TUSD's School Year 2013-14 E-Rate Application
Background, Request Descriptions, and Staff Recommendations

1. Introduction

Background Summary

As described in the February 12th Board Agenda Item titled, "Tucson Unified School District's Participation in the Federal E-Rate Program", at this time of year TUSD and school districts nationwide submit to the Schools and Libraries Division (SLD) their annual requests for funding in accordance with the Federal E-Rate Program.

The district's E-Rate request must be formally approved by the Governing Board in an Open Meeting prior to submitting the request. The deadline for filing this year's request with SLD is March 14th, 2013.

The request actually consists of several individual Funding Requests, grouped into four categories for the Board's consideration. A separate Board Agenda Item has been forwarded to Board members for each of the four request groups:

- Approval and Commitment of Funding for Continuation of District Internet and Long Distance Services for School Year 2013-2014
- Approval and Commitment of Funding for Continuation and New Wide Area Network Services for School Year 2013-2014
- Approval and Commitment of Funding for New Local Area Network Equipment and Services for School Year 2013-2014
- Approval and Commitment of Funding for New Telecommunications Equipment and Services for School Year 2013-2014

Purpose

At the core of our E-Rate request is the ongoing IT Infrastructure Modernization Initiative (ITIMI), which effectively replaces the district's aging voice and data infrastructure with modern network and telecommunications systems and services. This year's E-Rate request continues to fund required existing services and to complete the transition from the old to the new infrastructure.

This document briefly summarizes ITIMI, how each Board Agenda Item contributes to the goals of that initiative, and how the transition from our old infrastructure to the new is being accomplished.

2. IT Infrastructure Modernization Initiative (ITIMI)

Overview

In the fall of 2011, TUSD launched an initiative designed to replace the district's aging and quite inadequate voice and data network infrastructure with robust and reliable technology designed to support the district's instruction, learning, administrative, and operational needs. After several years during which E-Rate funds were not available to the district, the existing infrastructure had reached the

point where teachers and students could no longer consistently perform even the most rudimentary computer-based tasks. Basic telephone service to the schools and administrative offices had become unreliable. Access to important systems, such as the Mojave Student Management System and Lawson's Requisition Center was difficult and frustrating to all. Perhaps most troubling of all is the fact that the existing infrastructure could in no way support new mobile devices and learning environments or new requirements for online testing.

After a comprehensive process that included a vendor Open Forum, Request for Information (RFI), and a formal Request for Proposals (RFP) and Bid Evaluation process, staff presented recommendations to the Governing Board on March 13th, 2012 for award of three contracts, as follows:

- Wide Area Network Solution – the Zayo Group
- Local Area Network and Campus-Wide Wireless Solution – World Wide Technologies
- Telephony Services Solution – Century Link

The Board approved all three contract awards. The 10-year contract term costs for each are as follows:

- The Zayo Group: $13,237,000
- World Wide Technologies: $11,324,892
- Century Link: $1,420,488
- **Total**   **$25,982,380**

As a pure E-Rate Priority 1 service, the Zayo WAN services are 100% E-Rate eligible at the district's 81% discount rate. The remainder of the costs are for items that are Priority 2 E-Rate eligible on a site by site basis. *As a reminder, the Schools and Libraries Division rarely funds Priority 2 requests for sites with less than 80% discount, and indications are that SLD will cut off P2 funding at 90% this year.*

Implementation Schedule

The ITIMI implementation is a complex endeavor due not only to the obvious technical complexity but to the timing and detailed requirements of the E-Rate program as well. The overall implementation schedule is as follows:

- School Year 2012-13 (by June 30, 2013):
    - Complete WAN Implementation
    - LAN/Telephony Upgrades to Schools w/less than 80% Discount & Admin Sites
- School Year 2013-14 (by June 30, 2014):
    - LAN/Telephony Upgrades to Remaining Schools (80 and 90% Discount Levels)

Shortly after contract award, one of the unsuccessful bidders protested the awards to WWT and Century Link. The vendor actually protested State Contract awards to the same vendors, and TUSD's awards were essentially swept up in that issue. The basis for the protest had to do with construction licensing for low-voltage cabling work (i.e. in-building technology cabling). The protest of TUSD's awards was ultimately decided in the district's favor, but affected the ITIMI implementation schedule in two significant ways:

1. All work by WWT and Century Link had to stop until the protest was resolved, essentially through July of 2012.
2. Both internal and external Legal Council strongly advised that we remove all cabling work from the contract with WWT and award that work separately.

To appreciate the significance of these two items it is important to understand the nature of analysis and engineering work that has to be done in preparation for E-Rate requests and the actual implementation of the LAN/Telephony upgrades.

Priority 2 E-Rate requests must include a substantial amount of technical detail that is specific to each site for which a request is made. In other words, for example, if we were to prepare a P2 request for LAN and Telephony upgrades at Cholla HS, it would have to include detailed estimates of the number of cable drops, the amount of cable to be installed, specific make and model numbers and quantities for each switch and other equipment. Essentially, the request requires a complete Bill of Materials. Producing such an artifact for each site requires that the vendors and staff conduct a thorough site survey in which they walk the entire site, visit classrooms and communications closets, open ceilings and wall installations to determine quality and code compliance, etc. It then requires engineering work to determine exactly how the upgrade will meet site requirements.

The delay that resulted from the protest kept us from beginning that work on schedule. Moreover, the decision to pull cabling work from the WWT contract caused additional substantial delay. We had planned to make use of the AZ State Contract for cabling services, but the new contract does not stipulate vendor E-Rate eligibility. Therefore, TUSD launched and successfully concluded a cabling RFP in November with Board approval of contract awards to three cabling companies in December. Staff and our vendor partners commenced site walks immediately after contract award and have recently completed that work.

3. School Year 2013-2014 E-Rate Request Description

As stated at the beginning of this document, this year's E-Rate requests are grouped into four logical categories. Following are descriptions and cost information for each.

Continuation of District Internet and Long Distance Services

TUSD receives its Internet Services under a five year contract with Login, Inc. As a district-wide Priority 1 E-Rate eligible service, TUSD is eligible for an 81% discount. As previously shared with the Board, correctly prepared P1 requests are always funded. The SLD usually issues funding commitments for P1 requests during the second half of the year for which the funds are requested, so districts must pay the full contract price up front and are reimbursed through the Billed Entity Applicant Reimbursement (BEAR) process.

Login has provided Internet services in a reliable and otherwise satisfactory manner, so we intend to renew the service for the 2013-14 school year. Further, in keeping with the ITIMI project and implementation of the new fiber-based WAN, this year's renewal will include an upgrade in capacity from the current 800 mbps to 1,000 mbps (or 1 gbps).

Long distance telephone service is the second component of this request group. TUSD receives long distance service via State contract with Century Link. As with Internet service, long distance telephone service is fully E-Rate eligible and the 81% district-wide discount level applies. While the exact cost of the service varies somewhat each year based on actual usage, we are able to estimate the cost based on past billing information. Specifically, this year's estimate reflects the average of the bills for the three highest usage months of service in calendar year 2012 (Feb, Apr, and Sep). Once again, the district must pay the full contract amount for the service and be subsequently reimbursed using the BEAR process.

Full costs and E-Rate share information for Internet and Long Distance Services are as follows:

	Monthly Cost	Annual Cost	E-Rate Share (81%)	TUSD Share (19%)
Login Internet Service	$13,500	$163,200	$132,192	$31,008
Century Link Long-Distance Service	$1,149	$13,787	$11,168	$2,620
TOTAL	**$14,649**	**$176,987**	**$143,360**	**$33,628**

Continuation (of Existing) and New Wide Area Network Services

One of the major components of the ITIMI project is transitioning from the district's old WAN – which comprises a variety of connection types from Century Link, STC (Microwave), City of Tucson (fiber), and a small number of other connections – to the new fully fiber-based network being built out by the Zayo Group. TUSD's contract with Zayo is purely a services contract; that is, although the network is being newly constructed, TUSD will not be billed for any of that construction. The district will begin paying for WAN *services* once sites are cutover to the new network. As a pure services contract with no Zayo-provided on-premise equipment, the new WAN services are full E-Rate Priority 1 eligible at TUSD's 81% discount rate.

We expect to begin cutting sites over to the Zayo network within the next several weeks, and to be connected district-wide by the end of June, 2013. Our transition process calls for us to keep the old/existing connection in place at each site for 30-60 days after cutover to mitigate any risk of new service issues. Aside from that overlap period, we will be able to terminate the non-Century Link connections by or very soon after June 30. The Century Link WAN connections will be required for most of the next school year, however, because our voice telecommunications services will continue to use those connections until the new telephony upgrades are complete. Those upgrades will be complete by June 30, 2014.

Additionally, there are Century Link telecommunication services that will remain in place indefinitely after completion of the ITIMI project. These include connections to the Public Switched Telephone Network (PSTN), back-up basic telephone connections to sites, and security-related connections. Those services are all fully eligible for E-Rate funds as well.

The services described above are all in the category of WAN services, both new and existing.

Finally, this request incudes basic local telephone service provided by Century Link under State contract. Local telephone service is fully E-Rate eligible as well.

Full costs and E-Rate share are shown in the following table:

	Monthly Cost	Annual Cost	E-Rate Share (81%)	TUSD Share (19%)
Zayo WAN Service	$144,936	$1,739,232	$1,408,778	$330,454
Century Link WAN and Phone Services	$81,851	$982,217	$795,596	$186,621
TOTAL	$226,787	$2,721,449	$2,204,374	$517,075

New Local Area Network Equipment and Services

As part of the ITIMI project, Local Area Network equipment required for school/site LAN's and site-wide wireless connectivity is currently being installed under a multi-year contract with World Wide Technologies. This E-Rate request group covers the second and final year of the implementation.

LAN equipment, installation, and basic maintenance are E-Rate Priority 2 eligible and are funded for schools and other instructional facilities that have a sufficiently high E-Rate discount rate. Each year SLD starts funding Priority 2 requests for sites with 90% discount rates and continues funding at lower discount rates until the funds run out. Historically, SLD has cut off funding at or near the 80% discount rate with some exceptions.

Primarily in view of SLD's past Priority 2 funding practices, we decided to implement LAN upgrades (as well as telephony upgrades – see next section) at administrative sites – which are not E-Rate eligible – and schools with lower than 80% discount rates during school year 2012-13. That work is under way. This year's E-Rate request covers implementation of LAN upgrades at all remaining school sites – that is, schools with 90% or 80% discount rates. There are 72 instructional sites in this group.

LAN upgrades and installation of site-wide wireless requires substantial cabling within the buildings. As described earlier in this document, in the wake of the protest resolution TUSD withdrew the cabling portion of the WWT contract and awarded contracts to three vendors pursuant to a separate RFP process. Staff and our vendor partners recently completed the detailed site surveys and engineering work. The total cost for cabling is substantially higher than we had expected. Primary among the reasons for this are 1) poor quality installation that was done several years in the past as part of a State networking initiative, 2) cable installation that does not meet Code, 3) installation of switches "in the open" as well as in sub-standard, unprotected communications closets where either accidental or willful damage can occur, and 4) greater than expected amounts of old standard copper cabling (Cat 3) that cannot support current or future bandwidth requirements.

Fortunately, TUSD is authorized to use Bond funds for technology cabling. District staff and the Bond Fiscal Oversight Committee are working diligently to complete expenditure of remaining Bond funds by June 30, 2013. Technology Services leadership is coordinating with the FCO, COO, and Bonds and Architecture regarding the use of Bond funds on a number of the school LAN upgrade projects. While such use is subject to BFOC and Governing Board approval, we feel confident that much or even most of the cabling costs for schools with lower than 90% discount rates can be funded via remaining Bond funds. As a high-level prioritization approach, we will start with schools that are receiving students and

staff as a result of the recently approved school closures. The next priority will be the remaining schools that have 80% or less E-Rate discount levels.

As a prudent protection measure, this request still includes E-Rate funding for the 80% schools. In the event Bond funding is approved for some or all those schools, the district is allowed to remove those sites from the E-Rate request.

Full costs and E-Rate share for cabling (ACE) and WWT are shown in the following table. Costs for 90% and 80% schools are shown separately.

	Total Cost for Schools Eligible for 90% or 80% Discount	E-Rate Share (90% or 80%)	TUSD Share (10% or 20%)
ACE Cabling for 53 Schools @ 90% Discount	$5,249,032	$4,724,129	$524,903
ACE Cabling for 19 Schools @ 80% Discount	$3,819,990	$3,055,992	$763,998
WWT LAN Equip. for 53 Schools @ 90% Discount	$4,509,855	$4,058,870	$450,986
WWT LAN Equip. for 19 Schools @ 80% Discount	$2,222,248	$1,777,798	$444,450
TOTAL	$15,801,125	$13,616,789	$2,184,336

New Telecommunications Equipment and Services

As part of the IT Infrastructure Modernization Initiative, new telephony equipment is currently being installed under a multi-year contract with Century Link. This fourth E-Rate request covers the second and final year of the implementation.

Telephony equipment, installation, and basic maintenance is E-Rate Priority 2 eligible and is typically funded for schools and other instructional facilities that have a sufficiently high E-Rate discount rate (discount rate is determined by participation in the National School Lunch Program). As stated previously, SLD starts funding Priority 2 requests for sites with 90% discount rates and continues funding at lower discount rates until the funds run out. SLD has cut off funding at or near the 80% discount rate in the past with some exceptions in the last two years.

Primarily in view of SLD's past Priority 2 funding practices, we decided to implement the telephony upgrades (as well as LAN upgrades – see the previous section) at administrative sites – which are not E-Rate eligible – and schools with lower than 80% discount rates during school year 2012-2013. That work is under way. This year's E-Rate request covers implementation of telephony upgrades at all remaining school sites – that is, schools with 90% or 80% discount rates.

Consistent with the LAN/cabling/wireless requests, if SLD does not fund 80% schools the district must pay the full contract cost for the telephony upgrades. Unlike network cabling, however, Bond funds may not be used for technology equipment. Therefore, should our 80% schools not be funded, staff will develop and present a proposal for district funding for this equipment and installation to the Board for its consideration.

Full costs and E-Rate share for Century Link are shown in the following table. Costs for 90% and 80% schools are shown separately.

	Total Cost for Schools Eligible for 90% or 80% Discount	E-Rate Share (90% or 80%)	TUSD Share (10% or 20%)
Telephony Equip. for 52* Schools @ 90% Discount	$703,004	$632,704	$70,300
Telephony Equip. for 17 Schools @ 80% Discount	$257,870	$206,296	$51,574
Basic Maintenance for 52* Schools @ 90% Discount	$54,565	$49,109	$5,457
Basic Maintenance for 17 Schools @ 80% Discount	$21,524	$17,220	$4,305
TOTAL	$1,036,963	$905,329	$131,636

* There are 52 90% sites shown, rather than 53 as in the LAN cost table, because one site will receive telephony services from a nearby facility, rather than having its own local equipment.

4. Staff Recommendations

Staff recommends that the Governing Board approve each of the four request described above.