will assist County staff in the continued development of communication strategies and facilities that will allow the County to take advantage of various communication technologies, both wire line and wireless, in its effort to upgrade and enhance the ATMS system's infrastructure.

This amendment will not preclude PWWM from seeking proposals and entering into contract for Phase III of ATMS project. In the event this extension and a new contract overlap; this contract may be terminated by the County in accordance to the contract provisions or the remaining time and funds may be utilized to allow for knowledge transfer and software maintenance activities.

To date, the County has invested nearly $32M in upgrading the existing traffic signals and traffic management systems. The new ATMS allows the County to control all 2837 existing traffic signals with capacity to grow up to 4000 traffic signals. The system allows for more flexible singal programming allowing for timing plans to accommodate time of day and day of week patterns, as well as for the implementation of special event plans. A critical improvement offered by the new ATMS is that it provides for a distributed architecture, meaning that there is intelligence (essentially a computer) at each traffic signal so that it can operate even when it loses communication with the Traffic Control Center. Under the UTCS, traffic signals would go to flash, when communications were lost. Lastly, the new ATMS will allow for the integration of new technologies such as adaptive controls, Bluetooth readers, microwave sensors, CCTV cameras, and other sensors that allow for the County to monitor

new ATMS will allow for the integration of new technologies such as adaptive controls, Bluetooth readers, microwave sensors, CCTV cameras, and other sensors that allow for the County to monitor traffic and gauge travel time/ traffic congestion so that slight timing modifications can be made to address the traffic situation in real time.

The primary work that needs to continue is the upgrade of the ATMS communications upgrades. The ATMS is currently hindered by the absence of a reliable, high bandwidth and high speed communications network for traffic control. Currently, only 40% of eligible intersections (approximately 1,200 signals) have been upgraded to high speed wireless communications. Of these, approximately 400 are on a County owned wireless network, while 750 signals are served through AT&T wireless communications. PWWM is pursuing converting as many traffic signals from landlines to wireless as an intermediate step in developing a long term communications network. The conversion of each of the County's signals from a leased copper line to wireless not only offers higher broadband and faster communications, but provides a 50% savings ($45 per month per line) in recurring annual lease charges. Once completed, the County is anticipated to be saving nearly $1.5M annually in communications for the traffic signals. These savings allow for the recovery on investment within a one (1) year period while allowing for greater system functionality and flexibility. Concurrent to this effort, PWWM has taken critical initial steps so that the County can eventually develop and migrate to a reliable County-owned traffic system communications network. KHA is completing the design of the first of several critical fiber optic communication corridors that will serve as a backbone for this communications network. The communications upgrade will support the 2,850 existing signals, existing and future closed circuit television cameras, school zone flashing signals, dynamic message signs, and other traffic system technologies. Related central software enhancements to support the additional devices described above, and associated functions made possible by the upgraded communications, will also be addressed.

Miami Dade's Planning Division's demographic shows the population and vehicles in Miami Dade County has nearly doubled over the last four decades;

1970: 1.267 Million people and 1,012,724 Vehicle License Tags
2012: 2.591 Million people and 2,183,782 Vehicle License Tags

In addition, Miami Dade County hosts 13 million tourists annually. The expansion and growth of the County has resulted in increased numbers of vehicles traveling to and from the County's business centers and entertainment areas. The continued improvement and evolution of the ATMS is critical in order to keep pace with growing volumes of traffic.

Alina T. Hudak
Deputy Mayor

MEMORANDUM

(Revised)

TO: Honorable Chairwoman Rebeca Sosa
and Members, Board of County Commissioners

DATE: July 1, 2014

FROM: R. A. Cuevas, Jr.
County Attorney

SUBJECT: Agenda Item No. 8(L)(8)

Please note any items checked.

_____	**"3-Day Rule" for committees applicable if raised**
_____	**6 weeks required between first reading and public hearing**
_____	**4 weeks notification to municipal officials required prior to public hearing**
_____	**Decreases revenues or increases expenditures without balancing budget**
_____	**Budget required**
_____	**Statement of fiscal impact required**
✓	**Ordinance creating a new board requires detailed County Mayor's report for public hearing**
_____	**No committee review**
_____	**Applicable legislation requires more than a majority vote (i.e., 2/3's ____, 3/5's ____, unanimous _____) to approve**
_____	**Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required**

Approved _____ Mayor

Veto _____

Override _____

Agenda Item No. 8(L)(8)
7-1-14

RESOLUTION NO. R-612-14

RESOLUTION AUTHORIZING AMENDMENT NO. 3 TO AN EXISTING CONTRACT BETWEEN MIAMI-DADE COUNTY AND KIMLEY-HORN AND ASSOCIATES FOR THE PEOPLE'S TRANSPORTATION PLAN PROJECT ENTITLED ADVANCED TRAFFIC MANAGEMENT SYSTEM FOR AN ADDITIONAL TWO (2) YEAR PERIOD; AND AUTHORIZING THE COUNTY MAYOR OR COUNTY MAYOR'S DESIGNEE TO EXECUTE SAME FOR AND ON BEHALF OF MIAMI-DADE COUNTY AND TO EXERCISE THE PROVISIONS CONTAINED THEREIN

WHEREAS, this Board desires to accomplish the purposes outlined in the accompanying memorandum, a copy of which is incorporated herein by reference; and

WHEREAS, both Kimley-Horn and Associates (KHA) and Miami-Dade County wish to facilitate the County wide implementation and deployment of the Advanced Traffic Management System (ATMS),

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that this Board approves contract amendment No. 3 of the existing contract between Miami-Dade County and KHA providing an additional two (2) years for the continued implementation and enhancement of the ATMS, in substantially the form attached hereto and made a part hereof; authorizing the County Mayor or County Mayor's designee to execute same for and on behalf of Miami-Dade County and to exercise the provisions contained therein.

The foregoing resolution was offered by Commissioner **Sally A. Heyman**, who moved its adoption. The motion was seconded by Commissioner **Dennis C. Moss** and upon being put to a vote, the vote was as follows:

Rebeca Sosa, Chairwoman			**aye**
Lynda Bell, Vice Chair			**aye**
Bruno A. Barreiro	**aye**	Esteban L. Bovo, Jr.	**absent**
Jose "Pepe" Diaz	**aye**	Audrey M. Edmonson	**aye**
Sally A. Heyman	**aye**	Barbara J. Jordan	**aye**
Jean Monestime	**aye**	Dennis C. Moss	**aye**
Sen. Javier D. Souto	**aye**	Xavier L. Suarez	**aye**
Juan C. Zapata	**aye**		

The Chairperson thereupon declared the resolution duly passed and adopted this 1st day of July, 2014. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS

HARVEY RUVIN, CLERK

By: ***Christopher Agrippa***
Deputy Clerk

Approved by County Attorney as
to form and legal sufficiency.

Bruce Libhaber

AMENDMENT NO. 3 TO THE MIAMI-DADE COUNTY ATMS SYSTEM INTEGRATOR CONTRACT

This Amendment No. 3 to the contract is made and entered into this _____ day of _____,20____, by and between Miami-Dade County, a political subdivision of the State of Florida, hereinafter referred to as the "COUNTY," and KIMLEY-HORN AND ASSOCIATES, INC., hereinafter referred to as the "SYSTEM INTEGRATOR".

WITNESSETH:

WHEREAS, pursuant to Resolution No. R-876-05 approved by the Board of County Commissioners on July 07, 2005, the parties hereto entered into a Contract retaining the SYSTEM INTEGRATOR for the provision, installation, and implementation of a new Advanced Traffic Management System (ATMS), and providing a maximum compensation of $9,000.000.00 for all professional services required during the implementation of the current phase of the project for a contract period of five (5) years, and authorized the Public Works Director to extend this Agreement for up to two (2) additional two-year periods;

WHEREAS, pursuant to Resolution No. R-42-10 approved by the Board of County Commissioners on January 21, 2010, the parties hereto entered into Contract Amendment No. 1 extending the SYSTEM INTEGRATOR contract by two (2) years to allow for the continued provision, installation, and implementation of the new ATMS, and providing for a maximum compensation of $11,160.000.00 for all professional services required during the implementation of the current phase of the project;

WHEREAS, pursuant to Resolution No. R-97-12 approved by the Board of County Commissioners on January 24, 2012, the parties hereto entered into Contract Amendment No. 2 extending the SYSTEM INTEGRATOR contract by two (2) years to allow for the continued provision, installation, and implementation of the new ATMS, and providing for a maximum compensation of $15,145,000.00 for all professional services required during the implementation of the current phase of the project;

WHEREAS, the County requires for the SYSTEM INTEGRATOR to continue to provide services authorized by Amendment No. 2; these additional services being described in the accompanying memorandum, a copy of which is incorporated herein by reference;

NOW, THEREFORE, in consideration of the mutual desires of the parties hereto, the following modifications are made to the aforementioned Agreement:

SECTION XVIII - DURATION OF AGREEMENT

Shall read as follows:

This Agreement shall remain in full force and effect for a period of 11 years from the original date of execution, or until depletion of the funds allocated to pay for the cost of said services, whichever occurs first.

In all other respects, except as amended by Amendment No. 1, Amendment No. 2 and Amendment No. 3; the original Agreement shall remain unchanged and in full force and effect.

IN WITNESS WHEREOF the parties hereto have caused this Third Amendment to the Contract to be executed by their appropriate officials as of the date first entered above.

ATTEST:

HARVEY RUVIN
CLERK OF THE BOARD

BY: _____
Deputy Clerk

MIAMI-DADE COUNTY, FLORIDA,
BY ITS BOARD OF
COUNTY COMMISSIONERS

BY: _____
County Mayor or County Mayor's Designee

Approved by County Attorney
as to form and legal sufficiency _____
County Attorney

ATTEST:

By: _____

KIMLEY-HORN AND ASSOCIATES, INC.
a Corporation authorized to transact
business in Florida

By: _____
K. K. SAXENA
SENIOR VICE PRESIDENT

(CORPORATE SEAL)