DATE: April 17, 2020

State of Illinois
CAPITAL DEVELOPMENT BOARD

Farnsworth Group Inc.
One NW Old State Capitol Plaza
Springfield, IL 62701
217-528-3661

TO: PROSPECTIVE BIDDERS

SUBJECT: ADDENDUM NO. FIVE TO THE BIDDING DOCUMENTS FOR

CDB-756-030-001
Illinois Treasury Department Relocation
One East Old State Capitol Plaza
Springfield, Illinois 62701

This addendum forms a part of the bidding and contract documents and modifies the original bidding documents, dated March 05, 2020. Acknowledge receipt of this addendum in space provided on Bid Form. FAILURE TO DO SO MAY SUBJECT BIDDER TO DISQUALIFICATION.

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PROJECT MANUAL:

1. SECTION 01 32 00 “Construction Schedule Non-CPM Option”:
   a. Section 1.2.A revised to delete references to specifications not in the project manual.
   b. See attached revised specification section.

2. SECTION 01 74 23 “Final Cleaning”:
   a. Revised to indicate number of coats of wax for existing and new VCT.
   b. See attached revised specification section.

3. SECTION 27 13 40 “Communication Systems”:
   a. See attached revised specification section.

DRAWINGS:

1. SHEET A2.1.3 – “3rd Floor Plan”
   a. Revision delta #1.
   b. Construction note #C9 revised to include additional information about the existing steel beam and fireproofing.
   c. See attached revised drawing.

2. SHEET A7.1.2 – “Room Finish Schedule – 2nd Floor and 3rd Floor (Partial)”
   a. Revision delta #1.
   b. Added finishes at Open Office 243, Office #244, Office #264, Office #265, and Office #266.
   c. Revised accent wall location at Office #262.
   d. See attached revised drawing.
3. SHEET A7.1.3 – “Room Finish Schedule – 3rd Floor (Continued)”
   a. Revision delta #2.
   b. Revised flooring at Office #377.
   c. See attached revised drawing.
4. SHEET P2.1.0 – “Lower Level Plumbing Renovation Plan”
   a. Revision #3.
   b. Utility sink information included for Print Shop #074.
   c. See attached revised drawing.
5. SHEET E0.0.1 – “General Notes, Symbols & Abbreviations”
   a. Revision #3.
   b. See attached revised drawing
6. SHEET E1.1.0 – “Lower Level Electrical Demolition Plan”
   a. Revision #3.
   b. See attached revised drawing.
7. SHEET E1.1.1 – “First Floor Electrical Demolition Plan”
   a. Revision #3.
   b. See attached revised drawing.
8. SHEET E1.1.2 – “Second Floor Electrical Demolition Plan”
   a. Revision #3.
   b. See attached revised drawing.
9. SHEET E1.1.3 – “Third Floor Electrical Demolition Plan”
   a. Revision #3.
   b. See attached revised drawing.
10. SHEET E2.1.0 – “Lower Level Electrical Renovation Plan”
    a. Revision #3.
    b. See attached revised drawing.
11. SHEET E2.1.1 – “First Floor Electrical Renovation Plan”
    a. Revision #3.
    b. See attached revised drawing.
12. SHEET E2.1.2 – “Second Floor Electrical Renovation Plan”
    a. Revision #3.
    b. See attached revised drawing.
13. SHEET E2.1.3 – “Third Floor Electrical Renovation Plan”
    a. Revision #3.
    b. See attached revised drawing.
CLARIFICATIONS

1. Questions from Adam Boelman with Jones-Blythe Construction Company:
   a. Drawing A2.1.0 Note C6 calls for a new mop sink in room 074 Print Shop. There is not
      plumbing shown to this new mop sink on drawings P2.1.0. Please advise if this mop sink
      is required.
         i. There will be a new utility sink in Print Room 074 at the location of an existing
            electric water cooler that will be removed.
   b. Drawing A2.1.3 Note C9 calls for replacing the fireproofing, Can you provide
      approximate square footage for this work?
      i. Note C9 on sheet A2.1.3 has been expanded. See the revised sheet issued in this
         addendum.
   c. Drawings A5.3.2 Note 1 calls for 18 ga studs everywhere. Please confirm this is what you
      want.
      i. Yes.
   d. Drawing A7.3.1 Resilient parking bumpers are to be glued to the concrete per
      specifications. Do you have product in mind to adhere these to the concrete?
      i. See 32 17 13 “Parking Bumpers” 2.1.A.3.
   e. There are sprinkler heads lining either side of the atrium on the second and third floors.
      The heads are not centered in the ceiling tiles on the third floor. Do you want these heads
      relocated to the center of the ceiling tiles?
      i. There is not any fire protection sprinkler work in this project. Sprinkler heads to
         maintain existing locations.

2. Questions from Karen Deen with Deen Contracting regarding tile:
   a. The first question concerns the wall tile and whether the trim will be bullnose tile or
      Schluter trim?
      i. See Materials List on Sheet A7.1.3, PCT 2006 for listing of trim for the top edge
         and outside corners of the porcelain tile wainscot at the restrooms. The grout
         color is also listed.
   b. Should we use an Illinois vendor since it is a job done in Illinois?
      i. There is no requirement to use Illinois vendors.

3. Question from David Heneberry of United Constructors:
   a. Our bonding company has requested the architects’ estimate for the general work contract
      that we are bidding. Please furnish this information if possible.
      i. The only estimate we can give out is in the Ad for Bids.

4. Question from Sarah Knott with fire Stop Technologies, Inc.
   a. Do you have life safety drawings and code sheets to identify the fire rated walls and the
      hourly rating of the floor assemblies?
      i. We were not able to obtain any drawings or documents that indicated fire rating
         of structure or of walls of the existing building. Assume a minimum 1-hour fire
         rating for the protected structure, for the floor assemblies, for the elevator
         hoistways and for the enclosed exit stairs.

5. Question from Randy Nichols with Evans Construction Company:
   a. I want to make sure we include all necessary forms with our bid. Please clarify the only
      forms we need to include with our bid besides the normal CDB forms is the 00 41 10
      Illinois State Treasure Certifications and Disclosures.
i. In addition to the required CDB forms, the Treasury Department only requires the 00 41 10 Illinois State Treasure Certifications and Disclosures be included in the bid package.

6. Questions from Hal Klaus with Korte Luitjohan:
   a. Spec section 01 51 50 , Paragraph 2.2.1 set up a phasing schedule, I thought I heard at this morning’s pre-bid meeting that we no longer have a phasing schedule. Could you confirm?
      i. See the revised 01 51 50 issued in Addendum #1 which eliminates any phasing.
   b. Spec Section 01 32 00, paragraph 1.1.2.A.3 mentions specification 00 72 75 – Liquidated Damages, but this spec is not found in the project manual. Could you clarify if Liquidated Damages apply to this project, and, if so, what are the terms?
      i. Liquidated Damages do not apply to this project.
      ii. Specification 01 32 00 has been revised to remove unused references.
   c. We discussed the last date for questions this morning… could you clarify the last day and time for submitting questions?
      i. We will stay with the last day for questions as stated in the pre-bid meeting.
   d. I understand the Treasury Department will move all the furniture, but I’d like to know if it will be stored inside the building and/or in areas where we will be working. If so, please clarify what measures you want us to take to protect it.
      i. Furniture will be stored inside the building in the South Lobby #102 and in Mechanical Room #023.
      ii. The Treasury Department will remove furniture from areas of work as required to enable work to proceed and will protect the furniture stored in the South Lobby of the 1st floor from dust and soiling.
   e. Since this is an IL Treasury Department project, will a building permit be required and, if so, who will pay for the permit?
      i. This is a state-owned building. A permit from the City of Springfield is not required.
   f. Item 6 on the March 12 Pre-bid minutes, says to contact CDB for instruction on how to break out the Heating and Ventilation on the Bid Form when it’s the same subcontractor. Rather than each of us General Contractors contacting CBD, can you provide us with this guidance?
      i. Please contact CDB Contracting directly.
   g. Rooms 253, 244, 264, 265 and 266 on drawings A7.3.2 don’t show any finishes. These same five rooms do not show up on the Room Finish Schedule on A7.1.2 either.
      i. The Room Finish Schedule has been revised to include these rooms. See the revised drawing issued in this addendum.
   h. Room 377 on drawing A7.3.3. shows as existing wood. This same room on the Room Finish Schedule on A7.1.3 shows CPT-T.
      i. The flooring designation has been revised. See the revised drawing issued in this addendum.
      i. On the Reflected Ceiling Plan Removal sheets it says, “Exist. 12” x 12” concealed spline ceiling system to be removed.” Could you describe what is above these 12” x 12” ceiling tiles? Is there a metal grid system? Is it wood framing?
      i. Assume the existing concealed spline ceiling system utilizes a metal grid system.
   j. Regarding the Final Cleaning spec in Addendum 1, can you tell me how many coats of wax you want on the VCT and is there a spec for the wax?
i. Specification 01 74 23 “Final Cleaning” has been revised to include this information. The revised specification is issued in this addendum.

k. Can we assume the drywall behind the wallcovering that is to be removed has been properly prepared?

1. Yes, assume the drywall behind existing wallcovering has been properly prepared. Replacement of drywall due to existing improper preparation of the wall before the existing wallcovering was installed will be addressed during construction.

7. Questions from Jeff Limbaugh with Limbaugh Construction:
   a. I have reviewed the bid documents and cannot find any references to liquidated damages. Will the general contractor be accessed liquidated damages of the scheduled completion date is not achieved.
      i. Liquidated damages to not apply to this project.
   b. Per the 2009 CDB Gen. Condition: Builders Risk Insurance. For the insurance company to provide pricing the buildings risk insurance per the specifications the following information is required. The mailing address of the building, the estimated value of the existing building and its contents if any.
      i. Re-read 00 73 19 “Builder’s Risk” for exclusions and what to include.
      ii. The mailing address for the building is included in the project documents.

BID DATE:
1. This Addendum does not alter the previously published bid date.

*Except as modified herein, Addendum #1, Addendum #2rev, Addendum #3, Addendum #4 and the originally issued bid documents shall remain in full force and effect.

Very truly yours,

Cynthia J. Petheram AIA
This addendum consists of 29 pages.

Attachments:
Specifications:
01 32 00 “Construction Schedule Non-CPM Option”:
01 74 23 “Final Cleaning”:
27 13 40 “Communication Systems”.

Drawings:
A2.1.3 – “3rd Floor Plan”
A7.1.2 – “Room Finish Schedule – 2nd Floor and 3rd Floor (Partial)”
A7.1.3 – “Room Finish Schedule – 3rd Floor (Continued)”
P2.1.0 – “Lower Level Plumbing Renovation Plan”
E0.0.1 – “General Notes, Symbols & Abbreviations”
E1.1.0 – “Lower Level Electrical Demolition Plan”
E1.1.1 – “First Floor Electrical Demolition Plan”
E1.1.2 – “Second Floor Electrical Demolition Plan”
E1.1.3 – “Third Floor Electrical Demolition Plan”
CDB-00 91 00 January 2015
E2.1.0 – “Lower Level Electrical Renovation Plan”
E2.1.1 – “First Floor Electrical Renovation Plan”
E2.1.2 – “Second Floor Electrical Renovation Plan”
E2.1.3 – “Third Floor Electrical Renovation Plan”
1. General

1.1 REQUIREMENTS INCLUDE:

A. The contractor shall prepare and maintain a detailed project schedule as described below.

B. The project schedule shall be the contractor’s working schedule; used to execute the work and record and report actual progress. It shall show how the contractor plans to complete the work within the contract time and meet any contractually specified intermediate milestone dates.

1.2 RELATED REQUIREMENTS

A. Specified Elsewhere:

   1. SDC 01 29 00 - Payment
   2. 00 72 20 - Assignment
   3. 00 72 75 - Liquidated Damages
   4. 01 11 00 - Project Summary
   5. 01 31 20 - Project Meetings
   6. 01 33 23 - Shop Drawings, Product Data and Samples
   7. 01 29 73 - Schedule of Values

1.3 FORM OF SCHEDULE

A. The project schedule shall be in the form approved by the A/E.

B. The schedule shall provide sufficient detail and clarity so that the contractor can plan and control the work and CDB and the A/E can readily monitor and follow the progress of all portions of the work. The critical activities must be clearly shown. The degree of detail must be satisfactory to the A/E and CDB.

1.4 CONTENTS OF SCHEDULE

A. The schedule must be inclusive of all installation tasks of the work.

B. Submittal and approval of shop drawings and material samples as well as delivery dates of major equipment shall be included in the project schedule.

C. Activity duration shall be in whole working days.

D. There should be at least one activity for each specification section.

1.5 UPDATING

A. The project schedule shall be updated monthly.

B. Actual activity completion dates shall be reported and recorded on the schedule.
C. Progress on uncompleted activities shall be reported.

D. Projected completion dates and activities shall be reviewed and revised if necessary.

1.6 REPORTS AND SUBMITTALS

A. Within 30 days of the Authorization to Proceed, the contractor shall submit the project schedule to the A/E and CDB.

B. Five (5) days prior to the pay/progress meeting, the contractor shall submit the current updated schedule to the A/E and CDB.

C. The schedule shall be presented on 11" by 17" sheets. Each sheet shall be clearly titled. Intermediate milestones shall be clearly indicated.

D. A management narrative report indicating the progress of the work, any revisions since last reporting period, any lost time required to be made up and the contractors' plan to maintain the schedule and meet the milestone dates and contract completion will accompany the updated schedule. The report will identify any potential delays and problem areas and their impact on project completion.

1.7 REVIEWS

A. The A/E and CDB shall review and may comment on the schedule at the pay/progress meeting. They may also attend the update meetings. The contractor(s) shall revise the schedule as directed by the A/E for compliance with the requirements herein.

B. Payment and reduction of retainage may be denied by CDB for failure to submit a proper schedule and maintaining work progress according to the project schedule.

C. Neither the A/E's nor CDB's review and/or comments shall indicate approval/disapproval of the schedule. Since the schedule is dependent on the contractors' proprietary information and commitments, the A/E and CDB cannot and will not warrant the schedule to be correct and sufficient to meet the required contract dates.
1. GENERAL

1.1 REQUIREMENTS INCLUDE

A. Contractor: Provide final cleaning:

1. At completion of work, or at such other times as directed by the Coordinating Contractor or Using Agency, remove all waste, debris, rubbish, tools, equipment, machinery and surplus materials. Clean all sight exposed surfaces; leave work clean and ready for occupancy.

B. Coordinating Contractor:

1. Supervise and coordinate the cleaning operations of all Assigned Contractors.
2. At project completion, leave project clean, ready for occupancy.

1.2 RELATED REQUIREMENTS

A. Specified elsewhere:

1. Specific specification sections - cleaning for specific products or work.

2. PRODUCTS

2.1 Cleaning agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

3. EXECUTION

3.1 FINAL CLEANING

A. Employ professional cleaners for final cleaning.

B. Remove grease, dust, dirt, stains, labels, fingerprints, protection and other foreign materials from sight-exposed interior and exterior finished surfaces; polish surfaces so designated to specified finish.

1. In preparation for substantial completion or occupancy, conduct final inspection of sight-exposed interior and exterior surfaces, and of concealed spaces to ensure performance.

C. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.

D. Contractor soft broom clean all exposed concrete surfaces clean; other paved areas with soft or stiff broom as directed. Rake clean other surfaces on grounds.
DIVISION 1 – GENERAL REQUIREMENTS
01 74 23 – Final Cleaning

E. Contractor sweep and mop clean all (existing & new) resilient, ceramic, exposed concrete and stone flooring. Apply final wax to all (existing & new) VCT. **Existing VCT to receive three coats of wax. New VCT to receive six coats of wax. Wax product as recommended by VCT manufacturer.**

F. Contractor clean existing guardrails adjacent to Atrium/Lobby spaces and polish the top rail to remove all dust, dirt and fingerprints.

G. Contractor vacuum clean all carpet.

H. Contractor remove snow and ice from access to building.

I. Contractor replace air handling (conditioning) filters if units were operated during construction.

J. Contractor vacuum clean ducts, blowers and coils, when directed by A/E.

K. Contractor clean all surfaces, existing and new, of the reception desk in Lobby 101 including surfaces below the counter.

L. Maintain finally cleaned areas until project, or designated portion thereof, is accepted by Using Agency.

END 01 74 23.
1. **GENERAL**

1.1 **WORK INCLUDES**

A. **Base Bid:**

1. General Contractor provide:
   a. In general, this Section includes, but is not necessarily limited to the furnishing, installing and/or performance of the following:

   1) Wiring of Telecommunications System for voice and data distribution system.
   2) On site instructions and training of Using Agency’s personnel for all systems.
   3) Testing, correcting, and retesting.

1.2 **RELATED WORK**

A. Specified Elsewhere:

   1. 26 05 00 - Common Work Results.
   2. 26 05 19 - Low-Voltage Electrical Power.
   3. 26 05 26 - Grounding and Bonding.
   4. 26 05 33 - Raceway and Boxes.
   5. 26 05 53 - Identification for Electrical Systems.

1.3 **QUALITY ASSURANCE:** The voice/data wiring system shall be installed by a contractor with a minimum of five (5) years experience as a telecommunications cable installation systems specialist.

1.4 **SUBMITTALS**

   A. Prior to fabrication, submit for approval detailed shop drawings as outlined in these specifications. These shall include, but are not necessarily limited to the following:

   1. All system functional block diagrams wire equipment identification.
   2. Point to point field wiring drawings with wiring identification.
1.5 MATERIAL AND EQUIPMENT: All material and equipment provided shall be NRTL approved. All equipment shall meet or exceed the latest applicable standards of the Electrical Industries Association, Federal Communications Commission, RTMA and IEEE. All wiring shall be installed in conduit except as noted herein or on the drawings.

1.6 OPERATION AND MAINTENANCE DATA

A. Submit in accordance with Division 01 requirements.

B. Submit operation instructions and maintenance manuals. Submit model number, catalog information, technical data sheets, wiring diagrams and maintenance instructions.

1.7 CODE REQUIREMENTS

A. All work installed under this Specification shall conform to the rules and regulations of the current edition of the National Electrical Code, including all subsequently published local ordinances and bulletins thereto, and to the requirements of other local and municipal bureaus and departments having authority over this project.

B. All items of labor and materials required to meet the Code shall be provided for a complete operable system. Each individual item shall be included. When the requirements of the Contract Drawings and Specifications are in excess of the corresponding requirements of the National Electrical Codes, and the local Department having jurisdiction, the Contract drawings and Specifications shall govern.

1.8 MEANING AND INTENT OF DRAWINGS

A. It is not intended that the drawings show every conduit, fitting, appliance, junction box, pull box, wire, etc., and it is understood that while the drawings must be followed as closely as circumstances will permit, the proper installation according to the true intent and meaning of drawings, specifications and standard practice shall be provided.

B. Any minor changes in the location of equipment, conduits, outlets, grounds, devices, etc., from those locations shown on the drawings, shall be made without extra cost, if so directed by the Architect/Engineer before the installation is made. A minor change in location shall be considered to be within 5'-0" of the originally indicated locations.

1.9 NAMEPLATES:

A. Provide nameplates for all exposed components, equipment cabinets and system junction boxes. Unexposed junction and pull boxes will be marked with indelible marker."

B. All wall jack locations and labels shall be noted on the As-Built Drawings.
1.10 SYSTEM TEST: Prior to final acceptance, conduct an operating test of the complete system. The system shall test free from cross talk, electrical noise, ground loops and other faults. All connections, as far as possible, shall be thoroughly checked for positive mechanical and electrical connection and continuity. All equipment shall be demonstrated to operate in accordance with the requirements set forth in these Specifications and shown on the drawings in the presence of authorized representatives. A copy of final test results will be turned in with the As-Built Drawings which will include jack labels and locations.

1.11 MISCELLANEOUS HANGERS AND STEEL: All hangers, angles, channels and other structural steel supports required by field conditions to install any electrical equipment shall be provided under this section of the specifications.

2. PRODUCTS

2.1 TELECOMMUNICATIONS

A. General

1. All installation work shall be done in a neat, high quality manner and in conformity with local and federal building codes.
2. Cables shall be placed with sufficient bending radius so as not to kink, shear, or damage binders.
3. It will be the responsibility of the contractor for the shipping, handling, and storage of all equipment and material and to secure and protect it from theft.
4. It is the responsibility of the contractor to: calculate all actual cable footage required.
5. The contractor shall test all riser and horizontal wiring installed for shorts and crosses.
6. It shall be the responsibility of the contractor to keep the work area free of debris, trash, empty cable reels, scrap wire and so forth, and to dispose of on a daily basis.
7. The contractor will be responsible for providing cable records which detail riser cable number, pair count, wiring closet location, and station run number.
8. Upon completion of all work functions, a final walk through with the Using Agency Telecommunications Specialist or his agent shall occur to inspect all work.
9. All telephone/data cables shall be approved by the applicable code authority for cable type and application prior to installation. All telephone/data cables shall be NRTL listed.
10. Provide all labor, materials, tools, equipment and services necessary for an incidental to a complete Telecommunications/data signal Distribution and Wiring System for voice and data, including but not limited to all conduits, underground cables, wiring, cross connection terminal blocks, mounting brackets, splicing materials, riser cables, fire stops, backboxes, terminations, jacks, outlets, backboards, intermediate distribution frames, main distribution frame, horizontal plenum cable wiring, cross connecting wiring, incidental and miscellaneous hardware, 120 volt sources of supply, hanging and mounting hardware, tie wraps, bushings, identification of all wiring and all final connections.
11. The equipment list contained in this Specification includes only the major equipment requirements. Notwithstanding, the details presented in these specifications verify the completeness of the material lists and suitability of devices to meet the intent of the Specifications. Any additional equipment or material required, even if not specifically mentioned herein shall be provided without claim for additional payment; it being understood that a complete, operating system, satisfactory to the A/E shall be provided.

B. Glossary of Terms (General):

1. Associated Hardware - All material, too numerous to list, needed to complete installation process. Material needed to give a neat appearance when work is complete.
2. LEC-Local Exchange Carrier (The Telephone Co.).
3. Cross Connect - To terminate wires between separate connecting blocks, by way of cross connect wire.
4. Demarcation Point - Where CO terminates their trunks or lines for final connection to user’s telecommunication system.

5. EMI - Electromagnetic Interference.

6. House/Inside/Horizontal Cable - Cable running between the wall jack and IDF or MDF.

7. Main Distribution Frame (MDF) - The main cross connection point in wall cabinet between the demarcation point and the telecommunication system. Point where all wall jack pairs can be accessed through cross connection. Telecommunications switching equipment is installed at this location. All riser cables originate from this location.

8. Riser Cable - That wiring within a building which provides the means of connecting all wall jack pairs terminated in the MDF. Used under STAR Distribution Methodology, the riser cable will contain pair for pair quantity equal to the floor for which it is connected.

9. Star Distribution Methodology - Wiring method where individual cable or group of cables wired direct with no splices between the MDF. This method is also used when running house cable between the wall jack.

10. Telephone Terminal Board (TTB) - Mounting board for all telephone switching equipment, connecting blocks, and associated hardware within the MDF. Made of 3/4” plywood, painted twice with flame retardant material, and normally provided in 4’ x 8’ sheets. Sizes are indicated on Drawings.

11. Termination - The punching down of individual copper conductors by placing each conductor in color coded industry sequence in the connecting block and punching them down using a special tool for such purpose. This procedure will also cut off excess wiring material. Termination also refers to the connection of cable pairs to wall jacks in color sequence order.

12. USOC - Universal Service Ordering code, used by vendors to describe industry standards for certain telecom products, (e.g., wall jacks).

13. Wall jacks - Device utilized at each telephone/data location as a point for terminating the horizontal wiring. The telephone and data terminal is then plugged into this device for making a connection to the wiring system.

14. The equipment list contained in this Specification includes only the major requirements. Notwithstanding, the details presented in these specifications completeness of the material lists and suitability of devices to meet the intent Specifications. Any additional equipment or material required, even if not specifically mentioned herein shall be provided without claim for additional payment; it being understood that a complete, operating system, satisfactory to A/E shall be provided.

C. Equipment and Building Requirements/Description:

1. Cable Data (CAT 6 E/UTP Cable)
   a. 4-pair.
   b. Individually twisted pairs.
   c. 23 AWG.
   d. Solid Conductor.
   e. All Data cables will have dark color jacket (i.e.: blue)

2. Cable Telephone Voice (CAT 6 E/UTP Cable)
   a. Standard 4-pair.
   b. Individually twisted pairs.
   c. 23 AWG.
   d. Solid Conductor.
   e. All voice cables will have light color jacket (i.e.: white)

3. Patch Panels
a. Voice cables shall be terminated on CAT-3 66m 1-50 blocks. This block can hold up to 50 pairs of riser cable or (12) 4-pair station wire connections. These blocks will be mounted on Block Brackets, Type 89 or 89s.
b. Data Cables will be terminated on 48- port category 6-rack mount modular patch panel installed on wall mount rack.

4. Acceptable Manufacturer's
   a. Cisco.
   b. Juniper.
   c. Brocade.

3. EXECUTION

3.1 GENERAL

A. Contractor will provide all material and labor for the installation of the telecommunications system as noted on the drawings, less the telephone instruments and switching equipment.

B. Contractor will coordinate with Using Agency and local telephone company to install a demarcation point.

C. All installation work will be done to present a neat and tidy appearance when completed.

D. Contractor will provide Using Agency with three (3) copies of blueline print depicting location and associated number of each wall jack and conduit locations.

E. All equipment materials and wiring, furnished, installed, adjusted, tested, corrected and re-tested, must be guaranteed against defect for one year after date of final acceptance.

F. Installation practices shall be in accordance with, but not limited to these Specifications and drawings. Installation shall be performed in accordance with the applicable electrical code and local authorities having jurisdiction.

G. Cable Installation: All wiring shall be in a home run conduit of continuous length from the wall jack to the Data/Electrical Room, other raceway systems will be looked at on a case by case basis. All cables will be of continuous length from the wall jack to the Data/Electrical Room with no splices. All cables, regardless of length, shall be marked with wrap-around number or letter cable markers at both ends, there shall be no unmarked cables any place in the system.

3.2 HORIZONTAL CABLE AND WALL JACKS

A. One each wall jack as a minimum. In areas where the wall exceeds fifteen (15) feet in length, there shall be additional wall jacks not to exceed spacing of seven (7) feet between each jack.

B. Spacing of the wall jack shall begin four (4) feet from corner of adjacent wall.

C. Pull voice and data cables from the Data/Electrical Room to each wall jack location.

D. Mark a number on each wall jack starting with one (1) and continuing in sequence until all jacks have been numbered. No jack number will be repeated on another jack within the building.

E. Affix a numbered label to each end of the cable. The number will correspond with the associated jack for which it is connected.
F. Upon completion of wire cable terminations, conduct continuity, validity, and polarity test of all pairs by toning each conductor. Replace cables containing bad pairs.

3.3 CHECKOUT SYSTEM AND ACCEPTANCE TESTS

A. Tests and Adjustments: The contractor shall perform all tests and adjustments. Contractor shall finish all test equipment necessary and perform all work required to determine or modify performance of system.

B. Check all remote-control functions for all origination points to all controlled locations for proper operations.

3.4 ACCEPTANCE TEST

A. The acceptance test shall consist of the following:

1. The operation of the complete system shall be demonstrated.
2. Subjective and objective testing to determine compliance with the Specifications.
3. Contractor shall be responsible for providing all necessary test equipment.
4. All final project record drawings, run sheets, manual, and documents are to be available at time of test.
5. In the event further adjustment is required or defective, equipment is to be repaired or replaced, tests shall be suspended or continued at the option of the Using Agency or the A/E.

3.5 BRIDGE TAPS: No bridge taps are allowed. Bridge taps cause line reflections and can cause link failure or intermittent operation. Wire pairing which is sometimes found on analog phones is also unacceptable, as it lowers the line impedance.

3.6 COLOR SEQUENCES FOR CABLE PAIR TERMINATION: Each twisted pair wire comes with a color which associates it with the correct order for termination. Wires must be terminated in color sequence order or reverse polarity will occur.

END 27 13 40
### Room: 3A-13-5

**Room Finish Schedule**

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carpet</td>
<td>Bedroom</td>
<td>A-13-5</td>
</tr>
<tr>
<td>Laminate</td>
<td>Hallway</td>
<td>A-13-5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
<th>Location</th>
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<td>Paint</td>
<td>Bedroom</td>
<td>A-13-5</td>
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<tr>
<td>Lighting</td>
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**Material List**

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<tr>
<td>2</td>
<td>Paint</td>
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<tr>
<td>3</td>
<td>Laminate</td>
</tr>
<tr>
<td>4</td>
<td>Carpet</td>
</tr>
</tbody>
</table>

### General Notes

1. **Stone Walls:**
   - Do not cover existing decorative columns or niches.
2. **Roof Finish:**
   - Utilize rolled roofing, 45 mil EPDM, and use a 4" wide drip cap at the roof parapet.
3. **Paint Color:**
   - White (RAL 9010) on all exterior walls.
4. **Lighting:**
   - All lighting fixtures shall be recessed and surface mounted.

**Intercom Build-Out**

IL\linois

Department
Relocation

Farnsworth

Building

IL\linois

TRB-001

INTERCOM BUILD-OUT

<table>
<thead>
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**Appendix**

- [Appendix A](#)
- [Appendix B](#)