

ENID PUBLIC SCHOOLS TECHNOLOGY PLAN 2006- 2009

3.0 INFRASTRUCTURE AND TELECOMMUNICATION SERVICES

3.0 INFRASTRUCTURE AND TELECOMMUNICATION SERVICES NARRATIVE

Until March 2006 the Wide Area Network, (WAN) consisted of 6MB connection to our Internet Service Provider, (ISP) that went into a 40MB ATM Frame Relay. School sites then connected to the Board of Education building via two bonded T1 copper connections providing each site with 3MB of connectivity. Thanks to funds received from E-Rate and House Bill 1815 and upgrade to the WAN in March 2006 the WAN was completed to a Customized Sub-Metro Ethernet (CSME) system. All schools, with the exception of Longfellow and Lincoln, were connected via fiber to the SBC Central Office. (Lincoln and Longfellow share the same block locations as Emerson and Garfield, therefore sharing the new fiber connection through their partnering school). A fiber connection then ran from SBC Central office to Board of Education office, where SBC terminates their connection into a Cisco 3750 Fiber Router. Two 1GB fiber connections are then handed off to Enid Public Schools. With fourteen 100MB connections 2 GB was needed in order not to oversubscribe the bandwidth, which would have occurred with just one 1GB fiber connection from SBC. The new CSME involved a flat architecture that required the installation of a Cisco 4507 switch at the Board of Education building and 14 Cisco 3560 switches in order to provide true Layer 3 security. The current VLAN structure remained unchanged. The new switches and relocation of some existing switches has satisfied the need for all network connections to be activated. The 6MB connection to our ISP was also upgraded to a 20MB circuit.

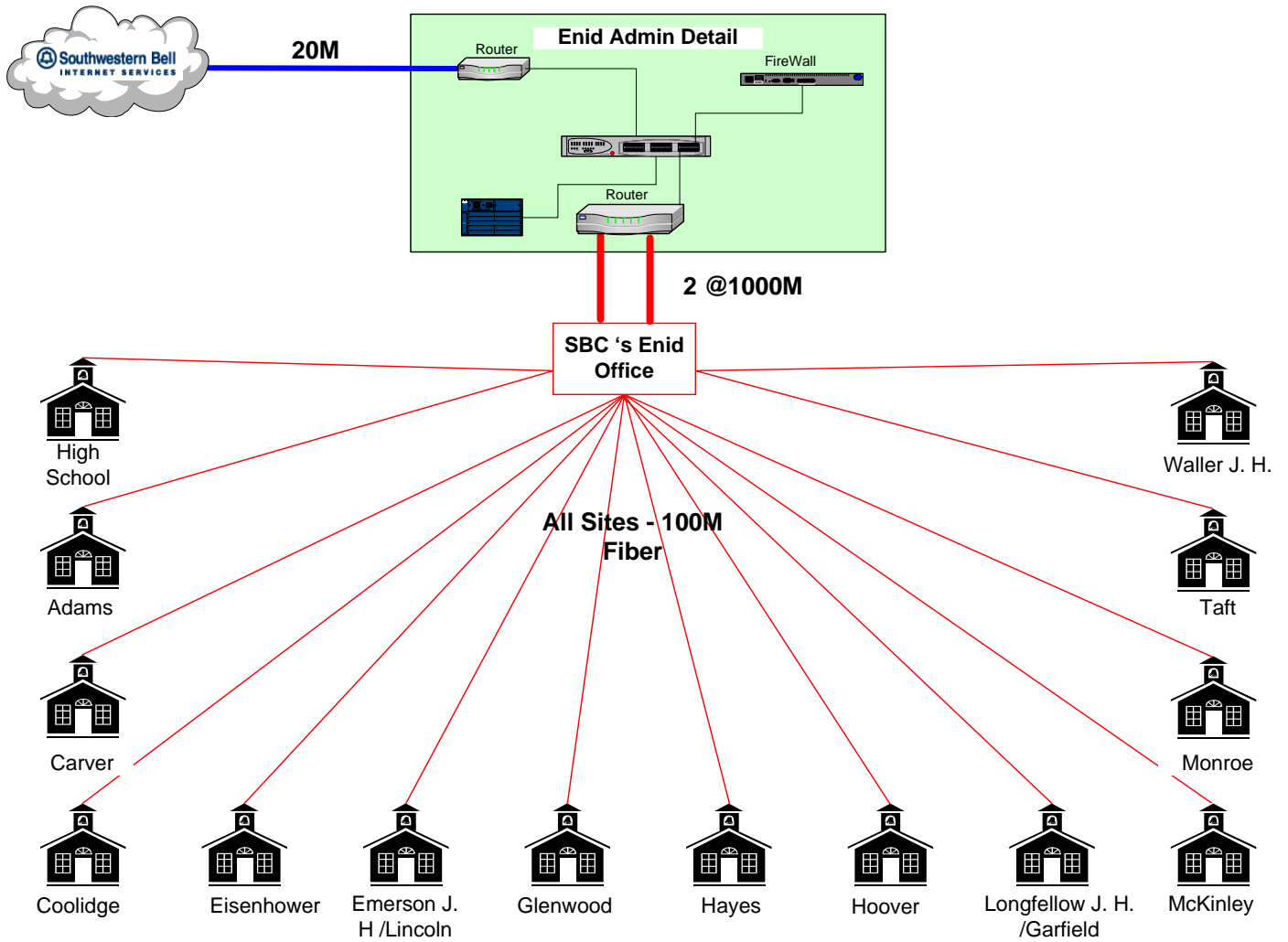
Each school site has at least one equipment closet and up to five equipment closets, depending upon the physical size and layout of the school. All internal equipment closets are connected via a fiber connection.

Bond and E-rate funds from 2001 through 2004 provided for the network wiring to all classrooms and offices in the District. New construction at certain sites in 2004 and 2005 followed the same procedure as the original wiring project, providing for four Cat5e network connections in every classroom and two Cat5e network connections in every office. Dark fiber, (un-terminated fiber) was also run to every classroom in the original project as well as new construction projects. This dark fiber has been installed to take advantage of technological advancements and other future enhancements needed for connectivity and speed. A Leviton certified cabling system providing a lifetime warranty of the cables and network outlets was originally implemented and is still required for any new network drop requests or new construction. With the upcoming upgrade and/or install of central heat and air, the utmost care should be taken not to disrupt or damage the existing wire and fiber infrastructure throughout the hallways, walls, ceilings and classrooms.

As technology continues to grow and becomes more and more necessary in the classroom, we may find ourselves facing the issue of not enough network drops in the classrooms. As this occurs a cost analysis will be completed to determine if additional drops needed could be completed by additional wiring or the addition of wireless network cards and access points.

If it were not for funds provided through E-rate, House Bill 1815 and 2003 Bond funds, we would not be as successful as we currently are in providing quicker network and internet access, reliably and efficiently to every classroom.

ENID PUBLIC SCHOOLS WIDE AREA NETWORK CONNECTIONS



INFRASTRUCTURE NUMBERING SYSTEM

