

City Council Report

915 I Street, 1st Floor

Sacramento, CA 95814

www.cityofsacramento.org

File ID: 2018-00742

May 29, 2018

Consent Item 24

Title: Supplemental Agreement No. 3 for Construction Administration Services for the Memorial Auditorium Improvement Project

Location: 1515 J Street, District 4

Recommendation: Pass a Motion authorizing the City Manager or the City Manager's designee to execute Supplemental Agreement No. 3 for a not-to-exceed amount of \$356,240 with Architectural Nexus for construction administration services for the Memorial Auditorium improvements for a new total not-to-exceed amount of \$1,589,425.

Contact: Sabrina Tefft, Junior Development Project Manager, (916) 808-3789, Economic Development Department; Desmond Parrington, Project Manager, (916) 808-5044; Fran Halbakken, Assistant City Manager/Project Executive, (916) 808-7194, Office of the City Manager.

Presenter: None

Attachments:

- 1-Description/Analysis
- 2-Background
- 3-Supplemental Agreement

Description/Analysis

Issue Detail: Staff recommends approval of Supplemental Agreement No. 3 with Architectural Nexus to provide construction administration services on a time and materials basis for an amount not-to-exceed \$356,240 for the Memorial Auditorium improvement project.

Construction of the improvements for Memorial Auditorium are expected to start in late June 2018. As the project architect for the Memorial Auditorium improvements, they will monitor the progress of the construction, review all submittals, respond to requests for information from the contractor, review any material substitution requests, review any change order requests, and review the punch list, among other responsibilities.

On January 24, 2017, City Council suspended competitive bidding in order to allow for a design-assist method of construction on the Memorial Auditorium project and approved a contract with Architectural Nexus to design the improvements to Memorial Auditorium. The improvements upgrade the performance capabilities of the facility and enable it to host the relocated events from the Community Center Theater in the 2019/2020 season. On April 4, 2017, their contract was amended to add additional scope including the rebalancing of the HVAC system. Furthermore, on December 18, 2017, their agreement was increased again to cover the additional cost of breaking their submittals into multiple packages for plan check which had not been envisioned in the original agreement.

Architectural Nexus has a strong project team that includes Schuler Shook as theatrical consultant, Miyamoto International as structural engineer, Warren Consulting Engineers as civil engineer, and McKay Conant Hoover as acoustical and audio-visual consultant. It is important that the architect be available to monitor the project and respond to questions throughout construction.

Policy Considerations: The improvements to the Auditorium will not only improve the facility itself and allow for a greater range of events, but it will also enable it to host shows from the Community Center Theater (CCT) when that renovation project begins. The requested actions support the following goals and policies of the City's General Plan:

- ERC 4.1.3 The City shall enhance the quality of existing City-owned arts and cultural resources and facilities through reinvestment, communications and marketing.
- HCR 2.1.9 City-Owned Resources. The City shall maintain all City-owned historic and cultural resources in a manner that is consistent with the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties. (SO)

Economic Impacts: Not applicable.

Environmental Considerations: The approval of the supplemental agreement with Architectural Nexus will have no significant effect on the environment and is exempt from California Environmental Quality Act (CEQA) pursuant to CEQA Guidelines Section 15061(b)(3).

Sustainability: The Auditorium project will be designed utilizing energy efficient systems whenever possible.

Commission/Committee Action: Not applicable.

Rationale for Recommendation: The design of the improvements to the Auditorium are needed not only to enhance the venue, but to allow for improvements at the CCT.

Financial Considerations: Supplemental Agreement No 3 with Architectural Nexus, Inc. is for an amount not-to-exceed \$356,240, for a new total not-to-exceed amount of \$1,589,425. Funding for this supplemental agreement will be provided through a short term interfund loan from the Water Fund (Fund 6005) available fund balance to the Community Center Fund (Fund 6010) as set forth in Staff Report No. 2018-00579, which was approved on May 22, 2018. The loan will be repaid with interest (Pool A rate) upon issuance of revenue bonds in fall 2018. As a result, there is sufficient funding available in the Convention Center Complex Renovation project (M17100100, Community Center Fund, Fund 6010) to cover the Supplemental Agreement.

Local Business Enterprise (LBE): Architectural Nexus is a local business enterprise.

Background

The Memorial Auditorium Improvement Project is funded out of Convention Center Complex Renovation Project (M17100100) in the Community Center Fund (Fund 6010). Bonds backed by Transient Occupancy Tax (TOT) revenue will be issued in fall 2018 to fund this project along with the Community Center Theater Renovation Project and the Convention Center Renovation and Expansion Project. Those bond proceeds will be used not only to pay for construction, but also to reimburse the City for its design and other pre-development expenses. In the interim, Council has authorized a short-term interfund loan to enable the project to start construction in late June 2018 and that loan will be paid back with interest when bonds are issued in fall 2018.

Below is the list of actions that Council has taken for the project including funding actions for all three projects:

- On January 24, 2017, City Council approved Resolution No. 2017-0036 which allows for bonds to be issued for the Community Center Theater, Memorial Auditorium and Convention Center projects to be used to cover design and other predevelopment costs associated with these projects.
- On January 24, 2017, City Council approved Resolution 2017-0035, which suspended competitive bidding for the Memorial Auditorium project and authorized: 1) the release of \$5.5 million of the \$8.5 million commitment of fund balance for the Convention Center Complex projects in the General Fund (Fund 1001) to the Convention Center Complex Renovation Project (M17100100); 2) a \$1,505,738 contract with Architectural Nexus for the design of the improvements; and 3) a \$187,000 contract with Rider Levett Bucknall for owner representation and advisory services.
- On February 14, 2017, City Council approved Resolution No. 2017-0057 which authorized a \$5 million loan from available fund balance in the Community Center Fund (Fund 6010). This is to be repaid when bonds are issued.
- On May 16, 2017, City Council approved Resolution No. 2017-0171 that authorized the purchase of the VAMPS acoustic shell for Memorial Auditorium that was needed for performances with the use of \$350,000 from the Community Center Fund (Fund 6010).
- On May 30, 2017 the City Council in Resolution No. 2017-0216 authorized a \$3.8 million interfund loan from the General Fund (Fund 1001) to the Convention Center Complex Project (Project), a \$3.8 million interfund loan from the Innovation and Growth Fund (Fund 2031) to the Project, and a \$3.4 million internal loan from Fund 6010 to the Project. These loans are to be repaid when bonds are issued.
- On June 6, 2017, City Council approved Motion No. 2017-0150 which authorized a \$177,804 Pre-construction Services Agreement with an option for Guaranteed Maximum Price for Construction with Kitchell CEM, Inc. for Memorial Auditorium.

- On March 20, 2018, Council approved Motion 2018-0071 for a supplemental agreement with Kitchell for additional services related to local hiring in the construction of the Memorial Auditorium project for an amount not-to-exceed \$49,570, bringing the total agreement to a new not-to-exceed amount of \$227,374.
- On March 27, 2018, Council approved Motion 2018-0083 for a supplemental agreement with Rider Levett Bucknall, Ltd. to extend the term of their contract for owner's representation services through April 30th and pay \$24,666 for their services for a new total contract amount of \$226,666. That agreement was later extended by the City Manager again until May 31st at an additional cost of \$12,333 for a total contract amount of \$238,999. Due to size of the last increase, that was done under City Manager authority and did not require staff to return to Council.
- On April 3, 2018, City Council approved Motion No. 2018-0090 for the removal of four trees along I Street and 15th Street for the Memorial Auditorium project to allow for the construction of improvements there.
- May 22, 2018, City Council approved a resolution that authorized the City Manager or his designee to execute Supplemental Agreement No. 2 to City Agreement No. 2017-0677 with Kitchell CEM, Inc., in the amount of \$10,739,169 for the construction of improvements to Memorial Auditorium (M17100100), for a new not-to-exceed total contract amount of \$10,966,543; 2) authorized an interfund loan between the Water Fund (Fund 6005) and the Community Center Fund (Fund 6010); and 3) authorized the transfer of \$11,075,170 from Fund 6005 to Fund 6010.

SUPPLEMENTAL AGREEMENT

Project Title and Job Number: Memorial Auditorium Upgrade
Purchase Order #: 37778

Date: 5-21-2017

Supplemental Agreement No.: 3

The City of Sacramento ("City") and Architectural Nexus, Inc. ("Contractor"), as parties to that certain Professional Services Agreement designated as Agreement Number 2017-0110, including any and all prior supplemental agreements modifying the agreement (the agreement and supplemental agreements are hereafter collectively referred to as the "Agreement"), hereby supplement and modify the Agreement as follows:

1. The scope of Services specified in Exhibit A of the Agreement is amended as follows:

Agreement No. 2017-0110 is amended to incorporate the additional scope of work for Construction Administration services from Architectural Nexus as set forth in Attachment 1 to Exhibit A. The fee for these additional services is set forth in Attachment 1 to Exhibit B. This supplemental agreement is based on time and materials with an additional not-to-exceed amount of \$359,240.

2. In consideration of the additional and/or revised services described in section 1, above, the maximum not-to-exceed amount that is specified in Exhibit B of the Agreement for payment of Contractor's fees and expenses, is increased by \$356,240, and the Agreement's maximum not-to-exceed amount is amended as follows:

| | |
|-----------------------------------------------------------------|--------------------|
| Agreement's original not-to-exceed amount: | <u>\$1,185,457</u> |
| Net change by previous supplemental agreements: | <u>\$47,728</u> |
| Not-to-exceed amount prior to this supplemental agreement: | <u>\$1,233,185</u> |
| Increase by this supplemental agreement: | <u>\$356,240</u> |
| New not-to exceed amount including all supplemental agreements: | <u>\$1,589,425</u> |

3. Contractor agrees that the amount of increase or decrease in the not-to-exceed amount specified in section 2, above, shall constitute full compensation for the additional and/or revised services specified in section 1, above, and shall fully compensate Contractor for any and all direct and indirect costs that may be incurred by Contractor in connection with such additional and/or revised services, including costs associated with any changes and/or delays in work schedules or in the performance of other services or work by Contractor.
4. Contractor warrants and represents that the person or persons executing this supplemental agreement on behalf of Contractor has or have been duly authorized by Contractor to sign this supplemental agreement and bind Contractor to the terms hereof.
5. Except as specifically revised herein, all terms and conditions of the Agreement shall remain in full force and effect, and Contractor shall perform all of the services, duties, obligations, and conditions required under the Agreement, as supplemented and modified by this supplemental agreement.

Approval Recommended By:

Approved As To Form By:

Project Manager

City Attorney

Approved By:



Contractor JEFFERY L. DAVIS, ARCH NEXUS

Approved By:

Attested To By:

City of Sacramento

City Clerk

**ATTACHMENT 1 TO EXHIBIT A
SCOPE OF SERVICES**

Attachment 1 to Exhibit for Contract No. 2017-0110 shall be amended to include the following Construction Administration services:

CONSTRUCTION ADMINISTRATION SCOPE OF SERVICES SUMMARY

The scope of work is to provide Construction Administration (CA) services including but not limited to: Submittal review, Request for Information (RFI) responses, attending scheduled construction meetings, review of pay applications, Change Order preparation and review, and Punch List preparation.

SCHEDULE

The schedule for the construction phase of the project is based on the information provided by the City of Sacramento's project management team. The information is based on the best available information available and may need to be adjusted. The schedule is as follows:

- Construction Documents Submitted: September 5, 2017
- Bidding Period to start after first round of Plan Check comments have been reviewed and major items incorporated into the drawings. Estimate start of bidding is mid-October with Bids due the third week of November.
- Construction Phase to begin: May 23, 2018
- Construction Completion Scheduled: May 11, 2019
- Phase 2 Restoration to Start: August 18, 2019
- Phase 2 Restoration Complete: November 11, 2020

PROJECT TEAM

Architect: Architectural Nexus: Jeffery L. Davis and Deborah Stevens

Theatrical Consultant: Schuler Shook: Kent Conrad

Acoustical Consultant: McKay Conant Hoover: Dave Conant

Audio Visual Consultant: McKay Conant Hoover: Randy Willis

Civil Engineer: Warren Consulting: Tom Fassbender

Structural Engineer: Miyamoto International: Lon Determan and Mike Simmons

Mechanical Engineer: Capital Engineering: Lowell Shields and Najeeb Shaikh

Electrical Engineer: The Engineering Enterprise: Scott Wheeler and Jacob Egorov

CONSTRUCTION ADMINISTRATION RESPONSIBILITIES

Architectural Nexus (Architect) will lead the coordination of the project team and will work with the project management team, and the City of Sacramento to provide an inclusive process that will provide the input necessary to make decisions and move quickly during construction.

Construction Administration is outlined in this proposal:

1. Architect shall attend weekly on-site meetings throughout the construction of the project. Additional visits shall be made as outlined in the scope of work below.
2. Observation reports within 4 business days of site visit
3. Submittal Reviews as follows:
 - a. Processing Time: Allow time for submittal review, including time for resubmittals, as follows. Time for review shall commence on Architect's receipt of submittal. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
 - (1) Initial Review: As noted in the Division 01 Specifications for the Project for initial review of each submittal. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.
 - (2) Intermediate Review: If intermediate submittal is necessary, process it in same manner as initial submittal.
 - (3) Resubmittal Review: As noted in Front End Documents.
4. RFI Responses as follows:

Architect will review each RFI, determine action required, and respond in accordance with the time frames set forth in the Division 01 Specifications. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.

 - a. The following RFIs will be returned without action:
 - (1) Requests for approval of submittals.
 - (2) Requests for approval of substitutions.
 - (3) Requests for coordination information already indicated in the Contract Documents.
 - (4) Requests for adjustments in the Contract Time or the Contract Sum.
 - (5) Requests for interpretation of Architect's actions on submittals.
 - (6) Incomplete RFIs or inaccurately prepared RFIs.
5. Substitutions

Substitutions for Cause: Submit requests for substitution immediately on discovery of need for change.

- a. Conditions: Architect will review Contractor's request for substitution when all of the following conditions are satisfied:
 - i. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 - ii. Requested substitution will not adversely affect Contractor's construction schedule.
 - iii. Requested substitution has received necessary approvals of authorities having jurisdiction.
 - iv. Requested substitution is compatible with other portions of the Work.
 - v. Requested substitution has been coordinated with other portions of the Work.
 - vi. Requested substitution provides specified warranty.
 - vii. Requested substitution is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.
 - b. Substitutions for Convenience: Not allowed.
6. Proposed Change Orders / Change Order Requests:
- a. Review and responses of the architect to Work Change Proposal Requests issued by the CITY or contractor shall be issued within the agreed upon time specified in CITY or contractor's Request but shall be not less than the time allotments set forth in the Division 01 Project Specifications.
7. Review of the contractor's provided punch list submitted with the contractor's request for substantial completion.

ADDITIONAL SCOPE OF SERVICES

Structural:

1. Up to ten (10) site visits during construction.
2. Review of shop drawings and submittals in accordance with the time frames set forth in the Division 01 Specifications.
3. Respond to structural RFI's for clarification of plans and specifications, consistent with Construction Administration Responsibilities above.

Mechanical:

1. Scheduled site visits include initial contractor site walk, one for rough-in, one for mechanical progress and one for final observation for punch. Other visits if required to address a field condition.
2. Review of shop drawings and submittals.
3. Respond to RFI's for clarification of plans and specifications, consistent with Construction Administration Responsibilities above.

4. Review Air Balance and O&M manuals.
5. Excludes enhanced commissioning.

Mechanical Commissioning:

1. Commission the following systems:
 - a. VRF Fan Coil System
 - i. Verify all modes of operation for VRF FCD systems
 - ii. Confirm Stand-alone control functions
 - iii. Verify Configuration and schedules
 - b. Split FC Unit
 - c. Exhaust Fans
 - i. Verify sequence of operation
 - d. Existing AHUs
 - i. Verify proper operation of AHUs after completion of work. (Sequence verification excluded.)
 - ii. Sample verify TAB work per the latest TAB report and compare the results to baseline TAB.
2. Track all open issues until they are resolved/accepted.
3. Document and submit test results and issues log.
4. Site Activities:
 - a. One site visit for Functional testing and TAB sample verification.
 - b. Once completion of remaining tests and/or back-check any open issues.
5. Up to two (2) site visits for functional testing and issues close-out.
6. Excluded Services:
 - a. Existing equipment commissioning
 - b. Retesting more than once
 - c. Peer review of contractor's as-built drawings
 - d. Demonstration and Training Recording
 - e. Extended construction period

Electrical:

1. Up to three (3) site visits during construction.
2. Review of shop drawings, submittals, and as-built drawings in accordance with the time frames set forth in the Division 01 Specifications.
3. Respond to RFI's for clarification of plans and specifications, consistent with Construction Administration Responsibilities above.
4. Excludes formal commissioning, change order review of Owner scope changes, preparation of record drawings.

Acoustical:

1. Up to three (3) site visits during construction.

2. Review of shop drawings and submittals in accordance with the time frames set forth in the Division 01 Specifications for:
 - a. Partition construction components, such as resilient membranes, acoustical sealants, insulation, resilient channel, sway braces, etc.
 - b. Sound lab-rated doors and/or windows, if any.
 - c. Orchestra Pit (basement location) and Orchestra Shell coordination.
 - d. Sound-absorbing and reflecting finishes.
 - e. Doors and door gasketing hardware.
 - f. M.E.P. components (fans, heat exchanges, pumps, transformers, vibration isolators/mounts, etc.) and ductwork shop drawings.
 - g. Respond to RFI's for clarification of within the acoustical area of responsibility, consistent with Construction Administration Responsibilities above.
 - h. Refer to the Additional Acoustical and Audio Visual Services scope of work for commissioning and tuning below.

Audio Visual:

1. McKay Conant Hoover (MCH) has allocated coordination meetings and trips to the site during the CA phase for observation of Audio Visual infrastructure progress. Trips consisting of: Infrastructure rough-in – 2; Substantial/Final Completion – 2
2. MCH will prepare field reports and punch lists after each site visit as required.
3. MCH will review the contractor's shop drawings and change proposals in accordance with the time frames set forth in the Division 01 Specifications.
4. MCH will issue RFI responses and supplemental bulletin drawings and answer questions as they arise during construction, consistent with Construction Administration Responsibilities above.
5. Upon completion of construction:
 - a. MCH will inspect the installation and conduct acceptance testing.
 - b. MCH will provide a punch list after our preliminary observation and final acceptance upon completion of the project.
 - c. MCH will review all operations manuals, aids to users and as-built documentation.
6. See Additional Acoustical and Audio Visual Services listed below for enhanced commissioning and tuning.

Theater:

1. Attend an initial construction team meeting to discuss theatrical requirements.
2. Provide consultation as required during construction to resolve job site questions and coordination issues.

3. Review and respond to contractor RFI's within theatrical scope, consistent with Construction Administration Responsibilities above.
4. Conduct a maximum of six (6) job site visits to observe work in progress and assist with coordination of related trades. Additional site visits will be an additional service fee of \$2,590 plus expenses.
5. Observe completed installations and submit punch list items. Observe commissioning for related systems.
6. Work closely with the Owner and Architect to assist in publicizing the completed project, helping identify special theatrical features of the building.

Additional Acoustical and Audio Visual Services:

The following scope of services will be provided by McKay Conant Hoover (MCH), a subconsultant to Architectural Nexus. References to MCH are for clarity and ease of reference only. Such references do not affect Architect's responsibility for overall performance under the terms of the Agreement with the City.

Part 1: Stakeholder Meeting

MCH will conduct a full day of meetings with the design team in the morning and afternoon. MCH will describe and discuss with stakeholders aspects of the design team's work and decision-making that inform the current renovation design. Special attention will be given to describing the acoustical adjustments for MEP noise control, sound isolation and room acoustics in the basement "orchestra pit" and in the main auditorium (both "fixed" and "variable" acoustics). At the meeting, in-depth discussion and analysis will be provided to stakeholders including the VAMPS recital screens, overhead ceiling reflectors, positioning of the orchestra on stage, as well as the nature of orchestra sound in various areas of audience seating, depending on the setting of the sound absorptive banners. If necessary, a two-day dedicated tuning exercise will be held before first rehearsals in Sacramento Memorial Auditorium (SMA).

Part 2: Acoustical Tuning for Sacramento Philharmonic Orchestra in SMA

MCH will conduct a Tuning exercise in the SMA leading toward optimization of on-stage settings (height & tilt angles) for the new orchestra shell ceiling elements, the VAMPS recital screens and the Acoustiroll banners at the balcony edge.

MCH will measure at the very end of the Construction Administration Phase and well before the SPO would arrive, in both the main hall and in the basement "pit", their reverberation times (various setting of banners) and background noise due to HVAC. This will help in MCH's preliminary understanding of the hall's characteristics prior to arrival of the SPO for any tuning or rehearsals.

Construction Administration Phase Basic Services – ACOUSTICAL

- MCH will provide clarification, information and response to questions within the area of its responsibility to the contractor and architect during construction. This will include the review of submittals for all systems and components related to MCH's proposed acoustical services.
- MCH will visit the site up to three (3) times at appropriate times during construction. MCH will note construction conflicts and suggest corrective measures to be taken, if required. MCH will provide a written report following each visit.
- Redesign in this phase required by non-compliance with MCH's recommendations is not included and may be considered Additional Services. Review of more than two submittals for the same equipment may be considered Additional Services.
- MCH will review submittals covering, at least, the areas noted below:
 - Partition construction components, such as resilient membranes, acoustical sealants, insulation, resilient channel, sway braces, etc.
 - Sound lab-rated doors and/or windows, if any.
 - Orchestra Pit and Orchestra Shell coordination.
 - Sound-absorbing and reflecting finishes.
 - Doors and door gasketing hardware.
 - Mechanical, Electrical and Plumbing (MEP) components (fans, heat exchanges, pumps, transformers, vibration isolators/mounts, etc.) and ductwork shop drawings.

Acoustical Tuning Services – Specific

1. MCH's Acoustical work is restricted to recommendations, working with stakeholders, regarding the positioning of the VAMPS recital screens, new shell ceiling elements and variable acoustic banners. The goal is to optimize trim settings for all these in consideration of both on-stage acoustical "support" and clarity as perceived the orchestra sections and the conductor as well as the audience patrons.
2. MCH will provide a preliminary, initial recommended orchestra seating layout and risers as well as VAMPS arrangement and ceiling element tilt angles and heights, prior to the first tuning event with the SPO. It should be noted, and may be recalled from the CCT tuning, that as much hung "soft goods" as possible should be set around and behind the VAMPS units to control both stray backstage light and reverberance behind the VAMPS.
3. MCH's work will come in the form of interactive discussions with stakeholders, including the Philharmonic conductor as well as marked-up drawings/sketches, and a final letter report summarizing our findings and recommendations.
4. Requests for work beyond that noted above, would be considered Additional Services.

5. The items listed below do not change in any way, the scope of construction document requirements but rather, simply note items requiring full completion at least 24-hours prior to beginning the Tuning exercise.
 - The outdoor crossover (for exterior noise control) completed with doors fully adjusted;
 - The gaskets on balcony windows coverings in place, with cavity absorption and well-sealed;
 - All HVAC fully completed and air-balanced (final air balance);
 - The new orchestra ceiling reflectors in and fully operational with luminaires operating;
 - Variable acoustic banners all in place and fully/correctly controllable;
 - All new “fixed” sound absorption in place at walls and balcony ceiling;
 - All seats installed in their final condition (refurbished, new (or not), etc.); and
 - Stage electrics fully functioning for musicians’ sheet music readability.
6. Conditions required at time of Tuning are simply that (workers) gone or unquestionably quiet in the auditorium, stagehouse, attic or adjacent spaces (i.e. no work adjusting door gaskets, cleaning corridors, etc.).

Part 3: Sound System Optimization for Amplified Performance in SMA

MCH has developed the following scope which covers the tuning of the new line array loudspeaker systems planned for the Memorial Auditorium, and the programming adjustments of the processing required for the line arrays to support a variety of amplified events.

The following assumptions underlie this task:

- 1) MCH expects that the arrays will be in place at the beginning our involvement, with trim height and toe in essentially established. MCH further anticipate that Hall staff will be available to make any adjustments to the above criteria as needed during the tuning process. MCH will make every effort to minimize these types of changes and to make them occur at reasonable times during the window of time MCH will be active.
- 2) MCH expects that power and signal wiring for the arrays, amplifiers, and digital signal processor (DSP) units will be completely in place at the beginning of our involvement. MCH anticipate that MCH will be optimizing the settings within the software configuration of the DSP and amplifier units, but MCH do not anticipate that MCH will be responsible for the physical wiring, initial programming and set up (provision of power, etc.) of this equipment.

- 3) MCH will require the most recent DSP files for the existing configuration, and all passwords required for full access. Upon completion of the tuning exercise, MCH will redistribute updated DSP files to the Owner and Integrating Contractor.
- 4) MCH expects to configure the DSP so that the new line arrays will act as the main left and right loudspeaker positions with respect to system layout. If desired, and time permits, MCH will also program optimal presets for a single center only array (typically used in simple speech only applications).
- 5) MCH expects to configure the DSP signal processing to include equalization, delay, and, if required, limiting to optimize the performance of the line arrays in their installed condition. This includes ensuring that the line arrays are aligned with the existing delay structure.

To summarize, this scope of work consists of two (2) full days, for two MCH media systems consulting staff members to tune the DSP for, and optimize the frequency and time performance of, the new line arrays for the Memorial Auditorium. MCH understand this to be the primary goal of the current work scope.

Anticipated Schedule: For Acoustical Tuning on-site, two (2) days is allotted with 2, 3-hr sessions across each of two sequential days in Fall 2019. For Sound System Optimization on-site, two full days will be needed in the Fall of 2019. These days may be sequential to, but should not overlap, the Acoustical Tuning exercise. Further, MCH's work will be scheduled after substantial completion verification observations have been conducted, and any salient remedial corrections performed, on the AudioVisual systems.

**ATTACHMENT 1 TO EXHIBIT B
FEE SCHEDULE**

Attachment 1 to Exhibit B of Contract 2017-0110 shall be amended to include the following fees for Construction Administration Services. Changes in scope may constitute reason for additional fee. The fee for the scope and services described above is a Time and Materials fee (T&M), Not-to-Exceed (NTE) \$356,240 and breaks down as follows:

| | |
|------------------------|---------------------|
| Architectural | \$161,526.00 |
| Theatrical | \$52,000.00 |
| Acoustical | \$13,200.00 |
| Audio Visual | \$23,800.00 |
| Structural | \$48,175.00 |
| Mechanical | \$24,900.00 |
| Electrical | \$10,400.00 |
| Civil | \$2,000.00 |
| AV & Acoustical Tuning | \$20,239.00 |
| TOTAL | \$356,240.00 |

The number of site visits remains as listed by each discipline and any additional site visits will increase the NTE number accordingly.

Additional services will be contracted on an hourly rate or a predetermined lump sum and shall be agreed upon in writing before proceeding. The attached pages below identify the hourly rates for the team. These rates shall replace those rates set forth in Attachment 1 of Exhibit B in Contract No. 2017-0110.