PART 1- Project Changes
**1.1 Summary**

1. Topics discussed with potential bidders after the site meeting.
2. Due to speaker location access and aesthetic choices some speaker mounting locations have been changed. These changes should result in easier installation by the sound contractor and aid in blending the speakers into the building structure.
3. The changes in speaker locations result in changes to the building penetration number and location for speaker cable passage.
4. Specification of exterior mounting hardware material.
5. Changes to speaker part/model numbers. The changes in part/model numbers result in a color change of the part but do not stray from the base model. This change is being made to better blend the speakers into building aesthetic.

**1.2 Post Site Meeting Discussion**

1. After the mandatory site meeting there was a short discussion between Jake Noyd (MWSU Operations Engineer) and a few of the bidders. The discussion was regarding the possibility of getting a scaffolding estimate. Jake Noyd told the present bidders that he would check to see if MWSU could get an estimate and share that with all bidders. Jake Noyd then met with Jerry Gentry (MWSU Director of Physical Plant) regarding the request for a scaffolding estimate. Jerry Gentry informed him that scaffolding would be rather expensive and MWSU would not pursue that option. Instead Jerry Gentry suggested changing the placement of speakers to locations that were more accessible and would require less specialized equipment. Much of the changes below are a result of these conversations.
2. If a bidder would like to pursue a scaffolding estimate it is the responsibility of the bidder to coordinate any necessary site access times with MWSU.

**1.3 Speaker Location Changes**

1. Speakers S-C 8 and 9 were moved to the ends of the roof, as depicted on sheets SS-4 through SS-6, so as not to obscure the “Missouri Western” text on the face of the building. The speakers shall be located as far toward the building face as safely possible (field side) and shall be mounted to the roof structure above in a horizontal fashion with a U type mount. Speaker mounting shall include a secondary safety cable attached to building structure.
2. Speakers S-B 4 and 5 were moved to the ends of the roof so as not to obscure the “Missouri Western” text on the face of the building. The speakers shall be located behind the S-C 8 and 9 speakers as noted above and shall be mounted to the roof structure above in a horizontal fashion with a U type mount. Speaker mounting shall include a secondary safety cable attached to building structure.
3. Speakers S-D 11 through 13 and S-D 16 through 19 were moved up and toward the ends of the building as depicted on sheets SS-4 and SS-5. The speakers shall be either mounted to the 1.66 inch OD hand rail via a sound contractor supplied Clamping U-bolts with a custom mounting plate or to the roof. Speakers S-D 13 and 16 will need to be angled (angle to be determined during installation and/or testing) toward the center of the building to better cover the center exterior seats at the Suite Level.
4. Speakers S-D 14 and 15 were moved up into the corners of the “Broadcast Camera Nest” as depicted on sheets SS-4 and SS-5. The speakers shall be mounted to the inner frame area of the openings (not to the building face) and the speakers shall extend outward past the face to allow for angling downward to cover suite level exterior seats.
5. Speakers S-D 19 through 26 were move up to the front of the suite level balcony as depicted on sheets SS-4 and SS-5. The speakers shall mount to the 4 inch angle steel hand rail structure via drilling and tapping the angle steel.

**1.4 Building Penetration Locations**

1. For speakers S-C 8 and 9, an interior electrical box, conduit and exterior weather proof box shall be provided by the electrical contractor for each speaker. The location of the boxes shall be coordinated by the sound contractor, electrical contractor, and qualified MWSU staff.
2. For speakers S-B 4 and 5, an interior electrical box, conduit and exterior weather proof box shall be provided by the electrical contractor for each speaker. The location of the boxes shall be coordinated by the sound contractor, electrical contractor, and qualified MWSU staff.
3. For speakers S-D 11 through 13 and S-D 16 through 19 an interior electrical box, conduit and exterior weather proof box shall be provided by the electrical contractor for each array of speakers. The location of the boxes shall be coordinated by the sound contractor, electrical contractor, and qualified MWSU staff. Each array of speakers shall be wired as a parallel circuit with the cable securely attached to the underside of the hand rail.
4. For speakers S-D 14 and 15 an interior electrical box, conduit and exterior weather proof box shall be provided by the electrical contractor for each speaker for each speaker. The location of the boxes shall be coordinated by the sound contractor, electrical contractor, and qualified MWSU staff.
5. For speakers S-D 19 through 26 an interior electrical box, conduit and exterior weather proof box shall be provided by the electrical contractor at each end of the speaker array. The location of the boxes shall be coordinated by the sound contractor, electrical contractor, and qualified MWSU staff. The array of speakers shall be wired as a parallel circuit with the cable securely attached to the underside of the bottom most rail of the hand rail system.
6. For speakers S-A 1 and 2, S-B 3 and 6, and S-C 7 and 10 an interior electrical box, conduit and exterior weather proof box shall be provided by the electrical contractor at the ends of the building for each individual speaker. The location of the boxes shall be coordinated by the sound contractor, electrical contractor, and qualified MWSU staff. The cables need to be securely attached at each end of the aerial run with adequate support via a messenger wire and drip/services loops at each end.

**1.5 Exterior Mounting Hardware Material**

1. All exterior mounting hardware shall be rated for outdoor use and have corrosion and UV resistant properties. For structural hardware 304 or 316 stainless steel is preferred. All exterior bolts shall have nuts applied with a thread locking mechanism such as nylon insert locknuts, jam nuts, and/or a reactive thread lock such as LocTite 268.

**1.6 Changes To Speaker Part/Model**

1. See the products table below for updated speaker part/model numbers. The changes to the numbers are noted in RED.

PRODUCTS TABLE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Vendor** | **Model #**  | **Description** | **Part #** | **QTY** |
|   |   | **SPEAKERS AND HARDWARE** |   |   |
| One System | CFA-2 | Speaker- Two Way LF (4) 10" HF (2) 2" 4 Ohm 55 x 30 1200w PGM |   | 2 |
| One System | 112/HTH-White | Speaker- Two Way LF (1) 12" HF (1) 2" 8 Ohm 60 x 40 800w PGM White |   | 4 |
| One System | 104/HTH-White | Speaker- Two Way LF (1) 3.5" HF (1) 1.25" 70v 110 x 80 Taps 12w,25w, 50w White |   | 16 |
| One System | 118/HSB-White | Speaker- Sub LF (1) 18" HF 8 Ohm 1000w PGM White |   | 4 |
| One System | PM4/M-White | Mount- Kit Pole Speaker Mount For Cross Field Array-2 White  |   | 2 |
| One System | PM4/M-White | Mount- Kit Pole Speaker Mount For 112/HTH White  |   | 2 |
| One System | 112/HTH-U/M-White | Mount- U Bracket Speaker Mount For 112/HTH White |   | 2 |
| One System | PT-10/M-White | Mount- Pan And Tilt Bracket For The 104/HTH White |   | 16 |
| One System | 118HSB-U/M-White | Mount- U Bracket Speaker Mount For 118/HSB White |   |   | 2 |
| One System | PM4/M-White | Mount- Kit Pole Speaker Mount For 118/HSB White |   | 2 |
| Band-It | C206R9 | Banding- Stainless Steel 3/4" w x 100' |   | 3 |
| Band-It | C25699 | Banding- Stainless Steel Buckle |   |   | 40 |
|  |  | Additional Rigging Hardware as needed |  |  |  |
|  |   |  |   |   |  |
| Liberty Cable | 10-2C-DB-BLK | Wire-Speaker 2 Conductor Of 10 AWG Direct Burial Black |   | 500 |
| Liberty Cable | 14-2C-DB-BLK | Wire-Speaker 2 Conductor Of 14 AWG Direct Burial Black |   | 500 |
| Liberty Cable | 10-2C-TTP-WHT | Wire-Speaker 2 Conductor Of 10 AWG Plenum White |   | 1500 |
| Liberty Cable | 14-2C-P-WHT | Wire-Speaker 2 Conductor Of 14 AWG Plenum White |   | 1000 |
|   |   | **HEADEND EQUIPMENT** |  |   |   |
| Crown | MA5000i | Amp- Dual Channel 1250w @ 8 ohms  |   | 3 |
| Crown | DCi 4/1250 | Amp- Quad Channel 1250w @ 8 ohms 70v 1250w |   | 1 |
| Crown | DCi 2/600 | Amp- Dual Channel 600w @ 8 ohms 70v 600w |   | 1 |
| Bi Amp | Audia Flex | DSP- Main Frame 24 Ch. In / Outs No Cobra Net | Flex-NC | 1 |
| Bi Amp | Audia Flex | DSP- Card Input 2 Channel Mic / Line  | IP2 | 1 |
| Bi Amp | Audia Flex | DSP- Card Output 2 Channel Mic / Line  | OP2e | 5 |
|  |   |  |   |   |  |
| Liberty Cable | 22-1P-CMP-EZ-WHT | Wire- Mic Shielded Pair Of 22 AWG Plenum White  | 500 |  |
|  |  | Additional cables and connectors as needed |  |  |