May 21, 2015 .

**ADDENDUM #3** ISSUED BY EDiS COMPANY
110 S. POPLAR STREET, WILMINGTON, DE 19801

**The bid due date remains unchanged.**
**Bids are being received until 3:30 p.m. on Wednesday, May 27, 2015 at the AI DuPont Middle School.**

NOTICE: Attach this addendum to the Project Manual for this project. It modifies and becomes a part of the Contract Documents. Work for materials not specifically mentioned herein are to be as described in the main body of the specifications and as shown on the Drawings. Acknowledge receipt of this Addendum in the space provided on the Bid Form.

**SPECIFICATION REVISIONS**

a) Specification Section 004100 : Bid Form and Attachments
   - Remove existing bid form for Contract A-02 – Carpentry and General Works (pages 8 - 14) from specification section 004100 and replace with the attached revised specification section 004100, Bid Form and Attachments, Pages 8 - 14.
   - Remove existing bid form for Contract A-08 – Electrical (pages 50 - 56) from specification section 004100 and replace with the attached revised specification section 004100, Bid Form and Attachments, Pages 50 - 56.
   - Remove existing bid form for Contract A-09 – Auditorium Seating (pages 57 - 63) from specification section 004100 and replace with the attached revised specification section 004100, Bid Form and Attachments, Pages 57 - 63.

b) Specification Section 011100: Contract A-02, Carpentry and General Works
   - Page 19 – Add Bullet #119, "***Provide paint at the auditorium ceilings and walls.***"
   - Page 19 – Add Bullet #120, "***Provide new colored sealant over entire concrete slab at auditorium seating area where hatched on Drawings A3.4 and A3.6 as part of pricing for Alternate #7 only. No new colored sealant is required as part of base bid.***"

c) Specification Section 011100: Contract A-05, Mechanical and Plumbing
   - Page 26 – Delete Bullet #41 and add the following, "***Include all necessary design labor and quick-ship costs to supply VAV's, Unit Ventilators, and Cabinet Unit Heaters for installation in Phase 1 areas for installation prior to August 2015 as stated in the project schedule. This includes costs to deliver and install Air Handlers AHU-2 and 4 as stated in the project schedule. All other mechanical units must be ordered and delivered to site for installation during each phase as shown on the construction schedule. New boilers and air handlers AHU 2 and 4 must be delivered and installed in time for the start of the district's heating season, October 2, 2015.***"
   - Page 26 – Add Bullet #42, "***During Phases 2 through 7, Mechanical Contractor is to provide all new mechanical equipment, branch ductwork, and hydronic piping in the classrooms and offices as shown on the mechanical prints and phasing drawings. Mechanical Contractor is to penetrate new ductwork and piping through the existing corridor walls and provide fire and smoke seals at these new penetrations as required. New branch ductwork is to be tied in to the existing ductwork mains in the corridors to***

***provide conditioning of the classroom and office spaces during Phases 2 through 7. Mechanical contractor is to temporarily remove and replace ceiling grid and tile as needed for access to complete this work in the corridor. Mechanical contractor is to include costs to return to disconnect new branch ductwork from duct mains and reconnect branch duct to new duct mains during Phase 8 (Summer 2016). Mechanical contractor will make final connections of hydronic branch piping to new hydronic mains in the corridors during Phase 8.***"

- Page 26 – Add Bullet #43, "***Provide duct leakage tests and pipe air pressure tests at the end of each phase. Provide final test reports at the end of Phase 8."***

d) Specification Section 011100: Contract A-06, Building Management Systems
- Page 29 – Add Bullet #33, "***Provide wire between fire alarm system, mechanical equipment, and HVAC controls system as required to provide communication between the systems to de-energize and re-energize equipment as specified in the sequence of operations for HVAC controls."***

e) Specification Section 012200 : Unit Prices
- Remove existing specification section 012200 and insert attached specification Section 012200 – Unit Prices

f) Specification Section 012300 - Alternates
- Remove existing specification section 012300 and insert attached specification Section 012300 – Alternates

g) Specification Section 013216 : Construction Progress Schedule
- Remove the existing Project Master Schedule dated 27 February 2015 and replace with the attached Project Master Schedule dated 20 May 2015.

**<u>RESPONSES TO REQUESTS FOR INFORMATION</u>**

1. Who is required to wire the smoke Dampers?
   a. **Smoke dampers are to be wired and connected to the fire alarm system by Contract A-08 : Electrical.**

2. On addendum #2 for the Auditorium Seating at A I DuPont on drawing A403 in room 145B are those Fixed Auditorium Seats to be part of the bid? It looks like 3.14 & 3.15 are the Fixed Auditorium Seats.
   a. **The fixed auditorium seats shown on drawing A-403 are located at the HB DuPont Middle School. The costs to remove and replace these seats should be included as part of Alternate #6.**

3. Bid Package A-09 – Auditorium Seating : Drawing A-401 updated by Addendum #2 includes 6 wheel chairs spaces in the lower part of the auditorium. Is the removal of the existing seating to be included in the A-09 bid?
   a. **Demolition of all existing seating in the lower and upper auditorium areas of the Conrad Schools of Science as shown on Drawing A-401 is to be included as part of the**

**pricing of Alternate #4. The reference questioned here is calling for the auditorium seating contractor to provide six new wheelchair spaces as required by code for the new seating in this alternate's pricing.**

4. Bid Package A-09 – Auditorium Seating : Drawing A-401 updated by Addendum #2 includes a note to include a level surface at each ADA space. Is this work to be done by the district, similar to the guardrail work included with Addendum #2, EDiS responses 11 and 12?
    a. **Correct. Work to provide the level surface along with guardrail work referenced on these drawings is to be provided by the district.**

5. Bid Package A-09 – Auditorium Seating : Can you please confirm the lower level seating on drawing A-401 updated by Addendum #2 is not to be replaced and only the balcony seating?
    a. **All seating shown on drawing A-401 is to be replaced. This includes the 529 fixed seats referenced in the lower auditorium along with the 310 fixed seats in the upper auditorium.**

6. Bid Package A-09 – Auditorium Seating : Drawing A-403 included with Addendum #2 state to replace chairs in kind. It appears all of these chairs with the exception of the first two rows have writing tablets. Are manufacturer's standard size tablet arms to be included in all rows except 1 and 2?
    a. **New auditorium seating provided in the base bid and three alternates is to be as specified in Specification Section 126100 – Fixed Audience Seating. No tablet arms are required.**

7. Please provide the existing fire alarm system and vendor for the school.
    a. **The existing fire alarm system utilized in the AI DuPont Middle School is the Edwards GE-EST2 as maintained by Wayman Fire Protection. Contract A-08 : Electrical is to provide new wiring and components that is compatible with the existing fire alarm system. Electrical contractor must contract with Wayman for programming / modifying existing fire alarm system.**

8. Please provide clarification on carpentry scope line item 106 & 107 which states we have fire protection (sprinkler work) in our scope? Is this correct?
    a. **Contract A-02 : Carpentry and General Works is to provide minor alterations to sprinkler head locations and heights to match the new acoustical ceiling configurations.**

## ATTACHMENTS

- Specification Section 004100 – Pages 8 through 14.
- Specification Section 004100 – Pages 50 through 56.
- Specification Section 004100 – Pages 57 through 63.

- Specification Section 012200 – Unit Prices.
- Specification Section 012300 - Alternates.
- Project Master Schedule dated 20 May 2015
- Addendum No. 3 from Studio JAED dated May 20, 2015.

END OF ADDENDUM #3

**Contract No. A-02 : Carpentry & General Works**

BID FORM

For Bids Due: _____ To: Red Clay Consolidated School District

Name of Bidder: _____

Bidder Address: _____

_____

Contact Name: _____ E-Mail Address: _____

Delaware Business License No.:_____ Taxpayer ID No.: _____

(Other License Nos.): _____

**(A copy of Bidder's Delaware Business License must be attached to this form.)**

Phone No.: ( ) _____ - _____ Fax No.: ( ) _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

$_____ ($_____ )

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 1: Provide Main Entrance Security Vestibule shown as Keynote 3 on Sheet A 3.3.

Add/Deduct _____($_____)

Alternate No. 2: Demolish existing bleachers and Provide New Bleachers in Gym

Add/Deduct _____($_____)

Alternate No. 3: Provide all Phase 2 through 7 work on Second Shift. Phase 1 and 8 work to remain regular hours.

Add/Deduct _____($_____)

Alternate No. 7: Provide aisle lights on new auditorium seating in the AI DuPont Middle School as shown on Drawings A 3.14 and A 3.15.

Add/Deduct _____($_____)

UNIT PRICES

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

N/A

NOTE: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for ninety (90) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

_____
(State of Corporation)

Business Address:_____
_____
_____
_____

Witness: _____ By: _____
( Authorized Signature )

(SEAL) _____
( Title )

Date: _____

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Delaware Business License
(Others as Required by Project Manuals)

## SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

| Subcontractor Category | Subcontractor | Address (City & State) | Subcontractors tax payer ID # or Delaware Business license # |
|---|---|---|---|
| 1. Carpentry | | | |
| 2. Doors & Hdwe (Supply) | | | |
| 3. Casework & Millwork | | | |
| 4. Roofing | | | |
| 5. Metal Studs & Drywall | | | |

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date _____.

All the terms and conditions of ***Contract No.:*** _____ have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE (TYPED): _____

AUTHORIZED REPRESENTATIVE (SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

_____

_____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20_____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

**BID BOND**

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____of _____in the County of _____ and State of _____ as Principal, and _____of _____in the County of _____ _____ and State of _____ as Surety, legally authorized to do business in the State of Delaware ('State"), are held and firmly unto the ***Red Clay Consolidated School District*** in the sum of _____ _____ Dollars (S_____), or percent not to exceed _____ _____ Dollars (S_____) of amount of bid on Contract No. _____ to be paid to the ***Red Clay Consolidated School District*** for the use and benefit of the ***Red Clay Consolidated School District*** for which payment well and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators, and successors, jointly and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bounden Principal who has submitted to the ***Red Clay Consolidated School District*** a certain proposal to enter into this contract for the furnishing of certain material and/or services within the State, shall be awarded this Contract, and if said Principal shall well and truly enter into and execute this Contract as may be required by the terms of this Contract and approved by the ***Red Clay Consolidated School District*** this Contract to be entered into within twenty days after the date of official notice of the award thereof in accordance with the terms of said proposal, then this obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____seal and dated this____day of _____in the year of our Lord two thousand and _____(20__).

SEALED, AND DELIVERED IN THE PRESENCE OF

_____
Name of Bidder (Organization)

Corporate Seal

By:_____
Authorized Signature

Attest _____

_____
Title

_____
Name of Surety

Witness_____

_____

_____
Title

CONSENT OF SURETY

DATE_____

To:

Gentlemen:

We, the _____

_____
(Surety Company's Address)

_____

a Surety Company authorized to do business in the State of Delaware hereby agrees that if

_____
(Contractor)

_____
(Address)

_____

is awarded the Contract No. _____

We will write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to Bidders.

_____
(Surety Company)

By _____
(Attorney-in-Fact)

**Contract No. A-08 : Electrical**

BID FORM

For Bids Due: _____ To: Red Clay Consolidated School District

Name of Bidder: _____

Bidder Address: _____

Contact Name: _____ E-Mail Address: _____

Delaware Business License No.:_____ Taxpayer ID No.: _____

(Other License Nos.): _____
**(A copy of Bidder's Delaware Business License must be attached to this form.)**

Phone No.: ( ) _____ - _____ Fax No.: ( ) _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

$_____ ($_____ )

ALTERNATES
Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 1: Provide Main Entrance Security Vestibule shown as Keynote 3 on Sheet A 3.3.

Add/Deduct _____($_____)

Alternate No. 2: Demolish existing bleachers and Provide New Bleachers in Gym

Add/Deduct _____($_____)

Alternate No. 3: Provide all Phase 2 through 7 work on Second Shift. Phase 1 and 8 work to remain regular hours.

Add/Deduct _____($_____)

Alternate No. 7: Provide aisle lights on new auditorium seating in the AI DuPont Middle School as shown on Drawings A 3.14 and A 3.15.

Add/Deduct _____($_____)

UNIT PRICES

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

N/A

NOTE: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for ninety (90) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.

I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

_____
(State of Corporation)

Business Address:_____
_____
_____
_____

Witness: _____ By: _____
( Authorized Signature )

(SEAL) _____
( Title )

Date: _____

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Delaware Business License
(Others as Required by Project Manuals)

## SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

| Subcontractor Category | Subcontractor | Address (City & State) | Subcontractors tax payer ID # or Delaware Business license # |
|---|---|---|---|
| 1. Electrical | | | |

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date _____.

All the terms and conditions of ***Contract No.:*** _____ have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE (TYPED): _____

AUTHORIZED REPRESENTATIVE (SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

_____

_____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20_____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

**BID BOND**

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____of _____in the County of _____ and State of _____ as Principal, and _____of _____in the County of _____ _____ and State of _____ as Surety, legally authorized to do business in the State of Delaware ('State"), are held and firmly unto the ***Red Clay Consolidated School District*** in the sum of _____ _____ Dollars (S_____), or percent not to exceed _____ _____ Dollars (S_____) of amount of bid on Contract No. _____ to be paid to the ***Red Clay Consolidated School District*** for the use and benefit of the ***Red Clay Consolidated School District*** for which payment well and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators, and successors, jointly and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bounden Principal who has submitted to the ***Red Clay Consolidated School District*** a certain proposal to enter into this contract for the furnishing of certain material and/or services within the State, shall be awarded this Contract, and if said Principal shall well and truly enter into and execute this Contract as may be required by the terms of this Contract and approved by the ***Red Clay Consolidated School District*** this Contract to be entered into within twenty days after the date of official notice of the award thereof in accordance with the terms of said proposal, then this obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____seal and dated this____day of _____in the year of our Lord two thousand and _____(20__).

SEALED, AND DELIVERED IN THE PRESENCE OF

_____
Name of Bidder (Organization)

Corporate Seal

By:_____
Authorized Signature

Attest _____

_____
Title

_____
Name of Surety

Witness_____

_____

_____
Title

CONSENT OF SURETY

DATE_____

To:

Gentlemen:

We, the _____

_____
(Surety Company's Address)

_____

a Surety Company authorized to do business in the State of Delaware hereby agrees that if

_____
(Contractor)

_____
(Address)

_____

is awarded the Contract No. _____

We will write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to Bidders.

_____
(Surety Company)

By _____
(Attorney-in-Fact)

**Contract No. A-09 : Auditorium Seating**

BID FORM

For Bids Due: _____ To: Red Clay Consolidated School District

Name of Bidder: _____

Bidder Address: _____

Contact Name: _____ E-Mail Address: _____

Delaware Business License No.:_____ Taxpayer ID No.: _____

(Other License Nos.): _____

**(A copy of Bidder's Delaware Business License must be attached to this form.)**

Phone No.: ( ) _____ - _____ Fax No.: ( ) _____ - _____

The undersigned, representing that he has read and understands the Bidding Documents and that this bid is made in accordance therewith, that he has visited the site and has familiarized himself with the local conditions under which the Work is to be performed, and that his bid is based upon the materials, systems and equipment described in the Bidding Documents without exception, hereby proposes and agrees to provide all labor, materials, plant, equipment, supplies, transport and other facilities required to execute the work described by the aforesaid documents for the lump sum itemized below:

$_____ ($_____ )

ALTERNATES

Alternate prices conform to applicable project specification section. Refer to specifications for a complete description of the following Alternates. An "ADD" or "DEDUCT" amount is indicated by the crossed out part that does not apply.

Alternate No. 1: Provide Main Entrance Security Vestibule shown as Keynote 3 on Sheet A 3.3.

Add/Deduct _____($_____)

Alternate No. 2: Demolish existing bleachers and Provide New Bleachers in Gym

Add/Deduct _____($_____)

Alternate No. 3: Provide all Phase 2 through 7 work on Second Shift. Phase 1 and 8 work to remain regular hours.

Add/Deduct _____ ($_____)

Alternate No. 4: Provide demolition and replacement of auditorium seating in Conrad Schools of Science

Add/Deduct _____ ($_____)

Alternate No. 5: Provide demolition and replacement of auditorium seating in Richardson Park Elementary School

Add/Deduct _____ ($_____)

Alternate No. 6: Provide demolition and replacement of auditorium seating in HB DuPont Middle School

Add/Deduct _____ ($_____)

Alternate No. 7: Provide aisle lights on new auditorium seating in the AI DuPont Middle School as shown on Drawings A 3.14 and A 3.15.

Add/Deduct _____ ($_____)

UNIT PRICES

Unit prices conform to applicable project specification section. Refer to the specifications for a complete description of the following Unit Prices:

| | Add | Deduct |
|---|---|---|
| 6. Price to supply and install one (1) new Fixed auditorium seat | _____ | _____ |
| 7. Price to supply and install five (5) new Fixed auditorium seats | _____ | _____ |
| 8. Price to supply and install ten (10) new Fixed auditorium seats | _____ | _____ |

NOTE: The difference in price between Add and Deduct in the above Unit Prices should not exceed fifteen percent (15%).

I/We acknowledge Addendums numbered _____ and the price(s) submitted include any cost/schedule impact they may have.

This bid shall remain valid and cannot be withdrawn for ninety (90) days the date of opening of bids, and the undersigned shall abide by the Bid Security forfeiture provisions. Bid Security is attached to this Bid (if required).

The Owner shall have the right to reject any or all bids, and to waive any informality or irregularity in any bid received.

This bid is based upon work being accomplished by the Sub-Contractors named on the list attached to this bid.

The undersigned represents and warrants that he has complied and shall comply with all requirements of local, state, and national laws; that no legal requirement has been or shall be violated in making or accepting this bid, in awarding the contract to him or in the prosecution of the work required; that the bid is legal and firm; that he has not, directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken action in restraint of free competitive bidding.

Upon receipt of written notice of the acceptance of this Bid, the Bidder shall, within twenty (20) calendar days, execute the agreement in the required form and deliver the Contract Bonds, and Insurance Certificates, required by the Contract Documents.
I am / We are an Individual / a Partnership / a Corporation

By _____ Trading as _____
(Individual's / General Partner's / Corporate Name)

_____
(State of Corporation)

Business Address:_____
_____
_____
_____

Witness: _____ By: _____
( Authorized Signature )

(SEAL) _____
( Title )

Date: _____

ATTACHMENTS

Sub-Contractor List
Non-Collusion Statement
Bid Bond
Consent of Surety
Delaware Business License
(Others as Required by Project Manuals)

## SUBCONTRACTOR LIST

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor must be listed for each category where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the Owner, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.**

| Subcontractor Category | Subcontractor | Address (City & State) | Subcontractors tax payer ID # or Delaware Business license # |
|---|---|---|---|
| 1. Auditorium Seating (Supply) | | | |
| 2. Auditorium Seating (Install) | | | |

NON-COLLUSION STATEMENT

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal submitted this date _____.

All the terms and conditions of ***Contract No.:*** _____ have been thoroughly examined and are understood.

NAME OF BIDDER: _____

AUTHORIZED REPRESENTATIVE (TYPED): _____

AUTHORIZED REPRESENTATIVE (SIGNATURE): _____

TITLE: _____

ADDRESS OF BIDDER: _____

_____

_____

PHONE NUMBER: _____

Sworn to and Subscribed before me this _____ day of _____ 20_____.

My Commission expires _____. NOTARY PUBLIC _____.

THIS PAGE MUST BE SIGNED AND NOTARIZED FOR YOUR BID TO BE CONSIDERED.

**BID BOND**

TO ACCOMPANY PROPOSAL
(Not necessary if security is used)

KNOW ALL MEN BY THESE PRESENTS That: _____of _____in the County of _____ and State of _____ as Principal, and _____of _____in the County of _____ _____ and State of _____ as Surety, legally authorized to do business in the State of Delaware ('State"), are held and firmly unto the ***Red Clay Consolidated School District*** in the sum of _____ _____ Dollars (S_____), or percent not to exceed _____ _____ Dollars (S_____) of amount of bid on Contract No. _____ to be paid to the ***Red Clay Consolidated School District*** for the use and benefit of the ***Red Clay Consolidated School District*** for which payment well and truly to be made, we do bind ourselves, our and each of our heirs, executors, administrators, and successors, jointly and severally for and in the whole firmly by these presents.

NOW THE CONDITION OF THIS OBLIGATION IS SUCH That if the above bounden Principal who has submitted to the ***Red Clay Consolidated School District*** a certain proposal to enter into this contract for the furnishing of certain material and/or services within the State, shall be awarded this Contract, and if said Principal shall well and truly enter into and execute this Contract as may be required by the terms of this Contract and approved by the ***Red Clay Consolidated School District*** this Contract to be entered into within twenty days after the date of official notice of the award thereof in accordance with the terms of said proposal, then this obligation shall be void or else to be and remain in full force and virtue.

Sealed with _____seal and dated this____day of _____in the year of our Lord two thousand and _____(20__).

SEALED, AND DELIVERED IN THE PRESENCE OF

_____
Name of Bidder (Organization)

Corporate Seal

By:_____
Authorized Signature

Attest _____

_____
Title

_____
Name of Surety

Witness_____

_____

_____
Title

CONSENT OF SURETY

DATE_____

To:

Gentlemen:

We, the _____

_____
(Surety Company's Address)

_____

a Surety Company authorized to do business in the State of Delaware hereby agrees that if

_____
(Contractor)

_____
(Address)

_____

is awarded the Contract No. _____

We will write the required Performance and/or Labor and Material Bond required by Paragraph 9 of the Instructions to Bidders.

_____
(Surety Company)

By _____
(Attorney-in-Fact)

END OF SECTION

SECTION 012200 - UNIT PRICES

1. GENERAL PROVISIONS

   A. The general provision of the Contract, including the Conditions of the Contract (General, Supplementary and other conditions, if any) and Division 1 as appropriate, apply to the Work specified in this Section.

   B. Refer to provisions in AIA Document A232 – 2009 EDITION, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CONSTRUCTION MANAGER AS ADVISOR EDITION, for requirements in addition to those specified in Division 1.

   C. For work being constructed under separate prime contract, provisions of this Section apply to each contract being bid.

2. BASE BID

   A. The Base Bid shall consist of all work shown or specified in the Contract Documents, exclusive of any Additive Unit Prices specified herein.

   B. The Base Bid shall include all work in any Subtractive Unit Prices specified herein.

3. UNIT PRICES

   A. State in the Bid Form the amount to be added to (or subtracted from) the Base Bid per unit of measurement for each Unit Price specified. State this amount to include all overhead and profit. No surcharge in addition to the Unit Price listed will be permitted.

   B. See Section 002113, INSTRUCTIONS TO BIDDERS for related information.

   C. For description of Unit Prices requested, refer to the specification. The method of stating the Unit Prices is described in the Bid Form.

   D. Where both add and deduct unit prices are requested, there shall not be more that a 10% variation between the two.

4. APPLICATION OF UNIT PRICES

   A. Unit prices stated in the Bid Form will apply from the time the Bid is submitted until Contract completion.

5. MEASUREMENT OF QUANTITIES

   A. Quantities shall be determined by field measurement by contractor personnel and as

verified by the Construction Manager.

B. At the Contractor's option, and at his expense, measurement may be made by a registered surveyor.

6. LIST AND DESCRIPTION OF UNIT PRICES

A. Unit Price #1 - Price to cut and replace up to ten feet (10′) of 0″ to 2″ hydronic piping per linear foot.

B. Unit Price #2 - Price to cut and replace up to ten feet (10′) of 2-1/4″ to 3″ hydronic piping per linear foot.

C. Unit Price #3 - Price to cut and replace up to ten feet (10′) of 3-1/4″ to 4″ hydronic piping per linear foot.

D. Unit Price #4 - Price to cut and replace up to ten feet (10′) of 4-1/4″ to 5″ hydronic piping per linear foot.

E. Unit Price #5 - Price to cut and replace up to ten feet (10′) of 5-1/4″ to 6″ hydronic piping per linear foot.

F. Unit Price #6 - Price to supply and install one (1) new fixed auditorium seat

G. Unit Price #7 - Price to supply and install five (5) new fixed auditorium seats

H. Unit Price #8 - Price to supply and install ten (10) new fixed auditorium seats

END OF SECTION

SECTION 012300 - ALTERNATES

1. GENERAL PROVISIONS

   A. The general provisions of the Contract, including the Conditions of the Contract (General, Supplementary and other conditions, if any) and Division 1 as appropriate, apply to the Work specified in this Section.

   B. Refer to provisions in AIA Document A232 – 2009 Edition, GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION, CONSTRUCTION MANAGER AS ADVISOR EDITION, for requirements in addition to those specified in Division 1.

   C. For work being constructed under separate prime contracts, provisions of this Section apply to each contract being bid.

2. BASE BID

   A. The Base Bid shall consist of all work shown or specified in the Contract Documents, exclusive of any Additive Alternates specified herein.

   B. The Base Bid shall include all work in any Subtractive Alternates specified herein.

3. ALTERNATES

   A. State in the Bid Form the amount to be added to the Base Bid for each Alternate specified.

   B. See Section 002113 - INSTRUCTIONS TO BIDDERS for related information.

   C. The description of Alternates contained herein is in summary form. Detailed requirements for materials and execution shall be as specified in other sections and as shown on drawings.

      ***Alternate No. 1: Provide Main Entrance Security Vestibule shown as Keynote 3 on Sheet A 3.3.***

      1. **Base Bid Item: No new work.**
      2. **Alternate: Provide new aluminum storefront system, doors, and hardware as described in Keynote 3 on Sheet A 3.3 and shown in elevations and details.**

      ***Alternate No. 2: Demolish existing bleachers and Provide New Bleachers in Gym***

      1. **Base Bid Item: No new work. Existing Bleachers are to remain.**
      2. **Alternate: Demolish existing bleacher system from the gymnasium and patch walls and floor where existing anchors/supports are removed. Supply and install new bleacher system to replace existing system in kind.**

*Alternate No. 3: Provide all Phase 2 through 7 work on Second Shift. Phase 1 and 8 work to remain regular hours.*

1. **Base Bid Item: All work in phases 1 through 8 are to be performed during standard working hours (7 a.m. to 3:30 p.m.).**
2. **Alternate: All work in phases 2 through 7 are to be performed during second shift working hours (2:30 p.m. to 11:00 p.m.). All work performed in Phase 1 and 8 are to remain regular hours (7 a.m. to 3:30 p.m.).**

*Alternate No. 4: Provide demolition and replacement of auditorium seating in Conrad Schools of Science as shown on Drawing A-401.*

1. **Base Bid Item: Provide demolition and installation of new fixed auditorium seating in AI DuPont Middle School auditorium as shown on Drawings A3.14 and A3.15.**
2. **Alternate: In addition to new seating in AI DuPont Middle School; Provide demolition of existing seating and supply and installation of new fixed auditorium seating in Conrad Schools of Science as shown on Drawing A-401.**

*Alternate No. 5: Provide demolition and replacement of auditorium seating in Richardson Park Elementary School as shown on Drawing A-402.*

1. **Base Bid Item: Provide demolition and installation of new fixed auditorium seating in AI DuPont Middle School auditorium as shown on Drawings A3.14 and A3.15.**
2. **Alternate: In addition to new seating in AI DuPont Middle School; Provide demolition of existing seating and supply and installation of new fixed auditorium seating in Richardson Park Elementary School as shown on Drawing A-402.**

*Alternate No. 6: Provide demolition and replacement of auditorium seating in HB DuPont Middle School as shown on Drawing A-403.*

1. **Base Bid Item: Provide demolition and installation of new fixed auditorium seating in AI DuPont Middle School auditorium as shown on Drawings A3.14 and A3.15.**
2. **Alternate: In addition to new seating in AI DuPont Middle School; Provide demolition of existing seating and supply and installation of new fixed auditorium seating in HB DuPont Middle School as shown on Drawing A-403.**

*Alternate No. 7: Provide aisle lights on new auditorium seating in the AI DuPont Middle School as shown on Drawings A 3.14 and A 3.15.*

1. **Base Bid Item: No aisle lights on new auditorium seating provided under base bid contract.**
2. **Alternate: Contract A-09 : Auditorium Seating is to provide aisle lights on the new auditorium seating in the locations shown on**

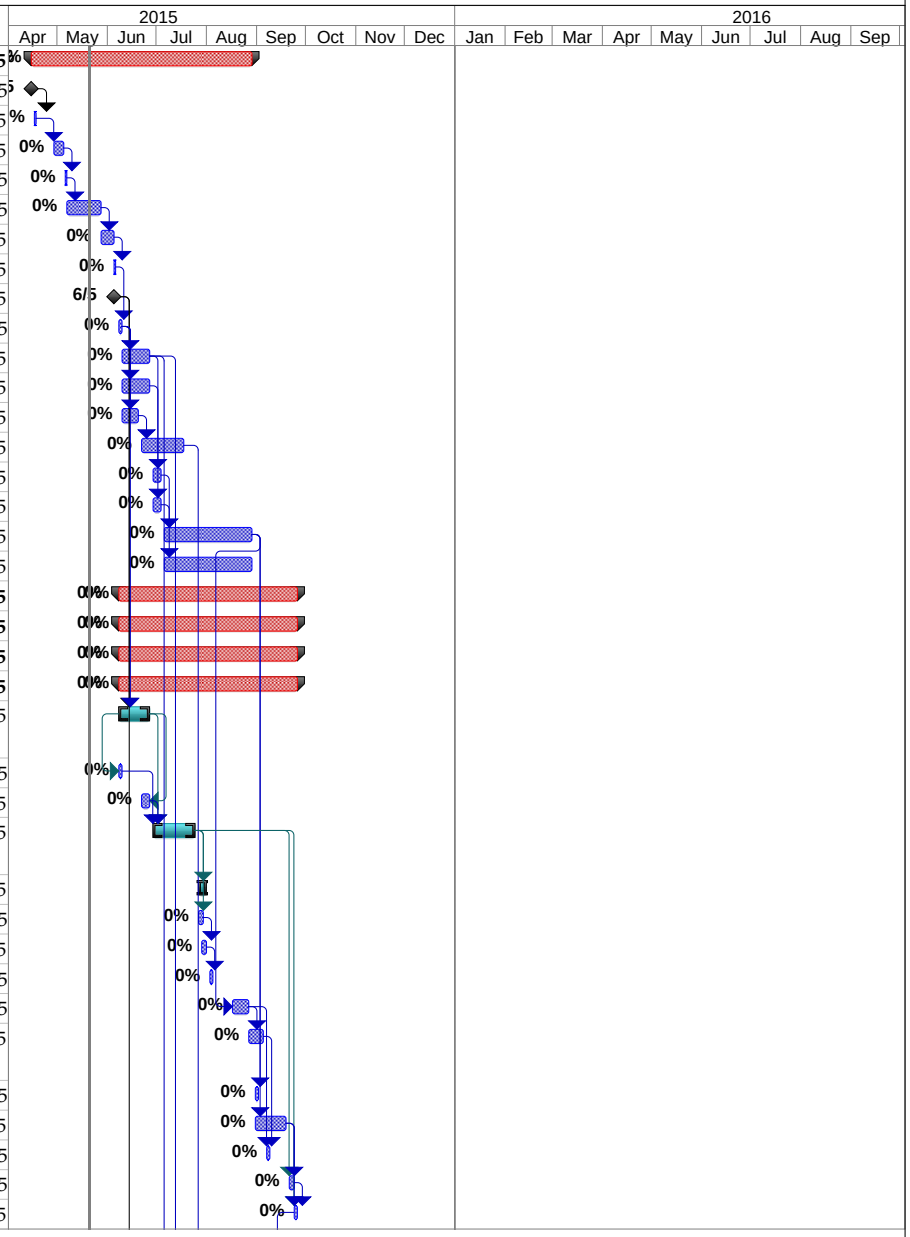
**Drawings A 3.14 and A 3.15. Contract A-08 : Electrical is to provide power connections for the new auditorium aisle lighting at each row of seating as shown on the revised electrical prints. Electrical contractor is to include saw-cutting, removal of concrete, and patching of concrete as shown on the electrical plans. Auditorium seating contractor will make final connections for aisle lights to power supplies provided by the electrician. Contract A-02 : Carpentry & General Works is to provide new colored sealant over entire concrete slab at auditorium seating area where hatched on Drawings A3.4 and A3.6.**

END OF SECTION

EDiS Company
Construction Managers

# RED CLAY CONSOLIDATED SCHOOL DISTRICT
# AI DUPONT HIGH SCHOOL RENOVATIONS
# PROJECT MASTER SCHEDULE

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 1 | **PRECONSTRUCTION** | **98 days** | **Wed 4/15/15** | **Fri 8/28/15** |
| 2 | RCCSD Board Approval for Bidding | 0 days | Wed 4/15/15 | Wed 4/15/15 |
| 3 | OMB Data Services Submission | 1 day | Fri 4/17/15 | Fri 4/17/15 |
| 4 | Advertisement for Bidding (consecutive weeks) | 4 days | Wed 4/29/15 | Mon 5/4/15 |
| 5 | Pre Bid Meeting | 1 day | Wed 5/6/15 | Wed 5/6/15 |
| 6 | Bidding Period | 15 days | Thu 5/7/15 | Wed 5/27/15 |
| 7 | Bid Review & Recommendation to Owner | 6 days | Thu 5/28/15 | Thu 6/4/15 |
| 8 | Special Facilities Meeting - Owner Reviews & Approves BPA | 1 day | Fri 6/5/15 | Fri 6/5/15 |
| 9 | School Commencement - 2015 | 0 days | Fri 6/5/15 | Fri 6/5/15 |
| 10 | Award Bid Pac A Contracts | 2 days | Mon 6/8/15 | Tue 6/9/15 |
| 11 | Develop and Submit Submittals | 13 days | Wed 6/10/15 | Fri 6/26/15 |
| 12 | Develop and Submit Mechanical Submittals | 13 days | Wed 6/10/15 | Fri 6/26/15 |
| 13 | Develop and Submit Mechanical Submittals - VAVs | 8 days | Wed 6/10/15 | Fri 6/19/15 |
| 14 | Lead Time for Phase 1 Mechanical Equipment - VAVs | 4 wks | Mon 6/22/15 | Fri 7/17/15 |
| 15 | Review and Approve Mechanical Equipment Submittals | 5 days | Mon 6/29/15 | Fri 7/3/15 |
| 16 | Review and Approve Window Submittals | 5 days | Mon 6/29/15 | Fri 7/3/15 |
| 17 | Lead Time for Phase 1 Mechanical Equipment - AHUs | 8 wks | Mon 7/6/15 | Fri 8/28/15 |
| 18 | Lead Time for Building Windows | 8 wks | Mon 7/6/15 | Fri 8/28/15 |
| 19 | **PHASE 1** | **80 days** | **Mon 6/8/15** | **Fri 9/25/15** |
| 20 | **Main Building** | **80 days** | **Mon 6/8/15** | **Fri 9/25/15** |
| 21 | **Basement Level** | **80 days** | **Mon 6/8/15** | **Fri 9/25/15** |
| 22 | **Boiler Room** | **80 days** | **Mon 6/8/15** | **Fri 9/25/15** |
| 23 | Demo & Remove existing boilers, Pumps, & associated piping in Mechanical Room | 15 days | Mon 6/8/15 | Fri 6/26/15 |
| 24 | Demo & Remove Existing Hot Water Heater | 2 days | Mon 6/8/15 | Tue 6/9/15 |
| 25 | Demo & Remove existing air compressor | 5 days | Mon 6/22/15 | Fri 6/26/15 |
| 26 | Install New Plumbing & Mechanical Piping in Boiler Room | 20 days | Mon 6/29/15 | Fri 7/24/15 |
| 27 | Install new pumps | 5 days | Mon 7/27/15 | Fri 7/31/15 |
| 28 | Install new water heaters | 3 days | Mon 7/27/15 | Wed 7/29/15 |
| 29 | Install Final Connections to New Water Heaters | 3 days | Wed 7/29/15 | Fri 7/31/15 |
| 30 | Pour new boiler equipment pads | 2 days | Mon 8/3/15 | Tue 8/4/15 |
| 31 | Install new boilers | 8 days | Mon 8/17/15 | Wed 8/26/15 |
| 32 | Install Piping, Breeching, and Final connections to boiler | 7 days | Thu 8/27/15 | Fri 9/4/15 |
| 33 | Install CU-4 on Rooftop | 2 days | Mon 8/31/15 | Tue 9/1/15 |
| 34 | Install new AHU-2 & AHU-4 | 15 days | Mon 8/31/15 | Fri 9/18/15 |
| 35 | Boiler Start-Up | 2 days | Mon 9/7/15 | Tue 9/8/15 |
| 36 | Install final connections to AHU-2 & AHU-4 | 3 days | Mon 9/21/15 | Wed 9/23/15 |
| 37 | AHU-2 & AHU-4 Start-Up | 2 days | Thu 9/24/15 | Fri 9/25/15 |



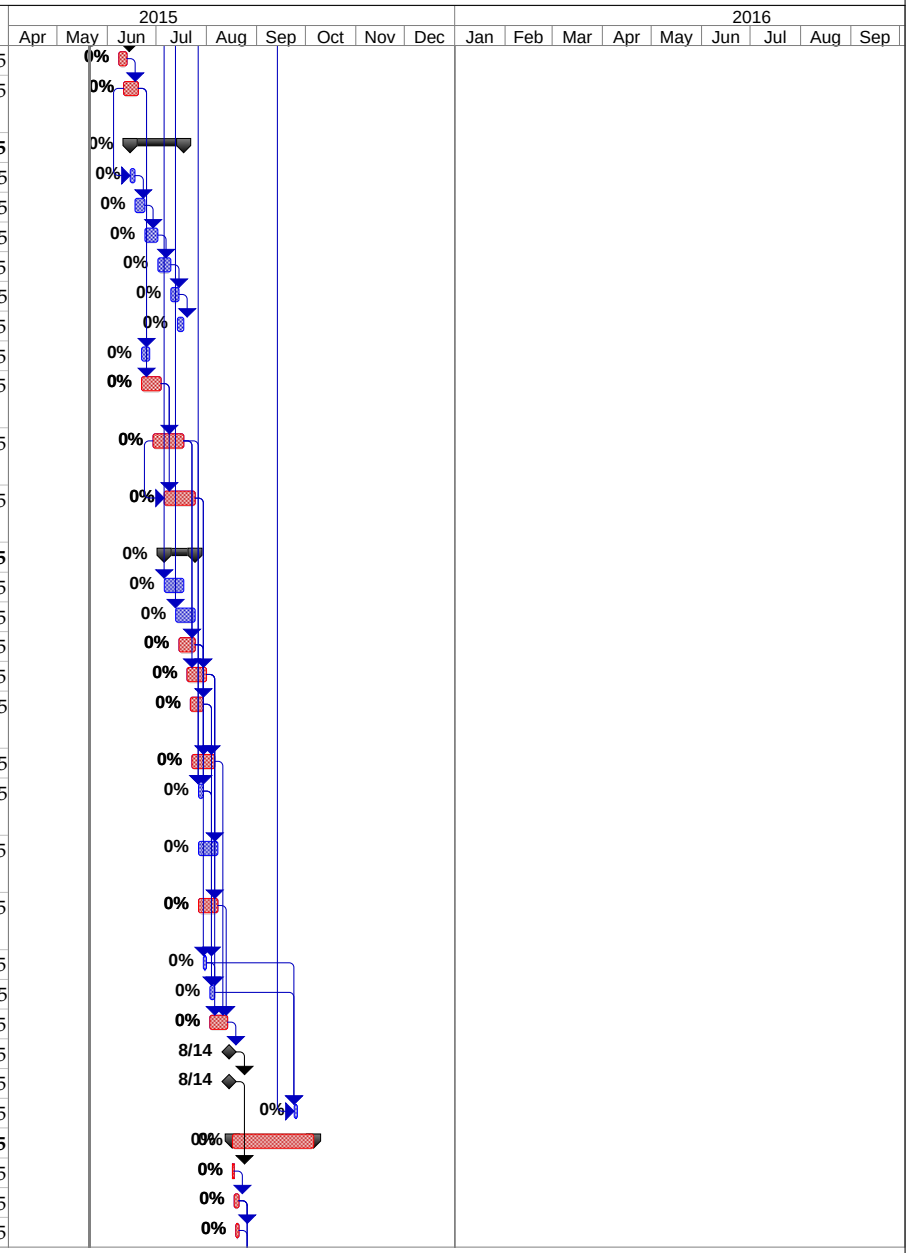

Red Clay Consolidated School District
Project Master Schedule
Date: 20 May 2015

Task | Milestone | Project Summary
Split | Summary | Critical

EDiS Company
Construction Managers

# RED CLAY CONSOLIDATED SCHOOL DISTRICT
# AI DUPONT HIGH SCHOOL RENOVATIONS
# PROJECT MASTER SCHEDULE

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 38 | Add Additional Support at Existing Light Fixtures | 5 days | Mon 6/8/15 | Fri 6/12/15 |
| 39 | Demo & Remove existing acoustical ceiling from lower level areas shown on Phasing Plans | 7 days | Thu 6/11/15 | Fri 6/19/15 |
| 40 | **Lower Level Abatement** | **25 days** | **Mon 6/15/15** | **Fri 7/17/15** |
| 41 | Abate 70 LF of pipe insulation from Corridor 3 | 3 days | Mon 6/15/15 | Wed 6/17/15 |
| 42 | Abate Pipe Insulation in Rooms 111C and 113 | 4 days | Thu 6/18/15 | Tue 6/23/15 |
| 43 | Abate Pipe insulation in Rooms 119 and 121 | 6 days | Wed 6/24/15 | Wed 7/1/15 |
| 44 | Abate Pipe Insulation in Room 123 | 6 days | Thu 7/2/15 | Thu 7/9/15 |
| 45 | Abate Pipe Insulation in Room 107S | 3 days | Fri 7/10/15 | Tue 7/14/15 |
| 46 | Abate Pipe Insulation in Rooms 115 and 132BT and 135GT | 4 days | Tue 7/14/15 | Fri 7/17/15 |
| 47 | Demo existing UV's and CUH's from lower level | 5 days | Mon 6/22/15 | Fri 6/26/15 |
| 48 | Demolish existing mechanical piping & ductwork in lower level | 10 days | Mon 6/22/15 | Fri 7/3/15 |
| 49 | Install new ductwork in lower level Corridors & Phase 1 Classrooms | 15 days | Mon 6/29/15 | Fri 7/17/15 |
| 50 | Install new mechanical piping in lower level Phase 1 Areas | 15 days | Mon 7/6/15 | Fri 7/24/15 |
| 51 | **Sitework** | **15 days** | **Mon 7/6/15** | **Fri 7/24/15** |
| 52 | Install new 4" Domestic Water Line | 2 wks | Mon 7/6/15 | Fri 7/17/15 |
| 53 | Install new Electrical Service to Building | 2 wks | Mon 7/13/15 | Fri 7/24/15 |
| 54 | Install new ductwork in cafeteria & Music Rooms | 8 days | Wed 7/15/15 | Fri 7/24/15 |
| 55 | Install Acoustical Ceiling Grid in lower level corridors | 10 days | Mon 7/20/15 | Fri 7/31/15 |
| 56 | Install new mechanical piping in lower level Cafeteria & Music Rooms | 6 days | Wed 7/22/15 | Wed 7/29/15 |
| 57 | Install Acoustical Ceiling Grid in cafeteria & music rooms | 10 days | Thu 7/23/15 | Wed 8/5/15 |
| 58 | Install new VAVs in lower level corridor, planetarium & classrooms | 3 days | Mon 7/27/15 | Wed 7/29/15 |
| 59 | Install Acoustical Ceiling Grid in lower level classrooms & planetarium | 10 days | Mon 7/27/15 | Fri 8/7/15 |
| 60 | Rehang Lights & Adjust Sprinkler Heads to New Grid - Lower level | 10 days | Mon 7/27/15 | Fri 8/7/15 |
| 61 | Install new VAVs in lower level cafeteria & music rooms | 2 days | Thu 7/30/15 | Fri 7/31/15 |
| 62 | Flush mechanical piping | 3 days | Mon 8/3/15 | Wed 8/5/15 |
| 63 | Install Ceiling Tiles - Lower Level | 9 days | Mon 8/3/15 | Thu 8/13/15 |
| 64 | Fire Marshal Inspection | 0 days | Fri 8/14/15 | Fri 8/14/15 |
| 65 | Building Final Inspection - Phase 1 | 0 days | Fri 8/14/15 | Fri 8/14/15 |
| 66 | Lower Level VAV & AHU Start-Up | 2 days | Thu 9/24/15 | Fri 9/25/15 |
| 67 | **PHASE 2** | **36 days** | **Mon 8/17/15** | **Mon 10/5/15** |
| 68 | Tie up lights & GRD's | 1 day | Mon 8/17/15 | Mon 8/17/15 |
| 69 | Demolish existing acoustical ceiling in classrooms | 3 days | Tue 8/18/15 | Thu 8/20/15 |
| 70 | Abate/Remove Existing VAV boxes with asbestos | 2 days | Wed 8/19/15 | Thu 8/20/15 |



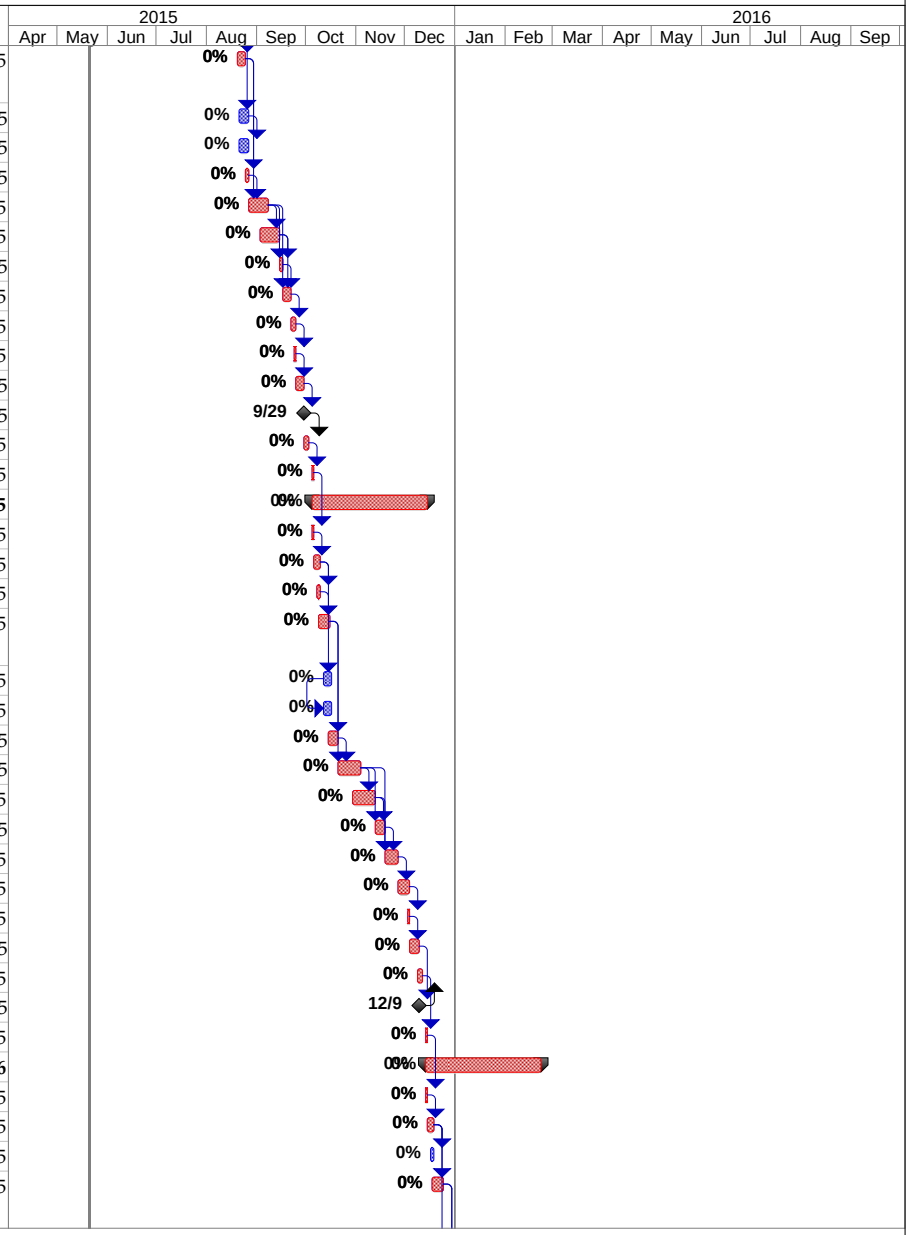

Red Clay Consolidated School District
Project Master Schedule
Date: 20 May 2015

Task | Split | Milestone | Summary | Project Summary | Critical

EDiS Company
Construction Managers

# RED CLAY CONSOLIDATED SCHOOL DISTRICT
# AI DUPONT HIGH SCHOOL RENOVATIONS
# PROJECT MASTER SCHEDULE

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 71 | Demolish & Remove Existing Mech Equipment and Ductwork in Classrooms | 3 days | Thu 8/20/15 | Mon 8/24/15 |
| 72 | Remove existing windows | 4 days | Fri 8/21/15 | Wed 8/26/15 |
| 73 | Install new blocking and windows | 4 days | Fri 8/21/15 | Wed 8/26/15 |
| 74 | Demolish existing branch piping in classrooms | 2 days | Tue 8/25/15 | Wed 8/26/15 |
| 75 | Install/Test/Insulate New Ductwork In Classrooms | 8 days | Thu 8/27/15 | Mon 9/7/15 |
| 76 | Install / Test / Insulate New Mechanical Piping in Classrooms | 8 days | Thu 9/3/15 | Mon 9/14/15 |
| 77 | Install & tie-in new Classroom VAVs | 2 days | Tue 9/15/15 | Wed 9/16/15 |
| 78 | Install Ceiling Grid | 3 days | Thu 9/17/15 | Mon 9/21/15 |
| 79 | Install Lights, Sprinklers & GRD's | 3 days | Tue 9/22/15 | Thu 9/24/15 |
| 80 | Above Ceiling Inspections - ELECTRICAL & NCC | 1 day | Thu 9/24/15 | Thu 9/24/15 |
| 81 | Install Ceiling Tiles | 3 days | Fri 9/25/15 | Tue 9/29/15 |
| 82 | NCC Final Inspection | 0 days | Tue 9/29/15 | Tue 9/29/15 |
| 83 | Final Cleaning | 3 days | Wed 9/30/15 | Fri 10/2/15 |
| 84 | RCCSD Relocates Classroom Furniture | 1 day | Mon 10/5/15 | Mon 10/5/15 |
| 85 | **PHASE 3** | **51 days** | **Mon 10/5/15** | **Mon 12/14/15** |
| 86 | Tie up lights & GRD's | 1 day | Mon 10/5/15 | Mon 10/5/15 |
| 87 | Demolish existing acoustical ceiling in classrooms | 4 days | Tue 10/6/15 | Fri 10/9/15 |
| 88 | Abate/Remove Existing VAV boxes with asbestos | 2 days | Thu 10/8/15 | Fri 10/9/15 |
| 89 | Demolish & Remove Existing Mech Equipment and Ductwork in Classrooms | 5 days | Fri 10/9/15 | Thu 10/15/15 |
| 90 | Remove existing windows | 5 days | Mon 10/12/15 | Fri 10/16/15 |
| 91 | Install new blocking and windows | 5 days | Mon 10/12/15 | Fri 10/16/15 |
| 92 | Demolish existing branch piping in classrooms | 4 days | Thu 10/15/15 | Tue 10/20/15 |
| 93 | Install/Test/Insulate New Ductwork In Classrooms | 10 days | Wed 10/21/15 | Tue 11/3/15 |
| 94 | Install / Test / Insulate New Mechanical Piping in Classrooms | 10 days | Fri 10/30/15 | Thu 11/12/15 |
| 95 | Install & tie-in new Classroom VAVs | 4 days | Fri 11/13/15 | Wed 11/18/15 |
| 96 | Install Ceiling Grid | 6 days | Thu 11/19/15 | Thu 11/26/15 |
| 97 | Install Lights, Sprinklers & GRD's | 5 days | Fri 11/27/15 | Thu 12/3/15 |
| 98 | Above Ceiling Inspections - ELECTRICAL & NCC | 1 day | Thu 12/3/15 | Thu 12/3/15 |
| 99 | Install Ceiling Tiles | 4 days | Fri 12/4/15 | Wed 12/9/15 |
| 100 | Final Cleaning | 3 days | Wed 12/9/15 | Fri 12/11/15 |
| 101 | NCC Final Inspection | 0 days | Wed 12/9/15 | Wed 12/9/15 |
| 102 | RCCSD Relocates Classroom Furniture | 1 day | Mon 12/14/15 | Mon 12/14/15 |
| 103 | **PHASE 4** | **51 days** | **Mon 12/14/15** | **Mon 2/22/16** |
| 104 | Tie up lights & GRD's | 1 day | Mon 12/14/15 | Mon 12/14/15 |
| 105 | Demolish existing acoustical ceiling in classrooms | 4 days | Tue 12/15/15 | Fri 12/18/15 |
| 106 | Abate/Remove Existing VAV boxes with asbestos | 2 days | Thu 12/17/15 | Fri 12/18/15 |
| 107 | Demolish & Remove Existing Mech Equipment and Ductwork in Classrooms | 5 days | Fri 12/18/15 | Thu 12/24/15 |



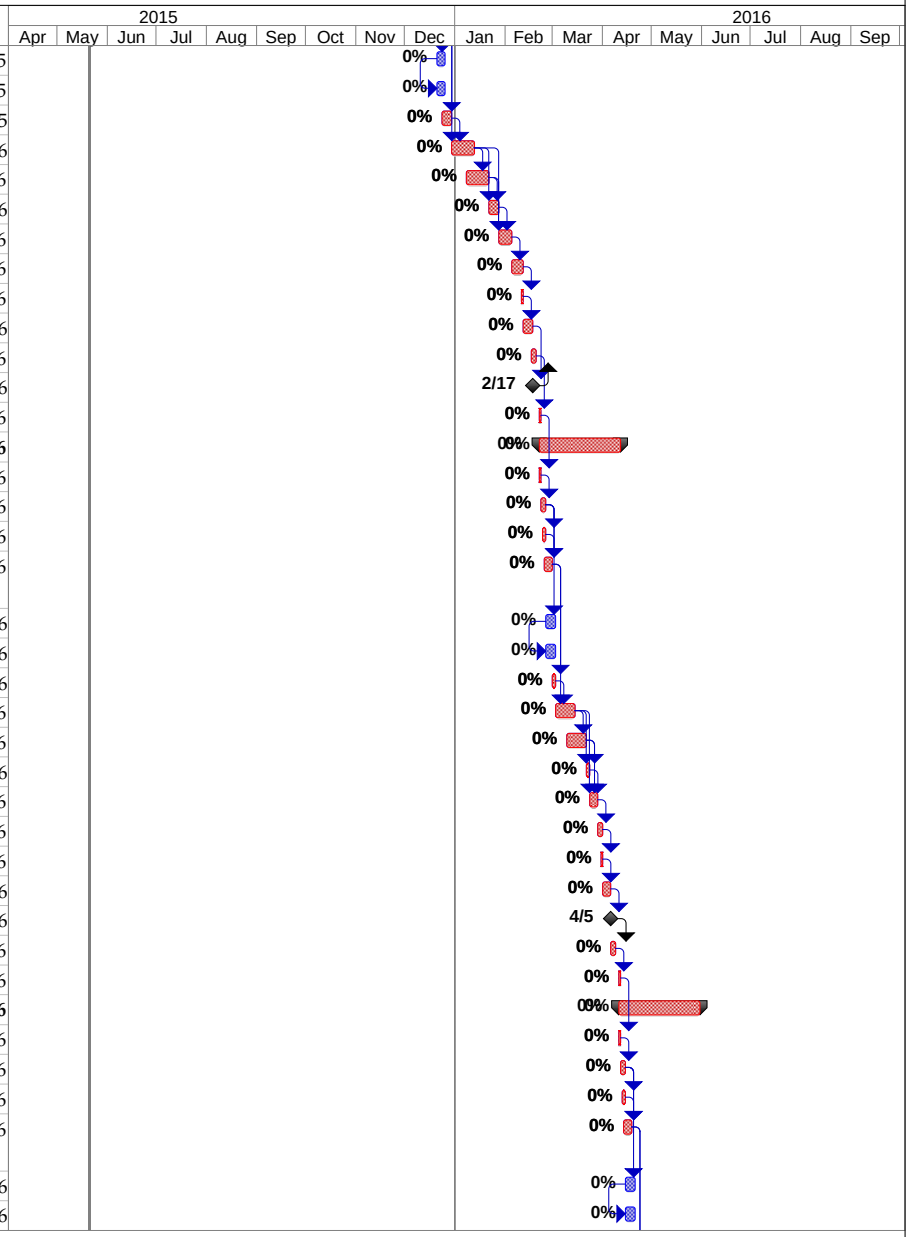

Red Clay Consolidated School District
Project Master Schedule
Date: 20 May 2015

Task | Milestone | Project Summary
Split | Summary | Critical

EDiS Company
Construction Managers

# RED CLAY CONSOLIDATED SCHOOL DISTRICT
# AI DUPONT HIGH SCHOOL RENOVATIONS
# PROJECT MASTER SCHEDULE

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 108 | Remove existing windows | 5 days | Mon 12/21/15 | Fri 12/25/15 |
| 109 | Install new blocking and windows | 5 days | Mon 12/21/15 | Fri 12/25/15 |
| 110 | Demolish existing branch piping in classrooms | 4 days | Thu 12/24/15 | Tue 12/29/15 |
| 111 | Install/Test/Insulate New Ductwork In Classrooms | 10 days | Wed 12/30/15 | Tue 1/12/16 |
| 112 | Install / Test / Insulate New Mechanical Piping in Classrooms | 10 days | Fri 1/8/16 | Thu 1/21/16 |
| 113 | Install & tie-in new Classroom VAVs | 4 days | Fri 1/22/16 | Wed 1/27/16 |
| 114 | Install Ceiling Grid | 6 days | Thu 1/28/16 | Thu 2/4/16 |
| 115 | Install Lights, Sprinklers & GRD's | 5 days | Fri 2/5/16 | Thu 2/11/16 |
| 116 | Above Ceiling Inspections - ELECTRICAL & NCC | 1 day | Thu 2/11/16 | Thu 2/11/16 |
| 117 | Install Ceiling Tiles | 4 days | Fri 2/12/16 | Wed 2/17/16 |
| 118 | Final Cleaning | 3 days | Wed 2/17/16 | Fri 2/19/16 |
| 119 | NCC Final Inspection | 0 days | Wed 2/17/16 | Wed 2/17/16 |
| 120 | RCCSD Relocates Classroom Furniture | 1 day | Mon 2/22/16 | Mon 2/22/16 |
| 121 | **PHASE 5** | **36 days** | **Mon 2/22/16** | **Mon 4/11/16** |
| 122 | Tie up lights & GRD's | 1 day | Mon 2/22/16 | Mon 2/22/16 |
| 123 | Demolish existing acoustical ceiling in classrooms | 3 days | Tue 2/23/16 | Thu 2/25/16 |
| 124 | Abate/Remove Existing VAV boxes with asbestos | 2 days | Wed 2/24/16 | Thu 2/25/16 |
| 125 | Demolish & Remove Existing Mech Equipment and Ductwork in Classrooms | 3 days | Thu 2/25/16 | Mon 2/29/16 |
| 126 | Remove existing windows | 4 days | Fri 2/26/16 | Wed 3/2/16 |
| 127 | Install new blocking and windows | 4 days | Fri 2/26/16 | Wed 3/2/16 |
| 128 | Demolish existing branch piping in classrooms | 2 days | Tue 3/1/16 | Wed 3/2/16 |
| 129 | Install/Test/Insulate New Ductwork In Classrooms | 8 days | Thu 3/3/16 | Mon 3/14/16 |
| 130 | Install / Test / Insulate New Mechanical Piping in Classrooms | 8 days | Thu 3/10/16 | Mon 3/21/16 |
| 131 | Install & tie-in new Classroom VAVs | 2 days | Tue 3/22/16 | Wed 3/23/16 |
| 132 | Install Ceiling Grid | 3 days | Thu 3/24/16 | Mon 3/28/16 |
| 133 | Install Lights, Sprinklers & GRD's | 3 days | Tue 3/29/16 | Thu 3/31/16 |
| 134 | Above Ceiling Inspections - ELECTRICAL & NCC | 1 day | Thu 3/31/16 | Thu 3/31/16 |
| 135 | Install Ceiling Tiles | 3 days | Fri 4/1/16 | Tue 4/5/16 |
| 136 | NCC Final Inspection | 0 days | Tue 4/5/16 | Tue 4/5/16 |
| 137 | Final Cleaning | 3 days | Wed 4/6/16 | Fri 4/8/16 |
| 138 | RCCSD Relocates Classroom Furniture | 1 day | Mon 4/11/16 | Mon 4/11/16 |
| 139 | **PHASE 6** | **36 days** | **Mon 4/11/16** | **Mon 5/30/16** |
| 140 | Tie up lights & GRD's | 1 day | Mon 4/11/16 | Mon 4/11/16 |
| 141 | Demolish existing acoustical ceiling in classrooms | 3 days | Tue 4/12/16 | Thu 4/14/16 |
| 142 | Abate/Remove Existing VAV boxes with asbestos | 2 days | Wed 4/13/16 | Thu 4/14/16 |
| 143 | Demolish & Remove Existing Mech Equipment and Ductwork in Classrooms | 3 days | Thu 4/14/16 | Mon 4/18/16 |
| 144 | Remove existing windows | 4 days | Fri 4/15/16 | Wed 4/20/16 |
| 145 | Install new blocking and windows | 4 days | Fri 4/15/16 | Wed 4/20/16 |



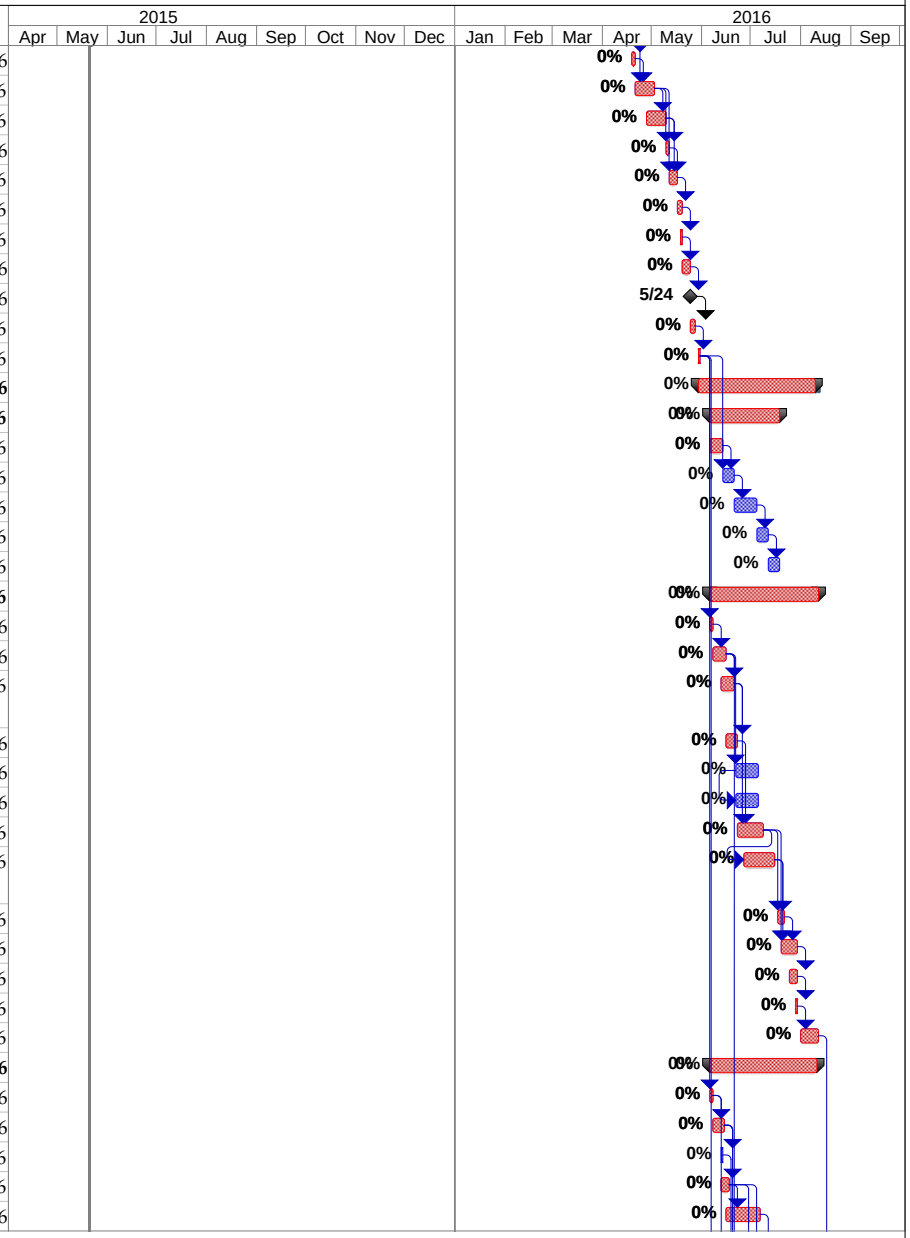

Red Clay Consolidated School District
Project Master Schedule
Date: 20 May 2015

Task | Split | Milestone | Summary | Project Summary | Critical

EDiS Company
Construction Managers

# RED CLAY CONSOLIDATED SCHOOL DISTRICT
# AI DUPONT HIGH SCHOOL RENOVATIONS
# PROJECT MASTER SCHEDULE

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 146 | Demolish existing branch piping in classrooms | 2 days | Tue 4/19/16 | Wed 4/20/16 |
| 147 | Install/Test/Insulate New Ductwork In Classrooms | 8 days | Thu 4/21/16 | Mon 5/2/16 |
| 148 | Install / Test / Insulate New Mechanical Piping in Classrooms | 8 days | Thu 4/28/16 | Mon 5/9/16 |
| 149 | Install & tie-in new Classroom VAVs | 2 days | Tue 5/10/16 | Wed 5/11/16 |
| 150 | Install Ceiling Grid | 3 days | Thu 5/12/16 | Mon 5/16/16 |
| 151 | Install Lights, Sprinklers & GRD's | 3 days | Tue 5/17/16 | Thu 5/19/16 |
| 152 | Above Ceiling Inspections - ELECTRICAL & NCC | 1 day | Thu 5/19/16 | Thu 5/19/16 |
| 153 | Install Ceiling Tiles | 3 days | Fri 5/20/16 | Tue 5/24/16 |
| 154 | NCC Final Inspection | 0 days | Tue 5/24/16 | Tue 5/24/16 |
| 155 | Final Cleaning | 3 days | Wed 5/25/16 | Fri 5/27/16 |
| 156 | RCCSD Relocates Classroom Furniture | 1 day | Mon 5/30/16 | Mon 5/30/16 |
| 157 | **PHASE 8** | **52 days** | **Mon 5/30/16** | **Tue 8/9/16** |
| 158 | **Auditorium** | **31 days** | **Mon 6/6/16** | **Mon 7/18/16** |
| 159 | Remove Auditorium Balcony Seating & Abate Floor Tile | 6 days | Mon 6/6/16 | Mon 6/13/16 |
| 160 | Demolish Existing Auditorium Seating | 5 days | Tue 6/14/16 | Mon 6/20/16 |
| 161 | Paint Ceilings & Walls (RCCSD) | 10 days | Tue 6/21/16 | Mon 7/4/16 |
| 162 | Paint Concrete Slab (RCCSD) | 5 days | Tue 7/5/16 | Mon 7/11/16 |
| 163 | Install New Auditorium Seating | 5 days | Tue 7/12/16 | Mon 7/18/16 |
| 164 | **Lower Level Classrooms** | **49 days** | **Mon 6/6/16** | **Thu 8/11/16** |
| 165 | Tie up lights & GRD's | 2 days | Mon 6/6/16 | Tue 6/7/16 |
| 166 | Demolish existing acoustical ceiling in classrooms | 6 days | Wed 6/8/16 | Wed 6/15/16 |
| 167 | Demolish & Remove Existing Mech Equipment and Ductwork in Classrooms | 6 days | Mon 6/13/16 | Mon 6/20/16 |
| 168 | Demolish existing branch piping in classrooms | 5 days | Thu 6/16/16 | Wed 6/22/16 |
| 169 | Remove existing windows | 10 days | Wed 6/22/16 | Tue 7/5/16 |
| 170 | Install new blocking and windows | 10 days | Wed 6/22/16 | Tue 7/5/16 |
| 171 | Install/Test/Insulate New Ductwork In Classrooms | 12 days | Thu 6/23/16 | Fri 7/8/16 |
| 172 | Install / Test / Insulate New Mechanical Piping in Classrooms | 15 days | Mon 6/27/16 | Fri 7/15/16 |
| 173 | Install & tie-in new Classroom VAVs | 4 days | Mon 7/18/16 | Thu 7/21/16 |
| 174 | Install Ceiling Grid | 8 days | Wed 7/20/16 | Fri 7/29/16 |
| 175 | Install Lights, Sprinklers & GRD's | 5 days | Mon 7/25/16 | Fri 7/29/16 |
| 176 | Above Ceiling Inspections - ELECTRICAL & NCC | 1 day | Fri 7/29/16 | Fri 7/29/16 |
| 177 | Install Ceiling Tiles | 9 days | Mon 8/1/16 | Thu 8/11/16 |
| 178 | **First Floor Corridors** | **48 days** | **Mon 6/6/16** | **Wed 8/10/16** |
| 179 | Tie up lights & GRD's | 2 days | Mon 6/6/16 | Tue 6/7/16 |
| 180 | Demo & Remove Existing acoustical ceiling | 5 days | Wed 6/8/16 | Tue 6/14/16 |
| 181 | Abate/Remove Existing VAV boxes with asbestos in corridor | 1 day | Mon 6/13/16 | Mon 6/13/16 |
| 182 | Demo & Remove Existing Ductwork in corridors | 5 days | Mon 6/13/16 | Fri 6/17/16 |
| 183 | Install New Ductwork in Corridors & Tie-In branch ductwork | 15 days | Thu 6/16/16 | Wed 7/6/16 |



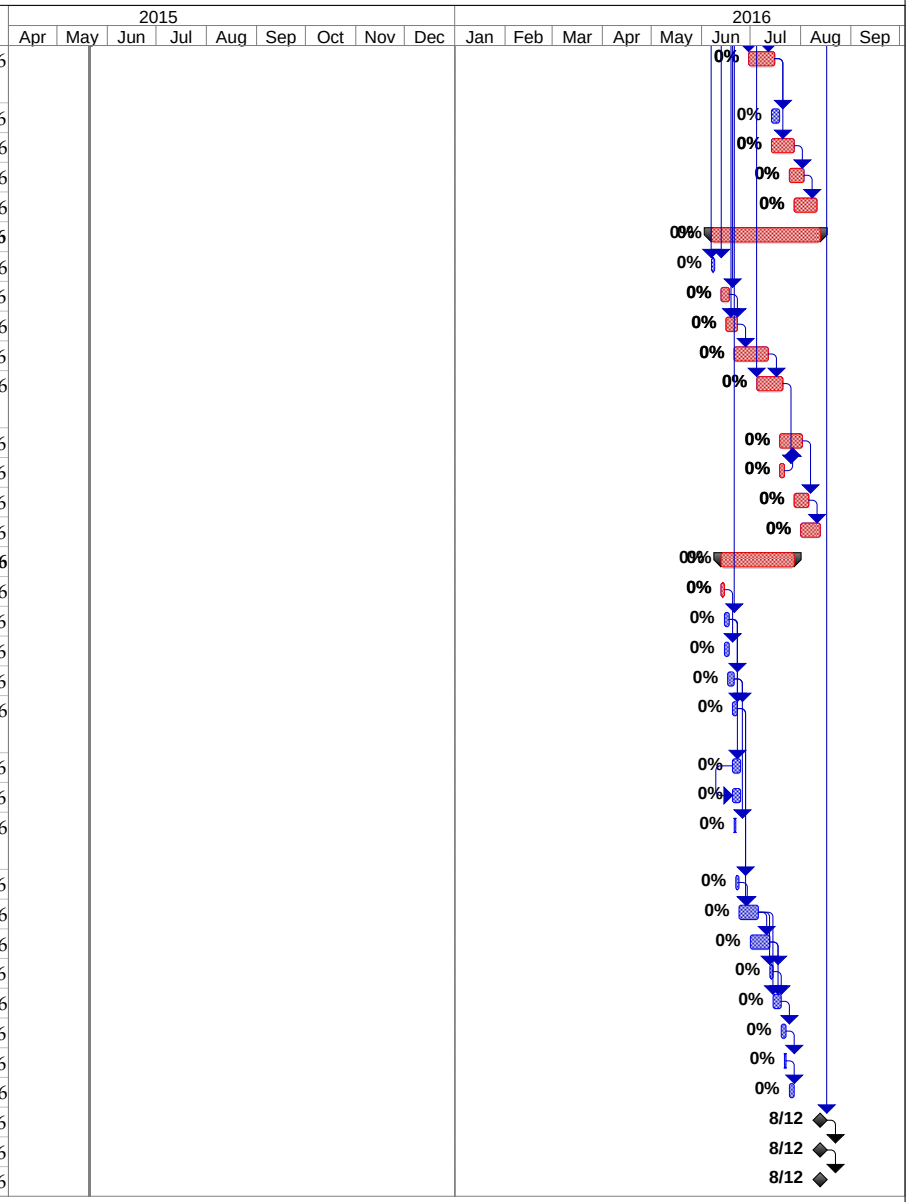

Red Clay Consolidated School District
Project Master Schedule
Date: 20 May 2015

Task | Milestone | Project Summary
Split | Summary | Critical

EDiS Company
Construction Managers

# RED CLAY CONSOLIDATED SCHOOL DISTRICT
# AI DUPONT HIGH SCHOOL RENOVATIONS
# PROJECT MASTER SCHEDULE

| ID | Task Name | Duration | Start | Finish |
|---|---|---|---|---|
| 184 | Install new hydronic mains and tie-in existing branch pipes in corridors | 12 days | Thu 6/30/16 | Fri 7/15/16 |
| 185 | Install New VAVs and CUHs in corridor | 3 days | Thu 7/14/16 | Mon 7/18/16 |
| 186 | Install Acoustical Ceiling Grid in corridors | 10 days | Thu 7/14/16 | Wed 7/27/16 |
| 187 | Rehang Lights & Adjust Sprinkler Heads to New Grid - Phase 2 | 7 days | Mon 7/25/16 | Tue 8/2/16 |
| 188 | Install Ceiling Tiles - First Floor Corridors | 10 days | Thu 7/28/16 | Wed 8/10/16 |
| 189 | **Second Floor Corridors** | **49 days** | **Tue 6/7/16** | **Fri 8/12/16** |
| 190 | Tie up lights & GRD's | 2 days | Tue 6/7/16 | Wed 6/8/16 |
| 191 | Demo & Remove Existing acoustical ceiling | 5 days | Mon 6/13/16 | Fri 6/17/16 |
| 192 | Demo & Remove Existing Ductwork in corridors | 5 days | Thu 6/16/16 | Wed 6/22/16 |
| 193 | Install New Ductwork in Corridors & Tie-In branch ductwork | 15 days | Tue 6/21/16 | Mon 7/11/16 |
| 194 | Install new hydronic mains and tie-in existing branch pipes in corridors | 12 days | Tue 7/5/16 | Wed 7/20/16 |
| 195 | Install Acoustical Ceiling Grid in corridors | 10 days | Tue 7/19/16 | Mon 8/1/16 |
| 196 | Install new VAVs and CUHs in corridor | 3 days | Tue 7/19/16 | Thu 7/21/16 |
| 197 | Rehang Lights & Adjust Sprinkler Heads to New Grid - Phase 3 | 7 days | Thu 7/28/16 | Fri 8/5/16 |
| 198 | Install Ceiling Tiles - 2nd Floor Corridor | 10 days | Mon 8/1/16 | Fri 8/12/16 |
| 199 | **First Floor Offices** | **33 days** | **Mon 6/13/16** | **Wed 7/27/16** |
| 200 | Demolish AHU-3 | 2 days | Mon 6/13/16 | Tue 6/14/16 |
| 201 | Demolish existing acoustical ceiling in offices | 3 days | Wed 6/15/16 | Fri 6/17/16 |
| 202 | Install New AHU-3 | 3 days | Wed 6/15/16 | Fri 6/17/16 |
| 203 | Abate Duct Mastic VAV Louver in Main Office | 2 days | Fri 6/17/16 | Mon 6/20/16 |
| 204 | Demolish & Remove Existing Mech Equipment and Ductwork in Offices | 3 days | Mon 6/20/16 | Wed 6/22/16 |
| 205 | Remove existing windows | 5 days | Mon 6/20/16 | Fri 6/24/16 |
| 206 | Install new blocking and windows | 5 days | Mon 6/20/16 | Fri 6/24/16 |
| 207 | Demo Wall Plaster and Abate Pipe Insulation in Nurses' Office | 1 day | Tue 6/21/16 | Tue 6/21/16 |
| 208 | Demolish existing branch piping in Offices | 2 days | Wed 6/22/16 | Thu 6/23/16 |
| 209 | Install/Test/Insulate New Ductwork In Offices | 8 days | Fri 6/24/16 | Tue 7/5/16 |
| 210 | Install / Test / Insulate New Mechanical Piping in Offices | 8 days | Fri 7/1/16 | Tue 7/12/16 |
| 211 | Install & tie-in new Office VAVs | 2 days | Wed 7/13/16 | Thu 7/14/16 |
| 212 | Install Ceiling Grid | 3 days | Fri 7/15/16 | Tue 7/19/16 |
| 213 | Install Lights, Sprinklers & GRD's | 3 days | Wed 7/20/16 | Fri 7/22/16 |
| 214 | Above Ceiling Inspections - ELECTRICAL & NCC | 1 day | Fri 7/22/16 | Fri 7/22/16 |
| 215 | Install Ceiling Tiles | 3 days | Mon 7/25/16 | Wed 7/27/16 |
| 216 | Fire Marshal Final Inspection | 0 days | Fri 8/12/16 | Fri 8/12/16 |
| 217 | NCC Land Use Final Inspection | 0 days | Fri 8/12/16 | Fri 8/12/16 |
| 218 | Substantial Completion | 0 days | Fri 8/12/16 | Fri 8/12/16 |




Red Clay Consolidated School District
Project Master Schedule
Date: 20 May 2015

Task | Split | Milestone | Summary | Project Summary | Critical

STUDIO JAED
www.studiojaed.com

**Addendum No. 3**

**Date:** May 21, 2015

**Project:** **AI DuPont MS Renovations** **Project No:** 14036

The work herein shall be considered part of the bid documents for the referenced project and carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Acknowledge receipt of addendum on the bid form as indicated.

***Item*** ***Description***

**Clarifications:**

1. None.

**RFI Responses:**

1. **Question:** All Existing Lennox roof top units controls have existing Alerton controls are we to replace them with new DDC controllers?
   **Answer: Yes.** See Specification Section 23 09 93 – Sequence of Operation for HVAC Controls, paragraph 3.10, as issued in Addendum #2. Existing equipment with Alerton controls shall be retrofitted as needed to communicate with the new building-wide BAS.

2. **Question:** Are we to assume that controls of all of the existing exhaust fans shown on the drawing (M8.26) are to be replaced?
   **Answer: Yes.** See Specification Section 23 09 93 – Sequence of Operation for HVAC Controls, paragraph 3.09, "Exhaust Fans". Change the first line to read "Exhaust Fans Serving Toilet Rooms or Locker Rooms, and for Building Relief". All exhaust fans shall be enabled and disabled based upon the occupied schedule for the building.

3. **Question:** Is there new casework going in Art 102, Fac 104, and Home Economics 106? I am not seeing any of the casework elevations in the bid package.
   **Answer:** There is no new casework in this project.

4. **Question:** On S1.2 it calls for CU-2 to remain but the mechanical drawings call for it to get replaced with a new CU-2.
   **Answer:** CU-2 is to be replaced per mechanical drawings. See sketch SK-S.1 issued with this addendum.

5. **Question:** Is the street main being tied-in to for the 4" Domestic line part of the city system or is this private? Please provide the authority who owns this main. Is the mechanical contractor responsible for obtaining a permit and purchasing the valve from this entity?

**Answer:** It is part of the City of Wilmington system. The contractor is responsible for getting the permit from the City and must be on the approved list of contractors for the City.

6. **Question:** Drawing CC-02 shows new check valves outside of the new meter box. Is this correct?
   **Answer:** The city requested the additional check valves and has stated they are outside of the meter pit. We are still waiting on their final approval.

7. **Question:** Will the Irwin 4500 bleachers be an acceptable substitution for the telescoping bleachers on the project?
   **Answer:** Yes, Irwin 4500 bleachers is an acceptable substitution.

8. **Question:** In the Clarifications item #1. I always pull off the escutcheon plate from the sprinkler heads and cut the tile and reinstall the escutcheon plat back on when my tile is installed. Is that what this clarification is referring to?
   **Answer:** Yes, contractor is to remove and reinstall escutcheon plates to facilitate new ceiling installation.

9. **Question:** In the revised Specifications Type A is Fine Fissured High NRC 1811. They also have Type B as the same item number but the specifications for type be do not match that item number. It is calling for a fiberglass tile, which 1811 is not. Do they want this Item number for type B also?
   **Answer:** See attached revised specification section 09 51 00.

10. **Question:** The item number called out for Type D is 3256 which is a 48" x 48" tile for 9/16" grid, the specs call for it to be a 2x4 tile for 15/16" grid. Which one are they wanting?
    **Answer:** See attached revised specification section 09 51 00.

11. **Question:** The specs only call for the grid to be Prelude XL 15/16" grid. The way the specs are right now Type A & B are calling for 1811 which is a fire rated tile, do they want fire rated grid? And Type B & D (assuming the item number is wrong on type B) are calling for 9/16" grid systems. There are any number of ways this could be interpreted. Do they want the grid to correspond with the item numbers, and do they want fire rated grid if the tile is fire rated?
    **Answer:** See attached revised specification section 09 51 00.

12. **Question:** For the stretch wall system there is no fabric specified other than "Heavy-Duty Fire Retardant Commercial fabric" with no specifics of color or manufacturer. Need some direction on this.
    **Answer:** Manufacturers are listed per specification 09 84 15 Section 2.01. Fabric to be manufacturer's standard line of fabric per Section 2.03D. Color to be determined by owner and architect during submittal process.

13. **Question:** Addendum #2 changed the Keynote Legend for the RCP's. There were no other RCP's re-issued with new corresponding notes on the rooms. Is it safe to assume that the new Keynote should be applied to all existing RCP's and room

designating notes, other than A3.11 which changed the designating notes for room material, even though there have been no new RCP's issued?
**Answer:** In Addendum #2, sheets A2.11 and A3.11 were reissued with changes to the Keynote Legend, as well as, the diamond shaped ceiling tags on plan. The ceiling tags on plan were not enclosed in revisions bubbles to keep the plan readable. Only these two sheets are to reflect the Keynote Legend revisions found on these two sheets, since each Keynote Legend refers only to the sheet that it is located on.

14. **Question:** The new Keynote Legend calls for Batt insulation above new ceiling. This is in Contract No. A-03's SOW. What size batt insulation are they calling for?
**Answer:** Provide 12" thick batt insulation.

15. **Question:** Section 126100 – Fixed Audience Seating : Studio Jaed response #36 in Addendum #2 stated Hussey is an approved substitution provided it meets the requirement of specifications. As with all manufacturers there are minor differences in manufacturing that make it not possible to meet the specifications of another manufacturer, these deviations were submitted with the substitution request. Is Hussey acceptable based on the deviations listed with the substitution request?
**Answer:** Specifications provided by Hussey did not specify in the deviations list the hardwood side panels as provided in StudioJAED specifications. Wood veneer was provided in the Hussey specifications. Also, see related comments in this Addendum regarding the seat bottom to be fully upholstered over the seat structure with a removable cover and zipper. Hussey is an accepted substitution based on the deviations provided, and the above mentioned deviations.

16. **Question:** Section 126100 – Fixed Audience Seating : The additional Section 126100 information included with Addendum #2 is in conflict with the current specification. Here are questions pertaining to this new information included with Addendum #2:
    a. Riser attached standards are specified. Are these required, if so, in what locations and at which schools (riser heights will also be necessary for each school, if these are required)? **Answer:** All new auditorium seats are to be floor mounted.
    b. The new information and Studio Jaed response #36 calls for a zippered seat cover, this would be for a fully upholstered seat assembly, is this correct?
    **Answer:** Yes, specified seat bottom to be fully upholstered with a removable cover.
    c. The seat frame enclosure included five options on the top of page 2 of the additional information. Which enclosure is to be used, a polypropylene seat bottom that is wrapped with upholstered cover with a zipper?
    **Answer:** Yes, polypropylene seat bottom to be fully upholstered with a removable cover.
    d. The armrests are specified to be four different options with this additional information. The original Section 126100 specified only wood armrests. Are wood armrests still required? **Answer:** Hardwood armrests and end panels to be provided.

17. **Question:** Section 126613 – Telescopic Bleachers : Section 126613, paragraph 2.01.A.1.b. calls for 11-5/8" row rise, it is recommended to utilize 9-5/8" row rise

on bleachers this size. This will require less maintenance over the bleacher. Can 9-5/8" row rise be used in lieu of 11-5/8"?
**Answer:** Yes, a 9 5/8" row rise is permitted.

18. **Question:** Section 126613 – Telescopic Bleachers : Section 126613, paragraph 2.01.A.1.3. calls for permanent and recoverable ADA spaces. Which are to be provided?
**Answer:** Permanent ADA spaces with front panels and rails to be provided. Recoverable spaces are not required.

19. **Question:** Section 126613 – Telescopic Bleachers : Removable belt barriers are used for recoverable ADA spaces and front rails with front panels for permanent ADA spaces, based on the response to which style is to be used, item 2.07.E. or 2.07.L. & 2.07.O. would need to be deleted. Can you advise which needs to be deleted?
**Answer:** Permanent ADA spaces with front panels and rails to be provided. Recoverable spaces are not required.

20. **Question:** Section 126613 – Telescopic Bleachers : Section 126613, paragraph 2.05.D. calls for high humidity finish. This is an expensive upgrade and not used in a gymnasium but with pool side bleachers. Is high humidity finish to be supplied for these bleachers?
**Answer:** High humidity finish is not required.

21. **Question:** Section 126613 – Telescopic Bleachers : Section 126613, paragraphs 2.07.J. and 2.07.K call for two different kinds of aisle handrails. It is recommended that non-folding, aisle handrails be used, as these will require less maintenance over the life of the bleacher. Can 2.07.J. be used in lieu of 2.07.K.?
**Answer:** Intermediate Aisle Handrails section 2.07J to be provided.

22. **Question:** Section 126613 – Telescopic Bleachers: Section 126613, paragraph 2.07.N. calls for rear panels, these are not supplied on wall attached bleachers, only portable or freestanding bleachers that are away from the wall. Can you confirm that rear panels are not required?
**Answer:** Rear panels are not required.

**Changes to Drawings:**

General

1. Changes have been made to Phases 1, 7, and 8. See attached revised set of Phasing Plans.

Structural

1. Drawing S1.2 – Revise structural work at CU-2. See sketch SK-S.1.

Architectural

1. None.

Mechanical

1. None.

Electrical

1. None.

Plumbing

1. None.

**Changes to Specification Manual:**

1. *Specification Section 09 51 00– Acoustical Ceilings:* Replace section with attached revised section in this Addendum.
2. *Specification Section 12 61 00 – Fixed Auditorium Seating*: In section 2.01.A.1 Basis of Design revised to 200 Series BW Contour.
3. *Specification Section 12 66 13– Telescopic Bleachers*:
    a. Irwin 4500 bleachers is an acceptable substitution.
    b. Delete the following sections:
        i. *2*.05D: High humidity finish
        ii. *2*.07C: Flex-Row
        iii. *2*.07E: Removable Belt barrier
        iv. *2*.07K: Intermediate Folding Aisle Handrails
        v. *2*.07N: Rear Panel
4. *Specification Section 23 09 53 – Sequence of Operation for HVAC Controls*:
    a. Change to paragraph 3.09, "Exhaust Fans". Change the first line to read "Exhaust Fans Serving Toilet Rooms or Locker Rooms, and for Building Relief". All exhaust fans shall be enabled and disabled based upon the occupied schedule for the building.
    b. Add paragraph 3.12 "Relief Hoods" as follows:
        i. Relief Hoods: Relief hoods for building pressure control shall be opened and closed based on the occupied and unoccupied schedule for the building. Display damper position on the BAS terminal, and verify damper position via end-switch.
5. *Specification Section 23 36 00 – Air Terminal Units*: Approved manufacturers for VAV terminal units are: Trane Co., York / JCI, Daikin / McQuay, and Envirotec.
6. *Specification Section 23 21 14 – Hydronic Specialties:*
    a. Approved manufacturers for strainers are Armstrong International, Green Country Filtration, Weamco, and Victaulic.
    b. Approved manufacturers for combination flow controls are Amtrol Inc, Bell & Gossett, Cla-Val, and Tour and Andersson.
7. *Specification Section 23 09 93 – Sequence of Operations for HVAC Controls:* Add the following section:
    3.12 RELIEF HOODS (8 UNITS TOTAL; 6 AUDITORIUM, 2 CLASSROOM)
    A. Relief hoods for building pressure control.
    1. Relief hoods shall open at the start of occupied mode and close at the start of unoccupied mode.
8. *Specification Section 23 21 13 – Hydronic Piping:* Replace section with section attached to this addendum.

9. *Specification Section 23 09 23 – Direct Digital Control System for HVAC:* Add "Alerton Controls by Advanced Power Control" to approved manufacturers.

# SECTION 09 51 00
# ACOUSTICAL CEILINGS

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Suspended metal grid ceiling system.

B. Acoustical units.

C. Support hangers, channels, and wires.

### 1.02 RELATED REQUIREMENTS

A. Section 07 21 00 - Thermal Insulation: Acoustical insulation.

B. Section 07 90 05 - Joint Sealers: Acoustical sealant.

C. Section 28 31 00 - Fire Detection and Alarm: Fire alarm components in ceiling system.

D. Section 23 37 00 - Air Outlets and Inlets: Air diffusion devices in ceiling.

E. Section 26 51 00 - Interior Lighting: Light fixtures in ceiling system.

### 1.03 REFERENCE STANDARDS

A. ASTM C635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.

B. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.

C. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions.

D. ASTM E1264 - Standard Classification for Acoustical Ceiling Products.

### 1.04 SUBMITTALS

A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

B. Shop Drawings: Indicate grid layout and related dimensioning, junctions with other ceiling finishes, and mechanical and electrical items installed in the ceiling.

C. Product Data: Provide data on suspension system components, acoustical units, and supplementary acoustical insulation.

D. Samples: Submit two samples 4x4 inch in size illustrating material and finish of acoustical units.

E.

F. Samples: Submit two samples each, 6 inches long, of suspension system main runner, cross runner, and perimeter molding.

G. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

### 1.05 QUALITY ASSURANCE

A. Suspension System Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years documented experience.

B. Acoustical Unit Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years documented experience.

### 1.06 FIELD CONDITIONS

A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

**1.07 PROJECT CONDITIONS**

A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.

B. Install acoustical units after interior wet work is dry.

**1.08 EXTRA MATERIALS**

A. See Section 01 60 00 - Product Requirements, for additional provisions.

**PART 2 PRODUCTS**

**2.01 ACOUSTICAL UNITS**

A. Manufacturers:
   1. Armstrong World Industries, Inc: www.armstrong.com.
   2. Substitutions: See Section 01 60 00 - Product Requirements.

B. Acoustical Units - General: ASTM E1264, Class A.
   1. Units for Installation in Fire-Rated Suspension System: Listed and classified for the fire-resistive assembly the suspension system is a part of.

C. Acoustical Tile Type A: Painted mineral fiber, ASTM E1264 Type III, with to the following characteristics:
   1. VOC Content: As specified in Section 01 61 16.
   2. Size: 24 x 48 inches.
   3. Thickness: 3/4 inches.
   4. Edge: Square.
   5. Surface Color: White.
   6. Product: Fissured 755 by Armstrong.

D. Acoustical Tile Type C and E: Scrubbable faced mineral fiber, ASTM E1264 Type IV, with the following characteristics:
   1. VOC Content: As specified in Section 01 61 16.
   2. Size: 24 x 48 inches (Type C), 24 x 24 inches (Type E).
   3. Thickness: 3/4 inches.
   4. Edge: Square.
   5. Surface Color: White.
   6. Surface Pattern: Fine.
   7. Product: Health Zone Ultima by Armstrong.
      a. 1938 (Type C).
      b. 1935 (Type E).

E. Acoustical Panels Type B: Painted mineral fiber, ASTM E 1264 Type III with the following characteristics:
   1. VOC Content: As specified in Section 01 61 16.
   2. Size: 24x24 inches.
   3. Thickness: 3/4 inches.
   4. Edge: Square.
   5. Surface Color: White.
   6. Surface Pattern: Non-directional textured.
   7. Product: Fissured 756 by Armstrong.

F. Acoustical Panels Type D: painted faced mineral fiber, ASTM E 1264 Type III with the following characteristics:
   1. VOC Content: As specified in Section 01 61 16.
   2. Size: 24 x 48 inches.

3. Thickness: 7/8 inches.
4. NRC Range:.75, determined as specified in ASTM E1264.
5. Edge: Square.
6. Surface Pattern: Non-directional fissured.
7. Product: Fine Fissured High NRC 1755 by Armstrong.

**2.02 SUSPENSION SYSTEM(S)**

A. Manufacturers:
1. Same as for acoustical units.
2. Armstrong World Industries, Inc:www.armstrong.com.
3. Substitutions: See Section 01 60 00 - Product Requirements.

B. Suspension Systems - General: ASTM C635; die cut and interlocking components, with stabilizer bars, clips, splices, perimeter moldings, and hold down clips as required.

C. Exposed Tee Steel Suspension System: Formed galvanized steel, commercial quality cold rolled; heavy-duty.
1. Profile: Tee; for square tegular edge panels 15/16 inch wide face.
2. Construction: Double web.
3. Finish: White painted.
4. Product: Prelude XL, 15/16" by Armstrong.

**2.03 ACCESSORIES**

A. Support Channels and Hangers: Galvanized steel; size and type to suit application and ceiling system flatness requirement specified.

B. Perimeter Moldings: Same material and finish as grid.

C. Acoustical Sealant For Perimeter Moldings: Specified in Section 07 90 05.

D. Gasket For Perimeter Moldings: Closed cell rubber sponge tape.

E. Touch-up Paint: Type and color to match acoustical and grid units.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Verify existing conditions before starting work.

B. Verify that layout of hangers will not interfere with other work.

**3.02 INSTALLATION - SUSPENSION SYSTEM**

A. Install suspension system in accordance with ASTM C 636, ASTM E 580, and manufacturer's instructions and as supplemented in this section.

B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:240.

C. Lay out system to a balanced grid design with edge units no less than 50 percent of acoustical unit size.

D. Locate system on room axis according to reflected plan.

E. Install after major above-ceiling work is complete. Coordinate the location of hangers with other work.

F. Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.

G. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.

H. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.

I. Support fixture loads using supplementary hangers located within 6 inches of each corner, or support components independently.

J. Do not eccentrically load system or induce rotation of runners.

K. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
   1. Install in bed of acoustical sealant or in bed of acoustical sealant.
   2. Use longest practical lengths.
   3. Miter or Overlap and rivet corners.

L. Form expansion joints as detailed. Form to accommodate plus or minus 1 inch movement. Maintain visual closure.

**3.03 INSTALLATION - ACOUSTICAL UNITS**

A. Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

C. Fit border trim neatly against abutting surfaces.

D. Install units after above-ceiling work is complete.

E. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

F. Cutting Acoustical Units:
   1. Cut to fit irregular grid and perimeter edge trim.
   2. Make field cut edges of same profile as factory edges.
   3. Double cut and field paint exposed reveal edges.

G. Where round obstructions and bullnose corners occur, provide preformed closures to match perimeter molding.

H. Install hold-down clips on panels within 20 ft of an exterior door.

**3.04 TOLERANCES**

A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.

B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

**END OF SECTION**

# SECTION 23 21 13
# HYDRONIC PIPING

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Hydronic system requirements (Chilled water, hot water, dual temperature)

B. Heating water piping, above grade.

C. Pipe and pipe fittings for:
   1. Hot water piping system.
   2. Equipment drains and overflows.

D. Pipe hangers and supports.

E. Unions, flanges, mechanical couplings, and dielectric connections.

F. Valves:
   1. Gate valves.
   2. Globe or angle valves.
   3. Ball valves.
   4. Plug valves.
   5. Butterfly valves.
   6. Check valves.

G. Flow controls.

### 1.02 RELATED REQUIREMENTS

A. Section 08 31 00 - Access Doors and Panels.

B. Section 09 90 00 - Painting and Coating.

C. Section 22 05 16 - Expansion Fittings and Loops for Plumbing Piping.

D. Section 22 05 48 - Vibration and Seismic Controls for Plumbing Piping and Equipment.

E. Section 22 05 53 - Identification for Plumbing Piping and Equipment.

F. Section 22 07 19 - Plumbing Piping Insulation.

G. Section 22 05 16 - Expansion Fittings and Loops for Plumbing Piping.

H. Section 23 05 16 - Expansion Fittings and Loops for HVAC Piping.

I. Section 23 05 48 - Vibration and Seismic Contols for HVAC.

J. Section 23 05 53 - Identification for HVAC Piping and Equipment.

K. Section 23 07 19 - HVAC Piping Insulation.

L. Section 23 21 14 - Hydronic Specialties.

M. Section 23 25 00 - HVAC Water Treatment: Pipe cleaning.

N. Section 26 27 17 - Equipment Wiring: Electrical characteristics and wiring connections.

### 1.03 REFERENCE STANDARDS

A. ASME (BPV IX) - Boiler and Pressure Vessel Code, Section IX - Welding and Brazing Qualifications; The American Society of Mechanical Engineers.

B. ASME B16.3 - Malleable Iron Threaded Fittings; The American Society of Mechanical Engineers.

C. ASME B16.3 - Malleable Iron Threaded Fittings; The American Society of Mechanical Engineers.

D. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers (ANSI B16.18).

E. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings.

F. ASME B31.9 - Building Services Piping (ANSI/ASME B31.9).

G. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers.

H. ASME B31.5 - Refrigeration Piping and Heat Transfer Components; The American Society of Mechanical Engineers.

I. ASME B31.9 - Building Services Piping; The American Society of Mechanical Engineers (ANSI/ASME B31.9).

J. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless.

K. ASTM A234/A234M - Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service.

L. ASTM B32 - Standard Specification for Solder Metal.

M. ASTM B88 - Standard Specification for Seamless Copper Water Tube.

N. ASTM B88M - Standard Specification for Seamless Copper Water Tube (Metric).

O. ASTM D1785 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120.

P. ASTM D2235 - Standard Specification for Solvent Cement for Acrylonitrile-Butadiene-Styrene (ABS) Plastic Pipe and Fittings.

Q. ASTM D2241 - Standard Specification for Poly (Vinyl Chloride) (PVC) Pressure-Rated Pipe (SDR Series).

R. ASTM D2310 - Standard Classification for Machine-Made "Fiberglass" (Glass-Fiber-Reinforced Thermosetting-Resin) Pipe.

S. ASTM D2466 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40.

T. ASTM D2467 - Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80.

U. ASTM D2680 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) and Poly(Vinyl Chloride) (PVC) Composite-Sewer Piping.

V. ASTM D2751 - Standard Specification for Acrylonitrile-Butadiene-Styrene (ABS) Sewer Pipe and Fittings.

W. ASTM D2855 - Standard Practice for Making Solvent-Cemented Joints with Poly(Vinyl Chloride) (PVC) Pipe and Fittings.

X. ASTM F708 - Standard Practice for Design and Installation of Rigid Pipe Hangers.

Y. ASTM F876 - Standard Specification for Crosslinked Polyethylene (PEX) Tubing.

Z. ASTM F1476 - Standard Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications.

AA. AWS A5.8/A5.8M - Specification for Filler Metals for Brazing and Braze Welding.

AB. ASTM F877 - Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems.

AC. AWS A5.8/A5.8M - Specification for Filler Metals for Brazing and Braze Welding; American Welding Society.

AD. AWS D1.1/D1.1M - Structural Welding Code - Steel.

AE. AWWA C105/A21.5 - Polyethylene Encasement for Ductile-Iron Pipe Systems (ANSI/AWWA C105/A21.5).

AF. AWWA C105/A21.5 - Polyethylene Encasement for Ductile-Iron Pipe Systems; American Water Works Association (ANSI/AWWA C105/A21.5).

AG. AWWA C110/A21.10 - American National Standard for Ductile-Iron and Gray-Iron Fittings, 3 In. Through 48 In. (75 mm Through 1200 mm), for Water and Other Liquids; American Water Works Association.

AH. AWWA C111/A21.11 - Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings; American Water Works Association (ANSI/AWWA C111/A21.11).

AI. AWWA C151/A21.51 - Ductile-Iron Pipe, Centrifugally Cast, for Water; American Water Works Association (ANSI/AWWA C151/A21.51).

AJ. AWWA C606 - Grooved and Shouldered Joints (ANSI/AWWA C606).

AK. AWWA C606 - Standard Specification for Grooved and Shouldered Joints; American Water Works Association.

AL. MSS SP-58 - Pipe Hangers and Supports - Materials, Design and Manufacture, Selection, Application, and Installation; Manufacturers Standardization Society of the Valve and Fittings Industry, Inc..

**1.04 SYSTEM DESCRIPTION**

A. Where more than one piping system material is specified, ensure system components are compatible and joined to ensure the integrity of the system is not jeopardized. Provide necessary joining fittings. Ensure flanges, union, and couplings for servicing are consistently provided.

B. Use grooved mechanical couplings and fasteners in accessible locations.

C. Use unions, flanges, and couplings downstream of valves and at equipment or apparatus connections. Do not use direct welded or threaded connections to valves, equipment or other apparatus.

D. Use non-conducting dielectric connections whenever jointing dissimilar metals.

E. Provide pipe hangers and supports in accordance with ASME B31.9 unless indicated otherwise.

F. Use gate or ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.

G. Use globe or ball valves for throttling, bypass, or manual flow control services.

H. Use spring loaded check valves on discharge of condenser water pumps.

I. Use plug cocks for throttling service. Use non-lubricated plug cocks only when shut-off or isolating valves are also provided.

J. Use only butterfly valves in chilled and condenser water systems for throttling and isolation service.

K. Use lug end butterfly valves to isolate equipment.

L. Use 3/4 inch gate or ball valves with cap for drains at main shut-off valves, low points of piping, bases of vertical risers, and at equipment. Pipe to nearest floor drain.

**1.05 SUBMITTALS**

A. Product Data: Include data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalogue information. Indicate valve data and ratings.

B. Welders Certificate: Include welders certification of compliance with ASME (BPV IX).

C. Manufacturer's Installation Instructions: Indicate hanging and support methods, joining procedures.

D. Project Record Documents: Record actual locations of valves.

E. Maintenance Data: Include installation instructions, spare parts lists, exploded assembly views.

**1.06 QUALITY ASSURANCE**

A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with minimum three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified in this section, with minimum three years of experience.

C. Welder Qualifications: Certify in accordance with ASME (BPV IX).

**1.07 REGULATORY REQUIREMENTS**

A. Conform to ASME B31.9 code for installation of piping system.

B. Welding Materials and Procedures: Conform to ASME (BPV IX) and applicable state labor regulations.

C. Provide certificate of compliance from authority having jurisdiction, indicating approval of welders.

**1.08 DELIVERY, STORAGE, AND HANDLING**

A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.

B. Provide temporary protective coating on cast iron and steel valves.

C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

D. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

**1.09 FIELD CONDITIONS**

A. Do not install underground piping when bedding is wet or frozen.

**1.10 EXTRA MATERIALS**

A. Provide two repacking kits for each size and valve type.

**PART 2 PRODUCTS**

**2.01 HYDRONIC SYSTEM REQUIREMENTS**

A. Comply with ASME B31.9 and applicable federal, state, and local regulations.

B. Piping: Provide piping, fittings, hangers and supports as required, as indicated, and as follows:
   1. Where more than one piping system material is specified, provide joining fittings that are compatible with piping materials and ensure that the integrity of the system is not jeopardized.
   2. Use non-conducting dielectric connections whenever jointing dissimilar metals.
   3. Grooved mechanical joints may be used in accessible locations only.
      a. Accessible locations include those exposed on interior of building, in pipe chases, above acoustical ceilings, and in mechanical rooms, aboveground outdoors, and as approved by Architect.
      b. Use rigid joints unless otherwise indicated.
   4. Provide pipe hangers and supports in accordance with ASME B31.9 or MSS SP-58 unless indicated otherwise.
   5. Provide pipe hangers and supports in accordance with ASME B31.9 unless indicated otherwise.

C. Pipe-to-Valve and Pipe-to-Equipment Connections: Use flanges, unions, or grooved couplings to allow disconnection of components for servicing; do not use direct welded, soldered, or threaded connections.

D. Valves: Provide valves where indicated:
   1. Provide drain valves where indicated, and if not indicated provide at least at main shut-off, low points of piping, bases of vertical risers, and at equipment. Use 3/4 inch gate valves with cap.
   2. For throttling, bypass, or manual flow control services, use globe, ball, or butterfly valves.

E. Welding Materials and Procedures: Conform to ASME (BPV IX).

**2.02 DUAL TEMPERATURE, HEATING, & CHILLED WATER PIPING, BURIED**

A. Steel Pipe: ASTM A53/A53M, Schedule 40, black with AWWA C105/A21.5 polyethylene jacket, or double layer, half-lapped polyethylene tape.
   1. Fittings: ASTM A234/A234M, wrought steel welding type with double layer, half-lapped polyethylene tape.
   2. Joints: Welded in accordance with AWS D1.1.
   3. Casing: Closed glass cell insulation.

B. Steel Pipe Sizes 12 Inch and Over: ASTM A53/A53M, 0.375 inch wall, black with AWWA C105/A21.5 polyethylene jacket, or double layer, half-lapped polyethylene tape.
   1. Fittings: ASTM A234/A234M, wrought steel welding type with double layer, half-lapped polyethylene tape.
   2. Joints: Welded in accordance with AWS D1.1.
   3. Casing: Closed glass cell insulation.

**2.03 DUAL TEMPERATURE, HEATING, & CHILLED WATER PIPING, ABOVE GRADE**

A. Steel Pipe: ASTM A53/A53M, Schedule 40, black; using one of the following joint types:
   1. Welded Joints: ASTM A234/A234M, wrought steel welding type fittings; AWS D1.1 welded.
   2. Threaded Joints: ASME B16.3, malleable iron fittings.
   3. Grooved Joints: AWWA C606 grooved pipe, fittings of same material, and mechanical couplings.
   4. Fittings: ASME B16.3, malleable iron or ASTM A 234/A 234M, wrought steel welding type.
   5. Joints: Threaded or AWS D1.1 welded.

B. Steel Pipe Sizes 12 Inch and Over: ASTM A53/A53M, 0.375 inch wall, black; using one of the following joint types:
   1. Welded Joints: ASTM A234/A234M, wrought steel welding type fittings; AWS D1.1 welded.
   2. Grooved Joints: AWWA C606 grooved pipe, fittings of same material, and mechanical couplings.
   3. Joints: Welded in accordance with AWS D1.1.

C. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), hard drawn; using one of the following joint types:
   1. Solder Joints: ASME B16.18 cast brass/bronze or ASME B16.22, solder wrought copper fittings.
      a. Solder: ASTM B32 lead-free solder, HB alloy (95-5 tin-antimony) or tin and silver.
      b. Braze: AWS A5.8/A5.8M BCuP copper/silver alloy.
   2. Grooved Joints: AWWA C606 grooved tube, fittings of same material, and copper-tube-dimension mechanical couplings.
   3. Tee Connections: Mechanically extracted collars with notched and dimpled branch tube.
   4. Mechanical Press Sealed Fittings: Double pressed type complying with ASME B16.22, utilizing EPDM, non toxic synthetic rubber sealing elements.
      a. Manufacturers:

1) Grinnell Products, a Tyco Business; Model _____: www.grinnell.com.
2) Shurjoint Piping Products, Inc., a Tyco Business; Model _____: www.shurjoint.com.
3) Viega LLC; Model _____: www.viega.com.
4) Substitutions: See Section 01 60 00 - Product Requirements.

5. Joints: Solder, lead free, ASTM B 32, HB alloy (95-5 tin-antimony), or tin and silver.

**2.04 EQUIPMENT DRAINS AND OVERFLOWS**

A. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), drawn; using one of the following joint types:
   1. Solder Joints: ASME B16.18 cast brass/bronze or ASME B16.22 solder wrought copper fittings; ASTM B32 lead-free solder, HB alloy (95-5 tin-antimony) or tin and silver.
   2. Joints: Solder, lead free, ASTM B 32, HB alloy (95-5 tin-antimony), or tin and silver.

B. PVC Pipe: ASTM D1785, Schedule 40, or ASTM D2241, SDR 21 or 26.
   1. Fittings: ASTM D2466 or D2467, PVC.
   2. Joints: Solvent welded in accordance with ASTM D2855.

**2.05 PIPE HANGERS AND SUPPORTS**

A. Provide hangers and supports that comply with MSS SP-58.
   1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.

B. Conform to ASME B31.9.

C. Hangers for Pipe Sizes 1/2 to 1-1/2 Inch: Malleable iron, adjustable swivel, split ring.

D. Hangers for Cold Pipe Sizes 2 Inches and Over: Carbon steel, adjustable, clevis.

E. Hangers for Hot Pipe Sizes 2 to 4 Inches: Carbon steel, adjustable, clevis.

F. Hangers for Hot Pipe Sizes 6 Inches and Over: Adjustable steel yoke, cast iron roll, double hanger.

G. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.

H. Multiple or Trapeze Hangers for Hot Pipe Sizes 6 Inches and Over: Steel channels with welded spacers and hanger rods, cast iron roll.

I. Wall Support for Pipe Sizes to 3 Inches: Cast iron hook.

J. Wall Support for Pipe Sizes 4 Inches and Over: Welded steel bracket and wrought steel clamp.

K. Wall Support for Hot Pipe Sizes 6 Inches and Over: Welded steel bracket and wrought steel clamp with adjustable steel yoke and cast iron roll.

L. Vertical Support: Steel riser clamp.

M. Floor Support for Cold Pipe: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.

N. Floor Support for Hot Pipe Sizes to 4 Inches: Cast iron adjustable pipe saddle, lock nut, nipple, floor flange, and concrete pier or steel support.

O. Floor Support for Hot Pipe Sizes 6 Inches and Over: Adjustable cast iron roll and stand, steel screws, and concrete pier or steel support.

P. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

Q. Hanger Rods: Mild steel threaded both ends, threaded one end, or continuous threaded.

R. Inserts: Malleable iron case of steel shell and expander plug for threaded connection with lateral adjustment, top slot for reinforcing rods, lugs for attaching to forms; size inserts to suit threaded hanger rods.

S. In grooved installations, use rigid couplings with offsetting angle-pattern bolt pads or with wedge shaped grooves in header piping to permit support and hanging in accordance with ASME B31.9.

**2.06 UNIONS, FLANGES, MECHANICAL COUPLINGS, AND DIELECTRIC CONNECTIONS**

A. Unions for Pipe 2 Inches and Under:
   1. Ferrous Piping: 150 psig malleable iron, threaded.
   2. Copper Pipe: Bronze, soldered joints.

B. Flanges for Pipe Over 2 Inches:
   1. Ferrous Piping: 150 psig forged steel, slip-on.
   2. Copper Piping: Bronze.
   3. Gaskets: 1/16 inch thick preformed neoprene.

C. Mechanical Couplings for Grooved and Shouldered Joints: Two or more curved housing segments with continuous key to engage pipe groove, circular C-profile gasket, and bolts to secure and compress gasket.
   1. Dimensions and Testing: In accordance with AWWA C606.
   2. Mechanical Couplings: Comply with ASTM F1476.
   3. Housing Material: Malleable iron or ductile iron, galvanized.
   4. Housing Clamps: Malleable iron galvanized to engage and lock, designed to permit some angular deflection, contraction, and expansion.
   5. Gasket Material: EPDM suitable for operating temperature range from -30 degrees F to 230 degrees F.
   6. Bolts and Nuts: Hot dipped galvanized or zinc-electroplated steel.
   7. When pipe is field grooved, provide coupling manufacturer's grooving tools.
   8. Manufacturers:
      a. Grinnell Products, a Tyco Business; Model ____: www.grinnell.com.
      b. Shurjoint Piping Products, Inc., a Tyco Business; Model _____: www.shurjoint.com.
      c. Victaulic Company: www.victaulic.com.

D. Dielectric Connections: Union or waterway fitting with water impervious isolation barrier and one galvanized or plated steel end and one copper tube end, end types to match pipe joint types used.

**2.07 GATE VALVES**

A. Manufacturers:
   1. Conbraco Industries: www.conbraco.com.
   2. Nibco, Inc: www.nibco.com.
   3. Milwaukee Valve Company: www.milwaukeevalve.com.
   4. Substitutions: See Section 01 60 00 - Product Requirements.

B. Up To and Including 2 Inches:
   1. Bronze body, bronze trim, screwed or union bonnet, non-rising stem, lockshield stem or handwheel, inside screw with backseating stem, solid wedge disc, alloy seat rings, solder ends.

C. Over 2 Inches:
   1. Iron body, bronze trim, bolted bonnet, rising stem, handwheel, outside screw and yoke, solid wedge disc with bronze seat rings, flanged or grooved ends.

**2.08 GLOBE OR ANGLE VALVES**

A. Manufacturers:
   1. Conbraco Industries: www.conbraco.com.
   2. Nibco, Inc: www.nibco.com.
   3. Milwaukee Valve Company: www.milwaukeevalve.com.

4. Substitutions: See Section 01 60 00 - Product Requirements.

B. Up To and Including 2 Inches:
1. Bronze body, bronze trim, screwed or union bonnet, rising stem and handwheel, inside screw with backseating stem, renewable composition disc and bronze seat, solder ends.

C. Over 2 Inches:
1. Iron body, bronze trim, bolted bonnet, rising stem, handwheel, outside screw and yoke, rotating plug-type disc with renewable seat ring and disc, flanged ends.

**2.09 BALL VALVES**

A. Manufacturers:
1. Conbraco Industries: www.conbraco.com.
2. Nibco, Inc: www.nibco.com.
3. Victaulic Company; Model ____: www.victaulic.com.
4. Milwaukee Valve Company: www.milwaukeevalve.com.
5. Substitutions: See Section 01 60 00 - Product Requirements.

B. Up To and Including 2 Inches:
1. Bronze one piece body, chrome plated brass ball, teflon seats and stuffing box ring, lever handle with balancing stops, solder ends with union.

C. Over 2 Inches:
1. Ductile iron body, chrome plated steel ball, teflon seat and stuffing box seals, lever handle, grooved ends or flanged, rated to 800 psi.
2. Cast steel body, chrome plated steel ball, teflon seat and stuffing box seals, lever handle, flanged.

**2.10 PLUG VALVES**

A. Manufacturers:
1. Conbraco Industries: www.conbraco.com.
2. Nibco, Inc: www.nibco.com.
3. Milwaukee Valve Company: www.milwaukeevalve.com.
4. Substitutions: See Section 01 60 00 - Product Requirements.

B. Up To and Including 2 Inches:
1. Bronze body, bronze tapered plug, full port opening, non-lubricated, teflon packing, threaded ends.
2. Operator: One plug valve wrench for every ten plug valves minimum of one.

C. Over 2 Inches:
1. Cast iron body and plug, full port opening, pressure lubricated, teflon packing, flanged ends.
2. Operator: Each plug valve with a wrench with set screw.

**2.11 BUTTERFLY VALVES**

A. Manufacturers:
1. Hammond Valve: www.hammondvalve.com.
2. Crane Co.: www.cranevalve.com.
3. Milwaukee Valve Company: www.milwaukeevalve.com.
4. Victaulic Company; Model ____: www.victaulic.com.
5. Substitutions: See Section 01 60 00 - Product Requirements.

B. Body: Cast or ductile iron with resilient replaceable EPDM seat, wafer, lug, grooved, or _____ ends, extended neck.

C. Disc: Construct of aluminum bronze, chrome plated ductile iron, stainless steel, ductile iron with EPDM enscapsulation, Buna-N enscapsulation, or _____.

D. Body: Cast or ductile iron with resilient replaceable EPDM seat, wafer or lug ends, extended neck.

E. Disc: Aluminum bronze.

F. Operator: 10 position lever handle.

**2.12 SWING CHECK VALVES**

A. Manufacturers:
   1. Hammond Valve: www.hammondvalve.com.
   2. Nibco, Inc: www.nibco.com.
   3. Victaulic Company; Model ____: www.victaulic.com.
   4. Milwaukee Valve Company: www.milwaukeevalve.com.
   5. Substitutions: See Section 01 60 00 - Product Requirements.

B. Up To and Including 2 Inches:
   1. Bronze body, bronze trim, bronze rotating swing disc, with composition disc, solder ends.

C. Over 2 Inches:
   1. Iron body, bronze or _____ trim, stainless steel, bronze, bronze faced rotating, or _____ swing disc, renewable disc and seat, flanged, grooved, or _____ ends.
   2. Iron body, bronze trim, bronze or bronze faced rotating swing disc, renewable disc and seat, flanged ends.

**2.13 SPRING LOADED CHECK VALVES**

A. Manufacturers:
   1. Hammond Valve: www.hammondvalve.com.
   2. Crane Co.: www.cranevalve.com.
   3. Milwaukee Valve Company: www.milwaukeevalve.com.
   4. Victaulic Company; Model ____: www.victaulic.com.
   5. Substitutions: See Section 01 60 00 - Product Requirements.

B. Iron body, bronze trim, split plate, hinged with stainless steel spring, resilient seal bonded to body, wafer or threaded lug ends.

**2.14 FLOW CONTROLS**

A. Manufacturers:
   1. ITT Bell & Gossett: www.bellgossett.com.
   2. Griswold Controls: www.griswoldcontrols.com.
   3. Taco, Inc: www.taco-hvac.com.
   4. Victaulic Company; Model ____: www.victaulic.com.
   5. Substitutions: See Section 01 60 00 - Product Requirements.

B. Construction: Class 125, Brass or bronze body with union on inlet and outlet, temperature and pressure test plug on inlet and outlet, blowdown/backflush drain.

C. Calibration: Control flow within 5 percent of selected rating, over operating pressure range of 10 times minimum pressure required for control, maximum minimum pressure 3.5 psi.

D. Calibration: Control flow within 5 percent of selected rating, over operating pressure range of 10 times minimum pressure required for control, maximum minimum pressure 3.5 psi psi.

**PART 3 EXECUTION**

**3.01 PREPARATION**

A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.

B. Prepare pipe for grooved mechanical joints as required by coupling manufacturer.

C. Remove scale and dirt on inside and outside before assembly.

D. Prepare piping connections to equipment using jointing system specified.

E. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.

F. After completion, fill, clean, and treat systems. Refer to Section 23 25 00 for additional requirements.

**3.02 INSTALLATION**

A. Install in accordance with manufacturer's instructions.

B. Install heating water, chilled water, dual-temperature, and condenser water piping to ASME B31.9 requirements.

C. PVC Pipe: Make solvent-welded joints in accordance with ASTM D2855.

D. Route piping in orderly manner, parallel to building structure, and maintain gradient.

E. Install piping to conserve building space and to avoid interfere with use of space.

F. Group piping whenever practical at common elevations.

G. Sleeve pipe passing through partitions, walls and floors.

H. Slope piping and arrange to drain at low points.

I. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Refer to Section 22 05 16.

J. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment. Refer to Section 23 05 16.

K. Inserts:
   1. Provide inserts for placement in concrete formwork.
   2. Provide inserts for suspending hangers from reinforced concrete slabs and sides of reinforced concrete beams.
   3. Provide hooked rod to concrete reinforcement section for inserts carrying pipe over 4 inches.
   4. Where concrete slabs form finished ceiling, locate inserts flush with slab surface.
   5. Where inserts are omitted, drill through concrete slab from below and provide through-bolt with recessed square steel plate and nut flush with top of slab.

L. Pipe Hangers and Supports:
   1. Install in accordance with ASME B31.9.
   2. Support horizontal piping as scheduled.
   3. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
   4. Place hangers within 12 inches of each horizontal elbow.
   5. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
   6. Support vertical piping at every floor. Support riser piping independently of connected horizontal piping.
   7. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
   8. Provide copper plated hangers and supports for copper piping.
   9. Prime coat exposed steel hangers and supports. Refer to Section 09 90 00. Hangers and supports located in crawl spaces, pipe shafts, and suspended ceiling spaces are not considered exposed.

M. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings. Refer to Section 22 07 19.

N. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings. Refer to Section 23 07 19.

O. Provide access where valves and fittings are not exposed. Coordinate size and location of access doors with Section 08 31 00.

P. Use eccentric reducers to maintain top of pipe level.

Q. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc rich primer to welds.

R. Prepare unfinished pipe, fittings, supports, and accessories, ready for finish painting. Refer to Section 09 90 00.

S. Install valves with stems upright or horizontal, not inverted.

**3.03 SCHEDULES**

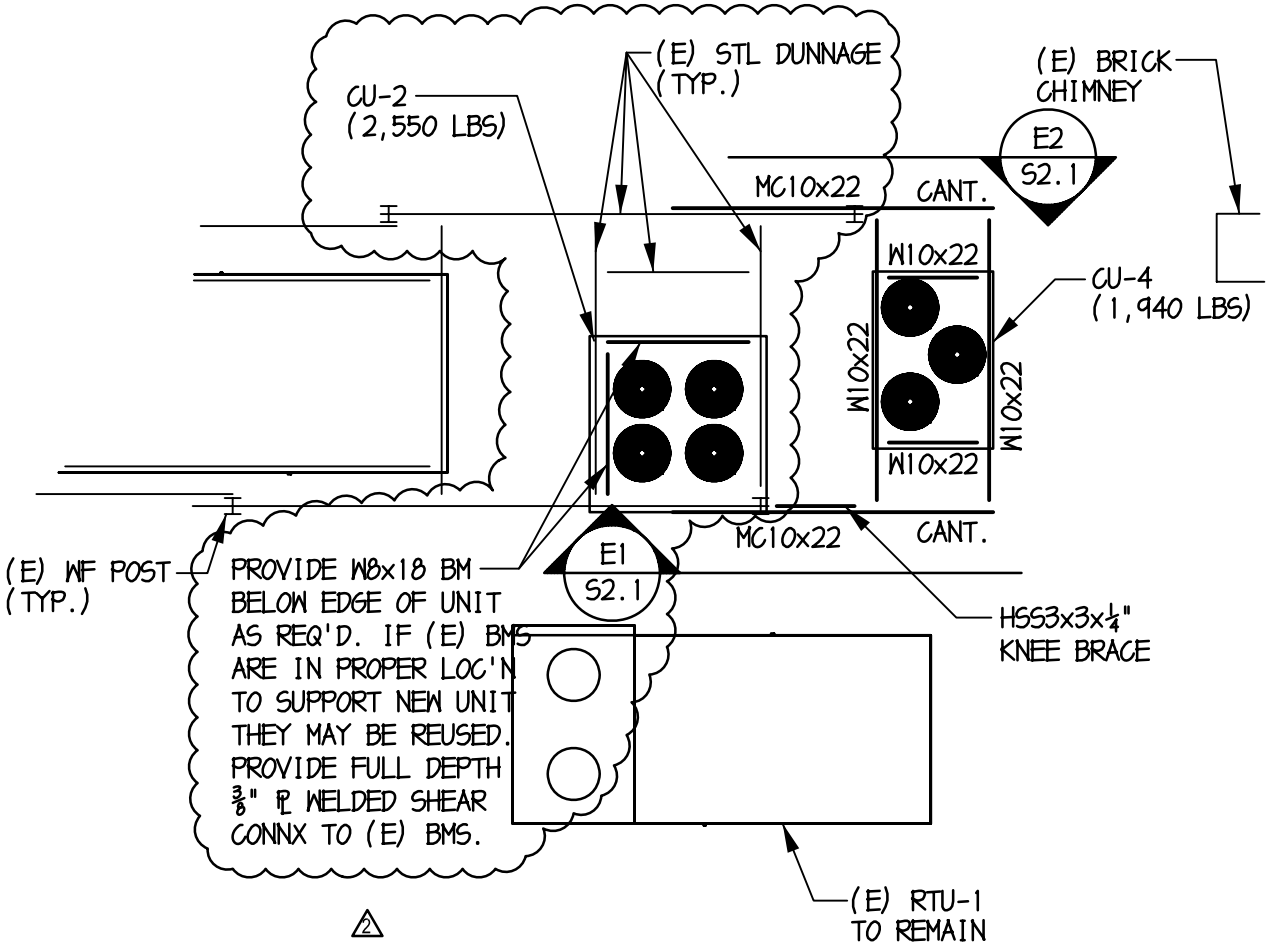
A. Hanger Spacing for Copper Tubing.
1. 1/2 inch and 3/4 inch: Maximum span, 5 feet; minimum rod size, 1/4 inch.
2. 1 inch: Maximum span, 6 feet; minimum rod size, 1/4 inch.
3. 1-1/2 inch and 2 inch: Maximum span, 8 feet; minimum rod size, 3/8 inch.
4. 2-1/2 inch: Maximum span, 9 feet; minimum rod size, 3/8 inch.
5. 3 inch: Maximum span, 10 feet; minimum rod size, 3/8 inch.
6. 4 inch: Maximum span, 12 feet; minimum rod size, 1/2 inch.
7. 6 inch: Maximum span, 14 feet; minimum rod size, 1/2 inch.
8. 8 inch: Maximum span, 16 feet; minimum rod size, 5/8 inch.
9. 10 inch: Maximum span, 18 feet; minimum rod size, 3/4 inch.
10. 12 inch: Maximum span, 19 feet; minimum rod size, 7/8 inch.

B. Hanger Spacing for Steel Piping.
1. 1/2 inch, 3/4 inch, and 1 inch: Maximum span, 7 feet; minimum rod size, 1/4 inch.
2. 1-1/4 inches: Maximum span, 8 feet; minimum rod size, 3/8 inch.
3. 1-1/2 inches: Maximum span, 9 feet; minimum rod size, 3/8 inch.
4. 2 inches: Maximum span, 10 feet; minimum rod size, 3/8 inch.
5. 2-1/2 inches: Maximum span, 11 feet; minimum rod size, 3/8 inch.
6. 3 inches: Maximum span, 12 feet; minimum rod size, 3/8 inch.
7. 4 inches: Maximum span, 14 feet; minimum rod size, 1/2 inch.
8. 6 inches: Maximum span, 17 feet; minimum rod size, 1/2 inch.
9. 8 inches: Maximum span, 19 feet; minimum rod size, 5/8 inch.
10. 10 inches: Maximum span, 20 feet; minimum rod size, 3/4 inch.
11. 12 inches: Maximum span, 23 feet; minimum rod size, 7/8 inch.
12. 14 inches: Maximum span, 25 feet; minimum rod size, 1 inch.
13. 16 inches: Maximum span, 27 feet; minimum rod size, 1 inch.
14. 18 inches: Maximum span, 28 feet; minimum rod size, 1-1/4 inch.
15. 20 inches: Maximum span, 30 feet; minimum rod size, 1-1/4 inch.

C. Hanger Spacing for Plastic Piping.
1. 1/2 inch: Maximum span, 42 inches; minimum rod size, 1/4 inch.
2. 3/4 inch: Maximum span, 45 inches; minimum rod size, 1/4 inch.
3. 1 inch: Maximum span, 51 inches; minimum rod size, 1/4 inch.
4. 1-1/4 inches: Maximum span, 57 inches; minimum rod size, 3/8 inch.
5. 1-1/2 inches: Maximum span, 63 inches; minimum rod size, 3/8 inch.
6. 2 inches: Maximum span, 69 inches; minimum rod size, 3/8 inch.
7. 3 inches: Maximum span, 7 feet; minimum rod size, 3/8 inch.

8. 4 inches: Maximum span, 8 feet; minimum rod size, 1/2 inch.
9. 6 inches: Maximum span, 10 feet; minimum rod size, 1/2 inch.
10. 8 inches: Maximum span, 11 feet; minimum rod size, 5/8 inch.
11. 10 inches: Maximum span, 13 feet; minimum rod size, 3/4 inch.
12. 12 inches: Maximum span, 14 feet; minimum rod size, 7/8 inch.
13. 14 inches: Maximum span, 15 feet; minimum rod size, 1 inch.
14. 16 inches: Maximum span, 16 feet; minimum rod size, 1 inch.
15. 18 inches: Maximum span, 18 feet; minimum rod size, 1-1/4 inch.

**END OF SECTION**




P1
SK-S.1

# PARTIAL ROOF PLAN

1/8" = 1'-0"

NOTES:

1. REF. DWG S1.2 FOR PLAN NOTES.

| | | | |
|---|---|---|---|
| 05/21/15 | S1.2 | PROJECT: | REVISIONS: |
| DATE | SHEET NO. | RED CLAY CONSOLIDATED SCHOOL DISTRICT<br>A.I. DuPont MIddle School<br>HVAC RENOVATION<br>3130 KENNETT PIKE<br>WILMINGTON, DELAWARE 19807 | 2 ADDENDUM #3 |
| D9342.00 | SK-S.1 | | |
| PROJECT NO. | | | |

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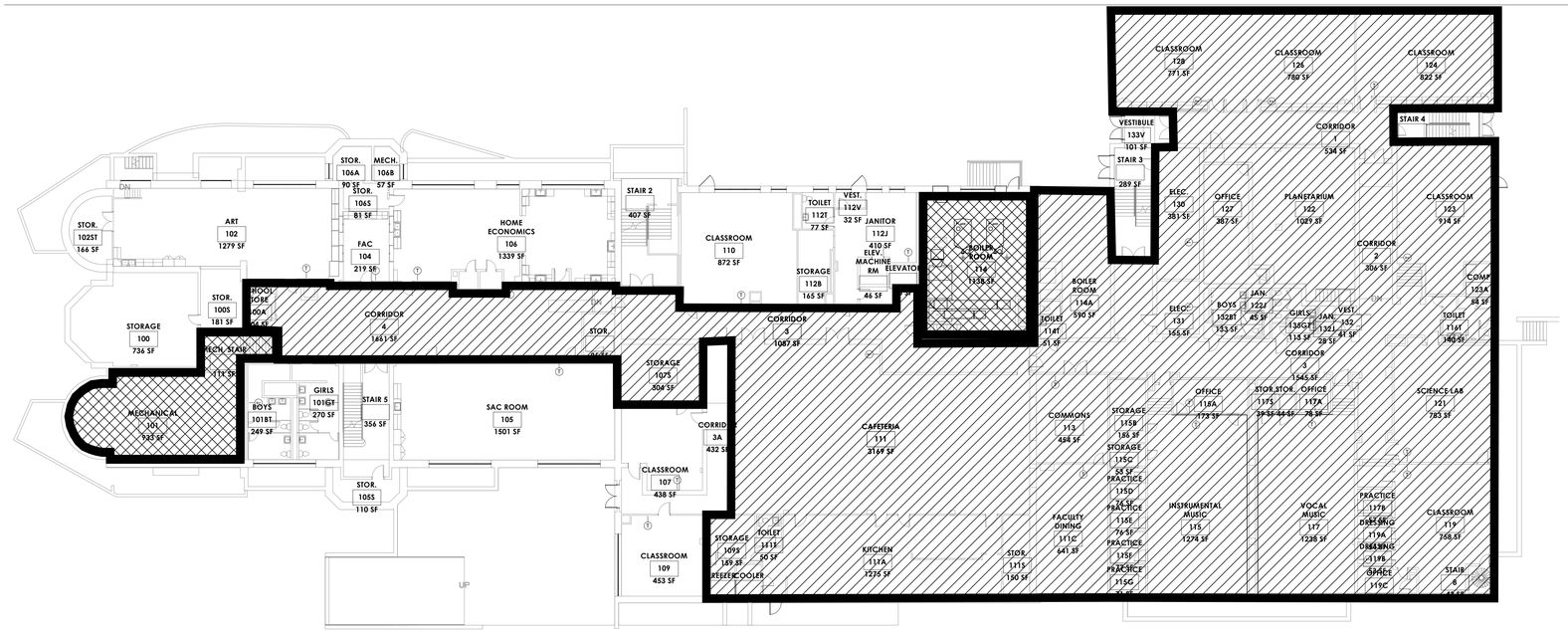
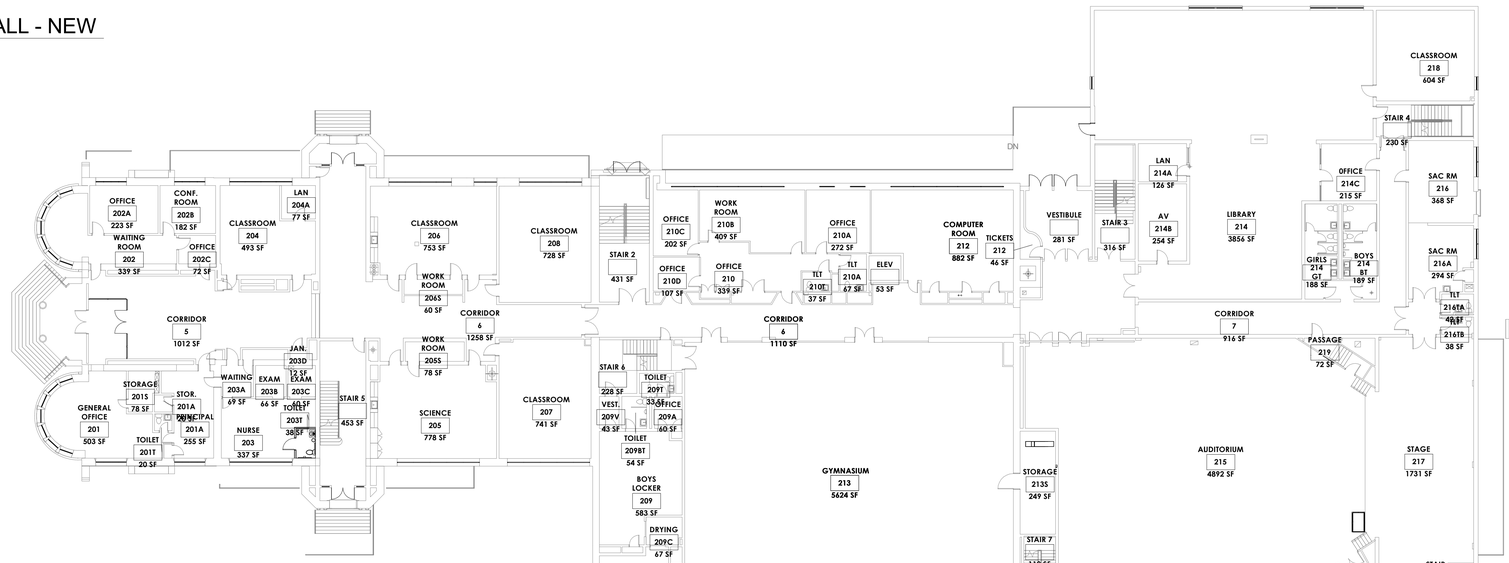
# PHASE 1 - SUMMER 2015



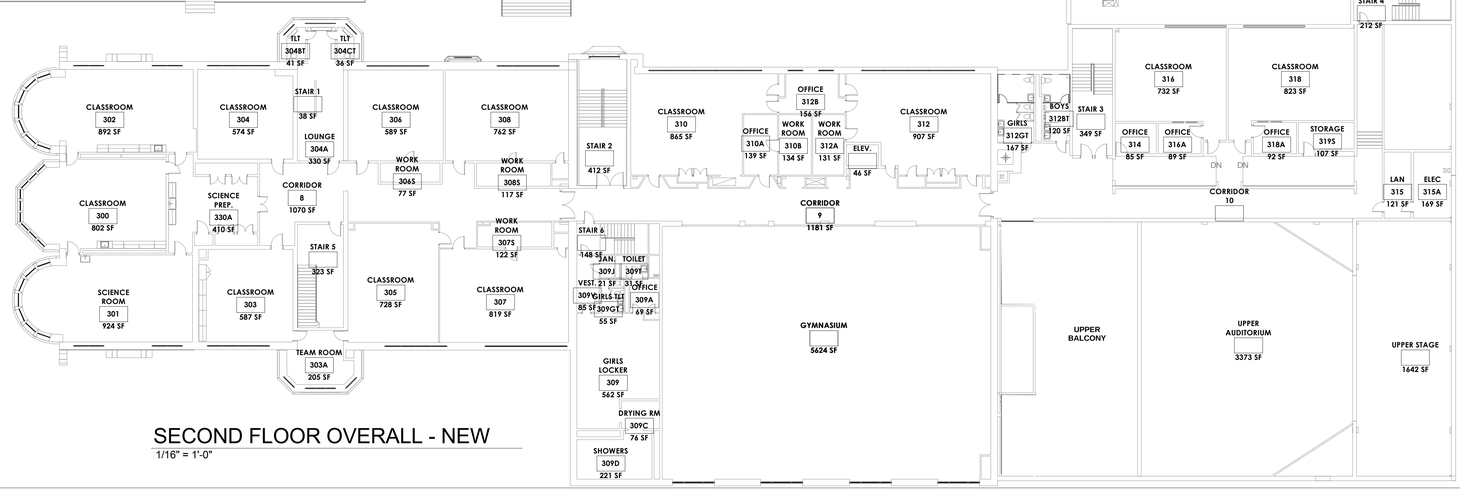

## LOWER LEVEL OVERALL - NEW

1/16" = 1'-0"




## FIRST FLOOR OVERALL - NEW

1/16" = 1'-0"




## SECOND FLOOR OVERALL - NEW

1/16" = 1'-0"

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PROJECT

RED CLAY CONSOLIDATED SCHOOL DISTRICT

A. I. DuPont Middle School
HVAC RENOVATION
3130 KENNETT PIKE
WILMINGTON, DELAWARE 19807

SHEET TITLE

PHASING PLAN
PHASE 1

DRAWN | CHK'D / DESIGNER

DISCIPLINE | SHEET NO.

PROJECT NO. 14036

P1

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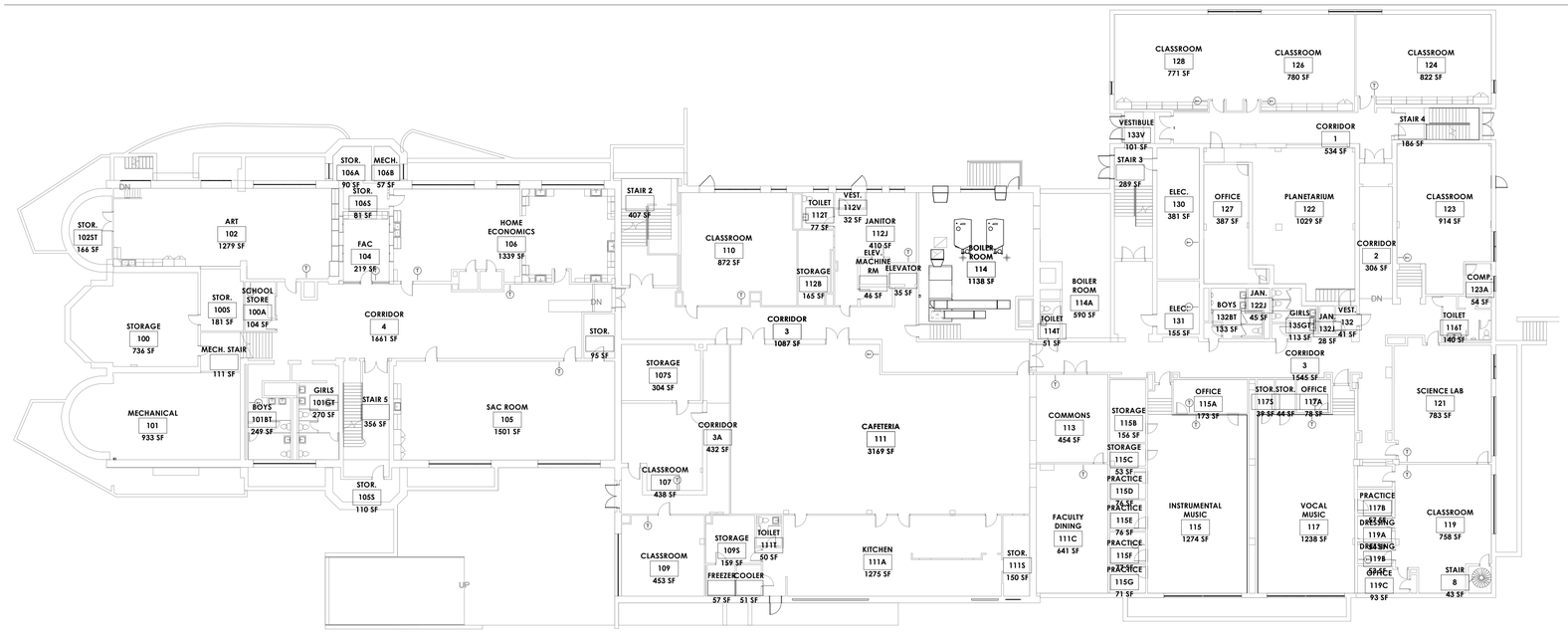
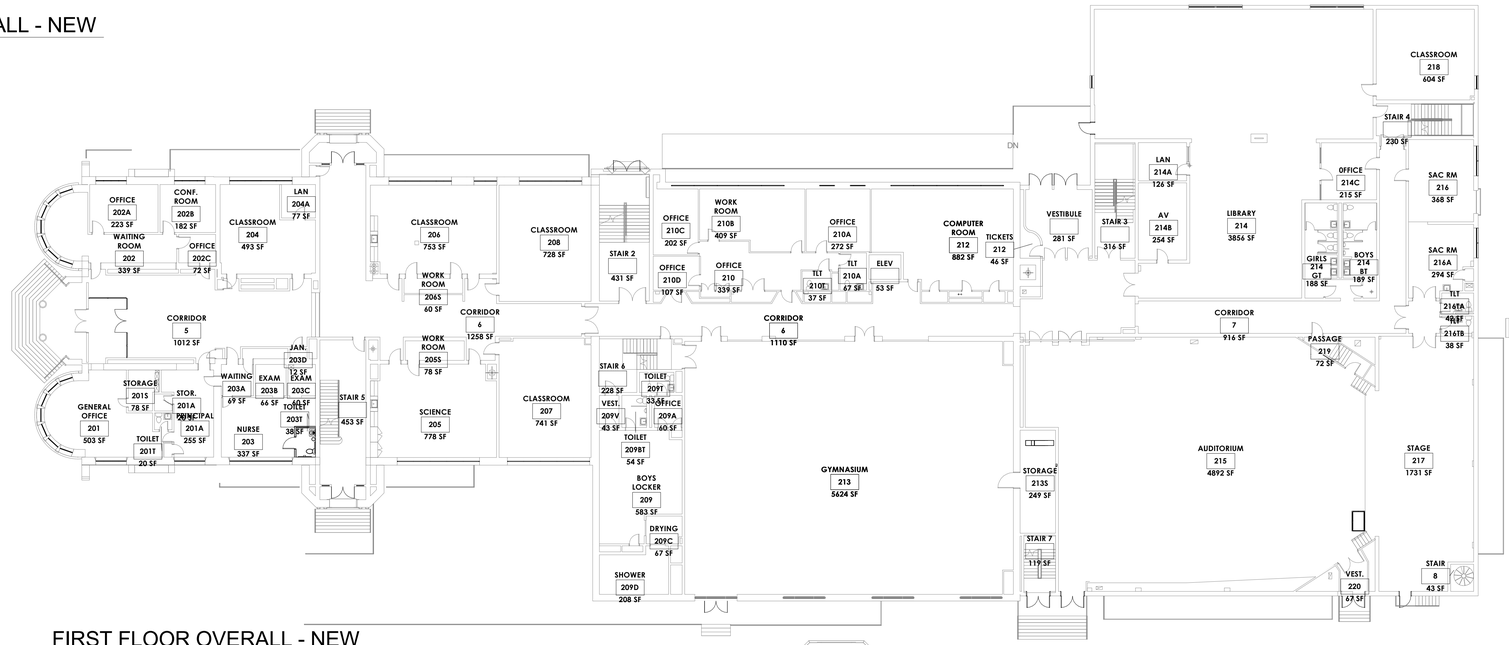
# PHASE 2 - SEPT./OCT. 2015



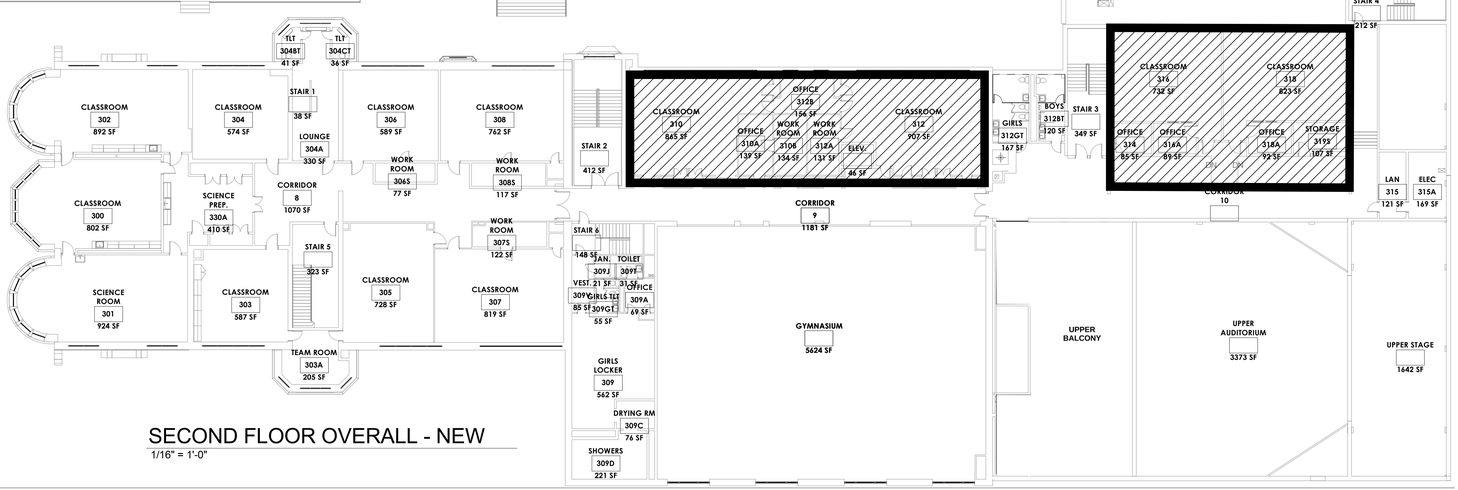

## LOWER LEVEL OVERALL - NEW

1/16" = 1'-0"




## FIRST FLOOR OVERALL - NEW

1/16" = 1'-0"




## SECOND FLOOR OVERALL - NEW

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REVISIONS

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PROJECT

RED CLAY CONSOLIDATED SCHOOL DISTRICT

A. I. DuPont Middle School
HVAC RENOVATION
3130 KENNETT PIKE
WILMINGTON, DELAWARE 19807

SHEET TITLE

PHASING PLAN
PHASE 2

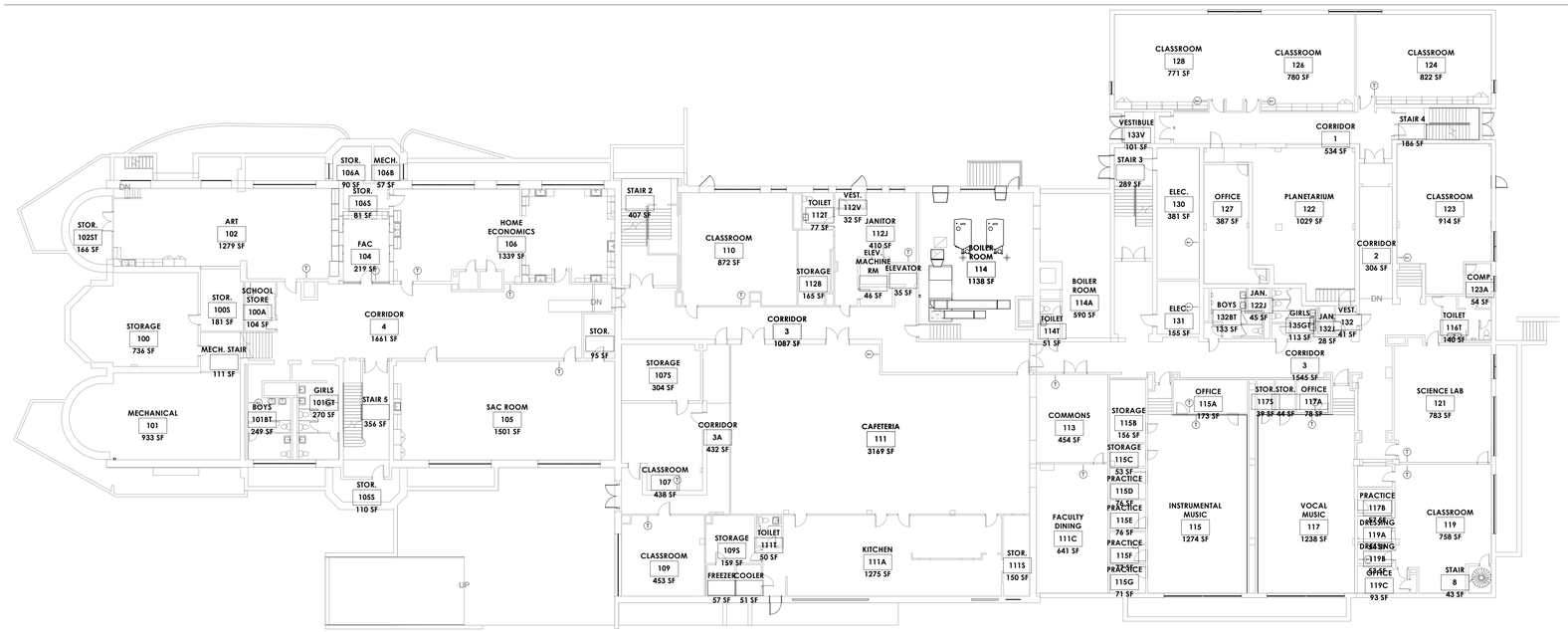
DRAWN | CHK'D / DESIGNER

DISCIPLINE | SHEET NO.

PROJECT NO. 14036

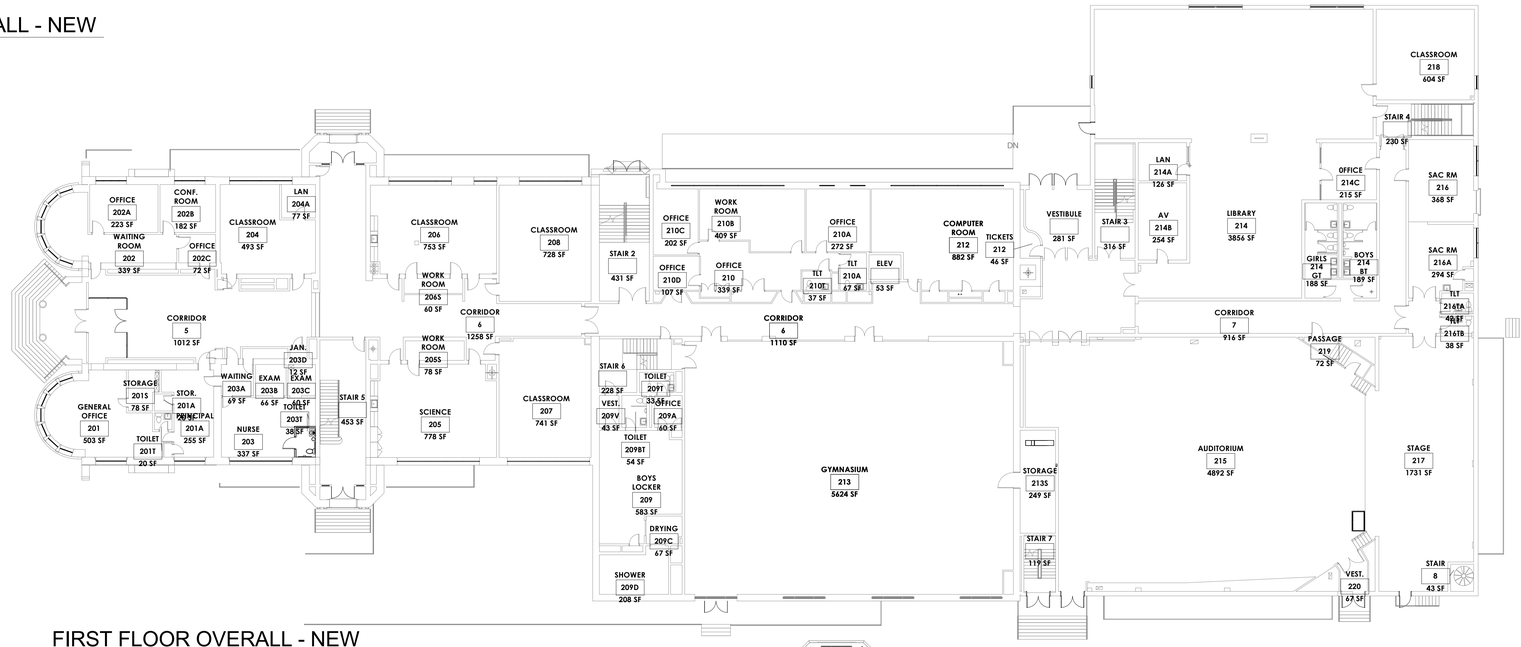
P2

# PHASE 3 - OCT./DEC. 2015



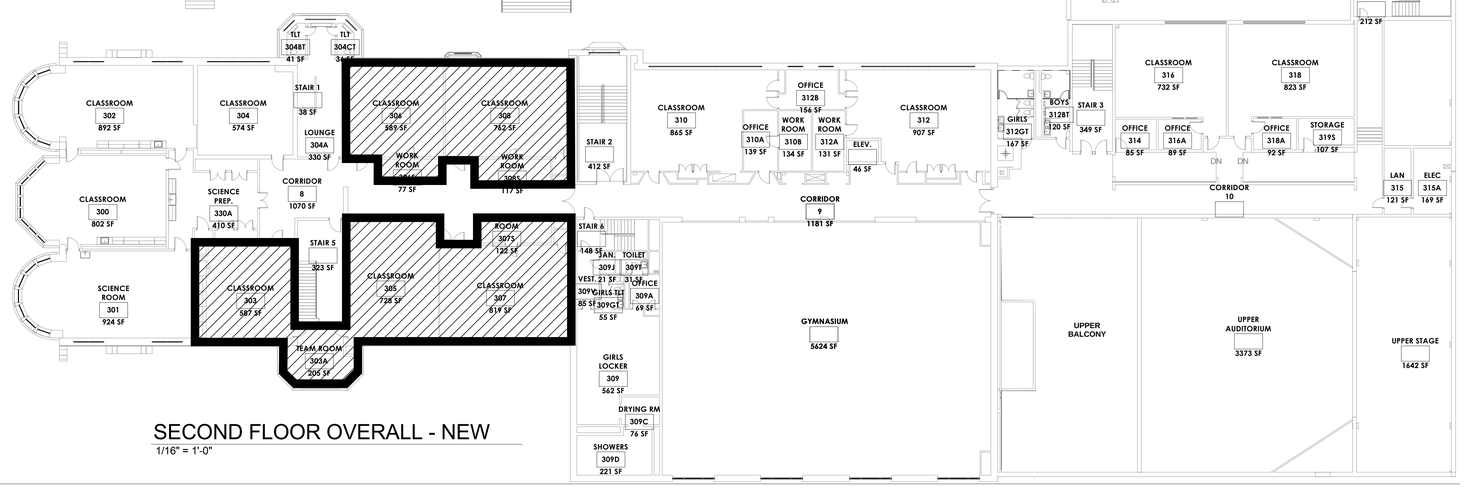

## LOWER LEVEL OVERALL - NEW

1/16" = 1'-0"




## FIRST FLOOR OVERALL - NEW

1/16" = 1'-0"




## SECOND FLOOR OVERALL - NEW

1/16" = 1'-0"

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REVISIONS

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PROJECT

RED CLAY CONSOLIDATED SCHOOL DISTRICT

A. I. DuPont Middle School
HVAC RENOVATION
3130 KENNETT PIKE
WILMINGTON, DELAWARE 19807

SHEET TITLE

PHASING PLAN
PHASE 3

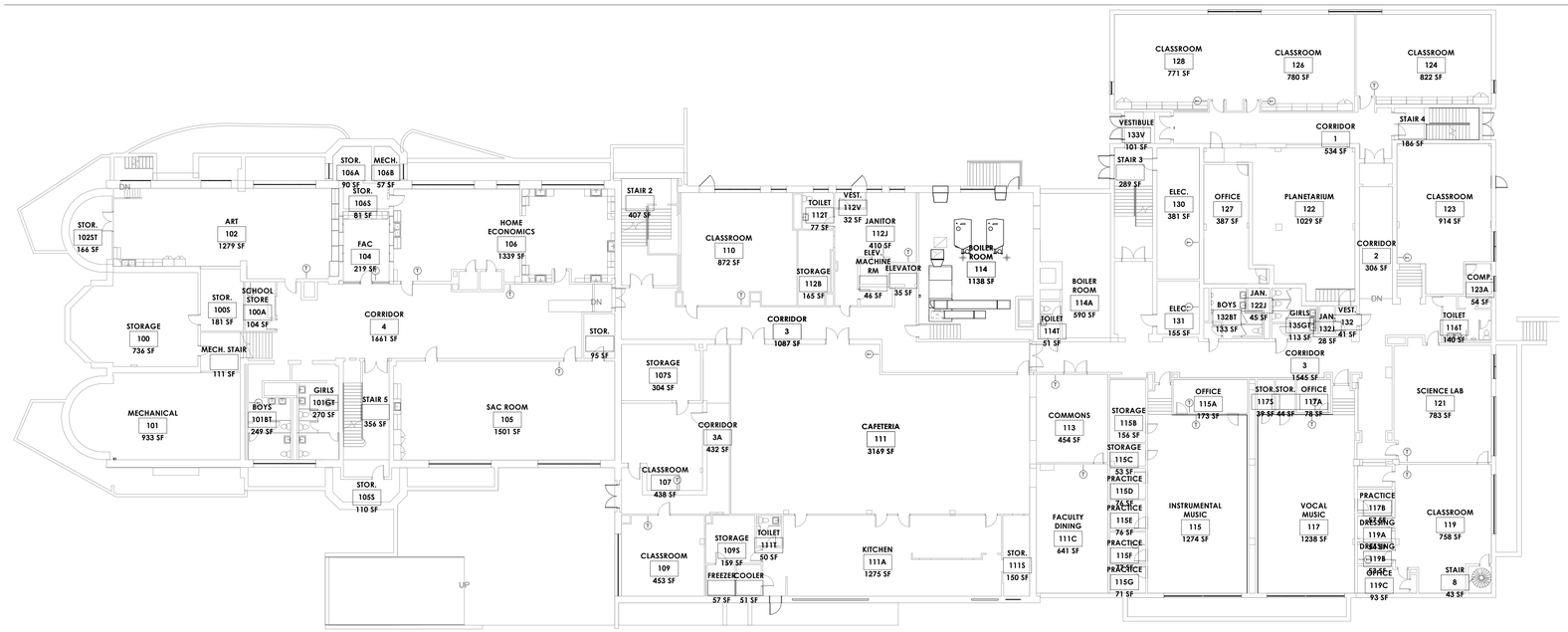
DRAWN | CHK'D / DESIGNER

DISCIPLINE | SHEET NO.

PROJECT NO. 14036

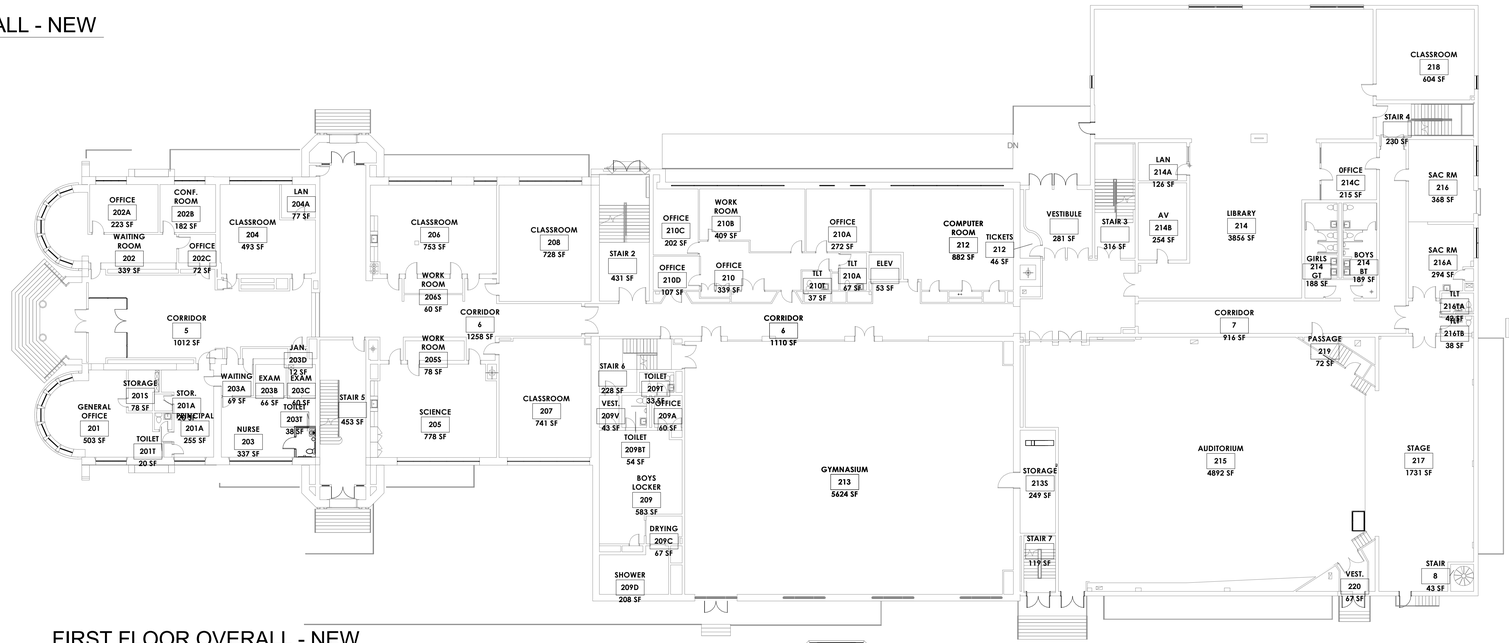
P3

# PHASE 4 - DEC.-JAN. 2016




## LOWER LEVEL OVERALL - NEW

1/16" = 1'-0"




## FIRST FLOOR OVERALL - NEW

1/16" = 1'-0"

## SECOND FLOOR OVERALL - NEW

1/16" = 1'-0"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PROJECT

RED CLAY CONSOLIDATED SCHOOL DISTRICT

A. I. DuPont Middle School

HVAC RENOVATION
3130 KENNETT PIKE
WILMINGTON, DELAWARE 19807

SHEET TITLE

PHASING PLAN
PHASE 4

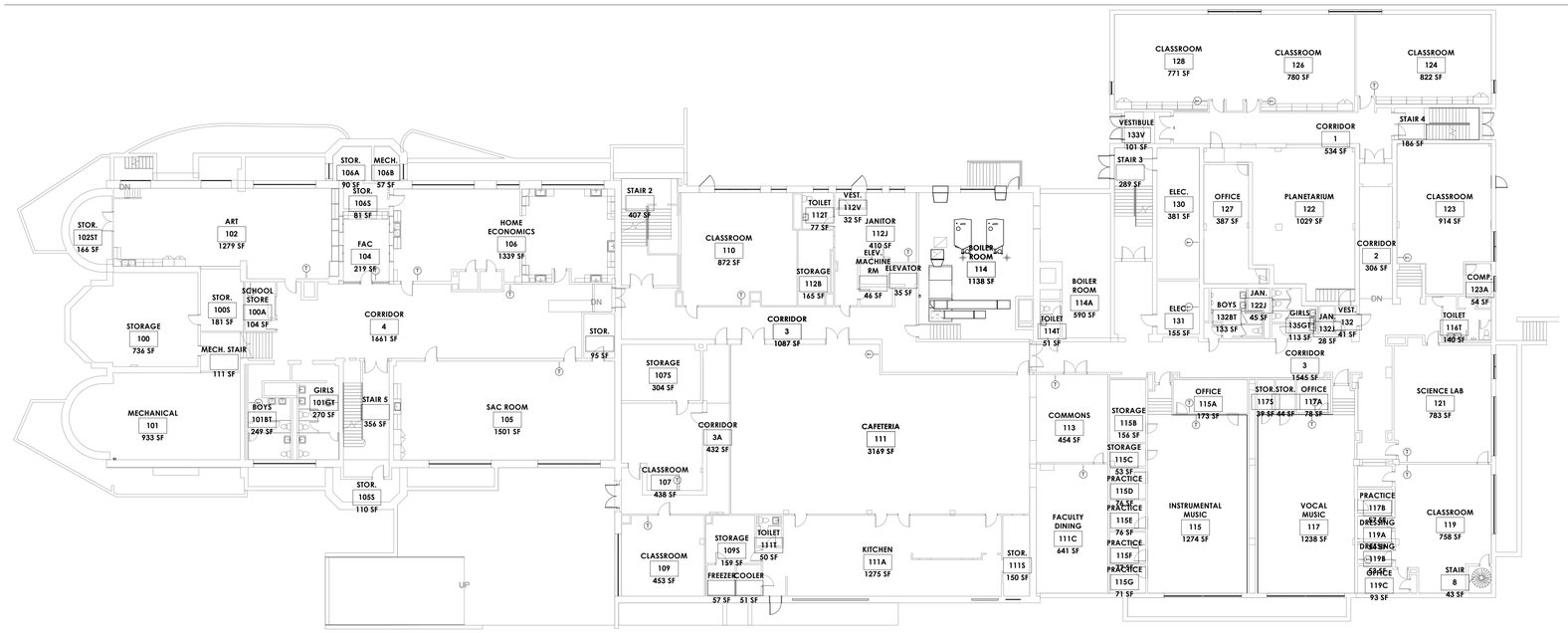
DRAWN | CHK'D / DESIGNER

DISCIPLINE | SHEET NO.

PROJECT NO. 14036

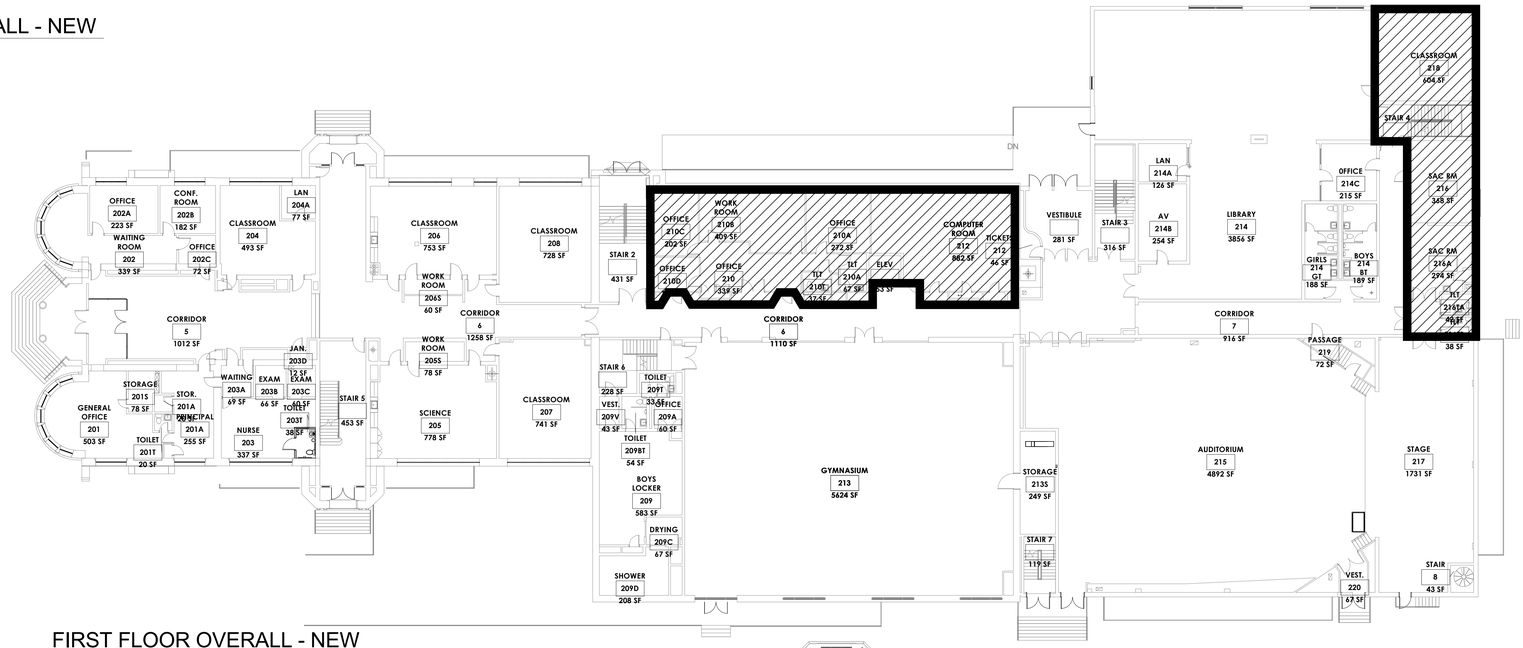
P4

# PHASE 5 - JAN./FEB. 2016




## LOWER LEVEL OVERALL - NEW

1/16" = 1'-0"




## FIRST FLOOR OVERALL - NEW

1/16" = 1'-0"

## SECOND FLOOR OVERALL - NEW

1/16" = 1'-0"

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PROJECT

RED CLAY CONSOLIDATED SCHOOL DISTRICT

A. I. DuPont Middle School

HVAC RENOVATION
3130 KENNETT PIKE
WILMINGTON, DELAWARE 19807

SHEET TITLE

PHASING PLAN
PHASE 5

DRAWN | CHK'D / DESIGNER

DISCIPLINE | SHEET NO.

PROJECT NO. 14036

P5

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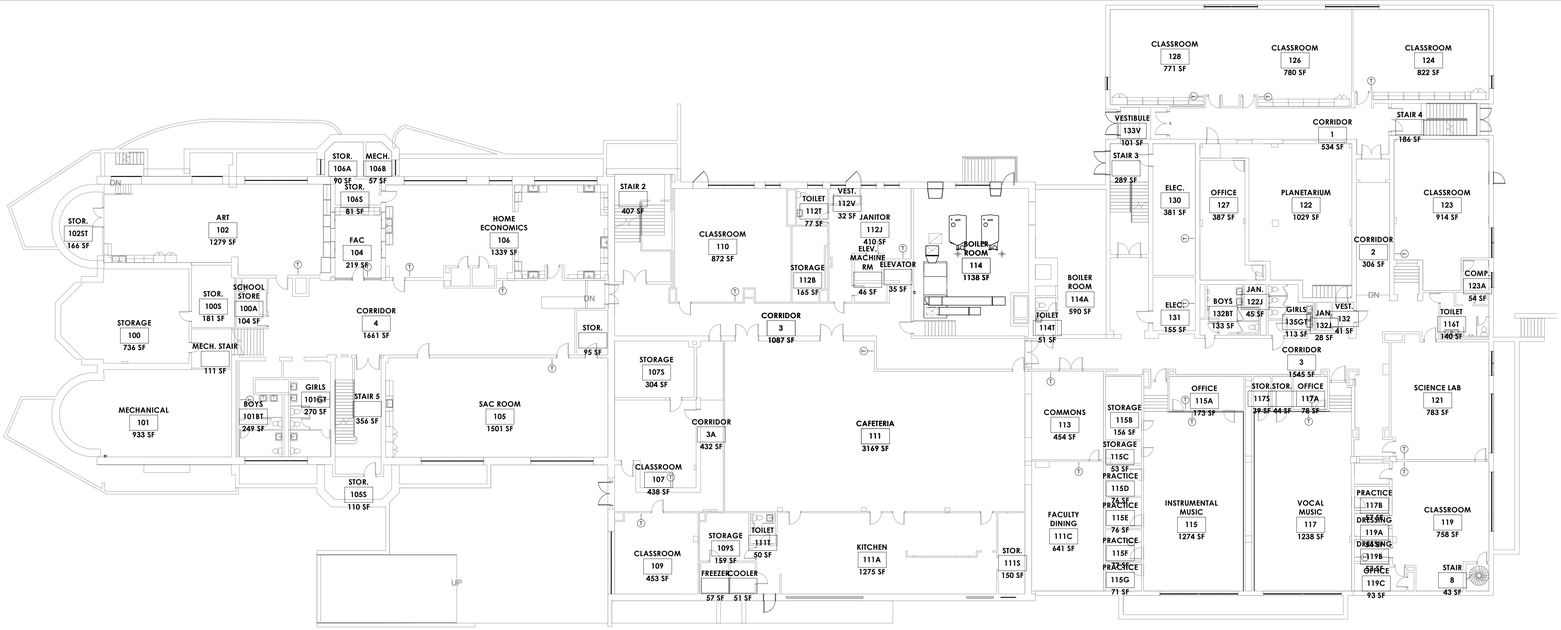
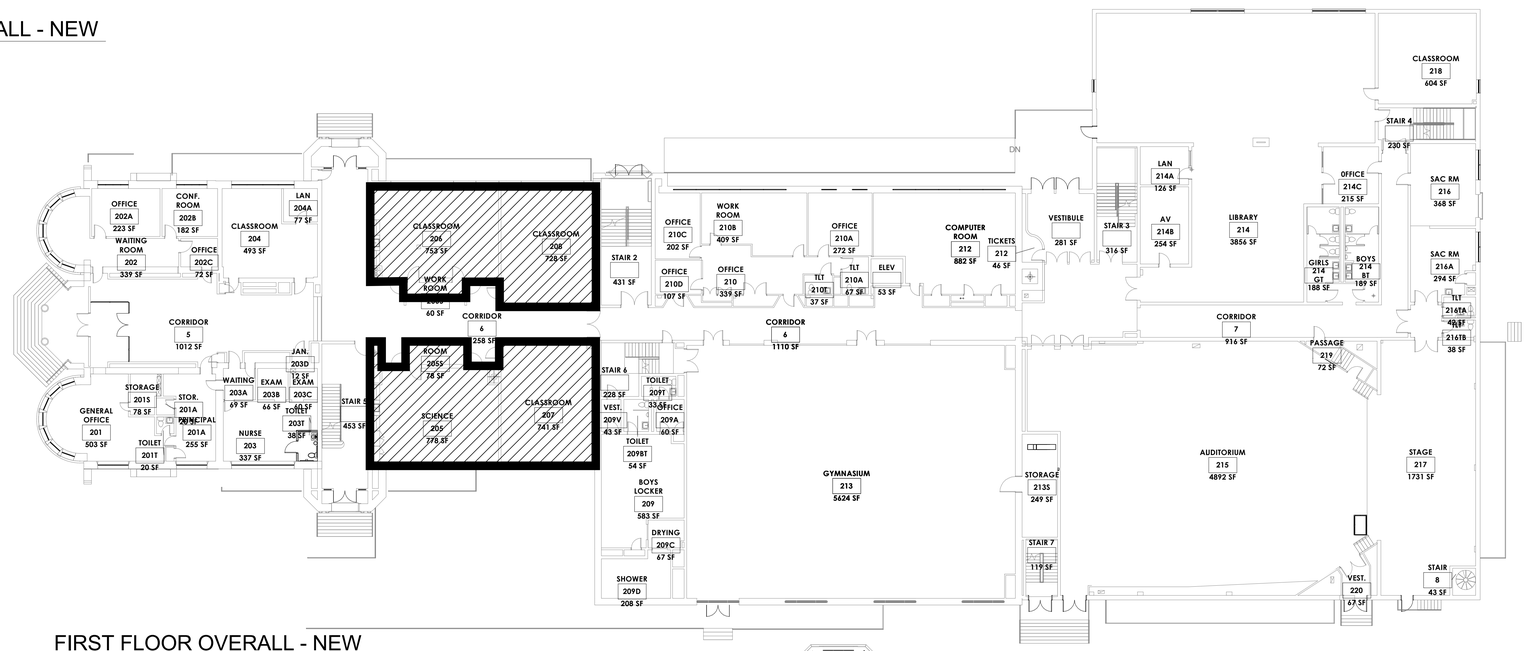
# PHASE 6 - FEB./APRIL 2016



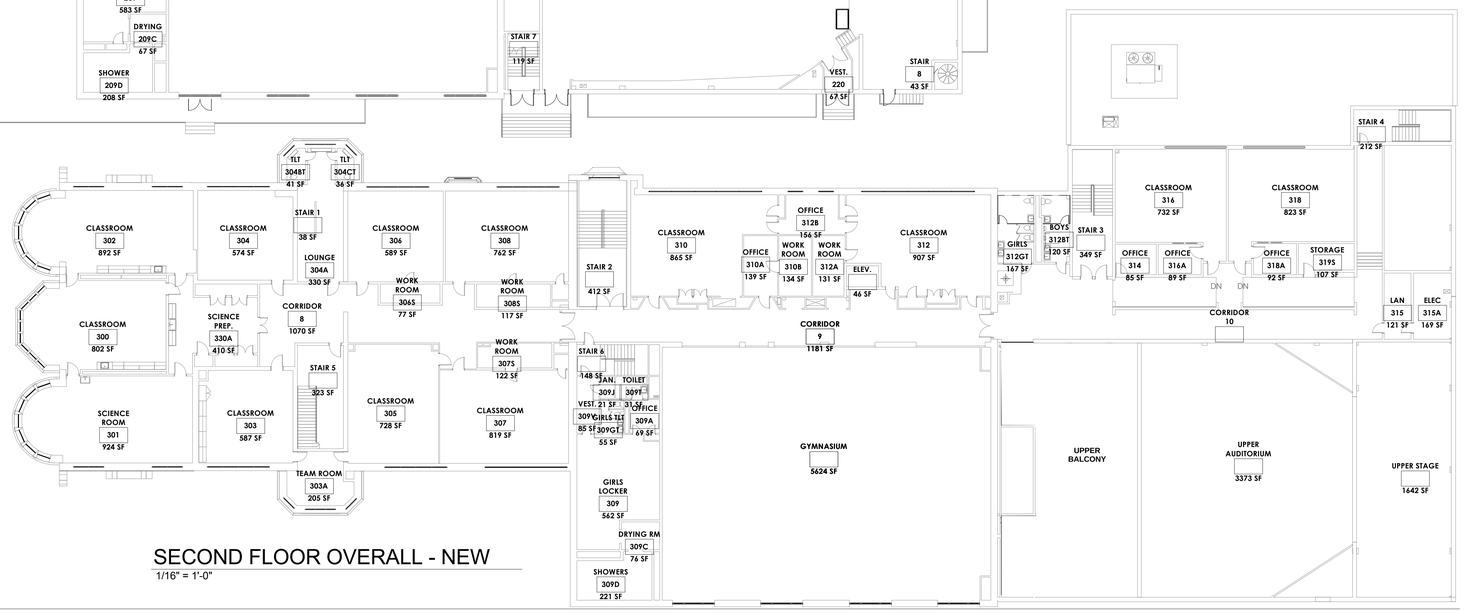

## LOWER LEVEL OVERALL - NEW

1/16" = 1'-0"




## FIRST FLOOR OVERALL - NEW

1/16" = 1'-0"




## SECOND FLOOR OVERALL - NEW

1/16" = 1'-0"

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REVISIONS

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PROJECT

RED CLAY CONSOLIDATED SCHOOL DISTRICT

A. I. DuPont Middle School

HVAC RENOVATION
3130 KENNETT PIKE
WILMINGTON, DELAWARE 19807

SHEET TITLE

PHASING PLAN
PHASE 6

DRAWN | CHK'D / DESIGNER

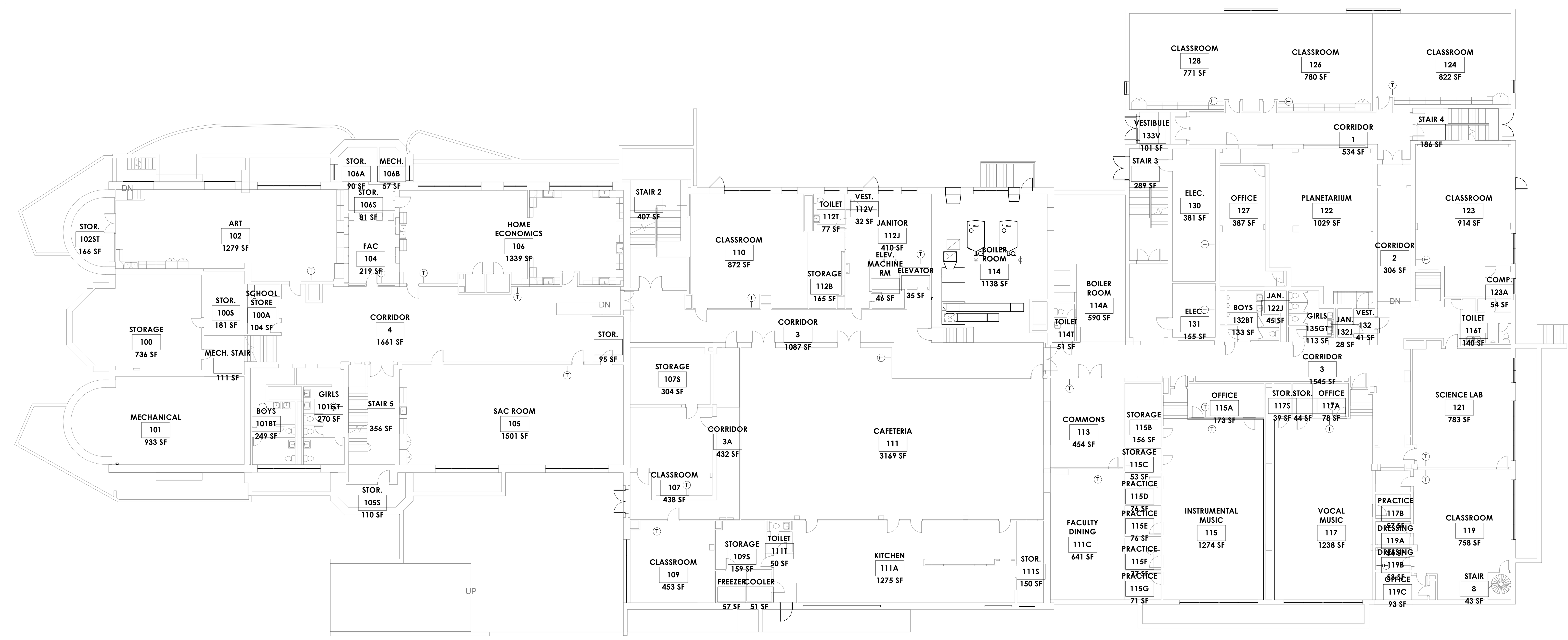
DISCIPLINE | SHEET NO.

PROJECT NO. 14036

P6

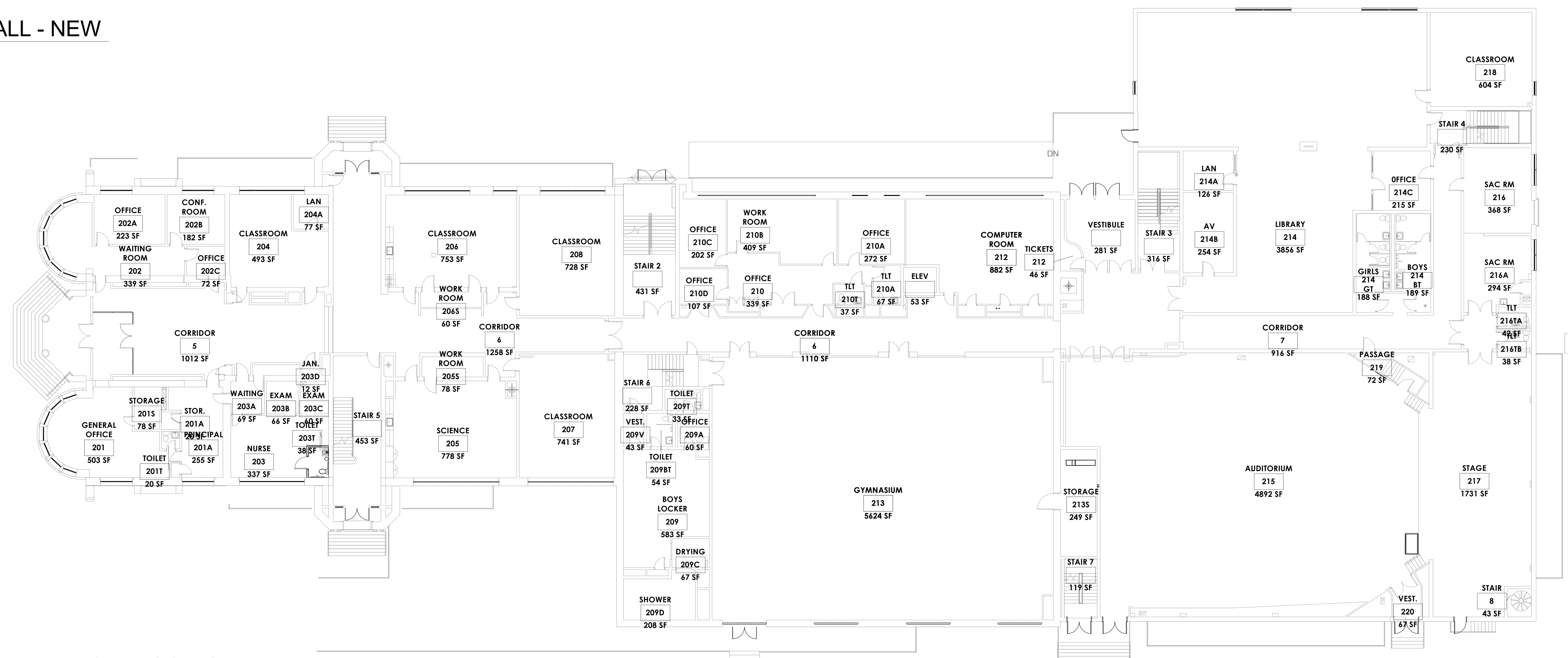
~~PHASE 7 - APRIL/MAY 2016~~

Phase 7 is no longer required. This work has been incorporated into Phase 1.



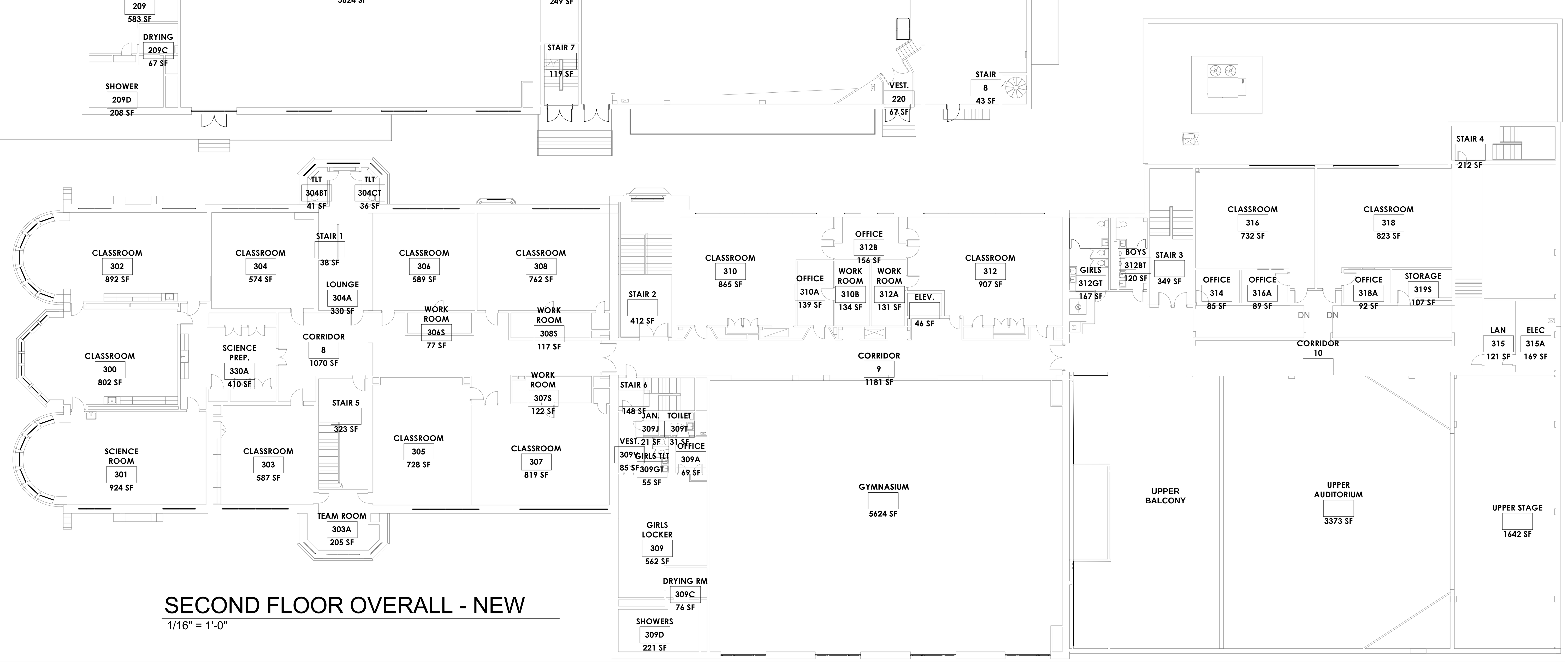
LOWER LEVEL OVERALL - NEW

1/16" = 1'-0"



FIRST FLOOR OVERALL - NEW

1/16" = 1'-0"



SECOND FLOOR OVERALL - NEW

1/16" = 1'-0"

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REVISIONS

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PROJECT

RED CLAY CONSOLIDATED SCHOOL DISTRICT

A. I. DuPont Middle School

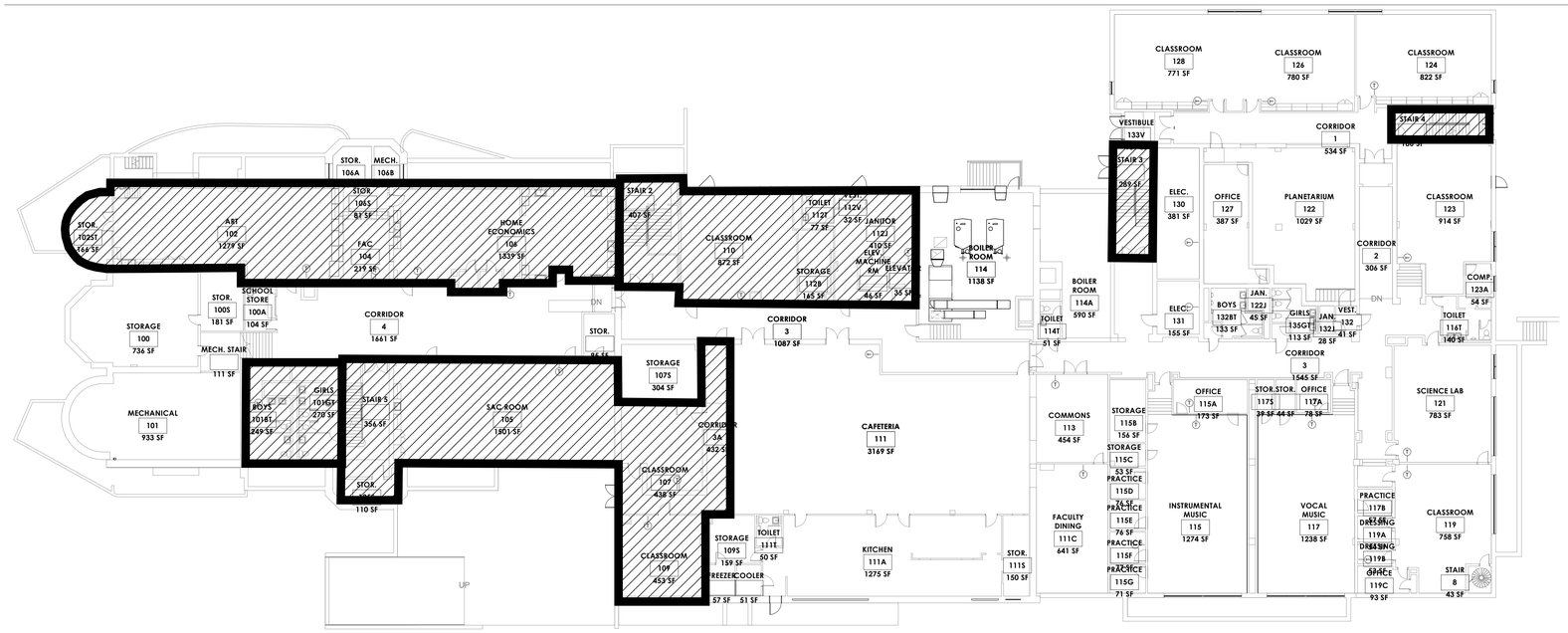
HVAC RENOVATION
3130 KENNETT PIKE
WILMINGTON, DELAWARE 19807

SHEET TITLE

PHASING PLAN
PHASE 7

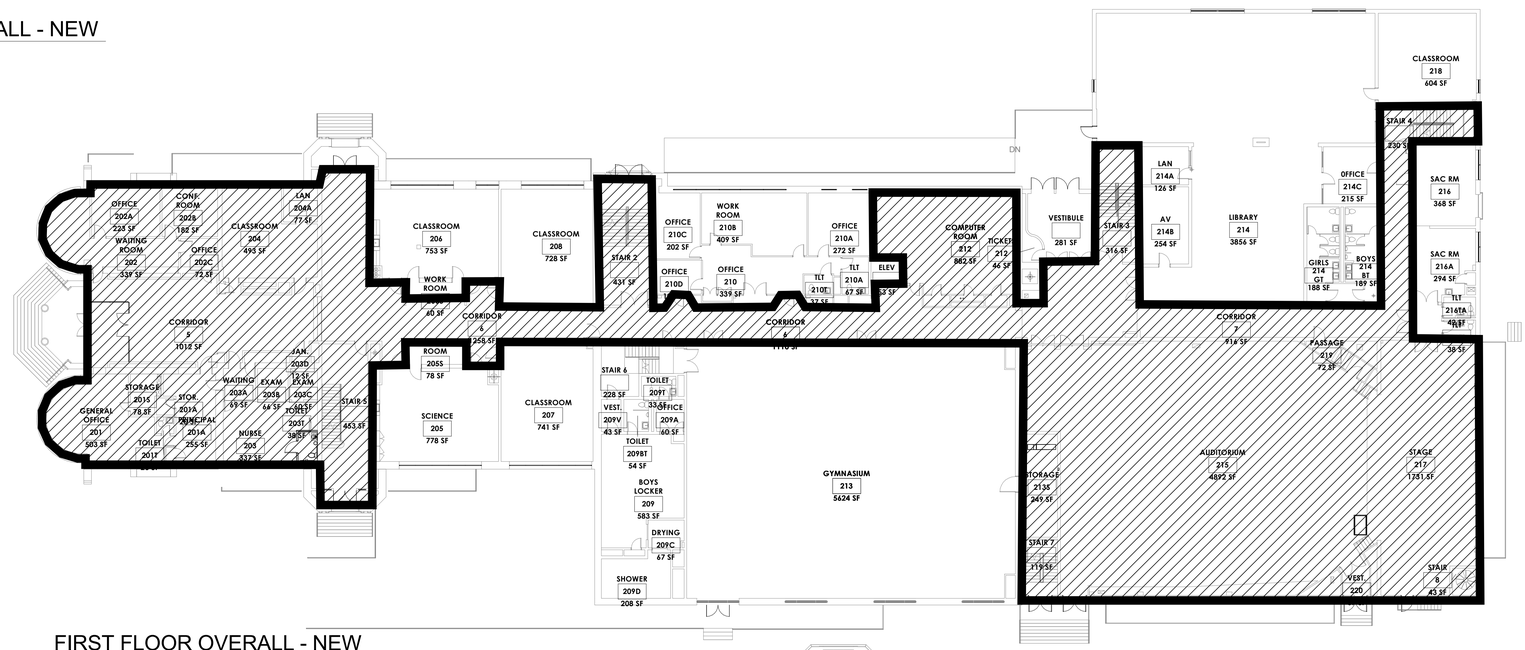
| DRAWN | CHK'D / DESIGNER |
|---|---|
| DISCIPLINE | SHEET NO. |
| PROJECT NO. 14036 | P7 |

# PHASE 8 - SUMMER 2016



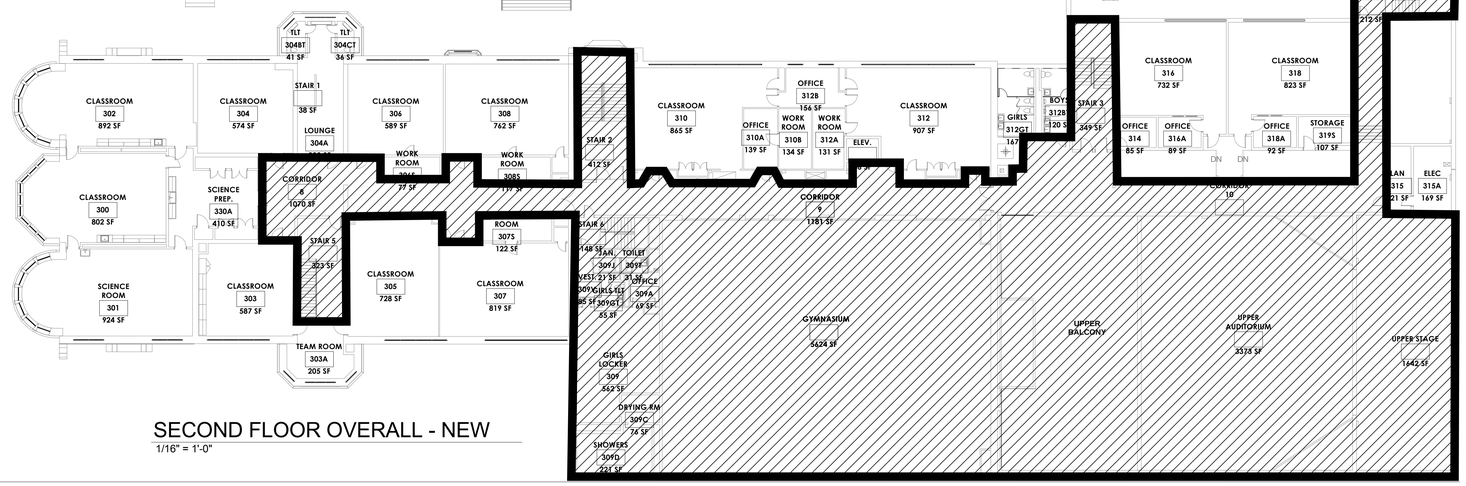

## LOWER LEVEL OVERALL - NEW

1/16" = 1'-0"




## FIRST FLOOR OVERALL - NEW

1/16" = 1'-0"




## SECOND FLOOR OVERALL - NEW

1/16" = 1'-0"

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REVISIONS

| DESCRIPTION | DATE |
|---|---|

PROJECT

RED CLAY CONSOLIDATED SCHOOL DISTRICT

A. I. DuPont Middle School

HVAC RENOVATION
3130 KENNETT PIKE
WILMINGTON, DELAWARE 19807

SHEET TITLE

PHASING PLAN
PHASE 8

DRAWN | CHK'D / DESIGNER

DISCIPLINE | SHEET NO.

PROJECT NO. 14036

P8

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