

Submitted by: Chair of the Assembly
at the Request of the Mayor
Prepared by: Traffic Department
For Reading: March 18, 2008

CLERK'S OFFICE

APPROVED

Date:

3-18-08

ANCHORAGE, ALASKA

AR NO. 2008-42

1 A RESOLUTION APPROPRIATING FORTY SEVEN THOUSAND TWO HUNDRED DOLLARS
2 (\$47,200) FROM A STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC
3 FACILITIES (ADOT&PF) MEMORANDUM OF AGREEMENT #59838-1 WITH THE
4 MUNICIPALITY OF ANCHORAGE (MOA), TO THE STATE CATEGORICAL GRANTS FUND
5 (231) UNDER THE MUNICIPAL TRAFFIC DEPARTMENT FOR THE PHASE I: ANCHORAGE
6 AREA RED LIGHT CONFIRMATION LIGHT PROJECT.

7
8
9 THE ANCHORAGE ASSEMBLY RESOLVES:

10
11 Section 1. That the sum of Forty Seven Thousand Two Hundred Dollars
12 (\$47,200) From a State of Alaska Department of Transportation and Public Facilities
13 (ADOT&PF) Memorandum of Agreement #59838-1 with the Municipality of Anchorage (MOA),
14 to the State Categorical Grants Fund (231) Under the Municipal Traffic Department for the
15 Phase I: Anchorage Area Red Light Confirmation Light Project.

16
17 Section 2. This resolution shall be effective immediately upon passage and
18 approval by the Anchorage Assembly.

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20 PASSED AND APPROVED by the Anchorage Municipal Assembly this 18th day of
21 March, 2008.

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Chair

ATTEST:

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Municipal Clerk

Department Appropriation:
Traffic Department \$47,200



MUNICIPALITY OF ANCHORAGE

ASSEMBLY MEMORANDUM

No. AM 162 -2008

Meeting Date: March 18, 2008

1 **FROM:** Mayor

2
3 **SUBJECT:** Appropriation of Forty Seven Thousand Two Hundred Dollars
4 (\$47,200) From a State of Alaska Department of Transportation and
5 Public Facilities (ADOT&PF) Memorandum of Agreement #59838-1
6 with the Municipality of Anchorage (MOA), to the State Categorical
7 Grants Fund (231) Under the Municipal Traffic Department for the
8 Phase I: Anchorage Area Red Light Confirmation Light Project.
9

10 An Assembly Resolution is requested to appropriate Forty Seven Thousand Two
11 Hundred Dollars (\$47,200) from a State of Alaska Department of Transportation and
12 Public Facilities (ADOT&PF) Memorandum of Agreement #59838-1 with the
13 Municipality of Anchorage (MOA), to the State Categorical Grants Fund (231) under
14 the Municipal Traffic Department for the Anchorage Area Red Light Confirmation Light
15 Project. The State of Alaska agreement utilizes Highway Safety Improvement Program
16 (HSIP): Small Spot Improvements FY06 funding from Federal Highway Administration
17 funds.
18

19 The recently adopted Alaska Strategic Highway Safety Plan recognized the need to
20 improve intersection safety by reducing the amount of vehicles running the red signal
21 lights. Under this project, the Municipal Traffic Department will use federal funding to
22 procure and install red light confirmation lights on or near traffic signal heads at
23 municipal and state signalized intersections as cooperatively suggested by the Alaska
24 Department of Transportation, the Municipal Traffic Department and the Anchorage
25 Police Department. The red light will allow for effective patrol car stationing and the
26 downstream visibility necessary for local law enforcement personnel to monitor
27 signalized intersections for red light runners. The work performed by the Municipality
28 will be in accordance with the current Traffic Signal Management TORA with
29 AKDOT&PF for the MOA to operate and maintenance all state-owned traffic signals
30 within the Municipality. The agreement expires December 31, 2008.
31

32 The budget detail is as follows:

33 Revenues	Account Name	Amount
34 231-77298G-9398	State Grant Revenue-Pass Thru	\$ 47,200
35	Total	\$ 47,200
36		
37		
38		
39		
40		
41		

<u>Expenditures</u>	<u>Account Name</u>	<u>Amount</u>
231-77298G-2201	Operating Supplies	\$ 8,330
231-77298G-3701	Rentals	\$ 11,000
231-77298G-6022	Clerk	\$ 5
231-77298G-6061	OEO	\$ 6
231-77298G-6091	Office of Management & Budget	\$ 42
231-77298G-6095	Purchasing	\$ 136
231-77298G-6103	Finance, Financial Reporting	\$ 466
231-77298G-6105	Finance, Accounts Payable	\$ 69
231-77298G-6109	Finance, Cash Receipts	\$ 4
231-77298G-6110	PeopleSoft Support	\$ 142
231-77298G-6779	Traffic/Signal Maintenance	\$ 27,000
	Total	\$ 47,200

THE ADMINISTRATION RECOMMENDS APPROVAL OF THE ATTACHED RESOLUTION APPROPRIATING FORTY SEVEN THOUSAND TWO HUNDRED DOLLARS (\$47,200) FROM A STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES (ADOT&PF) MEMORANDUM OF AGREEMENT #59838-1 WITH THE MUNICIPALITY OF ANCHORAGE (MOA), TO THE STATE CATEGORICAL GRANTS FUND (231) UNDER THE MUNICIPAL TRAFFIC DEPARTMENT FOR THE PHASE I: ANCHORAGE AREA RED LIGHT CONFIRMATION LIGHT PROJECT.

Prepared by: Lance R. Wilber, Director, Traffic Department
Fund Certification: Sharon Weddleton, CFO
Total Funds Certified \$47,200
231-77298G-9398-772980 BP 2008 \$47,200
(Federal Highway HSIP Grant BP2006)
Concur: Michael K. Abbott, Municipal Manager
Respectfully submitted: Mark Begich, Mayor

MEMORANDUM OF AGREEMENT

#59838-1

PROJECT: ACHHE-000S(591) / 59838 (L69) ; HSIP: Small Spot Improvements FY06;
Phase I: Anchorage Area Red Light Confirmation Lights

This agreement is made and entered into this 12TH day of FEB, 2008, between the State of Alaska. DEPARTMENT of Transportation and Public Facilities, acting by and through the Traffic & Safety Section, Division of Design and Engineering Services, hereinafter called the DEPARTMENT, and the MUNICIPALITY of Anchorage, acting through the Traffic DEPARTMENT and hereinafter called the MUNICIPALITY.

The MUNICIPALITY will perform force account construction of red light confirmation lights. The DEPARTMENT will provide Federal Highway Administration (FHWA) funding for eligible work and contract oversight.

This Agreement will terminate on December 31, 2008 unless terminated sooner by the DEPARTMENT. This leaves one construction season to complete the work.

FUNDING

A total of \$55,000 of FHWA funding is available for this Phase I project. Of this, \$2,560 is reserved by the DEPARTMENT for overhead known as ICAP, and \$5,240 for project administration by DEPARTMENT staff. This leaves a remainder of \$47,200 budgeted for all MUNICIPALITY provided labor, materials, and equipment to construct red light confirmation lights.

NOTICE TO PROCEED (NTP)

The DEPARTMENT will issue an NTP to the MUNICIPALITY in writing after this Agreement is fully executed. Under no circumstances will reimbursement be made for expenses incurred before the NTP is issued.

SCOPE OF WORK

The MUNICIPALITY shall procure and install red light confirmation lights. Red light confirmation lights are to be wired on or near to the signal heads as part of the red light circuit at selected intersection approaches. Final locations will be determined by the MUNICIPALITY to optimize local law enforcement preferences for downstream visibility and availability for patrol car stationing. Installations will include, but not be limited to, the following intersections:

- 1) New Seward Highway & Fireweed Lane (2 installations)
 - 2) New Seward Highway & 36th Avenue (4)
 - 3) New Seward Highway & Benson Boulevard (2)
 - 4) New Seward Highway & Northern Lights Boulevard (3)
 - 5) Old Seward Highway & Dimond Boulevard (4)
 - 6) Old Seward Highway & Tudor Road (4)
 - 7) Northern Lights Boulevard & Boniface Parkway (4)
- DELETED from Scope - Lake Otis Parkway and Tudor Road (MUNICIPALITY to build into separate 2008 intersection upgrades project)

Other eligible traffic signal intersections may have red light confirmation lights installed. The following signals have also been identified by the MUNICIPALITY as being candidates:

- 8) Debarr Road & Boniface Parkway
- 9) Debarr Road & Bragaw Street

Red light confirmation lights shall be installed by the MUNICIPALITY as intended in Exhibit's A and B attached. All work and methods will be in accordance with the Transfer of Responsibilities Agreement (TORA) between the DEPARTMENT and the MUNICIPALITY (approved by both parties March 22, 2005), and Amendment 1 (approved by both parties as of May 1, 2006).

Exhibit A provides the Public Interest Finding for force account work by the Municipality of Anchorage and the intent of the project. Exhibit B provides the environmental approval for the design and installation of red light confirmation lights and shows the installation concept.

The DEPARTMENT's Regional Traffic & Safety Engineer will be responsible for DEPARTMENT compliance with this Agreement, and will provide technical guidance and forms for complying with FHWA regulations.

The Municipal Traffic Engineer will be responsible for Municipal compliance with this Agreement, including documentation of labor, equipment, and materials on a daily basis, as well as all other relevant recordkeeping per the DEPARTMENT's Alaska Construction Manual. Coordination with the DEPARTMENT's Regional Traffic & Safety Engineer is recommended to ensure the rules, procedures and documentation needed for FHWA are complied with.

The Municipal Traffic Engineer shall submit to the DEPARTMENT's Regional Traffic & Safety Engineer the following Plan of Work documentation for DEPARTMENT approval prior to commencing work:

- proposed staffing,
- materials to be used,
- equipment to be used, and
- proposed equipment rates
- proposed schedule of time

If the MUNICIPALITY fails to follow an approved Plan of Work and if the work billed is not eligible for FHWA participation, then the MUNICIPALITY will not be reimbursed the portion that is not eligible for participation.

The MUNICIPALITY's Project Manager will review materials submittals and shop drawings for acceptance. Copies of approved submittals shall be given to the DEPARTMENT's Regional Traffic & Safety Engineer before installing materials.

The Buy America Requirements of 23 CFR 635.410 apply to this Agreement. No reimbursement will be made for steel or iron products manufactured outside the United States unless prior approval is obtained from the DEPARTMENT's Quality Assurance Group.

WORK ZONE TRAFFIC CONTROL

Traffic Control Plans (TCP's) do not require DEPARTMENT approval unless they are to be implemented in the 0600 to 0900 AM or 1630 to 1830 PM peak hours, or unless complete intersection closures are required. No night work is required. The MUNICIPALITY's Work Zone Traffic Control Supervisor shall notify and coordinate with the DEPARTMENT's Work Zone Traffic Control Supervisor in advance of each week's work schedules and locations.

FORMS, DOCUMENTATION

The following forms and documents apply to this work:

- **Plan of Work.** The MUNICIPALITY shall submit a Plan of Work as noted above. No form is available. Estimate the number of red light confirmation lights to be installed at each intersection, and the schedule for each intersection. Estimate the cost per installation.
- **Materials Submittals.** The MUNICIPALITY shall submit materials submittals for acceptance by the DEPARTMENT prior to ordering and installing materials.
- **Daily Force Account Summary Sheet (Form 25D196).** The Municipality shall complete this form for each days work noting labor, equipment, and materials used. Place the Inspector's full name on the "prepared by" signature line. Place the Project Manager's full name on the "checked by" signature line. If none of these items were incurred that day, then a form is not required. The MUNICIPAL Traffic Engineer shall submit these forms monthly as support for monthly billing requests to the DEPARTMENT.
 - **Equipment Costs:** Shall be established based upon Equipment Rental Rate Blue Book values depending upon age, condition, and location of equipment, or MUNICIPALITY hourly rates, whichever is lower.
 - **Labor Costs.** Shall be based upon actual wage rates plus direct overhead rates accepted by the DEPARTMENT.
 - **Materials Costs:** Shall be based upon invoices supplied by the MUNICIPALITY. Each invoice shall be noted on the face or a cover page as to where the material was or will be used, which intersection(s), and which date(s) the material was or will be used.
- **Daily Force Account Narrative.** The MUNICIPALITY shall provide a one page or less narrative attached to each Daily Force Account Summary Sheet. Note the date, time, and Project. Note the location(s) of work and the amount of work accomplished. Describe the work performed for this project in a paragraph or more as needed.
- **Traffic Control Daily Review (Form 25D104).** The MUNICIPALITY shall complete this form when work requires lane closures using devices beyond the flashing blue lights of the mobile work equipment. The MUNICIPALITY's Traffic Engineer shall submit these forms monthly as support for monthly billing requests to the DEPARTMENT. This will provide a record of safety devices in effect per the MUTCD, Part 6H, Typical Applications.
- **Work Zone Accident Report (Form 25D123).** The MUNICIPALITY shall complete this form when there is a crash within the work zone for active work on this project, regardless as to the apparent crash cause. The MUNICIPALITY's Traffic Engineer shall submit these forms monthly as support for monthly billing requests to the DEPARTMENT. The

MUNICIPALITY's Traffic Engineer shall submit these forms monthly as support for monthly billing requests to the DEPARTMENT.

- **Monthly Progress Estimate.** No form is available. The MUNICIPALITY shall provide a monthly progress estimate to the DEPARTMENT. Provide the date, project, name and address. Provide a total billing for the month's work. Number each estimate in sequential order. Attach daily summary sheets for force account work and narrative, traffic control, and any crash reporting.

Construction forms are attached, and can also be found at:

<http://www.dot.state.ak.us/stwddes/dcspubs/forms.shtml#>

Upon completion of the work, the DEPARTMENT will schedule a Final Inspection. If incomplete, the DEPARTMENT will issue a Report of Final Inspection, punchlisting remaining work. Otherwise the DEPARTMENT will issue a Letter of Project Completion

ENVIRONMENTAL IMPACTS

No ground will be significantly disturbed by this Project. A Storm Water Pollution Prevention Plan (SWPPP) Notice of Intent is not required for eligible work and materials incorporated into this Project. Any changes to the work locations or scope must be approved in advance by the DEPARTMENT.

REIMBURSEMENT

The MUNICIPALITY shall comply with 49 CFR Part 18, "Uniform Administrative requirements for Grants and Cooperative Agreements to State and Local Governments."

The MUNICIPALITY will be reimbursed for all eligible actual costs up to the agreed upon budget accumulated by project staff at an approved, audited rate including salaries, benefits, and allowable overhead costs in accordance with the accounting procedure established by the MUNICIPALITY and approved by the DEPARTMENT. General and administrative overhead costs are ineligible for reimbursement. Equipment rental rates must be approved in advance by the DEPARTMENT.

Municipal billings shall be submitted monthly, with the appropriate backup information attached. Each billing will show:

- The project name, project number, dates covering the period that the billed work was performed, a recapitulation showing the total cost to date and the amount of the current billing.
- The names of each Municipal employee charging time during the billing period, their title or classification, their hourly billable rate, and their total hours and cost.
- Reimbursable miscellaneous expenses will be those customarily not included in standard overhead rates, and will be itemized in enough detail to identify what the

charges are and if they are appropriate.

- Overhead is to be included in the hourly billable rate, and is not to be listed separately.

Billing rates shall include full compensation for salaries, benefits and direct overhead. General and administrative overhead costs are not eligible for reimbursement.

Billings will be forwarded to the DEPARTMENT for review for reasonableness, and then approved for payment by the Regional Traffic & Safety Engineer. The final billing will be audited by the DEPARTMENT's Internal Review Section.

Payment of billings properly prepared, submitted and approved for payment will be made with the minimum of delay. The DEPARTMENT, and its funding agency, reserves the right to perform an audit of all Project records prior to, or after, payment on any billing.

PROJECT CLOSEOUT

All closeout paperwork required by the DEPARTMENT's Quality Assurance Engineer will be prepared by the DEPARTMENT and delivered to the DEPARTMENT's Project Control Group no later than 90 days after all construction is complete. The paperwork will include all records needed for FHWA documentation.

MAINTENANCE AND OPERATIONS


Maintenance and operations of red light confirmation lights is subsidiary to the traffic signal funding of the current TORA and subsequent amendments.

RECORDS RETENTION

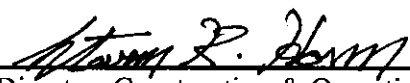
All MUNICIPALITY project records pertinent to this Agreement shall be made available for inspection, audit or reproduction for a minimum of three (3) years from the date of final payment by the funding agency, or upon termination of this Agreement.

The DEPARTMENT reserves the right to terminate this Agreement at any time. Upon termination of this Agreement or completion of the Project, all project related material including notebooks, computations, correspondence, etc, shall be delivered to the DEPARTMENT.

AGREED and SIGNED BY:

 2-19-08

Municipal Manager Date
MUNICIPALITY

 2/12/08

Director, Construction & Operations Date
DEPARTMENT

Attachments:

Exhibit A, Hardware Example, Anchorage Area Red Light Confirmation Lights Project

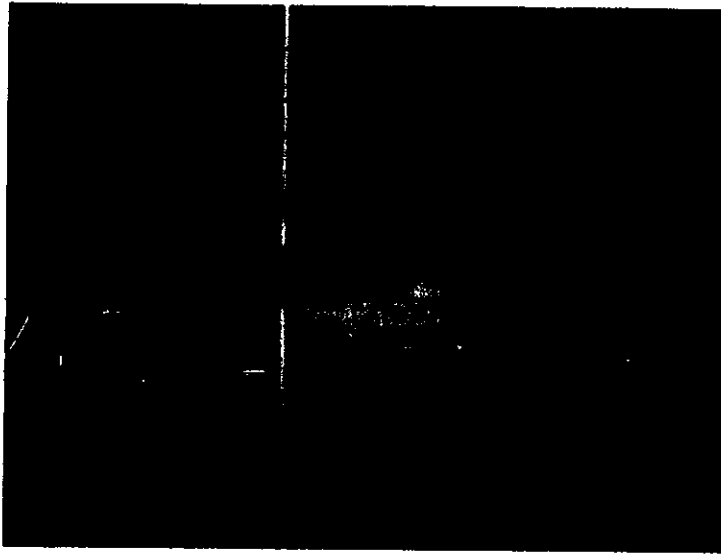
Exhibit B. HSIP Candidate Description and Cost Estimate

Form 25D196 Daily Force Account Summary Sheet

Form 25D104 Traffic Control Daily Review Form

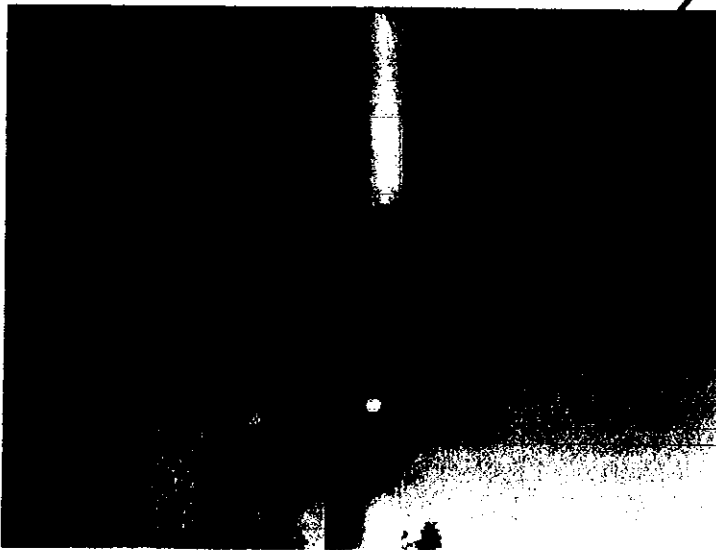
Form 25D123 Work Zone Accident Report Form

EXHIBIT A



LED Red Light
Confirmation
Light

Confirmation Light mounted on the back side of existing traffic signal head on Southbound Seward Highway, south of 36th Avenue.



Close up view of confirmation lights on the back side of the existing traffic signal heads, southbound Seward Highway @ 36th Avenue.

DESCRIPTION OF INSTALLATION

The red light confirmation light consist of a white circular LED display mounted on the back side of an existing traffic signal head. This LED is either wired directly into the RED signal LED on the opposite side of the confirmation light location or a separate wire may have to be run from the LED confirmation light to the traffic signal controller cabinet at the intersection using existing intersection conduit runs.

State of Alaska
Department of Transportation & Public Facilities
Central Region
Traffic, Safety & Utilities Section

FFY06 Highway Safety Improvement Program
06CN1 HSIP SMALL SPOT IMPROVEMENTS. 2006
ACHHE-000S(591)/59838
Anchorage Area Red Confirmation Lights Project
Hardware Example

Drawn By: RFM

Date: 10/5/2007

Scale: None

EXHIBIT B

**STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
Central Region Traffic & Safety Section
Municipality of Anchorage Traffic Department**

**FFY06 Highway Safety Improvement Program
06CN1 HSIP SMALL SPOT IMPROVEMENTS, 2006
ACHHE-000S(591)/59838
Candidate Description and Cost Estimate**

Candidate Name:

Anchorage Area Red Light Confirmation Lights Project

This project is being initiated under the 06CN1: HSIP SMALL SPOT IMPROVEMENTS, 2006 parent project, approved as part of the FFY2006 HSIP.

Candidate Location and Description:

In 2003, the Municipality of Anchorage (MOA) retained Intus Road Safety Engineering Inc. to undertake a safety review of the following intersections:

- Lake Otis Parkway at Tudor Road
- New Seward Highway at Fireweed Lane
- Old Seward Highway at Dimond Boulevard
- New Seward Highway at 36th Avenue
- Northern Lights Boulevard at Boniface Parkway

These five intersections were identified by the State Farm Mutual Automobile Insurance Company (State Farm) as the five most crash-prone intersections in Alaska. State Farm compiled the list of intersections based on motor vehicles crashes that resulted in insurance claims by its policyholders in 1999 and 2000. The list took into account the number of crashes at various intersections, how many of those crashes involved injury, and the proportion of vehicles insured by State Farm in areas where the intersections are located.

As a result of this study, these intersections along with three additional high crash intersections were selected for additional monitoring and enforcement, particularly with respect to red light running. Signs indicating the number of crashes and the number of red light running citations were erected at the five State Farm intersections and the three additional intersections in October 2004 to remind drivers of the crash rates and enforcement activities taking place at these locations. The additional intersections were:

- Tudor Road at Old Seward Highway
- New Seward Highway at Benson Boulevard
- New Seward Highway at Northern Lights Boulevard

Crashes Susceptible to Correction with the installation of Confirmation Lights.

There were a total of 260 crashes that have been determined to be susceptible to correction through the installation of red light confirmation lights. Crashes susceptible to correction include right angle and other crashes with contributing factors of failure

to yield, red light violation, or with vehicle citations of failure to yield or stop for a traffic control device (traffic signal).

<u>Intersection</u>	<u>Fatality</u>	<u>Major Injury</u>	<u>Minor Injury</u>	<u>Property Damage</u>	<u>TOTAL</u>
Seward Highway @ Northern Lights Blvd	0	1	9	26	36
Seward Highway @ Benson Boulevard	0	1	21	28	50
Tudor Road @ Old Seward Highway	0	1	7	21	29
Northern Lights Blvd @ Lake Otis Pkwy	0	2	21	20	43
Seward Highway @ 36th Avenue	0	1	14	17	32
Old Seward Highway @ Dimond Blvd	1	2	11	15	29
Fireweed Lane @ Seward Highway	0	1	2	8	11
Tudor Road @ Lake Otis Parkway	0	0	6	24	30
TOTALS	1	9	91	159	260

Existing Enforcement Problems and Proposed Mitigation:

Existing Enforcement Problems

Enforcement of red light running has been problematic at most of these intersections. In order to effectively provide enforcement for red light running, the officer must

- See the color of the light facing the violator and be able to see the stop bar.
- Be able to testify to the violator's vehicle and its distance from the stop bar at the time of the red signal.
- Be traveling the same direction of the violator, see violation and attempt to affect a stop.
- Monitor a single direction, see a violation and attempt a stop.

This requires officers to use lights and siren to attempt to clear cross traffic, a practice that can be dangerous to the officers and other motorists. Two officers are required for red light enforcement. The staffing at the Anchorage Police Department's Traffic Unit usually precludes using two officers at one location. As a result of these difficulties and associated hazards, red light enforcement at the most needed intersection is not often conducted.

Proposed Mitigation

Red light enforcement lights have been used by several cities in the US with good results. These lights consist of either a red, blue or white light fixture wired into the red circuit of the signal head. Power to the red light sends power to the enforcement light. As a result, officers can tell signal color from different angles and can not only safely conduct enforcement but can monitor more than one direction at a time.

Other jurisdictions have used a joint assessment team of local law enforcement and engineers evaluate each location, choosing locations that have a history of red light violations and locations that can facilitate safe access to the violator and a clear view of the stop bar. The deployment of enforcement lights in Anchorage will also be a joint effort between DOT, the MOA and the Anchorage Police Department.

In Florida, observational surveys have noted a 50.4 % decrease in red light running incidents at intersections where these lights have been deployed. As result of the use of enforcement lights and increased traffic enforcement, the City of Clearwater Florida realized a 6.7 percent decrease in traffic crashes between 2002 and 2004.

Due in part to the success of these lights in Clearwater and Tampa, the Florida DOT has adopted the enforcement light concept as part of the five year safety plan.

We propose to install red light confirmation lights at the 8 intersections listed above for a total of 26 confirmation light assemblies on one for each direction of travel.

Proposed Project Delivery

We propose that this work be accomplished by the Municipality of Anchorage (MOA) through a Public Interest Finding (PIF) to allow the MOA to use force account labor, materials, and equipment for the above-mentioned project.

The MOA has a Signal Maintenance Shop that is fully equipped and prepared to conduct the confirmation lights installation. Allowing the MOA to use Signal Maintenance crews to install the appropriate equipment will save time in addition to creating a cost savings. Since the intent of the project is to improve safety, timeliness in the delivery of these improvements is important. The MOA Signal Maintenance staff has considerable experience installing and maintaining all of the traffic signals within the Municipality that the majority of contractors do not. Because of this, they can install the confirmation lights at the selected intersections, including the state-owned roads, without having to submit plans through the Central Region DOT.

Benefit/Cost Ratio:

Assuming a 5% reduction in red light running crashes at these 8 intersections, the benefit/cost ratio is estimated to be 11.7:1.

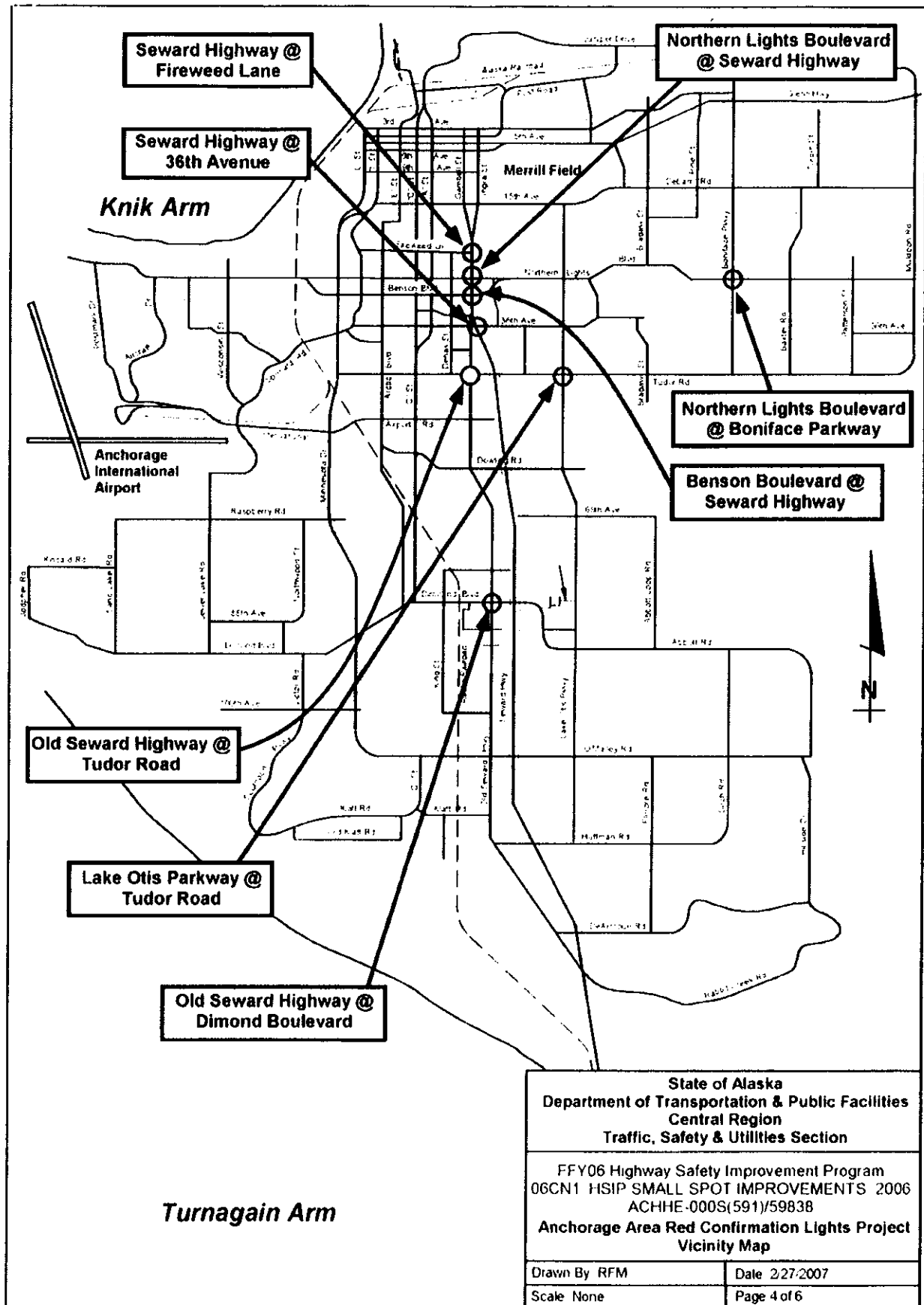
Cost Estimate:

PHASE	AMOUNT	Earliest Start Date
Preliminary Engineering (Phase 2):	\$5,000	FFY 07
Right of Way (Phase 3):	\$0,000	N/A
Utilities (Phase 7):	\$0,000	N/A
<u>Construction (Phase 4):</u>	<u>\$55,000</u>	<u>FFY 07-08</u>
TOTAL:	\$60,000	

(Note: All phases include ICAP in the amounts shown. Contract Administration is also included in the Construction amount.)

Attachments:

<i>Candidate Description and Estimate</i>	<i>Pages 1-3</i>
<i>Vicinity Map</i>	<i>Page 4</i>
<i>Project Ranking Worksheet</i>	<i>Page 5</i>
<i>Example of Confirmation Light Hardware</i>	<i>Page 6</i>
<i>Detailed Construction Cost Estimate</i>	<i>Page 7</i>



Confirmation Light Ranking

Alaska DOT/PF
Highway Safety Improvement Program
Project Ranking Worksheet

Red fields are input fields.
Black fields are fixed,
computed, or derived.

HSIP Project Name:	ACHHE-000S(591)/59838 06CN!: HSIP Small Spot Improvement, 2006: Anchorage Area Red Light Confirmation Project, Addendum #1, 3/29/2007				
Analysis Period:	1/1/01	to	12/31/05	Form Completed by:	Ron Martindale
				Date:	3/29/07

Miscellaneous Data	
Rate of Return:	3%
No of years of accident analysis	5

Accident Cost Data	
Accident Severity	Accident Cost
Property Damage Only:	\$8,500
Minor Injury:	\$65,000
Major Injury:	\$326,000
Fatality:	\$853,000

Predicted Change in Accidents due to Improvement(s)						
Improvement	Type of Accident Susceptible to Reduction or Increase due to Improvement	Reduction Factor (+ or -)	No of Acc.s Susceptible to Reduction or Increase			
			PDO	Min	Maj	Fat
Confirmation Loghts	All failure to yield/red light violation Crashes	-5%	159	91	9	1
Total Accidents Susceptible to Reduction or Increase:			159	91	9	1
Predicted Change in Accidents:			-8	-4.6	-0.5	-0.1
Predicted Change in Accident Cost (\$1,000):			-62	-296	-147	-33

Benefit/Cost of Improvements (Safety and M&O Benefits Only)											
Improvement	Total Proj Cost (K)	Ann M/O Cost (K)	Life of Impvt (yrs)	Predicted Change in Accidents				Predicted Change in Accident Cost	Annualized Safety and M&O Benefits	Annualized Constr. and M&O Costs	Benefit Cost (Safety and M&O Benefits only)
				PDO	Min	Maj	Fat				
Confirmation Loghts	60	2.0	10	-8.0	-4.6	-0.5	-0.1	-\$526,775	\$105,355	\$9,034	11.7:1
Subtotals:				-8	-4.6	-0.5	-0.1				
Totals/Averages:	60	2.0	10.0	-13				-\$526,775	\$105,355	\$9,034	11.7:1

Benefit Cost Formula (Safety and M&O Benefits Only)

B/C Ratio =
$$\frac{(\text{Estimated Annual Reduction in Accident Cost}) + (\text{Decrease in Ann Maintenance Cost, 0 if increase})}{(\text{Annualized Construction cost}) + (\text{Increase in Ann Maintenance cost, 0 if decrease})}$$



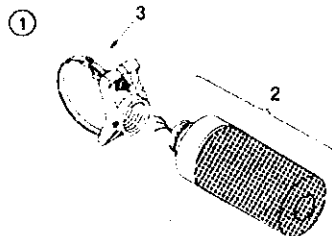
SIGN MOUNTINGS Confirmation Lights



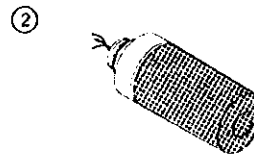
ITEM	DESCRIPTION	PART NO.
CONFIRMATION LIGHT ASSY:		
①	w/ Astro-Mini-Brac & Globe	SM-0286
②	w/ Globe	SM-0284
③	ASTRO MINI-BRAC, Band Mount, 1½" NPS	AB-0121

Notes:

1. All assemblies are supplied standard with stainless fasteners and natural aluminum alodine coating. Stainless upgrade to include stainless steel clamp screw.
2. Please specify options when ordering.



OPTIONS
GLOBE COLOR Clear, Blue, Red or None
BAND LENGTH: 29" or 42"
STAINLESS UPGRADE
PAINT

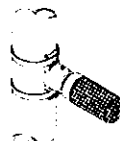


OPTIONS
GLOBE COLOR Clear, Blue, Red or None
PAINT

Typical Applications:



Mast Arm Mount
Astro-Mini-Brac



Side-of-Pole Mount
Banded Narrow Hub



Plumbizer Mount

State of Alaska
Department of Transportation & Public Facilities
Central Region
Traffic, Safety & Utilities Section

FFY06 Highway Safety Improvement Program
06CN1 HSIP SMALL SPOT IMPROVEMENTS 2006
ACHHE-000S(591)/59838
Anchorage Area Red Confirmation Lights Project
Hardware Example

Drawn By RFM

Date 2-27-2007

Scale None

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FFY2006 Highway Safety Improvement Program Construction Cost Estimates					
ACHHE- 000S(591)/59838		HSIP Small Spot Improvement, 2006: Anchorage Area Red Light Confirmation Project, Addendum #1, 3/29/2007			
3/29/2007 9:34		Install red light confirmation lights for red light enforcement			
Work	Quantity	Unit	Unit Cost	Total Cost	Remarks
REMOVALS					
Clearing and Grubbing	0	ACRE	\$15,000.00	\$0	
Remove Existing Curb	0	LF	\$12.00	\$0	
Unclassified Excavation	0	CY	\$20.00	\$0	
Remove Inlet	0	EA	\$1,300.00	\$0	
Remove Culvert Pipe	0	LF	\$25.00	\$0	
Obliterate Roadway	0	SY	\$10.00	\$0	
Remove Existing Guardrail	0	LF	\$8.00	\$0	
Remove Existing Pavement	0	SY	\$7.00	\$0	
Remove Sidewalk	0	SY	\$25.00	\$0	
INSTALLATIONS					
Borrow, Type A (2 tons CY)	0	TON	\$18.00	\$0	
Crushed Aggregate Base (2 tons CY)	0	TON	\$30.00	\$0	
Asphalt Concrete, Type II (115 lbs/SY Inch)	0	TON	\$75.00	\$0	
Asphalt Concrete, Type II (115 lbs/SY Inch)	0	TON	\$55.00	\$0	
Pavement Planing	0	SY	\$5.00	\$0	
Retaining Wall Concrete	0	SF	\$120.00	\$0	
Concrete Barrier	0	LF	\$160.00	\$0	
Sidewalk / Pathway	0	SY	\$60.00	\$0	
Patterned Concrete	0	SY	\$100.00	\$0	
Curb & Gutter	0	LF	\$25.00	\$0	
Curb Ramp	0	EA	\$1,600.00	\$0	
Approach Driveway	0	EA	\$2,000.00	\$0	
Guardrail	0	LF	\$55.00	\$0	
CRT	0	EA	\$3,600.00	\$0	
SRT/EI2000	0	EA	\$6,000.00	\$0	
Culvert End Section	0	EA	\$850.00	\$0	
Bollard	0	EA	\$1,500.00	\$0	
Crash Cushion Installed	0	EA	\$75,000.00	\$0	
Adjust Manhole/Inlet	0	EA	\$2,000.00	\$0	
Adjust Valve Box	0	EA	\$750.00	\$0	
Topsoil/Seeding	0	SY	\$10.00	\$0	
Trees	0	EA	\$600.00	\$0	
Culvert, 24"	0	LF	\$110.00	\$0	
Inlet	0	EA	\$5,000.00	\$0	
TRAFFIC CONTROL					
Relocated Signal Pole, Foundation	0	EA	\$7,500.00	\$0	
Relocated Electroliers	0	EA	\$4,500.00	\$0	
Relamp Electroliers	0	EA	\$2,400.00	\$0	
Flashing Beacon System	0	LS	\$50,000.00	\$0	
New Electrolier	0	EA	\$7,500.00	\$0	
New Load Center	0	EA	\$10,000.00	\$0	
Relocated Controller Foundations	0	EA	\$7,500.00	\$0	
New Controller Foundations	0	EA	\$50,000.00	\$0	
Relocate Traffic Structure Support	0	EA	\$50,000.00	\$0	
New Junction Boxes	0	EA	\$1,200.00	\$0	
Loop Detectors	0	EA	\$1,500.00	\$0	
New Traffic Signal Wiring	0	EA	\$12,000.00	\$0	
New Signal Pole, Heads, Signs	0	EA	\$25,000.00	\$0	
Confirmation Lights Hardware	26	EA	\$300.00	\$7,800	
Confirmation Lights Installation	26	EA	\$1,400.00	\$36,400	
New Ped pole & Gear	0	EA	\$7,500.00	\$0	
New Conduit w/wiring	0	LF	\$40.00	\$0	
Remove Pole & Foundation	0	EA	\$3,500.00	\$0	
Delimiters	0	EA	\$80.00	\$0	
Signage	0	EA	\$800.00	\$0	
Remove markings (100 Ft length)	0	STA	\$100.00	\$0	
Relocate Sign	0	EA	\$600.00	\$0	
Milling for Markings	0	LF	\$2.00	\$0	
Striping	0	LF	\$2.50	\$0	
Preformed Symbols	0	EA	\$1,000.00	\$0	
OTHER (N/A: Work to be performed by MOA forces through a Public Interest Finding)					
Erosion/Pollution Control	0	LS	All Req'd	\$0	1% of pay items
Field Office	0	LS	\$7,500.00	\$0	
Traffic Maintenance	0	LS	All Req'd	\$0	13% of pay items
Construction Surveying	0	LS	All Req'd	\$0	5% of pay items
Mobilization/Demobilization	0	LS	All Req'd	\$0	10% of pay items
CONSTRUCTION CONTRACT COST			Subtotal	\$44,200	
UTILITIES					
Utility Preliminary Design	0	LS	All Req'd	\$0	
Gas Line Relocate	0	LS	\$5,000.00	\$0	
Underground Telephone Relocate	0	LS	\$5,000.00	\$0	
Underground Electric Relocate	0	LF	\$10.00	\$0	
Hydrant Relocate	0	EA	\$15,000.00	\$0	
Sewerline Relocate	0	LF	\$150.00	\$0	
Overhead Electric Relocate	0	LS	\$150,000.00	\$0	
			Utilities Subtotal	\$0	
COST ESTIMATE SUMMARY			COST	WITH 5.5% ICAP	
Preliminary Design	0	LS	All Req'd	\$5,000	\$5,000
Right-of-Way	0	SF	\$25.00	\$0	\$0
Utilities	0	LS	All Req'd	\$0	\$0
Construction	0	LS		\$14,000	\$16,000
Contract Administration	0	LS	@ 20%	\$9,000	\$9,000
Contingencies	0	%	10.00%	\$0	\$0
Intersection: HSIP Small Spot Improvement, 2006: Anchorage Area Red Light Confirmation Project, Addendum #1, 3/29/2007			Total:	\$60,000	Est Design/Construction Costs

Content ID: 006073**Type:** AR_FundsApprop - Funds Approp Resolution**Title:** HSIP FY06: Red Light Confirmation Lights**Author:** maglaquijp**Initiating Dept:** Traffic**Description:** HSIP: Small Spot Improvements FY06: Phase I: Anchorage Area Red Light Confirmation Lights MOA**Date Prepared:** 2/26/08 3:21 PM**Director Name:** Lance R. Wilber**Assembly Meeting Date:** 3/18/08

Workflow Name	Action Date	Action	User	Security Group	Content ID
Clerk_Admin_SubWorkflow	3/6/08 5:59 PM	Exit	Heather Handyside	Public	006073
MuniMgrCoord_SubWorkflow	3/6/08 5:59 PM	Approve	Heather Handyside	Public	006073
MuniManager_SubWorkflow	3/6/08 5:55 PM	Approve	Heather Handyside	Public	006073
MuniManager_SubWorkflow	3/5/08 10:26 AM	Checkin	Joy Maglaqui	Public	006073
Finance_SubWorkflow	2/29/08 5:07 PM	Approve	Sharon Weddleton	Public	006073
OMB_SubWorkflow	2/28/08 1:53 PM	Approve	Wanda Phillips	Public	006073
Traffic_SubWorkflow	2/27/08 2:21 PM	Approve	Lance Wilber	Public	006073
FundsAppropWorkflow	2/26/08 3:28 PM	Checkin	Renee Stewart	Public	006073

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