

## LastMile Connectivity Grant Application

Applicant: Dallas School District  
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Funding Request: \$49,769

### 1. Project Description

Dallas School District is committed to providing 10MBps of bandwidth, or greater, to each of the schools within the district. To this end Dallas School District has fully funded the placement of fiber between the District Office and five of the district's six schools.

This project began in 2006 with fiber being run between the District Office and a post high-school building just three blocks from the District Office. This effort continued as follows:

- 2007 - Fiber was run to Dallas High School, serving 1,034 students.
- 2008 - Fiber was run to LaCreole Middle School, serving 773 students.
- 2008 - Fiber was run to Whitworth Elementary School, serving 441 students.
- 2009 - Fiber was run to Lyle Elementary School, serving 442 students.

In addition to the fiber runs, each building was equipped with a managed switch with Gigabit capabilities.

The District Office is connected to Willamette Education Service District, WESD, with a 20MBps fiber connection. WESD manages this connectivity and provides support for hardware components at Dallas School District.

The challenge we are currently facing is providing fiber to our one remaining school, Oakdale Heights Elementary. This fiber run is complicated by a lengthy underground directional bore that has not been necessary at the other buildings. All other buildings were connected with aerial service.

Fiber runs to each of our buildings represents the most viable, long term solution for the increasing demand for bandwidth. Fiber has been described as the gift that keeps on giving with advances in bandwidth accomplished by changing the hardware on each end of a run. The only annual cost is the Pole License Agreement with Pacific Corp. Dallas School District annually allocates \$1000 to cover this license agreement as well as any necessary pole maintenance and inspection fees.

The desire to provide fiber to Oakdale Heights Elementary is fueled by the need to provide access to information via the internet in the same way it is provided at other locations. Oakdale's connectivity is

currently a point-to-point T1 line providing 1.2MBps of bandwidth. While this has been satisfactory in the past it is no longer capable of supporting current needs.

Increased bandwidth at Oakdale Heights Elementary would allow teachers to fully access the two streaming media services available to public schools throughout the state of Oregon. Learn360 and Discovery Streaming provide digital media including video, still pictures and links to other teaching resources. Teachers can create their own tests and quizzes based on the media and compile their own lists of viewable material.

Two-thirds of the classrooms at Oakdale Heights Elementary are equipped with video projection systems that allow classroom teachers to fully incorporate the internet into their daily teaching. All classrooms will have these systems in place by the end of this school year. These systems, used in conjunction with streaming video, provide access to information in ways that captivate and motivate students.

Since 2002, Dallas School District has entered into an agreement with Movie Licensing USA to provide a public performance site license for motion pictures from nineteen major motion picture studios. Because of our long relationship with Movie Licensing USA, Dallas School District was approached by representatives of the company to discuss ways to provide this same access in a streaming video format. While this is currently being done in higher education, its use in K-12 public schools is limited. This opportunity would only be available at buildings with fiber connections.

Oakdale Heights Elementary uses Follett Destiny for its library service. This service is hosted at WESD. When bandwidth is consumed by other functions there is a noticeable delay in processing check-in and check-out of library books. This delay is not evident at the schools with fiber connections.

Updates of operating systems at Oakdale Heights Elementary are currently scheduled so this process does not consume available bandwidth. With fiber capabilities these updates can occur in a much more timely fashion.

## 2. Description of how the proposal satisfies the Criteria outlined.

If funded, this project will with one-time funding complete the fiber build to all students in Dallas School District. Grant funds will be used solely for the installation of fiber connecting Dallas School District Main Distribution Frame to Oakdale Heights Elementary Main Distribution Frame. This includes permit applications, aerial and underground construction, hardware, fiber termination panels and fiber splicing necessary for a complete fiber project.

### Demonstrated Need

Oakdale houses the only students in Dallas School District not currently served by a 10MBps connection or higher.

### Student Population Served

Oakdale is a K-3 building with 390 students and 57 licensed and classified staff members. Oakdale Heights also houses an early intervention and early childhood special education program staffed by WESD. This program supports 37 special needs students and their families. This same program also provides speech and language instruction to 7 students under the age of five.

### Commitment to on-going funding

Dallas School District is committed to fully funding all necessary support services to maintain fiber connectivity to all schools. This includes an annual agreement with CoastCom to provide timely repair in the event of a failed fiber line.

Dallas School District is also committed to an annual contracted service with WESD to provide technical assistance in switch, router, and firewall maintenance. This is a service Dallas School District purchases beyond those services provided through core services. For the last 5 years this has been a part of our resolution service with WESD.

### Partnering with neighboring district, ESD and others

Dallas School District relies heavily on WESD for infrastructure support and technical assistance. WESD has always been very responsive to our needs in all areas including system engineering and critical failures. Because we are only 20 miles from the WESD office, onsite support is easy to arrange.

The partnership with WESD for technical support extends beyond the preparation of this application into nearly all areas of Technology. WESD is currently managing a deployment of Cisco wireless access points at Dallas High School as well as enabling a new DMZ on the District Office switch to provide access to the internet without touching our network.

WESD's Early Intervention and Early Childhood Special Education Program is another example of a partnership with WESD. This program is housed in a large classroom at Oakdale Heights Elementary and provides support for children birth to five years of age with special needs. This program accesses the necessary resources at WESD and the internet with connectivity through Dallas School District. The increased bandwidth available from a fiber installation will also be available to them.

### Completed application requirements

All eight components are addressed in this grant application

#### 3. Description of site covered and projected numbers of students and educators served.

Oakdale Heights Elementary, located at 1375 SW Maple, Dallas, Oregon, is a K-3 school built in 1975. It has 25 classrooms and an open library design. All classrooms, offices, and teaching spaces have been wired with CAT 5e data drops, with several areas having multiple drops. The school is serviced by underground power and phone but has no usable conduit for fiber. An underground directional bore will be necessary to bring fiber to the building.

Oakdale Heights Elementary houses 390 students and 57 licensed and classified staff members. WESD special education staff, speech and hearing specialists, early intervention specialists and school psychologists also work out of the building. Each of these specialists has a data drop to provide access to WESD resources via the internet. Increased bandwidth will be available to these staff in addition to Dallas School District Staff.

4. Key ESD and/or school staff involved in Proposal.

Scott Voll, Network Manager for WESD, managed the competitive bid process for all fiber projects for Dallas School District and continues that role with this project. Scott also provides recommendations for the purchase of managed switches with fiber modules.

Caleb Harris, Principal at Oakdale Heights Elementary, provided staff and enrollment information as well as suggestions concerning the placement of the d-mark for the fiber run to minimize any potential problems.

Assistance in tracking previous spending for fiber projects was provided by Berta Horton, Accounts Payable Clerk.

The grant application was prepared by Dennis Engle, Assistant Superintendent.

5. Description and role of any contractors involved in Proposal

Doug Updenkelder, Vice President of CoastCom, Inc. has been the successful bidder for all but one of our fiber projects. He has worked closely with the city on two difficult projects that involved getting across a river with the fiber. CoastCom is based out of Newport Oregon. When a fiber run was cut by a city contracted tree trimmer, CoastCom was on site in two hours and had service restored in another two hours. All of their installations have been flawless and their technical advice has been invaluable.

During the installation of the fiber to Lyle Elementary School, CoastCom prepared for the fiber run to Oakdale Heights Elementary School because both schools shared a few blocks of common pathway from the District Office. The fiber run to Oakdale Heights Elementary is a challenging run; however, the work already done by CoastCom will prove beneficial.

6. Description of how the grant funds leverage other resources and their value

Dallas School District has no other funds for this project beyond grant dollars and the general fund. Should the Education Enterprise Steering Committee determine it is unable to fully fund the project, Dallas School District would determine its ability to complete the project if partially funded through the grant process.

Dallas School District is unique in its ability to run fiber to all schools. Every school is located no more than 1.5 miles from the District Office. Because of this close proximity owning our own fiber with no recurring costs, other than the annual pole fee, is the most cost effective long term solution for high bandwidth to all students and staff. To this end Dallas School District has committed \$126,816 of general fund dollars since 2006 to meet this goal.

The budget realities of public school funding have made this effort more difficult in the last year. We faced layoff of teachers and administrators this school year as well as a shortened school year last year.

We are committed to completing this project but are faced with possibility of delaying it. Funding from EESD would allow this project to stay on course.

7. Equipment requirements

Hardware is not a part of this funding request. At the District Office, the switch already has the fiber module in place. At Oakdale Heights Elementary School the district's technology budget can support the purchase of a HP Procurve 4202 72 Port Switch with a 24 port GIG T Module.

8. Proposed Budget Page

**Completed Projects**

Project	Date	Cost	Funding Source
Post High Program	February-06	\$ 6,146	General Fund
Dallas High School	May-07	\$ 24,050	General Fund
LaCreole Middle School	April-08	\$ 41,584	General Fund
Whitworth Elementary School	April-08	\$ 12,948	General Fund
Lyle Elementary School	June-09	\$ 42,088	General Fund
<b>Total</b>		<b>\$ 126,816</b>	<b>General Fund</b>

**Current Project**

Project	Date	Cost	Funding Source
Oakdale Heights Elementary	Spring 2010	<b>\$ 49,769</b>	<b>EESC Grant</b>
Procurve 72 Port Switch with Fiber Module	Spring 2010	\$ 4,106	General Fund