MICHIGAN STATE UNIVERSITY
INFRASTRUCTURE PLANNING AND FACILITIES

Michigan State University

Residential Hall Wireless Infrastructure Refresh Scope of Work

1. Project Overview

This project will refresh and modernize the wireless infrastructure within designated Residential Halls to support current and future wireless demands and will be executed in two phases to enable immediate wireless improvements while evaluating and preparing pathways and cabling infrastructure for full modernization. The scope includes replacement of existing wireless access points (WAPs), upgrades to horizontal cabling and connectivity components, investigation of existing pathways, and installation of new Category 6A structured cabling to support next-generation Juniper wireless access points. The Contractor shall furnish all labor, supervision, tools, and incidental materials required to complete this work, which shall be coordinated with Michigan State University Information Technology (MSU-IT) and Residential and Hospitality Services (RHS), and performed in compliance with all applicable codes, manufacturer requirements, and MSU construction and IT standards.

This project is in addition to work normally performed on campus and will require additional crews. Reallocation of crews already assigned to other MSU projects will not be permitted unless expressly approved by MSU IT. The University anticipates utilizing **multiple crews across multiple contractors** to complete the work between **early May and mid-August**.

2. Phase 1 – Wireless Refresh & Infrastructure Assessment

2.1 Dorm Rooms

The Contractor shall perform the following work in designated dorm rooms and associated communications rooms:

- Remove existing Cisco WAP and hand off to MSU-IT for reuse/surplus
- Remove and replace existing network jacks with Category 6A jacks in:
    - Communications rooms
    - Dorm rooms
- Replace existing patch cords with Low-OD Category 6A patch cords in:
    - Communications rooms

  - Dorm rooms
- Test all replaced connections for continuity and proper termination
- Place New Juniper Mist WAP
- Support MSU IT in recording wireless access point (AP) locations using Juniper Mist software

2.2 Pathway Inspection and Assessment

- Inspect existing pathways serving dorm rooms, including conduit, sleeves, cable tray, and other routing methods
- Evaluate pathway capacity, condition, and suitability for future Category 6A cabling
- Identify locations where new pathways will be required to support Phase 2 work
- Document findings and provide recommendations to MSU-IT
- All proposed new pathways shall be designed to comply with:
- NEC requirements
- MSU Construction Standards
- MSU-IT Infrastructure standards

2.3 Common Areas

The Contractor shall perform the following work in designated common areas, including but not limited to lounges, corridors, and shared spaces:

- Install new pathways as required, including:
  - J-hooks
  - Conduit
  - Sleeves
- Install new Category 6A horizontal cabling from designated communications rooms to approved wireless access point locations
- Terminate and label all cabling per MSU standards
- Certify all newly installed Category 6A cabling using a Fluke Versiv tester
- Place New Juniper Mist WAP
- Support MSU-IT in recording wireless access point (AP) locations using Juniper Mist software

3. Phase 2 – Dorm Room Cabling Installation

3.1 Authorization

Phase 2 work shall commence only after:

- Completion of Phase 1 pathway assessment
- Review and approval of pathway determinations by MSU-IT

3.2 Cabling Installation

Upon authorization, the Contractor shall:

- Install new Category 6A horizontal cabling from designated communications rooms to dorm room wireless access point locations
- Utilize existing pathways where approved; install new pathways where required
- Maintain proper cable management, bend radius, separation, and firestopping
- Remove abandoned cabling where feasible and directed

4. Testing and Certification

- Certify all newly installed Category 6A cabling using a Fluke Versiv tester
- Provide electronic test results demonstrating compliance with ANSI/TIA Category 6A standards
- Correct and re-test any failed links at no additional cost

5. Training

MSU-IT will provide training to designated personnel for the use of Juniper Mist AI software

Contractor participation may be required for coordination and validation purposes

6. Materials

The Contractor shall use the following approved materials or MSU-approved equivalents:

- Category 6A Cable -General Cable 7151880 – White
- Category 6A Jacks
    - Hubbell Category 6A Jack, Single – HJU6AW (White)
    - Hubbell Category 6A Jack, 24-Pack – HJU6AW24 (White)
- Patch Cords
    - Hubbell 1' Category 6A Patch Cord – HCL6AW01 (Communications Room)
    - Hubbell 10' Category 6A Patch Cord – HC6AW10 (Access Point)
- Surface Mount Boxes - Hubbell ISM10W

7. Coordination and Scheduling

- All work shall be scheduled and coordinated with MSU-IT and RHS
- Dorm room work shall be performed during approved access windows, primarily during summer months
- Common area work may have greater scheduling flexibility but shall still require MSU-IT and RHS approval
- Contractor shall minimize disruption to residents and building operations

8. Documentation and Deliverables

The Contractor shall provide:

- As-built documentation of all new cabling and pathways
- Updated labeling for communications rooms and device locations
- Fluke Versiv certification reports
- Pathway assessment documentation from Phase 1

9. Exclusions

Unless specifically authorized in writing, the following are excluded:

- Wireless configuration, tuning, or network programming
- Furniture removal beyond minor repositioning
- Architectural or structural modifications