PART 1: GENERAL

1.01 SCOPE OF WORK

A. Work covered by this Section shall consist of furnishing labor, equipment, supplies, materials, and testing unless otherwise specified, and in performing the following operations recognized as necessary for the labeling of the telecommunications infrastructure as described on the Drawings and/or required by these specifications.

B. It is the intent of the University to create a Class 3 system of administration as per current ANSI/TIA/EIA 606 Standards. As such, all elements must be labeled with unique identifiers as described in the following sections. UNM’s labeling layout uses a “from/to” format in labeling.

C. This section includes minimum requirements for the following:
   1. Labeling Communications Cabling
   2. Labeling Closet Hardware
   3. Labeling Work Stations

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 271116 Communications Cabinets, Racks, Frames, and Enclosures.
D. Division 27, Section 271119 Communications Termination Blocks and Patch Panels.
E. Division 27, Section 271123 Communications Cable Management and Ladder Rack.
F. Division 27, Section 271313 Communications Copper Backbone Cabling.
G. Division 27, Section 271323 Communications Optical Fiber Backbone Cabling.
H. Division 27, Section 271333 Communications Coaxial Backbone Cabling.
I. Division 27, Section 271513 Communications Copper Horizontal Cabling.
J. Division 27, Section 271523 Communications Optical Fiber Horizontal Cabling.
K. Division 27, Section 271533 Communications Coaxial Horizontal Cabling.
L. Division 27, Section 271543 Communications Faceplates and Connectors.

3 PART 2 - PRODUCTS

3.01 LABELS

A. Follow current Telecommunication Design Methods Manuel (TMDD) Connecting Hardware Identification Color Coding standard.
B. The size, color and contrast of all labels should be selected to ensure that the identifiers are easily read.

C. All labels are to be mechanically printed, no hand printed labels allowed for any component.

D. Labels should be visible during the installation of and normal maintenance of the infrastructure. Labels should be resistant to the environmental conditions at the point of installation (such as moisture, heat or ultraviolet light) and should have a design life equal to or greater than that of the labeled component.

E. Provide vinyl substrate with a white printing area and black print. If cable jacket is white, provide cable label with printing area that is any other color than white, preferably orange or yellow – so that the labels are easily distinguishable.

F. Labels shall be flexible vinyl or other substrates to apply easy and flex as cables are bent.

G. Labels shall use aggressive adhesives that stay attached even to the most difficult to adhere to jacketing.

4 PART 4: EXECUTION
4.01 LABELING INSTALLATION

A. Horizontal Copper Cable Labeling:

1. All horizontal cables shall be labeled with self-laminating marking tape, Brady ID-Pro labeler, Panduit LS7 labeler, or equivalent labeling system. Identification shall be as follows:

2. At the TR end, the cables shall be labeled with the location of where the other end of the cable is terminated including room number, TO number, and jack position. Place label on a visible part of cable within 12” of termination point for ease of identification after termination.

   a. Example: Two cables going to room 114, first TO, first jack position would be labeled as: 114-1A1. The second cable in the second TO, third jack position would be 114-2A3.

<table>
<thead>
<tr>
<th>Cable 1</th>
<th>114-1A1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable 2</td>
<td>114-2A3</td>
</tr>
</tbody>
</table>

3. At the TO end, the cables shall be labeled 4” from termination with the following: Data .TR. Rack. Patch Panel. Port. This shall be visible by removing outlet cover plate.

   a. Example: Data, TR Room 114, rack 1, patch panel 1, port 03 would be: D.114. 1.1.03

<table>
<thead>
<tr>
<th>Cable 1</th>
<th>D.114.1.1.03</th>
</tr>
</thead>
</table>
b. For voice cabling in older building with separate voice closets and no patch panels, include the TR and as much information as practical such as column, row, block number, and port number or pairs.
   
i. Example: TR room 105, on a 110 block in the first column, third row down, port 4 would be: V.105.1.3.04

   C1  C2  C3  C4  C5
   R1
   R2
   R3

   ii. Example: TR room 105, no discernable pattern of columns or rows or ports, and/or mixed environment of 110 and 66 blocks, the label could be: V.105.E wall.24/25.
4. For CATV coaxial drop cables, at the splitter or tap, the cables shall be labeled with the location where the other end of the cable is terminated including room number, TO number, and jack position. If not collocated with a TO, indicate room number at a minimum. Place label on a visible part of cable within 12” of termination point for ease of identification after termination
   a. Example: A cable going to room 114, first TO, sixth jack position would be labeled as: C.114.1A6.

b. Generally speaking, coaxial cables will be in the sixth position when collocated with a standard TO.

5. For coaxial cables at the TO, they shall be labeled 4” from termination with the words “From Room” and the room number where the splitter or tap is. This shall be visible by removing outlet cover plate.
   a. Example: Room 115 would simply be: From Rm 115.

B. Telecommunications Outlet (TO) Labeling Scheme:
   1. TO’s are labeled alphanumerically in a clockwise rotation around the room. Typically, the first TO located to the left of the main entrance of the room is labeled 1A, followed by 2A, 3A, etc. Where two entrances are present, designate one as the main entrance and label accordingly.
      a. The intent is to have unique identification for each TO. The starting point and nomenclature of the TO’s are irrelevant to the location inside the room.

   2. Floor box TO’s are to be prefaced with “FB” to read FB1A, FB2A, etc. Wireless Access Point TO’s in ceilings are to be prefaced with “WAP” to read WAP1, WAP2, etc. Overhead projectors in ceilings will have the designation of “AVP”. Elevators to be prefaced with “Elev” to read Elev1.

   3. On subsequent TO installations, the TO will be labeled alphanumerically depending on the new TO is. If the new TO is between 1A and 2A, the new TO would be labeled as 1B. If another one is later added between 1B and 2A, it would be labeled 1C. If it is after the last TO in the room, 3A, it would be labeled 4A.
4. Seek clarification from UNM Telecommunications for any labeling issues that arise.

C. Faceplate Labels:
1. Faceplates will be labeled using the plastic insert to cover a printed identification tag. Each of the 2 labels in a faceplate are meant to have 2 lines for a total of 4 individual lines per faceplate.
2. The TO label will vary slightly depending on whether a unified cabling platform is used where all cables go to one TR, or separate voice and data closets are used.
3. See addendum 1 for an example of the new UNM Telecommunications labeling on a faceplate with unified cabling.
4. See addendum 2 for an example of the old UNM Telecommunications labeling on a faceplate.
5. See addendum 3 (1) for an example spreadsheet in MS Excel with dimensions for the labels.
   a. Line 1 contains the preface “D” for Data, the specific TR, rack, patch panel, and the range of ports used for termination. In case of separate voice and data closets, only the data information is conveyed here.
      i. Example: For cables going to TR Room 114, rack 1, patch panel 1, ports 3-5, line 1 would read: D.114.1.1.03/05.
   b. Line 2 also contains information regarding where cables are terminated in the closet, but is used for subsequent cable installations to that specific TO.
      i. Example: Another 3 cables were added to the same TO at a later date. For cables that go to TR Room 114, rack 3, patch panel 3, ports 22, 23 and 24, line 2 would read: D.114.3.3.22/24.
   c. Line 3 is only used if separate voice and data closets are being used. Line 3 contains the preface “V” for Voice, the TR, and the TO number and jack position.
d. Line 4 is the unique identifier for the TO. It contains the UNM Building number, the room that the TO is located in, and the alphanumeric designation of the TO as per section 4.01.B.
   i. Example: A TO in room building 255, room 114, designated as 2A would be: 255-114-2A.

D. Horizontal 110 and 66 Block Labeling for voice:
   1. For 110 blocks, if the cables are for room terminations label the appropriate corresponding space for the port with the room number, TO, and jack position.
      a. Example: A cable going to room 114, first TO, first jack position would be labeled as: 114-1A1. A cable in the second TO, third jack position would be 114-2A3.
   2. For 66 type blocks, if the cables are for room terminations tag the cable with the room number, TO, and jack position with a loose paper tag with string that is easily accessible and readable.
      a. Example: A cable in room 114, first TO, first jack position would be labeled as: 114-1A1. A cable in the second TO, third jack position would be 114-2A3.
   3. If the 110 block is for the tie cable between the voice patch panel in the rack and the wallboard, label the space corresponding to the port with the rack, patch panel and port information as per section 4.01.E.2. For tie cables between the rack and wallboard a 110 block should always be used.
      a. Example: Rack 1, patch panel 1, would be: Rack1 Voice PP1.
      b. See addendum 3 (2) for an example label.

E. Patch Panel Labeling:
   1. For station cabling going to a TO, label each port on the patch panel with the room number, TO, and jack position.
      a. Example: A cable in room 114, first TO, first jack position would be labeled as: 114-1A1. A cable in the second TO, third jack position would be 114-2A3.
      b. Example: A cable going to a floor box TO labeled FB1A in room 114 in the second jack position would be labeled as: 114-FB1A2
   2. For voice patch panels connected to a 110 block within the TR, label each port on the voice patch panel with the corresponding 110 block source information as per section 4.01.D.3.
      a. Example: A 110 block in the first column, third row down, port 4 would be: 1.3.04
   3. Due to amount of space allocated for TO designation on patch panels, place room number on top and TO on bottom.
      a. See addendum 3 (3) for an example label.
F. Equipment Room:
   1. Equipment Racks shall be labeled with an (1”) one inch self-laminating marking tape, Brady ID-Pro labeler, Brother P-touch labeler, or equivalent labeling system at the base of the rack. Starting in front of the equipment rack, left to right, identification shall be as follows: Rack 1, Rack 2, and Rack 3.
   2. Patch panels shall be labeled with a self-laminating marking tape, Brady ID-Pro labeler, Brother P-touch labeler, or equivalent labeling system. Starting from top to bottom in sequence. Place label on the left side of the patch panel vertically, identification shall be as follows: PP 1, PP 2, PP3, and so on.

G. Vertical/Riser/Intrabuilding Copper Cable Labeling:
   1. All riser cables shall be labeled with self-laminating marking tape, Brady ID-Pro labeler, Panduit LS7 labeler, or equivalent labeling system.
   2. At the TR, the copper riser cables shall be labeled with from/to, cable count, and pair information on both ends. Place label on a visible part of cable close to wiring block for ease of identification after termination.
      a. Example: From ER B065 to TR 114, first of 2, 100 pair cables would be: ER B065 to TR 114 1-100. The second 100 pair cable between the rooms would be ER B065 to TR 114 101-200.
   3. Label cabling every 50’ along the length of the cable in open trays, and on each side of wall penetrations

H. Vertical/Riser/Intrabuilding Fiber Cable Labeling:
   1. All riser cables shall be labeled with self-laminating marking tape, Brady ID-Pro labeler, Panduit LS7 labeler, or equivalent labeling system. Identification shall be as follows:
   2. At the TR, the fiber riser cables shall be labeled with from/to, fiber type, and fiber count on both ends. Place label on a visible part of cable/innerduct close to fiber distribution unit (FDU) for ease of identification after termination.
      a. Example: From ER B065 to TR 114, first cable, would be: ER B065 to TR114 24sm/24mm.
      b. If a second fiber bundle between the rooms is installed with the same fiber count, place a (F2) and the end of the label.
         i. Example: From ER B065 to TR 114, second cable, would be: ER B065 to TR114 24SM/24MM. (F2)
   3. Label cabling every 50’ along the length of the cable in open trays, and on each side of wall penetrations.
I. Vertical/Riser/Intrabuilding 110-Block Labeling
   1. At the ER and TR, voice riser cables are terminated on their respective 110 blocks. Label each pair on each row of 110 blocks with the matching pair count information.
   2. Place the entire cable label of “from/to” in the center of the 110 block label as per section 4.01.G.
   3. See addendum 3 (4) for an example label.

J. Coax trunk Labeling (CATV)
   1. CATV coaxial trunk cables shall be labeled at each termination point with the information indicating the location of the next termination point of the cable, such as an amplifier, DCT, splitter, or tap.

K. Vertical/Riser/Intrabuilding and Campus Fiber FDU labels
   1. Labels shall indicate type of fiber (single mode or multi-mode 50µm or 62.5 µm), from/to information, pair count, loss for each strand, and length of cable.
   2. See addendum 3 (5) for an example label.

L. Interbuilding/Campus/Backbone Copper and Fiber Cable Labeling:
   1. All interbuilding cables shall be labeled permanently with from/to information, cable type and size, installation date, and installing contractor at each end.
      b. An as-built is to be provided to UNM Facilities of which manhole, and pull-boxes the cable passes through.
Addendum 1:

**UNM Telecommunications Outlet Unified Labeling Scheme**

- Signifies that is terminated on a patch panel
- TR Room Number
- TR Rack Number
- Patch Panel Number
- Patch Panel Ports Designation
- Blank 2nd Line (Reserved for future use)
- TO Cable Assignment 1-Data 2-Data 3-Voice
- TO Cable Non-Standard (4th cable if needed)
- TO Designation
- TO Room Number

D.1014.1.3.01/02

183-1501-2A

UNM Facility Number
Addendum 2

UNM Telecommunications Outlet Labeling Scheme

Data Designation
TR Room Number
TR Rack Number
Patch Panel Number

Blank 2nd Line (Reserved for future use)

D.1014.1.3.01/02

White Icon Voice Only (Used for UNMH and HSC)

TO Cable Designation 1-Data 2-Data 3-Voice

TO Cable Non-Standard (4th cable if needed)

Voice Designation

UNM Facility Number

V.1014.2A3 183-1501-2A

TO Room Number
TO Designation

TR Room Number
Voice Jack Designation
Addendum 3 (1): MS Excel with dimensions for the labels.

Dimensions: Row = 16, Column = 21, Font Arial 10
Alignment: Rows 1 and 3 vertical bottom, horizontal center
Alignment: Rows 2 and 4 vertical top, horizontal center

<table>
<thead>
<tr>
<th>Row</th>
<th>D.101.1.1.12/13</th>
<th>D.101.1.1.14/15</th>
<th>D.101.1.1.16/17</th>
<th>D.101.1.1.18/19</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>V.101.1A3</td>
<td>V.101.2A3</td>
<td>V.101.3A3</td>
<td>V.101.4A3</td>
</tr>
<tr>
<td>2</td>
<td>D.101.1.2.03</td>
<td>D.101.1.2.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>255-114-1A</td>
<td>255-114-2A</td>
<td>255-114-3A</td>
<td>255-114-4A</td>
</tr>
<tr>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Addendum 3 (2): 110 block labeling for voice patch panels.

Addendum 3 (3): Patch panel labeling.

Addendum 3 (4): Copper riser labeling.
Addendum 3 (5): High pair count labeling

| 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 010 | 011 | 012 | 013 | 014 | 015 | 016 | 017 | 018 | 019 | 020 | 021 | 022 | 023 | 024 | 025 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 026 | 027 | 028 | 029 | 030 | 031 | 032 | 033 | 034 | 035 | 036 | 037 | 038 | 039 | 040 | 041 | 042 | 043 | 044 | 045 | 046 | 047 | 048 | 049 | 050 |

| 051 | 052 | 053 | 054 | 055 | 056 | 057 | 058 | 059 | 060 | 061 | 062 | 063 | 064 | 065 | 066 | 067 | 068 | 069 | 070 | 071 | 072 | 073 | 074 | 075 |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 076 | 077 | 078 | 079 | 080 | 081 | 082 | 083 | 084 | 085 | 086 | 087 | 088 | 089 | 090 | 091 | 092 | 093 | 094 | 095 | 096 | 097 | 098 | 099 | 100 |