

**Agency: Commerce, Community and Economic Development****Grants to Named Recipients (AS 37.05.316)****Grant Recipient: Alaska Gateway School District****Federal Tax ID: 920058369****Project Title:****Project Type: Remodel, Reconstruction and Upgrades**

# Alaska Gateway School District - Lighting Efficiency Upgrade and Equipment Replacement

**State Funding Requested: \$117,000****House District: 39 / T**

One-Time Need

**Brief Project Description:**

To reduce the energy consumed by the lighting in Tok School, the parking lot/exterior lighting and the multipurpose building. Replace worn out equipment at the Mentasta Lake Katie John School that presents a safety hazard.

**Funding Plan:**

Total Project Cost:	\$130,000
Funding Already Secured:	(\$13,000)
FY2014 State Funding Request:	<u>(\$117,000)</u>
Project Deficit:	\$0

*Funding Details:*

*The district will utilize local funds to complete the project.*

**Detailed Project Description and Justification:**

The Energy Upgrades include the following:

- >Replace the existing T12 lamps and magnetic ballasts with new energy efficient LED lights with electronic ballasts.
- >Replace the gymnasium metal halide lights with new fluorescent fixtures that utilize LED lights.
- >Install occupancy sensors to automatically turn off the lighting in un-occupied rooms.
- >Replace the parking lot and exterior lighting with fixtures that utilize LED's as the light source.
- >Replace the multipurpose building lighting with fixtures that utilize LED's as the light source.
- >The lighting upgrades described above usually have a 3 or 4 year payback in Montana. The payback in Tok will be much shorter since the energy rates are much higher.
- >Retrofitting the lighting could reduce the lighting load by roughly 30%. The lighting in a typical school building consumes roughly 30% of the total energy consumption.
- >The district paid \$264,544 in FY12 for electricity so 30% of the overall energy, for lighting, would equate to \$79,363.
- >A 30% reduction in lighting costs, from the \$79,363 at current electrical rates, is a savings in lighting energy equating to approximately \$23,809 per year.
- >The payback for this project thru the savings produced by reducing energy costs is approximately four years.
- >Lighting upgrades could be put out to bid and completed by an outside contractor or be performed by the summer district maintenance crew.

The playground equipment at Mentasta Lake Katie John School needs to be repaired or rebuilt each summer by the

maintenance department because the equipment is worn out; has reached the maximum usage age; and safety concerns are beginning to arise. Some of the playground structures are built from wood and repairs are no longer an option. The district has received appropriations for Walter Northway School in 2008, Tok School in 2009 and Dot Lake School and Tanacross School in 2010 to replace and/or upgrade these school playgrounds. The District also used local funds to replace the playgrounds at Tetlin School and Eagle School in the summer of 2011. This past summer Tok School utilized grant funding from various organizations, as well as a District matching funds, to purchase additional playground equipment which the District installed after removing the outdated sections. (A-3 & A-4) The only remaining school needing a playground replacement is located in Mentasta. Attached is a picture of the playground structures (A-1) and a quotation (A-2) for the playground equipment from the summer of 2011. The same playground would be installed as all other sites within the district. The District will utilize local hire and/or summer maintenance staffing to install the purchased playground equipment.

### Project Timeline:

The project was approved during the January 17, 2011 Regional School Board meeting; at the January 16, 2012 Regional School Board meeting; and at the January 21, 2013 Board meeting.

The project would begin as soon as the appropriation was awarded and be completed by the end of October, 2013. All funds would be spent by June 30, 2014.

### Entity Responsible for the Ongoing Operation and Maintenance of this Project:

Alaska Gateway School District

### Grant Recipient Contact Information:

Name: Todd Poage  
 Title: Superintendent  
 Address: 1313.5 Alaska Highway  
 Tok, Alaska 99780  
 Phone Number: (907)883-5151  
 Email: tpoage@agsd.us

Has this project been through a public review process at the local level and is it a community priority?  Yes  No



## Meeting Minutes

PROJECT: Alaska Gateway School District:  
Biomass Boiler

ATTENDEES: Todd Poage, Scott MacManus, Rex Goolsby, Chris Rouch- AGSD; Nathan Ratz, Alan Bronec - CTA

DATE: **November 5, 2010**  
**(11:00am Alaska)**

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### Energy Upgrades

1. The potential to save energy in the existing school and hockey rink was discussed. Alan Bronec toured the existing school building and hokey rink and found that there are numerous opportunities to reduce the energy consumed by the lighting. The following was discussed:
  - a. Replace the existing T12 lamps and magnetic ballasts with new energy efficient T8 lamps and electronic ballasts.
  - b. Replace the gymnasium metal halide lights with new fluorescent fixtures that utilize T5HO lamps.
  - c. Install occupancy sensors to automatically turn off the lighting in un-occupied rooms.
  - d. Replace the parking lot and exterior lighting with fixtures that utilize LED's for the light source.
  - e. Replace the hockey rink lighting with fixtures that utilize LED's for the light source.
2. The lighting upgrades described above usually have a 3 or 4 year payback in Montana. The payback in Tok will be much shorter since the energy rates are much higher in Tok.
3. The ice rink is utilized approximately 30 hours per week and 36 weeks per year.
4. Retrofitting the lighting could reduce the lighting load by roughly 30%. The lighting in a typical school building consumes roughly 30% of the total energy consumption.
5. Lighting upgrades could be put out to bid and completed by an outside contractor or be performed by the school maintenance staff. Need to verify that work does not have to be performed by a licensed electrician.
6. CTA will prepare a fee proposal to prepare engineering documents for the proposed lighting upgrade.
7. Scott asked if stagger starting the motors in the school building will reduce the peak monthly demand charge. CTA will verify how APT calculates the demand charge. Most utilities calculate the peak demand by measuring the average power consumed over 15 minute periods during the monthly billing cycle. The peak demand is the highest average power used over a 15 minute period during the month. Although motors have a starting current that is 5 or 6 times higher than the running current, stagger starting will not reduce the peak demand for the building since the starting current only occurs for duration of a second or two. The power consumed during this short duration is insignificant when compared to the 15 minute window that the demand is calculated.

### New Welders

1. The school has constructed five new welding stations on the south wall of the welding room. Five used Miller Dialarc 250 welders have been donated to the school and set in place at each station but no electrical has been installed at this time.

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November 9, 2010

Mr. Todd Poage, Superintendent  
Alaska Gateway School District  
P.O. Box 226  
Tok, Alaska 99780-0226

Re: **Lighting Audit Fee Proposal**

Dear Todd:

As we discussed in our meeting on November 5<sup>th</sup>, 2010, we feel that there are numerous opportunities to reduce the energy consumed by the lighting in the Tok school building and the hockey rink building. During our site visit we observed the following potential energy savings upgrades:

1. Replace the existing T12 fluorescent lamps and magnetic ballasts with new energy efficient T8 fluorescent lamps and electronic ballasts.
2. Replace the gymnasium metal halide lights with new fluorescent fixtures that utilize T5HO fluorescent lamps.
3. Install occupancy sensors to automatically turn off the lighting in un-occupied rooms.
4. Replace the parking lot and exterior lighting with fixtures that utilize LED's for the light source.
5. Replace the hockey rink lighting with fixtures that utilize LED's for the light source.

We have implemented these upgrades on numerous other schools and have found them to reduce the lighting energy by 30% or more with a typical payback period of 3-4 years. A 30% reduction in the lighting energy will reduce your annual energy bills by \$12,000 to \$15,000.

Per your request, we have prepared the following fee proposal to perform a lighting audit for the school and hockey rink building. The scope of work for this audit will include the following:

**Scope of Work:**

1. Review the existing as-built plans for the school and prepare a spreadsheet that includes the following information:
  - a. Existing and proposed upgraded lighting in each room or space.
  - b. Hours of operation for the lighting in each room or space.
  - c. Estimated kW and kWh usage for the existing lighting and proposed lighting in each room or space.
2. Prepare an estimated cost for each proposed upgrade and calculate a simple payback for each upgrade.
3. Prepare specifications for each proposed lamp, ballast, and fixture. These specifications along with the spreadsheet described above will provide enough information for the school maintenance staff to perform the proposed upgrades.

**AGENDA**  
**ALASKA GATEWAY SCHOOL DISTRICT**  
**REGIONAL SCHOOL BOARD MEETING**  
**District Board Room –Tok, Alaska**  
**Monday, January 17<sup>th</sup>, 2011**  
**6:00 PM Regular Meeting**

*MISSION: "EDUCATING ALL STUDENTS TO REACH THEIR FULL POTENTIAL AS RESPONSIBLE CITIZENS."*

<b>CALL TO ORDER</b>	<b>President</b>
<b>ROLL CALL</b>	<b>Secretary-Treasurer</b>
<b>PLEDGE OF ALLEGIANCE</b>	<b>President</b>
<b>OATH OF OFFICE</b>	<b>President</b>
<b>ROLL CALL</b>	<b>Secretary-Treasurer</b>
<b>HEARING OF VISITORS ON AGENDA ITEMS<sup>1</sup></b>	<b>President</b>
<b>RECEIVING OF DELEGATIONS</b>	<b>President</b>
<b>PRESENTATIONS</b>	<b>President</b>
<b>Business Financial Administrative System</b>	
<b>ACTION ITEMS - ROUTINE MATTERS</b>	
1. Approval of Agenda	<b>President</b>
2. Approval of Minutes	<b>President</b>
<b>ACTION ITEMS - OLD BUSINESS</b>	<b>President</b>
<b>ACTION ITEMS - NEW BUSINESS</b>	<b>President</b>
3. Business Financial Administrative System	
4. Welder Circuits Bids	
5. Eagle and Tetlin Playgrounds Legislative Capital Project Request	
6. Tok School Welder Circuits Legislative Capital Project Request	
7. Tok School Energy Upgrade Legislative Capital Project Request	
8. Multipurpose Building Heat Loop Legislative Capital Project Request	
9. Section IV Seat G Board Vacancy	
10. ASB Principal Evaluation Form	
11. Tok School World Classroom Club Out-Of-State Travel Request	
12. Walter Northway School HSGQE Student Waiver	
<b>REPORTS/INFORMATION/DISCUSSION</b>	
Superintendent's Report	<b>Superintendent</b>
Financial Report	<b>Chief Financial Officer</b>
Executive Director's and Directors' Reports	<b>Executive Director</b>
Principals' Reports	<b>Principals</b>
Advisory School Board Minutes	<b>Superintendent</b>
Correspondence/Miscellaneous	<b>Superintendent</b>
<b>HEARING OF VISITORS ON NON-AGENDA ITEMS<sup>1</sup></b>	<b>President</b>
<b>DISCUSSION, COMMENTS, QUESTIONS BY MEMBERS OF THE BOARD</b>	<b>President</b>
Bus Contracts	
Student Activities	
Student Class Advancement	
<b>FUTURE MEETING DATES</b>	<b>President</b>
<b>SUGGESTED AGENDA ITEMS</b>	<b>President</b>
<b>EXECUTIVE SESSION-- Matters Required to be Confidential by Law</b>	<b>President</b>
<b>ADJOURNMENT</b>	<b>President</b>

*<sup>1</sup>All members of the public that would like to comment on any matters during Hearing of Visitors on Agenda Items or Hearing of Visitors on Non-Agenda Items need to sign-in with the Board Secretary. The Board President will call on each member of the public in the order he or she signed-in as the meeting progresses to that section of the agenda.*



TETLIN SCHOOL

TETLIN, ALASKA

15020290-1-6-1

10/28/2010

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# QUOTATION

DATE	NUMBER
10/26/2010	MM102610-1

NAME / ADDRESS	PURCHASE ORDER TO BE ISSUED TO			
Alaskan Gateway School District Eagle & Tetlin Elementaries Attn: Todd Poage Ph: 907-883-5151 X10 Email: tpoage@agsd.us	Landscape Structures Inc. 601 7th Street South Delano, MN 55328 PLEASE FAX COPY TO EXERPLAY AT 505-281-0155			
SHIPPED VIA	TERMS	REP	FOB	EST. SHIP DATE
Common Carrier	Progress ...	KC	Tok, AK	3 - 4 Weeks ARO

**PLEASE MAKE PURCHASE ORDER TO LANDSCAPE STRUCTURES, INC. - SEE ABOVE**

ITEM	DESCRIPTION	QTY	COST	TOTAL
PlayBooster	Eagle & Tetlin Elementary Schools Alaskan Gateway School District Tok, AK  LANDSCAPE STRUCTURES Per Drawing #20290-1-2, Includes (1) Pipe Barrier, (1) Wire Barrier, (1) Hole Panel, (1) S/S Slide for a 64" Deck, (1) S/S Slide for a 48" Deck, (1) Clatterbridge, (1) Block Climber, (1) Chain Ladder, (1) Loop Arch, (1) Loop Pole, (1) Chinning Bar, (1) Hand Hold/Leg Lift, (1) 2-Ring Bridge w/Crossovers and (1) End Vertical Ladder	2	22,582.00	45,164.00
LSI 120891A	Complimentary Arch Tire Swing w/Coated Chain, 299 lbs Valued at \$2,705.00 Each HGAC Discount, 6% Freight/Shipping Charges (150-362-10)	2	0.00	0.00
Disc Freight			-2,709.84 9,240.00	-2,709.84 9,240.00
Notes	Pricing is for the above listed equipment only and does not include installation, additional insured addendum, off loading of equipment at time of delivery, storage, security, site preparation, security fencing, or any applicable taxes, bonds or permits.  Pricing is good for 30 days.			

IF YOU ARE TAX-EXEMPT, PLEASE PROVIDE A TAX-EXEMPT CERTIFICATE ADDRESSED TO LANDSCAPE STRUCTURES, INC

*Michelle McKean*

**TOTAL** \$51,694.16

# D

# YOUTH

Contact the newsroom at [newsroom@newsminer.com](mailto:newsroom@newsminer.com) or 459-7572

Tuesday, September 4, 2012

## A NEW PLACE TO PLAY

Photos by Aliza Sherman Risdahl

TOK — Children romped and climbed and teeter-tottered and slid under a nearly cloudless vibrant sky at Tok School recently.

Nothing too special about that, right?

Ah, but this was no ordinary day at Tok School. This was the official opening of the new playground, full of red, white and blue equipment that had a distinctly modern look.

Nearly 100 community members, mostly parents, students and teachers, attended the ribbon cutting that opened the playground. The playground is the only one in the area, so it serves the school and the wider community.

Carrie Beeman, secretary-treasurer of the Tok PTSA, said a few words and thanked all the contributors to the project, including the Rasmuson Foundation, which gave \$15,000 with the requirement for some matching funds. A little more than \$88,000 was raised to pay for the new playground. Todd Poage, superintendent of the Alaska Gateway School District, cut the ribbon, sending about 40 children rushing to the playground.

— Information provided by Aliza Sherman Risdahl in Tok.





Becky Wade, Tok PTSA president, and Carrie Beman, Tok PTSA secretary/treasure watch as Todd Poage, superintendent of the Alaska Gateway School District, cuts the ribbon for the new Tok School playground. The playground is the only one in the area, so it serves the school and the wider community.



# World of Wonder

EXPLORING THE REALMS OF HISTORY, SCIENCE, NATURE AND TECHNOLOGY

# BOY SCOUTS

“Be prepared” is the famous motto of the Boy Scouts. From its beginning, the Scouting movement has been one of the world’s most successful youth organizations.

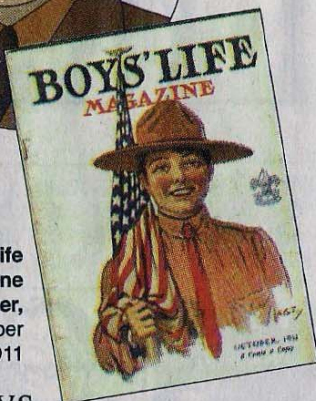
## In the United States

There were several U.S. youth organizations for boys prior to the Scout movement. In 1902, Ernest Thompson Seton created the Woodcraft Indians based on American Indian lore and outdoor life. Baden-Powell credited Seton with being one of the fathers of Boy Scouting.

Scouting was brought to the United States by William Boyce.



Robert Baden-Powell (1857-1941)



Boys' Life Magazine cover, October 1911

## Early days

