

**CITY OF LA VISTA  
MAYOR AND CITY COUNCIL REPORT  
JUNE 7, 2016 AGENDA**

<b>Subject:</b>	<b>Type:</b>	<b>Submitted By:</b>
MEMORANDUM OF UNDERSTANDING - CITY OF OMAHA - 84 <sup>TH</sup> STREET ADAPTIVE TRAFFIC SIGNALS	◆ RESOLUTION ORDINANCE RECEIVE/FILE	JOHN KOTTMANN CITY ENGINEER/ASSISTANT PUBLIC WORKS DIRECTOR

**SYNOPSIS**

A resolution has been prepared authorizing the Public Works Director to execute a Memorandum of Understanding with the City of Omaha for the design and operation of an adaptive signal control technology system on 84<sup>th</sup> Street from West Center Road in Omaha to Lincoln Road in Papillion.

**FISCAL IMPACT**

The FY 16 Capital Improvement Program Budget provides funding for La Vista's share of the project cost.

**RECOMMENDATION**

Approval

**BACKGROUND**

The Memorandum of Understanding (MOU) provides for the City of Omaha to lead the design and to assume full operational responsibilities for the traffic signals along the entire corridor from West Center Road to Lincoln Road. The Memorandum of Understanding (MOU) also includes the NDOR, City of Ralston, and City of Papillion. The MOU identifies allocation of costs for initial installation and allocation of ongoing operational costs.

The participating agencies (NDOR, Ralston, Papillion and La Vista) will retain ownership and maintenance responsibilities. The MOU provides for annual operating costs to be reimbursed to the City of Omaha. The annual cost to La Vista for these services is \$4,000. The term of this MOU is through December 31, 2018. The parties will review and extend or modify the MOU at that point as required.

The total project cost is estimated to be \$4,672,590 with 90 percent to be federal funds. The estimated La Vista share of the local costs is \$67,645. This is Project Number PWST-13-011.

RESOLUTION NO. \_\_\_\_\_

A RESOLUTION OF THE CITY OF LA VISTA, APPROVING AND AUTHORIZING THE EXECUTION OF A MEMORANDUM OF UNDERSTANDING WITH THE CITY OF OMAHA FOR THE DESIGN AND OPERATION OF AN ADAPTIVE SIGNAL CONTROL TECHNOLOGY SYSTEM ON 84<sup>TH</sup> STREET FROM WEST CENTER ROAD IN OMAHA TO LINCOLN ROAD IN PAPIILLION FOR AN ESTIMATED LOCAL COST OF \$67,645.

WHEREAS, the Mayor and City Council, have determined that the installation of an adaptive signal control technology system is necessary; and

WHEREAS, the City of Omaha will lead the design and assume full operational responsibilities for the traffic signals along the entire corridor from West Center Road to Lincoln Road; and

WHEREAS, the participating agencies include the Cities of Omaha, Papillion, Ralston and La Vista, and the Nebraska Department of Roads; and

WHEREAS, the participating agencies will retain ownership and maintenance responsibilities; and

WHEREAS, Subsection (C) (9) of Section 31.23 of the La Vista Municipal Code requires that the City Administrator secure Council approval prior to authorizing any expenditure over \$5,000.00.

NOW, THEREFORE, BE IT RESOLVED, that the Mayor and City Council do hereby approve and authorize the execution of a Memorandum of Understanding with the City of Omaha for the design and operation of an adaptive signal control technology system on 84<sup>th</sup> Street from West Center Road in Omaha to Lincoln Road in Papillion for and estimated local cost of \$67,645.

PASSED AND APPROVED THIS 7TH DAY OF JUNE, 2016.

CITY OF LA VISTA

\_\_\_\_\_  
Douglas Kindig, Mayor

ATTEST:

\_\_\_\_\_  
Rita M. Ramirez  
Assistant City Administrator

## Memorandum of Understanding (MOU)

### Design, Operations, and Maintenance of the Adaptive Signal Control Technology System (ASCT)

#### Along 84<sup>th</sup> Street (N-85) from West Center Road (Omaha) to Lincoln Road (Papillion)

April 28, 2016

#### I. PROJECT OVERVIEW

In 2011, the Metropolitan Area Planning Agency (MAPA) commissioned a project to coordinate traffic signals along 84<sup>th</sup> Street from West Center Road in Omaha to Lincoln Road in Papillion. One of the recommendations as a result of that project was to install an adaptive signal control technology (ASCT) system along the corridor. Since that time, the City of Omaha has completed a traffic signal system master plan, and MAPA has completed preliminary systems engineering for ASCT along the corridor. As part of stakeholder meetings held in 2015, the City of Omaha is leading the project and is seeking Highway Safety Improvement Program (HSIP) funds for the capital improvements. Other participating agencies include the Nebraska Department of Roads, City of Ralston, City of La Vista, and City of Papillion. Table 1 summarizes the signals along the corridor, the jurisdiction in which it is located, the existing owning agency, and the existing operating/maintaining agency.

Table 1 – Signals in the 84<sup>th</sup> St ASCT Corridor

Traffic Signal	Jurisdiction	Existing Owner	Existing Operations and Maintenance
84th St & West Center Rd	Omaha	Omaha	Omaha
84th St & Spring St	Omaha	Omaha	Omaha
84th St & Hascall St	Omaha	Omaha	Omaha
84th St & Grover St	Omaha	Omaha	Omaha
84th St & Papillion Pkwy	Omaha	Omaha	Omaha
84th St & I-80 WB Ramp	Omaha	Omaha	Omaha
84th St & I-80 EB Ramp	Omaha	Omaha	Omaha
84th St & F St	Omaha	Omaha	Omaha
84th St (N-85) & I St (US-275/N-92)	Omaha	Omaha	Omaha
84th St (N-85) & Lakeview St	Omaha/Ralston	Omaha	Omaha
84th St (N-85) & Q St	Omaha/Ralston	Omaha	Omaha
84th St (N-85) & Park Dr	Ralston	NDOR/Ralston	NDOR
84th St (N-85) & Madison St	Ralston	NDOR/Ralston	NDOR
84th St (N-85) & Harrison St	Ralston/La Vista	NDOR/Ralston/La Vista	Omaha
83rd St & Harrison St	Ralston/La Vista	Ralston/La Vista	Omaha
84th St (N-85) & Park View Boulevard	La Vista	NDOR/La Vista	NDOR
84th St (N-85) & Summer Dr	La Vista	NDOR/La Vista	NDOR
84th St (N-85) & Brentwood Dr	La Vista	NDOR/La Vista	NDOR
Granville Pkwy & Brentwood Dr	La Vista	La Vista	La Vista
84th St (N-85) & Giles Rd	La Vista/Papillion	NDOR/La Vista/Papillion	NDOR
85th St & Giles Rd	La Vista/Papillion	La Vista/Papillion	La Vista/Papillion
Washington St (N-85) & Cary St	Papillion	NDOR/Papillion	NDOR
Washington St (N-85) & Centennial Rd	Papillion	NDOR/Papillion	NDOR
Washington St (N-85) & Hogan Dr	Papillion	NDOR/Papillion	NDOR
Washington St (N-85) & 6th St	Papillion	NDOR/Papillion	NDOR
Washington St (N-85) & 1st St	Papillion	NDOR/Papillion	NDOR
Washington St (N-85) & Lincoln St	Papillion	NDOR/Papillion	NDOR

Based on past stakeholder discussions, the City of Omaha will lead the design and assume full operations responsibilities for the traffic signals along this entire project corridor. However, existing agencies will retain ownership and maintenance responsibilities. The purpose of this MOU is to describe activities for which each participating agency is responsible, as well as cost sharing for capital, operations, and maintenance activities.

## II. COST-SHARING

Costs of ASCT capital improvements and operations and maintenance will be shared among participating agencies as summarized in Table 2.

Table 2 ~ Summary of ASCT Cost-Sharing among Participating Agencies\*

Location	Percentage of ASCT Capital Costs Shared (Capital %)				
	Omaha	Nebraska	Salisbury	Leawards	Lincoln
84th St & West Center Rd	100%				
84th St & Spring St	100%				
84th St & Hascall St	100%				
84th St & Grover St	100%				
84th St & Papillion Pkwy	100%				
84th St & I-80 WB Ramp	100%				
84th St & I-80 EB Ramp	100%				
84th St & F St	100%				
84th St (N-85) & L St (US-275/N-92)	100%				
84th St (N-85) & Lakeview St	75%		25%		
84th St (N-85) & Q St	75%		25%		
84th St (N-85) & Park Dr		50%	50%		
84th St (N-85) & Madison St		50%	50%		
84th St (N-85) & Harrison St		50%	25%	25%	
83rd St & Harrison St			50%	50%	
84th St (N-85) & Park View Boulevard		50%		50%	
84th St (N-85) & Summer Dr		50%		50%	
84th St (N-85) & Brentwood Dr		50%		50%	
Granville Pkwy & Brentwood Dr				100%	
84th St (N-85) & Giles Rd		50%		25%	25%
85th St & Giles Rd				50%	50%
Washington St (N-85) & Cary St		50%			50%
Washington St (N-85) & Centennial Rd		50%			50%
Washington St (N-85) & Hogan Dr		50%			50%
Washington St (N-85) & 6th St		50%			50%
Washington St (N-85) & 1st St		50%			50%
Washington St (N-85) & Lincoln St		50%			50%

\* The allocation shown in this table is for ASCT cost sharing only and does not indicate any change in existing signal cost sharing arrangements for non-ASCT equipment and maintenance.

## III. ASCT CAPITAL IMPROVEMENTS

The following components will be upgraded as part of the ASCT project:

- Controllers – Existing controllers will be replaced with a rack-mount ATC controller with a local controller software to be determined by City of Omaha staff.
- ASCT Software – A single ASCT system will be selected for the entire corridor. The system will be selected using a best value procurement consistent with Systems Engineering (SE) processes through the refinement of needs and requirements that were first identified as part of the MAPA SE project by all participating agencies.
- ASCT Hardware – Any ASCT hardware or “black box” required by the selected ASCT system will be installed and configured at each signal.

- D. Detection – Depending on the ASCT system selected, existing detection will be replaced, modified, or supplemented with additional detection.
- E. Cabinets – Existing Type 332 cabinets will be retained if in good condition and have available space for any additional ASCT components. All other cabinets will be upgraded to a Type 332, 332S, or 332D.
- F. PTZ Cameras – Cameras will be deployed along the corridor at approximately half-mile spacing to provide traffic monitoring capabilities and ASCT system management.
- G. Communications – Single mode fiber optic cable will be deployed to all signals along the corridor to provide reliable, high-speed, high-capacity communications. This may include but is not limited to the following methods: 1) Existing conduit and cable owned by participating agencies, 2) Installation of new conduit and cable by participating agencies, 3) Expansion of existing lease agreements with private communications providers, or 4) Execution of new lease agreements with private communications providers. Regardless of the method used, at least 18 fibers shall be solely reserved for the management and monitoring of the Traffic Signal System and the ASCT system and physically separated from other fibers within the same cable. In addition to fiber, a wireless radio network will also be deployed to provide a redundant communications path.
- H. Miscellaneous Items – At certain intersections, other improvements such as LED indications, pedestrian push buttons, and other modifications to signal heads and signs are also included.

The total funding identified for the ASCT system is \$4,672,590, which includes design, utilities, construction, and construction engineering activities. Because HSIP funds are anticipated, 90% of the capital costs will be funded with the HSIP funds, and a 10% local match is required. The share of local match for each participating agency, based upon the proportions identified in Table 2, is summarized in Table 3.

Table 3 – Share of ASCT Capital Costs for Participating Agencies

Location	Total Cost	Share of Capital Costs				
		HSIP	Local	State	Federal	Local
84th St & West Center Rd	\$13,996	\$13,996				
84th St & Spring St	\$15,242	\$15,242				
84th St & Hascall St	\$14,362	\$14,362				
84th St & Grover St	\$14,362	\$14,362				
84th St & Papillion Pkwy	\$13,043	\$13,043				
84th St & I-80 WB Ramp	\$13,116	\$13,116				
84th St & I-80 EB Ramp	\$13,116	\$13,116				
84th St & F St	\$13,043	\$13,043				
84th St (N-85) & L St (US-275/N-92)	\$15,139	\$15,139				
84th St (N-85) & Lakeview St	\$19,947	\$14,960		\$4,987		
84th St (N-85) & Q St	\$20,284	\$15,213		\$5,071		
84th St (N-85) & Park Dr	\$15,242		\$7,621	\$7,621		
84th St (N-85) & Madison St	\$14,362		\$7,181	\$7,181		
84th St (N-85) & Harrison St	\$16,194		\$8,097	\$4,049	\$4,049	
83rd St & Harrison St	\$15,242			\$7,621	\$7,621	
84th St (N-85) & Park View Boulevard	\$14,582		\$7,291		\$7,291	
84th St (N-85) & Summer Dr	\$20,761		\$10,381		\$10,381	
84th St (N-85) & Brentwood Dr	\$20,274		\$10,137		\$10,137	
Granville Pkwy & Brentwood Dr	\$13,318				\$13,318	
84th St (N-85) & Giles Rd	\$22,558		\$11,279		\$5,640	\$5,640
85th St & Giles Rd	\$18,419				\$9,209	\$9,209
Washington St (N-85) & Cary St	\$22,791		\$11,396			\$11,396
Washington St (N-85) & Centennial Rd	\$20,579		\$10,289			\$10,289
Washington St (N-85) & Hogan Dr	\$23,377		\$11,689			\$11,689
Washington St (N-85) & 6th St	\$20,829		\$10,414			\$10,414
Washington St (N-85) & 1st St	\$25,573		\$12,787			\$12,787
Washington St (N-85) & Lincoln St	\$17,506		\$8,753			\$8,753
Totals	\$467,259	\$155,593	\$127,315	\$36,529	\$67,645	\$80,177

#### IV. TRAFFIC SIGNAL OPERATIONS

The City of Omaha will operate controllers, ASCT software, and other items specifically described below.

- A. Controllers – The City of Omaha is solely responsible for developing, implementing, and maintaining traffic signal controller databases, including clearance intervals, timing plans, schedules, etc.
- B. ASCT Software – The City of Omaha is solely responsible for developing, maintaining, and operating the ASCT software and databases. The City of Omaha will provide any available information or documentation related to the operation, configuration, performance, or maintenance of the ASCT system as requested by participating agencies.
- C. PTZ Cameras – The City of Omaha will operate PTZ cameras for the purposes of monitoring traffic operations and the management of the ASCT system. Participating agencies will have access to the PTZ cameras, including pan-tilt-zoom capabilities.
- D. Communications – The City of Omaha will monitor operations and performance of the fiber optic and wireless communications systems.
- E. To the extent practical, participating agency staff can be provided viewer access to the ATMS, ASCT, and network management software systems. The City of Omaha will configure these software systems to directly notify participating agency staff of equipment failures or signal malfunctions. The City of Omaha will coordinate with participating agency staff as needed to further troubleshoot, diagnose, and repair signals.

Costs for operations shall be \$1,000.00, annually, per location, plus any additional ASCT software/licensing/maintenance costs (which will be determined at procurement). These costs shall be divided among the participating agencies per the proportions identified in Table 2. Table 4 summarizes the share of annual operations costs for each of the participating agencies.

Table 4 – Share of Annual Operations Costs for Participating Agencies

Signal Location	Annual Operations Cost	Share of Annual Operations Costs			
		MOA	REDA	NEA	TH/USM
84th St (N-85) & Lakeview St	\$1,000		\$250		
84th St (N-85) & Q St	\$1,000		\$250		
84th St (N-85) & Park Dr	\$1,000	\$500	\$500		
84th St (N-85) & Madison St	\$1,000	\$500	\$500		
84th St (N-85) & Harrison St	\$1,000	\$500	\$250	\$250	
83rd St & Harrison St	\$1,000		\$500	\$500	
84th St (N-85) & Park View Boulevard	\$1,000	\$500		\$500	
84th St (N-85) & 83rd Dr	\$1,000	\$500		\$500	
84th St (N-85) & Brentwood Dr	\$1,000	\$500		\$500	
Granville Pkwy & Brentwood Dr	\$1,000			\$1,000	
84th St (N-85) & Giles Rd	\$1,000	\$500		\$250	\$250
85th St & Giles Rd	\$1,000			\$500	\$500
Washington St (N-85) & Cary St	\$1,000	\$500			\$500
Washington St (N-85) & Centennial Rd	\$1,000	\$500			\$500
Washington St (N-85) & Hogan Dr	\$1,000	\$500			\$500
Washington St (N-85) & 6th St	\$1,000	\$500			\$500
Washington St (N-85) & 1st St	\$1,000	\$500			\$500
Washington St (N-85) & Lincoln St	\$1,000	\$500			\$500
Totals		\$6,500	\$2,250	\$4,000	\$3,750

\* Does not include ASCT software licensing/maintenance costs

Future operational improvements, such as implementation of left turn arrows, modifications to signal phasing, or requests for other physical changes shall be subject to City of Omaha policies and evaluation by City of Omaha staff. Modifications to controller databases or ASCT system parameters is included in the operations costs described above, however, equipment and installations costs associated with these improvements will be shared among the participating agencies as summarized in Table 2.

#### **V. TRAFFIC SIGNAL MAINTENANCE**

The agency responsible for existing traffic signal maintenance will continue to maintain most traffic signal components, including detection, cabinets, PTZ cameras, communications, and signs, with the exception of any items noted below.

- A. If the participating agency requests the City of Omaha to provide and replace any controllers or ASCT hardware, the City of Omaha will directly bill the participating agency for labor and equipment costs on an annual basis (above and beyond the \$1,000 per signal operations cost).
- B. The City of Omaha will monitor the communications system and notify the agency owning the communications system of a failure. Each participating agency is responsible for the maintenance of the communications infrastructure (conduit/fiber optic cable, wireless devices). In addition, the owning agency is responsible for locating underground facilities.
- C. Power used for each signal will be metered and paid for by the jurisdiction in which the signal is located, as it is now.
- D. Exceptions – The City of Omaha will not assume any maintenance activities associated with the following: signing, pavement markings, maintenance of pavement surfaces, snow plowing, mowing, weed control, or any other non-signal-related activities.

#### **VI. FUTURE TRAFFIC SIGNAL CAPITAL OR OPERATIONAL IMPROVEMENTS**

The costs of future ASCT capital improvements shall be shared among participating agencies per the proportions identified in Table 2, unless otherwise agreed upon at that time. Other capital improvements could include, but is not limited to, traffic signal rebuilds, modifications to traffic signals due to public improvement projects (roadway widening), and modifications to traffic signals due to development-related projects, addition of left turn arrows, etc. which would be shared as determined by the affected agencies when such improvements occur. Participating agencies are responsible for notifying the City of Omaha when improvements take place that require operational changes to the controller databases or ASCT system.

#### **VII. TERMS OF MOU**

The terms of this MOU shall be effective until December 31, 2018, at which point participating agencies will agree to extend or modify the MOU for a new term.

#### **VIII. INTERLOCAL COOPERATION ACT PROVISIONS.**

This MOU shall not create any separate legal or administrative entity. It shall be administered jointly by the parties, through one representative to be designated by and on behalf of each party. Each party shall separately finance and budget its own duties and functions under this MOU. There shall be no jointly held property as a result of this MOU. Upon termination, each party shall retain ownership of the property it owns at the time of termination. This MOU does not authorize the levying, collecting or accounting of any tax.

Executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

Signature: \_\_\_\_\_

Print: \_\_\_\_\_

Title: \_\_\_\_\_

Agency: \_\_\_\_\_

Copy 1 of 5