2.8 Charges

IBM will provide up to an estimated two thousand, eight hundred eighty (2,880) hours of services at a blended hourly rate of $205. The estimated funding requirement is $590,400 plus applicable taxes. GMCS will be charged only for the actual hours provided by IBM in performing these services and will be invoiced monthly for the hours used during the previous month.

In addition, GMCS will reimburse IBM for the actual travel and living expenses incurred in providing these services, currently estimated at $65,000. GMCS will be invoiced monthly for the expenses incurred during the previous month.

Invoices are payable on receipt.

3.0 Statement of Work, Phase 2 - Network Implementation Services

This Phase of the Statement of Work (Phase 2) defines the scope of work to be accomplished by IBM, during Phase 2, under the terms and conditions of the *IBM Customer Agreement (Agreement)*. The tasks to be performed by IBM are defined and an estimated schedule is provided. In addition, the responsibilities of GMCS are listed.

Changes to this Statement of Work will be processed in accordance with the procedure described in Appendix B, "Project Change Control Procedure". The investigation and the implementation of changes may result in modifications to the Estimated Schedule, Charges, or other terms of this Statement of Work.

The following are incorporated in and made part of this Statement of Work:

- Appendix A, "Deliverable Guidelines"
- Appendix B, "Project Change Control Procedure"
- Appendix C, "Locations"
- Appendix D, "Equipment"

3.1 Phase 2 Overview

IBM is proposing to provide GMCS with a District-wide network infrastructure to facilitate communications throughout the Gallup McKinley County Public School District. Based upon the Detailed Design created in Phase 1 of this Statement of Work, IBM proposes to install and configure the proposed components (see Appendix D) to enable District-wide network communications.

IBM's implementation project team will include key members of the Detailed Design Phase (Phase 1) in order to maintain continuity throughout the entire project. As during the Detailed Design Phase, IBM will engage subject matter experts as required during Network Implementation (Phase 2). IBM's proposed Network Implementation is based upon the following major component descriptions:

- **Provide and Install Campus Cabling:** The objective of the Campus Cabling (intra-campus) is to provide physical connectivity, through a combination of Category 5 and fiber optic cable, to fixed classrooms, portable classrooms and supporting facilities.
- **Provide, Install, and Configure Network Electronics:** The objective of the Network Electronics portion of this Statement of Work is to provide logical connectivity, through a combination of Asynchronous Transfer Mode (ATM) and Ethernet Switches and Ethernet hubs, to fixed classrooms, portable classrooms, and supporting facilities.
- **Provide and Install Wide Area Network Connections:** The objective of the Wide Area Network Connections portion of this Statement of Work is to provide physical connectivity through a campus-wide fiber optic network to District facilities designated in Appendix C of this Statement of Work.
- **Provide, Install, and Configure Internet Access Products:** The objective of the Internet Access Products portion of this Statement of Work is to provide, install, and configure components necessary to provide District-wide Internet connectivity.

As outlined in the Executive Summary to this Statement of Work, IBM's proposed products, services and associated pricing for each of the above Phase 2 components are preliminary and are based upon selected "primary solution scenarios" that were chosen without the benefit of a detailed design effort. During the proposed Detail Design Services phase of this SOW (Phase 1), IBM will seek to validate or invalidate each of the selected primary solution scenarios from a cost as well as a feasibility perspective. Should IBM determine that any of the proposed primary solution scenarios are invalid from a cost or feasibility perspective, IBM will propose alternative scenario(s) for the District's consideration. Mutually agreed upon changes in scope and price will be incorporated through the Project Change Control Procedure, (Appendix B), contained in this SOW. Should any of the proposed primary solution scenarios prove invalid, and should the District and IBM be unable to reach a mutually agreeable alternative to such aspect of the project, IBM will provide the District with a Project Change Request to exclude that portion of the project from the Network Implementation Services phase of the project. The Project Change Request will address the change in scope, timeframes and costs associated with the excluded portion.

3.2 Key Assumptions

This Statement of Work and IBM's estimates to perform the Statement of Work are based on the following key assumptions. Deviations that arise during the proposed project will be managed through the procedure described in Appendix B, "Project Change Control Procedure".

System Environment

- The networking system environment consists of GMCS school campuses and supporting facilities, in total, numbering thirty-seven (37).

GMCS Personnel

- GMCS personnel who will be assigned to this project will have the technical skills necessary to participate in the Network Implementation effort.
- GMCS Information Systems (IS) and user personnel will be available as described in 3.4, "GMCS Responsibilities".

IBM and Subcontractor Personnel

- Work under this Statement of Work will be performed at GMCS locations in New Mexico and at IBM facilities.
- GMCS will be charged for travel time as time worked.
- Some IBM activities on this project may be performed on IBM premises. IBM will provide the IBM consultant with access to IBM tie lines, networks, and databases. The time spent on these contract-related IBM activities will be billable to GMCS.
- IBM will provide services under this Statement of Work during normal business hours, 8:30 am to 5:15 pm Monday through Friday, except holidays, unless other times are mutually agreed to.

Task Specific Assumptions

- Only those components detailed in this Statement of Work are to be supplied and installed by IBM.
- Provision, installation, and integration of any hardware and software not specified in this Statement of Work is the responsibility of GMCS.
- IBM and our subcontractors must have unlimited, unrestricted access to all buildings, according to the project plan. Any security requirements inclusive of guards, security codes/access codes, lighting and internal access and/or central monitoring are the responsibility of GMCS.
- IBM is not responsible under this Statement of Work for the identification or correction of any existing safety and/or code violations, whether federal, state or local, including but not limited to fire and electrical codes. If IBM should discover any safety and/or code violations during the course of this project, IBM will notify GMCS of the problem. IBM will not be required to proceed with its work under this Statement of Work until GMCS remedies such violation, nor will IBM be responsible for delays to the work caused by such violation.

- IBM will not be responsible for the detection or removal of asbestos, hazardous waste or other pollutants.
- It is specifically understood by GMCS and IBM that all matters relating to detection and/or abatement or removal of asbestos, hazardous waste or other pollutants are beyond the scope of this contract and that IBM shall not be liable for any delay or additional cost incurred as a result of such detection's and/or abatement. If asbestos, hazardous waste or other pollutants are uncovered during the course of the work on the contract, then GMCS shall be responsible for retaining the experts necessary to remove such asbestos, hazardous waste or pollutants from the site. GMCS shall also be responsible for any testing and corresponding with appropriate government authorities.
- Relocation and testing of existing telecommunications or CCTV equipment(s) or systems are not required as part of this project.
- Rerouting and testing of existing telecommunications or CCTV wiring is not required as part of this contract.
- Removal of existing telecommunications or CCTV cabling is not required as part of this project.
- IBM will be provided with access badges, keys and combinations or escorts to perform the work described in this Statement of Work. Any delay encountered due to unavailability of buildings may result in additional charges being incurred by GMCS.
- Adequate wall space will be made available to IBM for the purpose of placing MDF/IDF products and equipment provided under this agreement. It is understood by IBM and GMCS that any delay encountered due to insufficient wall space being available may result in time delays and additional charges being incurred by GMCS.
- It is understood by GMCS and IBM that this Statement of Work and pricing estimates are based upon the following estimated dates. In the event these dates are not achieved, IBM reserves the right to extend the projected project completion date on a working day for working day basis, or as mutually agreed upon by IBM and GMCS.
    - April 1, 1998 - IBM receives written approval from District to proceed with Phase 2, Network Implementation Services (Universal Service Fund funding approval received by District).
    - December 31, 1998 - IBM Completes Phase 2, Network Implementation Services, portion of the Statement of Work.
- It is understood by IBM and GMCS that this Statement of Work and the pricing associated with this Statement of Work are based upon the use of existing wiring closet locations in GMCS sites.
- It is understood by GMCS and IBM that all matters relating to physical construction of new wiring closets/equipment locations and retrofits for existing wiring closets/equipment locations (general construction buildout, HVAC, electrical, lighting, construction permits) is the responsibility of GMCS.
- It is understood by GMCS and IBM that the installation of electrical wiring and supporting components is the responsibility of GMCS.

- It is understood by GMCS and IBM that the establishment of true earth ground in locations requiring grounding is the responsibility of GMCS.
- Intra-campus cabling will be supported according to industry standards. Cabling will be run in the ceilings/walls where conducive to the running of cables. Where ceilings/walls are not conducive to the running of cable, cable will be installed in a surface mounted raceway. All necessary couplers and corners will be provided and installed where surface mounted raceway is concerned. Where cable is installed in plenum areas, plenum rated cable will be used.
- Outside-plant fiber connections, as outlined in sections entitled "Provide and Install Campus Cabling", and "Provide and Install Wide Area Network Connections" will be accomplished through approximately 98% aerial and 2% underground construction.
- The estimated mileage for the Install Wide Area Network Connections portion of this Statement of Work is based upon an assumption that IBM can utilize existing right of way and accessible aerial attachment pathing.

Exclusions from Phase 1 of this Statement of Work

- The provision, installation, and configuration of distance learning components, network management products, training, systems management tools and processes and voice communications are not included in Phase 2 of this Statement of Work.
- Ongoing operations and maintenance are not included in this Statement of Work.

3.2.1 YEAR 2000 CAPABILITIES

- This Service does not address the capability of GMCS systems to handle date data within and between the twentieth and twenty-first centuries. You acknowledge that it is your responsibility to assess your current systems and take appropriate action to migrate to Year 2000 ready systems.

3.3 IBM Responsibilities

3.3.1 Project Management

Description: The objective of this task is to provide technical direction and control of project personnel and to provide a framework for project communications, reporting, and procedural and contractual activity. The subtasks are:

- Maintain project communications through the GMCS Project Manager.
- Establish documentation and procedural standards for the deployment of the project.
- Prepare a detailed Project Plan for performance of this Statement of Work which defines the detailed task and schedule responsibilities.
- Measure and evaluate progress against the Project Plan.
- Resolve deviations from the Project Plan.
- Conduct regularly scheduled project status meetings.
- Prepare and submit a Status Report bi-weekly to the GMCS Project Manager.
- Review and administer the Project Change Control Procedure with the GMCS Project Manager.
- Coordinate and manage the technical activities of project personnel.

Completion: This task will end when the project ends.

Deliverable: Bi-weekly Status Reports.

3.3.2 Provide and Install Campus Cabling

Description: The objective of this task is to provide physical connectivity within a total of thirty-five (35) GMCS locations through a combination of Category 5 and fiber optic cable. Cables will be distributed between fixed classrooms, portable classrooms and supporting facilities. The subtasks include:

- Provide and install a total of ten thousand, nine hundred seventy-two (10,972) cable drops consisting of one (1) each, Category 5, 4-pair cable. Cables to be installed to end-user locations in fixed and portable buildings to support student, teacher, and administration network connections.
- Provide and install a total of two hundred sixty (260) fiber optic cable runs consisting of two (2) each, 62.5/125 micron, multi-mode fibers to connect a total of two hundred sixty (260) portable buildings to the nearest fixed-building intermediate distribution frame (IDF) or main distribution frame (MDF).
- Provide and install a total of forty-seven (47) fiber optic cable runs consisting of six (6) each, 62.5/125 micron, multi-mode fibers to connect MDFs to IDFs at campus locations.
- Provide and install the following in a total of eighty-two (82) GMCS-provided Distribution Frames (Main Distribution Frames or Intermediate Distribution Frames):
  - 3/4" Plywood Backboard
  - One (1) or more 19" Equipment Racks, with grounding hardware, to support IBM-provided copper and fiber optic termination
  - Fiber optic and copper cabling termination and mounting hardware sufficient to terminate IBM-installed cable drops
- Terminate all Category 5 cables in single or multi-position faceplates or surface-mounted boxes at end-user locations.
- Terminate all fiber optic runs in SC or ST connectors within fiber optic termination cabinets or termination panels in MDF/IDF and portable building locations.
- Provide one (1) 10' and one (1) 3' Category 5 patch cable for each Category 5 cable run.
- Provide 3', 62.5/125 micron, multi-mode fiber optic patch cables to support each portable building.
- Provide two (2) 3' 62.5/125 micron, multi-mode fiber optic patch cables to support each MDF to IDF connection.
- Functionally test each intra-building Category 5 cable drop (data) for Category 5 compliance.
- Functionally test each inter-building Category 5 cable drop (voice) for continuity.
- Functionally test each fiber optic cable using either a light meter or an OTDR.
- Create a Campus Cabling Test Results document and an As-Built Campus Cabling document for IBM-installed and tested Category 5 and fiber optic cables.
- Label all Category 5 cable drops at closet and end-user ends.
- Seal all coring and punch throughs using industry standard and recognized methods (caulk, foams, putties). In cases where fire-stopping is required, IBM will provide materials to meet code.

- Cables (up to a total of ten thousand nine hundred seventy-two (10,972) Category 5 cable drops) will be installed in approximate quantities as indicated in the following table:

Location Type	Student Drops	Teacher Drops	Printer Drops	Qty of Cat 5 Cables
Fixed Classroom	5	3	1	9
Portable Classroom	5	3	1	9
Special Education Rm.	1	3	0	4
Gymnasium	0	3	0	3
Press Box	0	3	0	3
Library	15	9	1	25
Computer Lab	15	3	1	19
Science Lab	1	3	1	5
Business Tech. Lab	1	3	1	5
Drafting Lab	25	3	1	29
Home Ec. Lab	1	3	1	5
Agricultural Lab	1	6	1	8
Tech 2000 Lab	15	6	1	22
Executive Desks	0	3	0	3
Staff Desks	1	0	0	1

Completion: This task will be complete when IBM has installed the specified Campus Cabling and has provided the Cable Test Results document and the As-Built Campus Cabling document to the GMCS Project Manager.

Deliverables: Campus Cabling Test Results document.

As-Built Campus Cabling document.

3.3.3 Provide, Install, and Configure Network Electronics

Description: The objective of this task is to install, and configure IBM-provided Network Electronics equipment. Network Electronics provided in this Statement of Work are outlined in Appendix D to his Statement of Work. The subtasks include:

- Take receipt of Network Electronics at loading docks or staging area.
- Unpack products and label each asset with asset identification tags provided by GMCS.
- Remove the appropriate system covers, front panels, module blank from units.
- Insert/install required modules, options, and attachments into their designated slot or position.
- Re-install system covers, front panels, module blanks from the unit.
- Secure Network Electronics in IBM-provided Equipment Racks.
- Power on each device and visually verify operations through observing device indicators.
- Install cables between various Network Electronic devices, as needed.
- Install cables between Network Electronics and IBM-provided termination and mounting hardware.
- For fiber optic cables, install external transceiver and cable, if required.
- Develop process for configuring Network Electronics.
- Configure devices with name address(es), subnet mask(s), time, date, SNMP information, assign blade(s) and/or ports to backplane circuits, set up port characteristics, save configuration and restart unit.
- Document configuration in a Network Electronics Configuration Parameters document.
- Functionally test unit, replace defective components, as needed.

Completion: This task will be complete when the Network Electronics components can communicate to its own network and the Network Electronics Configuration Parameters document has been delivered to the GMCS Project Manager.

Deliverable: Network Electronics Configuration Parameters document.

3.3.4 Provide and Install Wide Area Network Connections

Description: The objective of this task is to provide and install a fiber optic, Wide Area Network (WAN) connecting thirty-seven (37) locations as designated in Appendix C to this Statement of Work. Physical connectivity will be established through a combination of single and multi-mode fiber optic cable. The subtasks include:

- Provide up to two hundred thirty (230) miles of six (6) strands of single or multi-mode fiber to each of the locations designated in Appendix C to this Statement of Work.
  - Groupings of schools will be connected to one another through a six (6) strand, 62.5/125 micron multi-mode network; six (6) strands will run to each individual school.
  - Groupings of schools will be connected to the GMCS-designated central location, with (6) strands of fiber per individual school location.
- Terminate fiber optic cables in standard SC connectors in an IBM-provided SC - SC patch panel at a GMCS-Provided Main Distribution Frame at each location.
- Functionally test fiber optic cable with OTDR.
- Provide an As-Built WAN Connections document for all construction.
- Create a Wide Area Network Connections Test Results document for IBM-installed WAN fiber optic cables.

Completion: This task will be complete when IBM has installed the specified Wide Area Network Connections and has provided the As-Built WAN Connections document and the Wide Area Network Connections Test Results document to the GMCS Project Manager.

Deliverables: Wide Area Network Connections Test Results document.

As-Built WAN Connections document.

3.3.5 Provide, Install, and Configure Internet Access Products

Description: The objective of this task is to provide, install, and configure IBM-provided Internet Access products. Internet Access products provided in this Statement of Work are outlined in Appendix D to this Statement of Work. The subtasks include:

- Take receipt of Internet Access products at loading docks or staging area.
- Unpack products and label each asset with asset identification tags provided by GMCS.
- Remove the appropriate system covers and panels from units.
- Insert/install required hardware and options.
- Re-install system covers and panels from units.
- Perform power-on system test.
- Install Microsoft NT Server and NetVista Operating System on NetVista Servers.
- Establish physical connection to respective campus Ethernet network.
- Install NetVista Client on up to two hundred fifty (250) end-user workstations.
- Develop process for configuring Internet Access products.
- Configure Firewall, DNS, and NetVista Servers with TCP/IP address(es), subnet mask(s), time, and date, save configuration and restart unit.
- Configure NetVista Clients to run with NetVista Servers.
- Perform network connection verification.
- Backup system at completion of product installation.
- Document configurations in an Internet Access Products Configuration Parameters document.
- Functionally test unit, replace defective components, as needed.

Completion: This task will be complete when the Internet Access Products have been installed and configured and the Internet Access Products Configuration Parameters document has been delivered to the GMCS Project Manager.

Deliverable: Internet Access Products Configuration Parameters document.

3.4 GMCS Responsibilities

The responsibilities listed in this section are in addition to those responsibilities specified in the *Agreement* and are to be provided at no charge to IBM. IBM's performance is predicated upon the following responsibilities being fulfilled by GMCS.

3.4.1 GMCS Project Manager

Prior to the start of this Statement of Work under the Agreement, GMCS will designate a person, called the GMCS Project Manager, to whom all IBM communications will be addressed and who has the authority to act for GMCS in all aspects of the contract.

The GMCS Project Manager's responsibilities include:

- Serve as the interface between the IBM project team and all GMCS departments participating in this project.
- Communicating with appropriate personnel at your locations of the work to take place and obtaining their approval if necessary.
- With the IBM Project Manager, administer Project Change Control.
- Attend project status meetings.
- Obtain and provide information, data, decisions and approvals, within three (3) working days of IBM's request unless GMCS and IBM agree to an extended response time.
- Help resolve and escalate project issues within the GMCS organization, as necessary.

3.4.2 Additional Responsibilities

GMCS is responsible to:

- Provide IBM with network and I/T documentation including the most current network designs, hardware, software, technologies and technology detail and plans.
- Fund any required travel and living expenses for GMCS personnel.
- Provide full access to all GMCS school locations as required under this Statement of Work.
- Provide all the necessary closet and/or equipment areas for location of network electronics, racks and cabinets as described within this Statement of Work.
- Provide all necessary power and environmental support to accommodate IBM provided equipment.
- Inform IBM of any change in network requirements in accordance with the IBM Project Change Control Procedure, Appendix B.
- Should GMCS require IBM to utilize buried or underground conduit that does not currently exist, GMCS will provide required conduit and trenching within the project schedule timeframe.
- Provide personnel to witness and authorize standard testing of each school building as the installation/testing activities are completed.

- Obtain rights of way and attachment rights to aerial facilities (e.g., utility companies) and be responsible for associated fees and taxes.
- Provide locations for intermediate nodes for signal re-transmission, where required.
- Provide client workstations with a hardware and software configuration capable of supporting the NetVista Client software provided and installed under this Statement of Work.
- Contract with an Internet Service Provider (ISP) and provide secured / designated TCP/IP addresses, domain name, net mask, and upstream router connection.

3.4.3 Office Space and Other Facilities

- Provide suitable office space, office supplies, furniture, telephone and other facilities equivalent to those provided to GMCS employees for the IBM project team while working on GMCS premises.

3.4.4 Security and Laws

- GMCS is responsible for the actual content of any data file, selection and implementation of controls on its access and use, and security of the stored data.
- GMCS will identify and make the interpretation of any applicable federal, state and local laws, regulations and statutes and insure that products of the system meet those requirements.

3.5 Deliverable Materials

The following items will be delivered to GMCS under this Statement of Work.

- Type I: none.
- The following deliverables are Type II:
  - Bi-weekly Status Report.
  - Campus Cabling Test Results document.
  - As-Built Campus Cabling document.
  - Network Electronics Configuration Parameters document.
  - Wide Area Network Connections Test Results document.
  - As-Built WAN Connections document.
  - Internet Access Products Configuration Parameters document.

3.6 Estimated Schedule

The services for Phase 2 - Network Implementation Services is estimated as follows:

- April 1, 1998 - IBM receives written approval from District to proceed with Phase 2, Network Implementation Services (Universal Service Fund funding received by District).
- December 31, 1998 - IBM Completes Phase 2, Network Implementation Services, portion of the Statement of Work.

3.7 Completion Criteria

IBM shall have fulfilled its obligations under this Statement of Work when any one (1) of the following first occurs:

- IBM accomplishes the IBM tasks described in 3.3, "IBM Responsibilities", including delivery to GMCS of the materials listed in 3.6, "Deliverable Materials".
- IBM provides the number of hours of services specified in 3.8, "Charges" or in any subsequent Change Authorization.
- GMCS terminates the Project in accordance with the provisions of the *Agreement*.
- The estimated end date is reached.

3.8 Charges

IBM will provide up to seven thousand one hundred thirty-two (7,132) hours of services at a blended hourly rate of $205. GMCS will be charged only for the actual hours provided by IBM in performing these services and will be invoiced monthly for the hours used during the previous month.

Additionally, IBM will provide Major Components as outlined in the table below for Estimated Prices as stated in the table. GMCS will be invoiced monthly for Services performed and Products provided in each of the Major Component categories during the pervious month.

The total estimate for IBM labor (Phase 2) and Major Components combined is $16,952,914 plus applicable taxes. In addition, GMCS will reimburse IBM for the actual travel and living expenses incurred in providing these services, currently estimated at $160,000. GMCS will be invoiced monthly for the expenses incurred during the previous month. Invoices are payable on receipt.

Major Component	Item Description	Estimated Quantity	Estimated Price
Campus Cabling	Scope of Services as outlined in Section 3.3.2, entitled "Provide and Install Campus Cabling"	- 10,972 Cat. 5 drops - 260 Portable building - 47 MDF to IDF - 82 MDFs/IDFs	$3,049,865
Networking Electronics	Networking Electronics, designated in Appendix D	See "Networking Electronics" in Appendix D	$3,553,326
WAN Connections	Scope of Services as outlined in Section 3.3.4, entitled "Provide and Install Wide Area Network Connections"	230 miles of single and multi-mode fiber	$7,644,120
Internet Products	Scope of Services as outlined in Section 3.3.5 entitled "Provide, Install, and Configure Internet Access Products	See "Internet Products" in Appendix D	$1,243,543
IBM Labor	IBM Consultants and Implementation Specialists	7,132 hours	$1,462,060
Grand Total Estimate, Phase 2			**$16,952,914**

Appendix A. Deliverable Guidelines

A.1 Status Report

Purpose: IBM will provide a bi-weekly Status Report during the project to describe the activities which took place during that period. Significant accomplishments, milestones, and problems will be described.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager within five (5) working days following the reporting period.

Content: The report will consist of the following, as appropriate:

- Activities performed during the reporting period
- Activities planned for the next reporting period
- Hours summary
  - Hours originally estimated
  - Hours expended during this reporting period
  - Hours expended to date
  - Estimated remaining hours
- Project change control summary
- Problems, concerns, and recommendations
- Other items of importance

A.2 Networking Systems Assessment Presentation

Purpose: IBM will provide a Networking Systems Assessment presentation outlining IBM's review of GMCS's current network infrastructure and requirements.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager.

Content: The presentation, estimated at approximately twenty (20) pages, will consist of the following, as appropriate:

- Physical plant assessment
- Current Physical designs
- Current Logical designs
- Networking Requirements

A.3 Network Strategy and Architecture Presentation

Purpose: IBM will provide a Network Strategy and Architecture presentation.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager.

Content: The presentation, estimated at twenty (20) pages, will consist of the following, as appropriate:

- Outline of a networking strategy
- Outline of networking architecture options, capabilities and limitations
- Implementation considerations
- Critical Success Factors

A.4 Logical and Physical Network Designs

Purpose: IBM will provide Logical and Physical Design models for the implementation.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager.

Content: The designs will consist of the following, as appropriate:

- Physical Design models (8 1/2" x 11")
- Logical Design models (8 1/2" x 11")

A.5 Network System Plan

Purpose: IBM will provide a Network System Plan outlining scope and requirements for implementation.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager.

Content: The plan, estimated at twenty (20) pages, will consist of the following, as appropriate:

- Project scope
- Responsibilities and interfaces
- Systems management processes and procedures
- Resource Requirements
- Skills & Personnel support
- Project Management requirements
- Detailed project plan
- Implementation acceptance criteria

A.6 Campus Cabling Test Results document

Purpose: IBM will provide a Campus Cabling Test Results document demonstrating test results for Category 5 and multi-mode fiber optic cabling installed.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager.

Content: Test results will provide demonstrated compliance with the following:

Category 5 Cabling

- Category 5 (data) compliance testing per UL standards
- Category 5 (voice) continuity testing point-to-point

Multi-mode Fiber optic cabling

- Transmission and path loss testing (OTDR or Light Meter testing)

A.7 As-Built Campus Cabling document

Purpose: IBM will provide an As-Built Campus Cabling document providing marked-up 8 1/2" x 11" plan views showing drop and MDF/IDF locations for sites where IBM has provided Campus Cabling under this Statement of Work.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager.

Content: The as-built document will consist of one (1) marked-up 8 1/2" x 11" plan view for each site.

A.8 Network Electronics Configuration Parameters document

Purpose: IBM will provide a Network Electronics Configuration Parameters document with detailed configuration information for devices installed by IBM under this Statement of Work.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager.

Content: The configuration document will include the following information, as applicable, for each device:

- Name address(es)
- Subnet mask(s)
- Time, date
- SNMP information
- Assignment of blades and/or ports to backplane circuits
- Port characteristics

A.9 Wide Area Network Connections Test Results document

Purpose: IBM will provide a Wide Area Network Connections Test Results document demonstrating test results for wide-area network fiber optic cabling installed.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager.

Content: Test results will provide demonstrated compliance with the following:

Single and multi-mode fiber optic cabling

- Transmission and path loss testing (OTDR or Light Meter testing)

A.10 As-Built Wide Area Network Connections document

Purpose: IBM will provide an As-Built Wide Area Network Connections document on 8 1/2" x 11" plan views showing single and multi-mode fiber connections and counts as well as intermediate signal re-generation points.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager.

Content: The as-built document will consist of one (1) 8 1/2" x 11" plan view for each grouping of sites and one (1) overall plan view demonstrating District-wide, wide area network connectivity.

A.11 Internet Access Products Configuration Parameters document

Purpose: IBM will provide an Internet Access Products Configuration Parameters document with detailed configuration information for Internet Access devices installed under this Statement of Work.

Delivery: One (1) hard copy will be delivered to the GMCS Project Manager.

Content: The configuration document will include the following information, as applicable, for each device:

- Hardware and options installed
- Network Operating System (NOS) configuration(s)
- NetVista configuration(s)
- TCP/IP address(es)
- Subnet mask(s)
- Time, and date

Appendix B. Project Change Control Procedure

- A Project Change Request (PCR) will be the vehicle for communicating change. The PCR must describe the change, the rationale for the change and the effect the change will have on the project.
- The designated Project Manager of the requesting party will review the proposed change and determine whether to submit the request to the other party.
- Both Project Managers will review the proposed change and approve it for further investigation or reject it. IBM will specify any charges for such investigation. If the investigation is authorized, the Project Managers will sign the PCR which will constitute approval for the investigation charges. IBM will invoice GMCS for any such charges. The investigation will determine the effect that the implementation of the PCR will have on price, schedule and other terms and conditions of the Agreement.

APPENDIX C. LOCATIONS

CROWNPOINT CONNECTIONS

CROWNPOINT ELEMENTARY
P.O. DRAWER C
#1 MAIN STREET
CROWNPOINT, NM 87313

CROWNPOINT HIGH
P.O. BOX D
#1 CHACO DRIVE
CROWNPOINT, NM 87313

CROWNPOINT INSTITUTE OF TECHNOLOGY
LOWER POINT ROAD
CROWNPOINT, NM. 87313

NAVAJO CONNECTIONS

NAVAJO ELEMENTARY
P.O. BOX 1012
123 CEDAR AVE.
NAVAJO, NM 87328

NAVAJO PINE HIGH
P.O. BOX 1286
WEST WALNUT AVE.
NAVAJO, NM 87328

APPENDIX C. LOCATIONS (continued)

TOHATCHI CONNECTIONS

TOHATCHI ELEMENTARY
P.O. BOX 31
100 CHUSKA RD .- N HWY 666
TOHATCHI, NM 87325

TOHATCHI MIDDLE SCHOOL
P.O. BOX 322
MID SCHOOL LANE - N HWY 666
TOHATCHI, NM 87325

TOHATCHI HIGH SCHOOL
P.O. BOX 248
COUGAR LANE - N HWY 666
TOHATCHI, NM 87325

RAMAH CONNECTIONS

RAMAH ELEMENTARY
P.O. BOX 869
#17 EVANS CIRCLE
RAMAH, NM 87321

RAMAH HIGH SCHOOL
P.O. BOX 84
27 LEWIS STREET
RAMAH, NM 87321

APPENDIX C. LOCATIONS (continued)

THOREAU CONNECTIONS

THOREAU ELEMENTARY
P.O. BOX 839
#6 4TH AVENUE
THOREAU, NM 87323

THOREAU MIDDLE SCHOOL
P.O. DRAWER A
#8 HAWK CIRCLE
THOREAU, NM 87323

THOREAU HIGH SCHOOL
P.O. BOX 96
#4 HAWK CIRCLE
THOREAU, NM 87323

GALLUP CONNECTIONS

CHEE DODGE ELEMENTARY
P.O. BOX 4039
5 MI. N. HIGHWAY 666
YAH-TA-HEY, NM 87375

CHURCH ROCK ELEMENTARY
P.O. BOX 14
43 CHALLENGER ROAD
CHURCH ROCK, NM 87311