WAYNE STATE UNIVERSITY
Facilities Planning & Management - Design & Construction Services

CSC TELECOM ELECTRICAL UPGRADE
VOIP - Phase 2A Includes: 048 Cohn, 026 Purdy Library, 027 Kresge Library, 034 Student Center, 155 Alex Manoogian, 001 Old Main

WSU PROJECT NO. 193 - 2 4 8 4 5 2
B I D S  September 30, 2015

001 - Old Main
4841 Cass Avenue
Detroit, Michigan 48202

GPS : 42.358045, -83.085843

INDEX OF DRAWINGS

<table>
<thead>
<tr>
<th>SHEET #</th>
<th>DESCRIPTION</th>
<th>NOTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CVR</td>
<td>PROJECT COVER SHEET</td>
<td></td>
</tr>
<tr>
<td>F-6</td>
<td>ELECTRICAL STANDARDS AND NOTES</td>
<td></td>
</tr>
<tr>
<td>E-1</td>
<td>SUB-BASEMENT FLOOR POWER PLAN</td>
<td>Reference Only</td>
</tr>
<tr>
<td>E-2</td>
<td>BASEMENT FLOOR POWER PLAN</td>
<td></td>
</tr>
<tr>
<td>E-3</td>
<td>FIRST FLOOR POWER PLAN</td>
<td></td>
</tr>
<tr>
<td>E-4</td>
<td>SECOND FLOOR POWER PLAN</td>
<td></td>
</tr>
<tr>
<td>E-5</td>
<td>THIRD FLOOR POWER PLAN</td>
<td></td>
</tr>
<tr>
<td>E-6</td>
<td>FOURTH FLOOR POWER PLAN</td>
<td></td>
</tr>
<tr>
<td>E-7</td>
<td>FIFTH FLOOR POWER PLAN</td>
<td>Reference Only</td>
</tr>
<tr>
<td>E-8</td>
<td>SIXTH FLOOR POWER PLAN</td>
<td>Reference Only</td>
</tr>
<tr>
<td>E-9</td>
<td>SEVENTH FLOOR POWER PLAN</td>
<td>Reference Only</td>
</tr>
</tbody>
</table>

Project Location: Old Main
### ELECTRICAL SYMBOL LIST

- Duplex Receptacle
- Quad Receptacle
- Ground Receptacle
- Ground Receptacle - Noted
- Non-Fused Disconnect Switch
- Junction Box
- Branch Circuit Panelboard
- Transformer
- Distribution Panel
- Ground Bus

### VOIP - PHASE 2 Building and Rooms

<table>
<thead>
<tr>
<th>Room Number</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.20</td>
<td>1001</td>
</tr>
<tr>
<td>1.30</td>
<td>1002</td>
</tr>
<tr>
<td>2001</td>
<td>HFA</td>
</tr>
<tr>
<td>2002</td>
<td>HFA</td>
</tr>
<tr>
<td>2003</td>
<td>HFA</td>
</tr>
<tr>
<td>2004</td>
<td>HFA</td>
</tr>
<tr>
<td>2005</td>
<td>HFA</td>
</tr>
<tr>
<td>2006</td>
<td>HFA</td>
</tr>
<tr>
<td>2007</td>
<td>HFA</td>
</tr>
</tbody>
</table>

### SCOPE OF WORK

The contractor shall provide labor and materials for the following scope of work:

1. Provide 10 Amp 120 Volt single phase 4"x4" ground, from existing receptacle panel terminated into a 14/2 NM A//C receptacle in the closet. A (#) designated in VOIP - PHASE 2 BUILDING AND ROOM SCHEDULE 3, complete with 2F Disconnect Switch in the closet. Exact location of 4"x4" outlet to be field coordinated with C.E. Electrical Contractor to install under furnished pullout strip, exact location to be field coordinated with C.E.

2. The contractor shall rework existing circuits in receptacle panels to allow for the installation of 2x2 NM A//C 3 pole circuit breaker.

3. Provide 1/4" C//H 2% bend in electrical room and the data room, between the rooms above the ceiling will be run by a conductor or cable and properly supported.

4. Install a 3/8" C//H 2% bend in disconnect box in the data room, next to a 3/8" C//H 2% bend in the receptacle panel.

5. The contractor shall properly place all penetrations related to their work.

6. All work to be completed Monday thru Friday from 7:30 AM to 3:30 PM.

7. All receptacle panels #1-4 will be provided to the contractor to locate an alternate receptacle panel, within 5'x5' of the data room.

8. The contractor shall provide a label, with the receptacle panel designation and circuit number at the device.

9. At the receptacle panel, and install labels for all changes and the #2 pole breaker feeding the data circuit.

10. The contractor shall provide all new 2 pole and 4 pole circuit breakers to match existing panelboards.

11. Receptacle panel designation on the drawings is not necessary, the receptacle panel designation in the field. For labeling use the receptacle panel designation in the field.

12. All conduit to be above finished ceiling, existing ceilings are either 8'6" or 10' in dimensions.

### ELECTRICAL ABBREVIATIONS LIST

- A: Apparatus
- A+F: Above Finish Floor
- C: Circuit Breaker
- CB: Circuit Breaker Panel
- D: Disconnect
- DC: Distribution Panel
- EC: Electrical Contractor
- ELEC: Electrical Panel
- EMT: Electrical Metallic Tubing
- E/F: Electrical/Fire
- F: Fuse
- G: Ground
- HBS: National Electrical Code
- HRP: High-Rise Property
- I: Isolated
- J: Junction Box
- K: Knob
- K/B: Key/Barrier
- K/N: Key/Negation
- L: Lighting Panel
- LKB: Lighting Distribution Panel
- N: Neutral
- P: Power
- R: Transformer
- S: Switch
- U: Unit
- V: Volts
- VHV: Very High Voltage
- WV: Way
- X: Branch Circuit
- Y: Ground
- Z: Ground
- #/R: #/Red
- #/GR: #/Green
- #/BL: #/Blue
- #/W: #/White
- B: Black
- C: Copper
- E: Earth
- F: Female
- M: Male
- RP: Receptacle Panel
- X: Copper

Wayne State University - Electrical, Planning & Management
Project: 2015-18E Electrical Upgrade
VOIP - Phase 2A

E-0