Addendum # 1

DATE: November 18, 2008

TO: All Bidders of Record

FROM: David Martinez, Senior Buyer

SUBJECT: Addendum #1 to T-2741 “CNM Main Campus, Renovations at Ted Chavez Hall”

This amendment becomes part of the Contract Documents and modifies the original bidding documents as noted below:

TO DRAWINGS and PROJECT MANUAL (dated: 17 October 2008)

Project: Renovations at CNM Ted Chavez Hall
Albuquerque, New Mexico
CNM Rebid # T-2741

Architect: Wilson & Company
4900 Lang Avenue, NE
Albuquerque, NM 87109
505-348-4000
WCEA No.: 07 500 039 00

NOTICE TO BIDDERS:

A. This Addendum shall be considered part of the Contract Documents for this project as though it had been issued at the same time and shall be incorporated integrally therewith. Where provisions of the following supplementary data differ from those of the original Contract Documents, this Addendum shall govern and take precedence.
ADDENDUM NO. 1.
06-500-084-00
11/19/2008

B. Bidders are hereby notified that they shall make necessary adjustments in their estimates on account of the Addendum. It will be construed that each Bidder’s proposal will have the supplemental data specified herein.

Project Manual:

1. Cover Page
   a. DATE OF BID OPENING: Change Bid opening date to “Monday, December 1, 2008”. Time of bid opening remains unchanged at 3:00PM (MDT).

2. Section 00010 – INVITATION TO BID
   a. B. Receipt of Bids: Change Bid opening date to “Monday, December 1, 2008”. Time of bid opening remains unchanged at 3:00PM (MDT).
   b. Pre-Bid meeting: Attached is the sign-in sheet for the Pre-Bid meeting held on November 12, 2008.

3. Section 00100 – INSTRUCTIONS TO BIDDERS
   a. Part 1.01.C: The prime contractor/bidder is only required to hold a GB-98 license.

4. Section 270528 – PATHWAYS FOR COMMUNICATIONS SYSTEM
   a. Add Section 270528, attached, in its entirety including the attached cover letter from Raymond Barela, dated 11/10/08.

Prior Approvals

1. Section 10260 – WALL AND CORNER GUARDS
   a. Korogard by Koroseal Wall Protection Systems

2. The following requests for Plumbing Prior Approval is accepted:
   a. SL-ADA Series A – 18ga SS sink, Just Manufacturing Company.

End of Addenda No. 1
11/10/2008

To: Pre-Bid Contractors

From: Raymond Barela, CNM Facilities Project Manager

Subject: Renovations at CNM Ted Chavez Hall

Notice to Contractor concerning Bid #T-2741, CMN Re-cabling Project P-258. Attached you will find copies of Section 270528- Pathways for Communications System. Be advised that construction coordination concerning both projects will be required before placement of mechanical equipment.

Feel free to contact me if you have any questions or concerns regarding this matter.

Raymond Barela
CNM
Facilities Project Manager
505-224-4576
rbarela@cnm.edu

cc: Lou Castillo
Director, Construction Services
505-224-4580

cc: Blaine Henderson
Director, Mechanical Service
505-224-4566
SECTION 270528 - PATHWAYS FOR COMMUNICATIONS SYSTEMS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. The work required under this section consists of providing conduits, boxes, raceways, etc., for telecommunications wiring included in this project. Telecommunications wiring includes cables for Data, Voice, Video, Audio, Security and future signal requirements.
B. Furnish and install conduit stubs in walls and floors for cable routes.

1.2 RELATED SECTIONS

A. Division 27, Section 270528 Pathways for Communication Systems.
B. Division 27, Section 270553 Identification for Communication Systems.
C. Division 27, Section 271119 Communications Termination Blocks and Patch Panels.
D. Division 27, Section 271313 Communications Copper Backbone Cabling.
E. Division 27, Section 271323 Communications Optical Fiber Backbone Cabling.
F. Division 27, Section 271513 Communications Copper Horizontal Cabling.
G. Division 27, Section 271623 Communications Optical Fiber Horizontal Cabling.
H. Division 27, Section 271543 Communications Faceplates and Connectors.

1.3 SUBMITTALS

A. Product Data: For features, ratings, and performance of each component specified.
B. Submit manufacturer’s instructions for storage, handling, protection, examination, preparation, operation, and installation of products. Include application conditions or limitations of use stipulated by any product testing agency. Submit for the following:
   1. Wall Boxes
   2. Raceway
   3. Conduit
   4. Conduit Bushings
C. Shop Drawings:
   1. Component List: List manufacturer, part number, and quantity of each component.
   2. Include dimensioned plan and elevation views of equipment rooms, labeling each individual component. Show raceway assemblies, method of field assembly, workspace requirements, and access for cable connections.

PART 2 - PRODUCTS

2.1 TELECOM OUTLETS (TO)

A. New construction TO consists of one (1) 4-11/16” square by 2-1/8” deep flush mounted box. Each outlet box shall have a EMT conduit stubbed above the drop ceiling or extended into the hallway cable tray. Conduits size is as follows:
For Outlets with 3 or less cables, use a 1" EMT conduit  
For Outlets with 3-6 cables, use a 1.25" EMT conduit  
For all other sizes, calculate fill ratio at 40% for proper sized conduit

B. Existing surface-mounted construction TO typically consists of surface-mounted Wiremold raceway including base, cover, end fitting, entrance end fitting, and (2) 1" EMT conduits stubbed out top of entrance end fitting to above ceiling or out to nearest hallway distribution system. Size of the raceway is site dependent based on number of conductors to be installed.

C. The intent of the installation of the TOs which consist of the Wiremold raceway is as follows:

1. Where ceilings are accessible, the raceway and entrance end fitting shall extend above the ceiling and the conduits installed above the ceiling in the room to the nearest hallway distribution system.
2. Where ceilings are partially accessible, or if the Drawings and/or Specifications indicate installation of access panels, the raceway shall extend above the ceiling and the conduits installed above the ceiling in the room to the nearest hallway distribution system.
3. Where ceilings are inaccessible or no ceilings exist, the raceway shall extend up as close to the ceiling as practical to allow installation of conduits as high as possible to the nearest hallway distribution system.

2.2 HORIZONTAL DISTRIBUTION SYSTEMS

A. Conduit System (Renovations only, where conduit exists)
1. Provide conduits secured to wall above corridor ceilings as shown on the Drawings or as specified herein for installation of telecommunications cables. Any exposed conduit shall be painted except conduit above suspended ceilings or in mechanical, electrical or telecommunication rooms. Color to match that of surface installed upon or as directed by CNM ITS. Coordinate with CNM ITS prior to painting.
2. Corridor conduits shall be 4" EMT, furnished in 10 foot lengths wherever possible, with no sharp edges, reamed as necessary, evenly supported at two locations per 10 foot section spacing. Conduits shall be sized and quantified to account for handling cables in all TO conduits at 40% fill back to the TR and/or ER rooms. Verify size with CNM ITS prior to installation. Bushings and/or connectors on ends of EMT are required.
3. All conduits shall be installed stacked and attached to walls unless conditions exist which prohibit this type of installation. When this condition exists, mount conduits side-by-side supported with 3/8" rod attached to building structure utilizing unistrut channel to form a trapeze. Double nut the top and bottom at the unistrut. Utilize conduit clamp to secure conduits to unistrut.
4. Provide measured pull line in each conduit rated at 1200 lbs. minimum. Increments must be in 12" steps.
5. Grounding of conduits is not required per NEC #250-33, Exception No. 2.
6. Provide restorable fire stops inside and around conduits as recommended by UL1479 or ASTM E814 for all conduits penetrating fire-rated construction. Fire rated construction to be verified with CNM ITS. See Section 270500 for more firestopping information.

B. Corridor Cable Tray System
1. Complete wall mounted or suspended aluminum cable tray system and necessary accessories shall be provided as shown on plans. Install entire cable tray system in accordance with manufacturer’s minimum installation practices and all local governing codes.
2. Coordinate installation of cable tray with other trades to allow a minimum of 12" above, 12" in front, and 12" below of clearance from piping, conduits, ductwork, etc. Allowance must be provided for access to the tray with reasonable room to work. Obstructions to the tray must be minimized and cannot block more than 6 feet of the tray at any point in the run.

CNM Recabling Project          270528 - 2          PATHWAYS FOR
Central New Mexico Community College  COMMUNICATIONS SYSTEMS
Project Number P-258
3. Submittal drawings, in the form of 8 ½"x 11" catalog cut sheets, shall be provided for the following items: cable tray, fittings, accessories and load data.
4. Cable tray shall not be loaded beyond 60% of manufacturer's recommended load capacity.
5. Install wall mounted cable tray on both sides of hallway as shown on drawings and where applicable.
6. Where a new cable tray distribution system encounters a wall, install sufficient 4" EMT sleeves through the wall so cabling does not exceed 20% fill.
7. Where cable tray is exposed below ceiling, install the appropriate solid bottom inserts to conceal cables.
8. Install cable tray dropouts where large quantities of cables exit the distribution system.
9. Cable tray must be sized to facilitate sufficient growth capacity for migration cable plant to coexist in same tray as existing cable plant, wherever possible.
10. Manufacturer of cable tray in corridors and telecom rooms shall be:
    a. Mono-Systems, Inc.
    b. B-Line Systems, Inc.
    c. Hubbell
    d. or approved alternate per submittal requirements in contract SOW.

C. Telecommunication Room Cable Tray System
1. TR cable tray shall completely wrap all walls within the room. Cable tray shall extend over all equipment frames.
2. Cable tray shall be a minimum width of 2" high x 12" wide. Cable tray may be sized upwards if fill ratio requirements need to be met based on cable quantities.
3. Manufacturer of tubular ladder type cable tray in telecommunication rooms shall be Hornaco or Chatsworth.
4. Cable tray shall be 12 inch cable runway. Fabricated of 3/8-inch x 1-1/2-inch x .065-inch wall rectangular steel tubing, 1/2-inch x 3/8-inch x 1-1/2-inch
5. Rectangular steel tubing cross members welded at 12-inch intervals. Finish in gray enamel. Hornaco, Inc., Part Number TR10-12 or equivalent.
   a. 12-inch Wall Angle Assembly Kit – Hornaco, Inc., Part Number P12840H or equivalent.
   b. 3-inch Channel Rack-To-Runway Mounting Plate - Hornaco., Part Number JP0912 or equivalent.
   c. End Closing Tube - Hornaco Inc., Part Number P413512HT or equivalent.
   d. Corner Clamp - Hornaco Inc., Part Number P403473H or equivalent (2 required per End Closing Tube to complete assembly).

2.3 STATION CONDUITS

A station conduit is defined as a conduit that originates at the TO and rises within the walls or is exposed from Wiremold raceway and extends up into the drop ceiling or over to the hallway distribution system.

A. Provide station conduits from TOs to above the drop ceiling or extend over to the hallway distribution systems consisting of 1" EMT minimum or appropriate size as shown on the Drawings or as specified herein for installation of telecommunications cables.
B. Provide an insulating press fit bushing on all telecommunications conduits including interconnecting nipples and stub to distribution system. To prevent conflicts with other cables or conduits to cable tray, the conduit shall be stubbed not less than 6" above or below conduit/cable tray center line. Where space permits, every effort shall be made to bend station conduits down such that the flow of installed cables promotes the minimum length back to the TR and the least amount of bends in the cables. Bushings must be rated to be used in an environmental air handling space (Plenum).
1. Manufacturer of insulating bushing on all telecommunication conduits shall be Arlington or approved alternate equal.

C. Provide measured pull line in 12" increments in each empty conduit to hallway distribution system.
D. Indelibly mark station conduit at hallway distribution end with Room # that conduit serves.
E. The use of 90 degree electrical pulling elbows is prohibited.
F. Do not include more than two 90 degree bends between pulling points when installing station conduit runs. If the path of the station conduits requires more than 180 degrees of total bends, installation of an appropriate sized junction box is required. See section 2.4 for junction box requirements.
G. Place an appropriate sized junction box in each individual station conduit run that exceeds 100 feet in length.
H. The use of a third bend in a conduit is only acceptable if:
   1. The total conduit run is reduced by 15%.
   2. The conduit size is increased to the next trade size.
   3. One of the bends is located within 12" of the cable feed end.

2.4 JUNCTION BOX REQUIREMENTS FOR STATION CONDUITS

A. If the station conduit route exceeds the 180 degree of total bends limitation, an appropriate sized junction box is required within a straight section of the conduit run.
B. Each station conduit run requires a separate junction box. The sharing of a junction box by multiple conduits is prohibited.
C. A junction box shall not be used in place of a bend. All junction boxes in station conduit paths shall be installed within a straight section of the conduit run.

2.5 SERVICE ENTRANCE CONDUITS

A. Minimum of (4) 4" IMC conduits shall be installed from the nearest utility tunnel on outside of the building as shown on the Drawings. Consult with CNM ITS on required telecommunication service to determine additional conduit requirements. Terminate entrance conduits entering ER rooms from below grade to extend 4" above finished floor. Location of entrance conduits shall be within 12" of room corners.
B. Terminate entrance conduits entering ER rooms from above ceiling height to extend 4" below finished ceiling or 12" above cable tray.
C. Terminate entrance conduits entering an ER rooms from below ceiling height to extend 4" into the room.
D. Entrance conduits shall be continuous into the building and to the ER. Securely fasten all entrance conduits to the building to withstand any cable placing operation. Do not include more than two 90 degree bends between pulling points when installing entrance conduits.
E. On exterior wall penetrations, seal both sides of the wall around outside of conduit with hydraulic cement to prevent water from entering the building. Seal the inside of the conduit on both sides with conduit plugs, water plugs, or duct sealer to prevent water, vapors, or gases from entering the building.

2.6 PATHWAY REQUIREMENTS FOR ENTRANCE CONDUITS

A. If the entrance conduits exceeds the 180 degree of total bends limitation, an appropriate sized junction box, manhole, or handhole is required.
B. As-built drawings of entrance conduit path required to be submitted to CNM ITS before covered with soil.
2.7 RISER CONDUITS
Riser conduits shall only be used when noted on the Construction Documents for special applications only.
Riser conduits are not required as a general rule for the riser system. However, when required:
   A. Minimum of (2) 4" conduits shall be installed between the ER room and each TR room as shown on the Drawings.
   B. Conduits entering ER and TR rooms shall be reamed or bushed and terminated not more than 4" from entrance wall and within 12" of room corners.
   C. Conduits entering ER and TR rooms from below floor shall be terminated not more than 4" above finished floor.
   D. Conduits for riser cables shall be continuous and separate from all other conduit or enclosed raceway systems. Do not include more than two 90 degree bends between pulling points when installing riser conduits. Where junction boxes are required, locate in accessible areas, such as above suspended ceilings in hallways.
   E. Conduits shall not be less than 4" trade size and be equipped with a measured pull line at 12" increments rated at a minimum 1200 pound test.
   F. Provide restorable fire stops inside and around conduits as recommended by UL1479 or ASTM E814 for all conduits penetrating fire-rated construction. Fire-rated construction to be verified with CNM ITS.
   G. Provide an insulating press fit bushing on all telecommunications riser conduits. Bushings must be rated to be used in an environmental air handling space (Plenum).
      1. Manufacturer of insulating bushing on all telecommunication conduits shall be Arlington or equal.
   H. Riser conduits shall not be used for the distribution of horizontal cables.

2.8 FIRE STOPS
   A. In all buildings, floor/ceiling assemblies, stairs, and elevator penetrations must be sealed with a 2-hour fire stop assembly at a minimum, unless otherwise noted.
   B. Contact CNM ITS to identify walls which are fire-rated construction. Walls must be sealed with a 2-hour fire stop assembly at a minimum.
   C. Communication pathways requiring fire stopping shall utilize removable/re-usable fire stopping putties for ease of Moves, Adds, and Changes.
   D. All fire stopping penetrations shall conform to the recommended practices listed in UL1479 or ASTM.

PART 3: EXECUTION

3.1 GENERAL REQUIREMENTS
   A. The intention of the telecommunications conduits is to provide a route between ER and TR rooms, routes from the TRs throughout building floors to hallways, and routes from hallway distribution systems into rooms to individual TOs for telecommunications cabling.
   B. Installation of new pathways shall not interfere with existing pathways in such a way that installation of new cables within the existing pathway is made more difficult.

END OF SECTION 270528
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**Time:** 10:00 AM Local time (MDT)

**Date:** Wednesday, November 12, 2008

**Bid Opening Meeting**

**Bid T-241:** "Re-Bid CNM Main Campus Renovations At TC Hall"