Sampson Construction Co., Inc.
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Bid Bulletin #5

PROJECT: Kearney High School, Kearney, Nebraska
Bid Package #3
DATE: October 16, 2014

This Bid Bulletin includes items 5-1 through 5-4. Each item shall be fully incorporated into the Bidding/Contract Documents and have the same force and effect as though originally included. Bidders shall acknowledge receipt of this Bid Bulletin on the bid form. Bidders MUST use the bid form that is included in Bid Bulletin #1 or risk disqualification.

Item 5-1: BID DATES ARE MODIFIED AS FOLLOWS:

THE ONLY SCOPES OF WORK BIDDING ON OCTOBER 23, 2014 ARE:

3C: Structural Precast Concrete
3D: Masonry-North Half
3E: Masonry- South Half
3F: Steel Material
3R: HM/HDW/Doors

THE BID DATE HAS BEEN POSTPONED to OCTOBER 30th FOR THE FOLLOWING SCOPES OF WORK

3A Interior Slabs
3B Exterior Pavement/Walks
3G: Steel Erection
3H Rough Carpentry
3I Educational Casework
3J Install Millwork
3K Provide Millwork
3L Roofing
3M Waterproofing/Air Barrier
3N NOT USED
3O Metal Wall Panels
3P Joint Sealants
3Q Provide Expansion Joints
3S: Install HM/HDW/Doors
3T: Coiling Doors
3U: Aluminum & Glass
3V: Fire Curtain
3W Polished Floor System
3X: Tiling
3Y: Acoustical Ceilings
3Z Studs & Drywall
3AA Painting/VWC/Sealed Concrete
3BB Wood Gym Flooring
3CC Carpeting
3DD Provide Specialties
3EE Install Specialties
3FF Folding Panel Partitions
3GG Carpentry-Lockers
3HH Supply Lockers
3II Appliances & Equipment
3JJ Food Service
3KK Theatre Rigging/Lighting/Drapes
3LL Lab Fumehoods/Casework
3MM Gymnasium Equipment
3NN NOT USED
3OO Roller Shades
3PP Music Casework
3QQ Countertops
3RR Audience Seating
3SS Telescoping Bleachers
3TT Swimming Pool
3UU Grandstands
3VV Elevators
3BBB Synthetic Turf
3CCC Resilient Surfacing
3DDD Chain Link Fencing
3EEE Turf, Grasses, Plants
3FFF Site Irrigation
3GGG Site Utilities
3HHH Geothermal Well
3III Track & Field Turf Subgrade
3JJJ Track & Field Equipment

THE BID DATE HAS BEEN POSTPONED to NOVEMBER 6th FOR THE FOLLOWING SCOPES OF WORK!!!!!!!!!!!!

3WW Fire Suppression

3XX Plumbing

3YY HVAC

3ZZ Electrical

3AAA Communications

Item 5-2: See attached Summaries of work that have been modified to comply with Addendums and Bid Bulletins through October 16, 2014: 3I, 3J, 3K, 3M, 3O, 3P, 3CC, 3DD, 3EE, 3KK, 3PP, 3QQ, 3UU, 3ZZ, 3BBB, 3CCC, 3FFF, 3III

Item 5-3: Attached is a copy of Addendum #4 from Wilkins, Hinrichs, Stober Architects LLC dated October 16, 2014.

Item 5-4: Bids will be accepted until 2:00 PM Central Time at the Kearney Public Schools, Whittier Learning Resource Center, Office of Finance Director. Bids will be read aloud at 3:00 PM Central Time in the 2nd Floor Staff Development Conference Room.
Bids will be at 2:00pm Central Time for each of the dates noted above.

Bids can be hand delivered or mailed to 310 West 24th Street, Kearney, NE 68847, submitted by FAX to (308) 698-8001 or by e-mail to kpsbid@sampson-construction.com. It is your responsibility to make sure these bids are received prior to 2:00 PM Central Time according to the modified bid dates in this Bid Bulletin.

End of Bid Bulletin #5

SECTION 011000 - SUMMARY OF WORK #03I EDUCATIONAL CASEWORK (SUPPLY ONLY)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all material for the following sections:

- **Section 123530 Educational Casework (As it relates to Cabinets, Spray Booths, Steel Fabrications, Assemblies and Support Devices, Miscellaneous Items)**
- **This Summary also includes supply of all Plastic Laminate Countertops that are specified on top of Catalog/Educational casework. If a countertop is not above catalog numbered Educational Casework then it is not part of this summary.**

Contract specifically includes, but is not limited to the following:

1. **All permits, bonds, licenses, and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Coordinate all shipping with installation contractors.**
7. **Provide delivered FOB jobsite to be installed by others.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03J CARPENTRY-MILLWORK (INSTALL ONLY)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract, including Bidding And Contract Requirements (Division 00) and General Requirements (Division 01) of the Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, equipment, fasteners, supervision for installation of the following sections:

- **Section 062000 Finished Carpentry (as it relates to casework and millwork installation)**
- **Section 097710 Prefinished Wall Panels**
- **Section 115330 Laboratory Fume Hoods**
- **Section 123450 Laboratory Casework (As it relates to wood casework. Epoxy tops, sinks and lab fittings supplied and installed by others.)**
- **Section 123530 Educational Casework**
- **Section 123600 Countertops (As it relates to laminate assemblies. All solid surface, Concrete & quartz to be supplied and installed under separate summary of work.)**
- **Section 123540 Music Casework**

Contract specifically includes, but is not necessarily limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime if required to meet commitment to schedule.**
11. **Provide all field verification and coordinate backing locations with metal framing and drywall contractor.**
12. **Provide all layout requirements for this scope of work.**
13. **Provide all unloading, material handling and hoisting of own materials.**
14. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03K- MILLWORK (SUPPLY ONLY)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all material for the following sections:

- **Section 062000 Finish Carpentry (as it relates to casework and millwork)**
- **Section 097710 Pre-finished Wall Panels**
- **Section 123600 Countertops (As it relates to laminate countertops <u>not</u> above educational casework. Provide all support brackets, false walls and fascia panels. All Plastic Laminate countertops above catalog/Educational Casework are provided under summary of work 3I and installed by 3J. All quartz, concrete & solid surface to be supplied and installed under summary of work 3QQ.)**

Contract specifically includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Coordinate all shipping with specialty installation contractors & Construction Manager.**
7. **This package includes all custom casework.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03M WATERPROOFING & WEATHER BARRIERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, fasteners and supervision to install the following sections:

- **Section 071324 Pre-Applied Sheet Waterproofing**
- **Section 071325 Self Adhering Sheet Waterproofing**
- **Section 072500 Weather Barriers**

Contract includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime, if required, to meet commitment to schedule.**
11. **Provide all layout requirements for this scope of work.**
12. **All preparation work needed for proper installation/manufacturer installation/or industry standard installations.**
13. **Superintendents or project managers will be required to attend weekly coordination meetings with other contractors.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03O METAL WALL PANELS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, fasteners and supervision to install the following sections:

- **Section 074213 Metal Wall Panels**
- **Section 076200 - Sheet Metal Flashing and Trim (As it applies to metal wall panel systems.)**

Contract specifically includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime, if required, to meet commitment to schedule.**
11. **Provide all layout requirements for this scope of work.**
12. **Provide all unloading, material handling and hoisting of own materials.**
13. **Provide and install all furring, insulation and flashings, and panels for the complete installation of the metal wall panel scope of the project, coordinated with other trades and the Construction Manager.**
14. **Coordinate installation of panels with mechanical, electrical, masonry, and vapor barrier contractor**
15. **Cleaning of Streets of dirt and debris caused by this scope of work**
16. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03P JOINT SEALERS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, fasteners and supervision to install the following sections:

- **Section 079005 Joint Sealers**
- **Section 321373 Concrete Paving Joint Sealants**

Contract includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime, if required, to meet commitment to schedule.**
11. **Provide all layout requirements for this scope of work.**
12. **All preparation work needed for proper installation/manufacture installation/or industry standard installations.**
13. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03CC RESILIENT & CARPET

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract, including Bidding And Contract Requirements (Division 00) and General Requirements (Division 01) of the Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, supervision and other items necessary to complete the following sections:

- **Section 096453 Resilient Linoleum Stage Flooring System**
- **Section 096500 Resilient Flooring**
- **Section 096813 Tile Carpeting**

Contract specifically includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conduct site visit at least two weeks prior to scheduled start of installation and identify if/what floor preparation is necessary. Provide floor preparation as necessary to provide a complete, consistent and professional installation.**
6. **Conformance with all city and local jurisdictional requirements.**
7. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
8. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
9. **Coordinate all tests and inspections.**
10. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
11. **Overtime, if required, to meet commitment to schedule.**
12. **Provide all layout requirements for this scope of work.**
13. **Provide all unloading, material handling and hoisting of own materials.**
14. **Provide/install protection over finished work as required to protect work during construction.**
15. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**
16. **Provide SF cost for each flooring type (except Section 096453) for moisture mitigation/relative humidity on the bid form. This is required for ALL Bids!!!**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.

1. Project Location: 2702 West 11th Street, Kearney, NE 68845
2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03DD- SPECIALITIES (SUPPLY ONLY)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all material for the following sections:

- **Section 088300 Mirrors**
- **Section 101101 Visual Display Surfaces**
- **Section 101124 Tackable Wall Systems**
- **Section 101126 Tackable Display Panels**
- **Section 102113.19 Solid Plastic Toilet Compartments**
- **Section 102113.21 Solid Color Reinforced Composite Toilet Compartments**
- **Section 102123 Cubicles**
- **Section 102601 Wall and Corner Guards**
- **Section 102800 Toilet, Bath and Laundry Accessories**
- **Section 104400 Fire Protection Specialties**
- **Section 107500 Flagpoles**
- **Section 111313 Loading Dock Bumpers**
- **Section 115213 Projection Screens**

Contract includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Conformance with all city and local jurisdictional requirements.**
5. **All unloading, material handling and hoisting of materials is provided by others.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03EE CARPENTRY-SPECIALTIES (INSTALL ONLY)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract, including Bidding And Contract Requirements (Division 00) and General Requirements (Division 01) of the Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, equipment, fasteners, supervision for installation of the following sections:

- **Section 062000 Finished Carpentry (as it relates to specialties installation)**
- **Section 079513 Expansion Joint Cover Assemblies**
- **Section 088300 Mirrors**
- **Section 101101 Visual Display Surfaces**
- **Section 101124 Tackable Wall Systems**
- **Section 101126 Tackable Display Panels**
- **Section 102113.19 Solid Plastic Toilet Compartments**
- **Section 102113.21 Solid Color Reinforced Composite Toilet Compartments**
- **Section 102123 Cubicles**
- **Section 102601 Wall and Corner Guards**
- **Section 102800 Toilet, Bath and Laundry Accessories**
- **Section 104400 Fire Protection Specialties**
- **Section 107500 Flagpoles**
- **Section 111313 Loading Dock Bumpers**
- **Section 115213 Projection Screens**

Contract specifically includes, but is not necessarily limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime if required to meet commitment to schedule.**
11. **Provide all field verification and coordinate backing locations with metal framing and drywall contractor.**
12. **Provide all layout requirements for this scope of work.**
13. **Provide all unloading, material handling and hoisting of own materials and coordination of delivery.**
14. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 – SUMMARY OF WORK #03KK THEATER RIGGING/LIGHTING/DRAPERY/ CONCERT CEILING AND TORM DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract, including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, supervision and other items necessary to complete the following:

- **Section 102500 Tracked Theatrical Wall System**
- **Section 116100 Theatrical Rigging and Drapery**
- **Section 116101 Performance Lighting Fixtures & Accessories**
- **Section 116113 Concert Ceiling**
- **Section 115216 Projectors**

Contract includes, but is not limited to the following:

1. **All permits, bonds, licenses, and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime, if required, to meet commitment to schedule.**
11. **Provide all unloading, material handling and hoisting of own materials. Provide all field verification and coordination with other trades. Provide all layout.**
12. **Provide all field verification and coordinate backing locations with metal framing and drywall contractor.**
13. **Superintendents or project managers will be required to attend weekly coordination meetings with other contractors.**
14. **Coordinate substantial completion with Construction Manager's schedule.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.

1. Project Location: 2702 West 11th Street, Kearney, NE 68845
2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03PP MUSIC CASEWORK (SUPPLY ONLY)

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract, including Bidding And Contract Requirements (Division 00) and General Requirements (Division 01) of the Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all material and equipment for the following:

- **Section 123540 Music Casework**

Contract specifically includes, but is not limited to the following:

1. **All permits, bonds, licenses, and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Coordinate all shipping with installation contractors.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
1. Project Location: 2702 West 11th Street, Kearney, NE 68845
2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03QQ COUNTERTOPS-SOLID SURFACE & QUARTZ

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, supervision and other items necessary to complete the following sections:

- **Section 123600 Countertops (As it relates to solid surface, Concrete & quartz assemblies. Laminate countertops to be supplied and installed under separate summary of work.)**

Contract specifically includes, but is not necessarily limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime if required to meet commitment to schedule.**
11. **Provide all layout requirements for this scope of work.**
12. **Provide all unloading, material handling and hoisting of own materials.**
13. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03UU GRANDSTANDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, fasteners and supervision to install the following sections:

- **Section 131250 Permanent Grandstands**

Contract specifically includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime, if required, to meet commitment to schedule.**
11. **Provide all layout requirements for this scope of work.**
12. **Provide all unloading, material handling and hoisting of own materials.**
13. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**
14. **Include all engineering required.**
15. **Includes the footings and foundations required for this scope of work. To include labor, materials, rebar, and anchor bolts.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03ZZ ELECTRICAL/ELECTRONIC SAFETY & SECURITY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract, including Bidding And Contract Requirements (Division 00) and General Requirements (Division 01) of the Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, supervision and other items necessary to complete the following sections:

- **Section 078400 Firestopping (as it relates to scope of work)**
- **Division 26 Electrical (Complete)**
- **Division 28 Electronic Safety & Security (Complete)**

Contract specifically includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Coordinate inspections / testing as specified per scope of work.**
10. **Coordinate layout of all work with all other trades before installation.**
11. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others. No less than every week (Friday) the site will be left clean of all construction debris. This may require full time clean-up personnel.**
12. **Include all concrete light pole bases and concrete support for transformers.**
13. **Overtime, if required, to meet commitment to schedule.**
14. **Provide all layout requirements for this scope of work.**
15. **Floor protection when working above new flooring.**
16. **Provide all unloading, material handling and hoisting of own materials.**
17. **Provide site project management capable of ordering, tracking materials and subcontractors. Project Manager will be required to attend weekly coordination meetings with the Construction Manager and other contractors. During the first month, the Project Manager will be required to attend more meetings to coordinate work.**
18. **Provide temporary power and lighting for construction, energy costs paid by others.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03BBB SYNTHETIC TURF

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract, including Bidding And Contract Requirements (Division 00) and General Requirements (Division 01) of the Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, supervision and other items necessary to complete the following sections:

- **Section 325200 Synthetic Turf**

Contract specifically includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime, if required, to meet commitment to schedule.**
11. **Provide all layout requirements for this scope of work.**
12. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**
13. **Provide & Install Turf and Accessories only under this scope**
14. **Coordinate Subgrade installation by Others**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03CCC RESILIENT SURFACING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, fasteners and supervision to install the following sections:

- **Section 321816 Resilient Track Surfacing**
-

Contract specifically includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
7. **Coordinate all tests and inspections.**
8. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
9. **Overtime, if required, to meet commitment to schedule.**
10. **Provide all layout requirements for this scope of work.**
11. **Provide all surface prep work, clean-up of overspray and assurance of adhesion.**
12. **Provide all unloading, material handling and hoisting of own materials.**
13. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**
14. **Trench Drains by others.**
15. **Asphalt Base Course By Others**
16. **Coordinate Painting layout with Owner and Architect.**
17. **This scope includes runway's outside of the track. Coordinate with Athletic Equipment in division 116833/Scope of Work 03JJJ.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK 03FFF SITE IRRIGATION

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract, including Bidding And Contract Requirements (Division 00) and General Requirements (Division 01) of the Specifications, apply to this Section.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, supervision and other items necessary for the following sections:

- **Section 0328500 Lawn Sprinkler Irrigation**

Contract includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Bidders are responsible for conducting a visit to the site to familiarize themselves with the conditions of the work and to verify the set-up of the existing system.**
5. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
6. **Conformance with all city and local jurisdictional requirements.**
7. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
8. **Contractors must provide a complete and functional system integrated with the Owners existing system. Additional cost will not be approved for failure to verify current layout conditions.**
9. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
10. **Coordinate all tests and inspections.**
11. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
12. **Overtime, if required, to meet commitment to schedule.**
13. **Provide all layout requirements for this scope of work.**
14. **Provide all unloading, material handling and hoisting of own materials.**
15. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with Construction Manager and other contractors.**
16. **Training as specified.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.

1. Project Location: 2702 West 11th Street, Kearney, NE 68845
2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

SECTION 011000 - SUMMARY OF WORK #03III TRACK & FIELD TURF SUBGRADE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Drawings, Specifications, Addenda, Bulletins and general provisions of the Contract including Bidding and Contract Requirements (Division 00) and General Requirements (Division 01) of the specifications, apply to this scope of work

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. Provide all labor, material, equipment, fasteners and supervision to install the following sections:

- **Section 321215 Vehicle Grade Aggregate Surfacing**
- **Section 321216 Asphalt Paving**
- **Section 334600 Sub-Drainage System for Synthetic Turf**
- **Section 033000 Cast in Place Concrete (as it relates to ACO Drain and Curbs Directly Under Asphalt Paving and Synthetic Turf.)**

Contract specifically includes, but is not limited to the following:

1. **All permits, bonds, licenses, sales tax (as applicable), and applicable fees as required.**
2. **All submittals and shop drawings shall be submitted to the Construction Manager within 30 days unless noted otherwise or required by contractually agreed upon schedule.**
3. **All closeout procedures, documentation, and warranties as required.**
4. **Compliance with applicable OSHA and Construction Manager Safety Standards and Regulations, the more stringent will apply to all issues. Coordinate with and promptly act on any safety concerns noted by the Construction Manager.**
5. **Conformance with all city and local jurisdictional requirements.**
6. **Connection cost and utility consumption cost for on-site offices shall be by contractor.**
7. **Contractors will be responsible for taking and maintaining inventory of all received materials for their scope of work throughout the project. Missing items not identified at the time shipment is received will be the responsibility of the contractor to replace at no additional charge to the Owner.**
8. **Coordinate all tests and inspections.**
9. **Daily clean-up and any additional clean-up as directed by the Construction Manager, for all material, waste, and debris generated by this scope of work to a dumpster provided by others.**
10. **Overtime, if required, to meet commitment to schedule.**
11. **Provide all layout requirements for this scope of work.**
12. **Provide all surface prep work, clean-up of overspray and assurance of adhesion.**
13. **Provide all unloading, material handling and hoisting of own materials.**
14. **Superintendents and/or Project Managers will be required to attend progress and coordination meetings with the Construction Manager and other contractors.**
15. **Verify accessibility and existing conditions prior to submitting a proposal.**
16. **Includes base courses as specified.**
17. **Includes concrete track aprons.**
18. **Includes all ACO Drains and associated concrete.**
19. **Subgrade to be +/- 10'**
20. **See supplemental drawing below for limits of draintile and storm piping to be installed under this scope. Coordinate connection locations with Utility contractor.**

B. Contract Documents were prepared for the Project by Wilkins, Hinrichs, Stober Architects.
   1. Project Location: 2702 West 11th Street, Kearney, NE 68845
   2. Owner: Kearney Public Schools

1.3 WORK SEQUENCE/SCHEDULE

A. See Milestone schedule for dates affecting this scope of work. A detailed activity schedule will be provided and become part of the Contractor Agreement prior to award of this contract.

B. Time is of the essence on this project. Contractor/Construction Manager's project schedules will be updated periodically for the benefit and efficiency of all. All updated schedules will be considered agreed upon unless otherwise noted in writing within three days of the receipt of the updated schedule.

1.4 CONTRACTOR USE OF PREMISES

A. Use of the Site: Limit use of the premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.

B. Smoking: Kearney Public Schools does not allow smoking or the use of any tobacco products within its facilities or on the school grounds. This applies to contractors and subcontractors.

END OF SUMMARY OF WORK

BID FORM

Owner: Kearney Public Schools

Project: Kearney High School

Construction Manager: Sampson Construction Co., Inc.

Bid Package No. **3** Bid Package Title: **Balance of Project (Excludes precast wall panels/rebar fabrication/footings previously bid and earthwork/signage in future bid)**

Summary of Work: (Please indicate the summaries of work you are bidding)

[ ] 3A Interior Slabs	**[ ] 3AA Painting/VWC/Sealed Concrete**	**[ ] 3AAA Communications**
[ ] 3B Exterior Pavement/Walks	**[ ] 3BB Wood Gym Flooring**	**[ ] 3BBB Synthetic Turf**
[ ] 3C Structural Precast Concrete	**[ ] 3CC Carpeting**	**[ ] 3CCC Resilient Surfacing**
[ ] 3D Masonry-North Half	**[ ] 3DD Provide Specialties**	**[ ] 3DDD Chain Link Fencing**
[ ] 3E Masonry-South Half	**[ ] 3EE Install Specialties**	**[ ] 3EEE Turf, Grasses, Plants**
[ ] 3F Steel Material	**[ ] 3FF Folding Panel Partitions**	**[ ] 3FFF Site Irrigation**
[ ] 3G Steel Erection	**[ ] 3GG Carpentry-Lockers**	**[ ] 3GGG Site Utilities**
[ ] 3H Rough Carpentry	**[ ] 3HH Supply Lockers**	**[ ] 3HHH Geothermal Well**
[ ] 3I Educational Casework	**[ ] 3II Appliances & Equipment**	**[ ] 3III Track & Field Turf Subgrade**
[ ] 3J Install Millwork	**[ ] 3JJ Food Service**	**[ ] 3JJJ Track & Field Equipment**
[ ] 3K Provide Millwork	**[ ] 3KK Theatre Rigging/Lighting/Drapes**	
[ ] 3L Roofing	**[ ] 3LL Lab Fumehoods/Casework**	
[ ] 3M Waterproofing/Air Barrier	**[ ] 3MM Gymnasium Equipment**	
[ ] 3N NOT USED	**[ ] 3NN NOT USED**	
[ ] 3O Metal Wall Panels	**[ ] 3OO Roller Shades**	
[ ] 3P Joint Sealants	**[ ] 3PP Music Casework**	
[ ] 3Q Provide Expansion Joints	**[ ] 3QQ Countertops**	
[ ] 3R HM/HDW/Doors	**[ ] 3RR Audience Seating**	
[ ] 3S Install HM/HDW/Doors	**[ ] 3SS Telescoping Bleachers**	
[ ] 3T Coiling Doors	**[ ] 3TT Swimming Pool**	
[ ] 3U Aluminum & Glass	**[ ] 3UU Grandstands**	
[ ] 3V Fire Curtain	**[ ] 3VV Elevators**	
[ ] 3W Polished Floor System	**[ ] 3WW Fire Suppression**	
[ ] 3X Tiling	**[ ] 3XX Plumbing**	
[ ] 3Y Acoustical Ceilings	**[ ] 3YY HVAC**	
[ ] 3Z Studs & Drywall	**[ ] 3ZZ Electrical**	

Company Name _____

Address _____

City/State/Zip _____

Contact: _____

Office Phone: _____

Cell Phone: _____

FAX: _____

E-mail Address: _____

Addenda:

The Bidder hereby acknowledges receipt and inclusion in the Bid Proposal the following addenda:

Bid Bulletin	_____	Dated:	_____
Bid Bulletin	_____	Dated:	_____
Bid Bulletin	_____	Dated:	_____
Bid Bulletin	_____	Dated:	_____
Bid Bulletin	_____	Dated:	_____

In the following proposals, the amounts shall be shown in both words and figures. In the case of discrepancy between the words and the figures, the words shall govern.

_____

_____ ($)

Alternates:

The following amounts shall be added or deducted from the Base Bid: _____

#1	Add (100) parking stalls & associated light poles	($ _____	(ADD)
#2	Add (100) parking stalls & associated light poles	($ _____	(ADD)
#3	Furnish and install 5" thick sidewalks in lieu of 4" thick sidewalks	($ _____	(ADD)
#4	Delete 4" thick concrete along West 11th Street	($ _____	(DEDUCT)
#5	Delete 4" thick concrete along 30th Avenue	($ _____	(DEDUCT)
#6	Add connecting drive between the north parking lots & associated light poles	($ _____	(ADD)
#7	Add precast concrete screen wall south & east of Area A	($ _____	(ADD)
#8	Add (200) metal academic lockers & associated concrete bases	($ _____	(ADD)
#9	Additional casework and countertops as indicated	($ _____	(ADD)
#10	Add 6" thick concrete paving @ parking stalls	($ _____	(ADD)
#11	Additional theatrical performance lighting/rigging/flooring	($ _____	(ADD)
#12	Add Food Service Items 113,114, 117 through 153	($ _____	(ADD)
#13	Add Food Service Item 154. Include Electrical R.I. in base bid	($ _____	(ADD)
#14	Add Food Service Item 155. Include Electrical R.I. in Base bid	($ _____	(ADD)
#15	Add Food Service Item 156, 156A and 157. Include all MEP rough-ins in Base bid	($ _____	(ADD)
#16	Add landscaping plantings/materials at main entry boulevard and at monument sign	($ _____	(ADD)
#17	Provide Performance/Payment Bonds	($ _____	(ADD)

Unit Prices :

1. **Provide cost of floor prep for wood gymnasium floor if RH Level is 80-85/SF.** **$** _____

2. **Provide cost of floor prep for wood gymnasium floor if RH Level is 85-90/SF.** $ _____

3. **Provide SF cost for each flooring type (except Section 096543) for moisture mitigation/relative humidity. This is requred for ALL BIDS!!**

If concrete is:	**Resilient Flooring**	**Resilient Athletic Flooring**	**Tile Carpeting**
75-80 RH $/SF	**$** _____	**$** _____	**$** _____
80-85 RH $/SF	**$** _____	**$** _____	**$** _____
85-90 RH $/SF	**$** _____	**$** _____	$ _____
90-95 RH $/SF	**$** _____	**$** _____	$ _____

4 **Controls Vendor in Base Bid:** _____ **If TRANE Controls are not in Base Bid; Provide alternate price to provide Trane:** $ _____

Changes in the work shall be as established in the Contract Documents. The following fees shall be used for lump sum pricing and actual cost pricing of additions and deletions to that Work included in the Bid, namely:

	Not to Exceed
a. To Subcontractor/Supplier for work performed by their own forces.	10%
b. To Subcontractor/Supplier for work performed by other than their own forces.	5%
c. To Subcontractor's Subcontractor/Material supplier for work performed by Subcontractor's Subcontractor/Material Supplier own forces.	10%
d. To Subcontractor's Subcontractor/Material supplier for work performed by other than Subcontractor's Subcontractor/Material Supplier own forces.	5%

- Fee includes general requirements, all supervision, overhead and profit.

Time of Commencement, Completion, and Damages:

a. The Bidder agrees that if awarded the Contract, he will Substantially Complete the Work in accordance with the schedule developed by the Construction Manager.
   1. The Bidder hereby agrees to commence work under the Contract within seven (7) days after the date of a "Notice to Proceed", unless otherwise stipulated in that notice.
   2. Shop drawing submittals shall be assembled immediately upon the Notice to Proceed and forwarded to the Construction Manager within 14 calendar days of said notice.

b. Time is expressly declared to be of the essence in completion of the Work covered by these Contract Documents, and the Successful Bidder shall be liable for actual damages for delay in completion of Work. Where additional time is allowed under the Agreement for the completion of the Work, the new time limits shall be of the essence of the Agreement.

c. Substantial Completion of the Work: The undersigned will have the Work ready for either the following Contractor's work or the Final Inspection and Owner's acceptance within the time limit established in the Construction Milestone Schedule.

General Agreements:

a. The Bidder agrees that he has had an opportunity to examine the site of the Work and has examined the Contract Documents, and that he has carefully prepared his proposal upon the basis thereof and that he has carefully examined and checked this Bid and the materials, equipment, and labor required thereunder, the cost thereof, and his figures therefore, and hereby states that the amount or amounts set forth in this Bid is, or are, correct and that no mistake or error has occurred in this Bid or in the Bidder's computations upon which this Bid is based and the Bidder agrees that he will make no claim for reformation, modification, rescission, or correction of this Bid after the scheduled closing time for receipt of Bid.

b. The Bidder acknowledges that the Owner reserves the right to waive informalities and to reject any or all Bids.

c. The Bidder agrees that Bid shall not be withdrawn or altered for a period of forty five (45) calendar days after the last date scheduled for the submission of Bids.

d. By signing this Bid, each Bidder certifies that this Bid has been arrived at independently, without consultation, communication, or agreement as to any matter relating to this Bid with any other Bidder or with any competitor.

The undersigned Bidder agrees that, when these requirements have been completed, he will execute an agreement with the Owner on the Standard Form of Agreement Between Owner and Construction on the Agreement included in the bidding documents.

DATED THIS _____ DAY OF _____, 20___.

Name of Firm

_____

By: Signature of Authorized Officer

_____

SEAL

County of _____

My Commission Expires: _____

ADDENDUM #4

KEARNEY PUBLIC SCHOOLS
KEARNEY NEW HIGH SCHOOL
KEARNEY, NEBRASKA
1355

Wilkins Hinrichs Stober Architects, L.L.C.
2908 West 39th Street, Suite A
Kearney, Nebraska 68845
308-237-5787

Date Issued: October 16, 2014

Bid Date: October 23, 2014

TO: All Bid Holders of Record

Acknowledge receipt of this addendum by inserting its number in the space provided on the BID FORM. Failure to do so may subject Bidder to disqualification. This Addendum forms a part of the BIDDING DOCUMENTS and modifies them as follows.

- -

Addendum #4 - #1 **GENERAL CLARIFICATION NOTE**

Area P, which is the storage building immediately south of the track, is NOT IN CONTRACT (N.I.C.). Anything pertaining to this building should NOT be factored into your bid. Any utilities shown serving this building should be run to within five (5) feet of this building and stop. A future package will pick things up from that point.

Addendum #4 - #2 **SPECIFICATION SECTION – 00 2113 – INSTRUCTIONS TO BIDDERS**

Under 2.2 Availability D. All Bid Documents shall be returned to Sampson Construction of Kearney in lieu of the Architect's office. **Return plans to Sampson Construction, 119 Central Avenue, Kearney 68847.**

Addendum #4 - #3 **SPECIFICATION SECTION – 07 7200 – ROOF ACCESSORIES**

Paragraph 2.1.B.3.a.2: Add the following approved manufacturer subject to compliance with specifications and the basis of design: “2.Nystrom, Inc. Acoustical Smoke Vents”.

Addendum #4 - #4 **SPECIFICATION SECTION – 08 1416 – FLUSH WOOD DOORS**

Delete Addendum #3, Item #8. The doors can consist of Low Pressure Decorative Laminate Facing (LPDL) with the laminate specified.

Addendum #4 - #5 **08 4313 ALUMINUM-FRAMED STOREFRONTS**

Under 2.2., add the following:
C. Solid Aluminum Door: Wide stile with Solid Aluminum Face.
1. Basis of Design: Kawneer North America; Flushline.
2. Basis of Design: Special-Lite; SL-16 Aluminum Flush Door.
a. Face: Smooth, 0.062 inch 5005 alloy aluminum sheet.
b. Thickness: 1 3/4 inches.

Addendum #4 - #6 **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**

ALL HARDWARE SETS: Delete any and all doors that begin with the prefix “P___”.

Addendum #4 - #7 **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**

Remove the following Doors from their current Hardware Set: B111.1, B111.2, B112J, B209C.1, B209C.2, B215J, M100.1, M100.2, M114.1, and M114.2.

Addendum #4 - #8 **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Remove Door N104C from Hardware Set 77.0 and add Door N104C to Hardware Set 44.0.

Addendum #4 - #9 **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Remove Door A105A.4 from Hardware Set 77.0. This door does not exist.

Addendum #4 - #10 **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Add the following Doors to a new Hardware Set: 96.0 as shown on Attachment 1 to Addendum No. 4, dated October 16, 2014: "Doors: B112J, B215J".

Addendum #4 - #11 **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Add the following Doors to a new Hardware Set: 97.0 as shown on Attachment 1 to Addendum No. 4, dated October 16, 2014: "Doors: B111.1, B111.2, B209C.1 and B209C.2".

Addendum #4 - #12 **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Add the following Doors to a new Hardware Set: 98.0 as shown on Attachment 1 to Addendum No. 4, dated October 16, 2014: "Doors: M100.2 and M114.2".

Addendum #4 - #13 **SPECIFICATION SECTION – 08 7101 – DOOR HARDWARE SCHEDULE**
Add the following Doors to a new Hardware Set: 99.0 as shown on Attachment 1 to Addendum No. 4, dated October 16, 2014: "Doors: M100.1 and M114.1".

Addendum #4 - #14 **SPECIFICATION SECTION – 09 5100 – ACOUSTICAL CEILINGS**
Paragraph 2.1.B: Add the following approved manufacturer: "G&S Acoustics".
Paragraph 2.2.E.5: Add the following approved manufacturer: "G&S Acoustics".

Addendum #4 - #15 **10 5100 LOCKERS**
At 2.2.B. Locker Body, make the following changes:
Under 2.2.B.1, change to "16 gage, 0.0598 inch" in lieu of "24 gage, 0.0239 inch".
Under 2.2.B., add the following: 3. Locker Back: 18 gage, 0.0478 inch.

Addendum #4 - #16 **10 5100 LOCKERS**
Paragraph 2.2.A.4.a. Add the following "Type L1 lockers to be Knockdown style for field assembly on site.
Paragraph 2.2.A.4.b,c and d: Add the following clarification note: "Type L2, L3 and L4 to be fully welded lockers.
Paragraph 2.2.D Doors, make the following changes:
Under 2.2.D.1 Door Outer Face, change to "14 gage, 0.0747 inch with full height stiffener, minimum" in lieu of "18 gage, 0.0478 inch, minimum".
Under 2.2.D.2 Door Inner Face, change to "14 gage, 0.0747 inch" in lieu of "20 gage, 0.0359 inch".

Addendum #4 - #17 **SPECIFICATION SECTION 21 2200 – CLEAN AGENT FIRE EXTINGUISHING SYSTEMS**

a. Subparagraph 2.1.A Add the following "5. Fenwal."

Addendum #4 - #18 **SPECIFICATION SECTION 22 0701 – MECHANICAL INSULATION**

a. Subparagraph 3.15 Add the following

"3.15 EXTERIOR DUCT AND PLENUM APPLICATION SCHEDULE

A. This application schedule is for aboveground insulation for ductwork located outside the building.

B. Service: Round or rectangular ducts.

1. Material: Mineral fiber board.
2. Vapor Retarder Required: Yes. Board.
3. Thickness: 3 inches (75 mm).
4. Number of Layers: One.
5. Field Applied Jacket: Galvanized steel.
6. Steel Thickness: Minimum of 26 gage."

Addendum #4 - #19 **SPECIFICATION SECTION 22 4030 – PLUMBING SPECIALTIES**

a. Subparagraph 2.14. Add the following:.

D. Trench Drains (TD-3):

1. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
   a. Josam Company; Josam Div.
   b. MIFAB, Inc.
   c. Proline Drain, by Quickdrain USA
   d. Smith, Jay R. Mfg. Co.; Division of Smith Industries, Inc.
   e. Tyler Pipe; Wade Div.
   f. Watts Drainage Products Inc.
   g. Zurn Plumbing Products Group; Specification Drainage Operation.

2. Standard: ASME A112.6.3 for trench drains.
3. Material: Type 304 Fabricated Stainless Steel.
4. Flange: Not required.
5. Clamping Device: Vertically Adjusting anchoring support legs.
6. Outlet: Varies.
7. Grate Material: slotted heel-proof grate
8. Grate Finish: Type 304 Stainless Steel
9. Top Loading Classification: Light Duty.
10. Trap Material: Not required.
11. Trap Pattern: Not required.

Addendum #4 - #20 **SPECIFICATION SECTION 22 0501 – CENTRAL GEOTHERMAL PACKAGED PLANT**

Delete Specification in its entirety and substitute Section 22 0501 – CENTRAL GEOTHERMAL PACKAGED PLANT (REVISED)

Addendum #4 - #21 **SPECIFICATION SECTION 22 6423 – SCROLL WATER CHILLERS**

Delete Specification n its entirety and substitute Section 22 6423 – SCROLL WATER CHILLERS (REVISED)

Addendum #4 - #22 **SPECIFICATION SECTION 22 6426 – ROTARY-SCREW WATER CHILLERS**

Delete subparagraph 2.3.E.

Addendum #4 - #23 **SPECIFICATION SECTION 23 8416 – MECHANICAL DEHUMIDIFICATION UNITS**

b. Subparagraph 2.1.A Add the following “5. Annexair.”

Addendum #4 - #24 **NEW SPECIFICATION SECTION 32 1373**

ADD new Section 32 1373 CONCRETE PAVING JOINT SEALANTS as attached to this Addendum. (3 pages)

Addendum #4 - #25 **SPECIFICATION SECTION 33 4600**

Section 3.1.A.3 ADD “Before commencing the placement of geotextile and aggregate, Contractor shall perform a conformance survey by a Licensed Surveyor registered in the State of Nebraska, on a 30-foot grid over the prepared subgrade of the entire playing field for the Owner’s approval.”

Addendum #4 - #26 **SPECIFICATION SECTION 33 4600**
Section 3.4.C, First Sentence DELETE: "The subgrade must be prepared to tolerances of not more than -1/2" to +1/4" from design grade to allow for even drainage."
ADD: "The subgrade must be prepared to tolerances of not more than -1/2" to +1/2" from design grade to allow for even drainage."

Addendum #4 - #27 **SPECIFICATION SECTION 33 4600**
Section 3.4 ADD: "E. Conduct subgrade conformance survey as specified elsewhere in this specification."

Addendum #4 - #28 **SPECIFICATION SECTION 33 4600**
Section 3.7 ADD: "E. Conduct aggregate surface course conformance survey as specified elsewhere in this specification."

Addendum #4 - #29 **SPECIFICATION SECTION 32 5200**
Paragraph 1.7.A.2 Add the following additional manufacturer: "h. Aluminum Athletic Equipment (AAE), www.myAAEworld.com "

Addendum #4 - #30 **SHEET A1.06 – FLOOR PLAN – FIRST FLOOR – AREA D**
At Room D112S, delete the portion of the note referencing "LSI". These base cabinets are to be wood laboratory casework.

Addendum #4 - #31 **SHEET A1.08 – FLOOR PLAN – FIRST FLOOR – AREA G**
Add Gridlines "G3.1" "G5.1" "G5.2" and "G5.3" to match the structural gridlines added in Addendum No. 3, Attachment Sheet S2.6.

Addendum #4 - #32 **SHEET A1.09 – FLOOR PLAN – FIRST FLOOR – AREA H**
Add the following room tag to the south east Performing Arts Center entry vestibule/sound lock: "SOUND LOCK H119". Add the following room tag to the northeast Performing Arts Center entry vestibule/sound and light lock: "SOUND LOCK H120".

Addendum #4 - #33 **SHEET A1.20 – FLOOR PLAN – SECOND FLOOR – AREA D**
At Room D206S, delete the portion of the note referencing "LSI". These base cabinets are to be wood laboratory casework.

Addendum #4 - #34 **SHEET A3.06 – REFLECTED CEILING PLAN – FIRST FLOOR – AREA H**
3,4&5/A3.06: Delete the wood wall base shown along with the corresponding note and substitute rubber wall base, "WB-2".

Addendum #4 - #35 **SHEET A8.05 – STOREFRONT ELEVATIONS**
16,17&18/A8.05: Add the following notation underneath these storefront elevations:"2"x4 ½" STOREFRONT, NON-THERMAL".

Addendum #4 - #36 **SHEET A8.05 – STOREFRONT ELEVATIONS**
12/A8.05: Delete the following notation from the upper storefront elevation: "2"x6 ½" STOREFRONT" and substitute "2"x 4 ½" STOREFRONT".

Addendum #4 - #37 **SHEET A8.06 – STOREFRONT ELEVATIONS**
6/A8.06: Add the following annotation to the upper storefront elevation: "2"x6 ½" STOREFRONT".

Addendum #4 - #38 **SHEET A8.07 – STOREFRONT ELEVATIONS**
5/A8.07: Delete the following notation from the upper storefront elevation: "2"x8" CURTAINWALL" and substitute "2"x 4 ½" STOREFRONT".

Addendum #4 - #39 **SHEET A8.07 – STOREFRONT ELEVATIONS**
2/A8.08: Delete the following notation from the upper storefront elevation: "2"x6 1/2" STOREFRONT" and substitute "2"x 4 ½" STOREFRONT".

Addendum #4 - #40 **SHEETS A9.00 – A9.24 FINISH FLOOR PLANS – FIRST AND SECOND FLOOR**
ROOM FINISH REMARKS: Delete NOTE 20 and substitute the following NOTE 20: "20. PAINT (P-1B) AT ALL WALLS, FULL HEIGHT IN THE ELEVATOR SHAFT, INCLUDING ALL WALLS OF THE ELEVATOR PIT. PAINT ALL EXPOSED STRUCTURE/MECHANICAL/ELECTRICAL AND FIRE SUPRESSION (P-1).

Addendum #4 - #41 **SHEET A9.00 – ROOM FINISH SCHEDULE, NOTES, MATERIALS LIST & SIGNAGE**
MATERIALS LIST: Under the RESILIENT FLOORING heading delete "RB-10" in its entirety.

Addendum #4 - #42 **SHEET A9.06 – FINISH FLOOR PLAN – FIRST FLOOR – AREA E**
STAIR E103ST: At the concrete pedestal underneath the stair, the finish is to be a smooth trowel or float finish with a Polished Concrete finish. This is applicable to all three (3) occurrences of this concrete pedestal underneath stairs.

Addendum #4 - #43 **SHEET A9.08 – FINISH FLOOR PLAN – FIRST FLOOR – AREA H**
Add the following room tag to the south east Performing Arts Center entry vestibule/sound lock: "SOUND LOCK H119". Add the following room tag to the northeast Performing Arts Center entry vestibule/sound and light lock: "SOUND LOCK H120".

Addendum #4 - #44 **SHEET A9.08 – FINISH FLOOR PLAN – FIRST FLOOR – AREA H**
ROOM FINISH SCHEDULE – FIRST FLOOR – AREA H: At H115 STAGE delete Wall Base "WB-1" and substitute "WB-2". Add the following wall paint clarification note: "THE MASONRY, OUTER STAGE WALLS ARE TO RECEIVE PAINT P-12, THE BACK SIDE OF THE WING DOORS AND SLIDING DOORS ARE TO RECEIVE PAINT P-12."

Addendum #4 - #45 **SHEET A9.08 – FINISH FLOOR PLAN – FIRST FLOOR – AREA H**
ROOM FINISH SCHEDULE – FIRST FLOOR – AREA H: At H116 PERFORMING ARTS CENTER the base of all walls are to receive WALL BASE "WB-2".

Addendum #4 - #46 **SHEET A9.09 – FINISH FLOOR PLAN – FIRST FLOOR – AREA J**
STAIR J102ST and STAIRJ129ST: At the concrete pedestal underneath the stair, the finish is to be a smooth trowel or float finish with a Polished Concrete finish.

Addendum #4 - #47 **SHEET A9.20 – FINISH FLOOR PLAN – SECOND FLOOR – AREA H**
ROOM FINISH SCHEDULE – FIRST FLOOR – AREA H: At H203 GALLERY (BALCONY) and H207 UPPER PERFORMING ARTS CENTER the base of all walls are to receive WALL BASE "WB-2".

Addendum #4 - #48 **SHEET A9.20 – FINISH FLOOR PLAN – SECOND FLOOR – AREA H**
ROOM FINISH SCHEDULE – FIRST FLOOR – AREA H: At H207B the base of all walls are to receive WALL BASE "WB-2".

Addendum #4 - #49 **SHEET P2.5 – PLUMBING LARGE SCALE PLANS**
Delete Drawing in its entirety and substitute P2.5 – PLUMBING LARGE SCALE PLANS.

Addendum #4 - #50 **SHEET S1.8 – FOUNDATION PLAN – AREA J**

a. Modify Drawing as shown on attachment S1.8-1 to Addendum No. 4, dated October 16, 2014. Drawing modified to add column tags.
b. Modify Drawing as shown on attachment S1.8-2 to Addendum No. 4, dated October 16, 2014. Drawing modified to add column and spread footing tags.

Addendum #4 - #51 **SHEET S1.12 – FOUNDATION PLAN – AREAS N & P**

Foundation Plan – Area N. Modify Drawing as shown on attachment S1.12-1 to Addendum No. 4, dated October 16, 2014. Drawing modified to adjust extend of concrete stem wall.

Addendum #4 - #52 **SHEET S2.11 – FRAMING PLAN – AREA M**

Modify Drawing as shown on attachment S2.11-1 to Addendum No. 4, dated October 16, 2014. Drawing modified to adjust beam sizes.

Addendum #4 - #53 **SHEET S3.1 – STRUCTURAL DETAILS**

Structural Spread Footing Schedule. Modify schedule as shown on attachment S3.1-1 to Addendum No. 4, dated October 16. 2014.

Set: 96.0

Doors: B112J, B215J
Description: FEMA DOORS w/ hardware

3	Hinge	SP3786 4-1/2" x 4-1/2"	US26D	MK
1	Multi-Point Lock	72 737P FM7113 ECMW	US26D	SA
1	Wall Stop	409	US32D	RO
1	Gasketing	S88D		PE

Set: 97.0

Doors: B111.1, B111.2, B209C.1, B209C.2
Description: FEMA DOORS w/ Hardware & Mag Hold Opens

6	Hinge	SP3786 4-1/2" x 4-1/2"	US26D	MK
2	Multipoint Exit Device	12 72 737P FM8713 ETMW	US32D	SA
2	Closer	281 P10	EN	SA
2	Kick Plate	K1050 10" x 2" LDW high 4BE CSK	US32D	RO
2	Electromagnetic Holder	998	689	RF
1	Gasketing	S88D		PE

Notes: Mag Hold Opens wired to fire alarm
Wiring by electrical contractor

Set: 98.0

Doors: M100.2, M114.2
Description: FEMA DOORS w/ Prox Reader

1	Continuous Hinge	MCK-FM300 PT 83-1/8"	US32D	MK
1	Electric Multipoint Device	FM8774-24v ETMW	US32D	SA
1	Closer	281 CPSH	EN	SA
1	Kick Plate	K1050 10" x 2" LDW high 4BE CSK	US32D	RO
1	Threshold	2009 APK		PE
1	Rain Guard	346C		PE
1	Gasketing	294AV TKSP8		PE
1	Sweep	345ANB		PE
1	Electrolynx Connector	As Required		MK
1	Electric Power Transfer	EL-CEPT		SU

1 Position Switch	DPS-M-GY	SU
1 Power Supply	BPS-24-1	SU

Notes: Prox reader releases exit device allowing entry.
Prox reader to be furnished and installed by access control supplier
Wiring of Door Position Switch by Access Control Supplier

Set: 99.0

Doors: M100.1, M114.1
Description: FEMA DOOR

3 Hinge	SP3786 4-1/2" x 4-1/2"	US26D	MK
1 Multi-Point Lock	72 737P FM7113 ECMW	US26D	SA
1 Closer	281 P10	EN	SA
1 Kick Plate	K1050 10" x 2" LDW high 4BE CSK	US32D	RO
1 Wall Stop	409	US32D	RO
1 Gasketing	S88D		PE

SECTION 230501

CENTRAL GEOTHERMAL PACKAGED PLANT (REVISED)

PART 1 - GENERAL

1.1 Central Geothermal Packaged Plant Components

A. Structural steel base

B. Pumps and motors

C. Piping, valves, and fittings

D. Control valves

E. Air separator(s)

F. Expansion tank(s)

G. Make-up water system

H. Chiller(s)

I. Boiler(s) – future connection

J. Plate-and-Frame Heat Exchanger

K. Variable frequency drives

L. Controls

M. Pressure, flow, and temperature transmitters

N. Power distribution

1.2 References

A. Hydraulic Institute

B. ANSI - American National Standards Institute

C. NEMA - National Electrical Manufacturers Association

D. UL - Underwriters Laboratories

E. ETL - Electrical Testing Laboratories

F. CSA - Canadian Standards Association

G. NEC - National Electric Code

H. BOCA – Building Officials and Code Administrators International, Inc.

I. UBC – Uniform Building Code

J. NIST – National Institute of Standards and Technology

1.3 Submittal and Operation and Maintenance Manual

A. Submittals shall include the following as a minimum:
1. System design information sheet
2. Description of system operation
3. Packaged system dimension and general arrangement drawing
4. Electrical power and control wiring diagram
5. Pump material and construction drawing
6. Pump curve showing design point
7. Catalog information on valves, strainers and control components
8. Name and address of factory trained service company
9. Piping schematic of packaged system components, showing all pipe sizes, location of reducers, components, specialties and instrumentation
10. Structural base drawings showing number and size of members accompanied by deflection calculations
11. A predictive pumping energy analysis showing system efficiency and kW for all pump combinations
12. Flow test procedure and drawing of the flow test stand
13. Complete drive submittal
14. Complete chiller submittal

B. Submittals, which are generic and not specifically designed to meet the requirements on this section, shall not be acceptable.

C. Provide one (1) electronic copy of Submittal to the consulting engineer for approval.

D. Operation and Maintenance Manuals shall include the following as a minimum:
1. System design information sheet
2. Description of system operation
3. Packaged system dimension and general arrangement drawing
4. Piping schematic of packaged system components and specialties
5. Control panel drawing with list of operator interfaces
6. Complete control sequence.
7. Electrical power and control-wiring diagram
8. Bill of material
9. Pump operation and maintenance instructions
10. Special electrical component operation instructions
11. Chiller operation and maintenance manual

E. Provide one (1) electronic copy of Operation and Maintenance Manual prior to system start-up.

F. Submittal and Operation and Maintenance Manual shall be assembled in a neat and orderly manner. Submittal and Operation and Maintenance Manual shall be electronically assembled in booklet form and shall include a title page with appropriate job name, location and equipment title, table of contents, and all package specific items listed above.

1.4 Quality Assurance

A. The packaged plant manufacturer must also be the manufacturer of the control panel used on the system and shall be listed by Underwriters Laboratories (UL) as an approved manufacturer of industrial control panels. Upon request from the engineer, the manufacturer shall furnish proof of listing.

B. The packaged plant manufacturer shall be listed by ETL as an approved manufacturer of factory assembled packaged plants. The equipment shall bear the ETL listing and label before shipment from the factory. This listing must cover the entire packaged plant as fabricated and assembled at the manufacturer's factory. A separate listing for individual components is unacceptable.

C. The manufacturer of the packaged plant shall have in place a Quality Assurance program. Provide with the submittal documentation of this program including the testing procedure. Provide a description of the flow testing procedure. Provide current independent testing (within last 9 months) certifying the test stand is traceable to NIST.

D. The manufacturer shall have a minimum of fifteen (15) years manufacturing and application experience and shall be responsible for the proper pressure and flow in the entire system.

E. After factory assembly, the packaged plant shall be hydrostatically tested to 150 PSIG for ANSI Class 150 and 250 PSIG for ANSI Class 300 for a minimum of thirty minutes. The control system shall be tested and all sequences and alarms shall be simulated.

F. The packaged plant manufacturer shall perform a factory efficiency test, prior to shipment, at 25, 50, 75 and 100% of the design flow of the system. Flow, system total dynamic head, kW and efficiency shall be recorded for each of the above percentages of design system flow. As part of the test procedure the manufacturer shall demonstrate the transition points at which standby pump(s) are added and subtracted to achieve optimum system efficiency. The test shall also include a guaranteed maximum kW at each 25, 50, 75, and 100% of design flow based upon the following schedule:

Chilled Water

Load	Flow	System Head	Maximum kW
25%	250	25.0	3.75
50%	500	38.0	8.1
75%	750	58.2	17.3
100%	1000	85.0	33.1

Hot Water

Load	Flow	System Head	Maximum kW
25%	225	25.0	3.5
50%	450	38	7.3
75%	675	58.2	15.0
100%	900	85.0	28.5

Ground Source

Load	Flow	System Head	Maximum kW
25%	618	21.9	6.0

50%	1235	26.9	13.1
75%	1853	34.7	29.0
100%	2470	45.0	37.5

1. The test stand must have a tank that will limit the water temperature rise from the beginning to the end of the test to 10 degrees F. Flow test data must be provided showing the tank temperature.

G. The entire testing facility shall be independently certified and traceable to NIST or ASME PTC 18.1 calibration procedures. This certification shall be kept on file for inspection. The Hydraulic Institute's standards shall be followed for the calibration procedures of all testing instrumentation. As a minimum requirement, the following test equipment must be utilized and shall be within the following accuracies:
1. Flow meter ± 4% of rated flow, 0 to full range.
2. Pressure gauges ± 2% based upon independent dead weight test.
3. Tachometer ± 1% of rated speed, 0 to full range.
4. Multimeter for readings of supply voltage, input amperage, input kilowatts, and power factor ± 1% of selected reading, 0 to full range.

1.5 Delivery of Equipment

A. The entire packaged plant shall be factory assembled and tested as a complete unit. Prior to shipment, the system manufacturer may be required to disassemble the unit in sub-assembly form to allow access of the equipment to the final location at the jobsite. Reassembly of the equipment at the jobsite is the responsibility of the installer. These sub-assemblies will be authorized by the engineer and coordinated between the installer and the packaged plant manufacturer.

B. Drain plugs shall be removed from equipment where the possibility of freeze damage may exist.

C. Comply with manufacturer's instructions for rigging, unloading, and transporting equipment.

D. The packaged plant shall be shipped in the necessary amount of sections so that it can fit thru a 10’-0” block-out wall opening.

PART 2 - PRODUCT

2.1 Manufacturers

A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
1. Trane Central Geothermal Packaged Plant
2. Mcquay Central Geothermal Packaged Plant
3. Multistack Central Geothermal Packaged Plant
4. York Central Geothermal Packaged Plant
5. Carrier Central Geothermal Packaged Plant
6. Systecon, Inc

2.2 Manufactured Units

A. Furnish and install a factory assembled central geothermal packaged plant. The system shall require only suction and discharge pipe connections for chilled water, hot water, and geothermal borefield, one electrical power connection, necessary terminal contacts to the various field mounted devices and the building automation system.

B. The central geothermal packaged plant shall use the bi-directional cascade arrangement to optimize efficiency of the chilled, hot, and borefield water loops. The bi-directional cascade arrangement utilizes the heat rejection and recovery of the chiller to provide chilled and hot water for the system.

C. The packaged system shall consist of system base, pumps, electric motors, controls, valves, chiller(s), heat exchanger, and all necessary piping and components as listed in Section 1.01 of this specification for a complete system. The system shall be designed for 1000 GPM at a total dynamic head of 100 feet for the chilled water system. The system shall be designed for 1000 GPM at a total dynamic head of 100 feet for the hot water system. The system shall be designed for 2470 GPM at a total dynamic head of 45 feet for the geothermal ground source water system. All systems shall account for dynamics in loop temperatures as well as compensation for specified glycol solution.

2.3 Components

A. Structural steel base

1. All components shall be mounted on a structural steel base. The base shall be large enough to support the packaged plant's chiller(s), plate-and-frame heat exchanger, pumps, piping and control panel(s). Steel supports shall be welded to the base to support the piping and control panel(s). Both the base and supports shall consist of structural steel components, all welded per the AISC Manual of Steel Construction, Part 4, "Welded Joints". Base to be at least 8" deep.
2. The top of the structural base shall be covered with ¼" thick diamond plate steel. The plate shall cover the total base and be welded to the substructure. Any seams shall be continuously welded. The plate shall be primed and then painted the same color as the packaged plant.

B. Pumps and motors
1. Reference:
   a. Section 230513 "Common Motor Requirements for HVAC Equipment"
   b. Section 232123 "Hydronic Pumps"

C. Piping, valves, and fittings
1. Reference:
   a. Section 230523 "General-Duty Valves for HVAC Piping"
   b. Section 230529 "Hangers and Supports for HVAC Piping and Equipment"
   c. Section 232113 "Hydronic Piping"
2. Base mounted supports shall be provided for the system suction and discharge headers and the suction and discharge piping on each pump. Piping shall be supported independently of pump connections. Pipe supports welded directly to the pipe shall be unacceptable. Pipe supports shall be arranged to permit field installation by the contractor of 1.5" thick pipe insulation.
3. Pete's plugs are to be provided on the suction and discharge of the package connections.
4. Drain plugs are to be provided in the pipe above the check valve or in any low piping that may collect water.

5. Butterfly valves shall be furnished on the suction and discharge of each pump.
6. A spring-loaded check valve shall be installed on the discharge of each pump.
7. A suction strainer shall be installed on the suction of each pump. The strainer shall be of the suction diffuser type. The strainer shall be full sized; a reducing strainer is not acceptable. Provide an eccentric reducer connected directly to the suction of the pump and a concentric expander connected directly to the discharge of the pump. The strainer shall include mounted blow-down valve. Blow-down valve shall be piped to drain by contractor.
8. Provide additional taps in system to ensure future coupling of any temporary heating or cooling equipment as required and shown on job specific drawings.

D. Control valves
1. Automatic, two-way, two-position, control valve(s) with electric actuator shall be provided as part of the packaged plant for chiller isolation.
2. Automatic, three-way, two-position, control valve with electric actuator shall be provided as part of the packaged plant for borefield injection connection.
3. The electric, two-position assembly shall be designed for quarter turn operation.
   a. The actuator shall be mounted on a bracket, which is coupled to the valve shaft.
   b. The actuator shall have a split phase capacitor AC reversing motor with 25% duty. The actuator shall require 120 VAC, 1 Ph, 60 Hz power.
   c. The gearing on actuators with a torque rating of 120-720 in-lbs shall be a sealed, permanently lubricated spur gear module driving a final dual torque bull gear. The gearing on actuators with a torque rating of 1440-2400 in-lbs shall have a permanently lubricated self-locking gear train with two stage planetary gear.
   d. The actuator shall be equipped with a mechanical brake.
   e. The actuator shall be housed in a NEMA 4 corrosion resistant enclosure with a baked epoxy coating.
   f. The actuator shall have a thermal motor overload protector with automatic reset.
   g. The actuator shall be equipped with two single pole double throw internally mounted adjustable cam operated limit switches, two isolated normally open limit switches for position indication, and manual override capability.
   h. The actuator shall be listed UL, ETL, and/or CSA. The valve opening and closing rate shall be adjustable.

E. Air separator/mixer
1. A standard air separator/mixer shall be provided for the chilled and hot water systems.
   a. The separator shall consist of a welded steel tank.
   b. The separator shall have tangential inlet connection and outlet connection.
   c. The unit shall be constructed in accordance with ASME boiler and pressure vessel code and stamped 125 PSIG design pressure.
   d. The air separator shall be supplied with an automatic air release valve.

F. Expansion tank
1. An expansion tank shall be provided for the chilled and hot water systems.
   a. The expansion tank shall be a 132 gallon pre-charged steel hydro pneumatic tank with replaceable heavy-duty rubber bladder.
   b. The unit shall be constructed in accordance with Section VIII of the ASME boiler and pressure vessel code and stamped 125 PSIG design pressure.

G. Make-up water
1. A 3/4" make-up water system shall be provided.

   a. This system shall include pressure-reducing valve, double check valve type backflow preventer when required, shut-off valves, Y-strainer, pressure gauge, and manual bypass.

H. Chiller
   1. Reference
      a. Section 236423 “Scroll Water Chillers”
      b. Section 236426 “Rotary-Screw Water Chillers”

I. Boiler
   1. Refer to the drawings for locations of contingency connection points as required.

J. Plate and frame heat exchanger
   1. Reference:
      a. Section 235700 “Heat Exchangers for HVAC”

K. Variable Frequency Drives
   1. Reference:
      a. Section 232920 “Variable Frequency Drives”
   2. A variable frequency drive shall be furnished for each chilled, hot, borefield, condenser heat transfer, and evaporator heat transfer water pumps.
   3. The variable speed drives shall be adjustable frequency, which employ a pulse width modulated inverter.

L. Controls
   1. Reference:
      a. Section 230900 “Instrumentation and Control for HVAC”
      b. Section 230993 “Sequence of Operations for HVAC Controls”
   2. The controls manufacturer shall be the same as chiller manufacturer to ensure proper operation of the system.

M. Transmitters
   1. Refererence:
      a. Section 230519 “Meters and Gauges for HVAC Piping”

N. Differential Pressure Transmitters
   1. The packaged plant manufacturer shall provide seven complete, self-contained, variable capacitance type differential pressure transmitter(s) equal to a Rosemount "Smart Transmitter" No. 1151.
      a. Wiring terminals and electronics shall be in separate compartments, so the electronics remain sealed during installation. Reverse polarity protection shall be included to keep wiring mishaps from damaging the transmitter. Wiring between the control system and the transmitter(s) shall be Belden 9320, two wire, shielded twisted cable, and shall not be included in conduit containing AC circuit wiring.
   2. Design range shall be as required by system. External zero and span adjustments, over-pressure to 2,000 PSI, and no humidity effects.
   3. Minimum accuracy shall be 0.25% of calibrated span. Includes combined effects of linearity, hysteresis and repeatability. Stability shall be 0.25% of upper range limit for six months. No internal mechanical linkages shall be used in the transmitter(s).

O. Flow Meters
   1. The packaged plant manufacturer shall provide five dual turbine, insertion type flow meter(s) equal to a Onicon SF1210.
      a. Wiring installed by the contractor between the control system and the meters shall be Belden 9320, two wire, shielded twisted cable, and shall not be included in conduit containing AC circuit wiring.

2. The meter shall have two contra-rotating axial turbines, each with its own rotational sensing system, and an averaging circuit to reduce measurement errors due to swirl in undeveloped flow locations caused by short straight pipe runs.
    a. Rotational sensing of each turbine shall be accomplished electronically by sensing impedance change and not with magnetic or photoelectric means. Paddle type rotors will not be acceptable.

3. The sensor shall have a maximum operating pressure of 400 PSI, maximum operating temperature of 180 deg F (optional 300 deg F peak) and a pressure drop of less than 1 PSI at 17 feet per second flow velocity. Flow sensor shall have 175:1 turndown ratio. Accuracy shall be within +-0.5% of actual reading at the calibrated typical velocity, and within +-2% of reading over a 50:1 turndown (from 0.4 to 20 ft/s).
    a. Each sensor shall be individually wet-calibrated in a flow laboratory against a primary volumetric standard accurate to within 0.1% and directly traceable to the U.S. National Institute of Standards and Technology (NIST). Provide certificate of calibration with each flow meter.
4. The sensor shall have integral analog outputs of 0-10 VDC and 4-20 mA linear to within +-0.1% of calibrated span for connection to the control system. The sensor shall also include three internal frequency outputs, (top turbine, bottom turbine, average frequency) for commissioning and diagnostic purposes. All outputs shall be linear with flow rate.
5. The turbine elements shall be made of polypropylene with sapphire jewel bearings and tungsten carbide shafts. The flow sensor shall be constructed of plated brass with an aluminum electronics enclosure and gasketed cover.
6. The unit shall be provided with hot tap installation, in order to be both insertable and removable through a ball valve when the pipe is under pressure.

P. Temperature Transmitters
1. The packaged pumping system manufacturer shall provide ten self-contained RTD type temperature transmitters.
2. The temperature transmitters shall each receive its power input and send its current output (4-20mA) over the same pair of low voltage wires. Each transmitter head shall be explosion proof.
3. The temperature probe shall use a platinum, wire wound, sensing element in a 316SS sheath, spring loaded, and inserted into a 3/4" NPT stainless steel thermowell with explosion proof process fittings and connection head. The thermowell shall penetrate one-half the pipe diameter.
4. The temperature range shall be [32-122 Deg F (0-50 Deg C) for chilled or condenser water] and [32-392 Deg F (0-200 Deg C) for hot water]. For applications measuring the supply and return temperatures for a loop type water system, the two probes shall be a matched pair.
5. The total system accuracy of the temperature transmitter/probe assembly shall be +/- 01.00% of span; the sensing element and the transmitter shall be individually calibrated and traceable to NIST.
6. The stability of the transmitter/probe assembly shall be +/-0.01% of span/Deg C change in ambient temperature, +/-0.001% of span/volt change in line voltage, and +/-0.001% of span/100 ohms of lead resistance.
7. All temperature transmitters shall be packaged mounted and wired where possible. All remaining transmitters not package mounted shall be field installed and wired by the temperature controls contractor.

Q. Building Automation System

1. The packaged plant manufacturer shall provide a direct communication interface as an integral part of the package. The communication interface shall be BACnet. Any interface to convert from any communication driver to BACnet is the responsibility of the manufacturer. The communication interface shall transmit and receive the following points:

a. Receive:

1)	System Request to Start/Stop	(Digital)

b. Transmit:

1)	Equipment on/off status (Pumps, chillers, boilers)	(Digital)
2)	Equipment failure alarms (Pumps, chillers, boilers)	(Digital)
3)	Pump suction pressure (Each pump)	(Analog)
4)	Pump discharge pressure (Each pump)	(Analog)
5)	Pump speed (Each Pump)	(Analog)
6)	Suction pressure (Each connection)	(Analog)
7)	Discharge pressure (Each connection)	(Analog)
8)	Chilled water flow	(Analog)
9)	Chilled water system kW	(Analog)
10)	Chilled water zone differential pressure	(Analog)
11)	Chiller differential pressures	(Analog)
12)	Hot water flow	(Analog)
13)	Hot water system kW	(Analog)
14)	Hot water zone differential pressure	(Analog)
15)	Borefield water flow	(Analog)
16)	Borefield water system kW	(Analog)
17)	System supply temperature	(Analog)
18)	System return temperature	(Analog)

2.4 Finishing

A. All steel components shall be cleaned, degreased and painted with a rust preventive primer.

B. The complete packaged plant shall be factory painted with machine enamel prior to shipment.

PART 3 - EXECUTION

3.1 Installation

A. Install the packaged plant in accordance with manufacturer's instructions.

B. The contractor shall align the pump and motor shafts to within the manufacturer's recommended tolerances prior to system start-up.

3.2 Demonstration

A. The system manufacturer or his representative shall provide one on-site job visit for commissioning of the water management system. The packaged plant manufacturer's commissioning shall include final checkout, adjustment, and start-up. Prior to commissioning, the installing contractor shall perform a preliminary check for proper installation. Commissioning shall occur only after all hook-ups, tie-ins, and terminations have been completed and signed-off on the system manufacturer's start-up request form by the installer. At that time, all ancillary equipment (i.e. chillers, boilers, BAS systems, air handlers, etc.) shall be ready for automatic start-up.

B. The final visit will include the system manufacturer or his representative to provide a minimum of four (4) hours of on-site training for the owner's personnel on the operation and maintenance of the packaged pumping systems.

C. The package manufacturer shall warrant all parts for a period of 12 months from start-up or 24 months from shipment.

D. Manufacture shall provide and alternate cost for and annual service contract for the chiller plant. Contract shall include a minimum of (3) site visits per year

END OF SECTION 230501

SECTION 236423

SCROLL WATER CHILLERS (REVISED)

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Packaged, air-cooled, electric-motor-driven, scroll water chillers.

1.2 ACTION SUBMITTALS

A. Product Data: Include refrigerant, rated capacities, operating characteristics, furnished specialties, and accessories.

B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.

1.3 INFORMATIONAL SUBMITTALS

A. Certificates: For certification required in "Quality Assurance" Article.

B. Startup service reports.

C. Warranty.

1.4 CLOSEOUT SUBMITTALS

A. Operation and maintenance data.

1.5 QUALITY ASSURANCE

A. ARI Certification: Certify chiller according to ARI 550/ARI 590 certification program(s).

B. ARI Rating: Rate water chiller performance according to requirements in ARI 506/110, "Water Chilling Packages Using the Vapor Compression Cycle."

C. ASHRAE Compliance: ASHRAE 15 for safety code for mechanical refrigeration.

D. ASHRAE/IESNA 90.1 Compliance: Applicable requirements in ASHRAE/IESNA 90.1, Section 6 - "Heating, Ventilating, and Air-Conditioning."

E. ASME Compliance: Fabricate and stamp water chiller heat exchangers to comply with ASME Boiler and Pressure Vessel Code.

F. Comply with NFPA 70.

G. Comply with requirements of UL and UL Canada and include label by a qualified testing agency showing compliance.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of chillers that fail in materials or workmanship within specified warranty period.
   1. Extended warranties include, but are not limited to, the following:
      a. Refrigerant and oil charge.
      b. Parts and labor.
      c. Loss of refrigerant charge for any reason.
   2. Warranty Period: Three years from date of Substantial Completion.

1.7 MAINTENANCE SERVICE

A. All inspections and service of units shall be accomplished by factory trained and authorized servicing technicians.

B. All labor for leak checking the chiller according to the manufacturer's IOM and documentation must be included.

C. In conjunction with and supporting Factory warranty OEM shall furnish complete factory authorized service and maintenance of Applied Chillers for 3 years from Date of Substantial Completion. All work shall be done by manufacturer's commercial warranty agent.

D. OEM shall provide and report quarterly, semiannual, and annual maintenance in compliance with or better than ASHRAE Standard 180-2008.

E. Include maintenance items as recommended in manufacturer's operating and maintenance data.

F. Submit copy of service call work orders and summary report to the Owner, including description of work performed, operating performance status and noted exceptions.

1.8 EFFICIENCY REQUIREMENTS

A. PERFORMANCE TOLERANCES
   1. The following allowable tolerances must be followed:
      a. The tolerance on allowable capacity is as defined by AHRI Standard.
      b. The MyPLV tolerances must be as defined by AHRI Standard, and the tolerances at full load and all part load test points must also be as defined by AHRI Standard. The tolerances for kW/ton at all points shall be [as defined by AHRI Standard.
      c. Efficiency shall be offered in conjunction with the following [4] points:

% Load	**% Weighted**	**Entering CWT**	**kW/ton**
100%	19.7	85	.758
75%	57.2	75	.628
50%	16.8	65	.558
25%	6.3	65	.646

1.9 VERIFICATION OF CAPACITY AND EFFICIENCY

A. All proposals for chiller performance must include an AHRI approved selection method. Verification of date and version of computer program selection or catalog is available through AHRI.

B. The chiller (one of each size) shall be factory performance tested under full load conditions in an AHRI certified test facility. The manufacturer shall supply a certified test report to confirm performance as specified. Proper AHRI certification documents for the test loop shall be made available upon request from the manufacturer for inspection. The performance test shall be conducted in accordance with AHRI Standard 550/590 procedures and tolerances.
   1. The performance test shall be run with clean tubes in accordance with AHRI Standard 550/590 to include the following:
      a. A downward temperature adjustment shall be made to the design leaving evaporator water temperature to adjust from the design fouling to the clean tube condition.
      b. An upward temperature adjustment shall be made to the design entering condenser water temperature to adjust from the design fouling to the clean tube condition.
      c. There shall be no exceptions to conducting the performance test with clean tubes and with temperature adjustments in (1) and (2). The manufacturer shall clean tubes, if necessary, prior to test to obtain a test fouling factor of .0000 hr. sq. ft. F/BTU.
   2. The factory test instrumentation shall be per AHRI Standard 550/590, and the calibration of all instrumentation shall be traceable to the National Institute of Standards and Technology (formerly NBS).
   3. A certified test report of all data shall be submitted to the Contracting Officer prior to completion of the project. The factory certified test report shall be signed by an officer of the manufacturer's company. Preprinted certification will not be acceptable; certification shall be in the original.
   4. The equipment will be accepted if the test procedures and results are in conformance with AHRI Standard 550/590. If the equipment fails to perform within allowable tolerances, the manufacturer will be allowed to make necessary revisions to his equipment and retest as required.

PART 2 - PRODUCTS

2.1 SUMMARY

A. The contractor shall furnish and install rotary screw, centrifugal, or scroll water chillers as shown and scheduled in the plans. The units shall be installed in accordance with this specification or section 236426 “Rotary Screw Water Chillers” and produce the specified tonnage per the scheduled data in accordance with AHRI Standard 550/590-2003. The unit shall be AHRI certified as applicable.

2.2 MANUFACTURERS
   1. ArtiChill, The Arctic Chiller Group, Ltd
   2. Climacool Corp.
   3. Multistack, LLC

2.3 General:

A. Chiller/Heater shall be a thermal heat recovery, Chiller/Heater. Chiller/Heater shall be equipped with integral valves that allows the assembly to serve the following functions:
   1. Simultaneous Heating and Cooling Mode – Chiller/Heater assembly must be capable of varying the flow rate on the evaporator and condenser sides of the modules to maintain heating and cooling water set points simultaneously. Simultaneous loads must be satisfied with a single compression cycle and cannot use the source/sink solution as the means of energy transfer. Systems that require double compression to satisfy simultaneous loads are not acceptable.
   2. Cooling Dominant Mode – Chiller/Heater must be able to reject cooling dominant load to the source/sink. Cooling dominant modules must be capable of running at a lower head pressure than simultaneous modules to minimize power consumption.
   3. Heating Dominant Mode – Chiller/Heater must be able to satisfy heating dominant load by extracting heat from the source/sink. Heating dominant modules must be capable of running at optimal suction pressure to minimize power consumption.
   4. Packaged System Shall Be Reversing Valve Free Design – Chiller/Heater must be reversing valve free and optimize heat transfer in all control modes.
   5. Source/Sink Water Connections – Chiller/Heater must allow geothermal loop water to enter both the evaporator and condenser side of the machine.

B. System shall be configured to allow modules to run in simultaneous dedicated heat recovery chiller mode, dominant cooling mode, and dominant heating mode. The Chiller/Heater must be capable of allowing modules to run in multiple modes at the same time to optimize efficiency.

C. The Chiller/Heater shall be designed for simultaneous variable heating and cooling capacity. Valve modules shall contain fast-acting motorized butterfly valves that open/close on a command from the central control system. The motorized actuators shall be NEMA 2 with easily visible position indicators and internal thermal motor overload protection. Valves shall be fast acting type with a maximum stroke time (full closed to full open) of 30 seconds. Valve modules shall be built into pre-engineered headers and powered by the Chiller/Heaters bussbar. Valves shall be Victaulic grooved connections.

D. Heat Exchanger Variable Flow Valves: Condenser and Evaporator heat exchangers shall be equipped with motorized modulating butterfly type valves driven independently by signals from the module controller and powered from the main power feed. The motorized actuators shall be NEMA 2with easily visible position indicators and internal thermal motor overload protection. Valves shall be fast acting type with a maximum stroke time (full closed to full open) of 15 seconds. Load side valves shall modulate to maintain modular leaving load temperatures. When heat exchangers are using sink/source due to unequal heating/cooling duty, master controller shall modulate valve to provide minimum required head pressure control in order to maximize efficiency of those Chiller/Heater modules and to provide equipment protection. All valves must be installed such that proper piping practices are observed, including proper distances before and after elbows.

E. Chiller/Heater shall be designed to operate using R-410a or HFC-134a Refrigerant.

F. Chiller shall be designed for parallel evaporator water flow.

G. The liquid to be chilled will be water containing corrosion inhibitors.

H. Chiller shall be designed to operate using 460 volt, 3 phase, 60 Hz electrical power supply.

2.4 Chiller shall incorporate Scroll-type compressors and consist of multiple modules.

A. Each module shall consist of (2) tandem compressor sets, and common dual circuit condenser, dual circuit evaporator, electronic expansion valves, (thermal expansion valves not acceptable), and control system.

B. Each circuit shall be constructed to be independent of other circuits from a refrigeration and electrical stand-point.

C. The multi-circuit chiller must be able to produce chilled water even in the event of a failure of one or more refrigerant circuits.

2.5 Chilled and Condenser Water Mains:

A. Each module shall include supply and return mains for both chilled and condenser water.
1. Cut grooved end connections are provided for interconnection to ten inch standard (10.625" outside diameter) piping with grooved type couplings. Rolled grooved shall be unacceptable.

B. Water Mains shall be installed such that they are beneath any power or control wiring so as to insure for safe operation in the event of condensation or minor piping leaks.

2.6 Evaporators and condensers:

A. Each evaporator and condenser shall be brazed plate heat exchangers constructed of 316 stainless steel; designed, tested, and stamped in accordance with UL 1995 code.

B. Both the condenser and evaporator heat exchanger shall be mounted below the compressor, to eliminate the effect of migration of refrigerant to the cold evaporator with consequent liquid slugging on start-up.
1. All inlet connections require minimum 30 mesh external filtration.

C. Optimized compressors, oil cooler and high condenser temperature control panel allows for leaving condenser water temperatures up to 140°F (60°C). This option allows for entering condenser water temperatures above 95°F (35°C). Condenser leaving water temperature control option is required; the setpoint range is 80°F (26.7°C) to 140°F (60°C).

2.7 Compressor:

A. Each module shall contain two compressor sets, each set containing two compressors, with the two compressors in the set manifolded together and mounted to the module with rubber-in-shear isolators.
1. Each system also includes high discharge pressure and low suction pressure safety cut-outs.

2.8 CONTROLS

A. The chiller manufacturer shall engineer, install, program, and commission the chiller/heat plant control. Control shall be per the sequence of operation listed in this specification.

B. The chiller/heater plant control shall include:

1. Chiller sequencing, run-time equalization, failure recovery.
2. Chiller water pump and VFD sequencing, run-time equalization, failure recovery
3. Hot water pump and VFD sequencing, run-time equalization, failure recovery
4. Geothermal borefield pump and VFD sequencing, run-time equalization, failure recovery

C. The chiller(s) shall be controlled by a microprocessor-based, proportional and integral controller to show water and refrigerant temperatures, refrigerant pressures and diagnostics. A dedicated chiller control panel with a non-coded display is to be supplied with each chiller by the chiller manufacturer. The controller shall provide chiller capacity control in response to the leaving chilled water temperature.

D. The chiller control panel shall utilize the following components to automatically take action to prevent unit shutdown due to abnormal operating conditions which will perform as follows:
1. High pressure limit that is set 10% lower than factory pressure switch that will automatically unload the compressor to help prevent a high pressure condenser control trip. One switch is required for each compressor and indicating light shall also be provided.
2. Current limit setpoint that is set to 120% of compressor RLA that will automatically unload the compressor to help prevent an overcurrent trip. One protector is required for each compressor and indicating light shall also be provided.
3. Low refrigerant temperature limit that will automatically unload the compressor to help prevent a low evaporator temperature trip.

E. If the chiller runs in any of the abnormal operating conditions, the chiller will continue to run, in an unloaded state, and will continue to produce chilled water in an attempt to meet the cooling load. However, if the chiller reaches the trip-out limits, the chiller controls will take the chiller off line for protection, and a manual reset is required. Once the "near trip" condition is corrected, the chiller will return to normal operation and can then produce full load cooling.

F. The chiller control panel shall provide control of chiller operation and monitoring of chiller sensors, actuators, relays, and switches. The panel shall be a complete system for stand-alone chiller control and include controls to safely and efficiently operate the chiller.

G. Manufacturer shall provide a compressor that is capable a in order to provide water temperature accuracy of +/- 0.5F. In the event that the compressor unloads to finite steps, the manufacturer shall provide four (4) or more steps of unloading on each compressor or provide HGBP.

H. The chiller control panel is to be provided with the following digital type pressure readouts:
1. Evaporator refrigerant pressure
2. Condenser refrigerant pressure

I. The front of the chiller control panel shall be capable of displaying the following clear language as standard:
1. Entering and leaving evaporator water temperature
2. Entering and leaving condenser water temperature
3. Chilled water setpoint
4. Electrical 3 phase current limit and percent RLA setpoint
5. Electrical 3 phase amp draw
6. Chiller operating mode
7. Condenser refrigerant temperature
8. Elapsed time and number-of-starts counter
9. Chiller compressor run status relay
10. Diagnostics with time and date stamp
11. The control panel display shall identify the fault, indicate date, time, and operating mode at time of occurrence, and provide type of reset required and a help message. The

historic diagnostic report shall display the last 20 diagnostics with their times and dates of occurrence

12. External chilled water and current limit setpoint 4-20mA.
13. Percent RLA output 2-10VDC
14. The chiller control panel shall output head pressure via a 0-10vdc signal to control a condenser water flow modulating device.
15. Power consumption and power factor for each compressor.

J. Digital communications to building automation system shall consist of a BACnet interface.

K. Time of Day Scheduling that allows up to 10 events to be scheduled in a 1 week time period at the unit control panel.

L. The chiller shall provide the following points for system control and monitoring:
1. A relay output to start the condenser water pump and/or enable the cooling tower temperature controls.
2. A relay output that shall energize whenever a fault requiring manual reset is detected by the panel.
3. A relay output that shall energize whenever the unit is operating in a limit mode for an extended time period.
4. An analog input to control leaving chilled water temperature setpoint based upon a 4-20ma or 0-10 VDC signal from a building automation system.
5. An analog input to control chiller current limit setpoint based upon a 2-10VDC or 4-20mA signal from a building automation system.

M. The chiller control panel shall provide a programmable soft load to prevent the chiller from achieving full capacity during the pulldown period by imposing a ramped current limit, or a temperature pulldown rate. Either can be adjusted to limit how fast the chiller can load after an initial startup.

N. The chiller control panel shall provide leaving chilled water temperature reset based upon return water temperature.

O. The chiller shall have factory mounted and tested controls that provide dual chilled water setpoint control for ice-making application.

P. The chiller control panel shall provide a chilled water pump output relay that closes when the chiller is given a signal to start.

Q. The chiller control panel shall have the ability to operate in variable evaporator flow applications. The chiller control must be able to operate with evaporator flow rate changes up to 10% during a 1 minute time period while maintaining 0.5F water temperature accuracy. The chiller control must also be able to operate with evaporator flow rate changes up to 30% during a 1 minute time period and not trip off.

R. The chiller control panel shall have the ability to control the leaving condenser fluid temperature setpoint through the user interface or via a 0-10vdc signal from a building automation system.

2.9 STARTERS (LOW VOLTAGE)

A. The motor starters shall be [Wye-Delta] [Across-the-Line]. Motor starters shall have a UL 1995 gasketed enclosure. Enclosure shall be constructed of 14 gauge steel minimum.

B. Starters shall be unit mounted with ventilating louvers.

C. Motor starters shall include incoming line provisions for the number and size cables shown on the drawings. Incoming line lugs shall be copper mechanical type. Connection directly to the contactors is not permissible.

D. Contactors shall be sized properly to the chiller full load and locked rotor currents. Contactors shall have double break main contacts with weld resistant silver cadmium faces. Auxiliary interlocks that interface with the control panel shall be low resistance having palladium silver contacts.

E. Each motor starter shall include a control power transformer with fused primary and secondary. Current transformers of the proper size, ratio and burden capacity shall be provided to provide a signal to the control panel and optional devices. Control relays shall be provided within the motor starter to interface with the control panel.
   1. Factory installed control power transformer shall also be capable of providing 115V power for optional field-installed water regulating valve (water-cooled condenser only)

F. Each starter shall include an advanced motor protection system incorporating electronic three phase overloads and current transformers. This electronic motor protection system shall monitor and protect against the following conditions:
   1. Three phase overload protection
   2. Overload protection during start-up
   3. Phase imbalance
   4. Phase loss
   5. Phase reversal
   6. Low voltage
   7. Under/over voltage protection (optional)

G. Alternately the advanced motor protection system can be furnished in the chiller control panel.

H. Each starter/control shall be designed and able to operate in temperatures up to 104 F (40 C).

I. All field supplied wires, bus bars, and fittings shall be copper only.

J. Provide in the starter panel:
   1. Circuit Breaker - Starter shall contain a circuit breaker. The disconnect handle shall be capable of being padlocked in the off position.

K. Provide Short Circuit Current Rating (SCCR) and AIC rating as shown on the electrical plans for a Wye-Delta starter based on the corresponding Circuit Breaker connection. The Short Circuit Rating is the rating of the panel to withstand a short circuit of the specified amps. This rating is separate from the AIC rating of Circuit Breakers.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Provide for connection to electrical service. If oil pump is electric include the connection of the electrical to the oil pump.

C. Provide Neoprene Isolation Pads to reduce vibration transmission.

D. On units without unit mounted starters provide for connection of electrical wiring between starter and chiller control panel, oil pump, and purge unit.

E. Furnish and install necessary auxiliary water piping for oil cooling units and purge condensers.

F. Arrange piping for easy dismantling to permit tube cleaning.

G. Provide piping from chiller relief valve to outdoors. Size as recommended by manufacturer.

3.2 MANUFACTURER'S FIELD SERVICES

A. OEM Startup is performed by factory trained and authorized servicing technicians confirming equipment has been correctly installed and passes specification checklist prior to equipment becoming operational and covered under OEM warranty.
   1. Included OEM Factory Startup:
      a. Centrifugal or Rotary Screw/Scroll Chillers > 60 tons

B. Applied Chiller manufacturers shall maintain service capabilities no more than 200 miles from the jobsite.

C. The manufacturer shall furnish complete submittal wiring diagrams of the package unit as applicable for field maintenance and service.

END OF SECTION 236423

SECTION 32 1373

CONCRETE PAVING JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Cold-applied joint sealants.
2. Hot-applied joint sealants.
3. Joint-sealant backer materials.
4. Primers.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each kind and color of joint sealant required.

C. Paving-Joint-Sealant Schedule: Include the following information:

1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant color.

1.3 INFORMATIONAL SUBMITTALS

A. Product certificates.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Compatibility: Provide joint sealants, backing materials, and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by joint-sealant manufacturer, based on testing and field experience.

2.2 HOT-APPLIED JOINT SEALANTS

A. Hot-Applied, Single-Component Joint Sealant: ASTM D 6690, ASTM 3405, AASHTO M301, Type II or IV.

1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:

    a. Crafco Inc; RoadSaver 201, RoadSaver 220, RoadSaver, 221, RoadSaver 231, or RoadSaver 534.
    b. Meadows, W.R.,Inc; Sealtight 3405M.
    c. Right Pointe; [JTS 3405 Parking Lot Sealant 007, or JTS 3405 Rubber 009.

PART 3 - EXECUTION

3.1 INSTALLATION OF JOINT SEALANTS

A. Comply with joint-sealant manufacturer's written installation instructions for products and applications indicated unless more stringent requirements apply.

B. Cleaning of Joints: Clean out joints immediately to comply with joint-sealant manufacturer's written instructions.

C. Joint Priming: Prime joint substrates where indicated or where recommended in writing by joint-sealant manufacturer.

D. Joint-Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions.

E. Install joint-sealant backings to support joint sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.

    1. Do not leave gaps between ends of joint-sealant backings.
    2. Do not stretch, twist, puncture, or tear joint-sealant backings.
    3. Remove absorbent joint-sealant backings that have become wet before sealant application and replace them with dry materials.

F. Install joint sealants immediately following backing installation, using proven techniques that comply with the following:

    1. Place joint sealants so they fully contact joint substrates.
    2. Completely fill recesses in each joint configuration.
    3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.

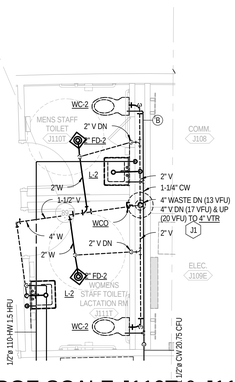
G. Tooling of Nonsag Joint Sealants: Immediately after joint-sealant application and before skinning or curing begins, tool sealants according to the following requirements to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint:

    1. Remove excess joint sealant from surfaces adjacent to joints.
    2. Use tooling agents that are approved in writing by joint-sealant manufacturer and that do not discolor sealants or adjacent surfaces.

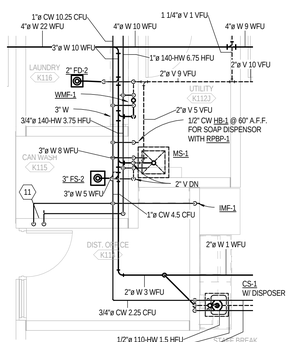
H. Provide joint configuration to comply with joint-sealant manufacturer's written instructions unless otherwise indicated.

I. Clean off excess joint sealant as the Work progresses, by methods and with cleaning materials approved in writing by joint-sealant manufacturers.

END OF SECTION



1 P2.3 LARGE SCALE J110T & J111T
SCALE: 1/4" = 1'-0"



2 P2.3 LARGE SCALE K112J, K115 & K116
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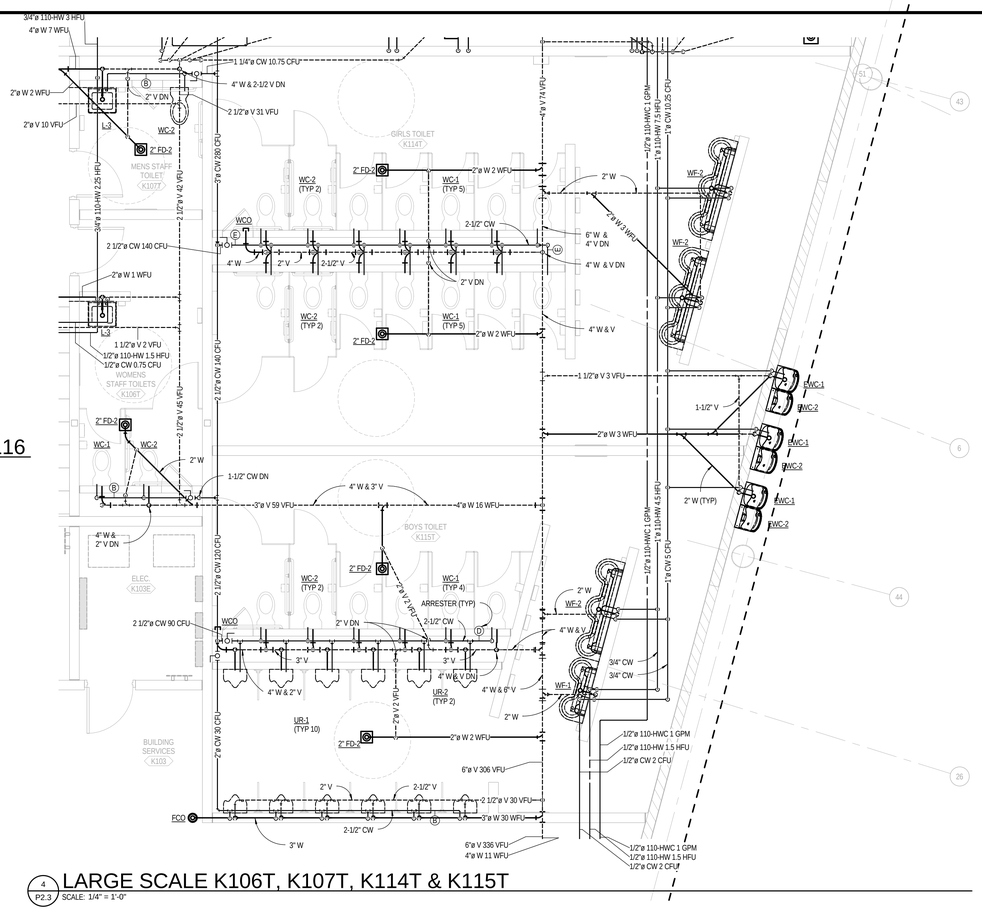

4 P2.3 LARGE SCALE K106T, K107T, K114T & K115T
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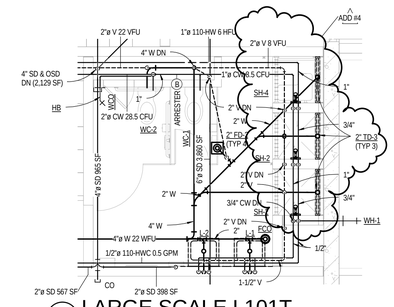

5 P2.3 LARGE SCALE L101T
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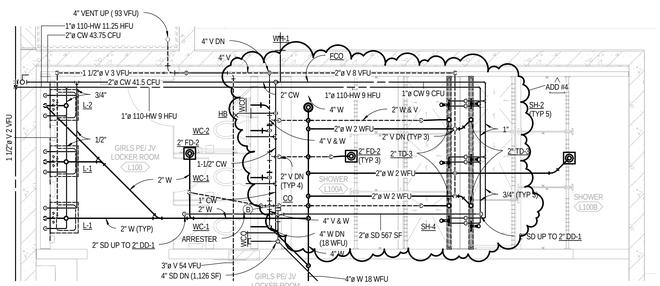
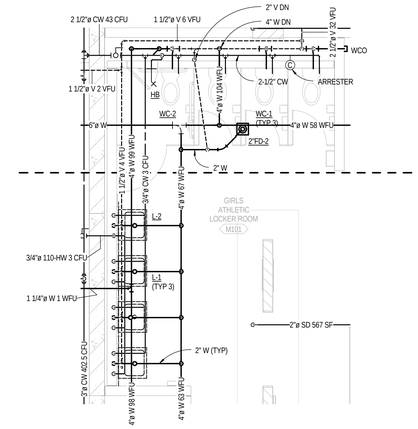
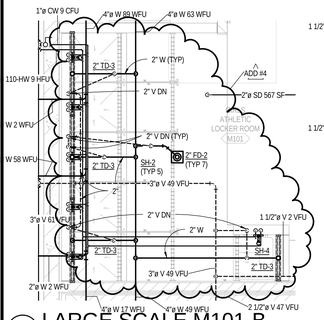


3 P2.3 LARGE SCALE L100, L100A & L100B
SCALE: 1/4" = 1'-0"



6 P2.3 LARGE SCALE M101-A
SCALE: 1/4" = 1'-0"



7 P2.3 LARGE SCALE M101-B
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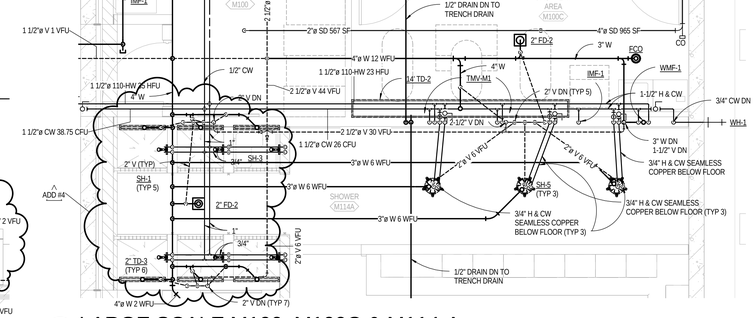

8 P2.3 LARGE SCALE M100, M100C & M114-A
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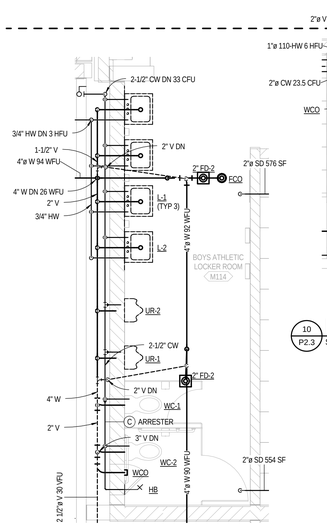

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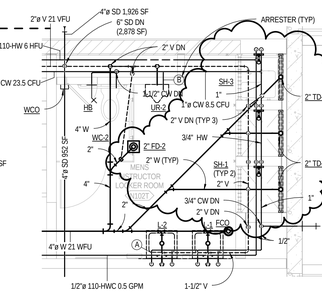
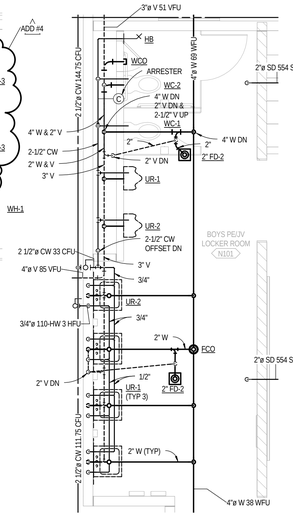


10 P2.3 LARGE SCALE N102T
SCALE: 1/4" = 1'-0"



11 P2.3 LARGE SCALE N101
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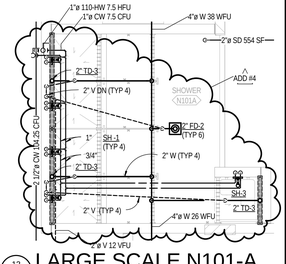

12 P2.3 LARGE SCALE N101-A
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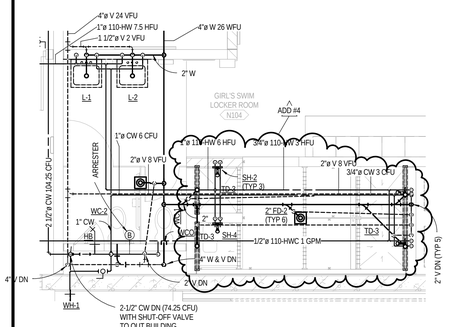

13 P2.3 LARGE SCALE N104
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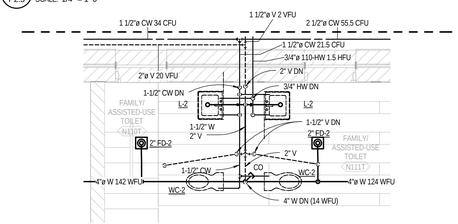

15 P2.3 LARGE SCALE N110T & N111T
SCALE: 1/4" = 1'-0"

PLUMBING GENERAL NOTES

1. FOR PIPE SIZES TO INDIVIDUAL FIXTURES, SEE THE PLUMBING FIXTURE CONNECTION SCHEDULE ON SHEET M5.5.
2. INVERT ELEVATIONS ARE BASED ON A FINISHED FLOOR ELEVATION OF 100'.
3. RUN BRANCH MAINS FULL SIZE THE ENTIRE LENGTH OF THE CHASE AND BRANCH OFF TO FIXTURES WITH SIZES PER THE PLUMBING FIXTURE CONNECTION SCHEDULE.
4. VALVES SHALL BE LOCATED ABOVE ACCESSIBLE CEILINGS. IF THIS IS NOT POSSIBLE, ACCESS PANELS SHALL BE PROVIDED. ACCESS PANELS SHALL BE TAMPERPROOF LOCKABLE ACCESS PANELS FOR ACCESS TO ALL PLUMBING VALVES THAT ARE NOT LOCATED OVER AN ACCESSIBLE CEILING.
5. ALL DETAILS FOR ITEMS SHOWN ON THIS SHEET ARE REFERRED TO AS FOLLOWS:
   - A. FOR WATER METER ENTRANCE DETAIL, SEE 1/P3.1.
   - B. FOR GAS SERVICE ENTRANCE DETAIL, SEE 2/P3.1
   - C. FOR 2-WAY GRADE CLEANOUT DETAIL, SEE 3/P3.1.
   - D. FOR PVC-CASTIRON TRANSITION DETAIL, SEE 4/P3.1.
   - E. FOR UNDERGROUND PIPE DETAILS, SEE 5 & 6/P3.1.
   - F. FOR ISLAND SINK DETAIL, SEE 8/P3.1.
   - G. FOR ACCESSIBLE LAVATORY OR COUNTER SINK DETAIL, SEE 9/P3.1.
   - H. FOR HOSE REEL ASSEMBLY DETAIL, SEE 10/P3.1.
   - I. FOR WATER SOFTENER DUAL TANK DETAIL, SEE 11/P3.1.
   - J. FOR WATER HEATER WITH STORAGE TANKS DETAIL, SEE 12/P3.1.
   - K. FOR AIR COMPRESSOR DETAIL, SEE 1/P3.2.
   - L. FOR COMPRESSED AIR OUTLET DETAILS, SEE 2 &3/P3.2.
   - M. FOR UNDER COUNTER RESIDENTIAL TYPE DISHWASHER DETAIL, SEE 4/P3.2.
   - N. FOR SAND & OIL INTERCEPTOR DETAIL, SEE 5/P3.2.
   - O. FOR NUTRALIZATION TANK DETAIL, SEE 6/P3.2.
   - P. FOR DISHWASHER BOOSTER DETAIL, SEE 7/P3.2.
   - Q. FOR ICE MACHINE – UNDER COUNTER DETAIL, SEE 8/P3.2.
   - R. FOR EMERGENCY SHOWER/EYEWASH DETAIL, SEE 9/P3.2.
   - S. FOR SUMP PUMP DETAIL, SEE 10/P3.2.
   - T. FOR POST HYDRANT - ROOF DETAIL, SEE 11/P3.2.
   - U. FOR MASTER GAS SHUTOFF DETAIL, SEE 12/P3.2.
   - V. FOR COFFEE MAKER DETAIL, SEE 13/P3.2.
   - W. FOR GREASE INTERCEPTOR DETAIL, SEE 14/P3.2.
   - X. FOR INLINE PUMP DETAIL, SEE 8/M4.2.

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9-30-2014

DLR Group
Architecture
Engineering
Planning
Interiors

DLR Group Project No: 10-13113-00

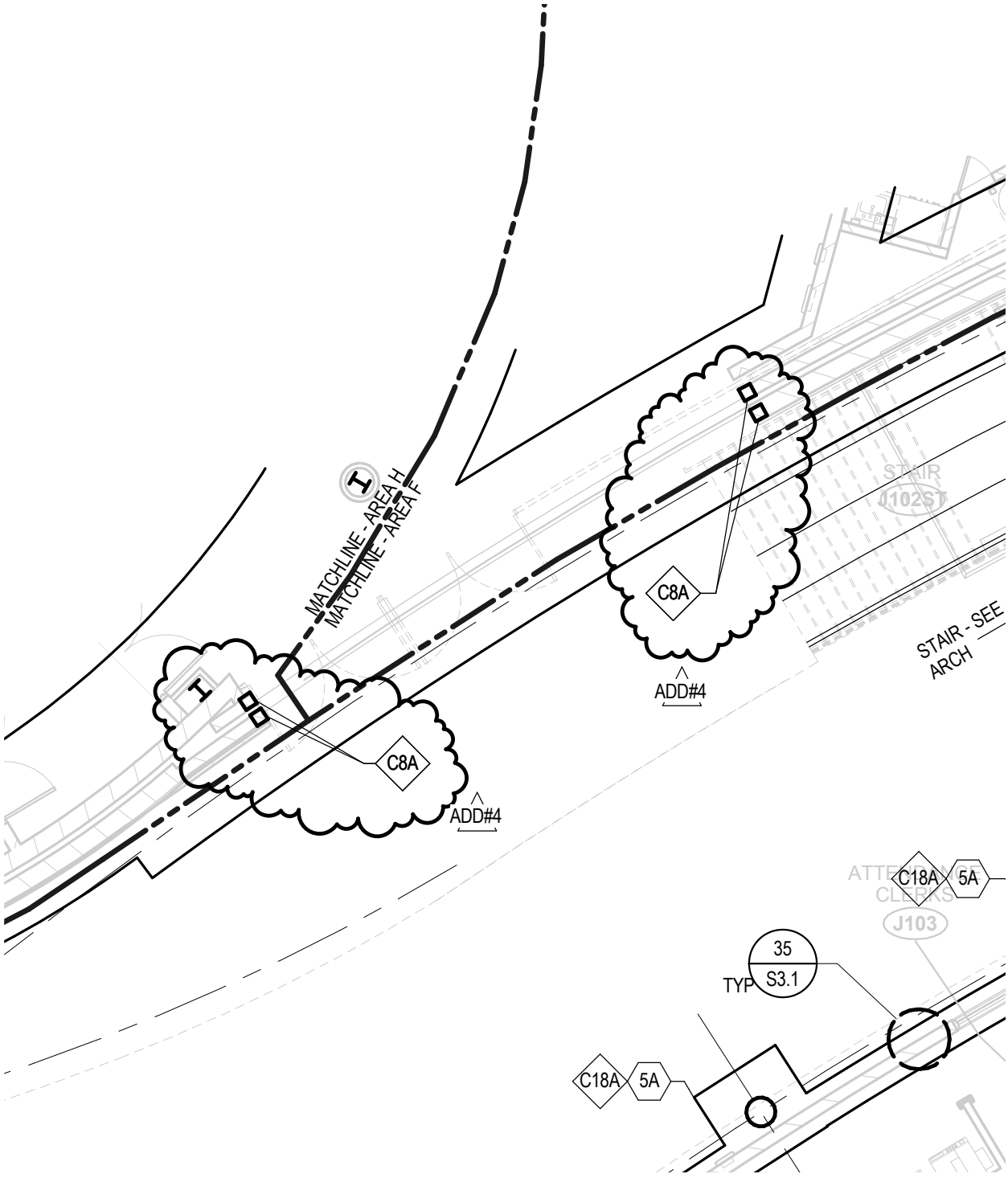
Kearney Public Schools
New Kearney High School
Kearney, Nebraska

Revision/Issue	Date
ADD #3 Addendum #3	10/14/2014
ADD #4 Addendum #4	10/16/2014

PLUMBING LARGE SCALE PLANS

ProjectNumber: 1355
Date: September 30, 2014

Sheet Number:
P2.3



Attachment No. S1.8-1
to Addendum No. 4
Dated: October 16, 2014

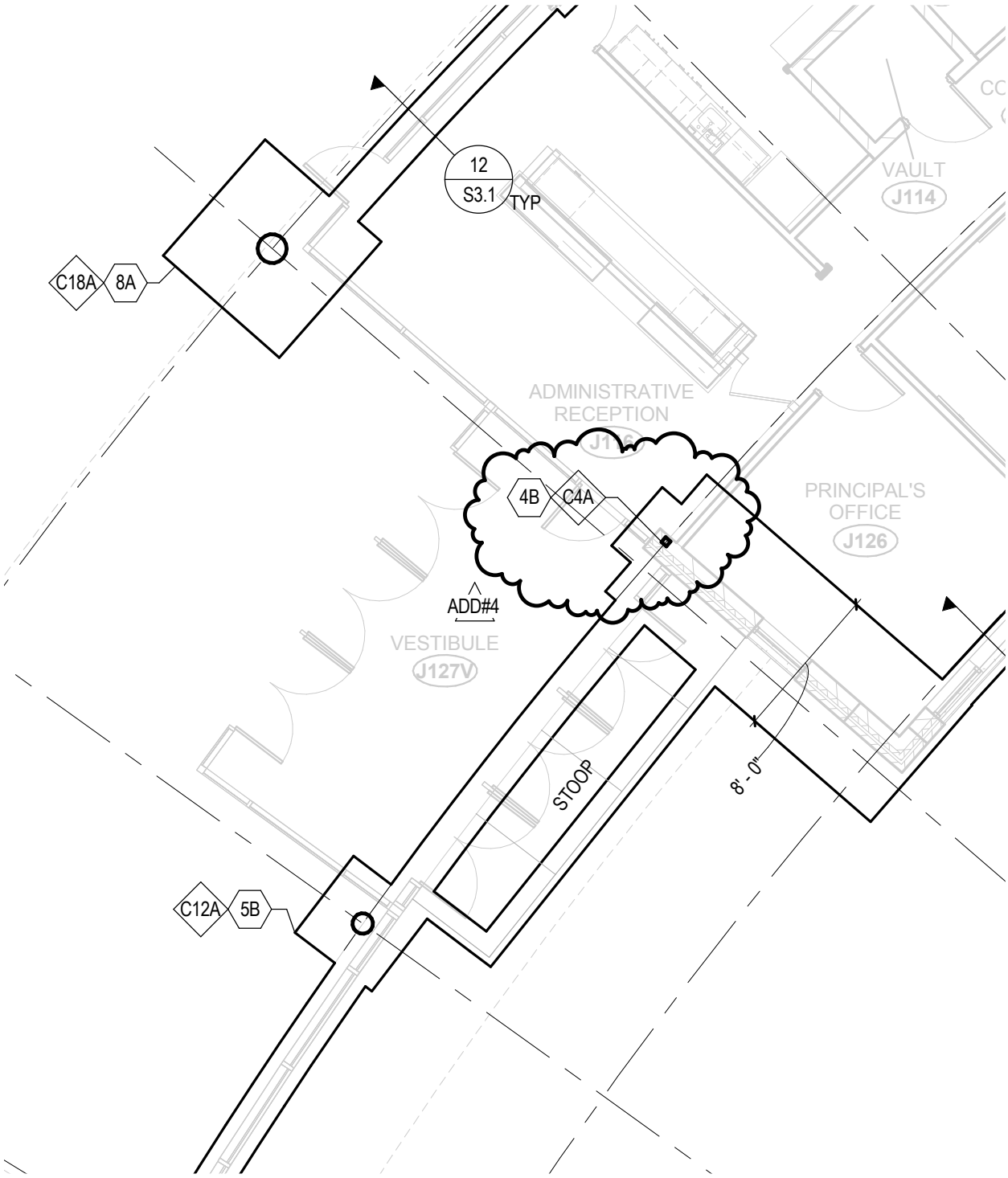
Wilkins Hinrichs Stober Architects, L.L.C.

DLR Group
Architecture Engineering Planning Interiors

DLR Project # 10-13113-00

Kearney Public Schools
New Kearney High School

Project Number: 1355



Attachment No. S1.8-2
to Addendum No. 4
Dated: October 16, 2014

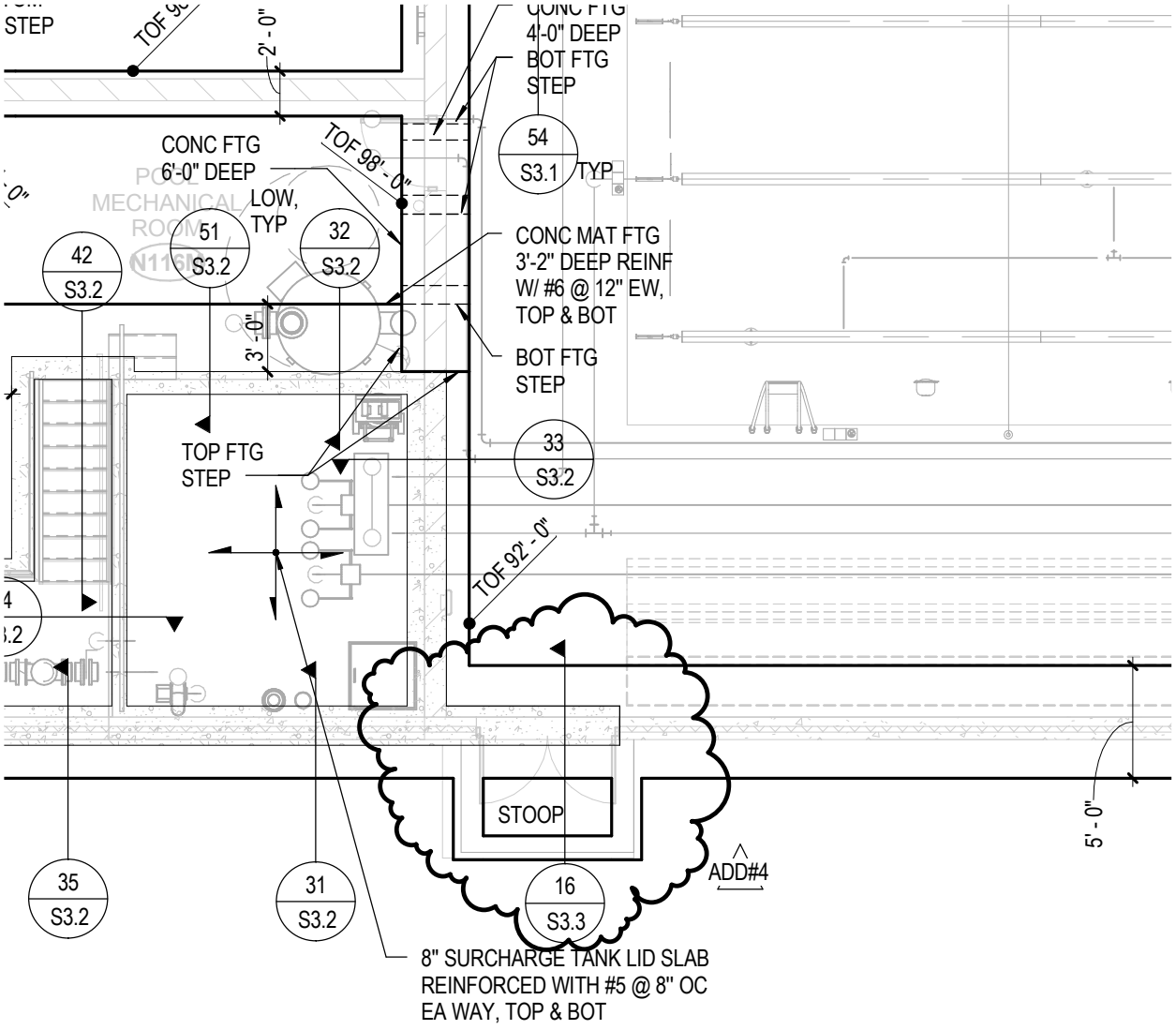
Wilkins Hinrichs Stober Architects, L.L.C.

DLR Group
Architecture Engineering Planning Interiors

DLR Project # 10-13113-00

Kearney Public Schools
New Kearney High School

Project Number: 1355



Attachment No. S1.12-1
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Dated: October 16, 2014

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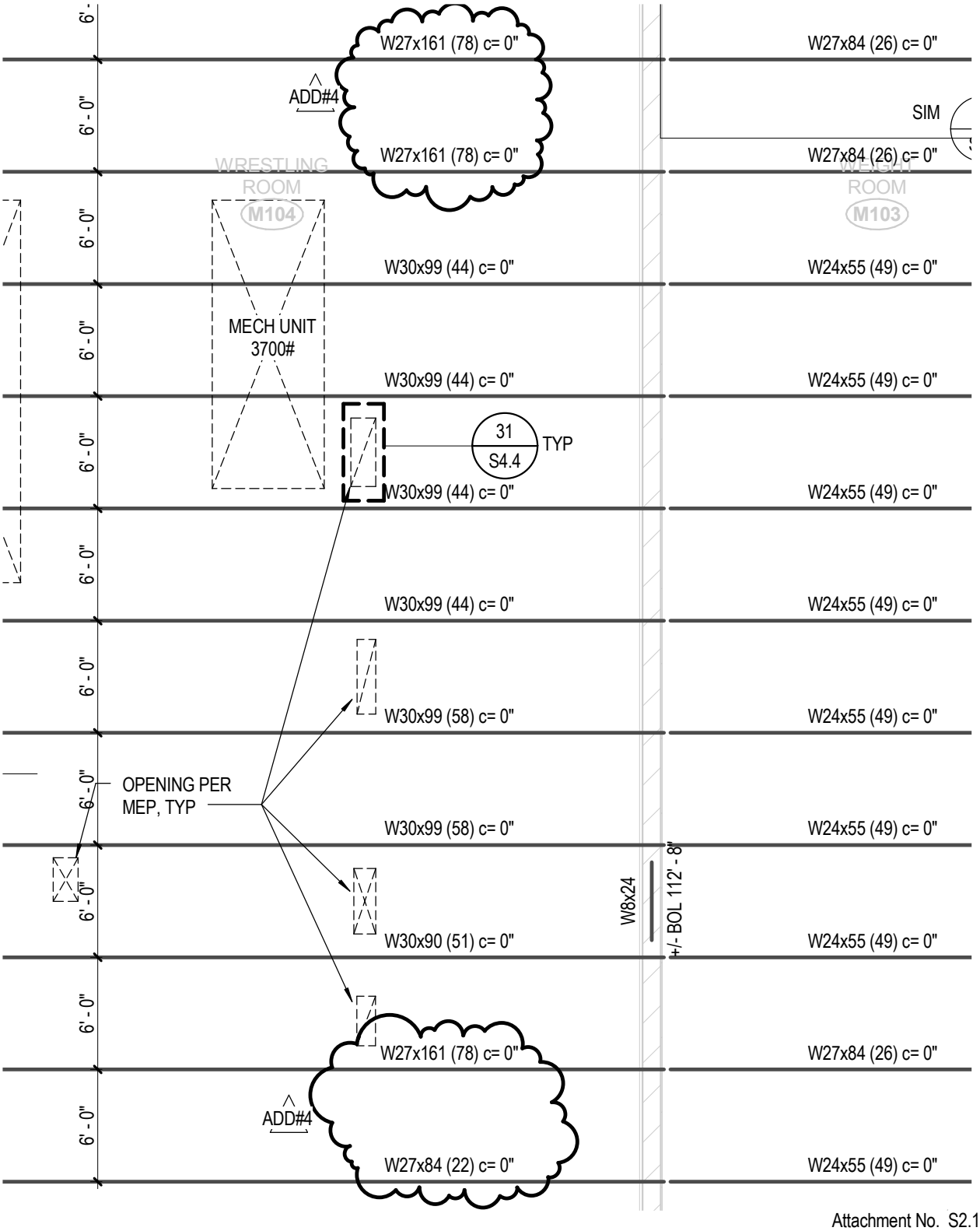
DLR Project # 10-13113-00

Kearney Public Schools
New Kearney High School

Project Number: 1355



Attachment No. S2.11-1
to Addendum No. 4
Dated: October 16, 2014

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Architecture Engineering Planning Interiors

DLR Project # 10-13113-00

Kearney Public Schools
New Kearney High School

Project Number: 1355

Structural Spread Footing Schedule				
Mark	Footing Dimensions		Footing Thickness	Reinforcing
	Length	Width		
3A	3' - 0"	3' - 0"	2' - 0"	4-#6 EW BOTTOM
3B	3' - 0"	3' - 0"	3' - 2"	4-#6 EW BOTTOM
3D	3' - 0"	3' - 0"	4' - 0"	4-#6 EW BOTTOM
3E	3' - 6"	3' - 6"	3' - 2"	4-#6 EW BOTTOM
4A	4' - 0"	4' - 0"	2' - 0"	5-#6 EW BOTTOM
4B	4' - 0"	4' - 0"	3' - 2"	5-#6 EW BOTTOM
5A	5' - 0"	5' - 0"	2' - 0"	6-#6 EW BOTTOM
5B	5' - 0"	5' - 0"	3' - 2"	6-#6 EW TOP AND BOT
5C	5' - 0"	5' - 0"	2' - 6"	6-#7 EW BOTTOM
5D	5' - 0"	5' - 0"	5' - 4"	6-#7 EW TOP AND BOT
6A	6' - 0"	6' - 0"	2' - 0"	7-#7 EW BOTTOM ADD#4
6B	6' - 0"	6' - 0"	3' - 2"	7-#7 EW TOP AND BOT
7A	7' - 0"	7' - 0"	2' - 0"	7-#7 EW BOTTOM
7B	7' - 0"	7' - 0"	3' - 2"	7-#7 EW TOP AND BOT
8A	8' - 0"	8' - 0"	2' - 0"	9-#8 EW BOTTOM
8B	8' - 0"	8' - 0"	3' - 2"	9-#8 EW TOP AND BOT
8C	8' - 0"	8' - 0"	4' - 0"	9-#8 EW TOP & BOT
8D	8' - 0"	8' - 0"	4' - 6"	9-#8 EW TOP AND BOT
8E	8' - 0"	8' - 0"	5' - 4"	9-#8 EW TOP & BOT
9A	9' - 0"	9' - 0"	2' - 0"	10-#8 EW BOTTOM
9B	9' - 0"	9' - 0"	3' - 2"	10-#8 EW TOP & BOT
10A	10' - 0"	10' - 0"	2' - 0"	12-#8 EW BOTTOM
11B	12' - 8"	11' - 4"	2' - 0"	12-#8 EW BOTTOM
12B	12' - 0"	5' - 0"	3' - 2"	13-#7 SW BOT, 6-#7 LW BOT
13A	13' - 0"	13' - 0"	2' - 6"	14-#8 EW BOTTOM
13B	13' - 0"	13' - 0"	4' - 0"	14-#8 EW TOP AND BOT

Attachment No. S3.1-1
to Addendum No. 4
Dated: October 16, 2014