Regular BoE Meeting

Wednesday, November 2, 2022 7:00 PM
BOE Auditorium and via Zoom Meeting Platform, 129 Church Street, Bristol, CT 06010

1. **CALL TO ORDER/ PLEDGE OF ALLEGIANCE/MOMENT OF SILENCE/MEETING NORMS**
2. **STAFF AND STUDENT RECOGNITION**
3. **APPROVAL OF MINUTES**
4. **COMMITTEE REPORTS**
5. **STUDENT REPRESENTATIVE REPORTS**
6. **CHAIR REPORT**
7. **SUPERINTENDENT REPORT**
8. **CONSENT AGENDA**

8.1. PERSONNEL

8.1.a. Teacher Resignations

8.1.b. New Teacher Hires

8.1.c. A-1 Hires - Effective August 23, 2022

8.1.d. A-2 Resignations

8.1.e. A-2 Hire - Effective August 23, 2022

8.1.f. A-3 Resignations - Effective June 16, 2022

8.1.g. A-3 Hire - Effective August 23, 2022

8.1.h. Certified Personnel Who Have Attained Tenure

8.2. GRANTS

8.2.a. Perkins Grant Allocation 2022-23

8.2.b. McPhee Foundation Grant for Ivy Drive

9. **PUBLIC COMMENT**
10. **DELIBERATED ITEMS/DISTRICT LEADERSHIP TEAM REPORTS**

10.1. Approve the Education Specifications for the SSS HVAC Replacement Project

10.2. Authorization of at least the schematic design for the SSS HVAC Replacement Project

10.3. Board of Education requests the City Council to Authorize the Board of Education to Apply for the SSS HVAC Replacement Project Grant

10.4. October 1 Enrollment Count for the 2022-2023 School Year

10.5. Special Services Report

11. **NEW BUSINESS**

12. **BUILDING REPORTS**

13. **INFORMATION/LIAISON REPORTS**

14. **VOTE TO CONVENE INTO EXECUTIVE SESSION**

15. **VOTE TO RECONVENE INTO PUBLIC SESSION**

16. **ADJOURNMENT**

The minutes presented within this document are a summary of the discussion that took place at the Board of Education meeting. To view the meeting in its entirety and hear full reports please go to: October 5, 2022 Meeting Recording ***Passcode:*** **Rq2=9yrG**

BRISTOL BOARD OF EDUCATION
Bristol, Connecticut
Wednesday, October 5, 2022 – 7:00 p.m.
Regular Meeting Minutes

The Bristol Board of Education meeting was held on Wednesday, October 5, 2022, at 7:00 p.m. at the Bristol Board of Education auditorium and via the Zoom Meeting Platform.

PRESENT: Commissioners: Russell Anderson, Eric Carlson, Jennifer Dube, Kristen Giantonio, Shelby Pons (virtual), Todd Sturgeon, Dante Tagariello, Karen Vibert, and Christopher Wilson (virtual); **ALSO PRESENT:** Dr. Catherine Carbone, Superintendent, Dr. Michael Dietter, Deputy Superintendent and Jolene Lusitani, Council Liaison

I. CALL TO ORDER/ PLEDGE OF ALLEGIANCE/MEETING NORMS
Chair Dube called the meeting to order at 7:00 p.m. and asked the audience to stand for The Pledge of Allegiance.

II. VOTE TO CONVENE INTO EXECUTIVE SESSION
Chair Dube called for a motion to Convene Into Executive Session for the purpose of discussing documents related to negotiations with the Bristol Association of Principals And Supervisors (BAPS) and the Board of Education for contract years July 2023 to June 2026. Dr. Carbone and Dr. Galloway would join the Executive Session.

On a motion by Dante Tagariello and a second, by Karen Vibert, the Board of Education voted to Convene Into Executive Session for the purpose of discussing documents related to negotiations with the Bristol Association of Principals And Supervisors (BAPS) and the Board of Education for contract years 2023 – 2026.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion. (7:02 p.m.)

EXECUTIVE SESSION

PRESENT: Commissioners: Russell Anderson, Eric Carlson, Jennifer Dube, Kristen Giantonio, Shelby Pons (virtual), Todd Sturgeon, Dante Tagariello, Karen Vibert, and Christopher Wilson(virtual); **ALSO PRESENT:** Dr. Catherine Carbone, Superintendent and, Dr. Sam Galloway, Director of Talent Management.

Commissioners received a report regarding the negotiations between the Bristol Association of Principals and Supervisors (BAPS) negotiations and the Board of Education for contract years July 2023 to June 2026.

III. VOTE TO RECONVENE INTO PUBLIC SESSION *to vote on items discussed in Executive Session*

On a motion by Dante Tagariello and a second, by Kristen Giantonio, the Board of Education voted to Reconvene Into Public Session to vote on items discussed in Executive Session.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion. (7:17 p.m.)

IV. STAFF AND STUDENT RECOGNITION
The Board of Education recognized Kelly Longo and Melanie Vetrano from Bristol Eastern High School for being 2020-2021 FAFSA Challenge Award Winners and Sara Hale, Dean of Athletics and Wellness highlighted what teachers were doing with their students in recognition of Hispanic Heritage month.

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V. APPROVAL OF MINUTES

September 14, 2022 – Special Meeting – Meet & Greet

On a motion by Dante Tagariello and a second, by Kristen Giantonio, the Board of Education approved the September 14, 2022, Special Meeting – Meet & Greet minutes as written.

Following a roll call vote, Chair Dube declared the motion **PASSED** with seven (7) Commissioners (Anderson, Giantonio, Pons, Tagariello, Vibert, Wilson, and Dube in favor of the motion. Commissioners Carlson and Sturgeon Abstained.

September 14, 2022 – Regular Meeting

On a motion by Dante Tagariello and a second, by Eric Carlson, the Board of Education approved the September 14, 2022 Regular Meeting minutes as written.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion.

VI. COMMITTEE REPORTS

The Board received the following monthly Committee Reports: Student Achievement, Policy, Communications, and Personnel.

VII. CHAIR REPORT

Chair Dube reported that she participated in the recent CT Teacher of the Year Interview process. Carolyn Kielma, Bristol's Teachers of the Year is one of four finalists in the CT Teacher of the Year.

VIII. STUDENT REPRESENTATIVE REPORTS

Bristol Central

Senior Representative, Fatima Aamir shared happenings from Bristol Central. Highlights from her report included The start of the Fall Sports season, Seniors volunteering at the unified soccer tournament, the InterAct Club setting up a vendor table at the Mum Festival alongside the Rotary Club for a mini golf tournament scholarship fundraiser, the senior Rambassadors assisting incoming freshmen at orientation and on the first day of school from helping them with their schedule to giving them advice, NHS is planning many events along with their annual food drive, NHS is starting tutoring sessions back up, and kicking off their first service project, in honor of October being Breast Cancer Awareness Month the home games will be made "pink out" and members will be selling bracelets, throughout the games all the proceeds will go to the breast cancer research. The Student Council is also planning a fun Spirit Week for the week before homecoming to get the students and teachers back into Spirit. Students have been working hard to get a great start to the school year, and have been preparing for the PSAT in October, lastly, several field trips have taken place such as the field trip to the Connecticut Convention Center through the writing initiative and the AVID students visiting some college campuses in preparation for the upcoming College app season.

Bristol Eastern

Senior Representative Pushpita Hussain shared happenings from Bristol Eastern. Highlights from her report included Freshmen have received aid from Lancer nation mentors since orientation, there are several students taking classes at BAIMS, and Bristol Tech it is exciting to hear the kind of classes they are taking at the schools. Bristol Eastern football, girls' volleyball, and boys' and girls' soccer have all recently started and we also have indoor track and cross-country that many students have been very interested in participating in. Many clubs have hosted their first two meetings with eventful plans for the school year. The Amnesty International Club has started off by raising awareness about domestic violence and the Diversity Club is creating plans for a celebration of identities for staff and students. Other after-school activities have opened up, such as the Pink Project and the Yearbook Club, the Fall production is in the works for the presentation of "12 Angry Jurors". We have received many students' proposals for master credits for graduation. Congratulations to Mrs. Kielma for becoming a finalist for the State Teacher of the Year, we hope you will get the chance to be recognized at the national level, and congrats to Student Peyton Troth who won Miss Connecticut's Outstanding Teen, and Olivia Chapdelaine for being named Miss Mum. Bristol Eastern was well represented at the Mum parade this past month, by the cheerleaders, the football team, the band, and other

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VII. STUDENT REPRESENTATIVE REPORTS – cont'd
groups they performed marched, and helped with the setup and breakdown of the event. Events that are coming up: PSATs on October 12th, parent/teacher conferences which teachers are preparing for, and the student council continuing to plan for homecoming on October 22nd and the blood drive on October 11th.

IX. SUPERINTENDENT REPORT
Dr. Carbone presented the monthly Superintendent Report. Highlights from her report included an update of the Alliance District Fall symposium held on September 29th, the CT TOY committee visited Bristol Eastern High School and interviewed parents, staff, and students as our very own Carolyn Kielma is a semi-finalist for the statewide recognition. We wish her continued success in this process. Dr. Carbone shared with Commissioners and parents the first BPS Annual report. The Annual Report is a summary of the accomplishment of our district during the 21-22 school year, highlights our progress toward our district indicators, and celebrates each school and department. Dr. Carbone shared the link and it has been sent through ParentSquare and it is posted on our website.

With regard to our reimagining plan and specifically our redistricting plan necessitated by the closure of Edgewood School. Over the past three weeks, the Admin team has met with Patrick Gallagher and Mike Zuba - Consultants from SLAM/SLR to review the proposed boundary maps and make adjustments based on current conditions and feedback we have received at the Operations Committee on 9.7.22 and BoE Meeting on 9.14.22. We now have an updated enrollment for all schools and accurate demographics and addresses related to our existing school populations. SLAM SLR has met with our transportation department to review route limitations and route timing parameters. The updated boundary areas and school catchment zones will be posted to our website on October 14th Dr. Dietter and Dr. Carbone will be reviewing our next steps at PTO meetings held throughout Sept, Oct and November and we will review the updated maps and gather community feedback at our BoE workshops scheduled on October 19, 2022 - BEHS Auditorium at 6:30 p.m. and November 17, 2022 - BCHS Auditorium at 6:30 p.m.

X. CONSENT AGENDA
Chair Dube called for a motion to approve the Consent Agenda, which included Items XA.1. through XA.7

On a motion by Dante Tagariello and a second, by Kristen Giantonio, the Board of Education voted to approve the Consent Agenda as written.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion.

X.A. PERSONNEL

X.A.1. Teacher Resignations
Garcia, Jesse – STAF – Kindergarten Teacher effective September 26, 2022
Landro, Laura – BCHS – Chemistry Teacher effective October 1, 20222

On a motion by Dante Tagariello and a second, by Kristen Giantonio, the Board of Education voted to accept the Teacher Resignations as written.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion.

X.A.2. New Teacher Hires
Bernadel, Melissa - GH - Extended Resource Teacher effective October 17, 2022
Mancini, Ryan - WB - Vocal Music Teacher effective TBD
Mercier, Matthew - WB - Grade 8 Special Education Teacher effective October 3, 2022
Montineri, Traci - BAIMS - .5 Math Intervention effective September 26, 2022
O'Connell, Justin - NEMS - Special Education GOAL Teacher effective October 11, 2022
Robair, Sandra - BCHS - Biology Teacher effective October 17, 2022
Saucier, AnneMarie - EPH - K-5 Special Education Teacher effective TBD

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X.A.2. New Teacher Hires – cont'd
On a motion by Dante Tagariello and a second by Kristen Giantonio the Board of Education voted to approve the New Teacher Hires as written.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion.

X.A.3. A-1 Resignations - Effective August 23, 2022
Cantin, Michelle - BAIMS - Grade 6 Team Leader
Plourde, Gerald - BCHS - Technology Department Head
Silva, Alyson - CHMS - Yellow Team Leader

On a motion by Dante Tagariello and a second by Kristen Giantonio the Board of Education voted to accept the A-1 Resignations as written.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion.

X.A.4. A-1 Hires - Effective August 23, 2022
Cote, Michelle - BCHS - Technology Department Head
Sisson, Suzanne - CHMS - Yellow Team Leader

On a motion by Dante Tagariello and a second by Kristen Giantonio the Board of Education voted to approve the A-1 Hires as written.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion.

X.A.5. A-2 Hires - Effective August 23, 2022
Archibald, Kathleen - BCHS - Freshman Co-Advisor
Martino, Rocco - BEHS - Technology Student Association Advisor
Rochester, Anya - BCHS - Freshman Co-Advisor

On a motion by Dante Tagariello and a second by Kristen Giantonio the Board of Education voted to approve the A-2 Hires as written.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion.

X.A.6. A-3 Resignation - Effective August 23, 2022
Dauphinee, John - CHMS - Math Curriculum Coordinator

On a motion by Dante Tagariello and a second by Kristen Giantonio the Board of Education voted to accept the A-3 Resignation as written.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion.

X.A.7. A-3 Hire - Effective August 23, 2022
Carroll, Lisa - BAIMS - Webmaster

On a motion by Dante Tagariello and a second by Kristen Giantonio the Board of Education voted to approve the A-3 Hires as written.

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X.A.7. A-3 Hire - Effective August 23, 2022 – cont'd

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion.

XI. PUBLIC COMMENT

Chair Dube read the virtual Public Comment rules into the record.
Chris Rutsch – 78 Vernon Street – submitted public comment regarding Hockey.
Emily Bailey – 21 Tiffany Lane – submitted public comment regarding AP UCONN Chemistry.

Chair Dube read the in-person Public Comment rules into the record.
Jason Harmon – 583 East Road – addressed the board regarding Hockey.
Chris Kuczenski – 601 Pine Street 2nd Floor - addressed the board regarding Hockey.
Peyton Hasler – 20 Beechwood Lane – addressed the board regarding Hockey.
Erin Ash – 19 Winston Court – addressed the board regarding redistricting.

XII. DELIBERATED ITEMS/DISTRICT LEADERSHIP TEAM REPORTS

XII.A. Presentation of Bristol Student Performance on 2022 Smarter Balanced Assessment

Carly Fortin, Director of the Office of Teaching and Learning presented a detailed report regarding Bristol Student Performance on the 2022 Smarter Balanced Assessment to the Board. The results shared were the best that Bristol has seen since the inception of the 2022 Smarter Balanced Assessment.

XII.B. Discussion and a possible vote of the tentative agreement between the Bristol Association of Principals and Supervisors (BAPS) and the Board of Education for the 2023 - 2026 contract.

On a motion by Dante Tagariello and a second by Karen Vibert the Board of Education voted to approve the tentative agreement between the Bristol Association of Principals and Supervisors (BAPS) and the Board of Education for a 2023 - 2026 contract.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion.

XII.C. Participation In Cooperative Hockey Program

Carly Fortin presented Participation In Cooperative Hockey Program. Mrs. Fortin provided background information before the board voted. Following a lengthy discussion and

On a motion by Todd Sturgeon and a second by Eric Carlson the Board of Education voted to pursue participation in Cooperative Hockey for the 22-23 school year.

Following a roll call vote, Chair Dube declared the motion **PASSED** with seven (7) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, and Dube) in favor of the motion and two (2) Commissioner (Vibert, and Wilson) OPPOSED.

XIII. POLICY REVISION

XIII.A. Policy 2100 – Administrative Staff Organization

Dr. Dietter presented Policy 2100 – Administrative Staff Organization. This is a revision to the existing policy this is the administrative staff organization the primary revisions include descriptors of the hiring selection committee members and rolls, timelines for action on the Superintendent candidates that are moved to the full board; as well as notwithstanding language to apply when the aforementioned committee cannot meet in a timely fashion.

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XIII. POLICY REVISION – cont'd

On a motion by Kristen Giantonio and a second by Todd Sturgeon, the Board of Education voted to approve Policy 2100 – Administrative Staff Organization.

Following a roll call vote, Chair Dube declared the motion **PASSED** with six (6) Commissioners (Anderson, Carlson, Giantonio, Sturgeon, Tagariello, and Dube) in favor of the motion and three (3) Commissioners (Pons, Vibert, and Wilson, OPPOSED.

XIV. NEW BUSINESS
There was no New Business to come before the Board.

XVI. BUILDING REPORTS
Dr. Dietter shared building reports for the following building projects.

1. MBIAMS Committee Update
2. High School Culinary Project Update
3. ESSER/ARP Building Committee Update

XVI. INFORMATION/LIAISON REPORTS
Commissioner shared a report and photo from South Side School.
Commissioner Dube shared a report from BECC and Mountain View School.

XVII. VOTE TO CONVENE INTO EXECUTIVE SESSION
Chair Dube called for a motion to Convene Into Executive Session for the purpose of discussing of Superintendent 2022-2023 Evaluation Goals.

On a motion by Eric Carlson and a second, by Dante Tagariello, the Board of Education voted to Convene Into Executive Session for the purpose of discussing documents related to negotiations with the Bristol Association of Principals And Supervisors (BAPS) and the Board of Education for contract years July 2023 to June 2026.

Following a roll call vote, Chair Dube declared the motion **PASSED** with nine (9) Commissioners (Anderson, Carlson, Giantonio, Pons, Sturgeon, Tagariello, Vibert, Wilson, and Dube) in favor of the motion. (9:01 p.m.)

EXECUTIVE SESSION

PRESENT: Commissioners: Russell Anderson, Eric Carlson, Jennifer Dube, Kristen Giantonio, Shelby Pons (virtual), Todd Sturgeon, Dante Tagariello, Karen Vibert, and Christopher Wilson (virtual); **ALSO PRESENT:** Dr. Catherine Carbone, Superintendent

Superintendent presented goals to commissioners. Questions followed from Commissioner Sturgeon, Giantonio, and Tagariello.

XVIII. VOTE TO RECONVENE INTO PUBLIC SESSION *to vote on items discussed in Executive Session. (9:46 p.m.)*

XIX. ADJOURNMENT
There being no other business to come before the Board, the meeting should adjourn. *(9:46 p.m.)*

Respectfully Submitted,

Susan Everett

Susan Everett, Recording Secretary
Bristol Board of Education

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BRISTOL BOARD OF EDUCATION
Bristol, Connecticut
Thursday, October 27, 2022 – 6:30 p.m.
Special Meeting – Redistricting Workshop

A Special Bristol Board of Education meeting was held on Thursday, October 27, 2022 at 6:30 p.m. in the Auditorium of Bristol Eastern High School, located at 632 King Street, Bristol, Connecticut.

PRESENT: Commissioners: Russell Anderson, Eric Carlson, Jennifer Dube, Kristen Giantonio, Shelby Pons, Dante Tagariello and Karen Vibert

ALSO PRESENT: Dr. Catherine Carbone, Superintendent, and Dr. Michael Dietter, Deputy Superintendent

ABSENT: Commissioners Todd Sturgeon and Christopher Wilson

1. **Call to Order/Pledge of Allegiance/Meeting Norms**

   Chair Dube called the Special Meeting to order at 6:30 p.m. and asked the audience to stand for the Pledge of Allegiance. Chair Dube read the meeting norms into the record.

   Chair Dube turned the meeting over to Dr. Carbone to introduce representatives from The S/L/A/M Collaborative (SLAM).

2. **Presentation of Redistricting Maps by SLAM**
   Dr. Carbone gave a brief overview of the BPS Reimagining 2023 plan and how we got to where we are today. Dr. Carbone introduced Patrick Gallagher, a Planning Manager from SLAM. Patrick Gallagher, provided a detailed report regarding Bristol Public Schools, Reimagining BPS 2023 Recommended Phase I Boundaries.

3. **Discussion**
   Chair Dube opened the floor for discussion by Commissioners. Commissioner Giantonio had a question regarding mediation with parents that will move multiple times. Commissioner Tagariello requested trying to minimize families that will have to move three times during Phase II. Commissioner Pons shared that Commissioners would not be able to respond to parent questions this evening, but wanted them to know they were being heard and they understand how parents are feeling. Commissioner Vibert shared that this can be difficult, but we have done this before and we will work to make these transitions as seamless as possible.

4. **Public Comment**
   Chair Dube read the Public Comment rules into the record. Dr. Carbone shared that if someone did not want to stand and speak they had the opportunity to participate in a ThoughtExchange survey. The link and QR code were provided on the screen and will be open until November 4, 2022.

   The following members of the community addressed the board regarding redistricting questions or concerns
   Erin Ash – 19 Winston Court – Chippens Hill/Edgewood – Grades 1,3,6,8 and PreK
   Matt Poulin – 7 Renee Street – MTV – Grade 1
   Carrie DeNino – 20 Woodside Way – Edgewood – Grades 4 and K
   Niece Zabawa – 30 Dorset Horn Lane – Chippens Hill/West Bristol – Grades 6 and 7
   Jennifer Aiedziona – 54 D'Amato Lane – Stafford – Grades 5 and PreK

   Chair Dube shared that there would be another Redistricting Meeting on November 17th at Bristol Central High School in the auditorium at 6:30 p.m.

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5. ADJOURNMENT
There being no other business, the meeting should adjourn. *(7:14 p.m.)*

Respectfully Submitted,



Susan Everett, Recording Secretary
Bristol Board of Education

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Erica Archambault

Award-Winning Science Educator

Forward-thinking educator with proven record of accomplishment in curriculum development during a nine-year career. Driven and ambitious change manager dedicated to continuous personal and business growth focused on enhancing outcomes and streamlining business operations.

Work History

2015-10 - Current

Chemistry, Anatomy and Physiology, Biology and Physical Science Instructor

Terryville High School, Plymouth, CT

- Award-winning educator in the field of Biology, National Association of Biology Teachers
- Committee member responsible for generating item standards for the Next Generation Science Standards assessment.
- Cultivate engaging learning environments for both physical and remote classrooms, teaching over a hundred students per semester across both formats.
- Create engaging curricula and supporting materials to facilitate positive learning outcomes across Chemistry, Biology, Forensics, and Physical Science courses.
- Keep abreast of developments within field of curriculum and instruction through participation in conferences, communication with colleagues and reading of contemporary literature.
- Provide supervision to teaching assistants, supporting work activities, answering questions and contributing to professional development.
- Foster student academic success by clearly outlining course objectives and expectations, monitoring progress and offering additional assistance.
- Next Generation Science Standards Test item reviewer and writer.
- Standards Review Committee: reviewed and revised school standards in preparation for NEASC visitation.
- Science Fairness and Accessibility Committee- Evaluate the Next Generation Science Standards assessment for several factors involved in fairness and accessibility to students.

2017-01 - Current

CEO and Founder

Contact

Address

Phone

E-mail

Skills

- Curriculum Development
- Organizational leadership
- Data Analysis
- Common Core State Standards
- Differentiated Instruction
- Professional Development Workshops
- Content Standards
- Online Assessments

- Specialize in college consulting services
- Manage operations and client acquisition
- Devise new promotional approaches to boost customer numbers and market penetration while enhancing engagement and driving growth.

2017-05 - 2019-01

Lead Science Tutor

Sylvan Learning Center, Newington, CT

- Primary science tutor specializing in the Next Generation Science Standards.
- SAT Math tutor.
- ACT Science tutor.
- Assisted students from various schools and backgrounds with science homework and preparation for exams.
- Collaborated with parents to create tutoring sessions appropriate for student's age, learning preference and learning style.
- Collaborated with students to complete homework assignments, identify lagging skills and correct weaknesses.

2013-07 - 2016-07

Capital Community College, Hartford, CT

- Anatomy and Physiology laboratory course professor.
- Planned and executed lesson plans with clear obtainable objectives.
- Assisted several students outside of the classroom to ensure their success in the course.
- Worked closely with the course director to integrate lectures and laboratory information.

2014-08 - 2015-10

Wilby High School, Waterbury, CT

- 9th grade Small Learning Community (SLC), Physical Science and Honors Biology.
- Chair of NEASC curriculum committee.
- Wrote and implemented rigorous lesson plans for 9th grade students.
- Differentiated instruction for all classes.
- Integrated technology for informational purposes.
- Facilitated faculty-parent/guardian interaction for the SLC.

2014-03 - 2015-03

Chair of Curriculum Advisory Committee

Wilby High School , Waterbury, CT

- Coordinated curriculum meetings consisting of the NEASC Curriculum Team.
- Researched and constructed responses to NEASC recommendations.
- Formulated solutions to curricular deficiencies, including alignment to national, state, and school-specific standards, Wilby High School, Science Curriculum Development Committee.
- Coordinated curriculum meetings consisting of colleagues from district-wide schools.
- Formulated common formative assessments to align diverse

schools to a common curriculum.

2014-01 - 2014-06

Research Assistant

Pfizer, Inc, Cambridge, MA

- Molecular biology researcher in Cardiovascular/Metabolism research unit.
- Planned, modified and executed research techniques, procedures and tests.
- Summarized search results by preparing written reports, graphs, fact sheets and tables.
- Planned, modified, and executed research techniques, procedures and tests.
- Collaborated with leadership team to identify relevant questions and determine best methods of collection.
- Analyzed statistical data using both modern and traditional methods.
- Wrote and edited data collection forms and questionnaires.

Education

2017-01 - 2019-01

M.A: Curriculum and Instruction

University Of Saint Joseph - West Hartford, CT

2014-01 - 2015-01

Alternate Route to Certification Hartford, CT Biology And General Science

Alternate Route To Certification (ARC) - Hartford, CT

2006-01 - 2010-01

B.A: Neurobiology

Harvard University - Cambridge, MA

Affiliations

- National Association of Biology Teachers
- Connecticut Educators Association
- Plymouth Educators Association
- Harvard Alumni Association (HAA),
- Connecticut Community for Addiction and Recovery (CCAR) Drug and Alcohol Recovery Program Volunteer
- Global Study Treks, Board Member, non-profit organization

Additional Information

I attended three years of medical school from 2010-2013. I left for personal reasons though continue to utilize my vast knowledge of the medical space and thorough understanding of my studies in my teaching.

Nadia DeRoy

OBJECTIVE To obtain a high school French teacher position

Summary Diversified experience in multiple levels of teaching French
Highly motivated and effective organizational skills.
Excellent communication skills and ability to work effectively in a team environment.
Strong computer skills and diverse experience with multiple educational software, programs, and websites.

EDUCATION Bennington College, Bennington, VT
Masters of Arts in Teaching Second Language: July 2009

Central Connecticut State University, New Britain, CT
Bachelor of Science Degree in Education: May 2005
Major: French

Certification Connecticut Teacher's Certification, K-12
UCONN Early College Experience Certification

Work Experience

French Teacher (Grades 8-12)
RHAM High School, Hebron, CT (August 2005 to Present)

- Plan and implement daily lesson plans in both the Middle and the High school level
- Teach all levels of French, including 2 UCONN ECE French courses
- Organize and run multiple student activities and trips with Francophone education and culture focus to France, Quebec, surrounding states, along with different areas in Connecticut
- Member of different school committees i.e. advisory, schedule, NEASC

Full-time Administrative Assistant for Adolescent Psychiatrist
Mujeeb Khalique M.D, West Hartford, CT September 2001- 2005

- Perform several office duties including but not limited to making appointments, filing, and billing

Coordinate personal and professional travel arrangements.
Assist to manage all personal accounts

Disney Cast Member
Restaurant Marrakech in Walt Disney World Resort December 1998-December 1999

- Hostess, waitress, and cashier

Skills

- Fluency in Arabic and French

Highly organized and detail oriented

- Excellent classroom management skills and teamwork oriented.

References

Available upon request

Lisa M. Ellison (Smith), LCSW

OBJECTIVE: To obtain a challenging and diverse position in the social work field to enhance the emotional, social and physical well-being and functioning to vulnerable populations.

EDUCATION:

Licensed Clinical Social Worker, Connecticut Department Public Health

Certified School Social Worker, State of Connecticut

Crisis Prevention Intervention Certified (CPI)

Master's Degree in Social Work, Springfield College, Springfield, Massachusetts

Bachelor's Degree in Social Work, Saint Joseph College, West Hartford, Connecticut

RELATED EXPERIENCE

Clinical Social Worker, CT Children's Medical Center, Hartford Connecticut- March 2017- Present

Perform clinical assessments and level of care evaluations for youth ages 5-18 in behavioral health crisis within an emergency department setting. Identify the psychosocial, substance abuse and mental health needs of youth through risk assessment, crisis intervention and supportive counseling. Perform solution focused therapy and behavior intervention to youth and families from culturally, socially, and economically diverse populations. Identify and address the social and emotional needs of patients and families. Perform care coordination and clinical case management to address the identified psychiatric and substance abuse needs. Facilitate referrals, coordinate resources and partner with receiving programs. Participate in a multidisciplinary health care team and collaborate with community providers and stakeholders. Conduct insurance pre-authorizations for behavioral health treatment. Provide clinical social work and family support while responding to activated traumas/medical alerts within the medical emergency department.

Social Worker, Hartford Hospital, Hartford, Connecticut- November 2020 - Present

Provide crisis intervention, supportive counseling and behavioral health evaluations for behavioral health team within the department of transplant and living donation. Assess coping and adjustment to implement interventions within inpatient and outpatient settings. Perform needs assessment and coordination of care. Conduct family meetings to increase family support and provide ongoing education. Obtain and monitor behavioral agreements from patients/families that address continued commitment to maintaining compliance with medical regiment and abstinence from substance use. Preparation to co-facilitate support/wellness group to patients. Participate in multidisciplinary committee to determine transplant and living donor candidacy.

Assessment Clinician, Institute of Living/Hartford Hospital, Hartford, Connecticut- March 2013-March 2017

Conducted clinical assessments for risk to self/others and level of care evaluations for both pediatric and adult emergency departments within CT Children's Medical Center and Hartford Hospital. Evaluated patients/families at multiple sites throughout the organization to determine psychiatric and substance abuse needs. Responsibilities include the assessment, intervention and disposition of children/ adolescents /adults in acute psychiatric crisis. Coordinated shift assignments and provided quality, cost effective care for patient/families within the pediatric and adult population. Assured access, provided assessment and/or direct care, coordinated with required resources and collaborated with receiving programs and clinicians. Conducted insurance pre- certifications and authorizations for inpatient level of care. Utilized excellent communication and negotiation skills, focused on providing the appropriate services to assure that the patient, provider, payor and health care organization's goals were met.

Renal Social Worker, Davita Dialysis, Hamden, Connecticut -July 2012- February 2013

Provided supportive counseling and ongoing psychosocial assessment of patients both before and after the start of dialysis. Utilized clinical case management skills, provided support and care coordination in all areas of patients' lives including emotional, financial, housing, transportation, medications, substance abuse, and mental health. Assisted patients and caregivers to the adjustment to end stage renal disease and dialysis. Provided therapeutic intervention and education about kidney disease and treatment options to empower patients to make informed decisions about their healthcare. Collaborated with medical multidisciplinary team and provided clinical consultation on the social and emotional needs/impact on patients and families. Participated in team meetings and knowledge of government and insurance programs, as well as referrals to community resources.

Family Services Counselor, Court Support State of Connecticut, New Haven, CT - October 2017 to July 2012

Completed psychosocial and risk assessments for family violence in the criminal court. Provided recommendations pertaining to treatment, protective orders, and case disposition. Collaborated with outside agencies for referrals and treatment outcomes. Performed child focused and systemic family assessments for the family court relative to children's best interest. Interviewed parents, children and collateral professionals and conduct home visits to evaluate specific parenting issues relative to mental health, substance abuse, domestic violence, and child welfare issues. Conducted comprehensive custody and visitation evaluations and provide specific, multi-level recommendations for the family. Mediated disputed parenting issues and provided conflict resolution services to high conflict parents pertaining to child custody and visitation. Negotiated cases for individuals in the dissolution process or contested parents relative to family finances, property settlement, child

support, parenting plans, custody and visitation. Presented extensive written reports and spontaneous oral reports to the court. Provided expert witness testimony to the Court when required. Maintained written documentation and adhere to time sensitive policy standard.

Clinician- Specialized Foster Care and Multisystemic Therapy, Wheeler Clinic- March 2006-October 2007

Provided family assessments, behavior intervention plans, crisis intervention and in-home support for children and families with specialized and complex needs involved in the foster care system. Performed individual therapy to at risk children/youth and provided family therapy to the foster family. Collaborated with outside agencies and systems for child welfare issues and treatment outcomes. Supported and educated foster parents in areas of child development, mental health and childhood trauma. Provided case management services to the foster family and made referrals to community resources. Conducted home studies to ensure licensing requirements for foster homes. Performed permanency planning for pre-adoptive families. Maintained clinical documentation.

Conducted multi-systemic assessment, interventions and treatment to at risk adolescents and families within an intensive in-home evidence based model. Provided crisis interventions, family therapy and substance abuse treatment to youth with delinquency issues, mental health needs, substance abuse problems, trauma exposure and oppositional behaviors. Provided individual and couples therapy to parents and caregivers. Maintained a clinical lead and regularly collaborated with school, community, family, and peer systems to coordinate services and treatment needs. Performed case management and advocacy for youth and families. Provided recommendations to judicial system and participated in Community Review Team meetings to determine placement of youth. Maintained clinical documentation and prepared weekly treatment reports. Completed insurance pre-authorizations for clients.

Fee for Service Clinician, Jewish Family Services, West Hartford, Connecticut-November 2005-March 2006

Provided individual and family therapy and treatment to children, families, and adults using multi-level and multi-systemic therapeutic approaches. Performed intakes, multi-axial assessments, case management and collaborated with clients to develop treatment plans.

Social Work Intern, Jewish Family Service, West Hartford, Connecticut-September 2004-June 2005

Provided multi-leveled and multi-systemic intakes, assessment, intervention and treatment to adults and youth. Participated in multi-disciplinary team meetings and maintained appropriate case documentation. Conducted a home study for an international adoption. Conducted post-adoption supervision and compiled post-adoption reports. Co-facilitated task groups for clients and staff. Composed, submitted and awarded a grant proposal for the agency. Conducted a cultural diversity assessment of agency, created an agency cultural wellness plan and facilitated a cultural wellness committee within the agency. Participated in statewide cultural competence team.

Primary Service Manager, Empowering People for Success Program, Jewish Family Services

August 2004- March 2006

Conducted intensive, nontraditional outreach and home based services to vulnerable and diverse families enrolled in the Temporary Family Assistance (TFA) state program. Provided assessments, strengths based case management, and advocacy to clients. Collaborated with clients to develop family development plans to promote empowerment and self-sufficiency. Reduced family barriers by referrals to community resources and service providers.

Case Manager/Field Supervisor, Southend Community Services, Hartford, Connecticut

August 2003-August 2004

Performed case management duties to homebound, medically compromised seniors in the Elderly Services department. Conducted home visits and maintained communication to assess their well-being and needs. Performed supervisory administrative duties and supervised a staff of eleven homemakers and companions. Mediated relational stressors between clients and staff to maintain consistent and efficient homecare services. Facilitated in-service trainings for staff pertaining to geriatric and development issues. Conducted interviews and completed hiring/termination process. Maintained contractual obligations with community agencies and funding sources.

Primary Service Manager, Empowering People for Success Program, Catholic Family Services

November 2001- March 2003

Conducted intensive, nontraditional outreach and home based services to vulnerable and diverse families enrolled in the Temporary Family Assistance (TFA) state program. Provided assessments, strengths-based case management, and advocacy to clients. Collaborated with clients to develop family development plans to promote empowerment and self-sufficiency. Reduced family barriers by referrals to community resources and service providers.

Social Work Intern, Family Intervention Center, Waterbury, Connecticut - September 2000-May 2001

Provided individual, marriage and family therapy to adolescents and adults. Conducted psychosocial assessments, administered substance abuse evaluations and developed treatment plans. Co-facilitated a chemical dependency group for ten clients.

Outreach Worker, United Way of CT/Infoline, Rocky Hill, Connecticut-Summers 1998-2000

Designed, coordinated and conducted outreach for HUSKY insurance. Provided casework to families.

REFERENCES

Available Upon Request

Margaret E. Freedman

HIGHLIGHTS OF QUALIFICATIONS

- Connecticut Teachers Professional Art Certification Pre-K-12 (042)
- Connecticut Teachers Professional Elementary Certification K-6 (005)
- Extensive Experience teaching art to pre-k – 7th grade children in diverse settings over 17 years (schools, museums, and Summer programs)
- Board of Directors member of The New Britain Art League from 2010-2013.
- Writing public school Art curriculum.
- Participant in National Council for Accreditation of Teacher Education (NCATE) and the Connecticut Department of Education Conference on Teacher Accreditation.
- Continuing to enhance my own artwork through painting, photography, pastel and ceramic classes.

EDUCATION

UNIVERSITY OF HARTFORD, West Hartford, CT
Masters Degree in Elementary Education (GPA: 3.9 - 4.0)

UNIVERSITY OF HARTFORD SCHOOL OF ART, West Hartford, CT
Bachelor of Fine Arts, Major in Advertising Design

PUBLIC and PRIVATE SCHOOL ART TEACHING EXPERIENCE

New Britain Museum of American Art, New Britain, CT, October 2019– May 2022
Planned and implemented art lessons for school tours which included grades K-12.

- Taught art using various artistic mediums: including painting, drawing, clay and crafts.
- Created and recorded virtual art lessons for the museum which coincide with exhibitions and lessons that were taught during school visits.
- Live Zoom and Google Meets art lessons for area schools, summer camps and the *Art Start Program*.
- Created art lessons in PowerPoint and IMovie for people visiting the museum.

Southington Community Cultural Arts (SoCCA), Southington, CT, October 2020 – Present, as needed.
Plan and implement art lessons for after school youth programs grades Pre-K-3.

- Teaching art using various artistic mediums: including painting, drawing and collage.

New Britain Museum of American Art *(Art Start Program),* New Britain, CT, October 2006 – June 2022

- Planned and implemented art lessons, for preschool students, ages 3-5, to align with museum's literacy and art goals.
- Delivered art lessons that connected to a piece of art in the museum, and a storybook read to children.
- Taught art using various artistic mediums: including painting, drawing, clay and crafts.

Trinity Academy, Sigourney Street, Hartford, CT, September 2017-2019
(part time position)

- Taught art to 2nd, 3rd and 4th grade students.
- Used diverse art media, including 2D and 3D, following Connecticut art standards for the elementary art curriculum.
- Organized and displayed student art work within the building, including for art shows.

CREC Academy of Science and Innovation, Slater Road, New Britain, CT, November 2016-June 2017 (part time position)

- Taught art to Pre-School students.
- Used diverse art media, including 2D and 3D, following Connecticut art standards for a Pre-K curriculum.
- Organized and displayed art pieces within the building which included the Pre-School art show.

West Hartford Public Schools, Aiken Elementary School, West Hartford, CT, long term Art Substitute, January 2016-February 2016

- Taught art to students in K-5th grade.
- Used diverse art media, including 2D and 3D, following Connecticut art standards and Common Core Curriculum.
- Organized and displayed art pieces within the building.

Simsbury Public Schools, Tootin' Hills Elementary School, West Simsbury, CT, long term Art Substitute, September 2015-December 2015

- Taught art to students in K-6th grade.
- Used diverse art media, including 2D and 3D following Connecticut art standards and Common Core Curriculum.
- Participated in organizing student art shows in buildings throughout the district.

Wethersfield Public Schools, Hanmer Elementary, Wethersfield, CT, one-year long term Art Substitute, August 2014-June 2015

- Taught art to students in K-6th grade.
- Used diverse art media, including 2D and 3D, following Connecticut art standards.
- Created art displays of students' work and participated in the school district's yearly art show.
- Participated in Hanmer's online weekly school newsletter called "The Hanmer Hoot".

Waterbury Public Schools, Reed School, Waterbury, CT, August 2013-June 2014

- Taught art to students in PreK-7th grade.
- Used varied art media, including 2D and 3D ,following Connecticut art standards and Common Core Curriculum.
- Created art displays of students' work.
- Participated in student school events.

Region 4 Essex Elementary School, Centerbrook, CT, September 2004 – June 2013 (.5 FTE) Tenured teacher.

- Taught art to students in K-6th grade.
- Used a variety of art media, including 2D and 3D, technology, collages, painting, drawing, clay and printing following Connecticut art standards and Common Core Curriculum.
- Created art displays of students' work throughout the school along with the students' yearly art show.
- Conducted portfolio assessments for grading purposes.
- Volunteered for after school Art Buddies Program that involved pairing High School students with Elementary students to create art.

Alicia Harrington

CAREER SUMMARY

Throughout my career, as an elementary educator, I have committed to serving children in their journey to become lifelong learners. My passion extends beyond the classroom where I've honed my collaboration and leadership skills to work with my grade partners and administration to promote quality education.

PROFESSIONAL EXPERIENCE

New Haven Public Schools, New Haven CT 2014 - Present
Lincoln Bassett School, Kindergarten Teacher
In this role, I work with my students to establish learning foundations in all major subjects. The experience in my classroom, and as a part of our culture is critical to enable my students to become more confident and capable learners.

New Haven Public Schools, New Haven CT 2016 - 2019
Summer School / Tutoring, Before/After-School & Enrichment Programs
I worked with elementary school students to help them to accelerate academic progress or bridge learning gaps. I supported programs to give additional learning opportunities for students in need or for continued achievement.

Hartford Public Schools, Hartford CT
L.W. Batchelder Elementary, Tutor 2014 - 2014
This opportunity was teaching language arts and math to at-risk Kindergarten students. I customized lessons according to my student's specific needs to enable them for the coming school year and beyond.

Branford Public Schools, Branford CT
Mary R. Tisko Elementary, Special Education Paraprofessional 2012 - 2014
My responsibilities included one-on-one support for a special needs Kindergarten student. I created and modified instructional lessons according to the student's individualized Educational Plan and worked to help them thrive.

East Haven Public Schools, East Haven, CT 2010 - 2011
D.C. Moore Elementary, 1st/2nd Grade Paraprofessional
Assisted the Special Education efforts by administering assessments and analyzing the needs of students with IEPs. Worked with students on a one-on-one and small group basis using directed teaching that focused on their specific needs for literacy and mathematical skills.

SKILLS

- Common Core Standards, Fundations Curriculum, Collaborative Classroom, iReady Math, Everyday Math
- Digital Communication w/ parents with the use of Class Dojo + live calls to parents
- Experience working with SMART Board technology
- Windows software programs including PowerPoint, Excel, Outlook, Word
- Familiar w/ Spanish language

EDUCATION & CERTIFICATION

University of Saint Joseph, Hartford, CT
Master of Arts, Education: Reading and Language
2017 / GPA: 4.0 / Dean's List

Coastal Carolina University, Conway, SC
Bachelor of Arts, ElementaryEducation
2010 / GPA: 3.8 / Dean's List

Certified Elementary Teacher
State of Connecticut Provisional K-6 013

SUSAN L LOPEZ

EDUCATION

University of Connecticut, Storrs, CT
Administrator Preparation Program (UCAPP), Sixth Year Diploma: August 2001
Intermediate Administrator/Supervisor Certificate (092): January 2001

Ithaca College, Ithaca, NY
Masters of Science: May 1997
Concentration: Teaching Behavior and Instruction in Physical Education

University of Connecticut, Storrs, CT
Bachelor of Science: May 1992
Certification in PreK-12 Physical Education and Health Certificates (043) and (044)

PROFESSIONAL EXPERIENCE

Elementary Reading Tutor

Hopewell Elementary School, Glastonbury, CT August 2021-present

-Extra reading support to assigned students in grade k-2 small group, one on one
-classroom coverage when assigned

Readiness PreSchool Tutor

Early Childhood Learning Center at Hockanum School, East Hartford, CT Nov 2014- March 2020

- Extra support to students in small group, whole group and one to one
- Staff coverage in 6 readiness classrooms

Instructional Associate, (Assistant Principal) Meriden, CT

Benjamin Franklin School (2003-2006)
Nathan Hale School (2000-2003)

- Assist Principal with daily administrative responsibilities in a 700 pupil school
- Coordinate school schedule to accommodate 90 certified staff/paraprofessionals
- Coordinate budgetary process and ordering building supplies
- Hire, train and supervise cafeteria assistants
- Process discipline referrals and follow up with teachers, parents and students
- Supervise school arrival and dismissal procedures
- Prepare written communications to staff and parents
- Participate in student counseling and discipline.
- Administrator Designee for Early Intervention PPT's (Program Planning and Placement Team)

K-5 Physical Education Teacher –Nathan Hale School, Meriden, CT (1993-2000)

- Designed and implemented lessons to accommodate regular and special education students in an inclusive setting
- Collaborated in Physical Education curriculum revision
- Developed and coordinated lessons to align with Individual Educational Plans (IEP)

Head Teacher – Nathan Hale School, Meriden, CT (1999-2000)

- Released from classroom to assume acting principal responsibilities at the discretion/absence of principal

RELATED PROFESSIONAL EXPERIENCE

CMT Intervention Module Coordinator - Nathan Hale School, Meriden, CT (2001-2003)

- Facilitated a before-school program developing and implementing lessons to improve Connecticut Mastery Test performance

Special Education Summer School Building Administrator - Nathan Hale School, Meriden, CT (2002)
- Supervised and provided support for summer school teachers and staff

Administrative Intern - John Lyman School, Middlefield, CT/Nathan Hale School, Meriden, CT (1999-2000)
- Shadowed and implemented administrative projects at the discretion of building administrator

SUSAN L LOPEZ

RELATED PROFESSIONAL EXPERIENCE CONTINUED

Teacher – Nathan Hale Summer School Program (1999, 2000)
- Created and implemented K-1 Guided Reading Program

Graduate Assistant-Kinesiology, Ithaca College, Ithaca, NY (1992-1993)
- Provided instructional assistance to students
- Planned and instructed lab work

RELATED EXPERIENCE

- Catechism teacher fall 2018 school year and 2014-15 school year
- Life Space Crisis Intervention Training and Certification (2001)
- Saturday Academy/School Accountability Grant Administrator (2000-2005)
- Professional Development and Stipend Committee Chair (2000-2005)
- Crisis Resource Committee Member and Co-Chair (1998-2003)
- School Improvement Committee Member (2000-2006)
- Child Study Team Liaison (2000-2006)
- Attendance Committee Member (2000-2006)
- Family Reading Club Committee Member (1999-2003)
- Volunteer Committee Member (1997-2002)
- Safety and Discipline Committee Member and Chair (1993-2006)
- Physical Education Revision Committee Member (1998-1999)
- Positive Behavior Support Committee Member (2004-2006)

REFERENCES

Furnished upon request

BOARD OF EDUCATION
Bristol, Connecticut

TENURE ELIGIBILITY LIST

Certified professional personnel who became eligible for continuing contract status (tenure) during the period September 1, 2021 through September 1, 2022 are listed below.

Bristol Arts Innovative Magnet School	**Effective Date**
Dudek, Caitlyn - Grade 8 Language Arts	6/30/2022
McLean, Racia - Grade 8 Science Teacher	6/30/2022
Palmero, Carolynn - Grade 8 Math Teacher	6/30/2022
Bristol Central High School	
Lindstrom, Sarah - World Language/Spanish Teacher	6/30/2022
Bristol Eastern High School	
Elliot, Lauri - Chemistry Teacher	5/31/2022
Nugent, Alyssa - Social Studies Teacher	6/30/2022
Chippens Hill Middle School	
Baker, Lorenzo - Wellness Teacher	6/30/2022
Martino, Danielle - Grade 8 Social Studies	6/30/2022
Sisson, Suzanne - Grade 7 Math Teacher	6/30/2022
Ellen P. Hubbell School	
Gagnon, Lindsay - Grade 3 Teacher	6/30/2022
Greene-Hills School	
Barichko, Christine - World Language/Spanish Teacher	11/30/2021
Blumenthal, Joshua - Art Teacher	6/30/2022
DeLarosa, Steven - Physical Education Teacher	6/30/2022
Fisher, Jessica - TESOL Teacher	6/30/2022
Ivy Drive School	
Eucalitto, Zachary - Grade 5 Teacher	6/30/2022
South Side School	
Oakes, Julie - Grade 5 Teacher	6/30/2022
Traner, Ashleeann - K-5 Library Media Specialist	6/30/2022
Stafford School	
Hanson, Alba - Literacy Coach	6/30/2022
West Bristol K-8 School	
Lowell, Anthony - 6-8 Physical Education Teacher	6/30/2022
Mazzei, Sarah - Grade 5 Teacher	11/30/2021
Special Education	
Broderick, Colin - Special Education Teacher - BEHS	6/30/2022
Davies, Jammy - Special Education Teacher - BEHS	6/30/2022
Gordon, Scott - Speech and Language Pathologist - SSS	6/30/2022

Carlisle, Laura - Special Education Teacher - STAF	2/28/2022
Hall, Erin - Guidance Counselor - WBS	6/30/2022

Administrators

Bulls, Tanya - Dean of Students - STAF and SSS	1/31/2022
Madruga, Matthew - Assistant Principal - WB	6/30/2022

South Side School Indoor Air Quality Upgrades
21 Tuttle Rd
Bristol CT 06010
Principal: David Huber
860-584-7812

Improve Indoor Air Quality:
Replace 6 Air Handling Units to Increase Ventilation and Humidity Control to Reduce Mold and Mildew.

Re: Education Specification

1. RATIONALE:

   The South Side School Ventilation System was installed in 1973. Component replacement has happened with the system throughout its life cycle. The old system provided only minimal humidity control. Some areas did not have cooling and proper ventilation. As the humidity levels rose outside the levels could not be properly adjusted to eliminate condensation on piping and surfaces in the building. This condensation led to mildew and mold in many of the teaching spaces and a unhealthy building.

2. LONG RANGE PLAN:

   As part of the 10-year Capital Improvement Plan, each year we identify schools that need upgrades. The BOE recommended we upgrade the HVAC at South Side School to provide the proper ventilation and dehumidification needed to solve the mold and mildew problem. This meant replacement of 6 air handing units that provide cooling, ventilation, and humidity control to the facility.

3. THE PROJECT SCOPE

   - Remove and replace 6 roof top units.
   - Replace Compressors and Cooling Towers
   - Replace Coil
   - Upgrade Ductwork and Ventilation
   - Replace Unit Ventilators
   - Identify and Remove HAZ MAT Materials
   - Upgrade Electric System to Accommodate HVAC
   - Upgrade Plumbing System to Accommodate HVAC

4. BUILDING SYSTEMS

    - Security: N/A
    - Public Address: N/A
    - Technology: N/A
    - Phone Systems: N/A
    - Clocks: N/A

5. INTERIOR BUILDING ENVIRONMENT

    - Acoustics: Ceilings: In areas that are disrupted during construction.
    - Electrical: Upgrades as Needed for HVAC
    - HVAC: System Upgrade to Improve Indoor Air Quality
    - Plumbing: Upgrades as Needed for HVAC
    - Windows and Doors: N/A

6. SITE DEVELOPMENT

    - Site Acquisitions: N/A
    - Parking: N/A
    - Drives: N/A
    - Walkways: N/A
    - Landscaping: N/A
    - Site Improvements: N/A

7. COMMUNITY USES

    South Side School is used by our community during, before, and after school hours, and on some weekends year round. The uses include but are not limited to the following:

    - PTO
    - After School Activities
    - Summer Programs

    Various and sometimes multiple areas are used for these functions.

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

CONTRACT 2C20-064

21 Tuttle Rd.
Bristol, CT 06010

April 15, 2020

CITY OF BRISTOL, CT
Mayor Ellen Zoppo-Sassu

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard Suite 250
Foxborough, MA 02035
(508) 698-3034 (800) SAMPSON
www.westonandsampson.com



DRAWING LIST

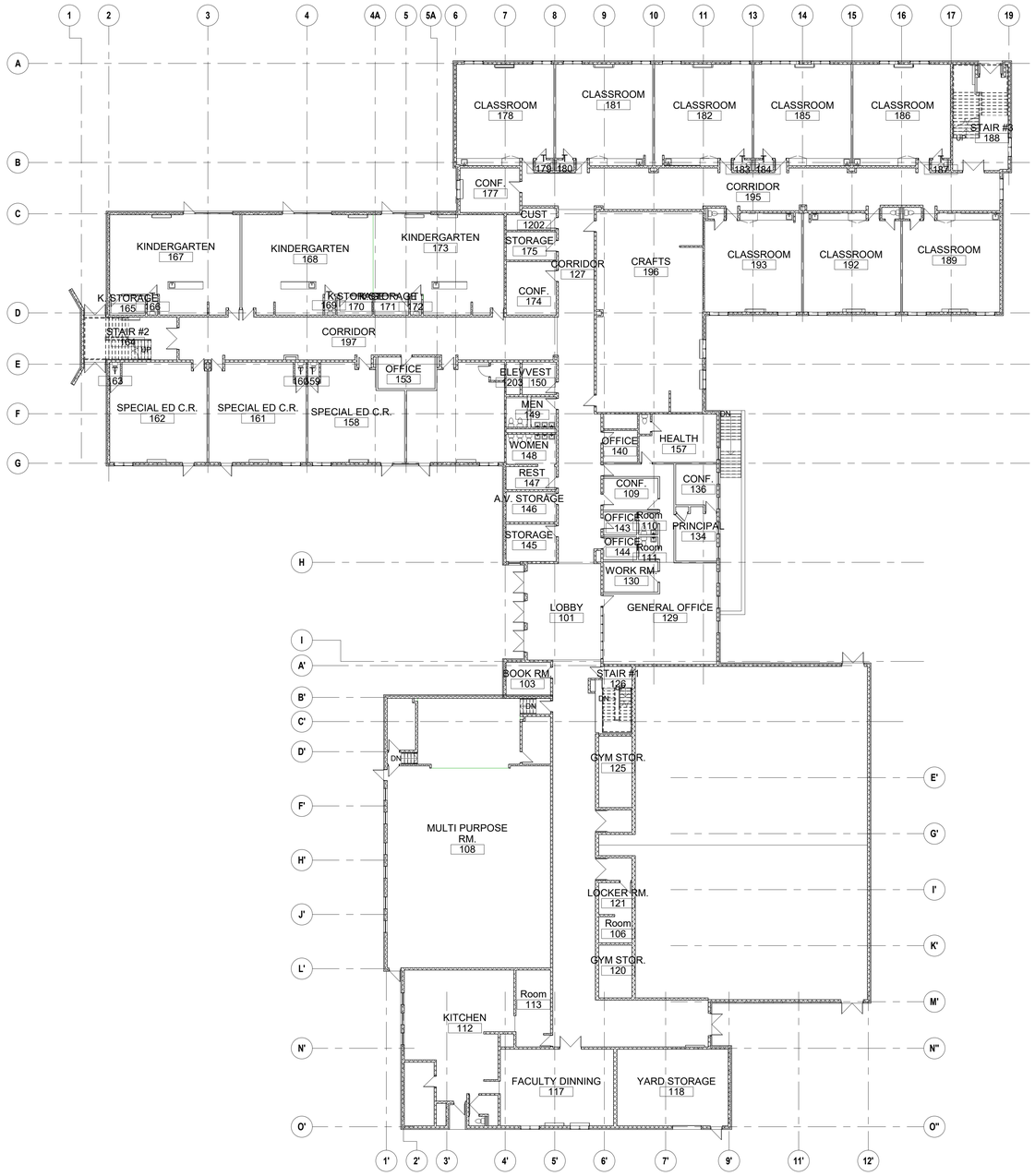
A101	OVERALL FIRST FLOOR PLAN
A101A	FIRST FLOOR PLAN PART A
A101B	FIRST FLOOR PLAN PART B
A102	OVERALL SECOND FLOOR PLAN
A102A	SECOND FLOOR PLAN PART A
A102B	SECOND FLOOR PLAN PART B
A103A	ROOF PLAN PART A
D101A	FIRST FLOOR DEMOLITION PLAN PART A
D101B	FIRST FLOOR DEMOLITION PLAN PART B
D102A	SECOND FLOOR DEMOLITION PLAN PART A
D105A	SECOND FLOOR RCP DEMOLITION PLAN PART A
D105B	SECOND FLOOR RCP DEMOLITION PLAN PART B
HAZMAT	
HM-1	BASEMENT & FIRST FLOOR ABATEMENT PLAN
HM-2	SECOND FLOOR ABATEMENT PLAN
MECHANICAL	
H001	LEGENDS, NOTES, AND ABBREVIATIONS
H101A	FIRST FLOOR DUCTWORK PLAN PART A
H101B	FIRST FLOOR DUCTWORK PLAN PART B
H102A	SECOND FLOOR DUCTWORK PLAN PART A
H102B	SECOND FLOOR DUCTOWKR PLAN PART B
H103A	ROOF PLAN PART A
H103B	ROOF PLAN PART B
H200	BASEMENT NEW WORK PIPING PLAN
H201A	FIRST FLOOR PIPING PLAN PART A
H201B	FIRST FLOOR PIPING PLAN PART B
H202A	SECOND FLOOR PIPING PART PLAN A
H202B	SECOND FLOOR PIPING PLAN PART B
H501	HVAC DETAILS
H502	HVAC DETAILS
H503	HVAC DETAILS
H601	SCHEDULES

DRAWING LIST

H602	SCHEDULES
H701	CONTROLS
H702	CONTROLS
H703	CONTROLS
H704	ADD ALTERNATE CONTROLS
H801	AIRFLOW DIAGRAMS
H802	AIRFLOW DIAGRAMS
H803	AIRFLOW DIAGRAMS
H804	AIRFLOW DIAGRAMS
H805	AIRFLOW DIAGRAMS
HD101A	FIRST FLOOR DEMOLITION PLAN PART A
HD101B	FIRST FLOOR DEMOLITION PLAN PART B
HD102A	SECOND FLOOR DEMOLITION PLAN PART A
HD102B	SECOND FLOOR DEMOLITION PLAN PART B
HD103A	ROOF DEMOLITION PLAN PART A
HD103B	ROOF DEMOLITION PLAN PART B
ELECTRICAL	
E001	ELECTRICAL TITLE SHEET
E101	LEVEL 1 LIGHTING PLAN PART A
E102	LEVEL 1 LIGHTING PLAN PART B
E103	LEVEL 2 LIGHTING PLAN PART A
E201	BASEMENT POWER PLAN
E202	LEVEL 1 POWER PLAN PART A
E203	LEVEL 1 POWER PLAN PART B
E204	LEVEL 2 POWER PLAN PART A
E205	LEVEL 2 POWER PLAN PART B
E206	ROOF POWER PLAN PART A
E207	ROOF POWER PLAN PART B
E501	ELECTRICAL DETAILS SHEET
E601	ELECTRICAL SCHEDULES SHEET
ED101	BASEMENT DEMOLITION PLAN
ED102	LEVEL 1 DEMOLITION PLAN PART A
ED103	LEVEL 1 DEMOLITION PLAN PART B
ED104	LEVEL 2 DEMOLITION PLAN PART A
ED105	LEVEL 2 DEMOLITION PLAN PART B
ED106	ROOF DEMOLITION PLAN PART A
ED107	ROOF DEMOLITION PLAN PART B



ISSUED FOR:
ADDENDUM #1



1 A101 **OVERALL First Floor PLAN**

1/16" = 1'-0"

Project:

Weston & Sampson

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard Suite 250
Foxborough, MA 02035
(508) 698-3034 (800) SAMPSON
www.westonandsampson.com

Consultants:

QA+M architecture
QuisenberryArcariMalik
195 Scott Swamp Road
Farmington, CT 06032
(860) 677-4594
qamarch.com

Seal:

Revisions:

Rev	Date	Description

Issued For: FOR BID

PROJECT TRUE

SCALE: AS NOTED

Date:	APRIL 2, 2020
Drawn By:	JCB
Reviewed By:	AC
Approved By:	-
W&S Project No:	Do Not Use

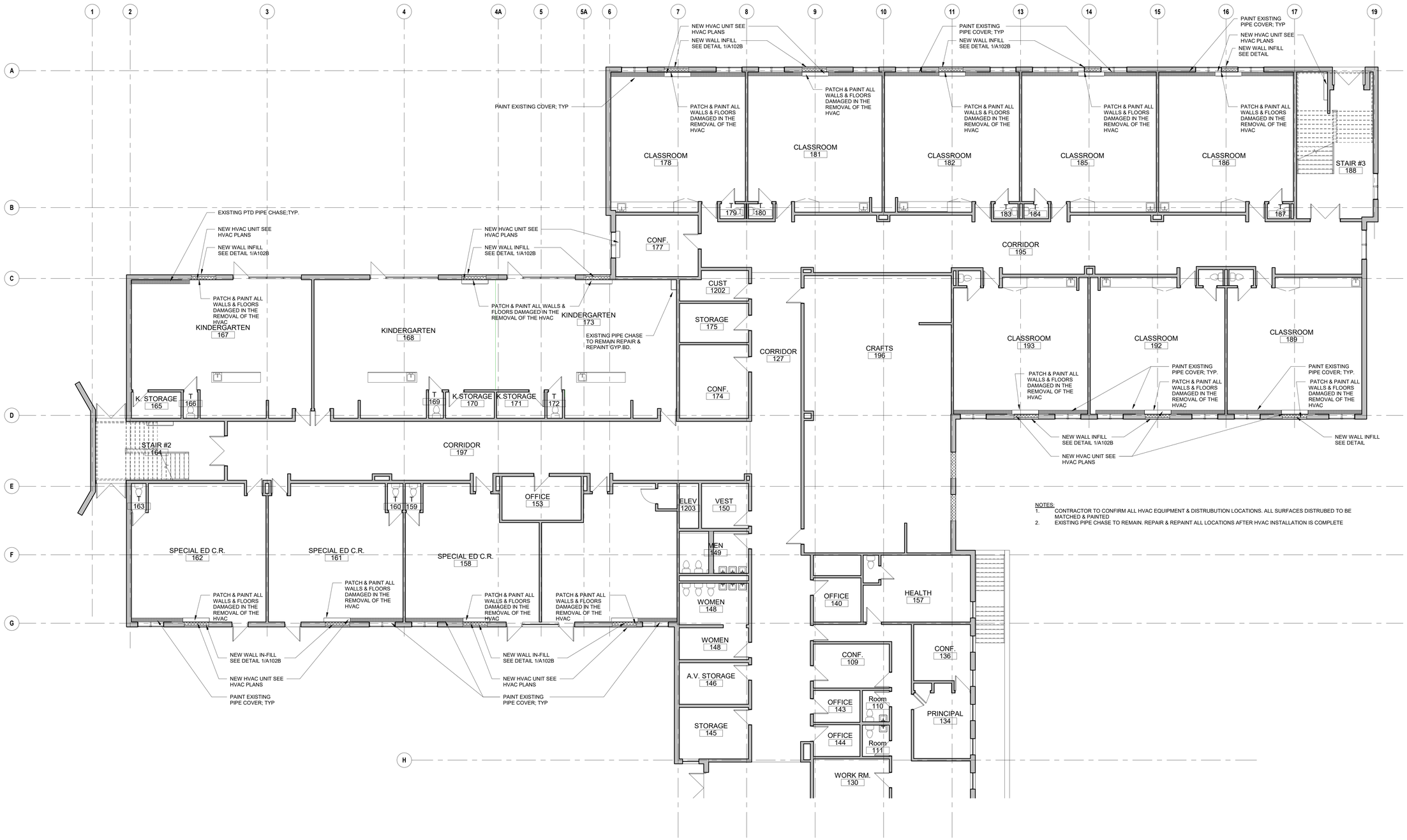
Drawing Title:

OVERALL FIRST FLOOR PLAN

Sheet Number:

A101

WESTON & SAMPSON COPYRIGHT 2018



NOTES:
1. CONTRACTOR TO CONFIRM ALL HVAC EQUIPMENT & DISTRUBUTION LOCATIONS. ALL SURFACES DISTRUBED TO BE MATCHED & PAINTED
2. EXISTING PIPE CHASE TO REMAIN. REPAIR & REPAINT ALL LOCATIONS AFTER HVAC INSTALLATION IS COMPLETE

1 A101A **First Floor PLAN PART A**
1/8" = 1'-0"

Project:

Weston & Sampson
Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard Suite 250
Foxborough, MA 02035
(508) 698-3034 (800) SAMPSON
www.westonandsampson.com

Consultants:

QA+M architecture
QuisenberryArcariMalik
195 Scott Swamp Road
Farmington, CT 06032
(860) 677-4594
qamarch.com

Seal:

Revisions:

Rev	Date	Description

Issued For: FOR BID

PROJECT TRUE

ADDENDUM 2

SCALE: AS NOTED

Date:	APRIL 21, 2020
Drawn By:	JCB
Reviewed By:	AC
Approved By:	-
W&S Project No:	Do Not Use

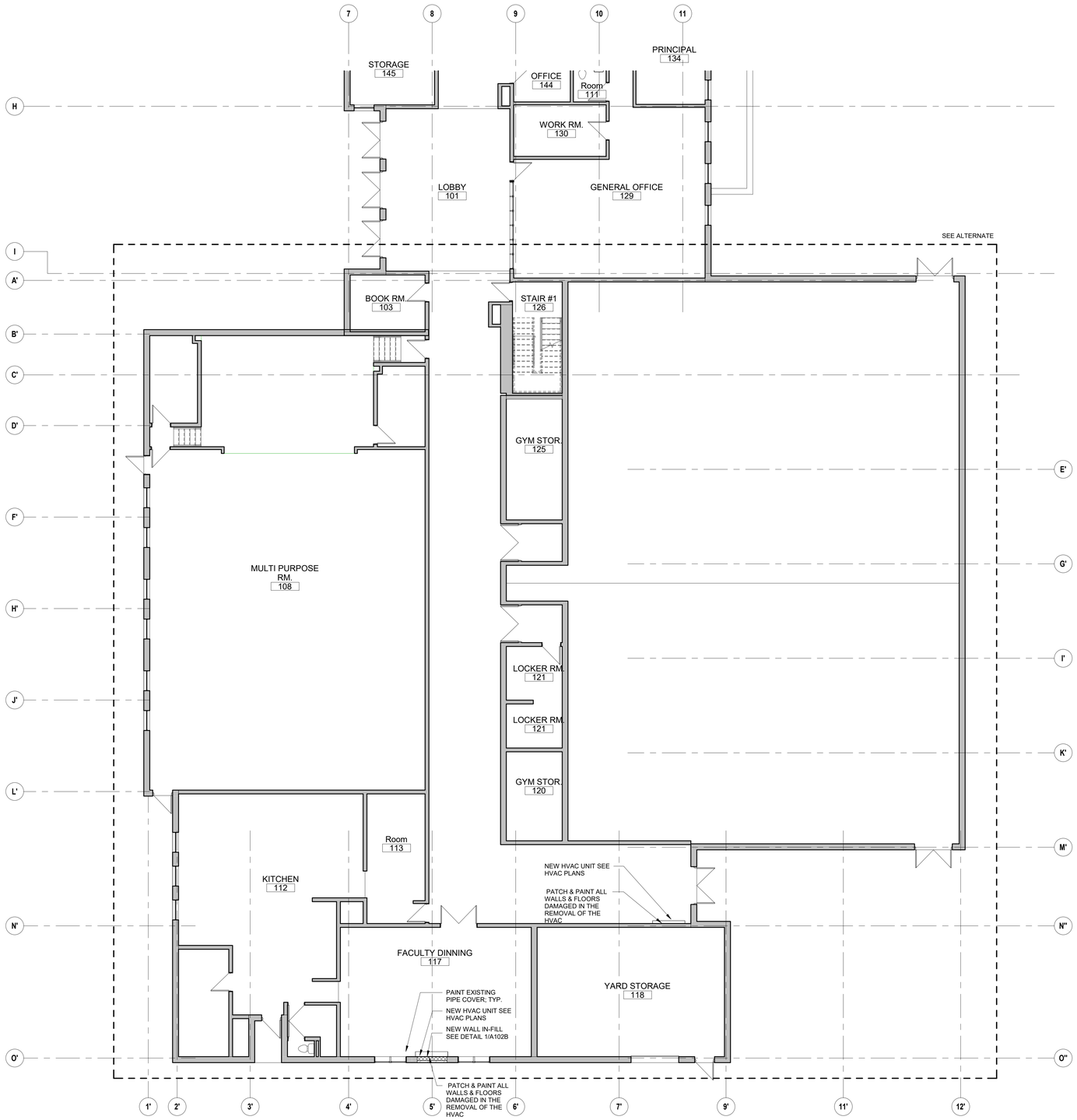
Drawing Title:

FIRST FLOOR PLAN PART A

Sheet Number:

A101A

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NOTES:
1. CONTRACTOR TO CONFIRM ALL HVAC EQUIPMENT & DISTRUBUTION LOCATIONS. ALL SURFACES DISTRUBED TO BE MATCHED & PAINTED
2. EXISTING PIPE CHASE TO REMAIN. REPAIR & REPAINT ALL LOCATIONS AFTER HVAC INSTALLATION IS COMPLETE

1 A101B First Floor PLAN PART B
1/8" = 1'-0"

Project:

Weston & Sampson
Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard Suite 250
Foxborough, MA 02035
(508) 698-3034 (800) SAMPSON
www.westonandsampson.com

Consultants:

QA+M architecture
QuisenberryArcariMalik
195 Scott Swamp Road
Farmington, CT 06032
(860) 677-4594
qamarch.com

Seal:

Revisions:

Rev	Date	Description

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ADDENDUM 2

SCALE: AS NOTED

Date: APRIL 21, 2020

Drawn By: JCB

Reviewed By: AC

Approved By: -

W&S Project No: Do Not Use

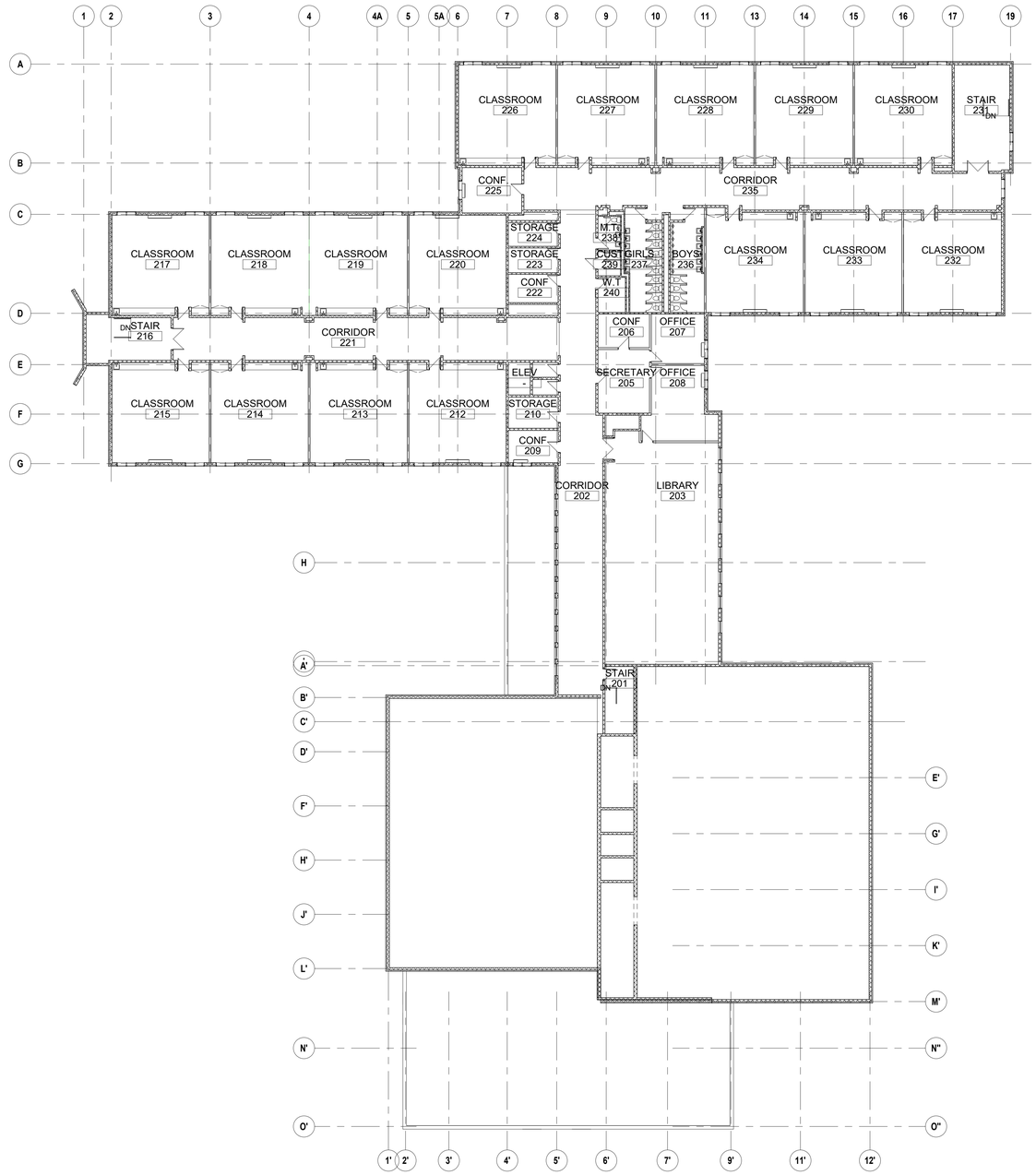
Drawing Title:

FIRST FLOOR PLAN PART B

Sheet Number:

A101B

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1 A102 **OVERALL Second Floor PLAN**
1/16" = 1'-0"

Project:

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(508) 698-3034 (800) SAMPSON
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PROJECT TRUE

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Date: APRIL 2, 2020
Drawn By: JCB
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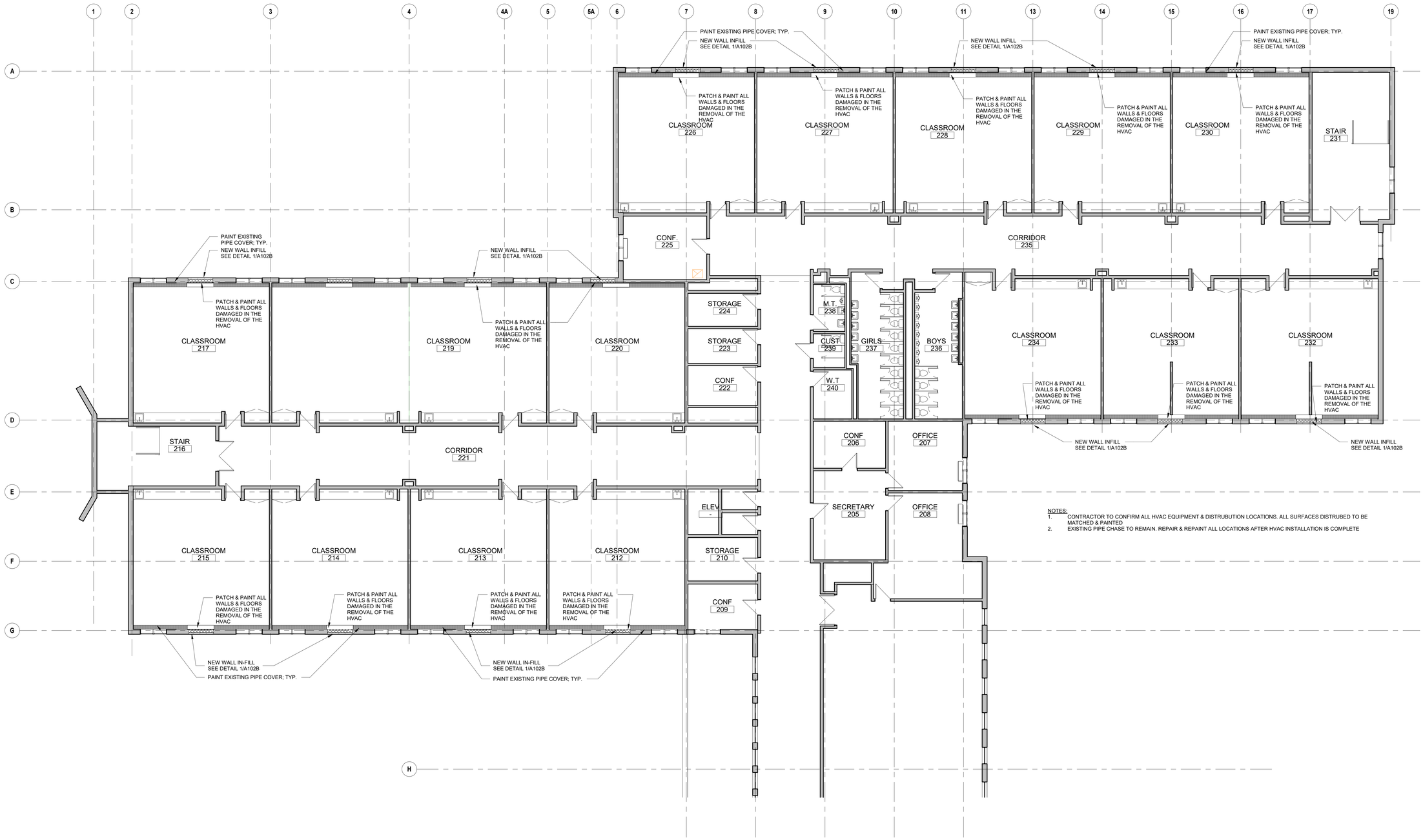
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OVERALL SECOND FLOOR PLAN

Sheet Number:

A102

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NOTES:
1. CONTRACTOR TO CONFIRM ALL HVAC EQUIPMENT & DISTRUBUTION LOCATIONS. ALL SURFACES DISTRUBED TO BE MATCHED & PAINTED
2. EXISTING PIPE CHASE TO REMAIN. REPAIR & REPAINT ALL LOCATIONS AFTER HVAC INSTALLATION IS COMPLETE

1 A102A **Second Floor PLAN PART A**
1/8" = 1'-0"

Project:

Weston & Sampson
Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard Suite 250
Foxborough, MA 02035
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ADDENDUM 2

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Reviewed By:	AC
Approved By:	-
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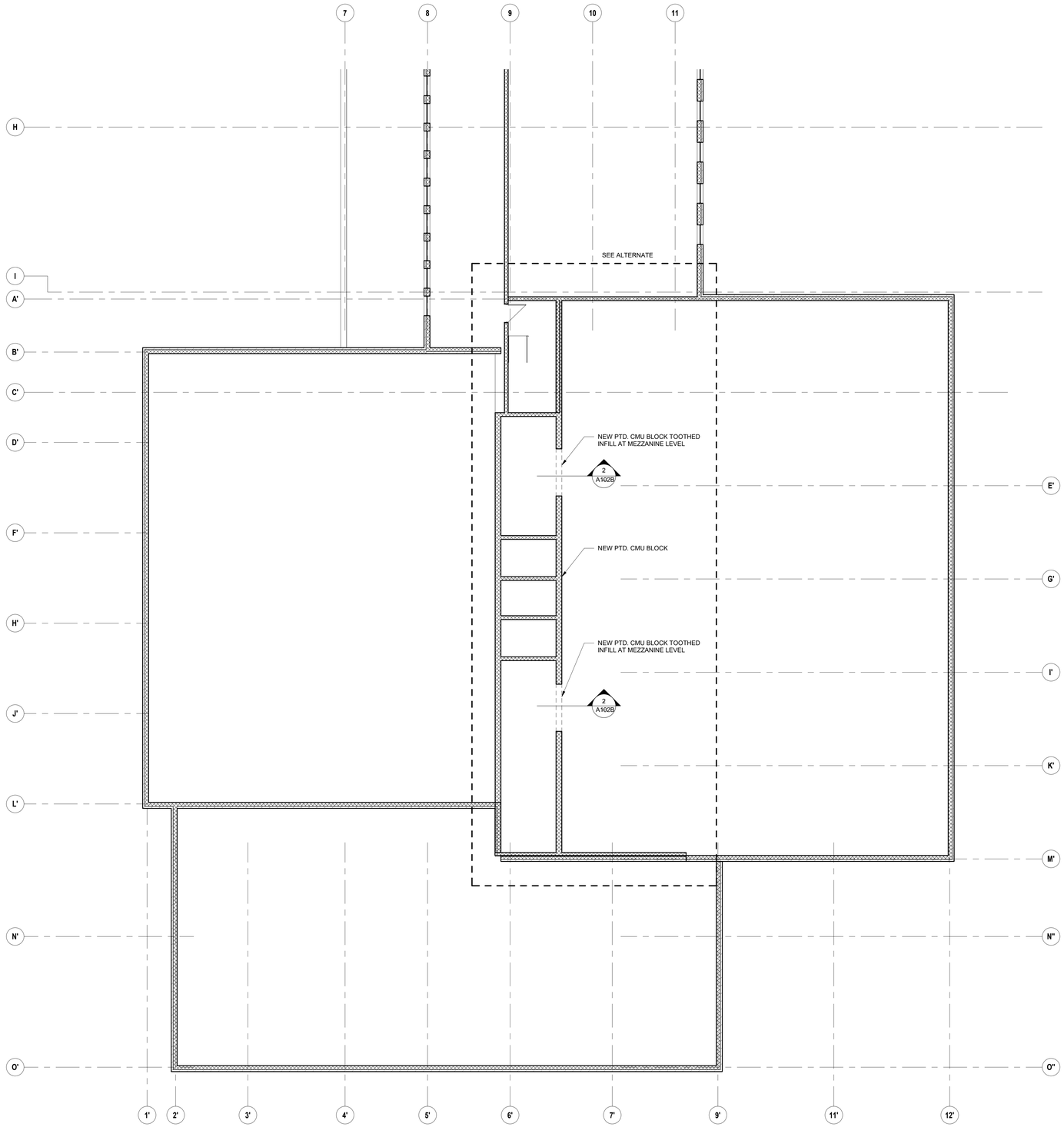
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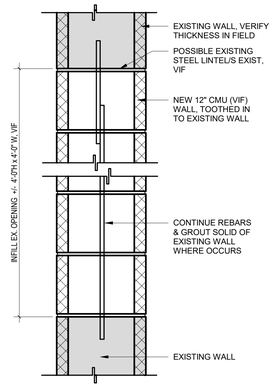
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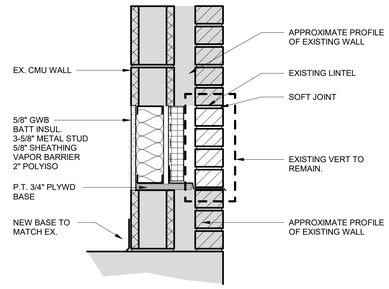
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3 A102B **Second Floor PLAN PART B**
1/8" = 1'-0"



2 A102B **CMU Wall infill**
1 1/2" = 1'-0"



1 A102B **Exterior Wall infill**
1 1/2" = 1'-0"

NOTES:
1. CONTRACTOR TO CONFIRM ALL HVAC EQUIPMENT & DISTRUBUTION LOCATIONS. ALL SURFACES DISTRUBED TO BE MATCHED & PAINTED
2. EXISTING PIPE CHASE TO REMAIN. REPAIR & REPAINT ALL LOCATIONS AFTER HVAC INSTALLATION IS COMPLETE

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SCALE: AS NOTED

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Approved By: -
W&S Project No: Do Not Use

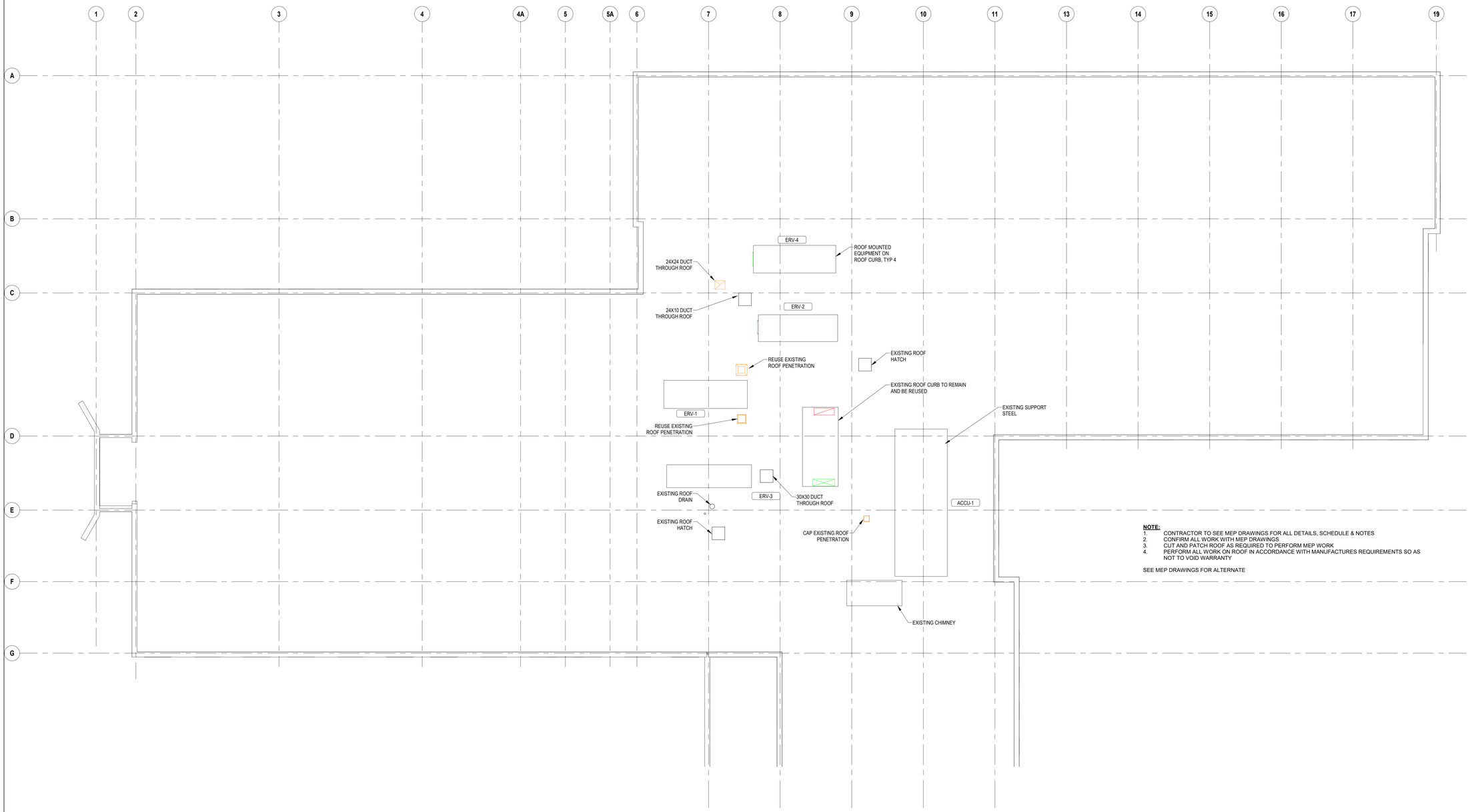
Drawing Title:

SECOND FLOOR PLAN PART B

Sheet Number:

A102B

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NOTE:

1. CONTRACTOR TO SEE MEP DRAWINGS FOR ALL DETAILS, SCHEDULE & NOTES
2. CONFIRM ALL WORK WITH MEP DRAWINGS
3. CUT AND PATCH ROOF AS REQUIRED TO PERFORM MEP WORK
4. PERFORM ALL WORK ON ROOF IN ACCORDANCE WITH MANUFACTURES REQUIREMENTS SO AS NOT TO VOID WARRANTY

SEE MEP DRAWINGS FOR ALTERNATE

1 A103A **ROOF PLAN PART A**
1/8" = 1'-0"

Project:

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard Suite 250
Foxborough, MA 02035
(508) 698-3034 (800) SAMPSON
www.westonandsampson.com

Consultants:

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Reviewed By: AC

Approved By: -

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Drawing Title:

ROOF PLAN PART A

Sheet Number:

A103A

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NOTE:
1. NEW ACOUSTICAL CEILING TILES, GRID & LIGHT FIXTURES IN CORRIDOR.
2. NEW ACOUSTICAL CEILING TILES & GRID. REINSTALL EXISTING LIGHT FIXTURES
3. NEW ACOUSTICAL CEILING TILES WHERE EXISTING TILES WERE REMOVED FOR MEP WORK
4. SALVAGE & REINSTALL ALL OTHER CEILING DEVISES IN ALL LOCATIONS

1 / A104A **First Floor RCP PLAN PART A**
1/8" = 1'-0"

Project:

Weston & Sampson Engineers, Inc.
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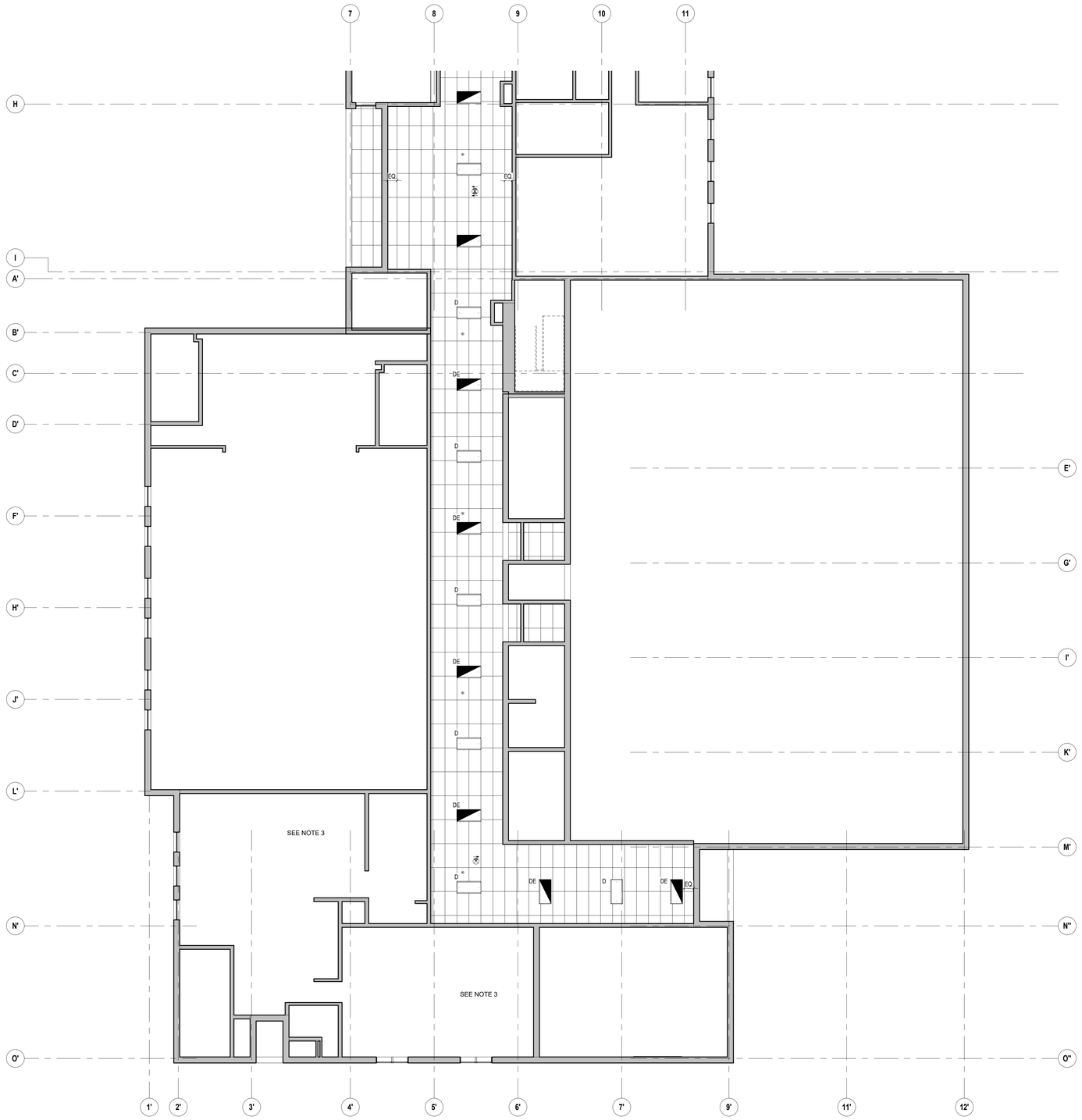
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FIRST FLOOR RCP PLAN PART A

Sheet Number:

A104A

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NOTE:
1. NEW ACOUSTICAL CEILING TILES, GRID & LIGHT FIXTURES IN CORRIDOR.
2. NEW ACOUSTICAL CEILING TILES & GRID. REINSTALL EXISTING LIGHT FIXTURES
3. NEW ACOUSTICAL CEILING TILES WHERE EXISTING TILES WERE REMOVED FOR MEP WORK
4. SALVAGE & REINSTALL ALL OTHER CEILING DEVISES IN ALL LOCATIONS

1 / A104B **First Floor RCP PLAN PART B**
1/8" = 1'-0"

Project:

Weston & Sampson
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Foxborough, MA 02035
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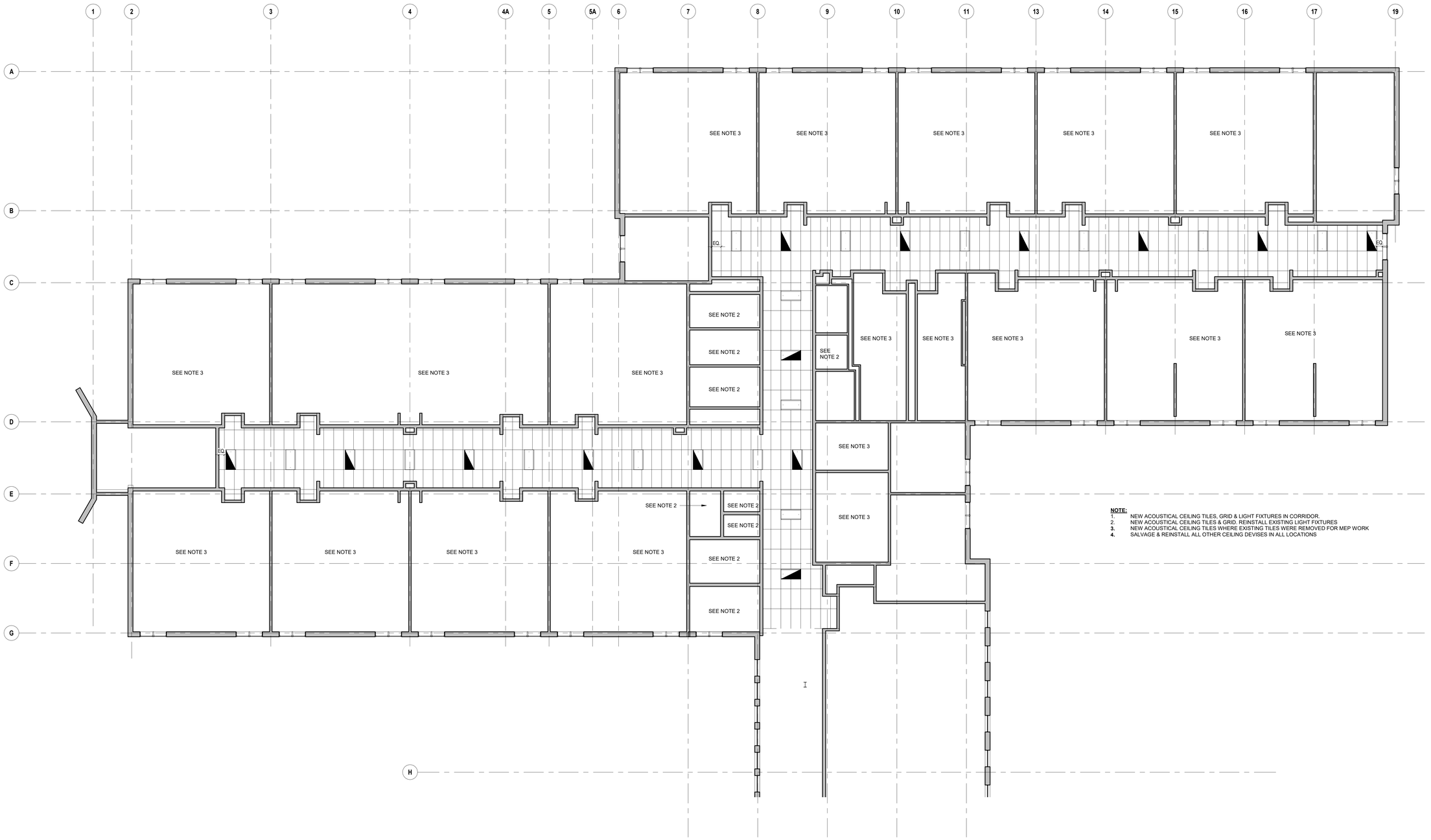
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FIRST FLOOR RCP PLAN PART B

Sheet Number:

A104B

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NOTE:
1. NEW ACOUSTICAL CEILING TILES, GRID & LIGHT FIXTURES IN CORRIDOR
2. NEW ACOUSTICAL CEILING TILES & GRID. REINSTALL EXISTING LIGHT FIXTURES
3. NEW ACOUSTICAL CEILING TILES WHERE EXISTING TILES WERE REMOVED FOR MEP WORK
4. SALVAGE & REINSTALL ALL OTHER CEILING DEVISES IN ALL LOCATIONS

1 A105A **Second Floor RCP PLAN PART A**
1/8" = 1'-0"

Project:

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Approved By: -

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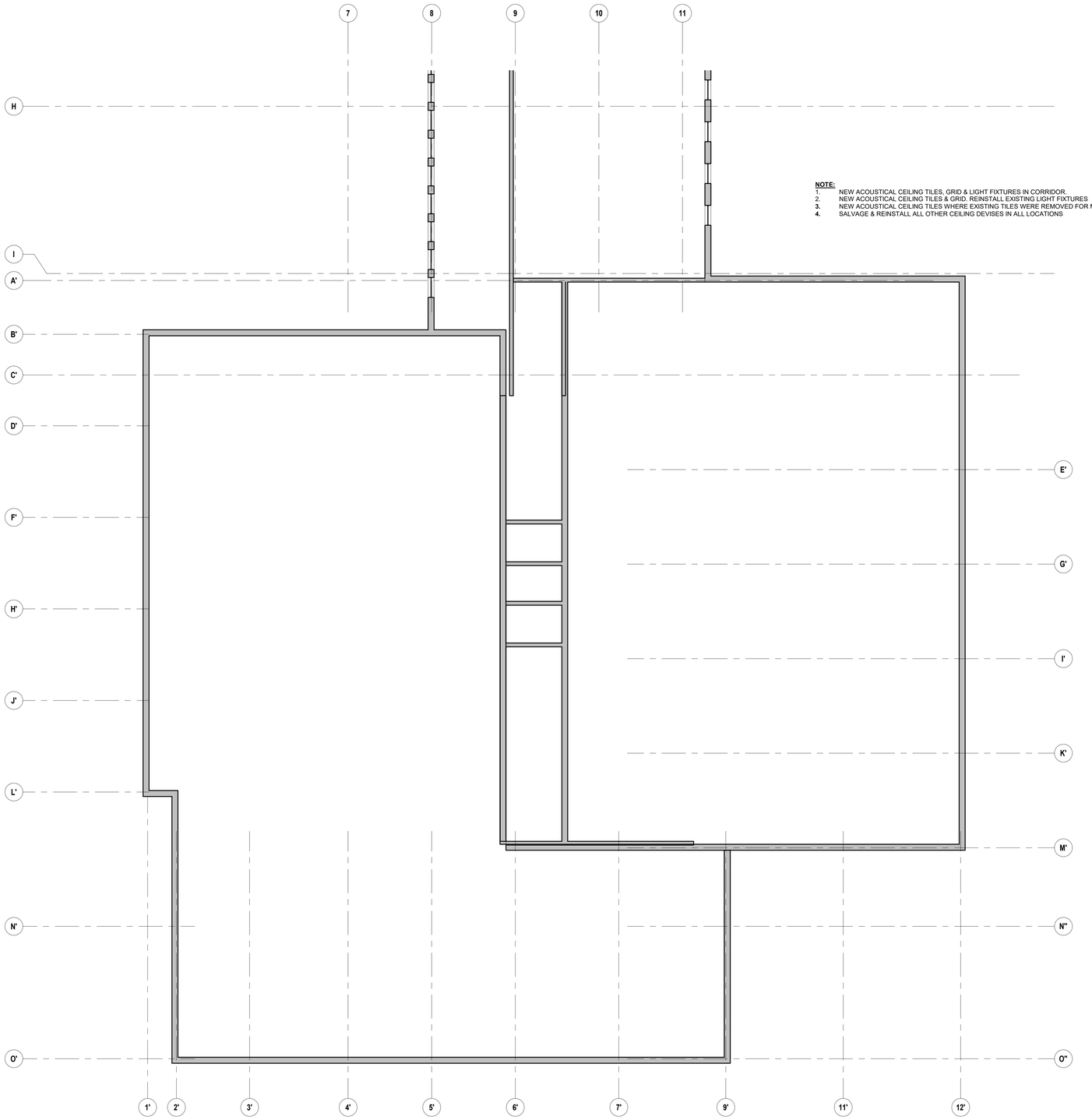
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SECOND FLOOR RCP PLAN PART A

Sheet Number:

A105A

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1 / A105B **Second Floor RCP PLAN PART B**
1/8" = 1'-0"

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(508) 698-3034 (800) SAMPSON
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SCALE: AS NOTED

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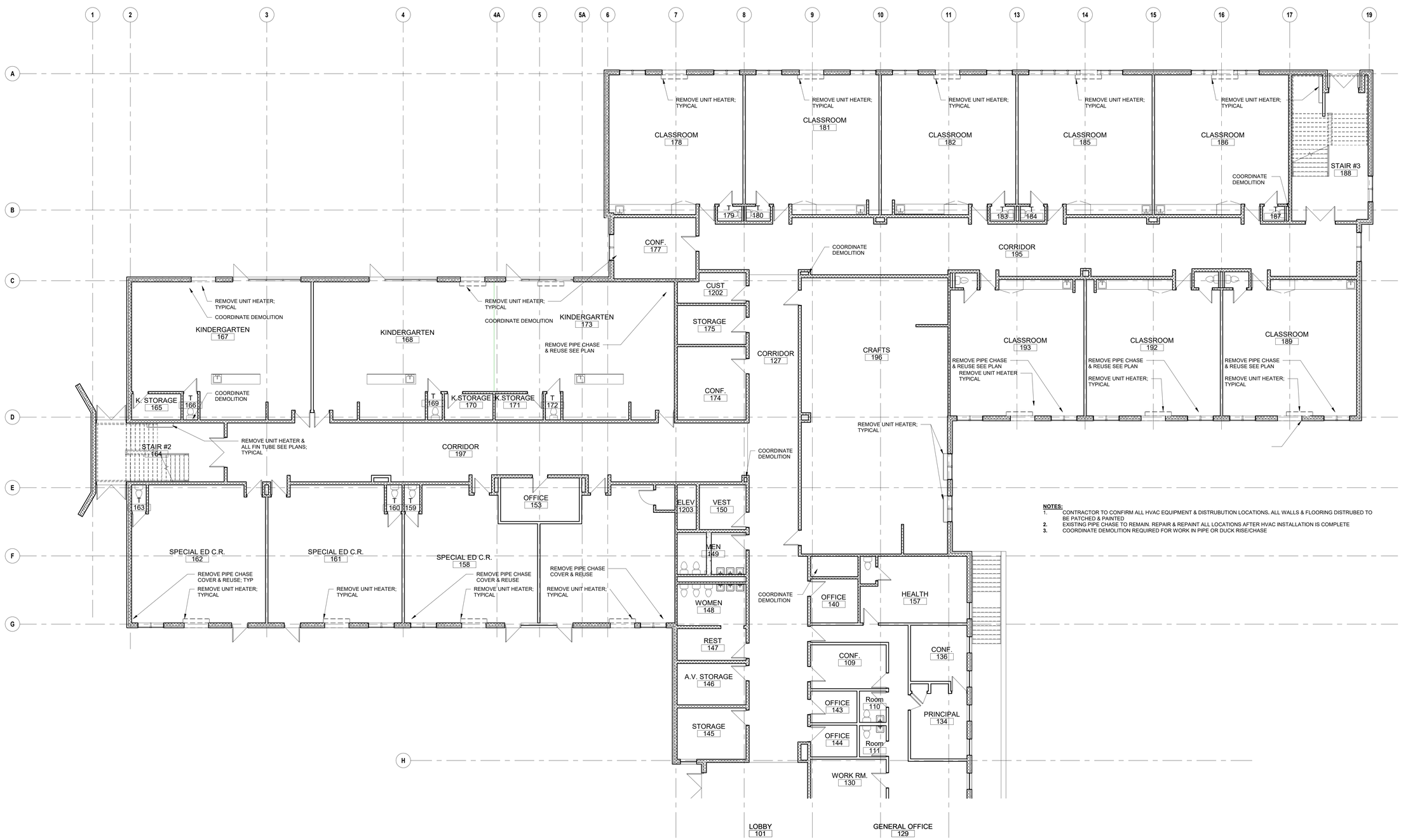
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SECOND FLOOR RCP PLAN PART B

Sheet Number:

A105B

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NOTES:

1. CONTRACTOR TO CONFIRM ALL HVAC EQUIPMENT & DISTRUBUTION LOCATIONS. ALL WALLS & FLOORING DISTRUBED TO BE PATCHED & PAINTED
2. EXISTING PIPE CHASE TO REMAIN. REPAIR & REPAINT ALL LOCATIONS AFTER HVAC INSTALLATION IS COMPLETE
3. COORDINATE DEMOLITION REQUIRED FOR WORK IN PIPE OR DUCK RISE/CHASE

1 First Floor DEMOLITION PLAN PART A

D101A 1/8" = 1'-0"

Project:

Weston & Sampson

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard Suite 250
Foxborough, MA 02035
(508) 698-3034 (800) SAMPSON
www.westonandsampson.com

Consultants:

QA+M architecture
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195 Scott Swamp Road
Farmington, CT 06032
(860) 677-4594
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Date:	APRIL 21, 2020
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Approved By:	-
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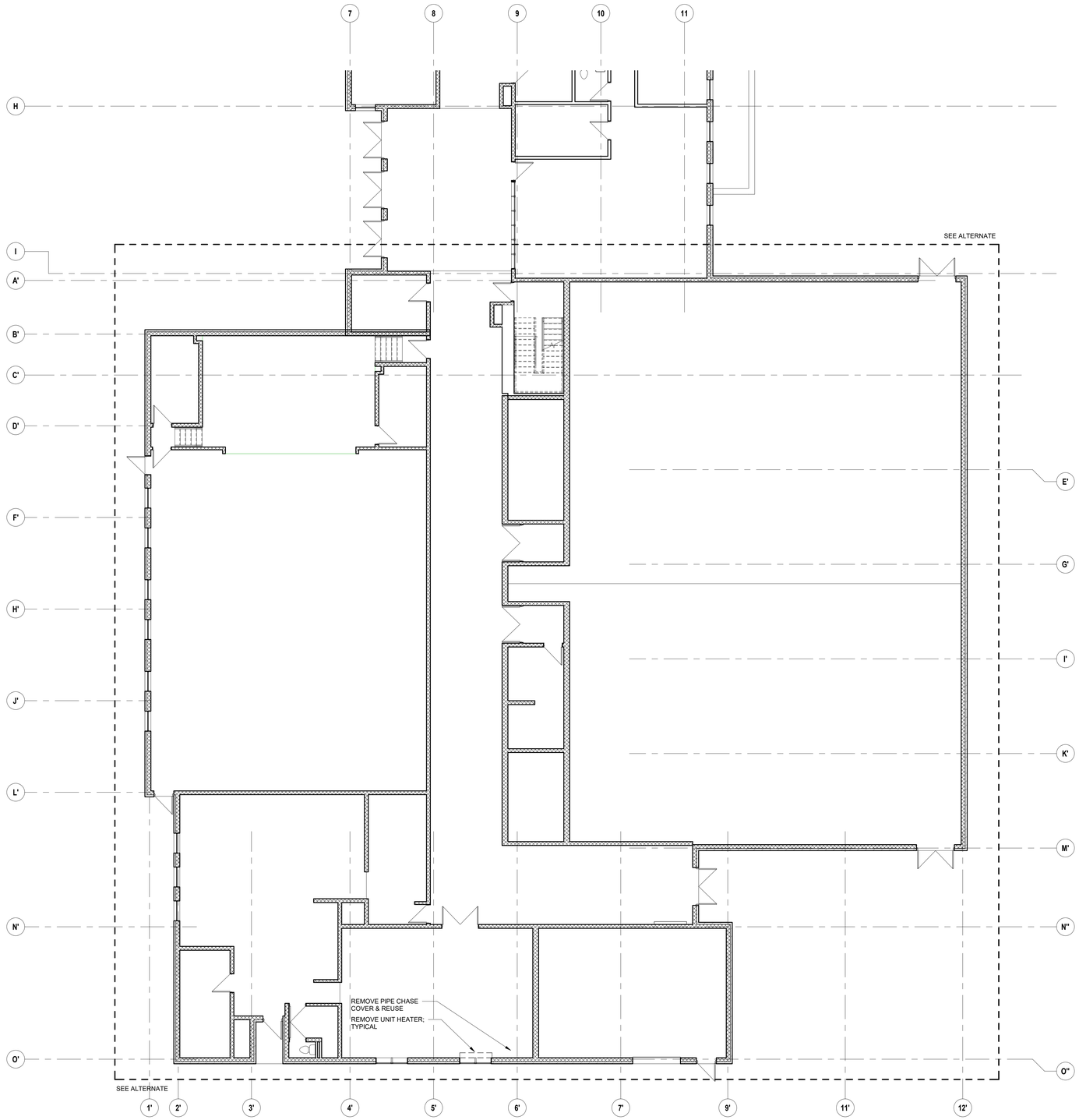
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FIRST FLOOR DEMOLITION PLAN PART A

Sheet Number:

D101A

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NOTES:
1. CONTRACTOR TO CONFIRM ALL HVAC EQUIPMENT & DISTRUBUTION LOCATIONS. ALL FLOORING & WALLS DISTURBED TO BE REPAIRED & PAINTED
2. EXISTING PIPE CHASE TO REMAIN. REPAIR & REPAINT ALL LOCATIONS AFTER HVAC INSTALLATION IS COMPLETE

1 D101B **First Floor DEMOLITION PLAN PART B**
1/8" = 1'-0"

Project:

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100 Foxborough Boulevard Suite 250
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(508) 698-3034 (800) SAMPSON
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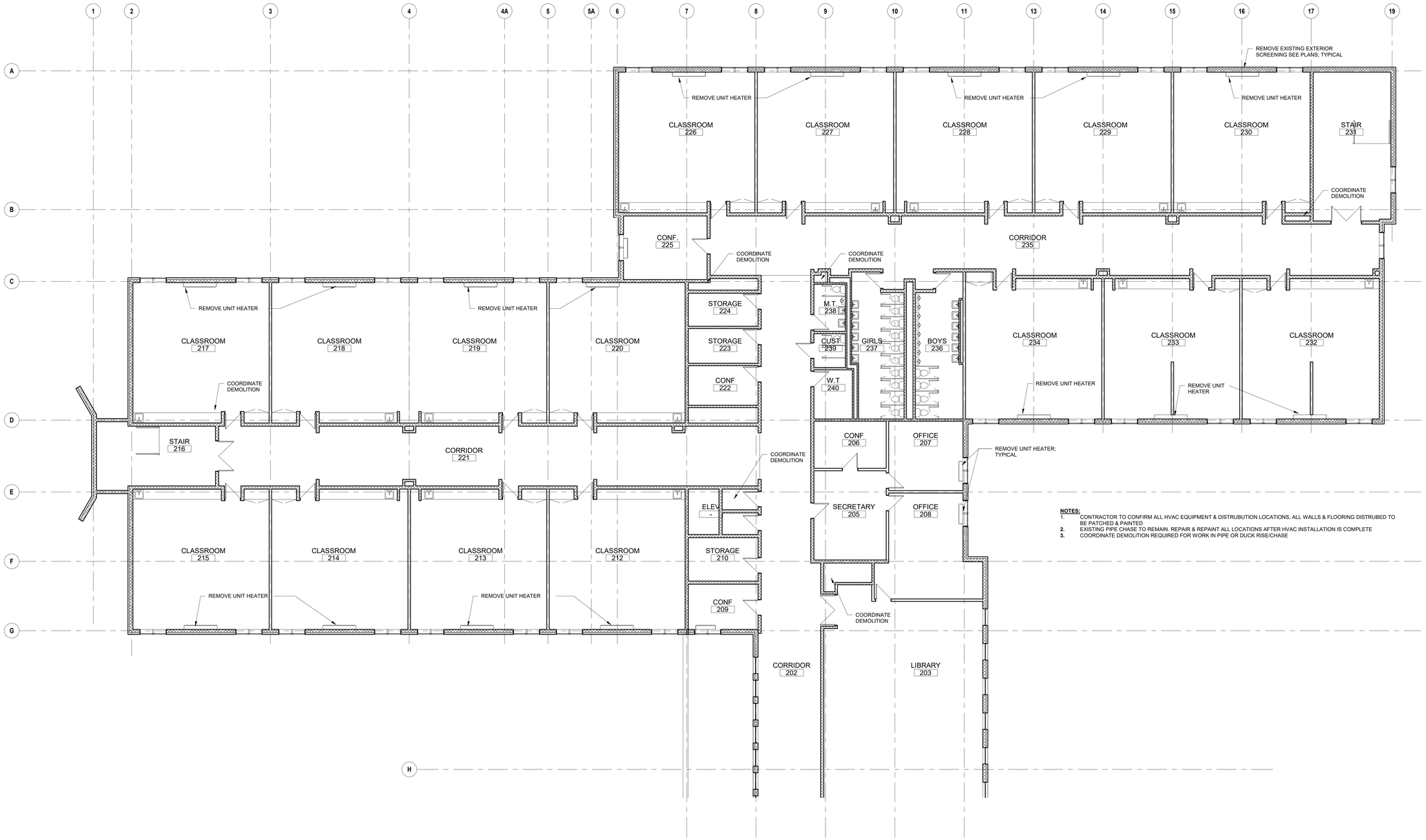
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FIRST FLOOR DEMOLITION PLAN PART B

Sheet Number:

D101B

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NOTES:

1. CONTRACTOR TO CONFIRM ALL HVAC EQUIPMENT & DISTRUBUTION LOCATIONS, ALL WALLS & FLOORING DISTRUBED TO BE PATCHED & PAINTED
2. EXISTING PIPE CHASE TO REMAIN. REPAIR & REPAINT ALL LOCATIONS AFTER HVAC INSTALLATION IS COMPLETE
3. COORDINATE DEMOLITION REQUIRED FOR WORK IN PIPE OR DUCK RISE/CHASE

1 D102A Second Floor DEMOLITION PLAN PART A

1/8" = 1'-0"

Project:

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(508) 698-3034 (800) SAMPSON
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Approved By:	-
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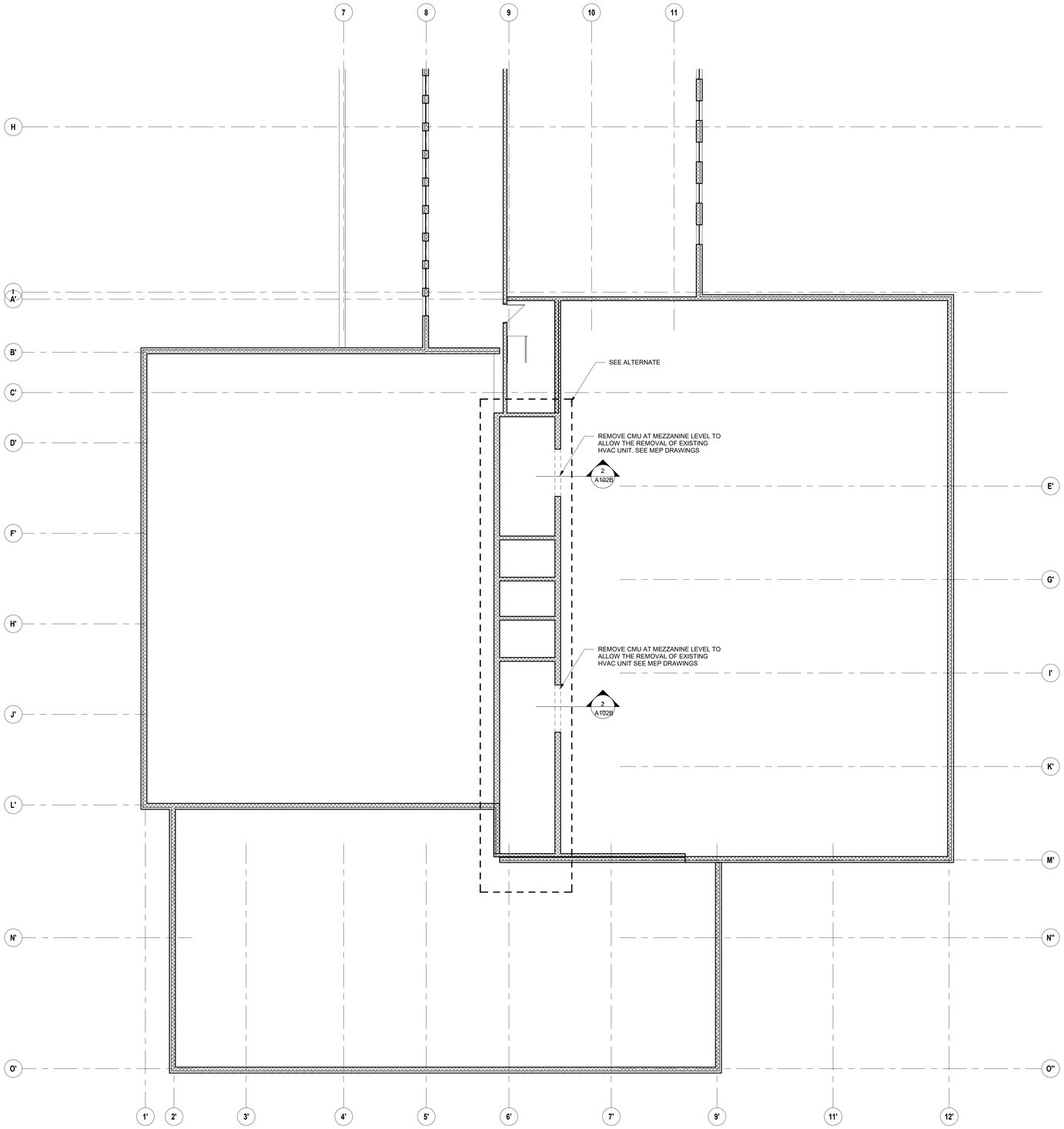
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SECOND FLOOR DEMOLITION PLAN PART A

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1 D102B **Second Floor DEMOLITION PLAN PART B**
1/8" = 1'-0"

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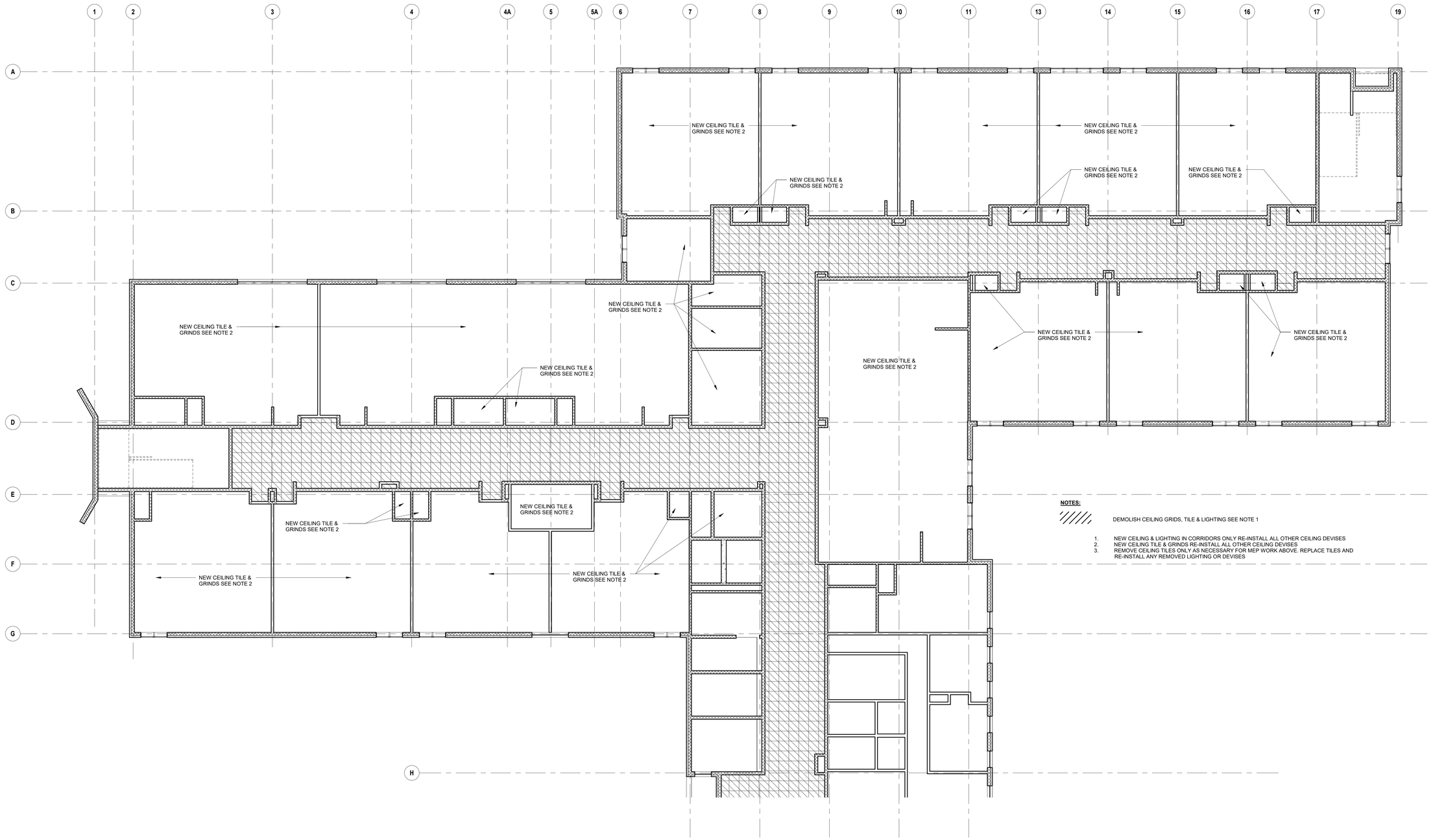
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SECOND FLOOR DEMOLITION PLAN PART B

Sheet Number:

D102B

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NOTES:

DEMOLISH CEILING GRIDS, TILE & LIGHTING SEE NOTE 1

1. NEW CEILING & LIGHTING IN CORRIDORS ONLY RE-INSTALL ALL OTHER CEILING DEVISES
2. NEW CEILING TILE & GRINDS RE-INSTALL ALL OTHER CEILING DEVISES
3. REMOVE CEILING TILES ONLY AS NECESSARY FOR MEP WORK ABOVE. REPLACE TILES AND RE-INSTALL ANY REMOVED LIGHTING OR DEVISES

Reflected Ceiling First Floor DEMOLITION PLAN PART A

1 / D104 A — 1/8" = 1'-0"

Project:

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Approved By: -

W&S Project No: Do Not Use

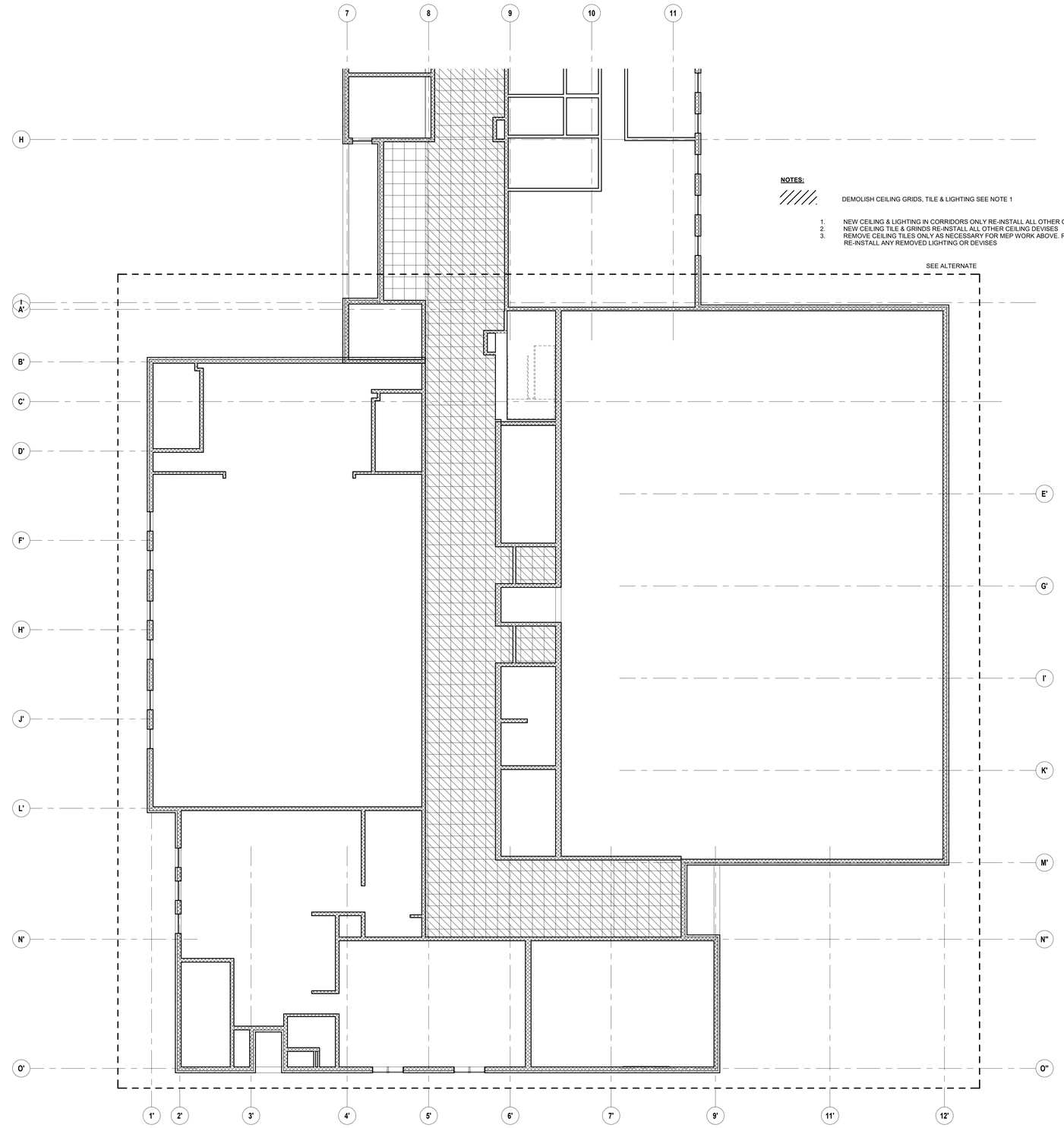
Drawing Title:

FIRST FLOOR RCP DEMOLITION PLAN PART A

Sheet Number:

D104 A

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Reflected Ceiling First Floor DEMOLITION PLAN
PART B

1 / D104B 1/8" = 1'-0"

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SCALE: AS NOTED

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Drawn By:	Author
Reviewed By:	Checker
Approved By:	Approver
W&S Project No:	Do Not Use

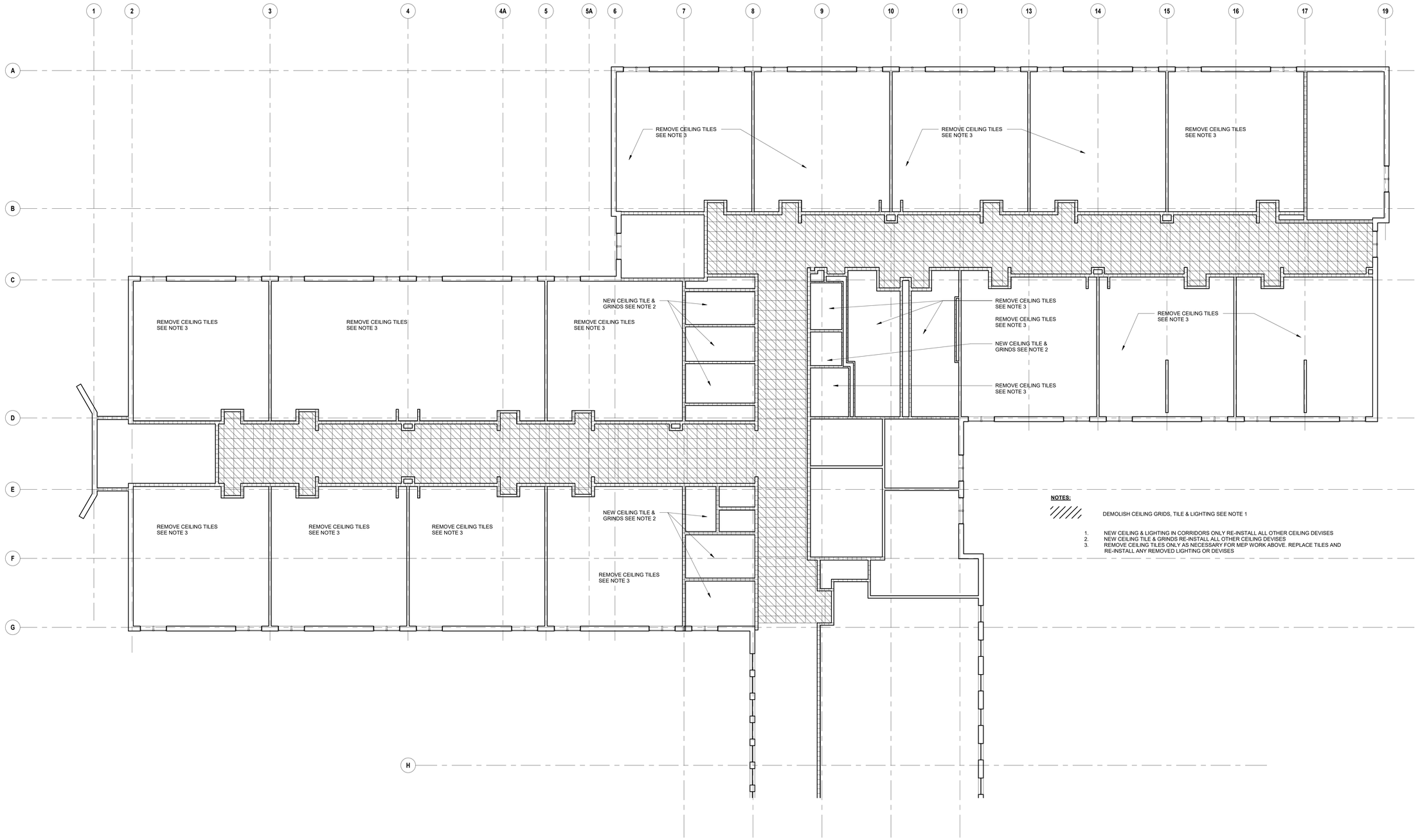
Drawing Title:

FIRST FLOOR RCP DEMOLITION PLAN PART B

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D104B

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Reflected Ceiling Second Floor Demolition Plan PART A

1 / D105 A — 1/8" = 1'-0"

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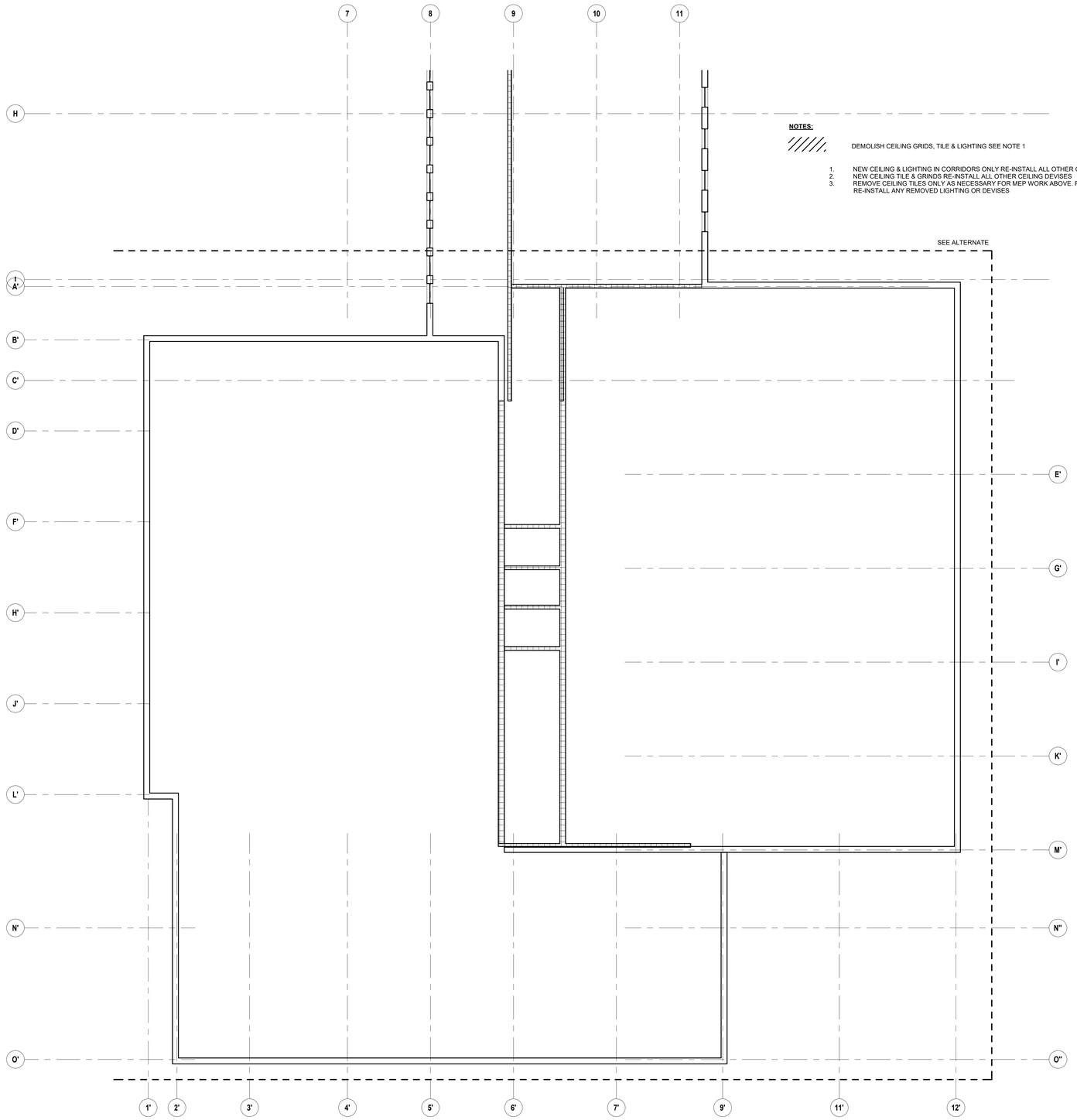
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SECOND FLOOR RCP DEMOLITION PLAN PART A

Sheet Number:

D105 A

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Reflected Ceiling Second Floor Demolition Plan
PART B

1 D105 B 1/8" = 1'-0"

Project:

Weston & Sampson
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Seal:

Revisions:

Rev	Date	Description

Issued For: FOR BID

PROJECT TRUE

ADDENDUM 2

SCALE: AS NOTED

Date:	APRIL 21, 2020
Drawn By:	JCB
Reviewed By:	AC
Approved By:	-
W&S Project No:	Do Not Use

Drawing Title:

SECOND FLOOR RCP DEMOLITION PLAN PART B

Sheet Number:

D105 B

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ABATEMENT NOTES:

AC = ASBESTOS CONTAINING
PCB'S = POLYCHLORINATED BIPHENYLS

- LOCATION OF SUSPENDED AC ACOUSTICAL CEILING TILES.
- REMOVE ALL SUSPENDED AC ACOUSTICAL CEILING TILES. DISPOSE OF AS FRIABLE ASBESTOS WASTE. DECONTAMINATE ALL CEILING GRIDS SCHEDULED TO REMAIN.
- (1) REMOVE ALL AC MUDDED INSULATION AND WOVEN CLOTH WRAP ON FIBERGLASS INSULATION. DISPOSE OF AS FRIABLE ASBESTOS WASTE.
- (2) REMOVE ALL AC TAR COATING ON INTERIOR OF UNIT HEATER. DISPOSE OF AS NON-FRIABLE ASBESTOS WASTE.
- (3) REMOVE ALL AC MUDDED PACKING AT VALVE ON INTERIOR OF UNIT HEATER. DISPOSE OF AS FRIABLE ASBESTOS WASTE.
- (4) REMOVE ALL SHEETROCK AND ASSOCIATED AC JOINT COMPOUND AND VINYL COVE BASE AT PIPE CHASE. DISPOSE OF AS FRIABLE ASBESTOS WASTE.
- (5) REMOVE ENTIRE LIGHT FIXTURE WITH AC FIXTURE PAPER. DISPOSE OF AS FRIABLE ASBESTOS WASTE.
- (6) REMOVE ALL AC SEALANT AT FILTER BOX TO HVAC UNIT. DISPOSE OF AS ASBESTOS AND PCB WASTE GREATER THAN 50 PPM.
- (7) NOT USED
- (8) REMOVE ALL VINYL COVE BASE ADHESIVE FROM CMU AT PIPE CHASE. DISPOSE OF AS ASBESTOS WASTE.

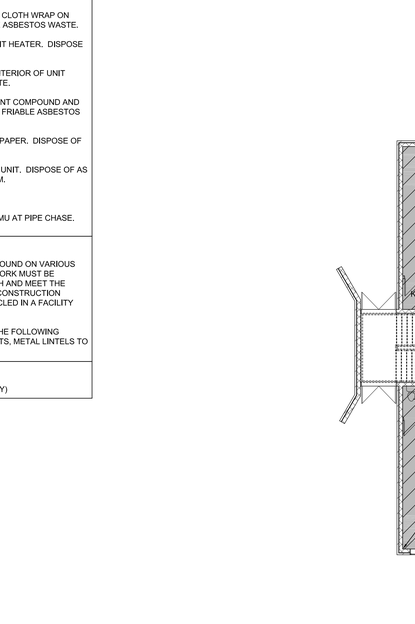
LEAD-BASED PAINT NOTE:

BOTH HIGH AND LOW LEVELS OF LEAD-BASED PAINT WERE FOUND ON VARIOUS COMPONENTS THROUGHOUT THE DEMOLITION AREA. ALL WORK MUST BE PERFORMED BY LEAD-TRAINED WORKERS AND COMPLY WITH AND MEET THE REQUIREMENTS OF ALL ASPECTS OF 1926.62 OSHA LEAD IN CONSTRUCTION STANDARD. METAL BUILDING COMPONENTS MUST BE RECYCLED IN A FACILITY THAT ACCEPTS LEAD-BASED PAINT.

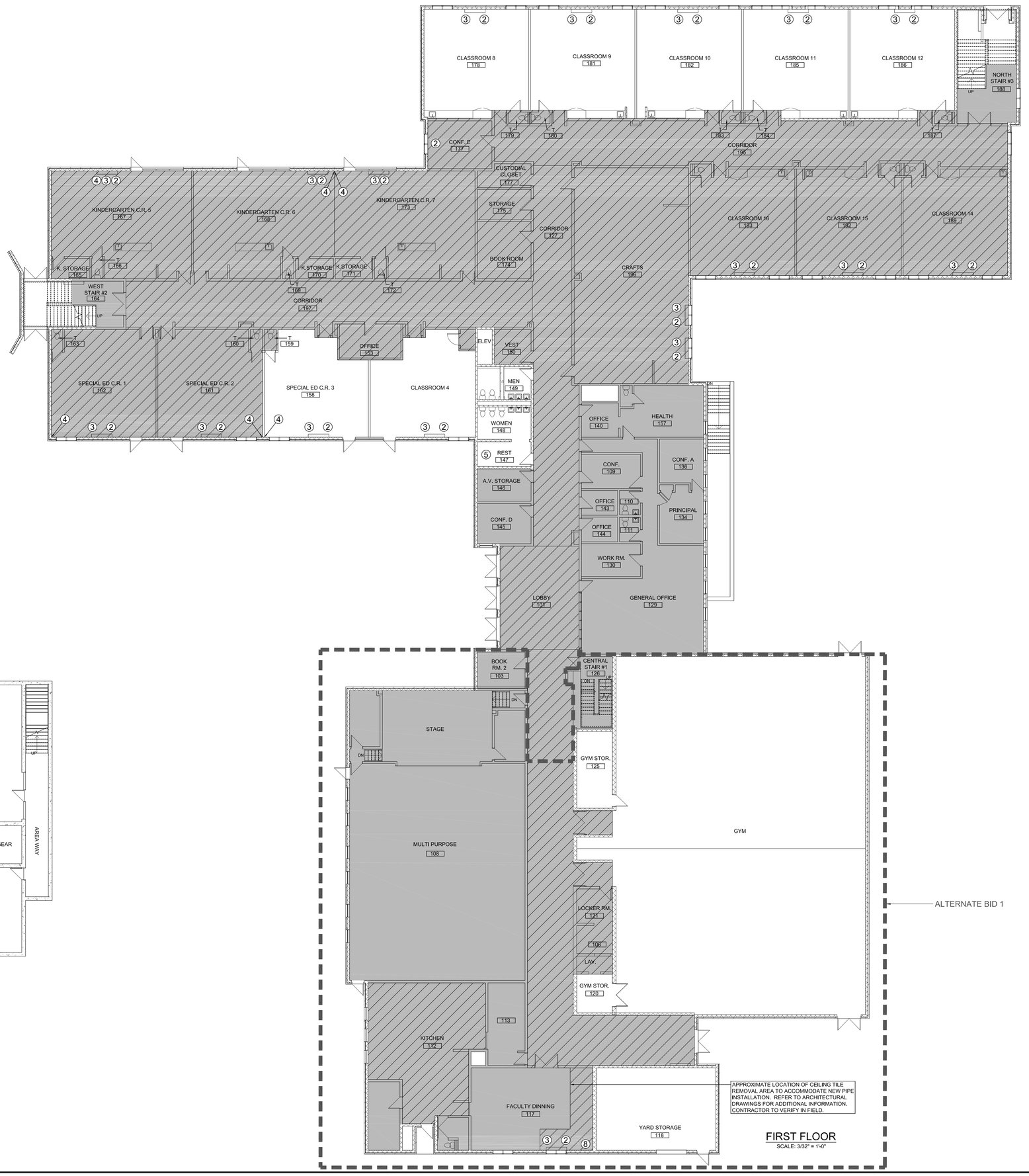
HIGH LEVELS OF LEAD (≥1.0 MG/CM^2) WERE IDENTIFIED ON THE FOLLOWING SURFACES: EXTERIOR WOOD DOOR OVERHANG, METAL VENTS, METAL LINTELS TO VENTS AND INTERIOR STRUCTURAL STEEL.

UNIVERSAL WASTE KEY:

U-SHAPED FLUORESCENT BULBS: (162 EA) (CORRIDORS ONLY)



BASEMENT
SCALE: 3/32" = 1'-0"



FIRST FLOOR
SCALE: 3/32" = 1'-0"

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

21 Tuttle Rd.
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EAGLE Environmental, Inc.
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860-589-8257

Seal:

Revisions:

Rev	Date	Description
1	4/15/2020	ADDENDUM #1

Issued For: ADDENDUM #1

PROJECT TRUE

0' 5' 10' 21'
SCALE: 3/32" = 1'-0"

Date: April 14, 2020
Drawn By: BB
Reviewed By: CL
Approved By: CL
W&S Project No: 2191117

Drawing Title:

BASEMENT & FIRST FLOOR ABATEMENT PLAN

Sheet Number:

HM-1

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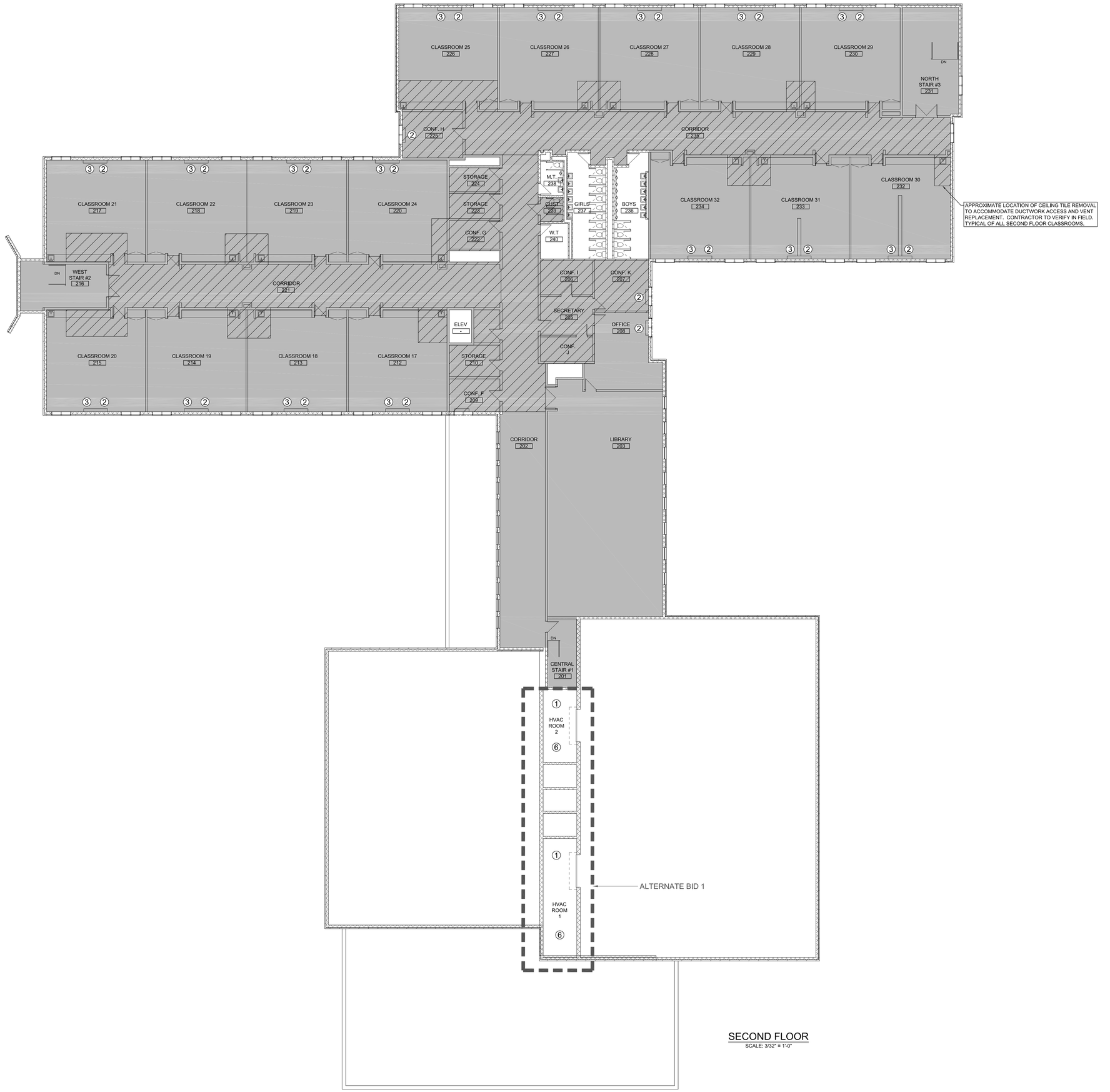
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UNIVERSAL WASTE KEY:

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SECOND FLOOR
SCALE: 3/32" = 1'-0"

Project:

CONTRACT 2C20-064

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Date: April 14, 2020
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W&S Project No: 2191117

Drawing Title:

SECOND FLOOR ABATEMENT PLAN

Sheet Number:

HM-2

WESTON & SAMPSON COPYRIGHT 2018

GENERAL MECHANICAL SYMBOLS

- REVISION NUMBER - SHOWN ON PLANS
- POINT WHERE NEW CONNECTS TO EXISTING
- LIMIT OF DEMOLITION
- NUMBER OF DETAIL ON SHEET / NUMBER OF SHEET WHERE DETAIL APPEARS
- KEYNOTE
- CONTINUATION SYMBOL
- Room 1 — ROOM NAME AND NUMBER
- ITEM TO BE DEMOLISHED
- AREA NOT IN CONTRACT
- 2" — PIPE SIZE TAG (DIAMETER)
- ABOVE GROUND PIPING
- 1/8" / 12" SLOPE — PIPE SLOPE TAG
- BELOW GROUND PIPING
- INVERT: -10' - 1" — PIPE INVERT ELEVATION TAG
- (E) — EXISTING PIPE TAG
- PIPING BEING DEMOLISHED

PIPING SYMBOLS

- CHWR — CHILLED WATER RETURN
- CHWS — CHILLED WATER SUPPLY
- CD — CONDENSATE DRAINAGE
- CWR — CONDENSER WATER RETURN
- CWS — CONDENSER WATER SUPPLY
- HCR — DUAL TEMPERATURE RETURN
- HCS — DUAL TEMPERATURE SUPPLY
- HWR — HEATING WATER RETURN
- HWS — HEATING WATER SUPPLY
- REF-L — REFRIGERANT-LIQUID
- REF-S — REFRIGERANT-SUCTION
- REF-HG — REFRIGERANT-HOT GAS
- STM — STEAM
- CDR — CONDENSATE RETURN
- CW — DOMESTIC COLD WATER

PIPE DROP, PIPE RISE, PIPE TEE, CAP, PLUG, REDUCING 45 DEGREE TEE, 45 DEGREE TEE (4", 4", 2", 4")

PIPE ACCESSORY TAGS

- 2" DOM. WM — DOMESTIC WATER METER
- 2" BALANCING — BALANCING VALVE
- 2" SHUTOFF — 1/4 TURN BALL VALVE
- 2" CHECK — CHECK VALVE
- 2" TMV — 3-WAY MIXING VALVE
- 2" M-CNTRL — MOTORIZED CONTROL VALVE
- 2" 3-WAY CNTRL — 3 WAY MOTORIZED CONTROL VALVE
- 2" PRV — PRESSURE REDUCING VALVE
- 3/8" SOLENOID — REFRIGERANT SOLENOID VALVE
- 2" BUTTERFLY — BUTTERFLY VALVE

HVAC SYMBOLS

- 16"x8" — SQUARE DUCT SIZE TAG (WIDTH x HEIGHT)
- 16"/8" — OVAL DUCT SIZE TAG (WIDTH / HEIGHT)
- 16"Ø — ROUND DUCT SIZE TAG (DIAMETER)
- (E) — EXISTING DUCT TAG
- DUCT BEING DEMOLISHED
- S/A — SUPPLY AIR
- S-O/A — CONDITIONED OUTSIDE AIR
- O/A — OUTSIDE AIR
- R/A — RETURN AIR
- T/A — TRANSFER AIR
- E/A — EXHAUST AIR
- L/A — RELIEF AIR
- GE/A — GREASE EXHAUST AIR
- DROP — RECTANGULAR SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — ROUND SUPPLY/OUTSIDE AIR DUCT RISE
- DROP — RECTANGULAR RETURN/TRANSFER AIR DUCT RISE
- DROP — ROUND RETURN/TRANSFER AIR DUCT RISE
- DROP — RECTANGULAR EXHAUST/RELIEF AIR DUCT RISE
- DROP — ROUND EXHAUST/RELIEF AIR DUCT RISE

GRILLES, REGISTERS & DIFFUSERS TAG

TYPE (SEE SCHEDULE) — S1 (400), TYP — CFM / QUANTITY/COMMENTS

EXISTING TYPE (RECTANGULAR SHOWN) — XxX (400), TYP — CFM, BALANCE TO CFM SHOWN / QUANTITY/COMMENTS

MECHANICAL EQUIPMENT TAGS

VAV-XX — VAV BOX

(E)VAV-XX — EXISTING EQUIPMENT TO REMAIN

EQUIPMENT BY OTHERS (REFER TO OTHER DISCIPLINE FOR ADDITIONAL INFORMATION)

RTU-XX — ROOFTOP UNIT

DATA DEVICE TAGS

SYMBOL / EQUIPMENT ID

- CARBON DIOXIDE SENSOR — CO2+TH — RTU-XX — TEMPERATURE & HUMIDITY SENSOR
- CARBON MONOXIDE SENSOR — CO+HTS — VAV-XX — TEMPERATURE SENSOR
- NITROGEN DIOXIDE SENSOR — NO2+T — THERMOSTAT
- HUMIDITY SENSOR — HS+MS — MANUAL SWITCH
- HUMIDISTAT — H+HS — SENSOR

DAMPER TAGS

- FIRE DAMPER — F — B — MANUAL BALANCING DAMPER
- SMOKE DAMPER — SD — D — BACKDRAFT DAMPER
- MOTORIZED DAMPER — M — C — COMBINATION FIRE/SMOKE DAMPER

ABBREVIATIONS

Ø	ROUND
ABV	ABOVE
AC	AIR CONDITIONING
ACCU	AIR CONDITIONING CONDENSING UNIT
ACD	AUOMATIC CONTROL DAMPER
ACT	ACOUSTICAL CEILING TILE
ACU	AIR CONDITIONING UNIT
AD	ACCESS DOOR
ADD	ADDENDUM
ADD'L	ADDITIONAL
AF	AIR FOIL
AFF	ABOVE FINISHED FLOOR
AFMS	AIR FLOW MONITORING STATION
AFR	ABOVE FINISHED ROOF
AFUE	ANNUAL FUEL UTILIZATION EFFICIENCY
AHU	AIR HANDLING UNIT
AL	ACOUSTIC DUCT LINER
ALT	ALTERNATE
AMB	AMBIENT
AMP	AMPERE
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
ARCH	ARCHITECT/ARCHITECTURAL
AS	AIR SEPARATOR
AS	AIR STREAM
ATC	AUOMATIC TEMPERATURE CONTROL
ATM	ATMOSPHERE
AVG	AVERAGE
B	BOILER
BDD	BACKDRAFT DAMPER
BFC	BELOW FINISHED CEILING
BFF	BELOW FINISHED FLOOR
BFP	BACKFLOW PREVENTER
BHP	BRAKE HORSEPOWER
BI	BACKWARD INCLINED
BLDG	BUILDING
BOD	BOTTOM OF DUCT
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STEEL
BP	BOILER PUMP
BSMT	BASEMENT
BTU	BRITISH THERMAL UNITS
BTUH	BRITISH THERMAL UNITS PER HOUR
CA	COMBUSTION AIR
CAP	CAPACITY
CAV	CONSTANT AIR VOLUME
CC	COOLING COIL
CD	CONDENSATE DRAIN
CENT	CENTRIFUGAL
CF	CUBIC FEET
CFM	CUBIC FEET PER MINUTE
CH	CHILLER
CHW	CHILLED WATER
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CL	CENTERLINE
CLG	CEILING
CLG	COOLING
CO	CLEAN OUT
CO	CARBON MONOXIDE
CO2	CARBON DIOXIDE
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CP	CONDENSATE PUMP
CSF	CHEMICAL SHOT FEEDER
CT	COOLING TOWER
CU	CONDENSING UNIT
CUH	CABINET UNIT HEATER
CV	CONSTANT VOLUME TERMINAL UNIT
CW	COLD WATER
CW	CONDENSER WATER
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY
D	DRAIN
D	DEPTH
DB	DRY BULB
DC	DRY COOLER
DDC	DIRECT DIGITAL CONTROLS
DEG	DEGREE
DH	DUCT HEATER
DIA	DIAMETER
DIM	DIMENSION
DN	DOWN
DOV	DRAIN OFF VALVE
DP	DIFFERENTIAL PRESSURE
DX	DIRECT EXPANSION
EA	EACH
E/A	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE
EBB	ELECTRIC BASEBOARD
ECM	ELECTRONICALLY COMMUTATED MOTOR
EER	ENERGY EFFICIENCY RATIO
EF	EXHAUST FAN
EFF	EFFICIENCY
EHC	ELECTRIC HEATING COIL
ELEC	ELECTRICAL
ELEV	ELEVATION
EQUIP	EQUIPMENT
ESP	EXTERNAL STATIC PRESSURE
ET	EXPANSION TANK
EVAP	EVAPORATOR
EUH	ELECTRIC UNIT HEATER
EWT	ENTERING WATER TEMPERATURE
EWH	ELECTRIC WATER HEATER
EXH	EXHAUST
EXP	EXPANSION
EXT	EXTERNAL
EXIST	EXISTING
F	DEGREES FAHRENHEIT
FA	FREE AREA
FC	FLEXIBLE CONNECTION
FCU	FAN COIL UNIT
FD	FIRE DAMPER
FL	FLOOR
FLA	FULL LOAD AMPS
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FS	FLOW SWITCH
FT	FOOT/FEET
FTR	FIN TUBE RADIATION
G	GAS
GA	GAUGE
GAL	GALLON
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GFU	GLYCOL FEED UNIT
GMU	GLYCOL MAKE UP
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRD	GRADE
GV	GRAVITY VENTILATOR
GWB	GYPSUM WALL BOARD
H	HUMIDIFIER
HB	HOSE BIB
HD	HEAD
HGB	HOT GAS BYPASS
HP	HORSE POWER
HP	HIGH POINT
HR	HOUR
HRU	HEAT RECOVERY UNIT
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HV	HEATING AND VENTILATION UNIT
HW	HOT WATER
HWC	HOT WATER HEATING COIL
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HX	HEAT EXCHANGER
HZ	HERTZ
ID	INDIRECT
ID	INSIDE DIAMTER
IN	INCH
IN WC	INCHES WATER COLUMN
IN WG	INCHES WATER GAUGE
INV	INVERT
KW	KILOWATT
L	LENGTH
LAT	LEAVING AIR TEMPERATURE
LB	POUND
LB/HR	POUNDS PER HOUR
LD	LINEAR DIFFUSER
LF	LINEAR FEET
LP	LOW POINT
LP	LOW PRESSURE
LPG	LIQUEFIED PETROLEUM GAS
LVG	LEAVING
LVR	LOUVER
LWT	LEAVING WATER TEMPERATURE
M/A	MIXED AIR
MAX	MAXIMUM
MAU	MAKE-UP AIR UNIT
MAV	MANUAL AIR VENT
MBH	ONE THOUSAND BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MCF	ONE THOUSAND CUBIC FEET
MD	MOTORIZED DAMPER
MECH	MECHANICAL
MEZZ	MEZZANINE
MFR	MANUFACTURER
MIN	MINIMUM
MISC	MISCELLANEOUS
MOCP	MAXIMUM OVER CURRENT PROTECTION
MTR	MOTOR
MU	MAKE-UP WATER
N/A	NOT APPLICABLE
NC	NOISE CRITERIA
NC	NORMALLY CLOSED
NIC	NOT IN CONTRACT
NG	NATURAL GAS
NO	NUMBER
NO	NORMALLY OPEN
NTS	NOT TO SCALE
O	OXYGEN
O/A	OUTSIDE AIR
OAI	OUTDOOR AIR INTAKE
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OCC	OCCUPIED
OD	OUTSIDE DIAMETER
ODP	OPEN DRIP PROOF
OED	OPEN END DUCT
OV	OUTLET VELOCITY
P	PUMP
PAD	PRIMARY AIR DAMPER
PD	PRESSURE DROP
PD	PRESSURE DIFFERENCE
PH	PHASE
PHC	PREHEAT COIL
PHX	PLATE AND FRAME HEAT EXCHANGER
PLBG	PLUMBING
POS	PROVIDED BY OTHER SECTION
PRESS	PRESSURE
PRV	PRESSURE REDUCING VALVE
PSI	POUNDS PER SQUARE INCH
PSIA	PSI ABSOLUTE
PSID	PSI DIFFERENTIAL
PSIG	PSI GAUGE
PWR	POWER
QTY	QUANTITY
R	RADIUS
R/A	RETURN AIR
RCP	RADIANT CEILING PANEL
RD	REFRIGERANT DISCHARGE
REC	RECESSED
RED	REDUCER
RET	RETURN
RF	RETURN FAN
RH	RELATIVE HUMIDITY
RHC	REHEAT COIL
RHGB	REFRIGERANT HOT GAS BYPASS
RL	REFRIGERANT LIQUID
RLA	RUNNING LOAD AMPS
RL/A	RELIEF AIR
RLF	RELIEF
RM	ROOM
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
RTU	ROOFTOP UNIT
S/A	SUPPLY AIR
SA	SOUND ATTENUATOR
SCR	SCREEN
SD	SMOKE DAMPER
SDET	SMOKE DETECTOR
SEER	SEASONAL ENERGY EFFICIENCY RATING
SENS	SENSIBLE
SF	SQUARE FOOT
SF	SUPPLY FAN
SFD	COMBINATION SMOKE FIRE DAMPER
SHC	SENSIBLE HEAT CAPACITY
SHR	SENSIBLE HEAT RATIO
SM	SURFACE MOUNT
SP	STATIC PRESSURE
SPECS	SPECIFICAITONS
SS	STAINLESS STEEL
STM	STEAM
SUP	SUPPLY
T	THERMOSTAT
T/A	TRANSFER AIR
TAV	THERMOSTATIC AIR VENT
TD	TEMPERATURE DROP
TEFC	TOTALLY ENCLOSED FAN COOLED
TEMP	TEMPERATURE
TF	TRANSFER FAN
TOD	TOP OF DUCT
TOP	TOP OF PIPE
TOS	TOP OF STEEL
TOT	TOTAL
TR	TRANSFER
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UG	UNDERGROUND
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UNOCC	UNOCCUPIED
UV	UNIT VENTILATOR
V	VENT
V	VOLTS
VAC	VACUUM
VAR	VARIABLE
VAV	VARIABLE AIR VOLUME
VB	VACUUM BREAKER
VD	VOLUME DAMPER
VEL	VELOCITY
VENT	VENTILATION
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THROUGH ROOF
W	WATT
W	WIDTH
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER COLUMN
WG	WATER GAUGE
WMS	WIRE MESH SCREEN
WPD	WATER PRESSURE DROP
WTD	WATER TEMPERATURE DIFFERENCE
ΔP	CHANGE IN PRESSURE
ΔT	CHANGE IN TEMPERATURE
°F	DEGREES FAHRENHEIT

HVAC NOTES

1. SUPPLY AND RETURN PIPING TO COILS ARE THE SAME SIZE.
2. CONTRACTOR SHALL LOCATE THERMOSTATS AND TEMPERATURE SENSORS AT 4'-0" AFF, A MINIMUM OF 8" FROM LIGHT SWITCH.
3. REFER TO PIPING DRAWINGS FOR THERMOSTAT AND TEMPERATURE SENSOR LOCATIONS.
4. CONDENSATE DRAINS SHALL BE SUPPLIED FOR ALL COOLING EQUIPMENT. CONTRACTOR SHALL ENSURE PROPER INSTALLATION AND DRAINAGE AS REQUIRED BY FEDERAL, STATE, AND LOCAL CODES. CONDENSATE PIPING SHALL BE TYPE "L" COPPER.
5. PROVIDE A 4" HOUSEKEEPING PAD FOR EACH PIECE OF MECHANICAL EQUIPMENT. COORDINATE SIZES WITH MECHANICAL EQUIPMENT SELECTED.
6. ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK SHALL BE RATED FOR PRESSURE CLASS OF 2" W.G. UNLESS NOTED OTHERWISE.
7. THIS CONTRACTOR SHALL BE REQUIRED TO REPLACE FILTERS ON HVAC EQUIPMENT AFTER ALL DUST PRODUCING CONSTRUCTION HAS BEEN COMPLETED AND PRIOR TO THE FINAL PUNCH.

PROJECT NOTES

1. REMOVE ALL UNUSED PIPING, DUCTWORK AND ACCESSORIES.
2. THE MECHANICAL CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING, PRIOR TO FINAL BID, ALL EXISTING CONDITIONS FOR MECHANICAL SYSTEMS.
3. WHERE FLOOR DRAINS OCCUR WITHIN THE LIMITS OF CONSTRUCTION, PREVENT CONSTRUCTION DEBRIS FROM ENTERING DRAIN BODY BY SEALING DRAIN OPENING PRIOR TO START OF WORK. UNSEAL DRAINS AT COMPLETION OF CONSTRUCTION.
4. COORDINATE INSTALLATION OF PIPING, DUCTWORK, CONDUIT, LIGHTS, CABLE TRAY, STRUCTURE, AND EQUIPMENT TO PREVENT CONFLICTS.
5. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL THE CONDITIONS BOTH EXISTING AND THOSE ILLUSTRATED BY THESE DOCUMENTS AS WELL AS THOSE WHICH CAN BE REASONABLY ANTICIPATED INCLUDING, BUT NOT LIMITED TO ARCHITECTURAL, ELECTRICAL, VENTILATION, PLUMBING, AND OTHER SYSTEMS INVOLVED ON THIS PROJECT.
6. FINAL PRODUCT SHALL BE A COMPLETE AND FUNCTIONING SYSTEM, AND SHALL CONFORM TO ALL REQUIREMENTS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING BUT NOT LIMITED TO THE INTERNATIONAL BUILDING CODE AND INTERNATIONAL MECHANICAL CODE.
7. LOCATE EQUIPMENT REQUIRING ACCESS 2'-0" MAXIMUM ABOVE CEILING.
8. ALL ROOF MOUNTED EQUIPMENT SHALL BE A MINIMUM 10'-0" FROM EDGE OF ROOF.
9. LOCATE DUCTWORK, PIPING AND MECHANICAL EQUIPMENT AWAY FROM THE SPACE ABOVE ELECTRICAL PANELS. TRANSFORMERS AND OTHER ELECTRICAL EQUIPMENT.
10. FIRE SEAL AROUND DUCT AND PIPING PENETRATIONS OF FIRE RATED WALLS. REFER TO SPECIFICATION.
11. PROVIDE SLEEVES AND/OR OPENINGS TO RUN PIPES AND DUCTS THROUGH FOUNDATIONS, FLOORS, WALLS, AND ROOF.
12. ADJUST PIPING AND DUCTWORK SIZES TO PROPERLY CONNECT TO MECHANICAL EQUIPMENT.
13. PIPE SIZES SHOWN SHALL BE CONTINUED IN THE DIRECTION OF FLOW UNTIL ANOTHER SIZE IS SHOWN.
14. FOR DETAILS, EQUIPMENT CONNECTIONS, AND PIPE SIZES NOT SHOWN ON THE SEGMENTS, REFER TO DETAILS, SCHEDULES, AND SPECIFICATIONS.
15. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH THE RESPECTIVE MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS, AT A LEVEL OF QUALITY AND WORKMANSHIP CONSISTENT WITH THE SPECIFICATIONS.
16. LOCATIONS OF PIPING, DUCTWORK AND EQUIPMENT AS INDICATED ON THE DRAWING, ARE APPROXIMATE AND SUBJECT TO MINOR ADJUSTMENTS IN THE FIELD. WORK SHALL BE COORDINATED WITH ALL OTHER TRADES TO AVOID INTERFERENCE IN THE FIELD.
17. INSTALL EXPOSED PIPING AND DUCTWORK AS HIGH AS PRACTICAL IN ROOMS WITHOUT CEILINGS.

SCOPE OF WORK

1. PROVIDE DEMOLITION OF THE EXISTING UNIT VENTILATORS AND PIPING, PROVIDE INSTALLATION OF NEW FAN COIL UNITS AND PIPING AS INDICATED ON THE PLANS.
2. PROVIDE DEMOLITION OF THE EXISTING COMPRESSOR AND CONTORL AIR PIPING.
3. PROVIDE DEMOLITION OF THE EXISTING CHILLED WATER AND HEATING HOT WATER PUMPS (P-1, P-2, P-5) AND PIPING, PROVIDE INSTALLATION OF NEW CHILLED WATER AND HEATING HOT WATER PUMPS AND PIPING AS INDICATED ON THE PLANS.
4. PROVIDE DEMOLITION OF THE EXISTING CHILLER, REMOTE CONDENSERS, AND PIPING (CHILLED WATER AND REFRIGERANT), PROVIDE INSTALLTION OF NEW CHILLER, REMOTE CONDENSERS, AND PIPING (CHILLED WATER AND REFRIGERANT) AS INDICATED ON THE PLANS.
5. PROVIDE DEMOLITION OF THE EXISTING ROOF MOUNTED EXHAUST FANS (EF 1-7) AND DUCTWORK, PROVIDE INSTALLTION OF NEW ENERGY RECOVERY UNITS, DUCTWORK, AND PIPING AS INDICATED ON THE PLANS.
6. PROVIDE DEMOLITION OF THE EXISTING ROOFTOP UNIT (AC-2), DUCTWORK, AND PIPING, PROVIDE INSTALLTION OF NEW ROOFTOP UNIT, DUCTWORK, AND PIPING AS INDICATED ON THE PLANS.
7. PROVIDE DEMOLITION OF THE EXISTING HEATING AND VENTILATION UNITS (H&V 1-3), DUCTWORK, AND PIPING, PROVIDE INSTALLTION OF NEW AIR HANDLING UNITS, DUCTWORK, AND PIPING AS INDICATED ON THE PLANS.
8. PROVIDE DEMOLITION OF THE EXISTING ROOF MOUNTED EXHAUST FANS (EF 8-9), PROVIDE INSTALLTION OF NEW EXHAUST FANS AS INDICATED ON THE PLANS.
9. PROVIDE DEMOLITION OF THE EXISTING AIR HANDLING UNIT (AC-1), DUCTWORK, AND PIPING, PROVIDE INSTALLTION OF NEW AIR HANDLING UNIT, DUCTWORK, AND PIPING AS INDICATED ON THE PLANS. THE EXISTING REMOTE CONDENSING UNIT (ACCU-1) SHALL REMAIN AND BE REUSED.
10. PROVIDE DEMOLITION OF THE EXISTING CABINET UNIT HEATERS, CONVECTORS, UNIT HEATERS, PROVIDE INSTALLTION OF NEW CABINET UNIT HEATERS, CONVECTORS, UNIT HEATERS AS INDICATED ON THE PLANS.
11. IF WORK IS DONE DURING THE HEATING SEASON, THE CONTRACTOR SHALL PROVIDE TEMPORARY HEAT AT NO ADDITIONAL COST TO THE OWNER.

DESIGN CONDITIONS

CODES/STANDARDS

2015 INTERNATIONAL BUILDING CODE
2015 INTERNATIONAL MECHANICAL CODE
2015 INTERNATIONAL ENERGY CONSERVATION CODE
2018 CONNECTICUT STATE BUILDING CODE AMENDMENTS

OUTDOOR AIR TEMPERATURE

ASHRAE - HARTFORD
WINTER 10°F DB/ 6°F WB
SUMMER 88°F DB/ 77°F WB

INDOOR CONDITIONS (°F)

SPACE	WINTER	SUMMER
OFFICES	70	74
CONFERENCE ROOM	70	74
BATHROOM	68	78
CLASSROOMS	70	74
GYM	68	78
STORAGE/MECH	68	78
CORRIDOR	68	78
MULTI-PURPOSE ROOM	70	76
ART ROOM	68	74
LIBRARY	68	74

MINIMUM VENTILATION

SPACE	CFM/PERSON	CFM/SF	CFM
OFFICES	5	0.06	
CONFERENCE ROOM	5	0.06	
BATHROOM	0	0	50*
CLASSROOMS	10	0.12	
GYM	7.5	0.06	
STORAGE/MECH	0	0.12	
CORRIDOR	0	0.06	
MULTI-PURPOSE ROOM	7.5	0.06	
ART ROOM	10	0.18	
LIBRARY	5	0.12	

* PER FIXTURE (INCLUDING SHOWERS)

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

21 Tuttle Rd.
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qamarch.com

Seal:

Revisions:

Rev	Date	Description

Issued For: BID SET

Date: April 2, 2020
Drawn By: HJH
Reviewed By: SEH
Approved By: SEH

W&S Project No: 2191117

Drawing Title:

LEGENDS, NOTES, AND ABBREVIATIONS

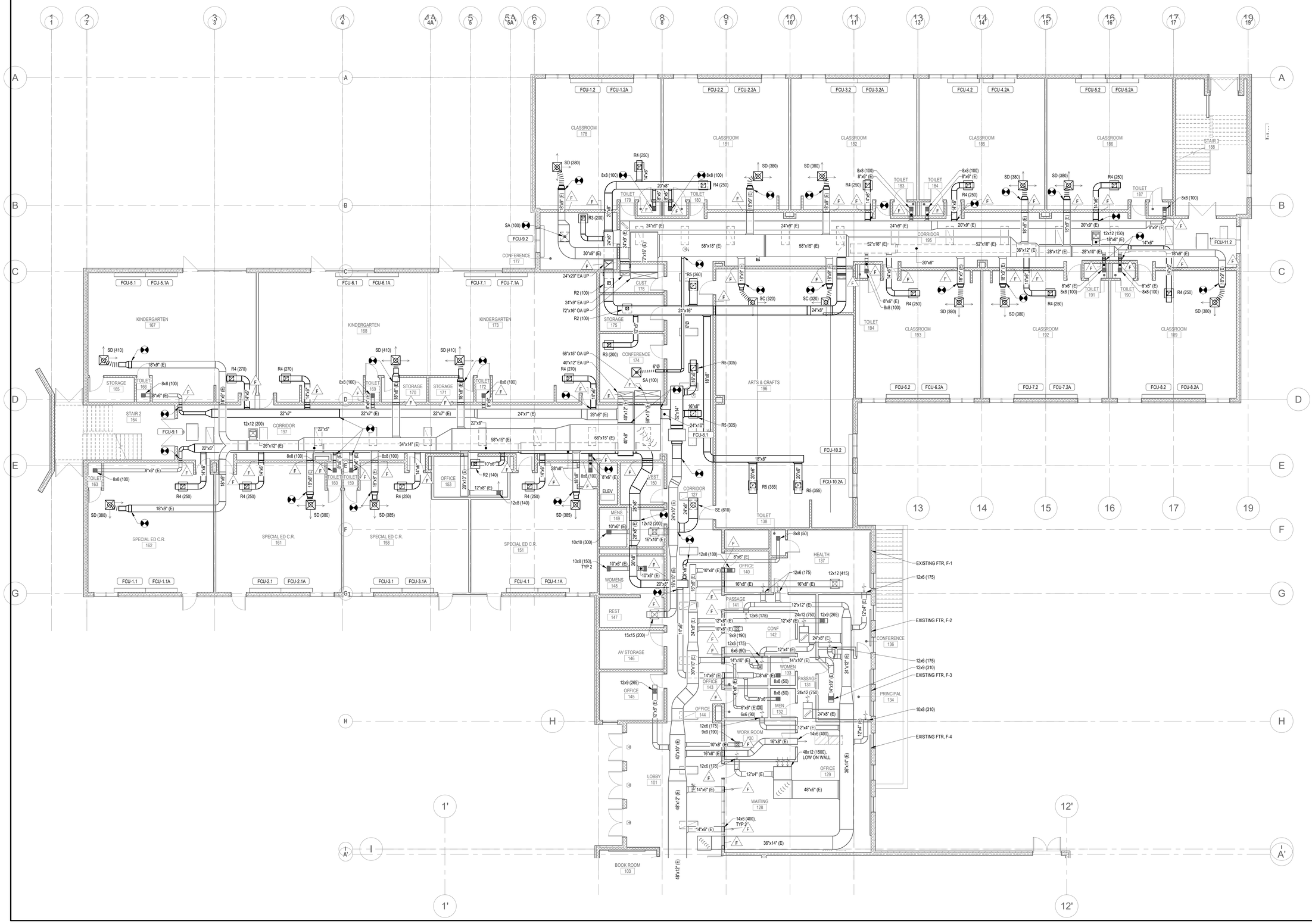
Sheet Number:

H001

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GENERAL NOTE

ALL EXISTING DUCCTWORK SHALL BE CLEANED TO COMPLY WITH NADCA AIR DUCT CLEANING STANDARDS.



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Seal:

Revisions:

Rev	Date	Description

Issued For: BID SET

PROJECT TRUE

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

Date:	April 2, 2020
Drawn By:	MRC
Reviewed By:	SEH
Approved By:	SEH
W&S Project No:	2191117

Drawing Title:

FIRST FLOOR DUCTWORK PLAN PART A

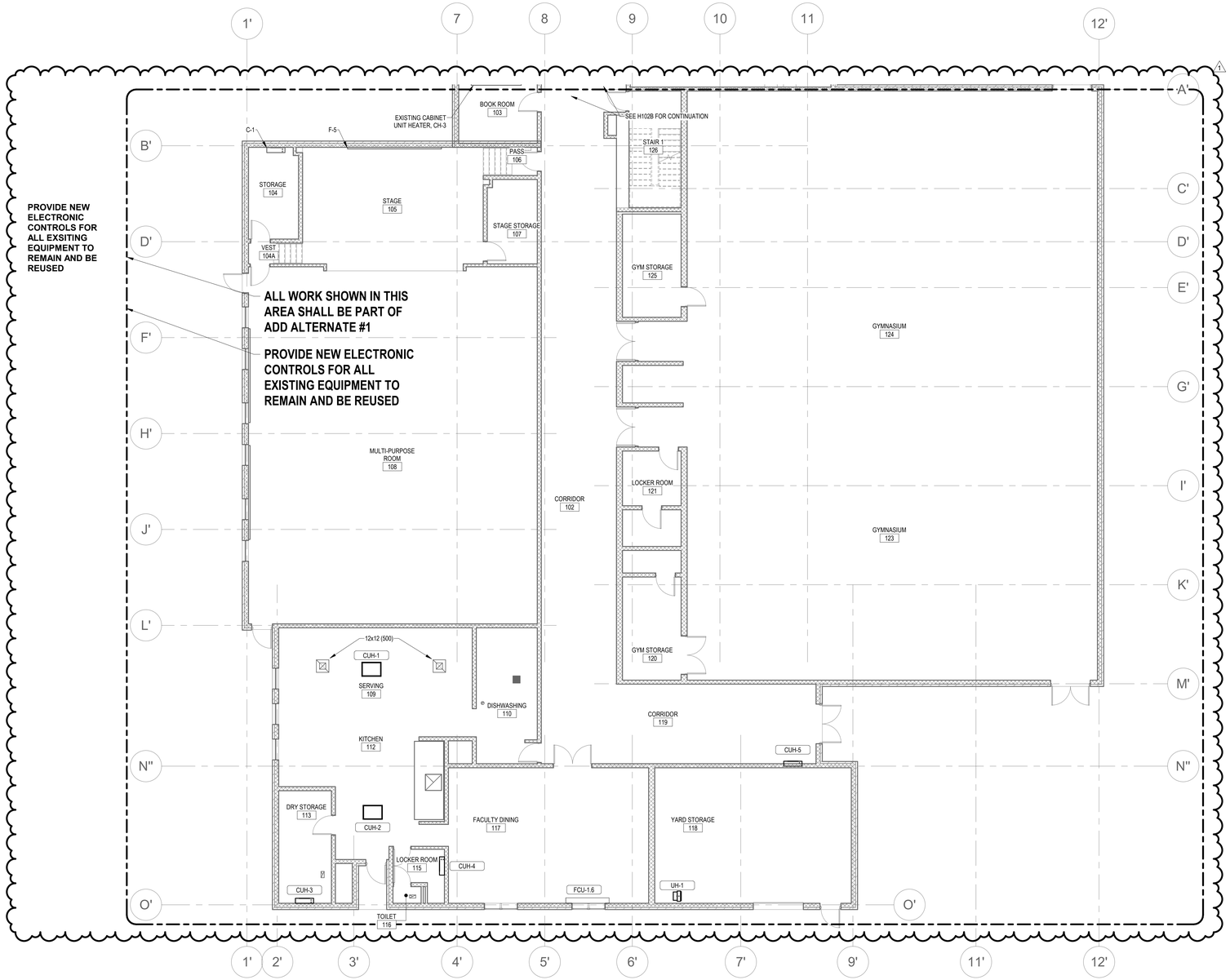
Sheet Number:

H101A

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GENERAL NOTES

1. ALL EXISTING DUCTWORK SHALL BE CLEANED TO COMPLY WITH NADCA AIR DUCT CLEANING STANDARDS.
2. ALL NEW HANGERS SHALL BE ATTACHED TO THE EXISTING STEEL VIA CLAMP ON STYLE HANGERS, NO WELDING ALLOWED AS THE STEEL IS COVERED WITH LEAD PAINT.



Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Seal:

Revisions:

Rev	Date	Description
1	4/15/2020	ADDENDUM #1

Issued For: ADDENDUM #1

PROJECT TRUE

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

Date: April 15, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

FIRST FLOOR DUCTWORK PLAN PART B

Sheet Number:

H101B

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GENERAL NOTE

ALL EXISTING DUCCTWORK SHALL BE CLEANED TO COMPLY WITH NADCA AIR DUCT CLEANING STANDARDS.



Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Seal:

Revisions:

Rev	Date	Description

Issued For: BID SET

PROJECT TRUE

0' 4' 8' 16'

SCALE: 1/8" = 1'-0"

Date: April 2, 2020

Drawn By: MRC

Reviewed By: SEH

Approved By: SEH

W&S Project No: 2191117

Drawing Title:

SECOND FLOOR DUCTWORK PLAN PART A

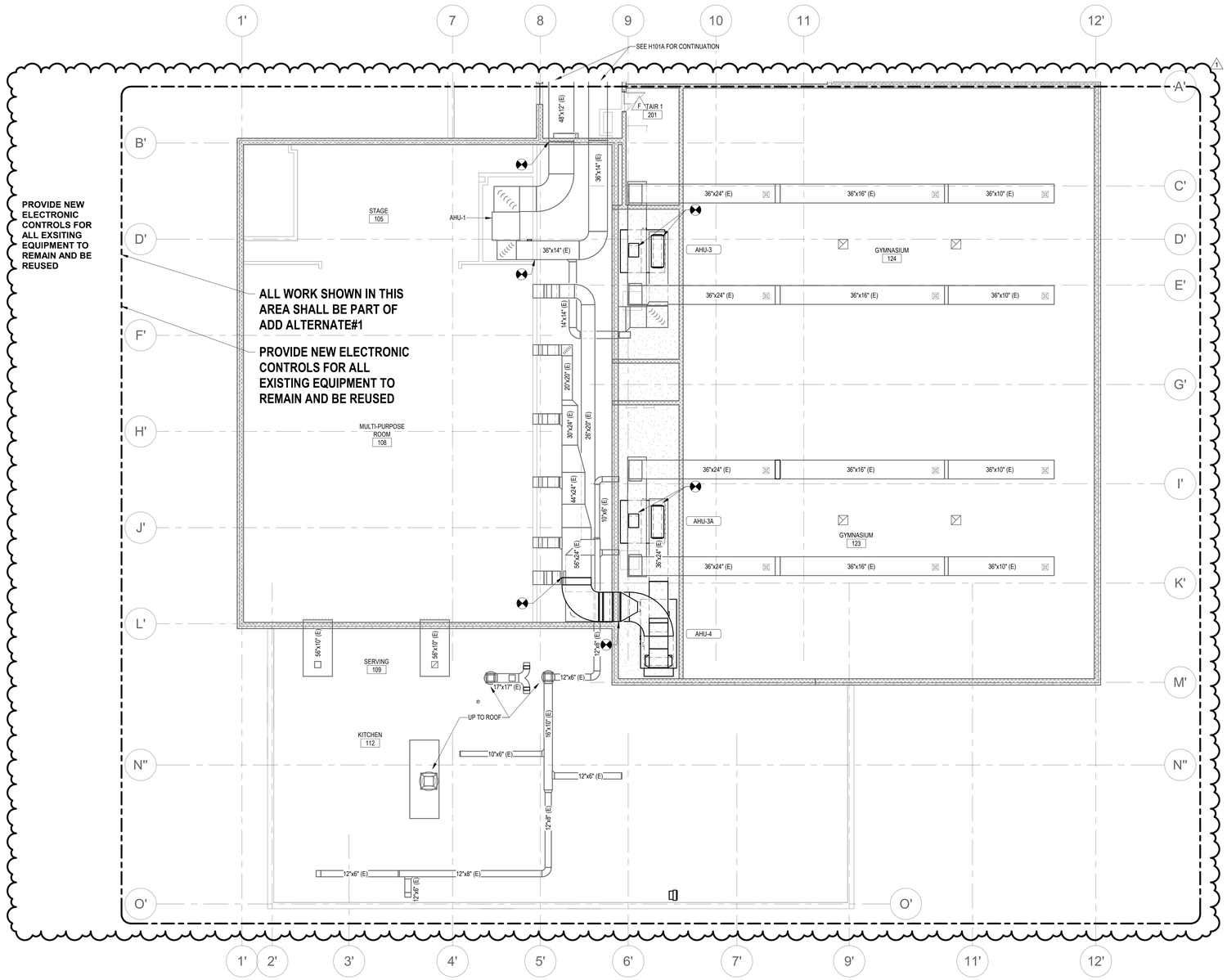
Sheet Number:

H102A

WESTON & SAMPSON COPYRIGHT 2018

GENERAL NOTES

1. ALL EXISTING DUCCTWORK SHALL BE CLEANED TO COMPLY WITH NADCA AIR DUCT CLEANING STANDARDS.
2. ALL NEW HANGERS SHALL BE ATTACHED TO THE EXISTING STEEL VIA CLAMP ON STYLE HANGERS, NO WELDING ALLOWED AS THE STEEL IS COVERED WITH LEAD PAINT.



Project:

CONTRACT 2C20-064

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Seal:

Revisions:

Rev	Date	Description
1	4/15/2020	ADDENDUM #1

Issued For: ADDENDUM #1

PROJECT TRUE

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

Date: April 15, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

SECOND FLOOR DUCTOWKR PLAN PART B

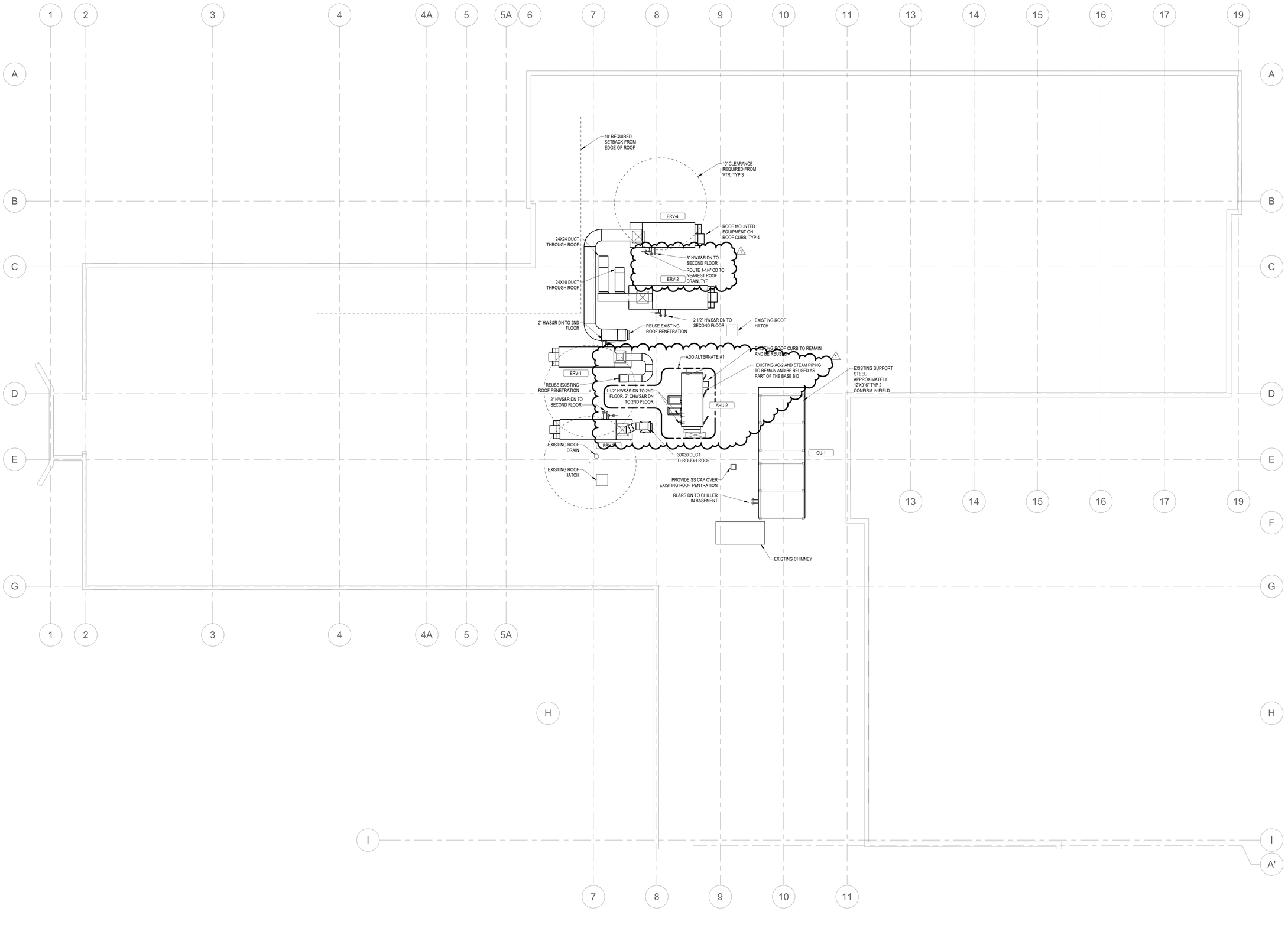
Sheet Number:

H102B

WESTON & SAMPSON COPYRIGHT 2018

GENERAL NOTES

1. ALL EXISTING DUCTWORK SHALL BE CLEANED TO COMPLY WITH NADCA AIR DUCT CLEANING STANDARDS.
2. ALL NEW HANGERS SHALL BE ATTACHED TO THE EXISTING STEEL VIA CLAMP ON STYLE HANGERS, NO WELDING ALLOWED AS THE STEEL IS COVERED WITH LEAD PAINT.



Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Revisions:

Rev	Date	Description
1	4/15/2020	ADDENDUM #1

Issued For: ADDENDUM #1

PROJECT TRUE

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

Date: April 15, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

ROOF PLAN PART A

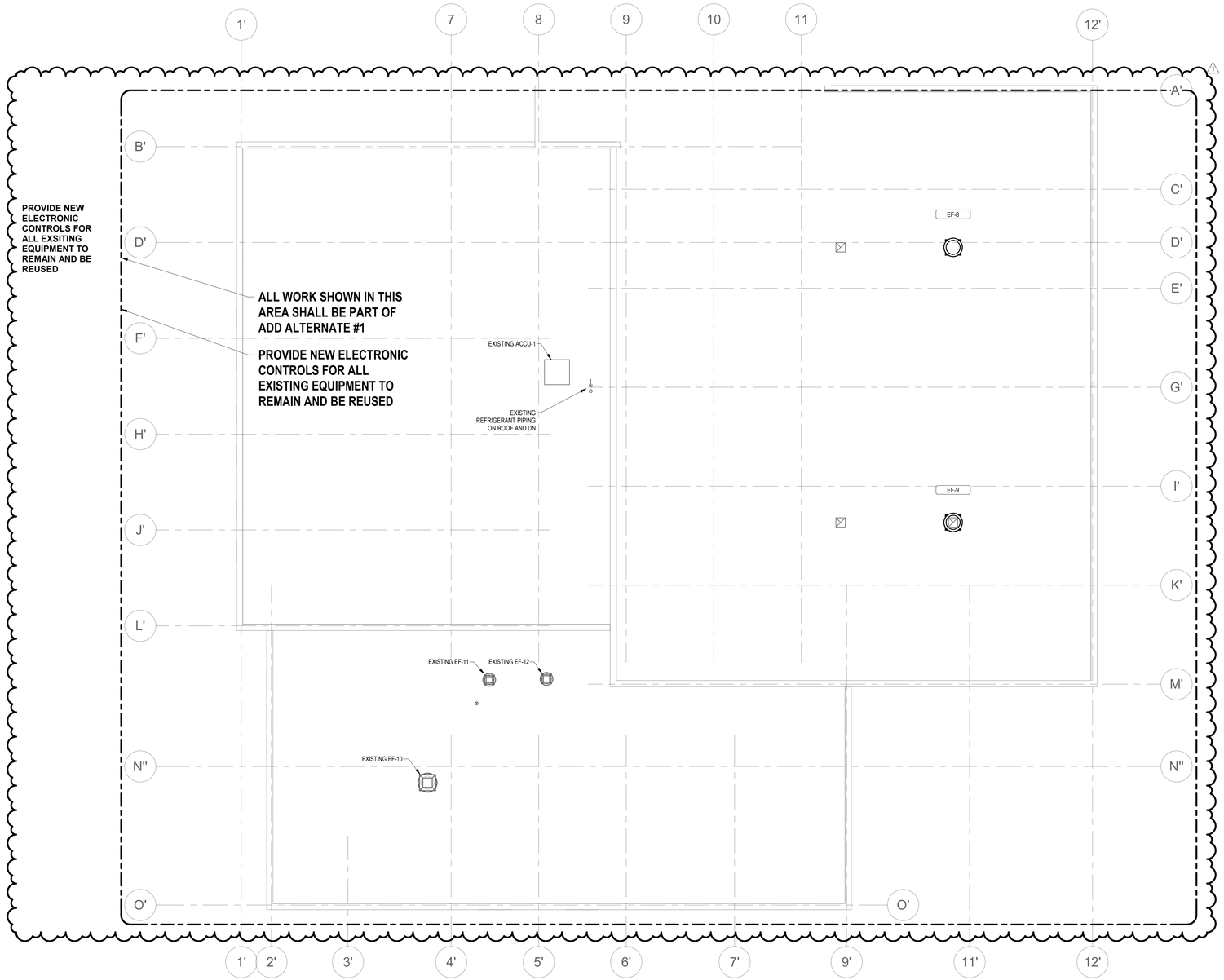
Sheet Number:

H103A

WESTON & SAMPSON COPYRIGHT 2018

GENERAL NOTES

1. ALL EXISTING DUCCTWORK SHALL BE CLEANED TO COMPLY WITH NADCA AIR DUCT CLEANING STANDARDS.
2. ALL NEW HANGERS SHALL BE ATTACHED TO THE EXISTING STEEL VIA CLAMP ON STYLE HANGERS, NO WELDING ALLOWED AS THE STEEL IS COVERED WITH LEAD PAINT.



Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Revisions:

Rev	Date	Description
1	4/15/2020	ADDENDUM #1

Issued For: ADDENDUM #1

PROJECT TRUE

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

Date: April 15, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

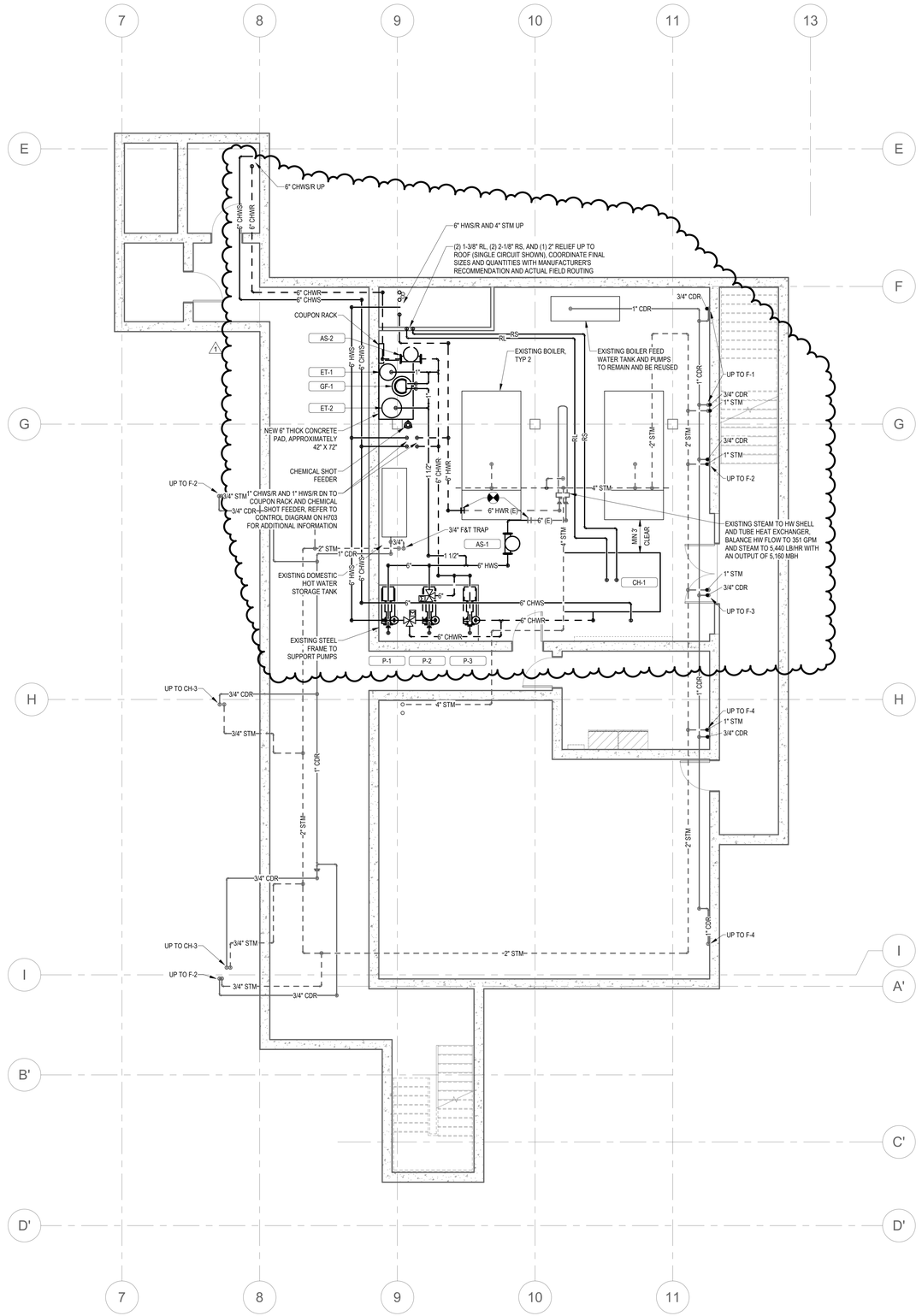
Drawing Title:

ROOF PLAN PART B

Sheet Number:

H103B

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1 H200 BASEMENT FLOOR PIPING PLAN
3/16" = 1'-0"

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Revisions:

Rev	Date	Description
1	4/15/2020	ADDENDUM #1

Issued For: ADDENDUM #1

PROJECT TRUE

Date: April 15, 2020
Drawn By: HJH
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

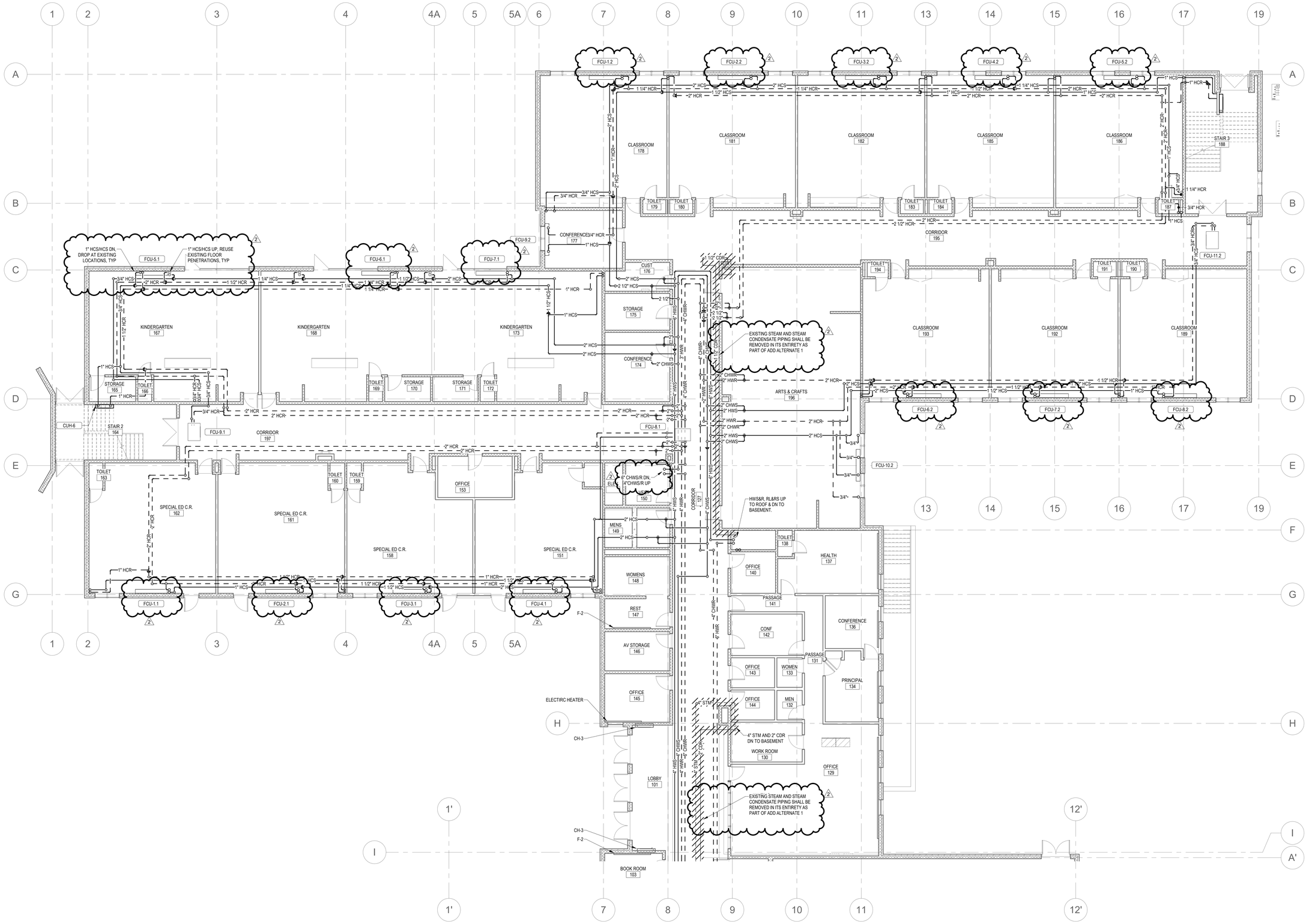
Drawing Title:

BASEMENT NEW WORK PIPING PLAN

Sheet Number:

H200

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Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Seal:

Revisions:

Rev	Date	Description
2	4/23/2020	ADDENDUM #2

Issued For: ADDENDUM #2

PROJECT TRUE

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

Date: April 23, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH

W&S Project No: 2191117

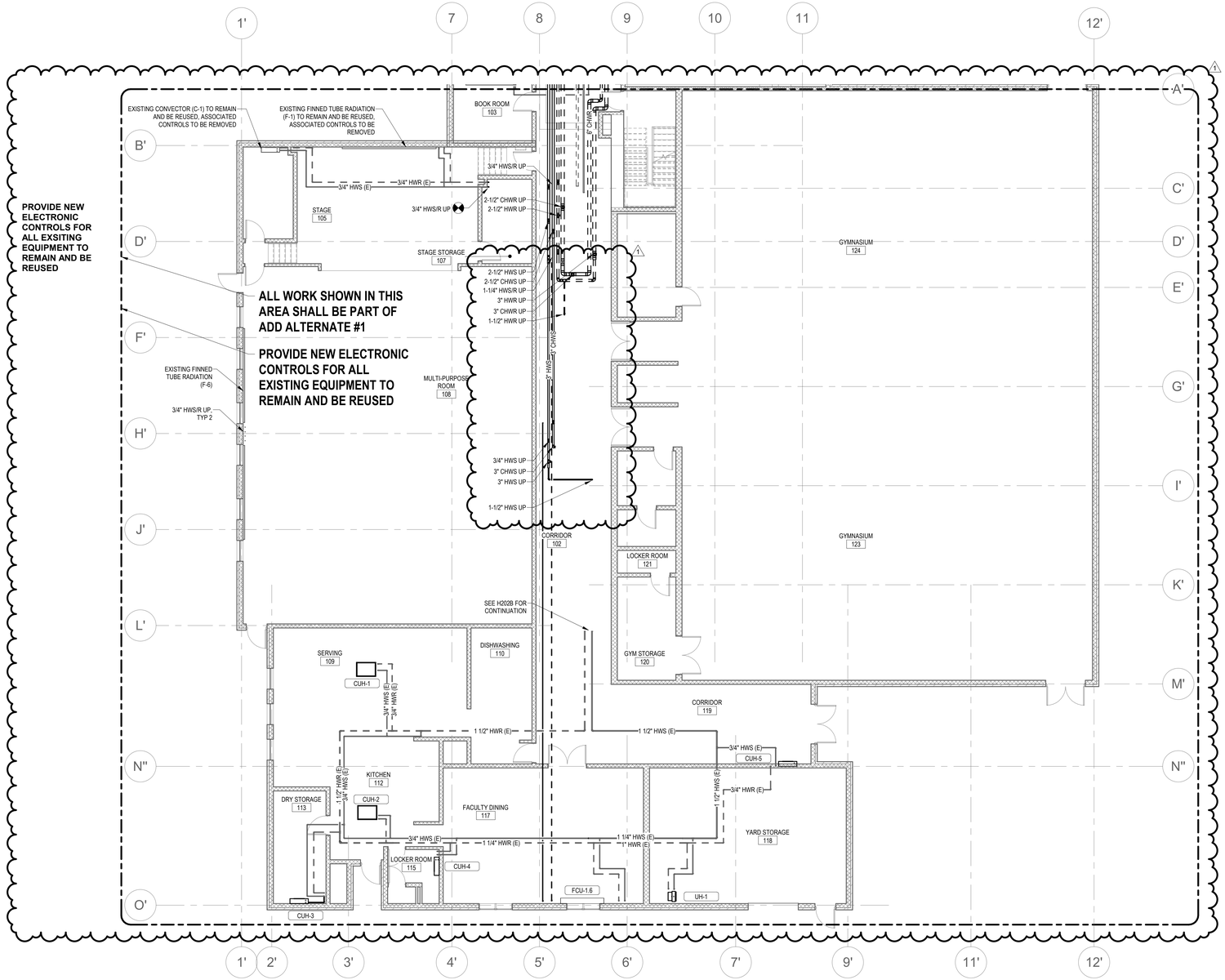
Drawing Title:

FIRST FLOOR PIPING PLAN PART A

Sheet Number:

H201A

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HVAC GENERAL NOTES:

1. ALL PIPING 3/4" UNLESS OTHERWISE NOTED.

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Seal:

Revisions:

Rev	Date	Description
1	4/15/2020	ADDENDUM #1

Issued For: ADDENDUM #1

PROJECT TRUE

0' 4' 8' 16'

SCALE: 1/8" = 1'-0"

Date: April 15, 2020

Drawn By: MRC

Reviewed By: SEH

Approved By: SEH

W&S Project No: 2191117

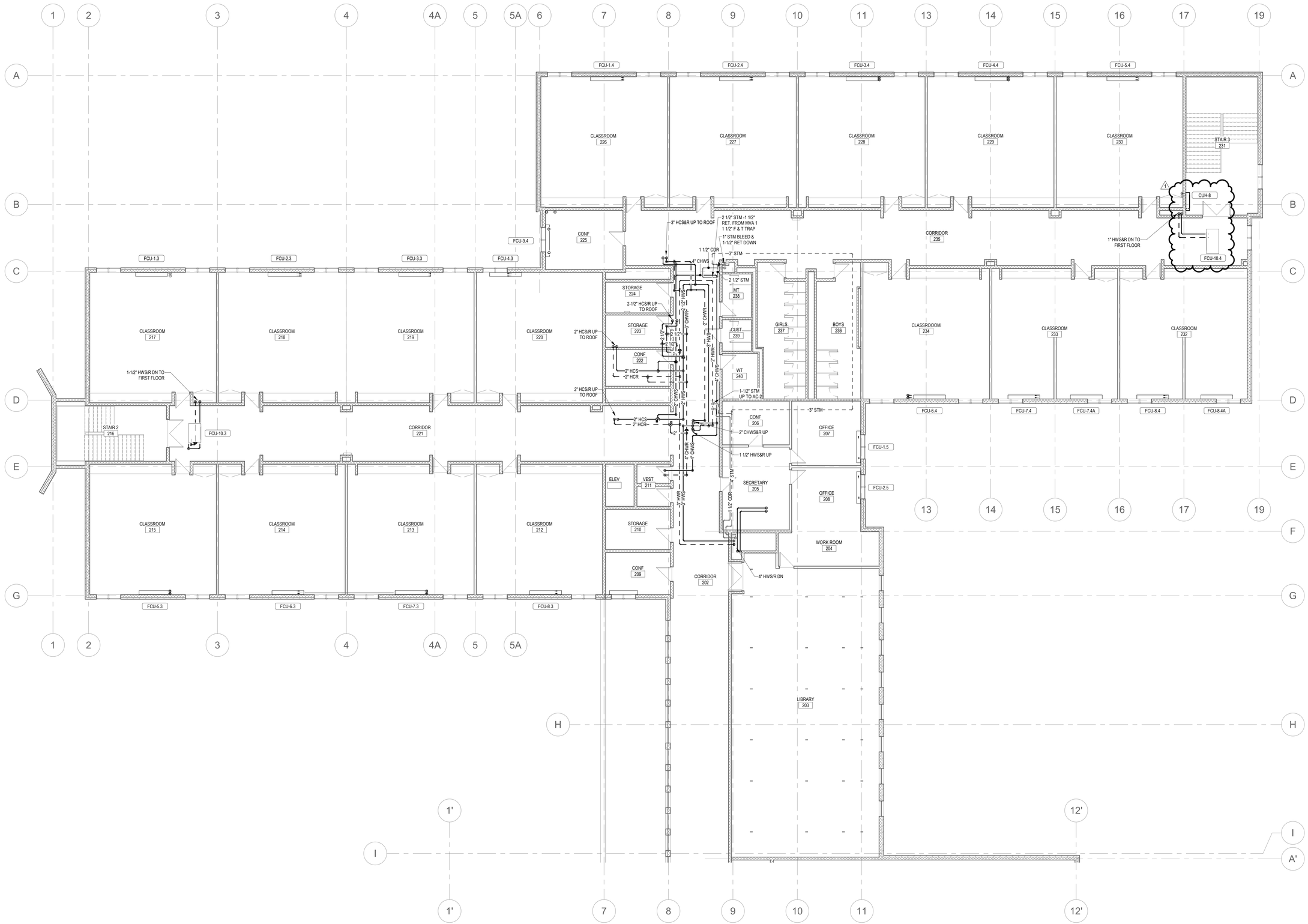
Drawing Title:

FIRST FLOOR PIPING PLAN PART B

Sheet Number:

H201B

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MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Seal:

Revisions:

Rev	Date	Description
1	4/15/2020	ADDENDUM #1

Issued For: ADDENDUM #1

PROJECT TRUE

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

Date: April 15, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH

W&S Project No: 2191117

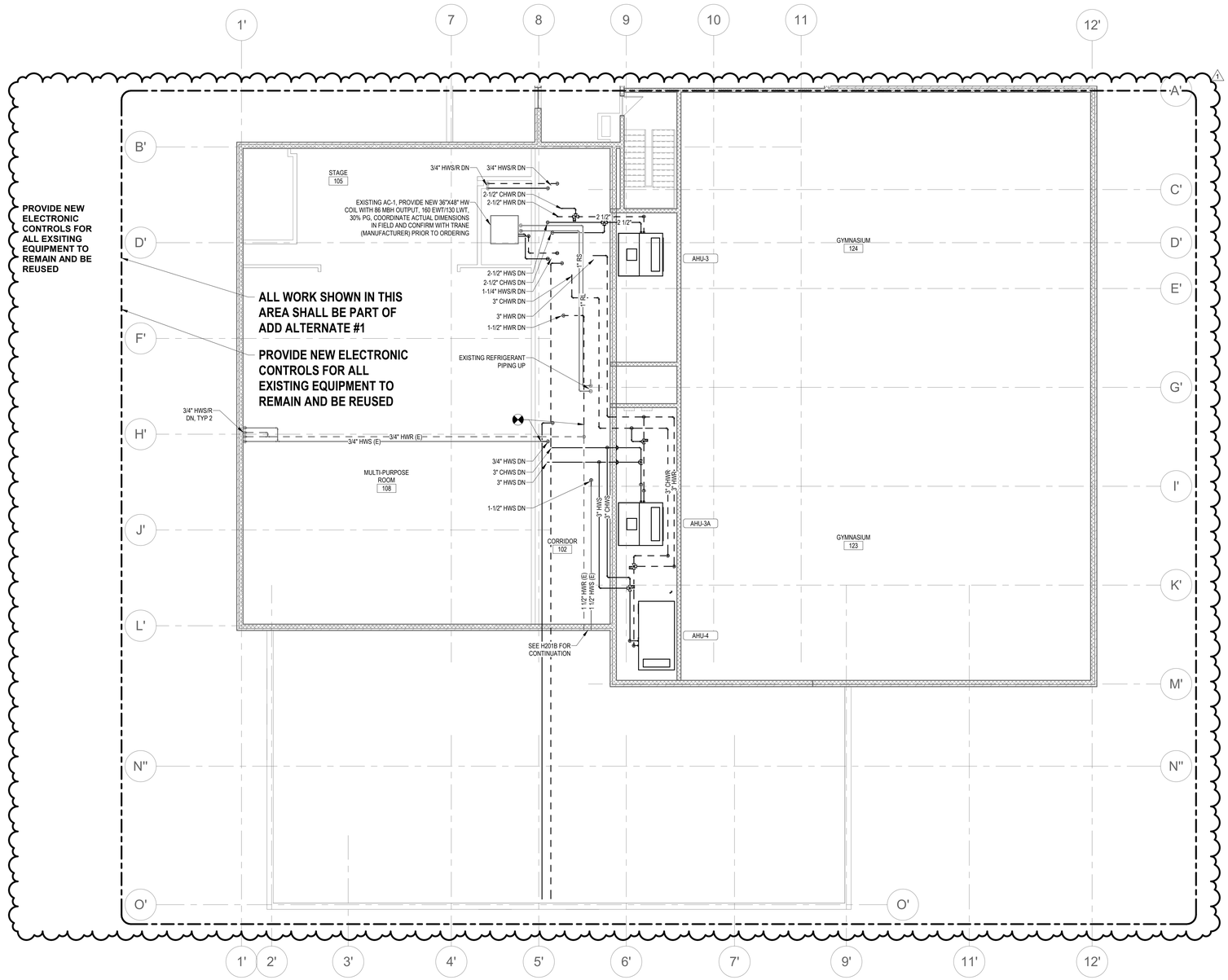
Drawing Title:

SECOND FLOOR PIPING PART PLAN A

Sheet Number:

H202A

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Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Seal:

Revisions:

Rev	Date	Description
1	4/15/2020	ADDENDUM #1

Issued For: ADDENDUM #1

PROJECT TRUE

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

Date: April 15, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

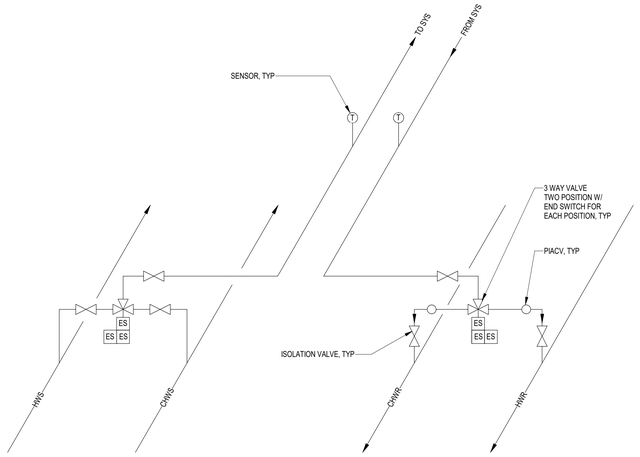
Drawing Title:

SECOND FLOOR PIPING PLAN PART B

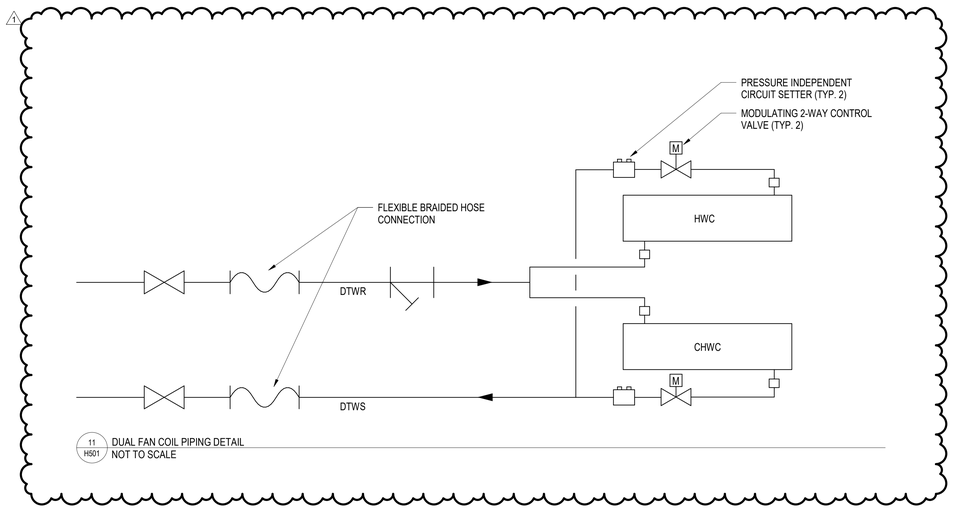
Sheet Number:

H202B

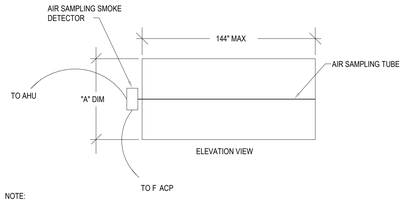
WESTON & SAMPSON COPYRIGHT 2018



9 H501 FOUR PIPE TO TWO PIPE
NOT TO SCALE



11 H501 DUAL FAN COIL PIPING DETAIL
NOT TO SCALE

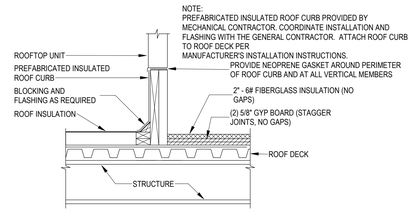


NOTE:

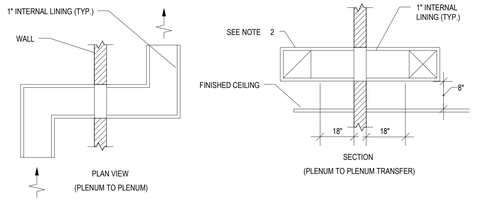
1. SMOKE DETECTORS SHALL BE IN ACCORDANCE WITH NFPA 72 AND ELECTRICAL SPECIFICATIONS. DETECTORS SHALL BE FURNISHED AND WIRED TO THE FIRE ALARM CONTROL PANEL (FACP) BY THE ELECTRICAL CONTRACTOR, INSTALLED BY THE HVAC CONTRACTOR, AND WIRED TO IT'S RESPECTIVE UNIT BY THE ATC CONTROL.
2. SMOKE DETECTORS SHALL BE EQUALLY SPACED AS DEFINED BY THE ELEVATION PARAMETERS.

"A" DIM	NO. OF SMOKE DETECTORS
36"	1
72"	2
96"	3
120"	4
144"	5

6 H501 DUCT SMOKE DETECTOR DETAIL
NOT TO SCALE



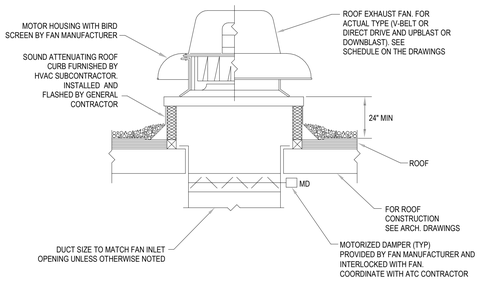
7 H501 ROOFTOP UNIT CURB INSTALLATION DETAIL
NOT TO SCALE



NOTES:
REFER TO ARCHITECTURAL DRAWINGS FOR FULL HEIGHT WALL PARTITIONS.
PROVIDE TRANSFER AIR DUCT IN EACH ROOM AND/ORWHERE SHOWN ON THE DRAWINGS.
REFER TO FLOOR PLANS FOR TRANSFER DUCT SIZE.

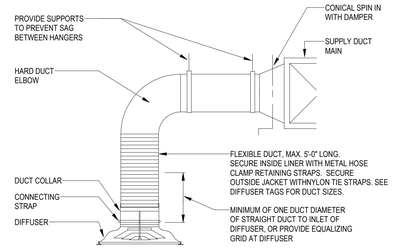
1 SUPPORT TRANSFER DUCT FROM STRUCTURE ABOVE.
2 OPEN END DUCT.

8 H501 TRANSFER DUCT DETAIL
NOT TO SCALE

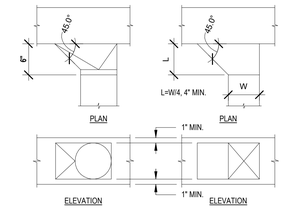


NOTE:
FOR HINGED FAN CURB REQUIREMENTS (WHERE REQUIRED), REFER TO SCHEDULES AND/OR SPECIFICATION.

10 H501 ROOF EXHAUST FAN DETAIL
NOT TO SCALE

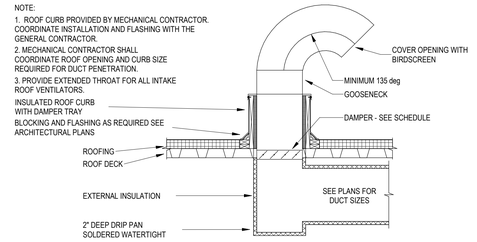


1 H501 DIFFUSER FLEXIBLE DUCT CONNECTION
NOT TO SCALE

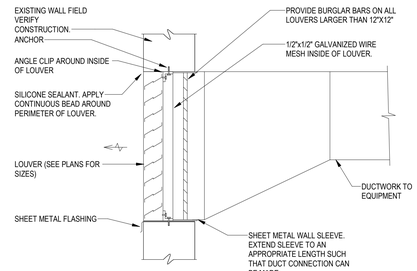


2 H501 DUCT TAKE-OFF DETAIL
NOT TO SCALE

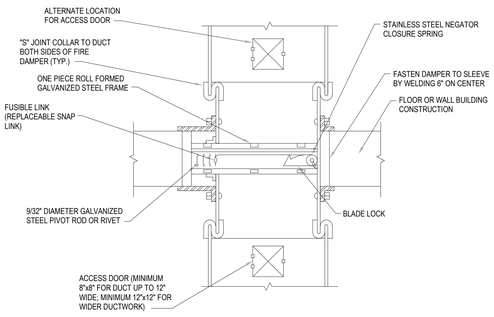
NOTE:
1. ROOF CURB PROVIDED BY MECHANICAL CONTRACTOR. COORDINATE INSTALLATION AND FLASHING WITH THE GENERAL CONTRACTOR.
2. MECHANICAL CONTRACTOR SHALL COORDINATE ROOF OPENING AND CURB SIZE REQUIRED FOR DUCT PENETRATION.
3. PROVIDE EXTENDED THROAT FOR ALL INTAKE ROOF VENTILATORS.



3 H501 GOOSENECK DETAIL - INTAKE OR EXHAUST
NOT TO SCALE



4 H501 LOUVER ASSEMBLY DETAIL
NOT TO SCALE



NOTE:
FIRE DAMPER INSTALLATION TO MEET UL REQUIREMENTS.

5 H501 FIRE DAMPER DETAIL
NOT TO SCALE

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

21 Tuttle Rd.
Bristol, CT 06010

Weston & Sampson

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard Suite 250
Foxborough, MA 02035
(508) 698-3034 (800) SAMPSON
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Consultants:

QA+M architecture
QuisenberryArcariMalik
195 Scott Swamp Road
Farmington, CT 06032
(860) 677-4594
qamarch.com

EAGLE Environmental, Inc.

VANZELM ENGINEERS
VAN ZELM HEYWOOD & SHADFORD, INC.
CT: 860.284.5964 MA: 617.218.9928
10 TALCOTT NOTCH, FARMINGTON, CT 06032 - 1800
Connecticut | Massachusetts | North Carolina

Seal:

Revisions:

Rev	Date	Description
1	4/15/2020	ADDENDUM #1

Issued For: ADDENDUM #1

Date: April 15, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

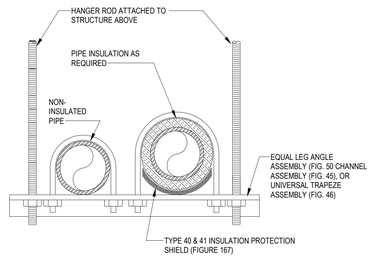
Drawing Title:

HVAC DETAILS

Sheet Number:

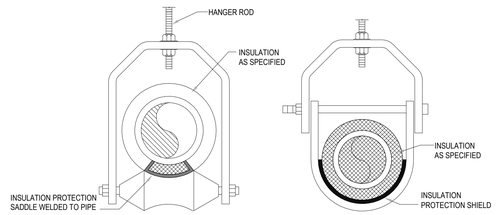
H501

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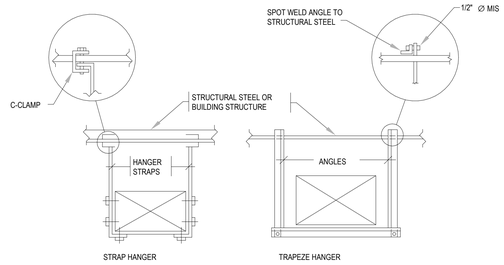
NOTES:
1. SIZE RODS, SPRING CUSHION, AND HORIZONTAL MEMBER APPROVED TO SATISFY LOAD REQUIREMENT WITH SAFETY FACTOR OF 5.
2. FIGURE NUMBERS ARE TYPICAL TO GRINNELL SUPPORT NUMBERS.

5 H502 TRAPEZE TYPE PIPE SUPPORT
1/8" = 1'-0"



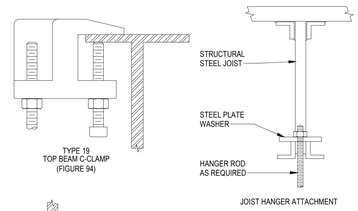
NOTES:
1. FOR TYPE OF HANGER AND INSULATION REQUIREMENTS REFER TO SPECIFICATIONS.
2. SERVICE PIPING AS INDICATED IN SPECIFICATIONS SHALL BE INSTALLED ON ROLLER HANGERS.

6 H502 PIPE HANGING DETAIL
NO SCALE



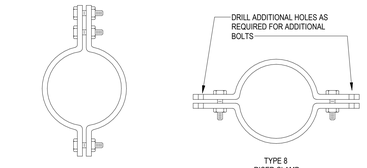
NOTES:
1. REFER TO OTHER DETAILS ON THIS DRAWING FOR HIGH VELOCITY DUCTWORK DETAILS AS REQUIRED.
2. FOR STRAP AND TRAPEZE HANGER SIZE, REFER TO SMACNA DUCT STANDARDS
3. NO POP RIVETS ALLOWED, USE SELF-TAPPING SHEET METAL SCREWS ONLY.

7 H502 DUCT HANGING DETAIL
1/8" = 1'-0"



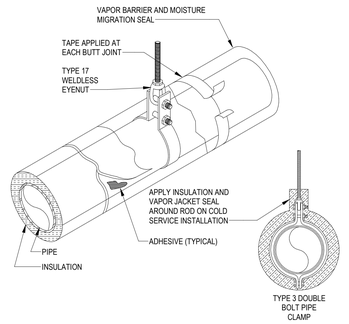
NOTE:
FIGURE NUMBERS TYPICAL TO GRINNELL SUPPORT NUMBERS.

1 H502 C-CLAMPS, JOIST HANGER ROD, AND WELDED BEAM ATTACHMENTS
1/8" = 1'-0"

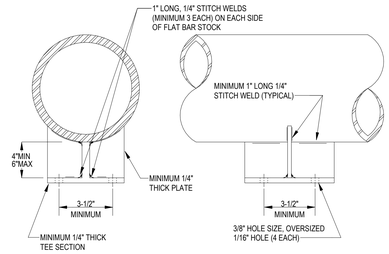


NOTE:
FIGURE NUMBERS ARE TYPICAL TO GRINNELL SUPPORT NUMBERS.

2 H502 PIPE CLAMPS
1/8" = 1'-0"



3 H502 PIPE HANGER, INSULATION AND VAPOR JACKET
1/8" = 1'-0"



NOTES:
1. SUPPORT WITH APPROVED ANCHORS TO MATCH BASE MATERIALS AND LOCAL REQUIREMENTS.
2. STRUCTURAL TEE SECTION CUT AT WEB CENTER OF W-SHAPE STEEL BEAM.

4 H502 T-BAR MOUNTED PIPE ANCHOR
1/8" = 1'-0"

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

21 Tuttle Rd.
Bristol, CT 06010

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100 Foxborough Boulevard Suite 250
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QA+M architecture
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195 Scott Swamp Road
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qamarch.com

Seal:

Revisions:

Rev	Date	Description

Issued For: BID SET

Date: April 2, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

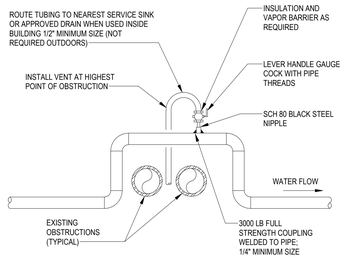
Drawing Title:

HVAC DETAILS

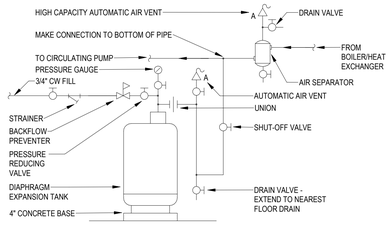
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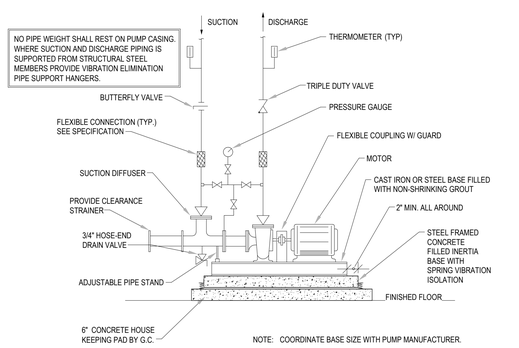
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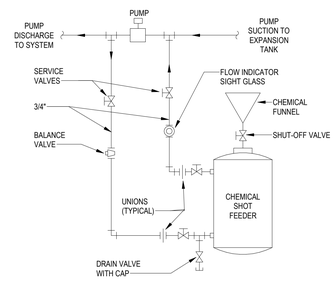
6 H503 HIGH POINT MANUAL AIR VENT
1/8" = 1'-0"



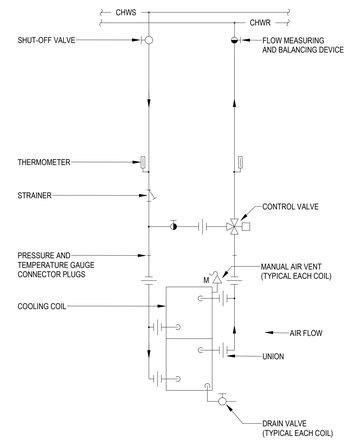
6 H503 EXPANSION TANK PIPING DETAIL
NO SCALE



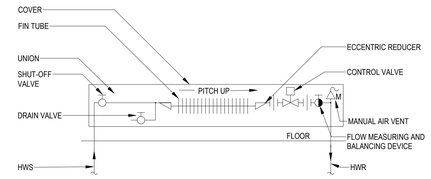
7 H503 END SUCTION PUMP DETAIL
NO SCALE



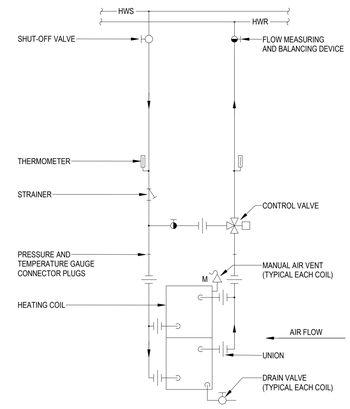
8 H503 CHEMICAL SHOT FEEDER DIAGRAM
1/8" = 1'-0"



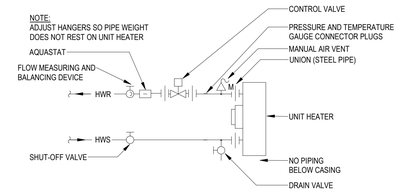
1 H503 CHILLED WATER COIL PIPING DETAIL W/3-WAY VALVE - MULTIPLE
1/8" = 1'-0"



2 H503 HOT WATER BASEBOARD RADIATION PIPING DETAIL I
1/8" = 1'-0"



3 H503 HOT WATER COIL PIPING DETAIL W/3-WAY VALVE - MULTIPLE
1/8" = 1'-0"



4 H503 HOT WATER UNIT HEATER PIPING DETAIL W/2-WAY VALVE I
1/8" = 1'-0"

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

21 Tuttle Rd.
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Consultants:

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(860) 677-4594
qamarch.com

Seal:

Revisions:

Rev	Date	Description

Issued For: BID SET

Date: April 2, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

HVAC DETAILS

Sheet Number:

H503

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AIR HANDLING UNIT SCHEDULE

ID	LOCATION NAME	MANUFACTURER	MODEL NO.	TYPE	ARRANGEMENT	OUTSIDE AIR (DESIGN CFM)	FAN AIRFLOW (CFM) DESIGN	FAN AIRFLOW (CFM) MIN	FAN PRESS ESP	FAN PRESS TSP	FAN RPM	FAN WHEEL TYPE	FAN WHEEL DIA	FAN DRIVE TYPE	MOTOR QTY	MOTOR HP	MOTOR BHP	MOTOR RPM	NOMINAL CAP (TONS)	COOLING COIL CAP (MBH) TOTAL	COOLING COIL CAP (MBH) SENSIBLE	COOLING COIL AIRSIDE EAT DB (°F)	COOLING COIL AIRSIDE EAT WB (°F)	COOLING COIL AIRSIDE LAT DB (°F)	COOLING COIL AIRSIDE LAT WB (°F)	COOLING COIL AIRSIDE FACE VELOCITY	COOLING COIL AIRSIDE PD	COOLING COIL AIRSIDE FPI	COOLING COIL GLYCOL GPM	COOLING COIL GLYCOL EWT (°F)	COOLING COIL GLYCOL LWT (°F)	COOLING COIL GLYCOL PD	COOLING PLANT GLYCOL TYPE	COOLING PLANT GLYCOL %	HEATING COIL CAP (MBH)	HEATING COIL AIRSIDE EAT DB (°F)	HEATING COIL AIRSIDE LAT DB (°F)	HEATING COIL AIRSIDE PD	HEATING COIL AIRSIDE FPI	HEATING COIL WATERSIDE GPM	HEATING COIL WATERSIDE EWT (°F)	HEATING COIL WATERSIDE LWT (°F)	HEATING COIL WATERSIDE PD	HEATING PLANT GLYCOL TYPE	HEATING PLANT GLYCOL %	WEIGHT (lb)	FLA	MCA	MOCP	V	PH	REMARKS
AHU-2	ROOF	Johnson Controls, Inc.	Solton XTO	OUTDOOR	DOWNFLOW	700	4500	1000	1.00	2.48	2825	AF	12"	BELT	1	5.00	3.65	1800	10.6	127.8	106.0	79.6	65.5	57.7	56.1	523	0.55	9	22.4	44	56	12.4	PG	30	297	54.0	75.4	0.16	10	20.8	160	130	9.9	PG	30	2850	14.0	17.5	30.0	208	3	1 THRU 7
AHU-3	MECH MEZZ	Johnson Controls, Inc.	AMI	INDOOR	VERTICAL	2600	9000	2600	0.75	2.00	870	FC	18"	BELT	1	7.50	6.26	870	27.5	329.5	247.6	80.9	66.8	56.1	55.0	416	0.72	10	53.4	44	56	19.4	PG	30	213	46.0	102.2	0.14	14	16.2	160	130	4.1	PG	30	1880	20.0	25.0	45.0	208	3	1 THRU 7
AHU-3A	MECH MEZZ	Johnson Controls, Inc.	AMI	INDOOR	VERTICAL	2600	9000	2600	0.75	2.00	870	FC	18"	BELT	1	7.50	6.26	870	27.5	329.5	247.6	80.9	66.8	56.1	55.0	416	0.72	10	53.4	44	56	19.4	PG	30	213	46.0	102.2	0.00	14	16.2	160	130	4.1	PG	30	1880	20.0	25.0	45.0	208	3	1 THRU 7
AHU-4	MECH MEZZ	Johnson Controls, Inc.	Solution XTI	INDOOR	HORIZONTAL	2600	8000	2600	0.75	3.71	2581	AF	12"	DIRECT	1	10.00	8.00	1800	29.0	348.6	247.9	81.3	67.1	52.5	52.3	567	1.36	11	60.9	44	56	17.5	PG	30	1045	43.0	129.7	1.70	0	73.3	160	130	0.9	PG	30	2510	27.4	34.3	60.0	208	3	1 THRU 7

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE HIGH EFFICIENCY HEATING AND VENTIALTION UNIT WITH FACTORY INSTALLED HOT WATER COIL, DUAL ENTHALPY ECONOMIZER, MERV 8 FILTER. PROVIDE WITH INSULATED PIPE CABINET. CABINET SHALL INCLUDE FULL PERIMETER BASERAILS FOR SHIPPING AND RIGGING.
3. PROVIDE GALVANIZED STEEL FULLY INSULATED CABINET. PROVIDE HINGED ACCESS DOORS WITH SINGLE LEVER LATCH MECHANISM. EXTERIOR SHALL BE A WEATHER RESISTANT BAKED ENAMEL FINISH. PROVIDE WITH FACTORY INSULATED ROOF CURB, INCLUDIGN THE PIPE CABINET, FOR PITCHED ROOF.
4. UNITS SHALL BE SINGLE POINT POWER WITH FACTORY DISCONNECT.
5. PROVIDE FLEXIBLE CONNECTIONS AT SUPPLY AND RETURN OPENINGS.
6. PROVIDE PREMIUM EFFICIENCY DIRECT DRIVE MOTOR.
7. PROVIDE WITH 1 YEAR COMPLETE UNIT WARRANTY (PARTS AND LABOR) AND 5 YEAR EXTENDED PARTS WARRANTY.

ADD ALTERNATE #1

ENERGY RECOVERY VENTILATOR (100% OA)

SYMBOL	MANUFACTURER	MODEL	DESCRIPTION	SUPPLY FAN TYPE	SUPPLY FAN DRIVE	SUPPLY FAN CFM	SUPPLY FAN E.S.P.	SUPPLY FAN TOT. S.P.	SUPPLY FAN RPM	SUPPLY FAN BHP	SUPPLY FAN MOTOR HP	EXHAUST FAN TYPE	EXHAUST FAN DRIVE	EXHAUST FAN CFM	EXHAUST FAN E.S.P.	EXHAUST FAN TOT. S.P.	EXHAUST FAN RPM	EXHAUST FAN BHP	EXHAUST FAN MOTOR HP	ERW WHEEL (SUMMER) EAT DB	ERW WHEEL (SUMMER) EAT WB	ERW WHEEL (SUMMER) LAT DB	ERW WHEEL (SUMMER) LAT WB	ERW WHEEL (SUMMER) BASE EFF.%	ERW WHEEL (SUMMER) MBH COOLING TOTAL	ERW WHEEL (SUMMER) MBH COOLING SENS.	ERW WHEEL (WINTER) EAT DB	ERW WHEEL (WINTER) EAT WB	ERW WHEEL (WINTER) LAT DB	ERW WHEEL (WINTER) LAT WB	ERW WHEEL (WINTER) BASE EFF.%	ERW WHEEL (WINTER) MBH HEATING	CHILLED WATER COIL ROWS	CHILLED WATER COIL EAT DB	CHILLED WATER COIL EAT WB	CHILLED WATER COIL LAT DB	CHILLED WATER COIL LAT WB	CHILLED WATER COIL EWT	CHILLED WATER COIL LWT	CHILLED WATER COIL GPM	CHILLED WATER COIL WPD FT	CHILLED WATER COIL APD IN	HOT WATER COIL ROWS	HOT WATER COIL EAT	HOT WATER COIL LAT	HOT WATER COIL GPM	HOT WATER COIL WPD FT	HOT WATER COIL APD IN	FILTERS OA EFF.	FILTERS EXH. EFF.	ELECTRICAL V	ELECTRICAL P	ELECTRICAL FLA	ELECTRICAL MCA	ELECTRICAL MOCP	WEIGHT (LBS)	REMARKS
ERV-1	JOHNSON CONTROLS	XTO-39x54	DOAS	AF	BELT	3500	1.50	3.85	3370	3.22	5.0	AF	BELT	3500	1.50	3.73	3341	3.21	5.0	88.0	73.0	79.6	67.1	61	211	127	7.00	2.90	46.89	37.88	62.64	293	8	79.6	67.1	54.3	54.0	42.0	53.9	37.2	16.0	0.66	8	46.89	141.6	20.5	1.5	0.3	MERV 8	MERV 8	208	3	14.0	17.5	30.0	5634	1 THRU 11
ERV-2	JOHNSON CONTROLS	XTO-42x63	DOAS	AF	BELT	4200	1.50	4.01	2549	4.07	5.0	AF	BELT	4200	1.50	4.48	3135	5.26	7.5	88.0	73.0	78.85	66.38	69	265	157	7.00	2.90	51.05	41.02	69.35	366	10	78.85	66.38	53.1	52.9	42.0	54.0	46.5	15.9	0.48	10	51.05	144.64	25.6	0.7	0.32	MERV 8	MERV 8	208	3	21.1	26.4	45.0	6355	1 THRU 11
ERV-3	JOHNSON CONTROLS	XTO-39x54	DOAS	AF	BELT	3500	1.00	3.35	3370	3.22	5.0	AF	BELT	3500	1.00	3.23	3341	3.21	5.0	88.0	73.0	79.6	67.1	61	211	127	7.00	2.90	46.89	37.88	62.64	293	8	79.6	67.1	54.3	54.0	42.0	53.9	37.2	16.0	0.66	8	46.89	141.6	20.5	1.5	0.3	MERV 8	MERV 8	208	3	14.0	17.5	30.0	5634	1 THRU 11
ERV-4	JOHNSON CONTROLS	XTO-45x66	DOAS	AF	BELT	5300	1.00	3.62	2840	5.41	7.5	AF	BELT	5300	1.00	2.99	2691	4.59	5.0	88.0	73.0	78.54	66.16	71	324	194	7.00	2.90	52.71	42.11	71.71	398	8	78.54	66.16	53.9	53.7	42.0	54.0	56.9	9.1	1.07	8	52.71	133.74	27.9	0.4	0.33	MERV 8	MERV 8	208	3	21.1	26.4	45.0	6519	1 THRU 11

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE DOUBLE WALL INSULATED CABINET. INSULATION SHALL BE 2" THICK INJECTED FOAM. PROVIDE HINGED ACCESS DOORS WITH SINGLE LEVER LATCH MECHANISM. EXTERIOR SHALL BE A WEATHER RESISTANT BAKED ENAMEL FINISH.
3. PROVIDE TOTAL ENTHALPY ROTARY AIR TO AIR TYPE ENERGY WHEEL.
4. PROVIDE FACTORY DAMPERS, FANS, MOTORS, VFDS, ACTUATORS, CONTROL WIRING BY THE ATC CONTRACTOR.
5. PROVIDE SUPPLY AND EXHAUST AIR FILTERS -2" THICK MERV 8, PLEATED, DISPOSABLE TYPE. PROVIDE 4 SETS OF SPARE FILTERS.
6. PROVIDE UNIT WITH EACH MOTOR WIRED INDIVIDUALLY, DISCONNECT BY DIV 23.
7. PROVIDE FACTORY STARTUP OF ERV.
8. PROVIDE FLEXIBLE CONNECTIONS AT ALL DUCT CONNECTIONS.
9. PROVIDE PREMIUM EFFICIENCY, VFD MOTOR WITH DISCONNECT, CONDITIONING, AND WIRE FAN CABLE.
10. PROVIDE WITH 1 YEAR COMPLETE UNIT WARRANTY (PARTS AND LABOR) AND 5 YEAR EXTENDED PARTS WARRANTY.
11. PROVIDE SINGLE COIL FOR CHILLED WATER AND HOT WATER. SCHEDULE INDICATES REQUIRED PERFORMANCE DURING WACH MODE OF OPERATION.

2

FAN COIL UNITS HOT/CHILLED WATER 4-PIPE

ID	LOCATION NAME	NO.	MANUFACTURER	MODEL	TYPE	ARRANGEMENT	AIRFLOW MAX	AIRFLOW MIN	FAN DATA TYPE	FAN DATA QTY	FAN DATA ESP (IN WG)	MOTOR (HIGH SPEED) DRIVE TYPE	MOTOR QTY	MOTOR HP	MOTOR RPM	MOTOR ECM	COOLING CAPACITY (MBH) TOTAL	COOLING CAPACITY (MBH) SENS	COOLING AIRSIDE EAT (°F) DB	COOLING AIRSIDE EAT (°F) WB	COOLING AIRSIDE LAT (°F) DB	COOLING AIRSIDE LAT (°F) WB	COOLING AIRSIDE PD (IN WC)	COOLING WATERSIDE GPM	COOLING WATERSIDE PD (FT HD)	COOLING WATERSIDE EWT	COOLING WATERSIDE LWT	HEATING AIRSIDE CAP MBH	HEATING AIRSIDE EAT	HEATING AIRSIDE LAT	HEATING WATERSIDE GPM	HEATING WATERSIDE PD (FT HD)	HEATING WATERSIDE EWT	HEATING WATERSIDE LWT	GLYCOL TYPE	GLYCOL %	WEIGHT (lb)	ELECTRICAL DATA MCA	ELECTRICAL DATA MOP	ELECTRICAL DATA V	ELECTRICAL DATA PH	REMARKS
FCU-1.1	SPECIAL ED C.R.	162	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080	560	FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	0.12	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-2.1	SPECIAL ED C.R.	161	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080	560	FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-3.1	SPECIAL ED C.R.	158	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080	560	FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-4.1	SPECIAL ED C.R.	151	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080	560	FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-5.1	KINDERGARTEN	167	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080	560	FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-6.1	KINDERGARTEN	168	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080	560	FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-7.1	KINDERGARTEN	173	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080	560	FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-8.1	CORRIDOR	127	JOHNSON CONTROLS	FNP-12	HORIZONTAL	DUCTED	1475	1020	FC	2	0.05	DIRECT	1	0.5	1500	YES	29.9	27.9	75	63	57.8	56.1	0.5	5.6	0.98	56	44	20.2	70	81.2	1.3	0.17	160	130	PG	30	195	9.63	15	120	1	1, 3 THRU 8
FCU-9.1	CORRIDOR	197	JOHNSON CONTROLS	FNX-6	HORIZONTAL	RECESSED	670	530	FC	1	0.1	DIRECT	1	0.33	1050	YES	11.3	11.0	75	63	60	57.3	0.32	2.1	2.27	56	44	10.1	70	83.2	0.7	0.34	160	130	PG	30	175	6.25	15	120	1	1, 3 THRU 8
FCU-1.2	CLASSROOM	178	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080	560	FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-2.2	CLASSROOM	181	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-3.2	CLASSROOM	182	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-4.2	CLASSROOM	185	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-5.2	CLASSROOM	186	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-6.2	CLASSROOM	193	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-7.2	CLASSROOM	192	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-8.2	CLASSROOM	189	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-9.2	CONFERENCE	177	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-10.2	ARTS & CRAFTS	196	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-11.2	CORRIDOR	195	JOHNSON CONTROLS	FNX-8	HORIZONTAL	RECESSED	890	645	FC	1	0.05	DIRECT	1	0.33	1050	YES	19.7	17.9	75	63	56.6	55.4	0.46	3.6	2.17	56	44	19.1	70	89.2	1.3	1.42	160	130	PG	30	210	6.25	15	120	1	1, 3 THRU 8
FCU-1.3	CLASSROOM	217	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-2.3	CLASSROOM	218	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-3.3	CLASSROOM	219	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-4.3	CLASSROOM	220	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-5.3	CLASSROOM	215	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-6.3	CLASSROOM	214	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-7.3	CLASSROOM	213	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-8.3	CLASSROOM	212	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-9.3	CONFERENCE	209	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-10.3	CORRIDOR	221	JOHNSON CONTROLS	FNX-14	HORIZONTAL	RECESSED	1790	1475	FC	2	0.05	DIRECT	2	0.33	1050	YES	20.3	20.3	75	63	64.6	59.2	0.32	3.8	1.61	56	44	30.5	70	85	2.0	1.24	160	130	PG	30	275	11.25	15	120	1	1, 3 THRU 8
FCU-1.4	CLASSROOM	226	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-2.4	CLASSROOM	227	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-3.4	CLASSROOM	228	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-4.4	CLASSROOM	229	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-5.4	CLASSROOM	230	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-6.4	CLASSROOM	234	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-7.4	CLASSROOM	233	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-7.4A	CLASSROOM	233	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-8.4	CLASSROOM	232	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
FCU-8.4A	CLASSROOM	232	JOHNSON CONTROLS	FWI-12	FLOOR MOUNTED	UPFLOW	1080		FC	4	0.05	DIRECT	2	0.25	1600	YES	17.3	16.6	75	63	61	57.6	1.73	3.2	1.73	56	44	30.7	70	95.1	2.1	1.33	160	130	PG	30	255	5.0	15	120	1	1 THRU 7
F

GLYCOL MAKE-UP UNIT SCHEDULE

ID	LOCATION	MANUFACTURER	MODEL NO.	PUMP FLOW (GPM)	UNIT VOL (GAL)	DRY WEIGHT (lb)	FLA	MOCP	V	PH	REMARKS
GF-1	BASEMENT	AXIOM	SF100-L	1.0	55.0	35	0.7	15	120	1	1 THRU 4

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE FACTORY PRESSURE REDUCING VALVE, PRESSURE GAUGE, SYSTEM CONNECTION HOSE, UNION, AND CHECK VALVE.
3. PROVIDE FACTORY SECOND PRESSURE REDUCING VALVE, PRESSURE GAUGE, SYSTEM CONNECTION HOSE, UNION, AND CHECK VALVE TO ALLOW FO RINDEPENDANT PRESSURE SUPPLY TO A SECOND SYSTEM.
4. PROVIDE FACTORY PUMP WITH THERMAL CUT-OUT, INTEGRAL PRESSURE SWITCH, AND CORD AND PLUG.

AIR SEPARATOR SCHEDULE

ID	LOCATION	MANUFACTURER	MODEL NO.	FLOW (GPM)	PIPE SIZE (IN)	UNIT DIMENSIONS HEIGHT (IN)	UNIT DIMENSIONS DIAMETER (IN)	DRY WEIGHT (lbs)	REMARKS
AS-1	BASEMENT	Bell & Gossett	RL-6F	350	6	44	26	280	1 THRU 3
AS-2	BASEMENT	Bell & Gossett	RL-6F	390	6	44	26	280	1 THRU 3

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE BALL TYPE BLOWDOWN VALVE, HOSE CONNECTION WITH CAP AND CHAIN.
3. PROVIDE HIGH CAPACITY AIR VENT WITH 1/2" COPPER TUBING FROM THE AIR VENT TO THE NEAREST DRAIN.

EXPANSION TANK SCHEDULE

ID	LOCATION	MANUFACTURER	MODEL NO.	TYPE	VOLUME TANK	UNIT DIMENSIONS HEIGHT	UNIT DIMENSIONS DIAMETER	PRESS RELIEF (PSIG)	DRY WEIGHT (lb)	FULL WEIGHT (lb)	REMARKS
ET-1	BASEMENT	TACO	CA90-125	BLADDER	23.0	29"	20"	85	120	312	1 THRU 3
ET-2	BASEMENT	BELL & GOSSETT	B-50LA	BLADDER	106.0	65"	24"	85	309	1184	1 THRU 3

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
2. TANK SHALL BE ASME RATED.
3. TANK SHALL BE DIAPHRAGM TYPE.

CABINET UNIT HEATER (HOT WATER)

SYMBOL	MANUFACTURER	MODEL	ARRANGEMENT	LOCATION	CFM	MBH	WATER SIDE GPM	WATER SIDE EAT	WATER SIDE LAT	WATER SIDE GLYCOL	WATER SIDE %	WATER SIDE MAX PD	MOTOR HP	MOTOR VOLTS	MOTOR PH	REMARKS
CUH-1	STERLING	RC-1200-08	CEILING RECESSED	KITCHEN 112	860	33.2	2.2	160	130	PG	30	0.55	1/10, 1/15	115	1	1 THRU 5
CUH-2	STERLING	RC-1200-08	CEILING RECESSED	KITCHEN 112	860	33.2	2.2	160	130	PG	30	0.55	1/10, 1/15	115	1	1 THRU 5
CUH-3	STERLING	W-1070-02	WALL MOUNT	DRY STORAGE 113	230	10	0.66	160	130	PG	30	0.05	1/15	115	1	1 THRU 5
CUH-4	STERLING	W-1070-02	WALL MOUNT	LOCKER ROOM 115	230	10	0.66	160	130	PG	30	0.05	1/15	115	1	1 THRU 5
CUH-5	STERLING	W-1070-12	WALL MOUNT	CORRIDOR 119	1230	46.1	3.0	160	130	PG	30	1.02	1/10	115	1	1 THRU 5
CUH-6	STERLING	W-1070-12	WALL MOUNT	STAIR 104	1230	46.1	3.0	160	130	PG	30	1.02	1/10	115	1	1 THRU 5
CUH-7	STERLING	W-1070-12	WALL MOUNT	STAIR 106	1230	46.1	3.0	160	130	PG	30	1.02	1/10	115	1	1 THRU 5
CUH-8	STERLING	W-1070-12	WALL MOUNT	STAIR 231	1230	46.1	3.0	160	130	PG	30	1.02	1/10	115	1	1 THRU 5

ADD ALTERNATE #1

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE STAMPED LOUVERS, 18 GAUGE CABINET, 16 GAUGE FRONT PANEL. ALL PAINTED SURFACES SHALL BE POWDER COATED. ALL UNPAINTED SURFACES SHALL BE GALVANIZED. PROVIDE WITH HINGED FRONT PANEL AND SAFETY CHAIN.
3. PROVIDE FACTORY PROVIDED, FIELD INSTALLED DISCONNECT SWITCH AND SPEED CONTROL.
4. PROVIDE WITH ECM TYPE MOTOR BUILT FOR CONTINUOUS USE.
5. PROVIDE WITH 1 YEAR COMPLETE UNIT WARRANTY (PARTS AND LABOR).

PUMPS

SYMBOL	MANUFACTURER	MODEL/ SERIES	SERVES	LOCATION	GPM	HEAD FT.	TYPE	IMP. DIA. (IN)	MAX NPSHR (FT)	BHP	MOTOR HP	PUMP SPEED (RPM)	PUMP EFF (%)	OPERATING WEIGHT (LBS)	ELECTRICAL V	ELECTRICAL PH	REMARKS
P-1	BELL & GOSSETT	e-1510	HW	BASEMENT	351	35	END SUCTION	9.875	5.24	3.85	5.0	1,125	79.3	435	208	3	1 THRU 4
P-2	BELL & GOSSETT	e-1510	HC	BASEMENT	390	46	END SUCTION	11	5.5	5.9	7.5	1,139	79.2	560	208	3	1 THRU 4
P-3	BELL & GOSSETT	e-1510	CHW	BASEMENT	390	46	END SUCTION	11	5.5	5.9	7.5	1,139	79.2	560	208	3	1 THRU 4

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE PREMIUM EFFICIENCY MOTOR, CAST BRONZE IMPELLOR, AND STEEL SHAFT.
3. PROVIDE NEOPRENE TYPE VIBRATION ISOLATION.
4. PROVIDE PREMIUM EFFICIENCY, VFD COMPATIBLE MOTOR WITH SHAFT GROUNDING RINGS. PROVIDE FACTORY VFD.

ADD ALTERNATE #1

EXHAUST FAN SCHEDULE

SYMBOL	MANUFACTURER	MODEL	TYPE	SERVICE	CFM	S.P. (IN.)	FAN RPM	BHP	HP	FLA	V	PH	REMARKS
EF-8	GREENHECK	G-183-VG	DIRECT	GYM	2,200	0.38	728	0.25	0.75	10.6	120	1	1 THRU 4
EF-9	GREENHECK	G-183-VG	DIRECT	GYM	2,200	0.38	728	0.25	0.75	10.6	120	1	1 THRU 4

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE GALVANIZED STEEL HOUSING.
3. PROVIDE ECM TYPE MOTOR WITH DIAL ON MOTOR AND FACTORY MOUNTED TOGGLE TYPE DISCONNECT SWITCH.
4. PROVIDE 24" HIGH FACTORY INSULATED ROOF CURB.

UNIT HEATER SCHEDULE

ID	NAME	NO.	MANUFACTURER	MODEL NO.	TYPE	FAN AIRFLOW (CFM)	FAN MOTOR QTY	FAN MOTOR POWER	FAN MOTOR RPM	FAN MOTOR ECM	HEATING COIL CAP (BTU/H)	HEATING COIL AIRSIDE EAT(db) °F	HEATING COIL AIRSIDE LAT(db) °F	HEATING COIL WATERSIDE FLOW (GPM)	HEATING COIL WATERSIDE EWT °F	HEATING COIL WATERSIDE LWT °F	HEATING COIL WATERSIDE PD (FT H20)	HEATING PLANT GLYCOL TYPE	HEATING PLANT GLYCOL %	UNIT WEIGHT (LB)	FLA	MCA	MOCP	VOLT	PH	REMARKS
UH-1			MODINE	HSB/HC 86	HYDRONIC	1340	1	0.13	1625	No	60200	60.0	101.6	6.3	160	110	1.0	PG	30	52	2.3	4.3	15.0	120	1	1 THRU 6

NOTES:
1. REFER TO SPECIFICATIONS, DETAILS, AND CONTROL DRAWINGS FOR ADDITIONAL INFORMATION.
2. PROVIDE STAMPED LOUVERS, 20 GAUGE CABINET. ALL PAINTED SURFACES SHALL BE POWDER COATED. ALL UNPAINTED SURFACES SHALL BE GALVANIZED.
3. PROVIDE FACTORY PROVIDED, FIELD INSTALLED DISCONNECT SWITCH.
4. PROVIDE WITH TEFC TYPE MOTOR WITH THERMAL OVERLOAD PROTECTION.
5. PROVIDE WITH OSHA FAN GUARD AND AIR DEFLECTION LOUVERS.
6. PROVIDE WITH 1 YEAR COMPLETE UNIT WARRANTY (PARTS AND LABOR).

REGISTER, GRILLE, & DIFFUSER SCHEDULE

TAG	AIRFLOW RANGE (CFM)	NECK SIZE (IN)	OVERALL SIZE (IN)	MATERIAL	SERVICE	MOUNTING	TYPE	PD (IN WG)	NC	MANUFACTURER	MODEL	REMARKS
SA	0 - 100	6"ø	12" x 12"	STEEL	SUPPLY	LAY-IN OR SURFACE	PLAQUE	0.08	<16	PRICE	SPD	1 THRU 6
SB	101 - 200	8"ø	24" x 24"	STEEL	SUPPLY	LAY-IN OR SURFACE	PLAQUE	0.04	<19	PRICE	SPD	1 THRU 6
SC	201 - 325	10"ø	24" x 24"	STEEL	SUPPLY	LAY-IN OR SURFACE	PLAQUE	0.06	<18	PRICE	SPD	1 THRU 6
SD	326 - 550	12"ø	24" x 24"	STEEL	SUPPLY	LAY-IN OR SURFACE	PLAQUE	0.13	21	PRICE	SPD	1 THRU 6
R1 OR E1	0 - 90	6" x 6"	8" x 8"	ALUMINUM	RETURN OR EXHUAST	LAY-IN OR SIDEWALL	DOUBLE DEFLECTION	0.01	25	PRICE	60	1 THRU 6
R2 OR E2	91 - 155	8" x 8"	10" x 10"	ALUMINUM	RETURN OR EXHUAST	LAY-IN OR SIDEWALL	DOUBLE DEFLECTION	0.01	24	PRICE	60	1 THRU 6
R3 OR E3	156 - 240	10" x 10"	12" x 12"	ALUMINUM	RETURN OR EXHUAST	LAY-IN OR SIDEWALL	DOUBLE DEFLECTION	0.01	26	PRICE	60	1 THRU 6
R4 OR E4	241 - 270	12" x 12"	14" x 14"	ALUMINUM	RETURN OR EXHUAST	LAY-IN OR SIDEWALL	DOUBLE DEFLECTION	0.01	21	PRICE	60	1 THRU 6
R5 OR E5	271 - 355	14" x 14"	16" x 16"	ALUMINUM	RETURN OR EXHUAST	LAY-IN OR SIDEWALL	DOUBLE DEFLECTION	0.01	23	PRICE	60	1 THRU 6

NOTES
1. REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.
2. RUNOUTS TO DIFFUSERS SHALL BE THE SAME SIZE AS THE INLET/NECK SIZE.
3. PROVIDE APPROPRIATE BORDER FOR INSTALLATION TYPE.
4. PROVIDE FACTORY POWDER COAT FINISH. COORDINATE FINAL COLOR WITH ARCHITECT/OWNER
5. COORDINATE BLOW PATTERN WITH MECHANICAL PLANS.
6. CONTRACTOR SHALL VERFIY QUANTITY OF REGISTERS, GRILLES, AND DIFFUSERS REQUIRED.

DUCTWORK PRESSURE CLASS AND SEAL CLASS

PRESSURE CLASS	STATIC PRESSURE CLASS	SMACNA SEAL CLASS	SMACNA LEAKAGE CLASS RECTANGULAR	SMACNA LEAKAGE CLASS ROUND	DESIGN VELOCITY LIMITS
3"	3" POS OR NEG	A	6	3	2500 FPM OR LESS
2"	2" POS OR NEG	A	6	3	2000 FPM OR LESS
UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS, USE THE FOLLOWING PRESSURE CLASSIFICATIONS FOR THE TYPES OF DUCTWORK LISTED...					
4" (POS) CLASS::	ALL SUPPLY DUCTWORK BETWEEN THE DISCHARGE OF AIR SUPPLY UNITS TO THE INLETS OF SUPPLY TERMINAL VOLUME BOXES.				
4" (NEG AND POS):	ALL MEDIUM PRESSURE EXHAUST AND RETURN SYSTEMS				
2" CLASS	ALL OTHER DUCTWORK				

NOTES
1 REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.
2 FOR ROUND DUCTWORK, NEGATIVE PRESSURE OVER 2"W.G., REFER TO SMACNA ROUND INDUSTRIAL DUCT CONSTRUCTION STANDARDS AND BUILD TO NEGATIVE RATING SPECIFIED (-4"W.G. MIN.).

MINIMUM DUCT INSULATION R-VALUES

LOCATION	SUPPLY	RETURN	RAW OUTDOOR AIR	EXHAUST W/ ENERGY RECOVERY	EXHAUST W/O ENERGY RECOVERY
ATTIC TYPE SPACE (EXPOSED ROOF AREA)	R-8	R-8	R-4	R-8	R-6*
OUTDOORS	R-8	R-8	-0-	R-8	R-8*
UNCONDITIONED SPACE (SHAFT OR CEILING WITH DUCTED RETURNS)	R-5	R-5	R-4	R-5	-0-
EXPOSED IN MECHANICAL ROOM	R-5	R-5	R-5	R-5	-0-
EXPOSED IN ZONE SERVED (**ONLY DUCTS THAT PROVIDE COOLING)	R-4**	-0-	R-4	-0-	-0-

* R-VALUE SHOWN IS ONLY IF AREA OF BUILDING BEING EXHAUSTED IS HUMIDIFIED. IF NOT HUMIDIFIED, NO INSULATION (-0-), UNLESS FIRE WRAP OR LINING IS NEEDED.

DUCT LINING SCOPE: ACOUSTIC DUCT LINING OF THE TYPE AND THICKNESS SPECIFIED SHALL BE INSTALLED ON ALL SUPPLY, RETURN, AND EXHAUST DUCTWORK WITHIN 20 FEET OF ALL TYPES OF AIR HANDLING UNITS (INCLUDING RTU, ERV, FCU, ETC., AND ALL BRANCHES WITHIN 20') ALL FANS (INCLUDING BRANCHES), AND WHERE DETAILED OR SHOWN ON DRAWINGS.

NOTES: (SEE SPECIFICATIONS FOR R-VALUES OF VARIOUS DUCT INSULATION AND LINERS)
1 REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.
2 R-VALUES SHOWN MAY BE OBTAINED BY ADDING THE R-VALUES OF BOTH THE LINING (WHERE SHOWN OR USED) AND EXTERNAL DUCT INSULATION.
3 R-VALUES SHOWN ARE AS INSTALLED. USE R-VALUES FOR 25% COMPRESSION FOR NON-RIGID INSULATION.

PIPE INSULATION (2015 IECC AND ASHRAE 90.1 2013 COMPLIANCE)

MINIMUM INSULATION THICKNESS IN INCHES FOR INDOOR PIPE SIZES (SEE NOTES BELOW)

PIPING SYSTEM TYPES	FLUID TEMPERATURE RANGE (°F)	<1"	1" & 1-1/4"	1-1/2" - 3"	4" - 6"	8" AND UP	K-FACTOR (BTU-INCH/°F-HR-SF) AT AVG TEMPERATURE (°F)
STEAM	251-350	3	4	4.5	4.5	1.5	0.29-0.32 @ 200°F
LOW PRESSURE STEAM OR ANY STEAM CONDENSATE	201-250	2.5	2.5	2.5	3	3	0.27-0.30 @ 150°F
LOW TEMPERATURE HEATING	141-200	1.5	1.5	2	2	2	0.25-0.29 @ 125°F
CHILLED WATER OR REFRIGERANT OR COOLING COIL CONDENSATE DRAIN	<60	0.5	1	1	1	1	0.20-0.27 @ 75°F

NOTES:
1 REFER TO SPECIFICATIONS AND DETAILS FOR ADDITIONAL INFORMATION.
2. FOR MINIMUM THICKNESS OF ALTERNATIVE INSULATION TYPES OUTSIDE THE STATED CONDUCTIVITY RANGE, SEE TEST METHOD FOR STEADY STATE HEAT TRANSFER PROPERTIES OF HORIZONTAL PIPE INSULATIONS, ASTM C 335-95, AND THE STATE ENERGY CODE.
3. FOR DUAL TEMPERATURE SYSTEMS (HEATING AND COOLING) USE THE THICKER INSULATION VALUE REQUIRED FOR EITHER HEATING OR COOLING AND PROVIDE VAPOR BARRIER JACKET.
4. FOR OUTDOOR CHILLED WATER AND GLYCOL ADD MINIMUM 50% TO THICKNESS LISTED. FOR OUTDOOR HEATING WATER ADD MINIMUM 50% TO THICKNESS LISTED. AN EXCEPTION TO THE 50% INCREASE IN THICKNESS IS ALLOWED FOR PIPING WITHIN RTU/AHU PIPE ENCLOSURES AND VESTIBULES.

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Reviewed By: SEH
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Drawing Title:

SCHEDULES

Sheet Number:

H602

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CONTROL POINT DESCRIPTOR LEGEND

TAG	ATC CONTRACTOR PROVIDED DDC POINT AND HARDWARE
TAG ELEC	CONTROL DEVICE FURNISHED BY ELECTRICAL OR PLUMBING CONTRACTOR BUT INTERFACED TO DDC SYSTEM BY ATC CONTRACTOR (ELEC SHOWN)
TAG	ATC CONTRACTOR INTERFACE TO EQUIPMENT MANUFACTURER'S HARDWARE
TAG	ATC CONTRACTOR PROVIDED LOCAL CONTROL POINT

CONTROL ABBREVIATIONS

ACD	AUTOMATIC CONTROL DAMPER	HV	HEATING CONTROL VALVE
ACV	AUTOMATIC CONTROL VALVE	HWRT	HOT WATER RETURN TEMP SENSOR
AFMS	AIR FLOW MEASURING STATION	HWST	HOT WATER SUPPLY TEMP SENSOR
ALM	ALARM	IFBD	INEGRAL FACE AND BYPASS
ATC	AUTOMATIC TEMPERATURE CONTROL	IGV	INLET GUIDE VANES
AQS	AQUASTAT	LAT	LEAVING AIR TEMP SENSOR
BCV	BASEBOARD CONTROL VALVE	LEL	LOW EXPLOSIVE LIMIT
BDD	BACKDRAFT DAMPER W/ ADJ COUNTERWEIGHT	LLSV	LIQUID LINE SOLENOID VALVE
		LSPS	LOW STATIC PRESSURE SWITCH
BV	BYPASS VALVE	LS	LEVEL SENSOR
C	CARBON DIOXIDE SENSOR	LSI	LEVEL SWICH INTERFACE
CAP	CAPACITY CONTROL	LSHA	LEVEL SENSOR HIGH ALARM
CCLT	COOLING COIL LEAVING AIR TEMP SENSOR	LSHS	LEVEL SENSOR HIGH SWITCH
CLT	COIL LAT SENSOR	LSLA	LEVEL SENSOR LOW ALARM
CHRT	CHILLED WATER RETURN TEMP SENSOR	LSLS	LEVEL SENSOR LOW SWITCH
CHST	CHILLED WATER SUPPLY TEMP SENSOR	MAT	MIXED AIR TEMP SENSOR
CHWRT	CHILLED WATER RESET TEMPERATURE	MUWW	MAKE-UP WATER VALVE
CO	CARBON MONOXIDE SENSOR	MD	MOTION DETECTOR
CRT	CONDENSER WATER RET TEMP SENSOR	MS	MOTOR STARTER
CST	CONDENSER WATER SUP TEMP SENSOR	NC	NORMALLY CLOSED (ON LOSS OF POWER)
CT	CURRENT TRANSFORMER (STATUS FEEDBACK)	NO	NORMALLY OPEN (ON LOSS OF POWER)
		NO2	NITROGEN DIOXIDE SENSOR
CV	COOLING COIL CONTROL VALVE	OAD	OUTSIDE AIR DAMPER
DAT	DISCHARGE AIR TEMPERATURE SENSOR	OAH	OUTSIDE AIR HUMIDITY SENSOR (WB)
DDC	DIRECT DIGITAL CONTROL	OAT	OUTSIDE AIR TEMPERATURE SENSOR (DB)
DDCFP	DIFFERENTIAL PRESSURE SWITCH	PAD	PRIMARY AIR DAMPER
DL	DEMAND LIMIT	PIACV	PRESSURE INDEPENDANT ACV
DPS	DEIFFERENTIAL PRESSURE SWITCH	PPM	PARTS PER MILLION
DPT	DIFFERENTIAL PRESSURE SENSOR/TRANSMITTER	PR	PRESSURE SENSOR
		PROP	PROPANE SEENSOR
DPV	DIFFERENTIAL PRESSURE BYPASS VALVE	RAD	RETURN AIR DAMPER
DSP	DISCHARGE STATIC PRESSURE SENSOR	RAH	RETURN AIR HUMIDITY SENSOR
EAD	EXHAUST AIR DAMPER	RAT	RETURN AIR TEMPERATURE SENSOR
EAT	ENTERING AIR TEMPERATURE	RV	REHEAT CONTROL VALVE
ECM	ELECTRONICALLY COMMUTATED MOTOR	RH	RELATIVE HUMIDITY
ERW	ENERGY RECOVERY WHEEL	RI	RUN INDICATOR
ES	END SWITCH	RSID	RETURN SMOKE ISOLATION DAMPER
FA	FAULT ALARM	S	SWITCH
FDPS	FILTER DIFFERENTIAL PRESSURE SWITCH	SAD	SUPPLY AIR DAMPER
FMT	FLOW METER/TRANSMITTER	SD	SMOKE DAMPER
FS	FLOW SWITCH	SDET	SMOKE DETECTOR
FZ	FREEZESTAT	SFT	SMOKE/FIRE DETECTOR
H	RELATIVE HUMIDITY SENSOR	SP	STATIC PRESSURE SENSOR
HCV	HEATING COIL CONTROL VALVE	SPD	SPEED CONTROL
HCLT	HEATING COIL LEAVING AIR TEMP SENSOR	S/S	START/STOP
HE	HIGH EFFICIENCY	S/SH	START/STOP HIGH SPEED/CAPACITY
HEGA	HE GAS ABSORBER FILTER	S/SL	START/STOP LOW SPEED/CAPACITY
HEPA	HE PARTICULATE AIR FILTER	SSID	SUPPLY SMOKE ISOLATION DAMPER
HGB	HOT GAS BYPASS	SSP	SUCTION STATIC PRESSURE SENSOR
HHL	HIGH HUMIDITY LIMIT SENSOR	T	THERMOSTAT
HLH	HIGH/LOW HUMIDITY LIMIT SENSOR	TAD	TRANSFER AIR DAMPER
HOA	HANDS-OFF AUTOMATIC SWITCH	TS	TEMPERATURE SENSOR
HS	HAND SWITCH	VFD	VARIABLE FREQUENCY DRIVE
HPS	HIGH LIMIT PRESSURE SENSOR	VFDS	VFD SPEED
HSPS	HIGH STATIC PRESSURE SWITCH	VFDO	VFD OUTPUT (FEEDBACK)
		VS	VIBRATION SWITCH

GENERAL ATC NOTES

1. PROVIDE NEW DDC AUTOMATIC TEMPERATURE CONTROL SYSTEM INCLUDING OPERATOR WORKSTATION. CONTROL SOFTWARE TO ALLOW GRAPHIC REPRESENTATION OF THE HVAC SYSTEM WITH "POINT AND CLICK" SELECTION OF ALL EQUIPMENT. ALL TEMPERATURE SETPOINT CHANGES, SCHEDULING, ETC. SHALL BE ADJUSTABLE THROUGH THE USE OF A MOUSE. PROVIDE GRAPHIC REPRESENTATION OF ALL FLOOR PLANS SHOWING HVAC EQUIPMENT, VALVES, DAMPERS, TEMPERATURE SENSORS, HUMIDITY SENSORS, ETC.
2. OPERATOR WORKSTATION SHALL CONSIST OF CURRENT GENERATION MULTI-CORE INTEL PROCESSOR OPERATING AT 2.4 GHZ MINIMUM SPEED. INCLUDE 2GB RAM AND A MINIMUM OF (1) 160GB/7200RPM HARD DISK DRIVE. PROVIDE A X16 PCIE GRAPHICS CARD, FOUR USB 2.0 PORTS, 100/1000 BASE-T NETWORK CARD, AND 16X DVD±RW DRIVE. PROVIDE 19IN. LCD FLAT SCREEN MONITOR.
3. NEW DDC CONTROL SYSTEM SHALL BE CONNECTED TO AND CONTROL NEW AIR HANDLING UNITS, AIR COOLED CONDENSING UNITS, FANS, VAV TERMINAL UNITS, EXISTING PUMPS, ETC.
4. OPERATOR WORKSTATION TO BE INSTALLED IN THE MAINTENANCE OFFICE. FINAL LOCATION TO BE DETERMINED BY THE OWNER. PROVIDE SECURITY ACCESS/PASSWORD PROGRAMMING FOR DDC CONTROL SYSTEM.
5. ALL ATC CONTROLS SHALL BE HARDWIRED. NO WIRELESS TECHNOLOGY SHALL BE ALLOWED. ALL EXPOSED WIRING IN THE SHOPS, MAINTENANCE OR STORAGE AREAS SHALL BE INSTALLED IN MINIMUM 1/2 INCH GALVANIZED EMT CONDUIT.
6. INSTALL ALL NEW CONTROL WIRING FOR OFFICES AND OTHER SIMILAR OCCUPIED SPACES IN THE WALLS. WHERE WIRING WOULD BE EXPOSED IN THESE AREAS, THE WIRING SHALL BE INSTALLED IN WIRE MOLD.
7. ALL DDC CONTROLLERS CONTROLLING THE H&V UNITS SHALL BE PROVIDED WITH AN OPERATOR DISPLAY/INTERFACE ALLOWING THE USER TO PERFORM OPERATIONS TASKS ON THE ATC SYSTEM. PROVIDE PASSWORD PROTECTION.
8. THE CONTRACTOR SHALL CARRY 16 HOURS OF ADDITIONAL ON-SITE PROGRAMMING (ABOVE BASE CONTRACT) TO ALLOW FOR FIELD MODIFICATIONS THAT MAY BE NEEDED TO OPTIMIZE THE VARIOUS SYSTEMS TO FULLY CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS, SEQUENCE OF CONTROLS AND WORK WITH THE ACTUAL OPERATING CONDITIONS AS INSTALLED. THIS WORK SHALL BE DONE AT NO ADDITIONAL COST,
9. ON-SITE TRAINING SHALL ALSO INCLUDE A MINIMUM OF 24 HOURS OF HANDS ON INSTRUCTION GEARED TOWARD OPERATION AND MAINTENANCE OF THE SYSTEMS, PRIOR TO TRAINING, THE NECESSARY LESSON PLANS, TRAINING DOCUMENTS, HANDOUTS, ETC. SHALL BE PROVIDED WITH THE CURRICULUM OUTLINE, WHICH SHALL INCLUDE AS A MINIMUM:
   a. INITIAL SESSION - 8 HRS
   b. 2ND SESSION, 2 WEEKS LATER - 8 HRS
   c. REMAINING 8 HRS TO BE SCHEDULED BY THE OWNER AS NEEDED.
10. ALL TRAINING SHALL BE RECORDED AND COPIED TO DVD BY THE ATC CONTRACTOR. THREE COPIES OF THE RECORDED SESSIONS SHALL BE SUBMITTED TO THE OWNER FOR THEIR USE.
11. PROVIDE WIRING FROM ELECTRICAL SOURCE TO MISCELLANEOUS ATC DEVICES. REFER TO HVAC PLANS, HVAC MECHANICAL ROOM PLANS, AND ELECTRICAL PLANS FOR LOCATION OF POWER SOURCES FOR ATC SYSTEM.
12. SUBMIT ACCEPTANCE TESTING PLAN, PRE-FUNCTIONAL PERFORMANCE TEST FORMS/NARRATIVES AND FUNCTIONAL TEST FORMS/NARRATIVES TO ENGINEER FOR REVIEW AND APPROVAL.
13. PROVIDE DEMOLITION OF EXISTING CONTROL COMPONENTS WHICH ARE BEING REPLACED BY THE NEW ATC CONTROL SYSTEM.
14. ALL MOTOR RATED RELAYS FOR FANS, ETC. SHALL BE FURNISHED BY DIVISION 250000 AND TURNED OVER TO DIVISION 260000 FOR INSTALLATION.
15. THE HVAC SYSTEM SHALL BE INDEXED TO HEATING WHEN HOT WATER IS AVAILABLE (GENERALLY BETWEEN THE MONTHS OF OCTOBER AND APRIL). THE HVAC SYSTEM SHALL BE INDEXED TO COOLING WHEN DX IS AVAILABLE (GENERALLY BETWEEN THE MONTHS OF MAY AND SEPTEMBER).
16. LOCATION OF ALL NEW DDC CONTROL PANELS SHALL BE FIELD VERIFIED WITH THE EXISTING CONDITIONS BY THE CONTRACTOR.

DDC MATRIX

DDC CONTROL MATRIX		
EQUIPMENT CATEGORY	CONTROLS BY: MFR	ATC
STM HX		X
PUMPS		X
AHU-X	X	
FAN COIL UNITS		X
ERV-X	X	
EXHAUST FANS		X
UH & CUH		X
BOILERS		X

1. LOCATE ATC PANELS IN MECHANICAL ROOM. COORDINATE LOCATION OF PANELS.
2. EQUIPMENT PROVIDED WITH PACKAGED CONTROL WILL BE PROVIDED WITH BACNET COMMUNICATION ACCESSORIES TO INTEGRATED INTO BMS. MECHANICAL CONTRACTOR SHALL COORDINATE WITH ATC CONTRACTOR AND EQUIPMENT MANUFACTURERS.

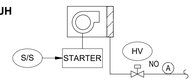
GLOBAL POINTS

TS	GLOBAL OUTDOOR AIR TEMPERATURE AND RELATIVE HUMIDITY SENSORS.
RH	

DIAGRAM EQUIPMENT SYMBOLS

	HUMIDIFIER	SD	PUMP
	FILTER		CENTRIFUGAL FAN
H C	HEATING COIL		PROPELLOR FAN
HR C	HEAT RECOVERY COIL		TUBE AXIAL OR VANE AXIAL FAN
PH C	PREHEAT COIL		INLINE CENTRIFUGAL FAN
	REHEAT COIL		UPBLAST FAN
G F	GAS FURNACE		DOWNBLAST FAN
C C	COOLING COIL		PARALLEL BLADE DAMPER (TWO POSITION)
			PARALLEL BLADE DAMPER (MODULATING)
DX C	DX COOLING COIL		OPPOSED BLADE DAMPER (TWO POSITION)
			OPPOSED BLADE DAMPER (MODULATING)
	CABINET UNIT HEATER		BACKDRAFT DAMPER
			2-WAY AUTOMATIC CONTROL VALVE (MODULATING)
	UNIT HEATER		2-WAY AUTOMATIC CONTROL VALVE (TWO POSITION)
			3-WAY AUTOMATIC CONTROL VALVE (MODULATING)
	AIR SEPARATOR		3-WAY AUTOMATIC CONTROL VALVE (TWO POSITION)
			2-WAY PIACV (MODULATING)
			2-WAY PIACV (TWO POSITION)
	EXPANSION TANK		FINNED TUBE RADIATION
	CHEMICAL SHOT FEEDER		AIR TERMINAL BOX
	AIR COOLED CONDENSING UNIT		AIR TERMINAL BOX W/ REHEAT COIL
	SHELL AND TUBE HEAT EXCHANGER		FAN POWERED AIR TERMINAL BOX
	PLATE AND FRAME HEAT EXCHANGER		FAN POWERED AIR TERMINAL BOX W/ REHEAT COIL

TYP CUH



CABINET UNIT HEATER CONTROLS:

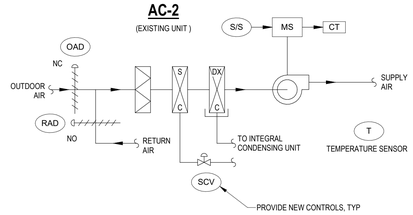
GENERAL
1. CABINET UNIT HEATER SHALL BE STARTED AND STOPPED VIA ELECTRONIC THERMOSTAT.
2. ALL SETPOINTS SHALL BE ADJUSTABLE.
3. MOTOR RATED RELAYS SHALL BE PROVIDED TO INTERFACE MANUAL MOTOR STARTER WITH CONTROL WIRING TO SATISFY CONTROL SEQUENCE.
4. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.

CONTROL SEQUENCE
1. THE UNIT HEATER FAN SHALL BE DE-ENERGIZED. UPON A DROP IN SPACE TEMPERATURE BELOW THE SETPOINT OF 60°F (ADJ), THE CONTROL VALVE (HV) SHALL OPEN AND FLOW SHALL BE PROVEN BY THE AQUASTAT PRIOR TO THE FAN BEING ENERGIZED.
2. THE OPPOSITE SHALL OCCUR ON A RISE IN SPACE TEMPERATURE ABOVE 62°F (ADJ).
3. THE CONTROL VALVE (HV) SHALL BE LOCKED OUT IF THE BAS IS INDEXED TO COOLING.

CABINET UNIT HEATER CONTROL SEQUENCE

AC-2

(EXISTING UNIT)



GENERAL
1. AIR HANDLING UNIT (AC-2) SHALL BE STARTED AND STOPPED BY A NEW DDC CONTROLLER. EXISTING AAON CONTROLS TO REMAIN AND BE REUSED. PROVIDE NEW BMS GATEWAY AS REQUIRED.
2. REPLACE ALL OF THE EXISTING PNUEMATIC CONTROLS/ACTUATORS WITH ELECTRONIC AS REQUIRED AND PROVIDE ALL NEW ATC POINTS AND RELAYS AS REQUIRED TO MEET THE CONTROL SEQUENCES.
3. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL NEW ACTUATORS SHALL BE ELECTRONIC. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
4. LOCAL HAND-OFF-AUTOMATIC SWITCH (H-O-A) FOR FANS SHALL OVERRIDE DDC START/STOP COMMANDS. ALL HARDWIRED SAFETIES SHALL BE ACTIVE IN BOTH "H" AND "A" POSITIONS.
5. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (FAN, VALVES, DAMPERS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURE, ETC.).
6. COMPRESSOR SAFETIES SHALL REMAIN ON THE EXISTING INTEGRAL CONDENSING UNIT.

FAN CONTROL
1. WHILE DE-ENERGIZED (OR OFF ON SAFETY OR MANUAL DISCONNECT) AHU SHALL BE OFF WITH THE OAD AND STEAM CONTROL VALVE (SCV) CLOSED. THE RAD SHALL BE OPEN.
2. WHEN COMMANDED TO START, THE AHU OAD AND RAD SHALL MODULATE OPEN TO THEIR MINIMUM POSITION. THE AHU SUPPLY FAN SHALL START. THE SPACE TEMPERATURE SENSOR SHALL MODULATE THE SCV TO MAINTAIN THE SPACE TEMPERATURE SET POINT. THE AHU SUPPLY FAN SHALL RUN CONTINUOUSLY.

ECONOMIZER MODE
1. WHEN THE OUTDOOR AIR ENTHALPY IS BELOW THE SETPOINT OF 27.0 BTU/LBM (ADJ), OUTDOOR AND RETURN AIR DAMPERS SHALL BE PROPORTIONALLY MODULATED UP TO 100% OUTDOOR AIR TO MAINTAIN SET POINT. THE REVERSE SHALL OCCUR ON A DROP BELOW THE COOLING SUPPLY AIR TEMPERATURE SET POINT.
2. THE SUPPLY AIR TEMPERATURE SHALL BE LIMITED TO 55°F AND SHALL NOT RESULT IN A REDUCTION BELOW THE MINIMUM OUTDOOR AIRFLOW.

OCCUPIED COOLING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING. THE SUPPLY FAN SHALL RUN CONTINUOUSLY AND MODULATE TO MAINTAIN SPACE SETPOINT OF 76°F (ADJ). UPON A RISE IN SPACE TEMPERATURE ABOVE THE COOLING SETPOINT OF 76°F (ADJ), THE MECHANICAL COOLING SHALL STAGE AS REQUIRED TO MAINTAIN THE SPACE SETPOINT.

UNOCCUPIED COOLING MODE
1. THE UNIT SHALL BE OFF, THE STEAM CONTROL VALVE (SCV) SHALL BE CLOSED, NO MECHANICAL COOLING SHALL BE PROVIDED.

OCCUPIED HEATING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING. THE SUPPLY FAN SHALL RUN CONTINUOUSLY. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 72°F (ADJ), THE SCV SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE.

UNOCCUPIED HEATING MODE
1. THE OAD SHALL BE CLOSED AND RAD SHALL BE OPEN. THE SUPPLY FAN SHALL BE DE-ENERGIZED. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 55°F (ADJ), THE SCV SHALL OPEN 100% AND THE SUPPLY FAN SHALL BE ENERGIZED. WHEN THE SPACE TEMPERATURE REACHES 65°F (ADJ), THE SUPPLY FAN SHALL DE-ENERGIZE AND SCV SHALL CLOSE.

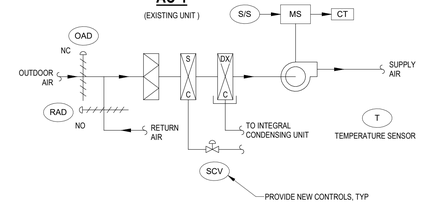
SAFETIES
1. THE FOLLOWING SAFETIES SHALL SHUT DOWN THE H&V UNIT.
   A. UPON A FAILURE OF THE AHU SUPPLY FAN AS SENSED BY THE CURRENT SENSOR, A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION. THE AHU SHALL BE DE-ENERGIZED, THE OAD SHALL BE CLOSED, AND THE RAD SHALL BE OPEN.

ALARMS
1. IF SUPPLY FAN FAILS OR ANY SAFETY IS TRIPPED, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.

EXISTING AIR HANDLING UNIT (AC-2)

AC-1

(EXISTING UNIT)



GENERAL
1. AIR HANDLING UNIT (AC-1) SHALL BE STARTED AND STOPPED BY A NEW DDC CONTROLLER. EXISTING TRANE CONTROLS TO REMAIN AND BE REUSED. PROVIDE NEW BMS GATEWAY AS REQUIRED.
2. REPLACE ALL OF THE EXISTING PNUEMATIC CONTROLS/ACTUATORS WITH ELECTRONIC AS REQUIRED AND PROVIDE ALL NEW ATC POINTS AND RELAYS AS REQUIRED TO MEET THE CONTROL SEQUENCES.
3. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL NEW ACTUATORS SHALL BE ELECTRONIC. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
4. LOCAL HAND-OFF-AUTOMATIC SWITCH (H-O-A) FOR FANS SHALL OVERRIDE DDC START/STOP COMMANDS. ALL HARDWIRED SAFETIES SHALL BE ACTIVE IN BOTH "H" AND "A" POSITIONS.
5. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (FAN, VALVES, DAMPERS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURE, ETC.).
6. COMPRESSOR SAFETIES SHALL REMAIN ON THE EXISTING OUTDOOR CONDENSING UNIT.

FAN CONTROL
1. WHILE DE-ENERGIZED (OR OFF ON SAFETY OR MANUAL DISCONNECT) AHU SHALL BE OFF WITH THE OAD AND STEAM CONTROL VALVE (SCV) CLOSED. THE RAD SHALL BE OPEN.
2. WHEN COMMANDED TO START, THE AHU OAD AND RAD SHALL MODULATE OPEN TO THEIR MINIMUM POSITION. THE AHU SUPPLY FAN SHALL START. THE SPACE TEMPERATURE SENSOR SHALL MODULATE THE SCV TO MAINTAIN THE SPACE TEMPERATURE SET POINT. THE AHU SUPPLY FAN SHALL RUN CONTINUOUSLY.

ECONOMIZER MODE
1. WHEN THE OUTDOOR AIR ENTHALPY IS BELOW THE SETPOINT OF 27.0 BTU/LBM, OUTDOOR AND RETURN AIR DAMPERS SHALL BE PROPORTIONALLY MODULATED UP TO 100% OUTDOOR AIR TO MAINTAIN SET POINT. THE REVERSE SHALL OCCUR ON A DROP BELOW THE COOLING SUPPLY AIR TEMPERATURE SET POINT.
2. THE SUPPLY AIR TEMPERATURE SHALL BE LIMITED TO 55°F AND SHALL NOT RESULT IN A REDUCTION BELOW THE MINIMUM OUTDOOR AIRFLOW.

OCCUPIED COOLING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING. THE SUPPLY FAN SHALL RUN CONTINUOUSLY AND MODULATE TO MAINTAIN SPACE SETPOINT OF 76°F (ADJ). UPON A RISE IN SPACE TEMPERATURE ABOVE THE COOLING SETPOINT OF 76°F (ADJ), THE MECHANICAL COOLING SHALL STAGE AS REQUIRED TO MAINTAIN THE SPACE SETPOINT.

UNOCCUPIED COOLING MODE
1. THE UNIT SHALL BE OFF AND THE DX COOLING SHALL BE OFF.

OCCUPIED HEATING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING. THE SUPPLY FAN SHALL RUN CONTINUOUSLY. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 72°F (ADJ), THE SCV SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE.

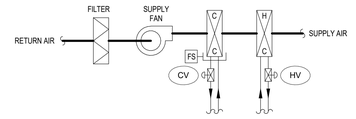
UNOCCUPIED HEATING MODE
1. THE OAD SHALL BE CLOSED AND RAD SHALL BE OPEN. THE SUPPLY FAN SHALL BE DE-ENERGIZED. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 55°F (ADJ), THE SCV SHALL OPEN 100% AND THE SUPPLY FAN SHALL BE ENERGIZED. WHEN THE SPACE TEMPERATURE REACHES 65°F (ADJ), THE SUPPLY FAN SHALL DE-ENERGIZE AND HV SHALL CLOSE.

SAFETIES
1. THE FOLLOWING SAFETIES SHALL SHUT DOWN THE H&V UNIT.
   A. UPON A FAILURE OF THE AHU SUPPLY FAN AS SENSED BY THE CURRENT SENSOR, A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION. THE AHU SHALL BE DE-ENERGIZED, THE OAD SHALL BE CLOSED, AND THE RAD SHALL BE OPEN.

ALARMS
1. IF SUPPLY FAN FAILS OR ANY SAFETY IS TRIPPED, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.

EXISTING AIR HANDLING UNIT (AC-1)

FCU



FAN COIL UNIT CONTROLS:

GENERAL
1. FAN COIL UNIT SHALL BE CONTROLELD VIA DDC CONTROLLER (PROVIDED BY THE BAS CONTRACTOR).
2. COORDINATE OCCUPIED/UNOCCUPIED SCHEDULE WITH OWNER..
3. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL ACTUATORS SHALL BE ELECTRONIC.
4. PROVIDE PIACV TYPE VALVE FOR HEATING AND COOLING COILS.
5. MOTOR RATED RELAYS SHALL BE PROVIDED TO INTERFACE MANUAL MOTOR STARTER WITH CONTROL WIRING TO SATISFY CONTROL SEQUENCE.
6. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
7. FAN COIL UNIT SHALL BE INDEXED TO HEATING/COOLING BY THE BAS.
8. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (FCU, VALVES, SENSORS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURE, MODE, ETC.).
9. PROVIDE FLOAT SWITCH (FS) IN COOLING COIL DRAIN PAN.

FAN CONTROL
1. WHILE IN OCCUPIED MODE, THE SUPPLY FAN SHALL BE OFF AND THE HEATING VALVE (HV) AND COOLING VALVE (CV) SHALL BE CLOSED.
2. WHILE IN UNOCCUPIED MODE, THE SUPPLY FAN SHALL BE OFF AND THE HEATING VALVE (HV) AND COOLING VALVE (CV) SHALL BE CLOSED.
3. THE FAN COIL UNIT SHALL HAVE AN ECM TYPE MOTOR WITH SPEED CONTROLLER. SPEED CONTROLLER SHALL BE CONTROLLED BY THE BAS.

OCCUPIED HEATING CONTROL (IF INDEXED TO HEATING BY THE BAS)
1. THE 2-WAY COOLING CONTROL VALVE (CV) SHALL BE CLOSED AND LOCKED OUT WHILE THE BAS IS INDEXED TO HEATING. END SWITCH SHALL PROVE THE VALVE IS CLOSED PRIOR TO ENTERING HEATING MODE.
2. UPON A CALL FOR HEATING FROM THE SPACE TEMPERATURE SENSOR (T), THE FAN SHALL BE ENERGIZED TO HIGH SPEED AND THE 2-WAY HEATING CONTROL VALVE (HV) SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 70°F (ADJ).
3. IF ADDITIONAL HEATING IS REQUIRED AND THE HEATING CONTROL VALVE IS 100% OPEN, THE BAS SHALL INCREASE THE SPEED OF THE FAN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 70°F (ADJ)
4. THE REVERSE SHALL OCCUR UPON A RISE IN ROOM TEMPERATURE ABOVE 72°F (ADJ).

UNOCCUPIED HEATING CONTROL (IF INDEXED TO HEATING BY THE BAS)
1. THE 2-WAY COOLING CONTROL VALVE (CV) SHALL BE CLOSED AND LOCKED OUT WHILE THE BAS IS INDEXED TO HEATING. END SWITCH SHALL PROVE THE VALVE IS CLOSED PRIOR TO ENTERING HEATING MODE.
2. UPON A CALL FOR HEATING FROM THE SPACE TEMPERATURE SENSOR (T), THE FAN SHALL BE ENERGIZED TO HIGH SPEED AND THE 2-WAY HEATING CONTROL VALVE (HV) SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 65°F (ADJ).
3. THE REVERSE SHALL OCCUR UPON A RISE IN ROOM TEMPERATURE.

OCCUPIED COOLING CONTROL (IF INDEXED TO COOLING BY THE BAS)
1. THE 2-WAY HEATING CONTROL VALVE (HV) SHALL BE CLOSED AND LOCKED OUT WHILE THE BAS IS INDEXED TO COOLING. END SWITCH SHALL PROVE THE VALVE IS CLOSED PRIOR TO ENTERING COOLING MODE.
2. UPON A CALL FOR COOLING FROM THE SPACE TEMPERATURE SENSOR (T), THE FAN SHALL BE ENERGIZED TO LOW SPEED AND THE 2-WAY COOLING CONTROL VALVE (CV) SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 74°F (ADJ).
3. IF ADDITIONAL COOLING IS REQUIRED AND THE COOLING CONTROL VALVE IS 100% OPEN, THE BAS SHALL INCREASE THE SPEED OF THE FAN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 74°F (ADJ).
4. THE REVERSE SHALL OCCUR UPON A DROP IN ROOM TEMPERATURE BELOW 72°F (ADJ).

UNOCCUPIED COOLING CONTROL (IF INDEXED TO COOLING BY THE BAS)
1. THE UNIT SHALL BE OFF, THE HEATING AND COOLING CONTROL VALVES SHALL BE CLOSED.

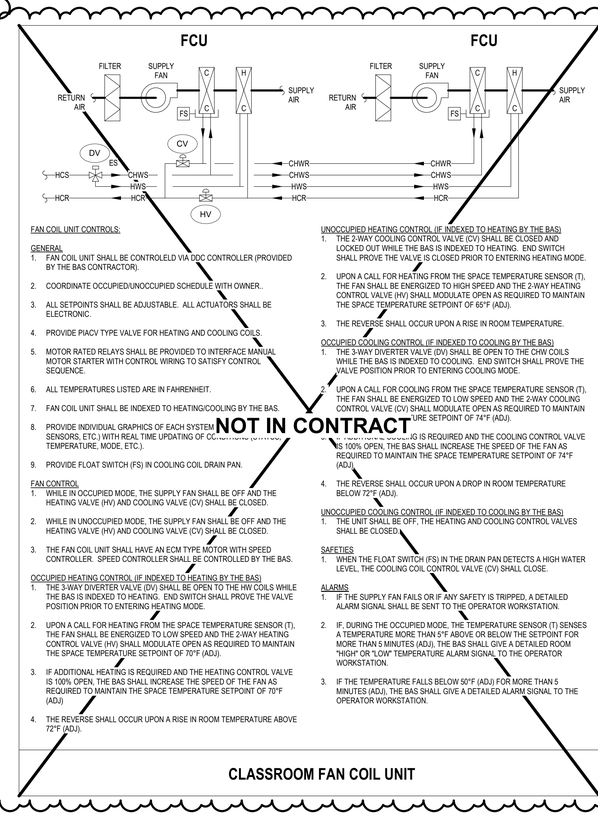
SAFETIES
1. WHEN THE FLOAT SWITCH (FS) IN THE DRAIN PAN DETECTS A HIGH WATER LEVEL, THE COOLING COIL CONTROL VALVE (CV) SHALL CLOSE.

ALARMS
1. IF THE SUPPLY FAN FAILS OR IF ANY SAFETY IS TRIPPED, A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
2. IF, DURING THE OCCUPIED MODE, THE TEMPERATURE SENSOR (T) SENSES A TEMPERATURE MORE THAN 5°F ABOVE OR BELOW THE SETPOINT FOR MORE THAN 5 MINUTES (ADJ), THE BAS SHALL GIVE A DETAILED ROOM "HIGH" OR "LOW" TEMPERATURE ALARM SIGNAL TO THE OPERATOR WORKSTATION.
3. IF THE TEMPERATURE FALLS BELOW 50°F (ADJ) FOR MORE THAN 5 MINUTES (ADJ), THE BAS SHALL GIVE A DETAILED ALARM SIGNAL TO THE OPERATOR WORKSTATION.

SINGLE FAN COIL UNIT

1

FCU



FAN COIL UNIT CONTROLS:

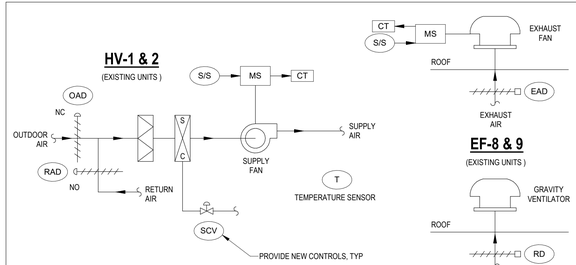
GENERAL
1. FAN COIL UNIT SHALL BE CONTROLELD VIA DDC CONTROLLER (PROVIDED BY THE BAS CONTRACTOR).
2. COORDINATE OCCUPIED/UNOCCUPIED SCHEDULE WITH OWNER..
3. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL ACTUATORS SHALL BE ELECTRONIC.
4. PROVIDE PIACV TYPE VALVE FOR HEATING AND COOLING COILS.
5. MOTOR RATED RELAYS SHALL BE PROVIDED TO INTERFACE MANUAL MOTOR STARTER WITH CONTROL WIRING TO SATISFY CONTROL SEQUENCE.
6. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
7. FAN COIL UNIT SHALL BE INDEXED TO HEATING/COOLING BY THE BAS.
8. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (FCU, VALVES, SENSORS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURE, MODE, ETC.).
9. PROVIDE FLOAT SWITCH (FS) IN COOLING COIL DRAIN PAN.

FAN CONTROL
1. WHILE IN OCCUPIED MODE, THE SUPPLY FAN SHALL BE OFF AND THE HEATING VALVE (HV) AND COOLING VALVE (CV) SHALL BE CLOSED.
2. WHILE IN UNOCCUPIED MODE, THE SUPPLY FAN SHALL BE OFF AND THE HEATING VALVE (HV) AND COOLING VALVE (CV) SHALL BE CLOSED.
3. THE FAN COIL UNIT SHALL HAVE AN ECM TYPE MOTOR WITH SPEED CONTROLLER. SPEED CONTROLLER SHALL BE CONTROLLED BY THE BAS.

OCCUPIED HEATING CONTROL (IF INDEXED TO HEATING BY THE BAS)
1. THE 3-WAY DIVERTER VALVE (DV) SHALL BE OPEN TO THE HW COILS WHILE THE BAS IS INDEXED TO HEATING. END SWITCH SHALL PROVE THE VALVE POSITION PRIOR TO ENTERING HEATING MODE.
2. UPON A CALL FOR HEATING FROM THE SPACE TEMPERATURE SENSOR (T), THE FAN SHALL BE ENERGIZED TO LOW SPEED AND THE 2-WAY HEATING CONTROL VALVE (HV) SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE SETPOINT OF 70°F (ADJ).
3. IF ADDITIONAL HEATING IS REQUIRED AND THE HEATING CONTROL VALVE IS 100% OPEN,

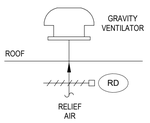
HV-1 & 2

(EXISTING UNITS)



EF-8 & 9

(EXISTING UNITS)



GENERAL
1. HEATING AND VENTILATION UNITS (HV-1 & 2) AND ASSOCIATED EXHAUST FANS (EF-8 & 9, RESPECTIVELY) SHALL BE STARTED AND STOPPED BY A NEW DDC CONTROLLER, EXISTING CONTROLS TO REMAIN AND BE REUSED. PROVIDE NEW BMS GATEWAY AS REQUIRED.
2. REPLACE ALL OF THE EXISTING PNUEMATIC CONTROLS/ACTUATORS WITH ELECTRONIC AS REQUIRED AND PROVIDE ALL NEW ATC POINTS AND RELAYS AS REQUIRED TO MEET THE CONTROL SEQUENCES.
3. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL NEW ACTUATORS SHALL BE ELECTRONIC. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
4. LOCAL HAND-OFF-AUTOMATIC SWITCH (H-O-A) FOR FANS SHALL OVERRIDE DDC START/STOP COMMANDS. ALL HARDWIRED SAFETIES SHALL BE ACTIVE IN BOTH "H" AND "A" POSITIONS.
5. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (FAN, VALVES, DAMPERS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURE, ETC.).

FAN CONTROL
1. WHILE DE-ENERGIZED (OR OFF ON SAFETY OR MANUAL DISCONNECT) HV SHALL BE OFF WITH THE OAD, EAD, AND STEAM CONTROL VALVE (SCV) CLOSED. THE RAD SHALL BE OPEN.
2. WHEN COMMANDED TO START, THE HV OAD AND RAD SHALL MODULATE OPEN TO THEIR MINIMUM POSITION, EAD SHALL OPEN. THE HV SUPPLY FAN AND THE EXHAUST FAN SHALL START. THE SPACE TEMPERATURE SENSOR SHALL MODULATE THE SCV TO MAINTAIN THE SPACE TEMPERATURE SET POINT. THE HV SUPPLY FAN SHALL RUN CONTINUOUSLY.

ECONOMIZER MODE
1. WHEN THE OUTDOOR AIR IS BETWEEN 50°F AND 60°F (ADJ), OUTDOOR AND RETURN AIR DAMPERS SHALL BE PROPORTIONALLY MODULATED UP TO 100% OUTDOOR AIR TO MAINTAIN SET POINT. THE RELIEF DAMPER (RD) SHALL BE OPEN.
2. IF THE SPACE TEMPERATURE DROPS 5°F BELOW SETPOINT WHILE IN ECONOMIZER MODE, THE SYSTEM SHALL RETURN TO OCCUPIED MODE.

COOLING MODE
1. NO COOLING IS AVAILABLE.

OCCUPIED HEATING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING, THE EAD SHALL BE OPEN, AND RD SHALL BE CLOSED. THE HV SUPPLY FAN SHALL RUN CONTINUOUSLY. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 72°F (ADJ), THE SCV SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE.

UNOCCUPIED HEATING MODE
1. THE OAD SHALL BE CLOSED AND RAD SHALL BE OPEN. THE SUPPLY FAN SHALL BE DE-ENERGIZED. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 55°F (ADJ), THE SCV SHALL OPEN 100% AND THE SUPPLY FAN SHALL BE ENERGIZED. WHEN THE SPACE TEMPERATURE REACHES 65°F (ADJ), THE SUPPLY FAN SHALL DE-ENERGIZE AND HV SHALL CLOSE.

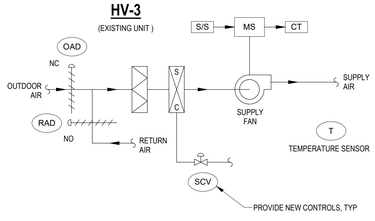
SAFETIES
1. THE FOLLOWING SAFETIES SHALL SHUT DOWN THE H&V UNIT.
   A. UPON A FAILURE OF THE HV SUPPLY FAN AS SENSED BY THE CURRENT SENSOR, A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION. THE AHU SHALL BE DE-ENERGIZED, THE OAD SHALL BE CLOSED, AND THE RAD SHALL BE OPEN.

ALARMS
1. IF SUPPLY FAN FAILS OR ANY SAFETY IS TRIPPED, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.

EXISTING HEATING AND VENTILATION UNITS (HV-1 & 2)

HV-3

(EXISTING UNIT)



GENERAL
1. HEATING AND VENTILATION UNITS (HV-1 & 2) AND ASSOCIATED EXHAUST FANS (EF-8 & 9, RESPECTIVELY) SHALL BE STARTED AND STOPPED BY A NEW DDC CONTROLLER, EXISTING CONTROLS TO REMAIN AND BE REUSED. PROVIDE NEW BMS GATEWAY AS REQUIRED.
2. REPLACE ALL OF THE EXISTING PNUEMATIC CONTROLS/ACTUATORS WITH ELECTRONIC AS REQUIRED AND PROVIDE ALL NEW ATC POINTS AS REQUIRED TO MEET THE CONTROL SEQUENCES.
3. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL NEW ACTUATORS SHALL BE ELECTRONIC. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
4. LOCAL HAND-OFF-AUTOMATIC SWITCH (H-O-A) FOR FANS SHALL OVERRIDE DDC START/STOP COMMANDS. ALL HARDWIRED SAFETIES SHALL BE ACTIVE IN BOTH "H" AND "A" POSITIONS.
5. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (FAN, VALVES, DAMPERS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURE, ETC.).

FAN CONTROL
1. WHILE DE-ENERGIZED (OR OFF ON SAFETY OR MANUAL DISCONNECT) HV SHALL BE OFF WITH THE OAD AND STEAM CONTROL VALVE (SCV) CLOSED. THE RAD SHALL BE OPEN.
2. WHEN COMMANDED TO START, THE HV OAD AND RAD SHALL MODULATE OPEN TO THEIR MINIMUM POSITION, EAD SHALL OPEN. THE HV SUPPLY FAN SHALL START. THE SPACE TEMPERATURE SENSOR SHALL MODULATE THE SCV TO MAINTAIN THE SPACE TEMPERATURE SET POINT. THE HV SUPPLY FAN SHALL RUN CONTINUOUSLY.

ECONOMIZER MODE
1. WHEN THE OUTDOOR AIR IS BETWEEN 50°F AND 60°F (ADJ) AND THE KITCHEN EXHUAST FANS ARE OPERATING, OUTDOOR AND RETURN AIR DAMPERS SHALL BE PROPORTIONALLY MODULATED UP TO 100% OUTDOOR AIR TO MAINTAIN SET POINT.
2. IF THE SPACE TEMPERATURE DROPS 5°F BELOW SETPOINT WHILE IN ECONOMIZER MODE, THE SYSTEM SHALL RETURN TO OCCUPIED MODE.

COOLING MODE
1. NO COOLING IS AVAILABLE.

OCCUPIED HEATING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING, AND THE EAD SHALL BE OPEN. THE HV SUPPLY FAN SHALL RUN CONTINUOUSLY. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 72°F (ADJ), THE SCV SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE.

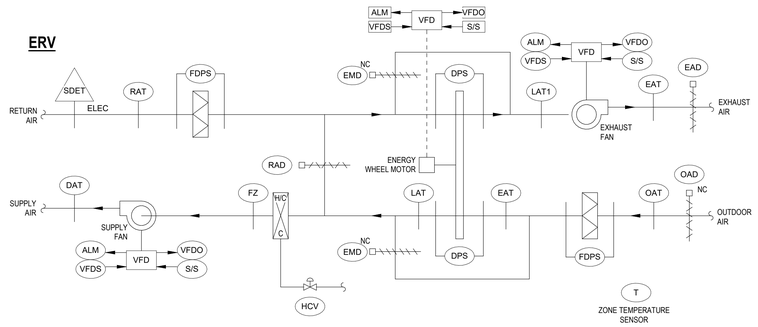
UNOCCUPIED HEATING MODE
1. THE OAD SHALL BE CLOSED AND RAD SHALL BE OPEN. THE SUPPLY FAN SHALL BE DE-ENERGIZED. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 55°F (ADJ), THE SCV SHALL OPEN 100% AND THE SUPPLY FAN SHALL BE ENERGIZED. WHEN THE SPACE TEMPERATURE REACHES 65°F (ADJ), THE SUPPLY FAN SHALL DE-ENERGIZE AND HV SHALL CLOSE.

SAFETIES
1. THE FOLLOWING SAFETIES SHALL SHUT DOWN THE H&V UNIT.
   A. UPON A FAILURE OF THE HV SUPPLY FAN AS SENSED BY THE CURRENT SENSOR, A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION. THE AHU SHALL BE DE-ENERGIZED, THE OAD SHALL BE CLOSED, AND THE RAD SHALL BE OPEN.

ALARMS
1. IF SUPPLY FAN FAILS OR ANY SAFETY IS TRIPPED, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.

EXISTING HEATING AND VENTILATION UNITS (HV-3)

ERV



ENERGY RECOVERY UNIT CONTROLS:

GENERAL
1. THE ENERGY RECOVERY UNIT (ERV) SHALL BE STARTED AND STOPPED VIA A DEDICATED FULLY PROGRAMMABLE DDC CONTROLLER.
2. COORDINATE UNOCCUPIED AND OCCUPIED SCHEDULE WITH OWNER.
3. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL ACTUATORS SHALL BE ELECTRONIC.
4. THE ERV MANUFACTURER SHALL PROVIDE THE VFDS.
5. LOCAL HAND/OFF/AUTO SWITCHES (HOA) FOR FANS SHALL OVERRIDE DDC START/STOP (S/S) COMMANDS. ALL HARDWIRED SAFETIES SHALL BE ACTIVE IN BOTH "H" AND "A" POSITIONS.
6. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
7. ALL TEMPERATURE SENSORS IN THE UNIT AND DUCTWORK SHALL BE AVERAGING TYPE EXCEPT FOR FREEZESTATS WHICH SHALL BE LOW POINT READING TYPE.
8. ERV SHALL BE INDEXED TO HEATING AND COOLING BY THE BUILDING AUTOMATION SYSTEM.
9. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (FANS, VALVES, DAMPERS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURE, ETC.).
10. THE ERV SHALL BE ABLE TO ENABLE THE STEAM TO HW HEAT EXCHANGER OR CHILLER.

FAN CONTROL
1. WHILE IN UNOCCUPIED MODE (OR OFF ON SAFETY OR MANUAL DISCONNECT) ERV SUPPLY AND EXHAUST FANS SHALL BE OFF WITH THE OUTSIDE AIR DAMPER (OAD), EXHAUST AIR DAMPER (EAD), ECONOMIZER MODE DAMPERS (EMD), AND HEATING/COOLING CONTROL VALVE (HCV) ARE CLOSED, AND THE RETURN AIR DAMPER (RAD) OPEN. ENERGY RECOVERY WHEEL SHALL BE OFF.
2. WHEN STARTED IN OCCUPIED MODE, THE ERV SUPPLY FAN SHALL START IN RECIRCULATION MODE (100% RETURN AIR) AT MINIMUM SPEED WITH RAD OPEN AND THE OAD, EAD, AND EMD CLOSED WITH THE EXHAUST FAN AND ENERGY RECOVERY WHEEL OFF.
3. THE SUPPLY FAN VFD SHALL SLOWLY INCREASE THE SPEED OF THE VFD TO THE DESIGN SETPOINT.
4. AFTER START-UP, ONCE THE SUPPLY FAN OPERATION IS STABLE AND IN OCCUPIED MODE THE OAD AND EAD SHALL SLOWLY OPEN TO OUTDOOR AIR POSITION AND THE EXHAUST FAN AND THE ENERGY WHEEL SHALL START. THE RAD AND EMD SHALL REMAIN CLOSED.

OCCUPIED COOLING MODE
1. UPON A RISE IN DAT ABOVE THE COOLING SETPOINT, THE COOLING CYCLE SHALL BE ACTIVATED.
2. THE FIRST MEANS OF MAINTAINING DISCHARGE AIR TEMPERATURE SHALL BE ACTIVATION OF THE ECONOMIZER. IF THE OUTSIDE AIR ENTHALPY IS BELOW THE SETPOINT OF 27.0 BTU/LBM (ADJ), THE SUPPLY AND EXHAUST FANS SHALL START AND THE EMD SHALL BE MODULATED TO MAINTAIN SETPOINT. THE RAD SHALL BE CLOSED AND THE ENERGY RECOVERY WHEEL SHALL BE OFF. DAT SHALL LIMIT SUPPLY AIR TEMPERATURE TO 52°F MINIMUM DURING THE COOLING SEASON (LIMIT SHALL NOT RESULT IN REDUCTION TO MINIMUM OUTDOOR AIRFLOW). IF ADDITIONAL COOLING IS REQUIRED, HCV SHALL MODULATE AS REQUIRED TO SATISFY THE DAT SETPOINT.
3. UNIT MOUNTED EXHAUST FAN SHALL PREVENT THE BUILDING FROM BECOMING OVER-PRESSURIZED DURING ECONOMIZER OPERATION.
4. IF THE OUTDOOR AIR ENTHALPY IS ABOVE SETPOINT, AND THE SPACE TEMPERATURE SENSORS ARE CALLING FOR COOLING, THEN THE OAD AND EAD SHALL OPEN, THE RAD AND EMD SHALL CLOSE, THE ENERGY RECOVERY WHEEL SHALL BE ENERGIZED, AND THE HCV SHALL MODULATE TO MAINTAIN COOLING SETPOINT TEMPERATURE. DAT SHALL LIMIT SUPPLY AIR TEMPERATURE TO 55° F MINIMUM DURING THE COOLING SEASON.

UNOCCUPIED COOLING MODE
1. THE SUPPLY AIR AND EXHAUST FANS SHALL BE OFF, THE OAD, EMD, AND EAD SHALL BE CLOSED, THE RAD SHALL BE OPEN, AND THE HEATING/COOLING CONTROL VALVE (HCV) SHALL BE CLOSED. NO COOLING SHALL BE PROVIDED.

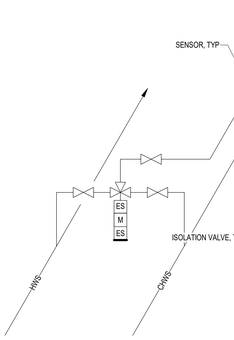
OCCUPIED HEATING
1. THE SUPPLY AIR AND EXHAUST FANS SHALL RUN CONTINUOUSLY. THE OAD AND EAD SHALL BE OPEN AND THE RAD AND EMD SHALL BE CLOSED, AND THE HEATING/COOLING CONTROL VALVE (HCV) SHALL BE CLOSED. NO COOLING SHALL BE PROVIDED.
2. THE HEATING/COOLING CONTROL VALVE (HCV) SHALL MODULATE TO MAINTAIN THE DAT SETPOINT OF 72°F (ADJ).

UNOCCUPIED HEATING
1. THE SUPPLY AIR AND EXHAUST FANS SHALL BE DE-ENERGIZED. THE OAD, EMD, AND EAD SHALL BE CLOSED AND RAD SHALL BE OPEN, AND THE HEATING/COOLING CONTROL VALVE (HCV) SHALL BE CLOSED. NO VENTILATION SHALL BE PROVIDED. REFER TO FAN COIL CONTROL SEQUENCE FOR ADDITIONAL INFORMATION.

SAFETIES
1. THE FREEZESTAT SHALL CAUSE AN ALARM AT THE OPERATOR WORKSTATION AND BE INTERLOCKED TO THE SUPPLY AND EXHAUST FANS FOR FAN SHUTDOWN WHEN SENSING A TEMPERATURE OF 37°F (ADJ) OR LESS. IN ADDITION, THE OAD AND EAD SHALL CLOSE AND THE RAD AND HV SHALL OPEN, THE ENERGY RECOVERY WHEEL SHALL BE OFF.
2. UPON A FAILURE OF THE SUPPLY OR EXHAUST FAN THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL TO THE OPERATOR WORKSTATION. THE ERV SHALL BE DE-ENERGIZED, THE OAD AND EAD SHALL CLOSE, THE ENERGY RECOVERY WHEEL SHALL DE-ENERGIZE, AND THE RAD SHALL OPEN.
3. WHEN THE SMOKE DETECTOR SENSES SMOKE THE ERV SHALL BE DE-ENERGIZED, THE OAD AND EAD SHALL CLOSE, THE ENERGY RECOVERY WHEEL SHALL DE-ENERGIZE, AND THE RAD SHALL OPEN. A DETAILED ALARM SHALL BE SENT TO THE OPERATOR WORKSTATION. THE ERV SHALL ALSO BE SHUTDOWN UPON RECEIVING A SIGNAL FROM THE FIRE ALARM CONTROL PANEL. COORDINATE CONNECTION TO THE FIRE ALARM PANEL WITH DIV 26.

ALARMS
1. IF THE SUPPLY OR EXHAUST FAN FAILS OR ANY SAFETY IS TRIPPED, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SHALL BE SENT TO THE OPERATOR WORKSTATION.
2. IF FILTER PRESSURE DROP EXCEEDS SETPOINT (INITIALLY 0.6" WG) FOR 10 MINUTES (ADJ), THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SHALL BE SENT TO THE OPERATOR WORKSTATION.
3. IF PRESSURE DROP FOR THE ENERGY WHEEL EXCEEDS SETPOINT (INITIALLY 0.6" WG) FOR 10 MINUTES (ADJ), THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SHALL BE SENT TO THE OPERATOR WORKSTATION.
4. IF THE COOLING DAT RISES ABOVE 60°F (ADJ) FOR 5 MINUTES (ADJ) OR LONGER A DETAILED ALARM SHALL BE SENT TO THE OPERATOR WORKSTATION.
5. IF THE HEATING DAT DROPS BELOW 50°F (ADJ) FOR 5 MINUTES (ADJ) OR LONGER A DETAILED ALARM SHALL BE SENT TO THE OPERATOR WORKSTATION.

ENERGY RECOVERY UNIT



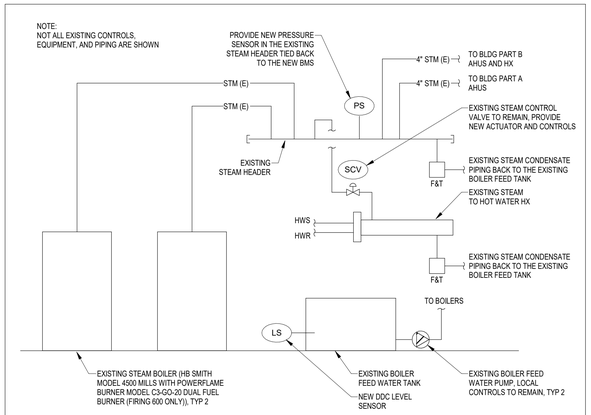
GENERAL
1. 3-WAY VALVES SHALL BE 2-POSITION. SUPPLY SIDE SHALL BE MIXING TYPE, RETURN SIDE SHALL BE DIVERTING TYPE. VALVES SHALL HAVE END-SWITCHES FOR BOTH CYCLES TO PROVE VALVE IS IN THE FULL HEATING OR FULL COOLING MODE.
2. EACH INDIVIDUAL 2-PIPE SYSTEM SHALL BE EITHER IN HEATING OR COOLING MODE.

NORMAL OPERATIONS
1. ON A CALL FOR HEATING OR COOLING FROM ANY SPACE THERMOSTAT, THE 3-WAY VALVE SHALL POSITION FOR THE APPROPRIATE 2-PIPE OPERATION. IF SPACES IN THE SAME ZONE ARE CALLING FOR COOLING + HEATING AT THE SAME TIME, THE MAJORITY CALL PREVAILS. IF THE SAME NUMBER OF SPACES ARE CALLING FOR HEATING AND COOLING IN THE SAME ZONE AT THE SAME TIME, THE MODE (HEATING OR COOLING) WITH THE GREATEST SUMMED OFFSET FROM SETPOINT PREVAILS.
2. SYSTEM SHALL REMAIN IN IT'S CURRENT HEATING OR COOLING MODE UNTIL A CALL FOR THE OPPOSITE MODE.

CHANGEOVER
1. WHEN 1 OR MORE OF THE SPACE THERMOSTATS CHANGES IT'S CALL FROM HEATING TO COOLING (OR VISA VERSA) THE SYSTEM SHALL MEET 2 CONDITIONS PRIOR TO INITIATING CHANGEOVER IN ORDER TO MEET THE REQUIREMENTS OF IECC 2015:
   a. A MINIMUM OF 4-HOURS SHALL PASS FROM THE TIME OF THE 1ST THERMOSTATES CALL AND CHANGEOVER IS INITIATED.
   b. A SUPPLY OR RETURN TEMPERATURE SENSOR SHALL READ NO MORE THEN 30F OF TEMPERATURE DIFFERENCE FROM THE CHANGEOVER FLUID'S SUPPLY TEMPERATURE SETPOINT.

ALARMS
1. SHOULD A 3-WAY VALVE END SWITCH FAIL TO MAKE, SYSTEM SHALL ALARM "FAILED 3-WAY CHANGEOVER VALVE."
2. IF THE 2-PIPE SYSTEM SUPPLY TEMPERATURE VARY MORE THAN 5F (ADJ) FROM THE SUPPLY TEMPERATURE OF THE 4-PIPE SUPPLY TEMPERATURE IT IS DRAWING FROM, SYSTEM SHALL ALARM "LEAKING 3-WAY CHANGEOVER VALVE".

HW & CHW 3-WAY VALVE CONTROL SEQUENCE



GENERAL
1. STEAM BOILERS AND FEEDWATER SYSTEM SHALL BE STARTED AND STOPPED BY A NEW DDC CONTROLLER, EXISTING BURNER CONTROLS TO REMAIN AND BE REUSED. PROVIDE NEW BMS GATEWAY AS REQUIRED.
2. REPLACE ALL OF THE EXISTING PNUEMATIC CONTROLS/ACTUATORS WITH ELECTRONIC AS REQUIRED AND PROVIDE ALL NEW ATC POINTS AS REQUIRED TO MEET THE CONTROL SEQUENCES.
3. ALL SETPOINTS SHALL BE ADJUSTABLE. ALL ACTUATORS SHALL BE ELECTRONIC. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
4. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM WITH REAL TIME UPDATING OF CONDITIONS (STATUS, WATER LEVEL, PRESSURE, BURNER FIRE RATE, ETC.).

HEATING MODE
1. ON A CALL FOR HEAT FROM ANY SPACE OR HEAT EXCHANGER, THE LEAD BOILER BURNER SHALL BE ENERGIZED.
2. THE BURNER ASSOCIATED WITH THE LEAD BOILER SHALL STAGE AS REQUIRED TO MAINTAIN 12PSI STEAM SETPOINT IN THE EXISTING STEAM HEADER.
3. SHOULD THE LEAD BOILER BURNER FAIL TO FIRE, THE STANDBY BOILER AND BURNER SHALL FIRE.

ALARMS
1. WHEN LOW WATER LEVEL IS SENSED (TIED INTO THE EXISTING LOW WATER CUT-OUT) A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
2. IF A FLAME FAILURE OCCURS (TIED INTO THE EXISTING BOILER BURNER CONTROLLER) A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
3. IF LOW PRESSURE IS SENSED IN THE EXISTING STEAM HEADER A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
4. IF LOW FEED WATER LEVEL IS SENSED IN THE EXISTING TANK A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
5. IF A BOILER FEED PUMP FAILS A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.

EXISTING STEAM BOILER CONTROLS

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Seal:

Revisions:

Rev	Date	Description
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2	4/23/2020	ADDENDUM #2

Issued For: ADDENDUM #2

Date: April 23, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

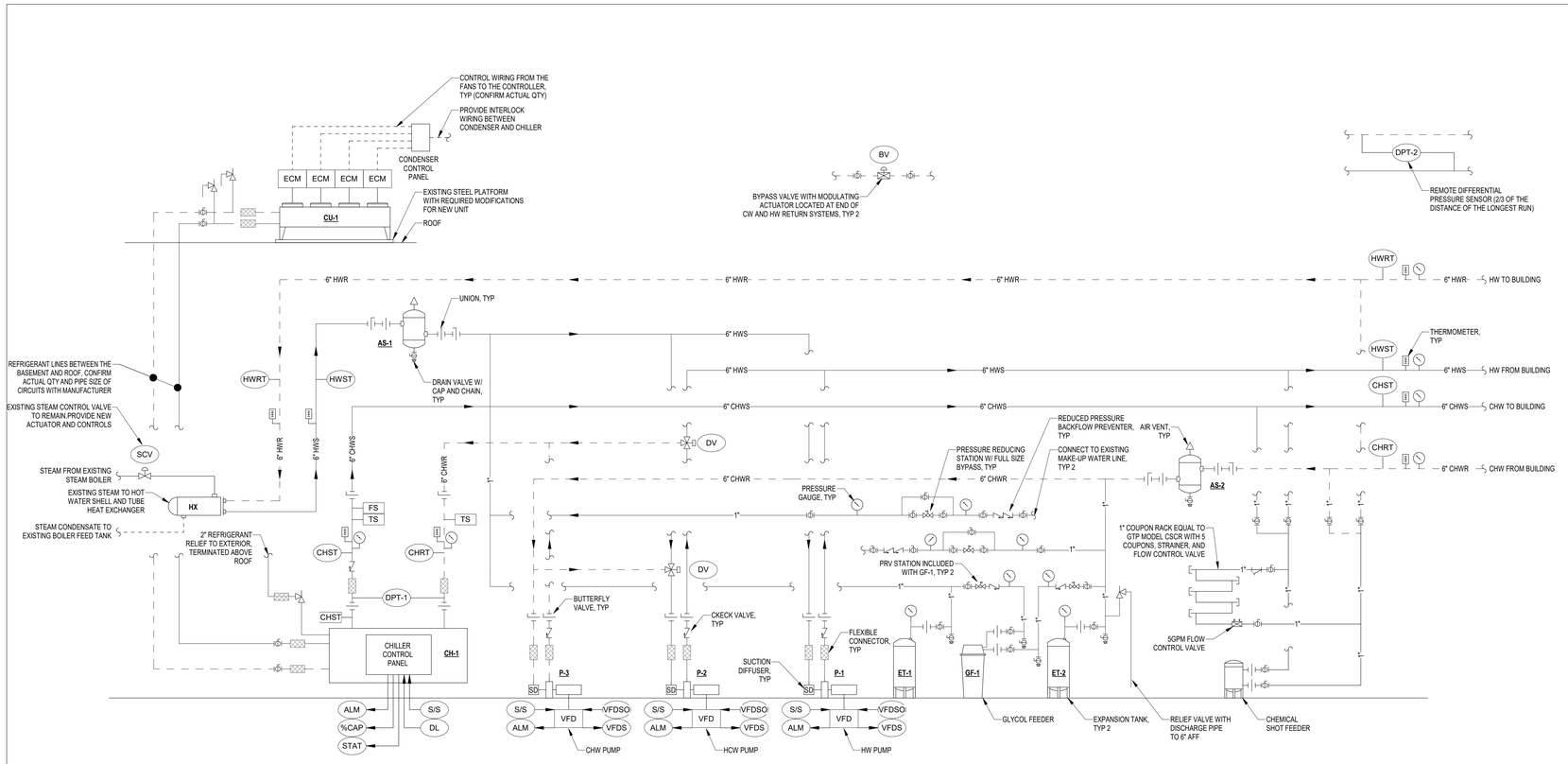
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CONTROLS

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H702

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2-PIPE AUTOMATIC CHANGE-OVER SYSTEM WITH DEAD BAND CONTROL SEQUENCES

GENERAL

1. THE CHILLER SHALL BE CONTROLLED BY THE MANUFACTURER'S INTEGRAL CONTROL PANEL AND INTERFACED TO THE BMS.
2. THE REMOTE CONDENSER SHALL BE CONTROLLED BY THE MANUFACTURER'S INTEGRAL CONTROL PANEL AND INTERFACED TO THE BAS.
3. PROVIDE ALL NEW CONTROLS FOR THE EXISTING STEAM BOILER, STEAM TO HOT WATER HEAT EXCHANGER, AND BOILER FEED SYSTEM AS REQUIRED TO REPLACE ALL OF THE EXISTING PNEUAMTIC CONTROLS AND TIE INTO THE NEW BMS.
4. LOCAL HAND-OFF-AUTOMATIC SWITCHES (H-O-A) FOR EQUIPMENT SHALL PROVIDE LOCAL OVERRIDE OF BAS. ALL HARDWIRED SAFETIES SHALL BE ACTIVE IN BOTH "H" AND "A" POSITIONS.
5. ALL TEMPERATURES LISTED ARE FAHRENHEIT. ALL LIST VALUES SHALL BE ADJUSTABLE.
6. PROVIDE VALVES, TEMPERATURE SENSORS AND OTHER SENSORS SHOWN AND COORDINATE ALL LOCATIONS WITH MECHANICAL CONTRACTOR. COORDINATE AND ENSURE MANUFACTURER'S RECOMMENDED UPSTREAM AND DOWNSTREAM PIPE DIAMETERS ARE PROVIDED.
7. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (PUMPS, CHILLER, REMOTE CONDENSER, HX, BOILERS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURES, ETC.).

ALARM

1. HEATING SUPPLY TEMPERATURE SENSOR (HWST) SHALL TRANSMIT AN ALARM SIGNAL TO THE BMS AND OPERATOR WORKSTATION AND SHUT THE HOT WATER DISTRIBUTION PIPES DOWN IF A TEMPERATURE ABOVE 200°F (ADJ.) IS SENSED FOR 5 MINUTES (ADJ.).
2. HEATING TEMPERATURE SENSOR (HWST) SHALL TRANSMIT AN ALARM SIGNAL TO THE BMS AND EXISTING FRONT END IF A TEMPERATURE BELOW 70°F (ADJ.) IS SENSED FOR 5 MINUTES (ADJ.). EXCLUDE THIS ALARM ON WHEN THE SYSTEM IS IN THE COOLING MODE OR ON START-UP OF SYSTEM.

CHILLER CONTROL SEQUENCE

GENERAL

1. CHILLER MANUFACTURER SHALL FURNISH FIELD MOUNTED (CHILLED WATER SUPPLY AND RETURN TEMPERATURE SENSORS) TO CONTROL AND MONITOR CHILLER CAPACITY, AND FS (FLOW SWITCH) TO VERIFY CHILLER FLOW (THE FLOW SWITCH AND TEMPERATURE SENSORS SHALL BE INSTALLED BY BMS CONTRACTOR). MANUFACTURER SHALL PROVIDE ADJUSTABLE 3-8 SECONDS TIME DELAY BEFORE SHUTDOWN ON LOSS OF FLOW TO ALLOW TIME FOR CHILLED WATER SPARE PUMP TO START
2. CONTROL OF INTERNAL CHILLER OPERATION SHALL BE DONE THROUGH THE CONTROL PANEL PROVIDED BY THE CHILLER MANUFACTURER.
3. AFTER STOPPING, THE CHILLER SHALL NOT START FOR 30 MINUTES. AFTER STARTING, THE CHILLER SHALL NOT STOP FOR AT LEAST 60 MINUTES BEFORE STOPPING. CHILLER SHALL BE LIMITED TO TWO STARTS PER HOUR AND A MAXIMUM FIVE STARTS PER 24 HOUR PERIOD.
4. CHILLED WATER FS (FLOW SWITCH) SHALL PROVE FLOW AT MINIMUM CHILLER FLOW (CONTRACTOR TO CONFIRM WITH MANUFACTURER).
5. BMS CONTRACTOR SHALL PROVIDE DPT-1 (DIFFERENTIAL PRESSURE SENSOR/TRANSMITTER) FOR THE EVAPORATOR OF THE CHILLER. THE DPT SHALL BE USED TO MONITOR THE CHILLED WATER FLOW, BASED ON DP SIGNAL AND CHILLER MANUFACTURER FLOW CURVES. COORDINATE FLOW CURVE WITH MANUFACTURER.

OPERATION

1. ON A CALL FOR COOLING, THE CHILLED WATER PUMP SHALL BE STARTED. AFTER THE CHILLER STARTS-UP, IT SHALL GO UNDER NORMAL CONTROL - SEE PUMP CONTROLS.
2. THE CHILLER SYSTEM SHALL BE SIGNALED TO START BY THE BMS ON A CALL FOR COOLING BY ANY ZONE WHEN THE OAT (OUTDOOR AIR TEMPERATURE SENSOR) IS ABOVE 50°, FOR 10 MINUTES.
3. THE CHILLER MANUFACTURER'S CONTROLS SHALL PROVE FLOW BEFORE THE CHILLER'S STARTED AND CONTROL OPERATION INCLUDING ANTI-RECYCLING TIME DELAYS.
4. WHEN THE OAT DROPS BELOW THE SET POINT FOR 15 MINUTES, THE CHILLER SHALL BE STOPPED, AND AFTER 10 MINUTES THE PUMPS SHALL STOP.
5. BAS CONTRACTOR SHALL SIGNAL THE CHILLER TO PROVIDE THE FOLLOWING LINEAR OUTDOOR AIR WET BULB RESET SCHEDULE:

OA WB	T
OVER 70°F	44
UNDER 55°	48

ALARM

1. COOLING SUPPLY TEMPERATURE SENSOR (CWST) SHALL TRANSMIT AN ALARM SIGNAL TO THE BAS AND OPERATOR WORKSTATION AND SHUT THE CHILLED WATER DISTRIBUTION PUMP DOWN IF A TEMPERATURE BELOW 40°F (ADJ.) IS SENSED FOR 5 MINUTES (ADJ.).
2. COOLING TEMPERATURE SENSOR (CWST) SHALL TRANSMIT AN ALARM SIGNAL TO THE BAS AND EXISTING FRONT END IF A TEMPERATURE ABOVE 58°F (ADJ.) IS SENSED FOR 5 MINUTES (ADJ.). EXCLUDE THIS ALARM ON WHEN THE SYSTEM IS IN THE COOLING MODE OR ON START-UP OF SYSTEM.
3. IF CHILLER FAILS, ALARM SHALL BE SENT TO THE BAS/ OPERATOR WORKSTATION AND THE LOCAL ALARM PANEL.

HOT WATER DISTRIBUTION PUMP (P-1)

GENERAL

1. ON A CALL FOR HEAT THE HOT WATER PUMP SHALL BE AUTOMATICALLY STARTED AND STOPPED BY THE BAS BEFORE HEAT EXCHANGER IS ACTIVATED.
2. WHEN THE HOT WATER PUMP IS STARTED, IT SHALL BE STARTED AT LOW SPEED (INITIALLY 25% - CONFIRM WITH PUMP MANUFACTURER). THE REMOTE DIFFERENTIAL PRESSURE SENSOR DPT-2 SHALL CONTROL THE OPERATING PUMP VARIABLE FREQUENCY DRIVE (VFD) AND SLOWLY INCREASE THE SPEED AS REQUIRED TO THE MINIMUM SPEED THAT MAINTAINS THE SET POINT OF THE REMOTE DPT-2 SENSOR. INITIAL SET POINT SHALL BE 15 PSI - FINAL SET POINTS SHALL BE COORDINATED WITH BALANCER TO THE MINIMUM REQUIRED TO ALLOW FULL FLOW THROUGH THE MOST REMOTE COILS.
3. THE HEATING HOT WATER SUPPLY PUMP (P-1) SHALL OPERATE CONTINUOUSLY WHEN COMMANDED ON BY THE BMS IF A PUMP FAILURE IS SENSED, THE CONTROLLER SHALL DISABLE THE PUMP. CHANGE THE DIVERTER VALVES (DV) ASSOCIATED WITH P-2 TO HEATING, AND ENABLE THE STANDY-BY PUMP (P-2).
4. IF PUMP FAILS, THEN THE BAS SHALL ALARM AND SEND A DETAILED ALARM TO THE OPERATOR WORKSTATION.

CHILLED WATER DISTRIBUTION PUMPS (P-3)

GENERAL

1. ON A CALL FOR COOLING THE CHILLED WATER PUMP SHALL BE AUTOMATICALLY STARTED AND STOPPED BY THE BMS BEFORE CHILLER IS ACTIVATED.
2. WHEN THE CHILLED WATER PUMP IS STARTED, IT SHALL BE STARTED AT LOW SPEED (INITIALLY 25% - CONFIRM WITH PUMP MANUFACTURER). THE REMOTE DIFFERENTIAL PRESSURE SENSOR DPT-2 SHALL CONTROL THE OPERATING PUMP VARIABLE FREQUENCY DRIVE (VFD) AND SLOWLY INCREASE THE SPEED AS REQUIRED TO THE MINIMUM SPEED THAT MAINTAINS THE SET POINT OF THE REMOTE DPT-2 SENSOR. INITIAL SET POINT SHALL BE 15 PSI - FINAL SET POINTS SHALL BE COORDINATED WITH BALANCER TO THE MINIMUM REQUIRED TO ALLOW FULL FLOW THROUGH THE MOST REMOTE COILS.
3. THE CHILLED WATER SUPPLY PUMP (P-3) SHALL OPERATE CONTINUOUSLY WHEN COMMANDED ON BY THE BMS SYSTEM IF A PUMP FAILURE IS SENSED, THE CONTROLLER SHALL DISABLE THE PUMP. CHANGE THE DIVERTER VALVES (DV) ASSOCIATED WITH P-2 TO COOLING, AND ENABLE THE STANDY-BY PUMP.
4. IF PUMP FAILS, THEN THE BAS SHALL ALARM AND SEND A DETAILED ALARM TO THE OPERATOR WORKSTATION.

HOT WATER RESET

1. WHEN THE OUTSIDE AIR TEMPERATURE DROPS TO 60°F (ADJ), IF REHEAT IS REQUIRED IN ANY ZONE, OR AT ANY HRV, THE SCV SHALL MODULATE TO MAINTAIN THE HOT WATER SUPPLY TEMPERATURE (HWST).
2. THE HOT WATER SUPPLY TEMPERATURE SHALL BE MODULATED BETWEEN 100°F AND 190°F (ADJ) ACCORDING TO THE FOLLOWING ADJUSTABLE SCHEDULE:

OUTDOOR AIR TEMP	HOT WATER SUPPLY TEMP
-10°F	190°F
10°F	160°F
50°F	100°F

REPORTING FUNCTIONS

HISTORIES

1. THE BMS SYSTEM SHALL PRINT OUT ANY TEMPERATURE OR DATA FROM ANY SENSOR OR DEFINED VARIABLE, ON REQUEST OF OPERATOR.
2. THE BMS SHALL BE PROGRAMMED TO RECORD HISTORIES OF ALL:
   A. WATER TEMPERATURES AND STATUS.
   B. HOUR OF DAY AND TIME OF DAY.
   C. HOURS OF OPERATION ASSOCIATED WITH EACH PIECE OF EQUIPMENT
   D. ANY OTHER ITEM, OVER ANY TIME PERIOD, REQUESTED BY OPERATOR
3. THE BMS SHALL PRINTOUT OUT ALL CHANGES IN EQUIPMENT STATUS, AS THEY OCCUR.

ALARM

1. IN ADDITION TO ALARMS PREVIOUSLY LISTED, ALL SENSORS AND VARIABLES SHALL BE CAPABLE OF HIGH/LOW ALARM POINTS, AT A MINIMUM THE FOLLOWING SHALL BE ALARMED, AFTER APPROPRIATE TIME DELAYS:
   A. ANY PIECE OF EQUIPMENT IS INDICATED AS OFF, WHEN IT SHOULD BE ON (IGNORE IF CHILLER IS OFF TEMPORARILY DUE TO LOW LOAD CONDITIONS.
   B. ANY PIECE OF EQUIPMENT IS ON, THAT IS INDICATED AS OFF OR FAILS

HOT WATER/CHILLED WATER CONTROL SEQUENCES

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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CONTROLS

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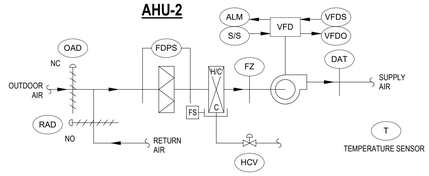
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ADD ALTERNATE #1

AHU-2



GENERAL
1. AIR HANDLING UNIT (AHU-2) SHALL BE CONTROLLED BY DDC CONTROLLER.
2. ALL SETPOINTS SHALL BE ADJUSTABLE.
3. ALL ACTUATORS SHALL BE ELECTRONIC. MANUFACTURER TO WIRE ALL CONTROL POINTS TO A TERMINAL STRIP FOR THE ATC CONTRACTOR TO CONNECT TO.
4. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
5. LOCAL HAND-OFF-AUTOMATIC SWITCH (H-O-A) FOR FANS SHALL OVERRIDE DDC START/STOP COMMANDS. ALL HARDWIRED SAFETIES SHALL BE ACTIVE IN BOTH "H" AND "A" POSITIONS.
6. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (FAN, VALVES, DAMPERS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURE, ETC.).

FAN CONTROL
1. WHILE DE-ENERGIZED (OR OFF ON SAFETY OR MANUAL DISCONNECT) AHU SHALL BE OFF WITH THE OAD AND HCV CLOSED. THE RAD SHALL BE OPEN.
2. WHEN COMMANDED TO START, THE AHU OAD AND RAD SHALL MODULATE OPEN TO THEIR MINIMUM POSITION. THE AHU SUPPLY FAN SHALL START. THE SPACE TEMPERATURE SENSOR SHALL MODULATE THE HEATING/COOLING VALVE (HCV) TO MAINTAIN THE SPACE TEMPERATURE SET POINT. THE AHU SUPPLY FAN SHALL RUN CONTINUOUSLY.

ECONOMIZER MODE
1. WHEN THE OUTDOOR AIR ENTHALPY IS BELOW THE RETURN AIR ENTHALPY SETPOINT, OUTDOOR AND RETURN AIR DAMPERS SHALL BE PROPORTIONALLY MODULATED UP TO 100% OUTDOOR AIR TO MAINTAIN SET POINT. THE REVERSE SHALL OCCUR ON A DROP BELOW THE COOLING SUPPLY AIR TEMPERATURE SET POINT.
2. THE SUPPLY AIR TEMPERATURE SHALL BE LIMITED TO 55°F AND SHALL NOT RESULT IN A REDUCTION BELOW THE MINIMUM OUTDOOR AIRFLOW.

OCCUPIED COOLING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING. THE SUPPLYFAN SHALL RUN CONTINUOUSLY. UPON A DROP IN SPACE TEMPERATURE BELOW THE COOLING SETPOINT OF 76°F (ADJ), THE HCV SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE.

UNOCCUPIED COOLING MODE
1. THE UNIT SHALL BE OFF, THE HEATING/COOLING CONTROL VALVE (HCV) SHALL BE CLOSED.

OCCUPIED HEATING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING. THE SUPPLY FAN SHALL RUN CONTINUOUSLY. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 68°F (ADJ), THE HCV SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE.

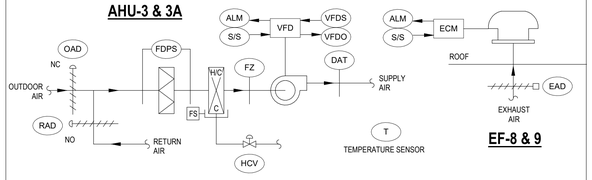
UNOCCUPIED HEATING MODE
1. THE OAD SHALL BE CLOSED AND RAD SHALL BE OPEN. THE SUPPLY FAN SHALL BE DE-ENERGIZED. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 60°F (ADJ), THE HCV SHALL OPEN 100% AND THE SUPPLY FAN SHALL BE ENERGIZED. WHEN THE SPACE TEMPERATURE REACHES 65°F (ADJ), THE SUPPLY FAN SHALL DE-ENERGIZE AND HV SHALL CLOSE.

SAFETIES
1. THE FOLLOWING SAFETIES SHALL SHUT DOWN THE H&V UNIT.
   A. THE FREEZESTAT SHALL SHUTDOWN AHU, CLOSE THE OAD, OPEN THE HCV, AND OPEN THE RAD WHENEVER THE TEMPERATURE IS BELOW 37°F (ADJ). A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
   B. UPON A FAILURE OF THE AHU SUPPLY FAN AS SENSED BY THE CURRENT SENSOR, A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION. THE AHU SHALL BE DE-ENERGIZED, THE OAD SHALL BE CLOSED, AND THE RAD SHALL BE OPEN.
   C. WHEN THE FLOAT SWITCH (FS) IN THE DRAIN PAN DETECTS A HIGH WATER LEVEL, THE COOLING COIL CONTROL VALVE (CV) SHALL CLOSE.

ALARMS
1. IF SUPPLY FAN FAILS OR ANY SAFETY IS TRIPPED, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
2. IF THE FILTER PRESSURE DROP EXCEEDS SETPOINT (INITIALLY 0.4" WG) FOR 10 MINUTES, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
3. DISCHARGE AIR TEMPERATURE SENSOR SHALL LIMIT THE HEATING DISCHARGE AIR TEMPERATURE TO NO LOWER THAN 50°F (ADJ). IF THE LIMITS ARE EXCEEDED BY 2°F FOR 5 MINUTES (ADJ) OR LONGER, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.

EXISTING AIR HANDLING UNIT (AHU-2)

AHU-3 & 3A



EF-8 & 9

GENERAL
1. AIR HANDLING UNIT (AHU-3 & 3A) SHALL BE CONTROLLED BY DDC CONTROLLER. UNIT SHALL BE INTERLOCKED WITH EXHAUST FAN (EF-8 & EF-9).
2. ALL SETPOINTS SHALL BE ADJUSTABLE.
3. ALL ACTUATORS SHALL BE ELECTRONIC. MANUFACTURER TO WIRE ALL CONTROL POINTS TO A TERMINAL STRIP FOR THE ATC CONTRACTOR TO CONNECT TO.
4. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
5. LOCAL HAND-OFF-AUTOMATIC SWITCH (H-O-A) FOR FANS SHALL OVERRIDE DDC START/STOP COMMANDS. ALL HARDWIRED SAFETIES SHALL BE ACTIVE IN BOTH "H" AND "A" POSITIONS.
6. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (FAN, VALVES, DAMPERS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURE, ETC.).

FAN CONTROL
1. WHILE DE-ENERGIZED (OR OFF ON SAFETY OR MANUAL DISCONNECT) AHU SHALL BE OFF WITH THE OAD AND HCV CLOSED. THE RAD SHALL BE OPEN.
2. WHEN COMMANDED TO START, THE AHU OAD AND RAD SHALL MODULATE OPEN TO THEIR MINIMUM POSITION. EXHAUST FAN DAMPER SHALL OPEN, THE AHU SUPPLY FAN SHALL START, AND THEN EXHAUST FAN SHALL START. THE SPACE TEMPERATURE SENSOR SHALL MODULATE THE HEATING/COOLING VALVE (HCV) TO MAINTAIN THE SPACE TEMPERATURE SET POINT. THE AHU SUPPLY FAN AND EXHAUST FAN SHALL RUN CONTINUOUSLY.

ECONOMIZER MODE
1. WHEN THE OUTDOOR AIR ENTHALPY IS BELOW THE RETURN AIR ENTHALPY SETPOINT. THE EXHAUST, OUTDOOR AND RETURN AIR DAMPERS SHALL BE PROPORTIONALLY MODULATED UP TO 100% OUTDOOR AIR TO MAINTAIN SET POINT. THE REVERSE SHALL OCCUR ON A DROP BELOW THE COOLING SUPPLY AIR TEMPERATURE SET POINT.
2. THE SUPPLY AIR TEMPERATURE SHALL BE LIMITED TO 55°F AND SHALL NOT RESULT IN A REDUCTION BELOW THE MINIMUM OUTDOOR AIRFLOW.
3. THE EXISTING GRAVITY VENTILATORS SHALL BE USED TO RELIEVE THE BUILDING PRESSURE WHEN ECONOMIZER MODE IS ACTIVATED.

OCCUPIED COOLING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING. THE SUPPLY AND EXHAUST FAN SHALL RUN CONTINUOUSLY. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 68°F (ADJ), THE HCV SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE.

UNOCCUPIED COOLING MODE
1. THE UNIT SHALL BE OFF, THE HEATING/COOLING CONTROL VALVE (HCV) SHALL BE CLOSED.

OCCUPIED HEATING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING. THE SUPPLY AND EXHAUST FAN SHALL RUN CONTINUOUSLY. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 68°F (ADJ), THE HCV SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE.

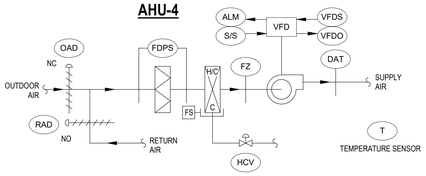
UNOCCUPIED HEATING MODE
1. THE OAD SHALL BE CLOSED AND RAD SHALL BE OPEN. THE SUPPLY FAN SHALL BE DE-ENERGIZED. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 60°F (ADJ), THE HCV SHALL OPEN 100% AND THE SUPPLY FAN SHALL BE ENERGIZED. WHEN THE SPACE TEMPERATURE REACHES 65°F (ADJ), THE SUPPLY FAN SHALL DE-ENERGIZE AND HV SHALL CLOSE.

SAFETIES
1. THE FOLLOWING SAFETIES SHALL SHUT DOWN THE H&V UNIT.
   A. THE FREEZESTAT SHALL SHUTDOWN AHU, CLOSE THE OAD, OPEN THE HCV, AND OPEN THE RAD WHENEVER THE TEMPERATURE IS BELOW 37°F (ADJ). A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
   B. UPON A FAILURE OF THE AHU SUPPLY FAN AS SENSED BY THE CURRENT SENSOR, A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION. THE AHU SHALL BE DE-ENERGIZED, THE OAD SHALL BE CLOSED, AND THE RAD SHALL BE OPEN.
   C. WHEN THE FLOAT SWITCH (FS) IN THE DRAIN PAN DETECTS A HIGH WATER LEVEL, THE COOLING COIL CONTROL VALVE (CV) SHALL CLOSE.

ALARMS
1. IF SUPPLY FAN OR ANY EXHAUST FAN FAILS OR ANY SAFETY IS TRIPPED, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
2. IF THE FILTER PRESSURE DROP EXCEEDS SETPOINT (INITIALLY 0.4" WG) FOR 10 MINUTES, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
3. DISCHARGE AIR TEMPERATURE SENSOR SHALL LIMIT THE HEATING DISCHARGE AIR TEMPERATURE TO NO LOWER THAN 50°F (ADJ). IF THE LIMITS ARE EXCEEDED BY 2°F FOR 5 MINUTES (ADJ) OR LONGER, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.

AIR HANDLING UNIT (AHU-3 & 3A) AND EXHAUST FAN (EF-8 & 9)

AHU-4



GENERAL
1. AIR HANDLING UNIT (AHU-4) SHALL BE CONTROLLED BY DDC CONTROLLER.
2. ALL SETPOINTS SHALL BE ADJUSTABLE.
3. ALL ACTUATORS SHALL BE ELECTRONIC. MANUFACTURER TO WIRE ALL CONTROL POINTS TO A TERMINAL STRIP FOR THE ATC CONTRACTOR TO CONNECT TO.
4. ALL TEMPERATURES LISTED ARE IN FAHRENHEIT.
5. LOCAL HAND-OFF-AUTOMATIC SWITCH (H-O-A) FOR FANS SHALL OVERRIDE DDC START/STOP COMMANDS. ALL HARDWIRED SAFETIES SHALL BE ACTIVE IN BOTH "H" AND "A" POSITIONS.
6. PROVIDE INDIVIDUAL GRAPHICS OF EACH SYSTEM (FAN, VALVES, DAMPERS, ETC.) WITH REAL TIME UPDATING OF CONDITIONS (STATUS, TEMPERATURE, ETC.).

FAN CONTROL
1. WHILE DE-ENERGIZED (OR OFF ON SAFETY OR MANUAL DISCONNECT) AHU SHALL BE OFF WITH THE OAD AND HCV CLOSED. THE RAD SHALL BE OPEN.
2. WHEN COMMANDED TO START, THE AHU OAD AND RAD SHALL MODULATE OPEN TO THEIR MINIMUM POSITION. EXHAUST FAN DAMPER SHALL OPEN, THE AHU SUPPLY FAN SHALL START, AND THEN EXHAUST FAN SHALL START. THE SPACE TEMPERATURE SENSOR SHALL MODULATE THE HEATING/COOLING VALVE (HCV) TO MAINTAIN THE SPACE TEMPERATURE SET POINT. THE AHU SUPPLY FAN AND EXHAUST FAN SHALL RUN CONTINUOUSLY.

ECONOMIZER MODE
1. WHEN THE OUTDOOR AIR ENTHALPY IS BELOW THE RETURN AIR ENTHALPY SETPOINT, THE EXHAUST, OUTDOOR AND RETURN AIR DAMPERS SHALL BE PROPORTIONALLY MODULATED UP TO 100% OUTDOOR AIR TO MAINTAIN SET POINT. THE REVERSE SHALL OCCUR ON A DROP BELOW THE COOLING SUPPLY AIR TEMPERATURE SET POINT.
2. THE SUPPLY AIR TEMPERATURE SHALL BE LIMITED TO 55°F AND SHALL NOT RESULT IN A REDUCTION BELOW THE MINIMUM OUTDOOR AIRFLOW.
3. THE EXISTING KITCHEN EXHAUST SYSTEM SHALL PROVIDE PRESSURE RELIEF FROM THE SPACE.

OCCUPIED COOLING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING. THE SUPPLY AND EXHAUST FAN SHALL RUN CONTINUOUSLY. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 68°F (ADJ), THE HCV SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE.

UNOCCUPIED COOLING MODE
1. THE UNIT SHALL BE OFF, THE HEATING/COOLING CONTROL VALVE (HCV) SHALL BE CLOSED.

OCCUPIED HEATING MODE
1. THE OAD AND RAD SHALL BE IN THE MINIMUM SETTING. THE SUPPLY AND EXHAUST FAN SHALL RUN CONTINUOUSLY. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 68°F (ADJ), THE HCV SHALL MODULATE OPEN AS REQUIRED TO MAINTAIN THE SPACE TEMPERATURE.

UNOCCUPIED HEATING MODE
1. THE OAD SHALL BE CLOSED AND RAD SHALL BE OPEN. THE SUPPLY FAN SHALL BE DE-ENERGIZED. UPON A DROP IN SPACE TEMPERATURE BELOW THE HEATING SETPOINT OF 60°F (ADJ), THE HCV SHALL OPEN 100% AND THE SUPPLY FAN SHALL BE ENERGIZED. WHEN THE SPACE TEMPERATURE REACHES 65°F (ADJ), THE SUPPLY FAN SHALL DE-ENERGIZE AND HV SHALL CLOSE.

SAFETIES
1. THE FOLLOWING SAFETIES SHALL SHUT DOWN THE H&V UNIT.
   A. THE FREEZESTAT SHALL SHUTDOWN AHU, CLOSE THE OAD, OPEN THE HCV, AND OPEN THE RAD WHENEVER THE TEMPERATURE IS BELOW 37°F (ADJ). A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
   B. UPON A FAILURE OF THE AHU SUPPLY FAN AS SENSED BY THE CURRENT SENSOR, A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION. THE AHU SHALL BE DE-ENERGIZED, THE OAD SHALL BE CLOSED, AND THE RAD SHALL BE OPEN.
   C. WHEN THE FLOAT SWITCH (FS) IN THE DRAIN PAN DETECTS A HIGH WATER LEVEL, THE COOLING COIL CONTROL VALVE (CV) SHALL CLOSE.

ALARMS
1. IF SUPPLY FAN FAILS OR ANY SAFETY IS TRIPPED, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
2. IF THE FILTER PRESSURE DROP EXCEEDS SETPOINT (INITIALLY 0.4" WG) FOR 10 MINUTES, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.
3. DISCHARGE AIR TEMPERATURE SENSOR SHALL LIMIT THE HEATING DISCHARGE AIR TEMPERATURE TO NO LOWER THAN 50°F (ADJ). IF THE LIMITS ARE EXCEEDED BY 2°F FOR 5 MINUTES (ADJ) OR LONGER, THE DDC CONTROLLER SHALL GIVE A DETAILED ALARM SIGNAL SHALL BE SENT TO THE OPERATOR WORKSTATION.

AIR HANDLING UNIT (AHU-4)

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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VANZELM ENGINEERS
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Seal:

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1	4/15/2020	ADDENDUM #1

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W&S Project No: 2191117

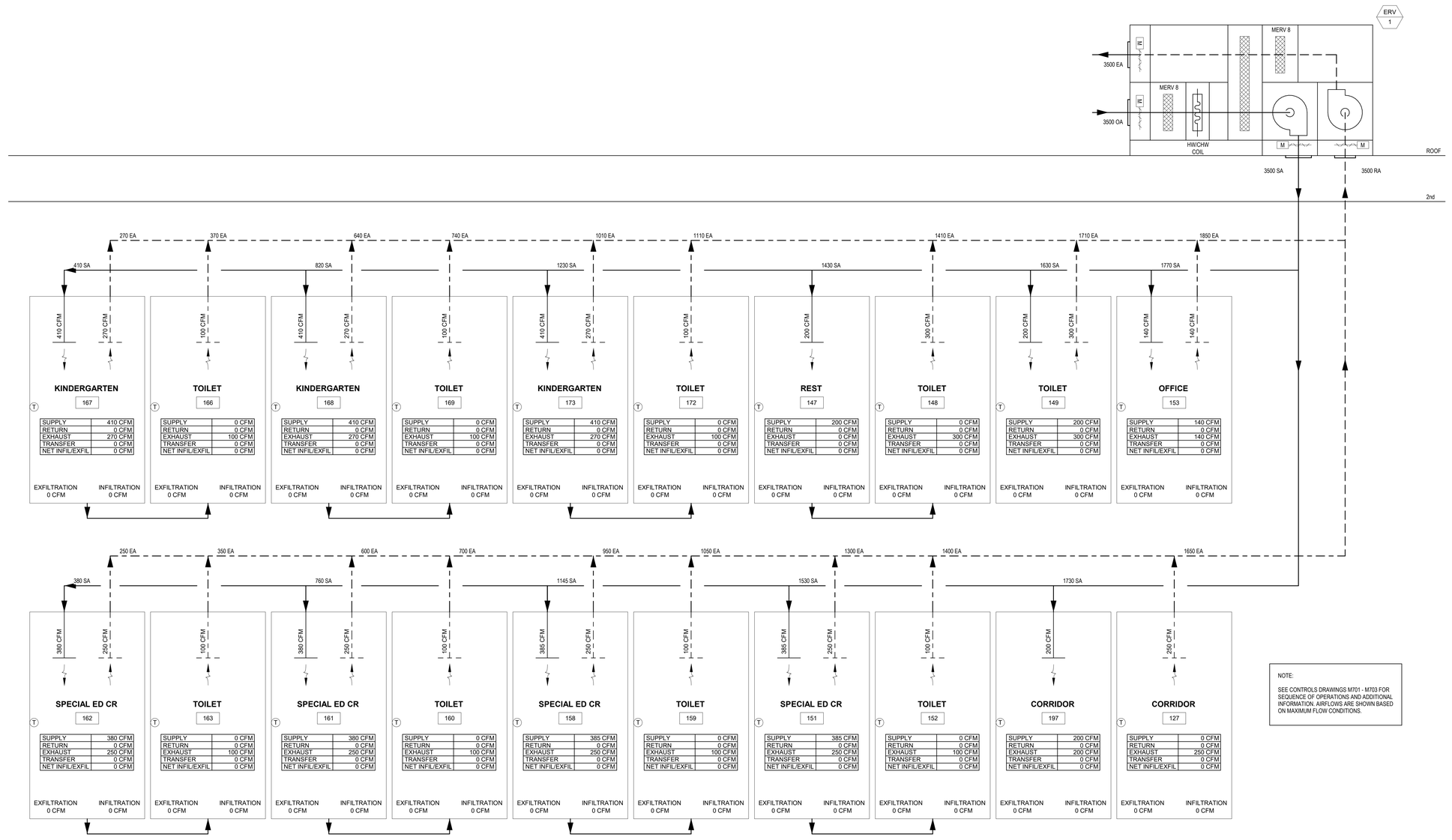
Drawing Title:

ADD ALTERNATE CONTROLS

Sheet Number:

H704

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SUPPLY	410 CFM
RETURN	0 CFM
EXHAUST	270 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

SUPPLY	0 CFM
RETURN	0 CFM
EXHAUST	100 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

SUPPLY	380 CFM
RETURN	0 CFM
EXHAUST	250 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

SUPPLY	385 CFM
RETURN	0 CFM
EXHAUST	250 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

SUPPLY	200 CFM
RETURN	0 CFM
EXHAUST	0 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

SUPPLY	300 CFM
RETURN	0 CFM
EXHAUST	0 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

SUPPLY	140 CFM
RETURN	0 CFM
EXHAUST	140 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

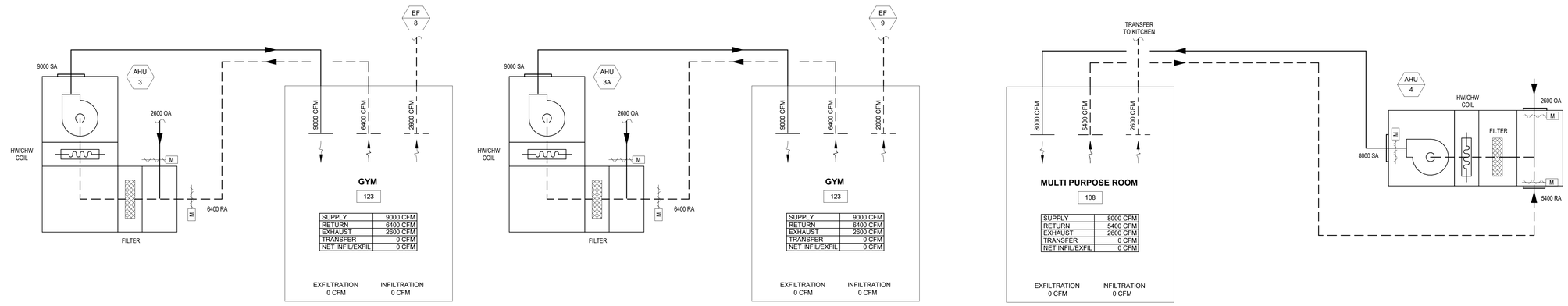
SUPPLY	200 CFM
RETURN	0 CFM
EXHAUST	200 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

SUPPLY	0 CFM
RETURN	0 CFM
EXHAUST	100 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

SUPPLY	0 CFM
RETURN	0 CFM
EXHAUST	250 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

NOTE:

SEE CONTROLS DRAWINGS M701 - M703 FOR SEQUENCE OF OPERATIONS AND ADDITIONAL INFORMATION. AIRFLOWS ARE SHOWN BASED ON MAXIMUM FLOW CONDITIONS.



SUPPLY	9000 CFM
RETURN	6400 CFM
EXHAUST	2600 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

SUPPLY	8000 CFM
RETURN	5400 CFM
EXHAUST	2600 CFM
TRANSFER	0 CFM
NET INFIL/EXFIL	0 CFM

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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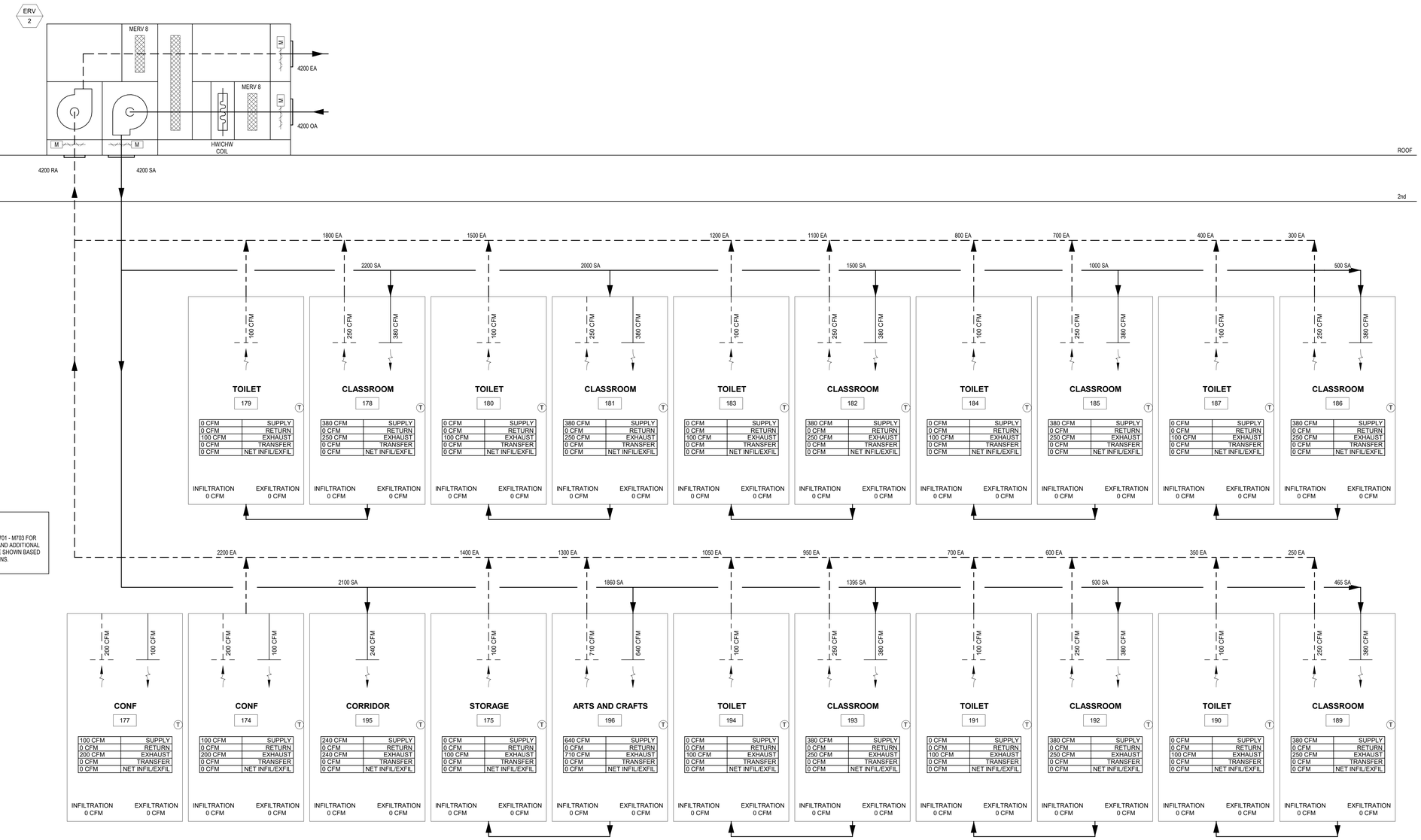
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AIRFLOW DIAGRAM

Sheet Number:

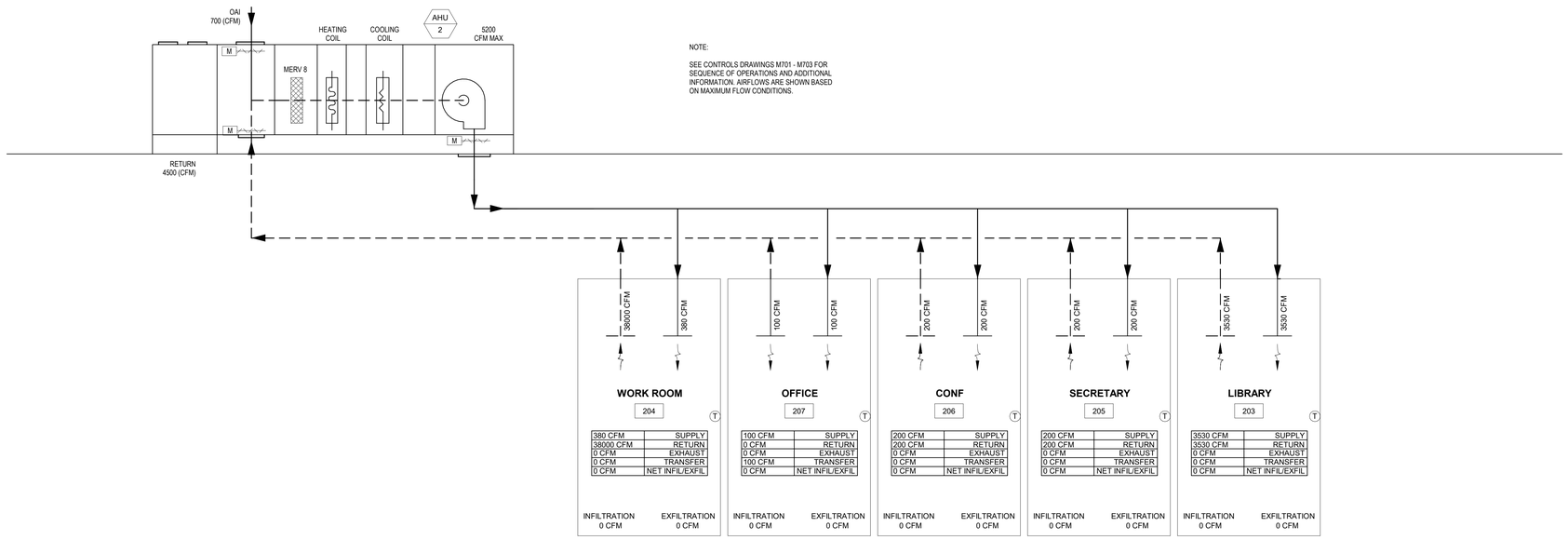
H801

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NOTE:

SEE CONTROLS DRAWINGS M701 - M703 FOR SEQUENCE OF OPERATIONS AND ADDITIONAL INFORMATION. AIRFLOWS ARE SHOWN BASED ON MAXIMUM FLOW CONDITIONS.



NOTE:

SEE CONTROLS DRAWINGS M701 - M703 FOR SEQUENCE OF OPERATIONS AND ADDITIONAL INFORMATION. AIRFLOWS ARE SHOWN BASED ON MAXIMUM FLOW CONDITIONS.

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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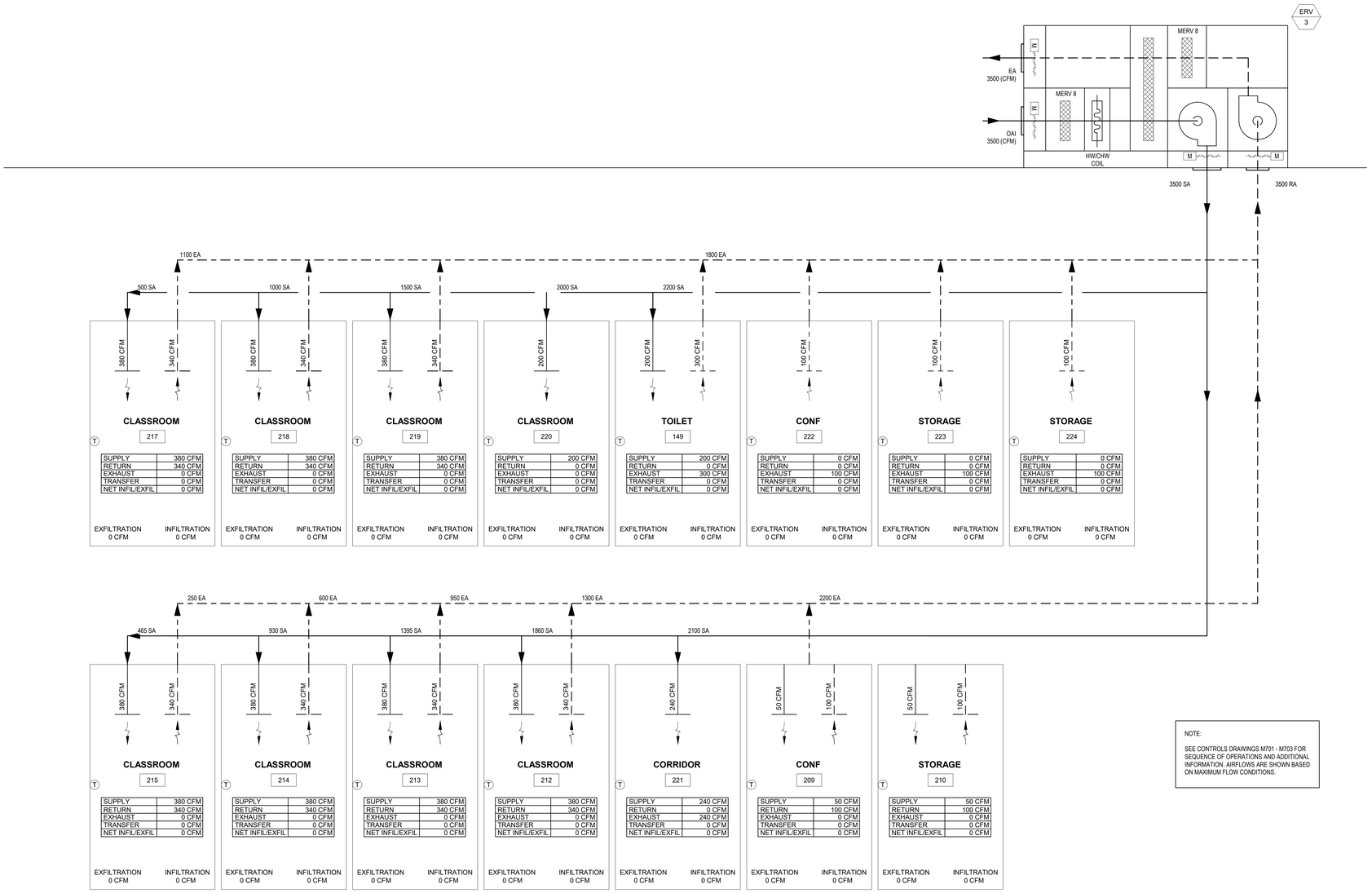
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AIRFLOW DIAGRAMS

Sheet Number:

H802

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NOTE:

SEE CONTROLS DRAWINGS M701 - M703 FOR SEQUENCE OF OPERATIONS AND ADDITIONAL INFORMATION. AIRFLOWS ARE SHOWN BASED ON MAXIMUM FLOW CONDITIONS.

Project:

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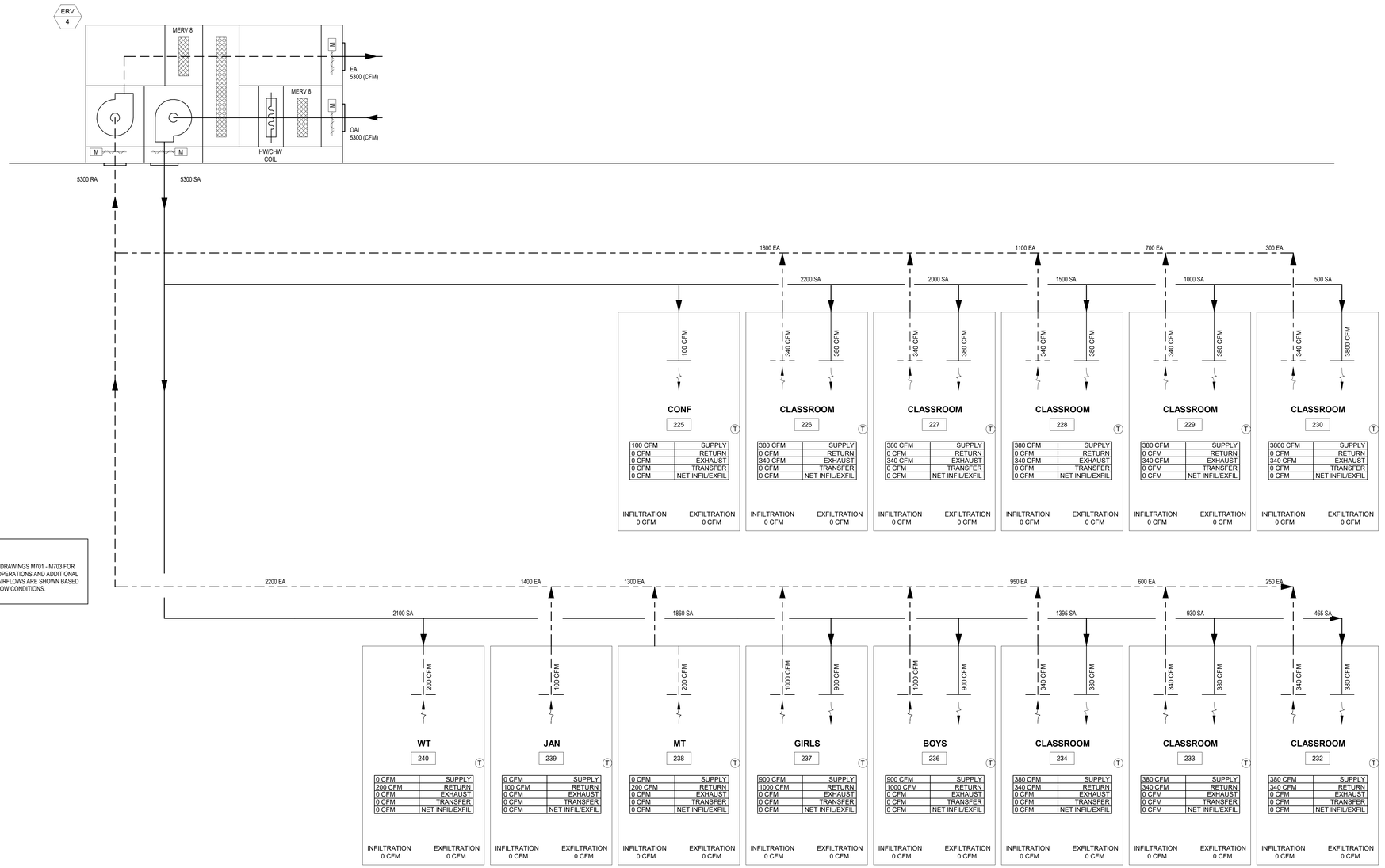
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AIRFLOW DIAGRAMS

Sheet Number:

H803

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NOTE:

SEE CONTROLS DRAWINGS M701 - M703 FOR SEQUENCE OF OPERATIONS AND ADDITIONAL INFORMATION. AIRFLOWS ARE SHOWN BASED ON MAXIMUM FLOW CONDITIONS.

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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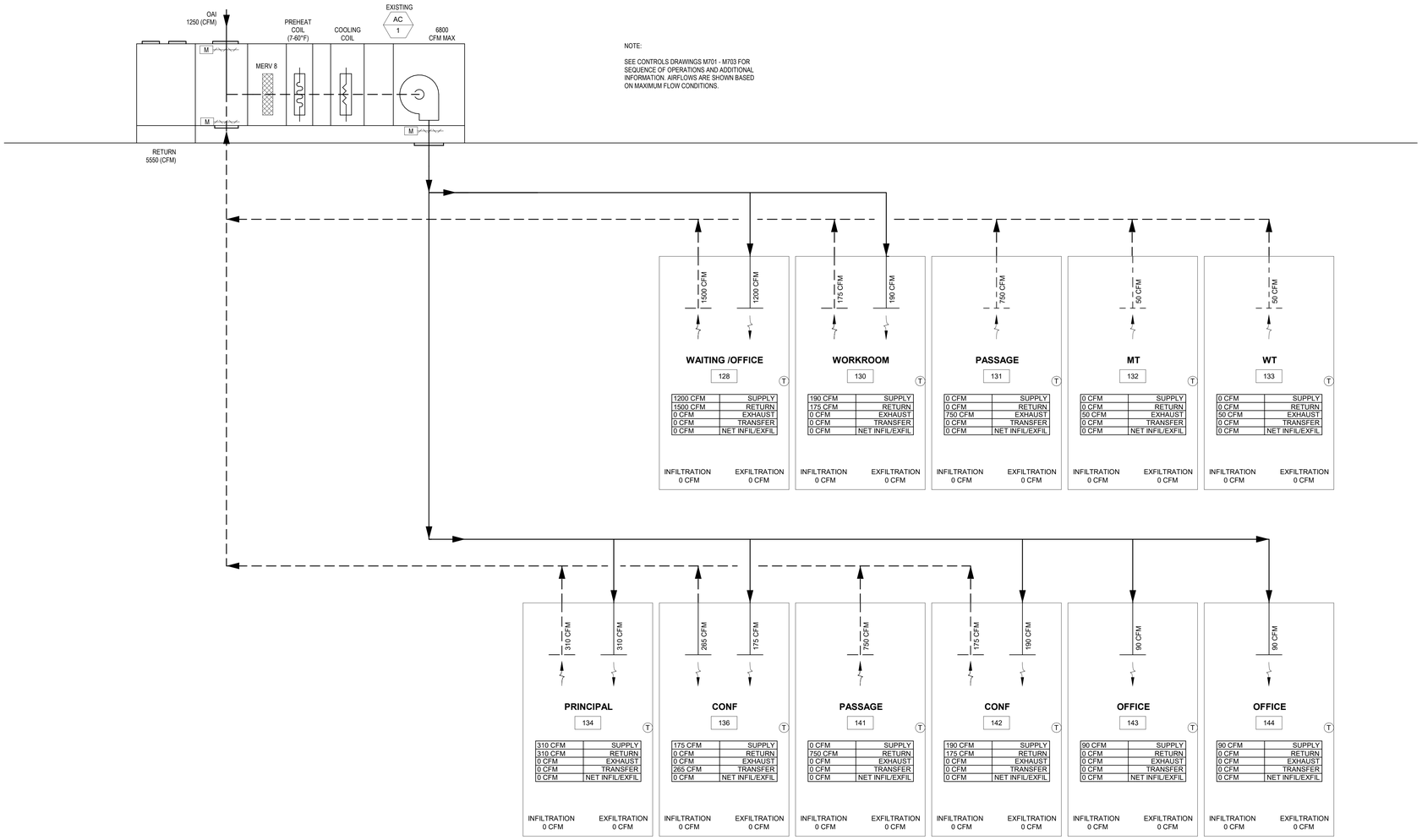
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AIRFLOW DIAGRAMS

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H804

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NOTE:

SEE CONTROLS DRAWINGS M701 - M703 FOR SEQUENCE OF OPERATIONS AND ADDITIONAL INFORMATION. AIRFLOWS ARE SHOWN BASED ON MAXIMUM FLOW CONDITIONS.

Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Drawing Title:

AIRFLOW DIAGRAMS

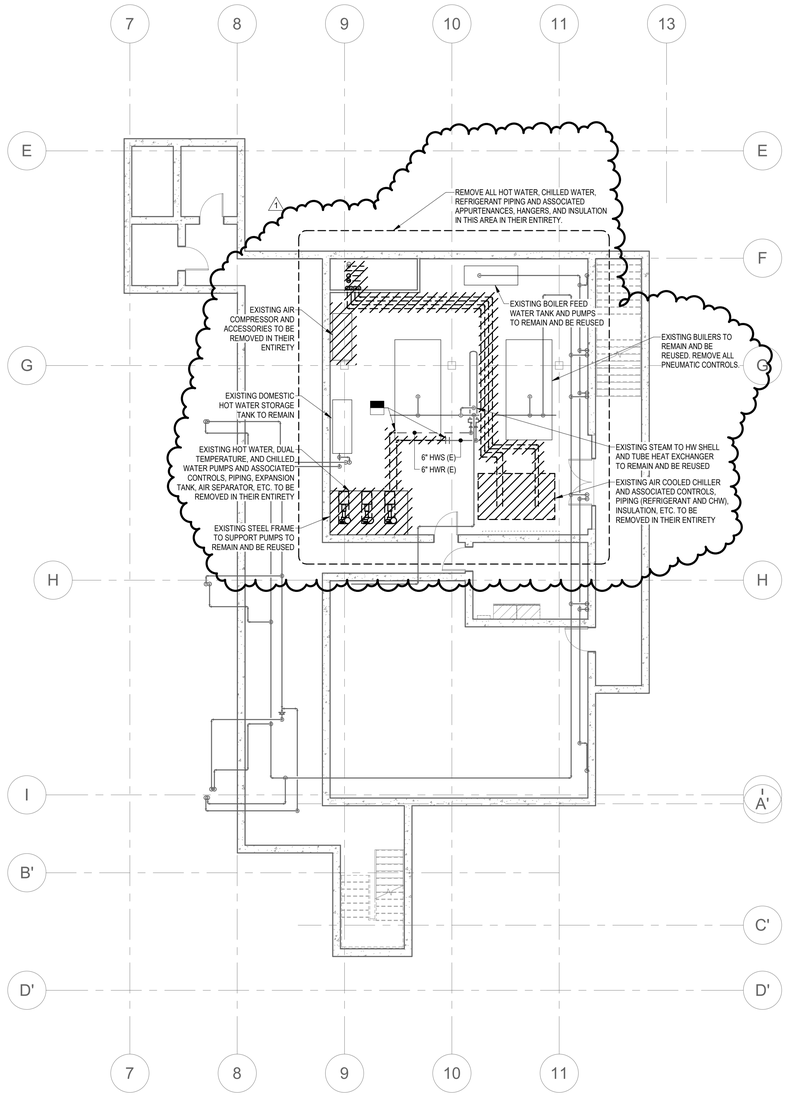
Sheet Number:

H805

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GENERAL NOTES

1. REMOVE ALL OF THE EXISTING UNIT VENTILATORS AND ASSOCIATED CONTROLS, PIPING, AND SLEEVE (INCLUDING THE OUTSIDE AIR INTAKE GRILLE) IN THEIR ENTIRETY. PATCHING OF THE FLOOR, INTERIOR, EXTERIOR WALL AND ROOF SHALL BE COORDINATED WITH THE ARCHITECTUAL PLANS.
2. REFERANCE HM-1 & HM-2



Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

21 Tuttle Rd.
Bristol, CT 06010

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PROJECT TRUE

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

Date: April 15, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

BASEMENT DEMOLITON PLAN

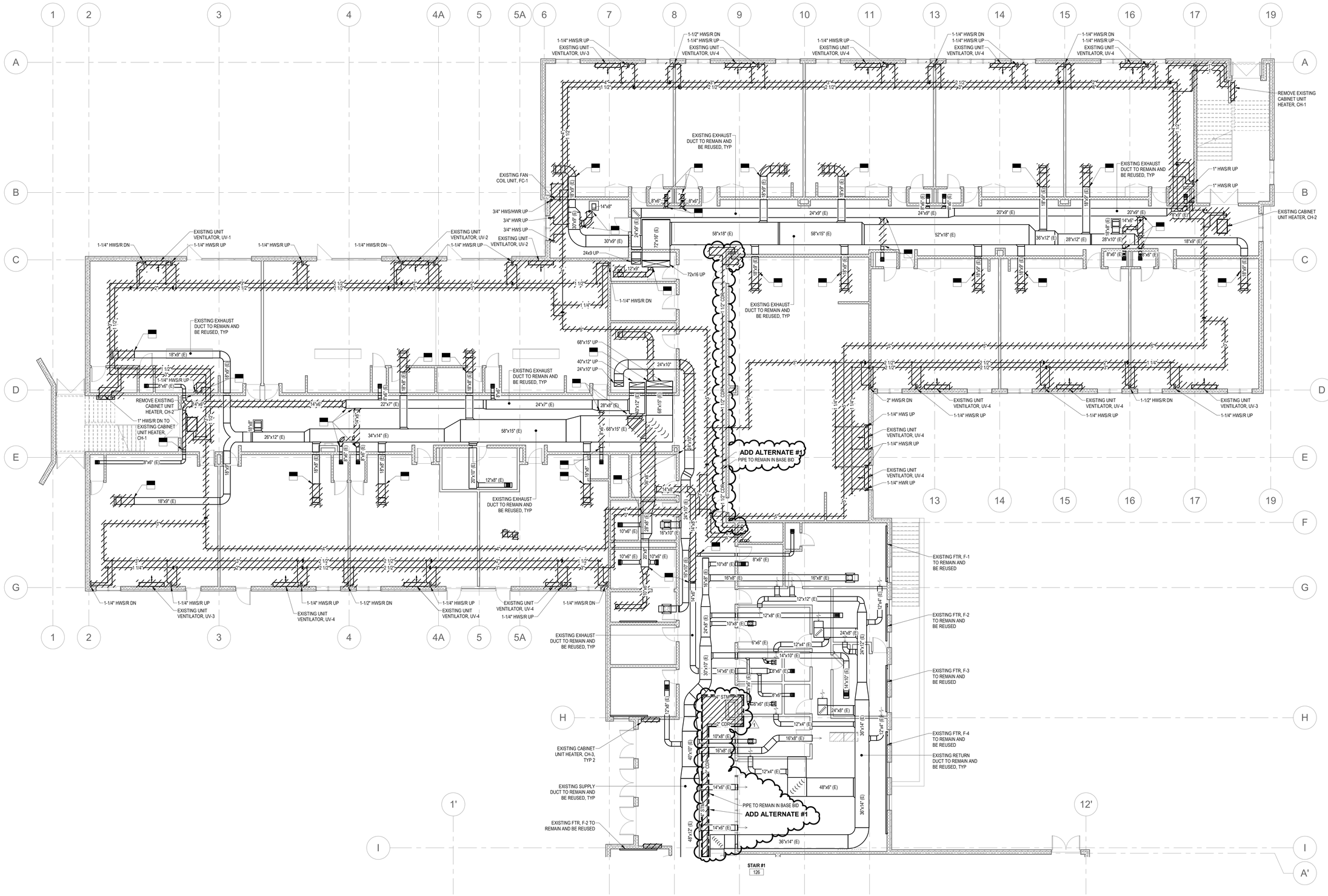
Sheet Number:

HD100

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GENERAL NOTES

1. REMOVE ALL OF THE EXISTING UNIT VENTILATORS AND ASSOCIATED CONTROLS, PIPING, AND SLEEVE (INCLUDING THE OUTSIDE AIR INTAKE GRILLE) IN THEIR ENTIRETY. PATCHING OF THE FLOOR, INTERIOR , EXTERIOR WALL AND ROOF SHALL BE COORDINATED WITH THE ARCHITECTUAL PLANS.
2. REFERANCE HM-1 & HM-2



Project:

CONTRACT 2C20-064

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0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

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Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

FIRST FLOOR DEMOLITION PLAN PART A

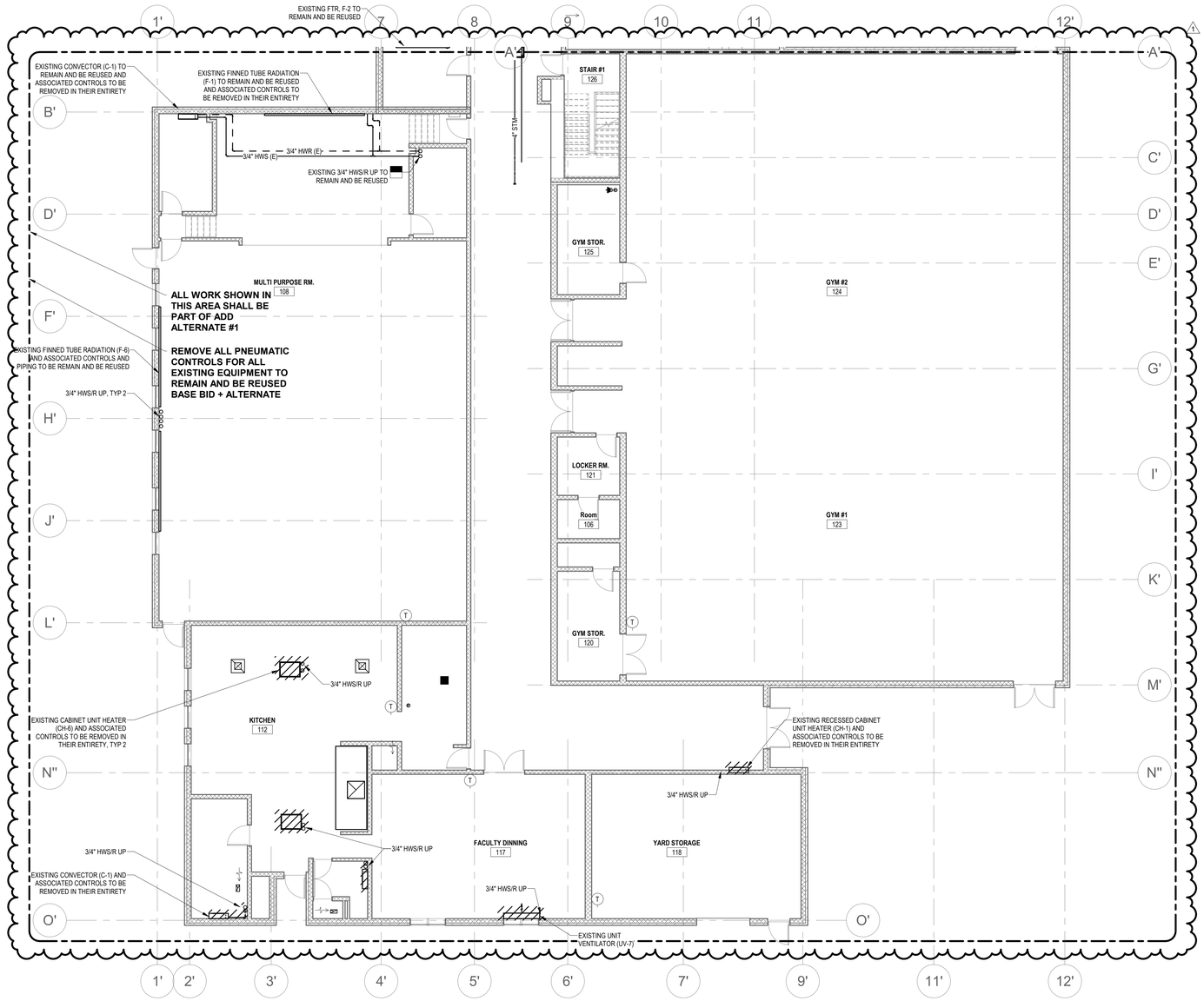
Sheet Number:

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GENERAL NOTES

1. REMOVE ALL OF THE EXISTING UNIT VENTILATORS AND ASSOCIATED CONTROLS, PIPING, AND SLEEVE (INCLUDING THE OUTSIDE AIR INTAKE GRILLE) IN THEIR ENTIRETY. PATCHING OF THE FLOOR, INTERIOR , EXTERIOR WALL AND ROOF SHALL BE COORDINATED WITH THE ARCHITECTUAL PLANS.
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Project:

CONTRACT 2C20-064

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PROJECT TRUE

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Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

FIRST FLOOR DEMOLITION PLAN PART B

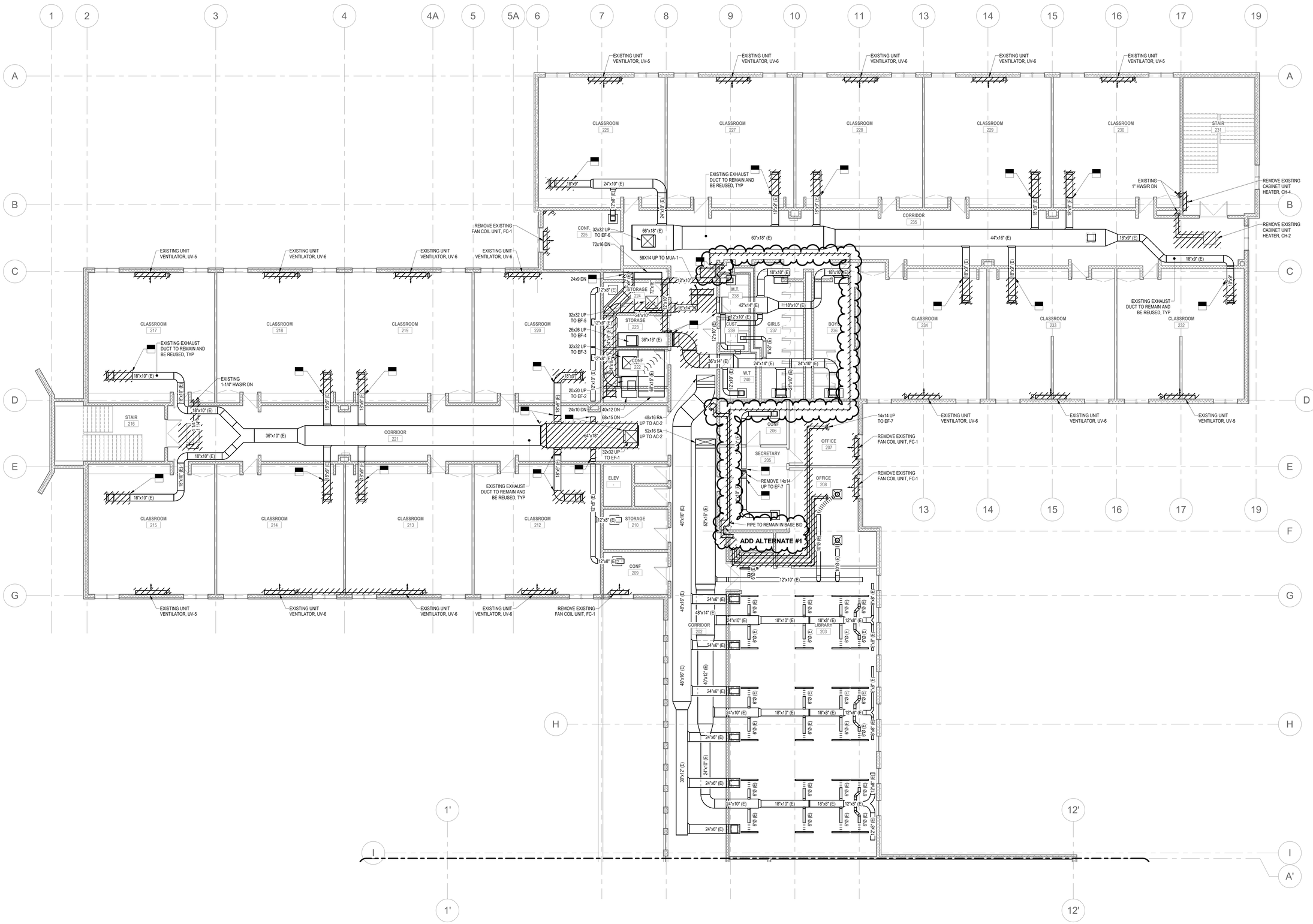
Sheet Number:

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GENERAL NOTES

1. REMOVE ALL OF THE EXISTING UNIT VENTILATORS AND ASSOCIATED CONTROLS, PIPING, AND SLEEVE (INCLUDING THE OUTSIDE AIR INTAKE GRILLE) IN THEIR ENTIRETY. PATCHING OF THE FLOOR, INTERIOR, EXTERIOR WALL AND ROOF SHALL BE COORDINATED WITH THE ARCHITECTUAL PLANS.
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Project:

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PROJECT TRUE

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SCALE: 1/8" = 1'-0"

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Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

SECOND FLOOR DEMOLITION PLAN PART A

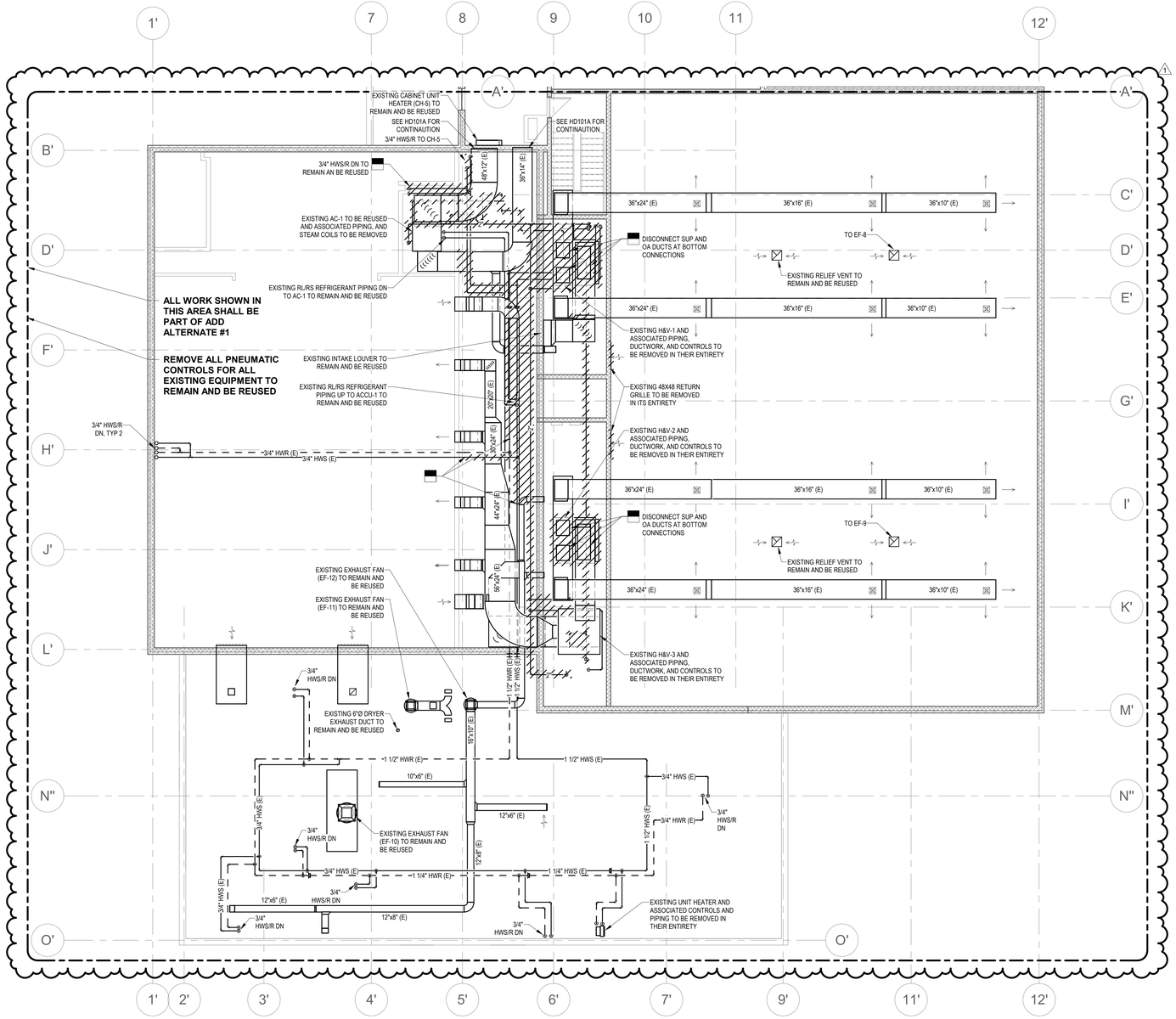
Sheet Number:

HD102A

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GENERAL NOTES

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2. REFERANCE HM-1 & HM-2



Project:

CONTRACT 2C20-064

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Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

SECOND FLOOR DEMOLITION PLAN PART B

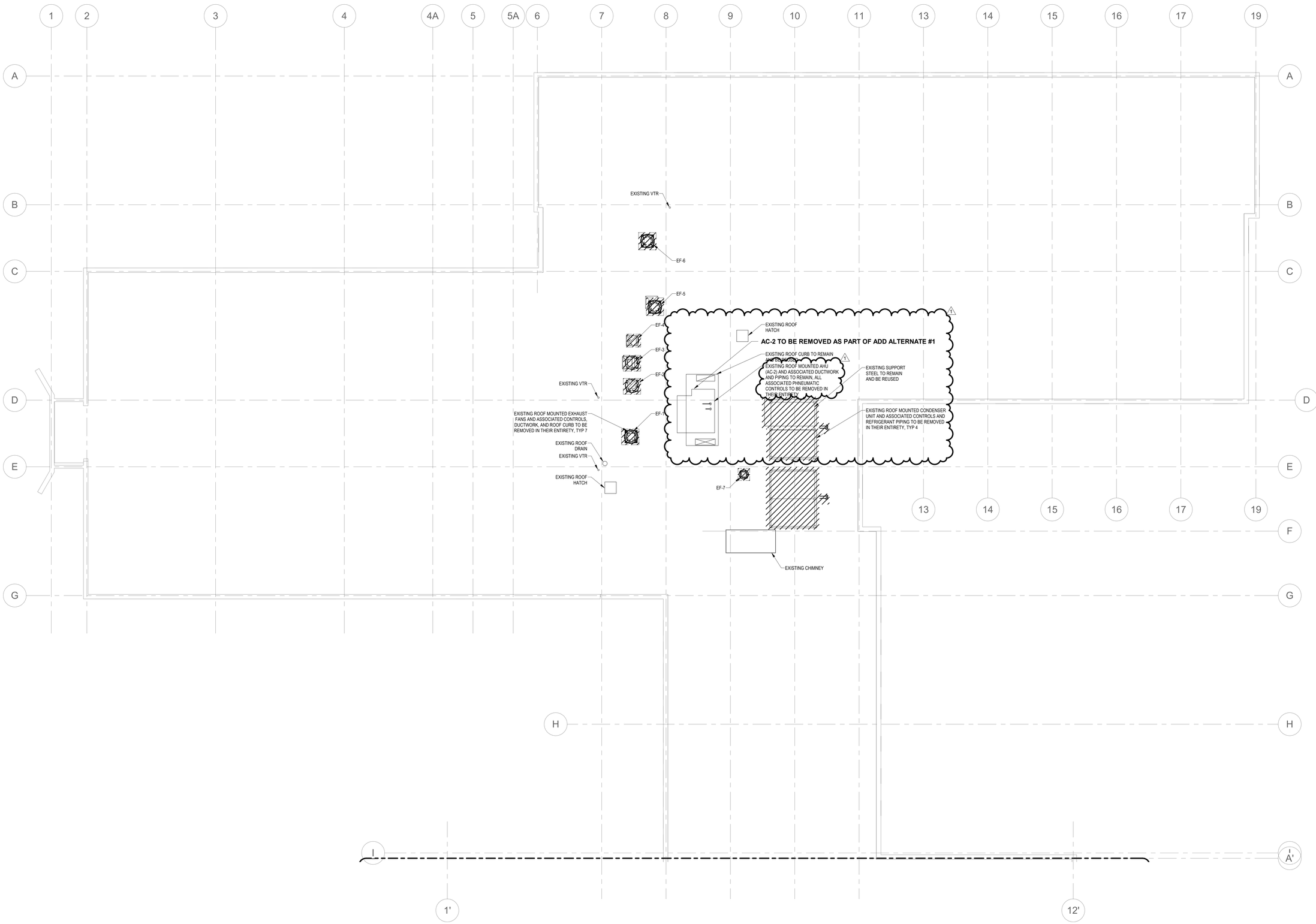
Sheet Number:

HD102B

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GENERAL NOTES

1. REMOVE ALL OF THE EXISTING UNIT VENTILATORS AND ASSOCIATED CONTROLS, PIPING, AND SLEEVE (INCLUDING THE OUTSIDE AIR INTAKE GRILLE) IN THEIR ENTIRETY. PATCHING OF THE FLOOR, INTERIOR , EXTERIOR WALL AND ROOF SHALL BE COORDINATED WITH THE ARCHITECTUAL PLANS.
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Project:

CONTRACT 2C20-064

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SCALE: 1/8" = 1'-0"

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Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

ROOF DEMOLITION PLAN PART A

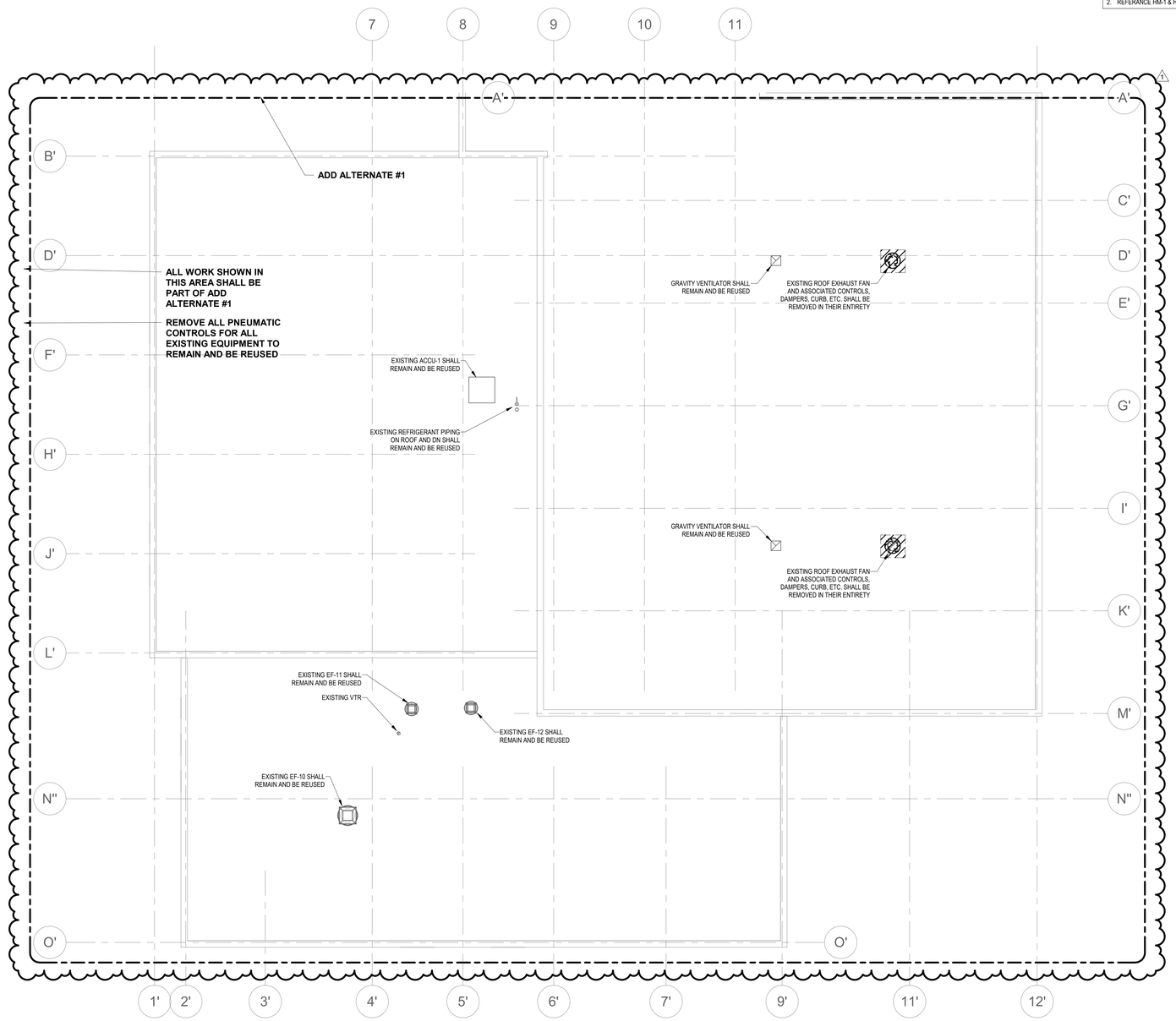
Sheet Number:

HD103A

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GENERAL NOTES

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2. REFERANCE HM-1 & HM-2



Project:

CONTRACT 2C20-064

MECH IMPROVEMENTS AT SOUTH SIDE ELEMENTARY SCHOOL BRISTOL, CT

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Issued For: ADDENDUM #1

PROJECT TRUE

0' 4' 8' 16'
SCALE: 1/8" = 1'-0"

Date: April 15, 2020
Drawn By: MRC
Reviewed By: SEH
Approved By: SEH
W&S Project No: 2191117

Drawing Title:

ROOF DEMOLITION PLAN PART B

Sheet Number:

HD103B

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ELECTRICAL ABBREVIATIONS LIST

1P	1 POLE (2P, 3P, 4P, ETC.)	AS	AMP SWITCH	CMPR	COMPRESSOR	DS	SAFETY DISCONNECT SWITCH	FIXT	FIXTURE	HTG	HEATING	LTG	LIGHTING	MOA	MULTIOUTLET ASSEMBLY	PA	PUBLIC ADDRESS	RM	ROOM	SYM	SYMMETRICAL	V	VOLT	∠	ANGLE
A	AMPERE	AT	AMP TRIP	CONN	CONNECTION	DT	DOUBLE THROW	FLR	FLOOR	HTR	HEATER	LTNG	LIGHTNING	MSP	MOTOR STARTER PANELBOARD	PB	PULL BOX OR PUSHBUTTON	RSC	RIGID STEEL CONDUIT	SYS	SYSTEM	VA	VOLT-AMPERES	@	AT
AC	ABOVE COUNTER OR AIR CONDITIONER	ATS	AUTOMATIC TRANSFER SWITCH	CONST	CONSTRUCTION	DWG	DRAWING	FLUOR	FLUORESCENT	HV	HIGH VOLTAGE	LV	LOW VOLTAGE	MSBD	MAIN SWITCHBOARD	PE	PNEUMATIC ELECTRIC	RTU	ROOF TOP UNIT	TEL	TELEPHONE	VDT	VIDEO DISPLAY TERMINAL	Δ	DELTA
		AUTO	AUTOMATIC	CONT	CONTINUATION OR CONTINUOUS	EC	ELECTRICAL CONTRACTOR	FU	FUSE	HVAC	HEATING, VENTILATING AND AIR CONDITIONING	MAX	MAXIMUM	MT	MOUNT	PED	PEDESTAL	SC	SURFACE CONDUIT	TEL/DATA	TELEPHONE/DATA	VERT	VERTICAL	'	FEET
ACLG	ABOVE CEILING	AUX	AUXILIARY	CONTR	CONTRACTOR	ELEC	ELECTRIC, ELECTRICAL	FUDS	FUSED SAFETY DISCONNECT SWITCH			MAG.S	MAGNETIC STARTER	MT.C	EMPTY CONDUIT	PF	POWER FACTOR	SEC	SECONDARY	TERM	TERMINAL	VFD	VARIABLE FREQUENCY DRIVE	"	INCHES
ADO	AUTOMATIC DOOR OPENER	AV	AUDIO VISUAL	CONV	CONVECTOR	ELEV	ELEVATOR	GA	GAUGE	HWP	HYDRONIC WATER PUMP	M/C	MOMENTARY CONTACT	MTS	MANUAL TRANSFER SWITCH	PH	PHASE	SHT	SHEET	TL	TWIST LOCK	VOL	VOLUME	#	NUMBER
AF	AMP FRAME	AWG	AMERICAN WIRE GAUGE	CP	CIRCULATING PUMP	EM	EMERGENCY	GAL	GALLON	IC	INTERRUPTING CAPACITY	MC	MECHANICAL CONTRACTOR	MTR	MOTOR, MOTORIZED	PIV	POST INDICATING VALVE	SIM	SIMILAR	TR	TAMPER RESISTANT	W	WATT	Ø	PHASE
AFF	ABOVE FINISHED FLOOR	BATT	BATTERY	CRT	CATHODE-RAY TUBE	EMS	ENERGY MANAGEMENT SYSTEM	GALV	GALVANIZED	IG	ISOLATED GROUND	MCB	MAIN CIRCUIT BREAKER	N.C.	NORMALLY CLOSED	PNL	PANEL	S/N	SOLID NEUTRAL	T-STAT	THERMOSTAT	W/	WITH	C	CENTER LINE
AFG	ABOVE FINISHED GRADE	BD	BOARD	CT	CURRENT TRANSFORMER	EMT	ELECTRICAL METALLIC TUBING	GC	GENERAL CONTRACTOR	IMC	INTERMEDIATE METAL CONDUIT	MCC	MOTOR CONTROL CENTER	NEC	NATIONAL ELECTRICAL CODE	PP	POWER POLE	SPEC	SPECIFICATION	TTC	TELEPHONE TERMINAL CABINET	WG	WIRE GUARD	P	PLATE
AFI	ARC FAULT CIRCUIT INTERRUPTER	BLDG	BUILDING	CTR	CENTER	EP	ELECTRIC PNEUMATIC	GEN	GENERATOR	INCAND	INCANDESCENT	MDC	MAIN DISTRIBUTION CENTER	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	PR	PAIR	SPKR	SPEAKER	TV	TELEVISION	WH	WATER HEATER		
		BMS	BUILDING MANAGEMENT SYSTEM	CU	COPPER	EQUIP	EQUIPMENT	GFI	GROUND FAULT CIRCUIT INTERRUPTER	IR	INFRARED	MDP	MAIN DISTRIBUTION PANEL			PRI	PRIMARY	SP	SPARE	TVTC	TELEVISION TERMINAL CABINET	W/O	WITHOUT		
AHU	AIR HANDLING UNIT	C	CONDUIT	DCP	DOMESTIC WATER CIRCULATING	EWC	ELECTRIC WATER COOLER	GFP	GROUND FAULT PROTECTOR	I/W	INTERLOCK WITH	MFR	MANUFACTURER	NFDS	NON-FUSED SAFETY DISCONNECT SWITCH	PROJ	PROJECTION	SR	SURFACE RACEWAY	TYP	TYPICAL	WP	WEATHERPROOF		
AL	ALUMINUM	CAB	CABINET	PUMP		EXIST	EXISTING	GND	GROUND	J-BOX	JUNCTION BOX	MFS	MAIN FUSED DISCONNECT SWITCH			PRV	POWER ROOF VENTILATOR	SS	STAINLESS STEEL	UC	UNDER COUNTER	XFMR	TRANSFORMER		
ALT	ALTERNATE	CAT	CATALOG	DEPT	DEPARTMENT	EXH	EXHAUST	GRS	GALVANIZED RIGID STEEL (CONDUIT)	KV	KILOVOLT	MH	MANHOLE	NIC	NOT IN CONTRACT	PT	POTENTIAL TRANSFORMER	SSW	SELECTOR SWITCH	UE	UNDERGROUND ELECTRICAL	XFR	TRANSFER		
AMP	AMPERE	CATV	CABLE TELEVISION	DET	DETAIL	EXP	EXPLOSION PROOF	GYP BD	GYPSUM BOARD	KVA	KILOVOLT-AMPERE	MIC	MICROPHONE	NL	NIGHT LIGHT	PVC	POLYVINYL CHLORIDE (CONDUIT)	S/S	STOP/START PUSHBUTTONS	UG	UNDERGROUND				
AMPL	AMPLIFIER	CB	CIRCUIT BREAKER	DIA	DIAMETER	FA	FIRE ALARM	HOA	HANDS-OFF-AUTOMATIC SWITCH	KVAR	KILOVOLT-AMPERE REACTIVE	MIN	MINIMUM	N.O.	NORMALLY OPEN	PWR	POWER	STA	STATION	UH	UNIT HEATER				
ANNUN	ANNUNCIATOR	CCTV	CLOSED CIRCUIT TELEVISION	DISC	DISCONNECT	FABP	FIRE ALARM BOOSTER POWER SUPPLY PANEL	HORIZ	HORIZONTAL	KW	KILOWATT	MISC	MISCELLANEOUS	NPF	NORMAL POWER FACTOR	QUAN	QUANTITY	STD	STANDARD	UT	UNDERGROUND TELEPHONE				
APPROX	APPROXIMATELY	CKT	CIRCUIT	DIST	DISTRIBUTION			HP	HORSEPOWER	KWH	KILOWATT HOUR	MLO	MAIN LUGS ONLY	NTS	NOT TO SCALE	RCPT	RECEPTACLE	SURF	SURFACE MOUNTED	UTIL	UTILITY				
AQ-STAT	AQUASTAT	CLG	CEILING	DN	DOWN	FACP	FIRE ALARM CONTROL PANEL	HPF	HIGH POWER FACTOR	LOC	LOCATE OR LOCATION	MMS	MANUAL MOTOR STARTER	OH	OVERHEAD	REQD	REQUIRED	SW	SWITCH	UV	UNIT VENTILATOR OR ULTRAVIOLET				
ARCH	ARCHITECT, ARCHITECTURAL	COMB	COMBINATION	DPR	DAMPER	FCU	FAN COIL UNIT	HT	HEIGHT	LT	LIGHT	MOA	MULTIOUTLET ASSEMBLY	OL	OVERLOADS	RM	ROOM	SWBD	SWITCHBOARD						

ELECTRICAL SYMBOL LEGEND

(NOTE: NOT ALL SYMBOLS MAY BE APPLICABLE)

SYMBOL	DESCRIPTION
	SURFACE LIGHT (TYPE DENOTED)
	WALL MOUNTED FLOODLIGHT (TYPE DENOTED)
	RECESSED LIGHT (TYPE DENOTED)
	POLE MOUNTED LIGHT (TYPE DENOTED)
	POLE MOUNTED LIGHT (TYPE DENOTED)
	SURFACE LINEAR LIGHT (TYPE DENOTED)
	SUSPENDED OR PENDANT LIGHT (TYPE DENOTED)
	RECESSED LINEAR LIGHT (TYPE DENOTED)
	STRIP LIGHT (TYPE DENOTED)
	EMERGENCY BATTERY LIGHT (TYPE DENOTED)
	EXIT SIGN (TYPE DENOTED)
	LIGHT FIXTURE ON (EM) LIFE SAFETY BRANCH
S	SINGLE POLE SW.
S2	2 POLE SINGLE THROW SW.
S3	3-WAY SW.
S4	4-WAY SW.
SK	KEYED SW.
SP	SW. W/PILOT
SD	DIMMER SWITCH
VSD	WALL MOUNTED LOW VOLTAGE DUAL TECHNOLOGY OCCUPANCY SENSOR BY XXX MODEL #XXX OR APPROVED EQUAL "D" INDICATES DIMMABLE SWITCH "a" LOWER CASE LETTER INDICATES SWITCH LEG
WSD	WALL MOUNTED LOW VOLTAGE DUAL TECHNOLOGY VACANCY SENSOR BY XXX MODEL #XXX OR APPROVED EQUAL "D" INDICATES DIMMABLE SWITCH "a" LOWER CASE LETTER INDICATES SWITCH LEG
T	TIMER SWITCH
VS	CEILING MOUNTED LOW VOLTAGE DUAL TECHNOLOGY OCCUPANCY SENSOR BY WATTSTOPER

SYMBOL	DESCRIPTION
	JUNCTION BOX
	PULL BOX
	CIRCUIT BREAKER PANEL
	POWER OR DISTRIBUTION PANEL
XX-1	MOTOR (SEE SCHEDULE)
	COMB. MOTOR STARTER (FUSED)
	SAFETY DISC. SW. (NON-FUSED)
	SAFETY DISC. SW. (FUSED)
R	RELAY
	ENCLOSED CIRCUIT BREAKER
	TIME CONTROL SWITCH (TIME SWITCH)
	DUPLEX RECEPT.
	RECEPT MOUNTED 44" AFF OR 6" ABOVE COUNTER (DUPLEX SHOWN)
	FOURPLEX RECEPT.
	FLOOR RECEPT. (DUPLEX SHOWN)
SD	CEILING MOUNTED RECEPTACLE (SINGLE SHOWN)
	FIRE ALARM REMOTE ANNUNCIATOR
S	SMOKE DETECTOR (TYPE DENOTED)
H	LINEAR HEAT DETECTOR
DS	DUCT SMOKE DETECTOR (TYPE DENOTED)
RTS	REMOTE TEST STATION
	CCTV CAMERA
	PA SPEAKER

1 EX: DENOTES EXISTING EQUIPMENT TO REMAIN. TEMPORARILY SUPPORTC CEILING ITEMS AS REQUIRED AND REINSTALL IN NEW CEILING

DEMOLITION NOTES

1. THE ELECTRICAL CONTRACTOR WILL WORK IN CONJUNCTION WITH THE GENERAL CONTRACTOR TO DEMOLISH THE EXISTING ELECTRICAL SYSTEM. THE ELECTRICAL CONTRACTOR IS TO DEACTIVATE, DISCONNECT AND REMOVE THOSE SYSTEMS WHICH WILL BE DEMOLISHED. THE ELECTRICAL CONTRACTOR WILL REMOVE AND DISPOSE OF ALL ELECTRICAL SYSTEM MATERIALS INCLUDING DEVICES, FIXTURES, RACEWAYS, CABLE, MOTOR CONTROLS AND APPURTENANCES. SYSTEMS REQUIRING TOTAL AND/OR PARTIAL DEMOLITION SHALL CONSIST OF BUT NOT BE LIMITED TO THE FOLLOWING:
   A. NORMAL AND EMERGENCY POWER BRANCH CIRCUIT SYSTEM
   B. NORMAL LIGHTING SYSTEM
   C. EMERGENCY AND EXIT LIGHTING SYSTEM
   D. COMMUNICATIONS SYSTEM
   E. FIRE ALARM SYSTEM
   F. SECURITY SYSTEM
2. EXISTING SYSTEMS THAT ARE TO REMAIN AND BE PROTECTED DURING DEMOLITION/CONSTRUCTION INCLUDE:
   A. POWER DISTRIBUTION SYSTEM
   B. EXTERIOR LIGHTING SYSTEM
   C. HVAC SYSTEM AND POWER WIRING
3. SYSTEMS WHICH PASS THROUGH THE AREA BEING DEMOLISHED BUT CONTINUE TO AREAS NOT WITHIN THE DEMOLITION SCOPE ARE TO REMAIN. THE ELECTRICAL CONTRACTOR IS TO IDENTIFY (SPRAY PAINT OR EQUIVALENT) AND PROTECT THOSE SYSTEMS WHICH ARE ACTIVE AND ARE TO REMAIN.
4. ALL EXISTING CAST IN PLACE RECEPTACLE, PULL, JUNCTION AND OTHER DEVICE BOXES WHICH CANNOT BE REMOVED OR EFFECTIVELY COVERED ARE TO BE PROVIDED WITH FINISHED PLATES AS APPROVED BY THE ARCHITECT.
5. ALL CONDUIT AND WIRE WHICH IS NO LONGER IN USE IS TO BE REMOVED. CONDUIT AND WIRE IS TO BE REMOVED BACK TO ITS SOURCE OR NEAREST DEVICE WHICH IS SCHEDULED TO REMAIN. COORDINATE THE REMOVAL OF ALL COMMUNICATIONS CONDUIT AND WIRE WITH THE COMMUNICATIONS CONTRACTOR. FIRE ALARM CABLING IS TO BE RETURNED TO THE NEAREST DEVICE SCHEDULED TO REMAIN, CONTROL PANEL, TERMINAL CABINET, ETC. UNDER NO CIRCUMSTANCES ARE ABANDONED CONDUIT AND WIRE OR SYSTEM COMPONENTS TO REMAIN.
6. MAKE ANY NECESSARY RE-CIRCUITING, EXTENSIONS OF EXISTING CIRCUITS AND RELOCATIONS REQUIRED TO PROPERLY RE-ENERGIZE REMAINING EXISTING SERVICES OR EQUIPMENT THAT MAY BE INTERFERED WITH BY NEW CONSTRUCTION, REMOVALS OR RELOCATIONS. ALL SHUTDOWNS TO RELOCATE ACTIVE FEEDERS OR BRANCH CIRCUITS WILL BE PERFORMED ON OFF HOURS AS MUTUALLY AGREED TO WITH THE OWNER.
7. PRIOR TO REMOVAL OF EQUIPMENT, CONFIRM THAT FEEDER AND BRANCH CIRCUITS ARE NO LONGER ACTIVE. SHOULD IT BE DISCOVERED THE FEEDER OR BRANCH CIRCUITS ARE ACTIVE, NOTIFY THE ARCHITECT IMMEDIATELY FOR DIRECTION.
8. ELECTRICAL CONTRACTOR IS TO REMOVE ALL LAMPS, BALLASTS AND OTHER ELECTRICAL COMPONENTS CLASSIFIED AS HAZARDOUS MATERIALS. ELECTRICAL CONTRACTOR IS TO OBTAIN THE SERVICES OF A LICENSED HAZARDOUS MATERIALS CONTRACTOR TO DISPOSE OF THE MATERIALS. PROVIDE WRITTEN DOCUMENTATION TO THE OWNER'S REPRESENTATIVE FROM THE HAZARDOUS MATERIALS CONTRACTOR.
9. ELECTRICAL DEMOLITION ABBREVIATIONS:

   "EX" DENOTES EXISTING EQUIPMENT TO REMAIN.

   "RL" DENOTES EXISTING EQUIPMENT TO BE DISCONNECTED AND RELOCATED. ALL EXISTING CONDUIT AND WIRE SHALL BE REMOVED BACK TO ITS SOURCE AND ALL DEVICES ASSOCIATED WITH THE EQUIPMENT SHALL BE REMOVED OR ALL CONDUIT AND WIRE SHALL BE INTERCEPTED AND EXTENDED AS REQUIRED. ALL NEW CONDUIT AND WIRE SHALL MATCH EXISTING IN STYLE AND SIZE. ALL EXISTING ELECTRICAL DEVICES ASSOCIATED WITH THE EXISTING EQUIPMENT SHALL BE REMOVED AND NEW DEVICES AS SHOWN SHALL BE PROVIDED.

   "NL" DENOTES NEW LOCATION OF RELOCATED EXISTING EQUIPMENT.

   "RE" DENOTES EXISTING EQUIPMENT TO BE DISCONNECTED AND REMOVED ALL EXISTING CONDUIT AND WIRE SHALL BE REMOVED BACK TO ITS SOURCE AND ALL DEVICES ASSOCIATED WITH THE EQUIPMNET SHALL BE REMOVED.

   "RX" DENOTES EXISTING EQUIPMENT TO BE DISCONNECTED AND REMOVED. ALL EXISTING CONDUIT AND WIRE SHALL BE MADE SAFE TO BE RE-USED FOR NEW EQUIPMENT OR DEVICE.

   "EXR" DENOTES NEW EQUIPMENT INSTALLED IN EXISTING CIRCUIT. CONTRACTOR EXTEND EXISTING CIRCUIT, IF NECCESSARY AND TO CONNECT NEW EQUIPMENT, FIXTURE OR DEVICE.

GENERAL ELECTRICAL NOTES

1. DRAWINGS ARE DIAGRAMMATIC ONLY. THE EXACT LOCATION, MOUNTING HEIGHTS, SIZE OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED AND DETERMINED IN THE FIELD.
2. THE EXACT LOCATION AND MOUNTING HEIGHTS OF ALL LIGHTING FIXTURES LOCATED IN MECHANICAL/ELECTRICAL EQUIPMENT SPACES SHALL BE COORDINATED IN THE FIELD BY THE ELECTRICAL CONTRACTOR BEFORE INSTALLATION OF SAME, SO AS TO AVOID INTERFERENCE WITH DUCTS, PIPING AND OTHER MECHANICAL/ELECTRICAL EQUIPMENT.
3. REFLECTED CEILING PLANS FOR ANY AND ALL AREAS PREPARED BY THE ARCHITECT SHOWING THE LOCATION OF LIGHTING FIXTURES SHALL TAKE PRECEDENCE OVER THE LOCATIONS OF SAME SHOWN ON THE LIGHTING DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL INSTALL THE LIGHTING FIXTURES IN ANY GIVEN AREA TO AGREE WITH THE ARCHITECT'S REFLECTED CEILING PLANS.
4. ALL STRAIGHT FEEDER, BRANCH CIRCUIT AND AUXILIARY SYSTEM CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 150 FEET. EXACT SIZES OF PULL BOXES AND LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ELECTRICAL CONTRACTOR.
5. FURNISH ALL REQUIRED ACCESS PANELS AS REQUIRED TO SUIT FIELD CONDITIONS FOR THE PROPER OPERATION AND MAINTENANCE OF THE ELECTRICAL SYSTEM. THE EXACT SIZES AND PHYSICAL LOCATIONS SHALL BE TO SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ALL ACCESS PANELS PROVIDED BY THE ELECTRICAL CONTRACTOR SHALL MATCH EXACTLY THE ACCESS PANELS FURNISHED AND INSTALLED BY THE GENERAL CONTRACTOR. THE ACCESS PANELS WILL BE INSTALLED BY THE TRADE CONTRACTOR UNDER THE APPROPRIATE SECTION OF THE SPECIFICATIONS FOR THE SURFACE IN WHICH THE PANELS ARE LOCATED.
6. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE HVAC AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EQUIPMENT. THE POWER WIRING, CONTROL WIRING AND ALL ELECTRICAL CONNECTIONS AND CONDUIT TURN-UPS SHALL BE COORDINATED WITH THE RESPECTIVE CONTRACTORS BEFORE THE START OF CONSTRUCTION IN THE FIELD.
7. SLEEVES ARE TO BE UTILIZED FOR PASSAGE OF CONDUITS THROUGH FLOORS OR WALLS. CONDUITS AND BOXES ARE TO BE SUPPORTED BY THE USE OF PRESET FASTENERS INSTALLED IN FLOORS, WALLS OR COLUMNS. CONDUITS AND BOXES ARE TO BE INSTALLED CONCEALED IN MASONRY WALLS AND ABOVE HUNG CEILINGS. ALL SLEEVES ARE TO BE SEALED WITH APPROVED FIRE STOPPING SEALANT.
8. ALL LIGHTING FIXTURES, ELECTRICAL DEVICES, CABLES AND RACEWAYS ARE TO BE INDEPENDENTLY SUPPORTED OF THE CEILING SYSTEM. FIXTURES ARE TO BE SUPPORTED FROM THE STRUCTURE BY THE USE OF JACK CHAIN, THREADED ROD OR OTHER MEANS APPROVED BY THE ENGINEER. CEILING SYSTEM TIE WIRES AND GRID ARE NOT TO BE UTILIZED FOR THE SUPPORT OF ELECTRICAL DEVICES, CABLES AND RACEWAYS. APPROVED SUPPORTS, HANGERS, CLIPS, ETC. ARE TO BE UTILIZED.
9. THE LOCATION AND MOUNTING HEIGHTS OF ALL POWER, LIGHTING, COMMUNICATIONS AND AUXILIARY SYSTEM DEVICES SHOWN ON THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER THE LOCATIONS SHOWN ON THE ELECTRICAL DRAWINGS. THE ELECTRICAL CONTRACTOR SHALL INSTALL ALL POWER, LIGHTING, COMMUNICATIONS AND AUXILIARY SYSTEM DEVICES TO AGREE WITH THE ARCHITECTURAL DRAWINGS.
10. COMBINED HOMERUNS OF TWO (2) OR THREE (3) CIRCUITS MAY BE UTILIZED. HOWEVER, THE NEUTRAL CONDUCTOR IS TO BE INCREASED TO #10AWG. COMBINED HOMERUNS ARE TO BE LIMITED TO 20A, LIGHTING AND POWER CIRCUITS.
11. INSTALLATION OF BACK TO BACK DEVICES ARE TO BE AVOIDED. ALLOW ONE WALL FRAMING MEMBER BETWEEN EACH BACK TO BACK DEVICE AS A MINIMUM.
12. WORK SHALL CONFORM TO THE CONNECTICUT ELECTRICAL CODE, CONNECTICUT BUILDING CODE, NFPA AND REQUIREMENTS OF LOCAL AUTHORITIES HAVING JURISDICTION.
13. THE WORD "CONTRACTOR" AS USED IN THE "ELECTRICAL WORK" SHALL MEAN THE ELECTRICAL SUBCONTRACTOR.
14. CONTRACTOR SHALL PAY FOR ALL PERMITS, INSURANCE AND TESTS, AND SHALL PROVIDE LABOR AND MATERIAL TO COMPLETE THE ELECTRICAL WORK SHOWN.
15. EXCEPT AS OTHERWISE NOTED, THE ELECTRICAL WORK SHALL INCLUDE DEMOLITION, PANELBOARDS, CIRCUIT BREAKERS, FEEDERS, WIRING, RACEWAYS, LIGHTING FIXTURES, DEVICES, TELEPHONE AND DATA OUTLETS, SAFETY SWITCHES, FIRE ALARM AND NURSE CALL SYSTEMS, TRANSFORMERS AND CONNECTION NECESSARY TO OPERATE MOTORS AND OTHER EQUIPMENT.
16. AUTOMATIC TEMPERATURE CONTROLS SHALL BE PROVIDED AND INSTALLED BY THE MECHANICAL SUBCONTRACTOR. STARTERS, VFD'S AND OTHER CONTROL DEVICES FOR EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL SUBCONTRACTOR FOR INSTALLATION AND CONNECTION BY THIS CONTRACTOR.
17. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY LIGHTING AND POWER AND THE GENERAL CONTRACTOR SHALL PAY ALL ENERGY CHARGES FOR TEMPORARY POWER AND LIGHTING.
18. DURING CONSTRUCTION, THE ELECTRICAL CONTRACTOR SHALL KEEP HIS PORTION OF THE WORK NEAT, CLEAN AND ORDERLY.
19. ALL SYSTEMS SHALL BE TESTED FOR SHORT CIRCUIT AND GROUNDS PRIOR TO ENERGIZING AND ANY DEFECTS SHALL BE CORRECTED.
20. ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL WORK SHALL BE INCLUDED AS PART OF THIS SECTION.
21. COMPLETE SHOP DRAWINGS SHALL BE SUBMITTED FOR ELECTRICAL EQUIPMENT. WHERE SPECIFIED ELECTRICAL EQUIPMENT IS SUBSTITUTED, THE ELECTRICAL CONTRACTOR SHALL SUBMIT COMPLETE SPECIFICATIONS ON THE SUBSTITUTE AS WELL AS THE ITEM ORIGINALLY SPECIFIED.
22. MATERIALS SHALL BE SPECIFICATION GRADE AND UL LISTED.
23. WHERE MATERIAL IS CALLED OUT IN THE LEGEND BY MANUFACTURER, TYPE OR CATALOG NUMBER, SUCH DESIGNATIONS ARE TO ESTABLISH STANDARDS OR DESIRED QUALITY. ACCEPTANCE OR REJECTIONS OF PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER.
24. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF EQUIPMENT AND DEVICE PRIOR TO ROUGHING IN FOR SAME.
25. WORK SHALL BE COORDINATED WITH THAT OF OTHER TRADES TO ELIMINATE INTERFERENCES.
26. EXACT LOCATIONS OF MECHANICAL EQUIPMENT, DEVICES, ETC. SHALL BE VERIFIED WITH HEATING, VENTILATION AND AIR CONDITIONING SUBCONTRACTOR PRIOR TO ROUGHING FOR SAME. (DELETE IF NO ARCHITECT ON PROJECT)
27. ELECTRICAL CONTRACTOR SHALL OBTAIN SHOP DRAWINGS/SPECIFICATIONS OF ALL EQUIPMENT FROM THE GENERAL CONTRACTOR PRIOR TO PURCHASING AND INSTALLING ELECTRICAL EQUIPMENT FOR SAME. NOTIFY ENGINEER OF ANY DISCREPANCIES BETWEEN ACTUAL EQUIPMENT INSTALLED AND CONTRACT DOCUMENTS.
28. ELECTRICAL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL COMPLETION.
29. WORK SHALL BE GROUNDED IN ACCORDANCE WITH CODE REQUIREMENTS. COMPLETE EQUIPMENT (INSULATED GREEN WIRE) GROUNDING SYSTEM SHALL BE INSTALLED.
30. WIRE SHALL BE TYPE "THHN-THWN" INSULATED FOR 600 VOLTS, MINIMUM SIZE #12 AWG COPPER UNLESS SPECIFICALLY NOTED OTHERWISE.
31. WIRING METHODS:
   A. EXTERIOR ABOVE GRADE FEEDERS SHALL BE RGS CONDUIT.
   B. INTERIOR FEEDERS SHALL BE EMT OR RGS CONDUIT.
   C. INTERIOR LIGHTING AND RECEPTACLE BRANCH CIRCUITS IN PARTITIONS SHALL BE MC CABLE.
   D. INTERIOR BRANCH CIRCUITS ABOVE HUNG CEILINGS SHALL BE EMT CONDUIT.
   E. INTERIOR BRANCH CIRCUITS FOR HVAC, PLUMBING AND FIRE PROTECTION EQUIPMENT SHALL BE EMT OR RGS.
   F. LIGHTING FIXTURE CONNECTIONS SHALL BE MC CABLE.
   G. EMERGENCY, CRITICAL AND LIFE/SAFETY BRANCH LIGHTING CIRCUITRY SHALL BE EMT CONDUIT.
   H. EQUIPMENT CONNECTIONS SHALL BE LIQUID TIGHT FLEXIBLE METAL CONDUIT.
   I. FIRE ALARM SYSTEM WIRING SHALL BE EMT.
   J. TELEPHONE AND DATA SHALL BE EMPTY EMT W/PULL WIRE.
32. CONNECTORS FOR RIGID CONDUIT SHALL BE MADE WITH THREADED COUPLINGS.
33. CONNECTORS FOR ELECTRIC METALLIC TUBING AND FLEXIBLE LIQUID TIGHT CONDUIT SHALL BE COMPRESSION TYPE WITH INSULATED THROATS.
34. CONDUIT AND TUBING SHALL BE SUPPORTED ON GALVANIZED WALL BRACKETS. TRAPEZE HANGERS OR PIPE STRAPS SECURED BY MEANS OF TOGGLE BOLTS OR INSERTS IN WOOD CONSTRUCTION.
35. BOXES SHALL BE GALVANIZED STEEL AND SHALL BE SIZED TO ACCOMMODATE THE EQUIPMENT OR APPARATUS TO BE INSTALLED. WHERE BOXES OF A STANDARD MAKE ARE NOT AVAILABLE, SPECIAL BOXES SHALL BE MANUFACTURED. FIXTURES SUPPORTED ON THE CEILING OR ON THE WALL SHALL HAVE SUITABLE FIXTURE SUPPORT FOR THE SPECIFIC FIXTURE.
36. DISCONNECT SWITCHES, AND CONTROLLERS SHALL HAVE NAMEPLATES OF BLACK LAMINATED PLASTIC WITH ENGRAVED WHITE LETTERS, SECURED WITH SELF-TAPPING SCREWS.
37. CONNECTIONS AT MOTORS SHALL BE MADE WITH 18" LENGTH OF 1/2 INCH FLEXIBLE LIQUID TIGHT CONDUIT.
38. CONTRACTOR SHALL PHASE BALANCE PANELBOARDS IN THE FIELD. LOAD ON EACH PHASE SHALL BE BALANCED WITHIN 10% OF EACH OTHER.
39. WALL PLATES SHALL BE PROVIDED FOR EACH SWITCH, RECEPTACLE, DATA AND TELEPHONE OUTLET. PROVIDE WALL PLATES WITH STAINLESS STEEL FINISH FOR ALL DEVICES IN FINISHED AREAS. FOR DEVICES IN UNFINISHED AREAS, PROVIDE CAST IRON OR ALLOY OF SUITABLE TYPE TO MATCH OUTLET BOXES SPECIFIED.
40. TOGGLE SWITCHES SHALL BE OF THE SINGLE POLE A.C. QUIET TOGGLE TYPE FOR MOUNTING IN A SINGLE-GANG SPACING. TOGGLE SWITCHES SHALL BE FULLY RATED 20 AMPERES AT 120/277 VOLT.
41. DUPLEX WALL RECEPTACLES SHALL BE 2 POLE, 3 WIRE, GROUNDING TYPE 20 AMPERE, 125 VOLT WITH METAL PLASTER EARS. RECEPTACLES SHALL BE NEMA STANDARD CONFIGURATION 5-20R.
42. FUSED OR UNFUSED SAFETY SWITCHES SHALL BE TOTALLY ENCLOSED, HEAVY DUTY TYPE. SWITCHES SHALL HAVE VOLTAGE, HORSEPOWER AND AMPERE RATING SUITABLE FOR THE APPLICATION. PROVIDE NUMBER OF POLES AS REQUIRED. SWITCHES LOCATED EXTERIOR TO THE BUILDING OR IN DAMPWET LOCATIONS SHALL BE IN A NEMA 3R ENCLOSURE.
43. FUSES SHALL BE DUAL ELEMENT, TIME DELAY TYPE, AS MANUFACURED BY BUSSMAN, RELIANCE OR APPROVED EQUAL.
44. FURNISH AND INSTALL SLEEVES IN FLOORS, BEAMS, WALLS, ETC. REQUIRED FOR INSTALLING THIS WORK.
45. CONDUIT PASSING THROUGH FIRE RATED WALLS AND FLOORS SHALL BE PROVIDED WITH ALL NECESSARY MATERIALS TO ENSURE THAT THE FIRE RATED INTEGRITY IS MAINTAINED.
46. FEEDER TAPS WILL NOT BE ALLOWED IN PANELBOARD GUTTERS.
47. CONDUIT RUNS AS SHOWN ON THE PLANS ARE DIAGRAMMATIC ONLY; EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD.
48. CONTRACTOR SHALL CHECK EXISTING CONDITIONS TO DETERMINE EXACT EXTENT OF WORK TO BE PERFORMED PRIOR TO BIDDING. DIMENSIONS RELEVANT TO EXISTING WORK SHALL BE VERIFIED IN THE FIELD.
49. IN AREAS NOT AFFECTED BY THIS RENOVATION, THIS SUBCONTRACTOR SHALL MAINTAIN CONTINUITY OF ELECTRIC SERVICE.
50. WHERE CONNECTIONS ARE MADE IN EXISTING PANELS, THE PANEL INDEX SHALL BE REVISED TO INDICATE THE NEW LOADS SERVED. NEW CIRCUIT BREAKERS ADDED TO EXISTING PANELS SHALL BE THE SAME FRAME SIZE, VOLTAGE RATING AND INTERRUPTING CAPACITY AS EXISTING PANEL AND CIRCUIT BREAKERS.
51. THE CONTRACTOR SHALL PROVIDE ALL REQUIRED POWER SUPPLIES, APPURTENANCES, FINAL CONNECTIONS, TESTING AND WORK REQUIRED FOR ADDITIONS TO THE EXISTING FIRE ALARM SYSTEM. PAY ALL COSTS ARISING THERE FROM, FOR A COMPLETE AND OPERATIONAL SYSTEM.
52. ELECTRICAL SHUTDOWN SHALL BE AT A TIME AND DATE APPROVED BY THE OWNER.
53. PROVIDE AS-BUILT "CADD" DRAWINGS AT THE COMPLETION OF THE PROJECT.
54. ALL RECEPTACLES LOCATED WITHIN THE MAINTENANCE BAY'S AND GARAGE AREAS SHALL BE GFI TYPE OUTLETS.
55. ELECTRICAL CONTRACTOR SHALL LABEL ALL ELECTRICAL DEVICES INCLUDING BUT NOT LIMITED TO RECEPTACLES, TELDATA OUTLETS, DISCONNECT SWITCHES, PANELBOARDS, THERMAL MOTOR SWITCHES, CONTROL PANELS, JUNCTION BOXES, ETC.
   A. RECEPTACLES - PANEL NAME AND CIRCUIT DESIGNATION
   B. TELDATA OUTLETS - NUMBER OF DATA AND TELEPHONE PORTS
   C. DISCONNECTS/THERMAL MOTOR SWITCHES - PANEL NAME, CIRCUIT DESIGNATION AND EQUIPMENT SERVING.
   D. PANELBOARDS - PANEL NAME, VOLTAGE, AMPERAGE, PHASE AS WELL AS PANEL AND CIRCUIT IT IS FED FROM.
   E. CONTROL PANEL - PANEL NAME AND CIRCUIT DESIGNATION
   F. JUNCTION BOXES - PANEL NAME AND CIRCUIT DESIGNATION
56. ADDRESS QUESTIONS TO THE ENGINEER IN WRITING BEFORE AWARD OF CONTRACT, OTHERWISE ENGINEER INTERPERTATION OF MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.

ELECTRICAL SYMBOL NOTES

- A2 / 12,b — THE LIGHTING FIXTURE TYPE IS INDICATED BY AN UPPER CASE LETTER. THE CIRCUIT DESIGNATION IS INDICATED BY A NUMBER. THE SWITCH DESIGNATION IS INDICATED BY A LOWER CASE LETTER.
  EXAMPLE 1: LIGHTING FIXTURE TYPE "A" IS CONNECTED TO CIRCUIT 12 AND CONTROLLED BY SWITCH "b".
- PPL1-1 — EXAMPLE 2: THE FIXTURE TYPE SHOWN AS A NUMERATOR INDICATES ALL LIGHTING FIXTURES IN THE ROOM OR SP



1 E101 Overall Lighting Plan-01-Area A
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES

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1	04/15/20	ADDENDUM #1
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Reviewed By: DNM
Approved By: RFM
W&S Project No: 2170808

Drawing Title:

LEVEL 1 LIGHTING PLAN PART A

Sheet Number:

E101

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1 E102 Overall Lighting Plan-01-Area B
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES

ALTERNATE NOTE :

1. ALL WORK INCLUDED IN THIS DRAWING SHALL BE INCLUDED AS PART OF ALTERNATE 1

1

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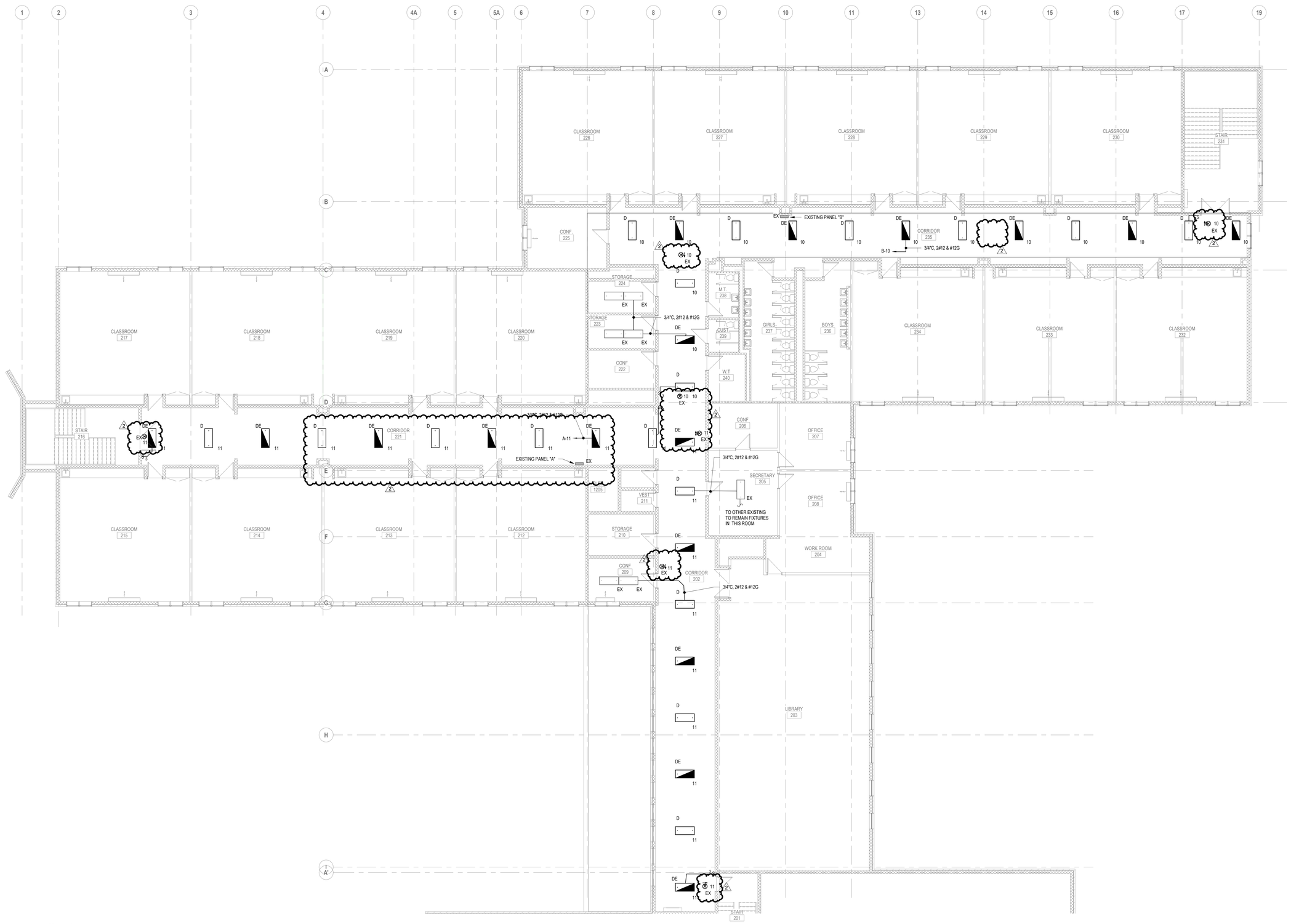
Drawing Title:

LEVEL 1 LIGHTING PLAN PART B

Sheet Number:

E102

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1 / E103 Overall-Lighting Plan-02-Area A
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES

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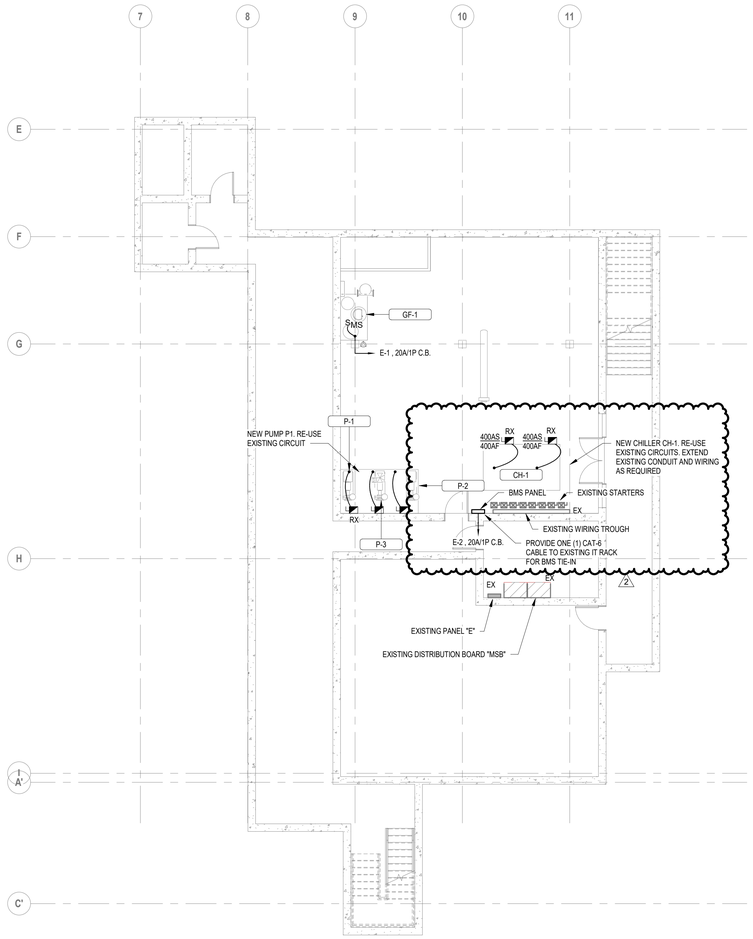
Drawing Title:

LEVEL 2 LIGHTING PLAN PART A

Sheet Number:

E103

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1 E201 B-Overall-Power Plan
1/8" = 1'-0"

DRAWING NOTE :

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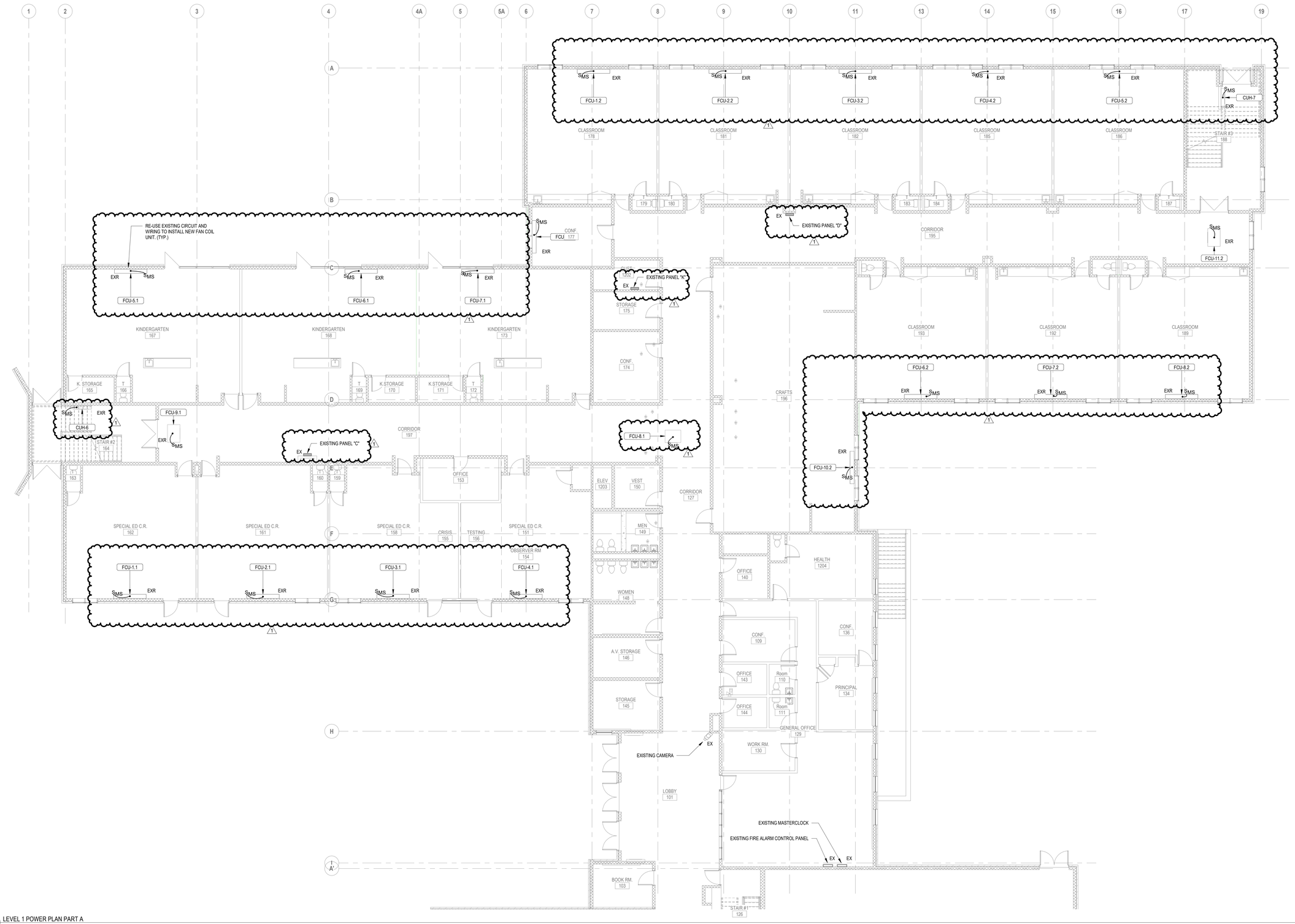
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BASEMENT
POWER PLAN

Sheet Number:

E201

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1 / E202 LEVEL 1 POWER PLAN PART A
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES

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LEVEL 1 POWER PLAN PART A

Sheet Number:

E202

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1 / E203 LEVEL 1 POWER PLAN PART B
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES

ALTERNATE NOTE :

1. ALL WORK INCLUDED IN THIS DRAWING SHALL BE INCLUDED AS PART OF ALTERNATE 1

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Revisions:

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2	04/23/20	ADDENDUM #2

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Date: 04/02/2020

Drawn By: MK

Reviewed By: DNM

Approved By: RFM

W&S Project No: 2170808

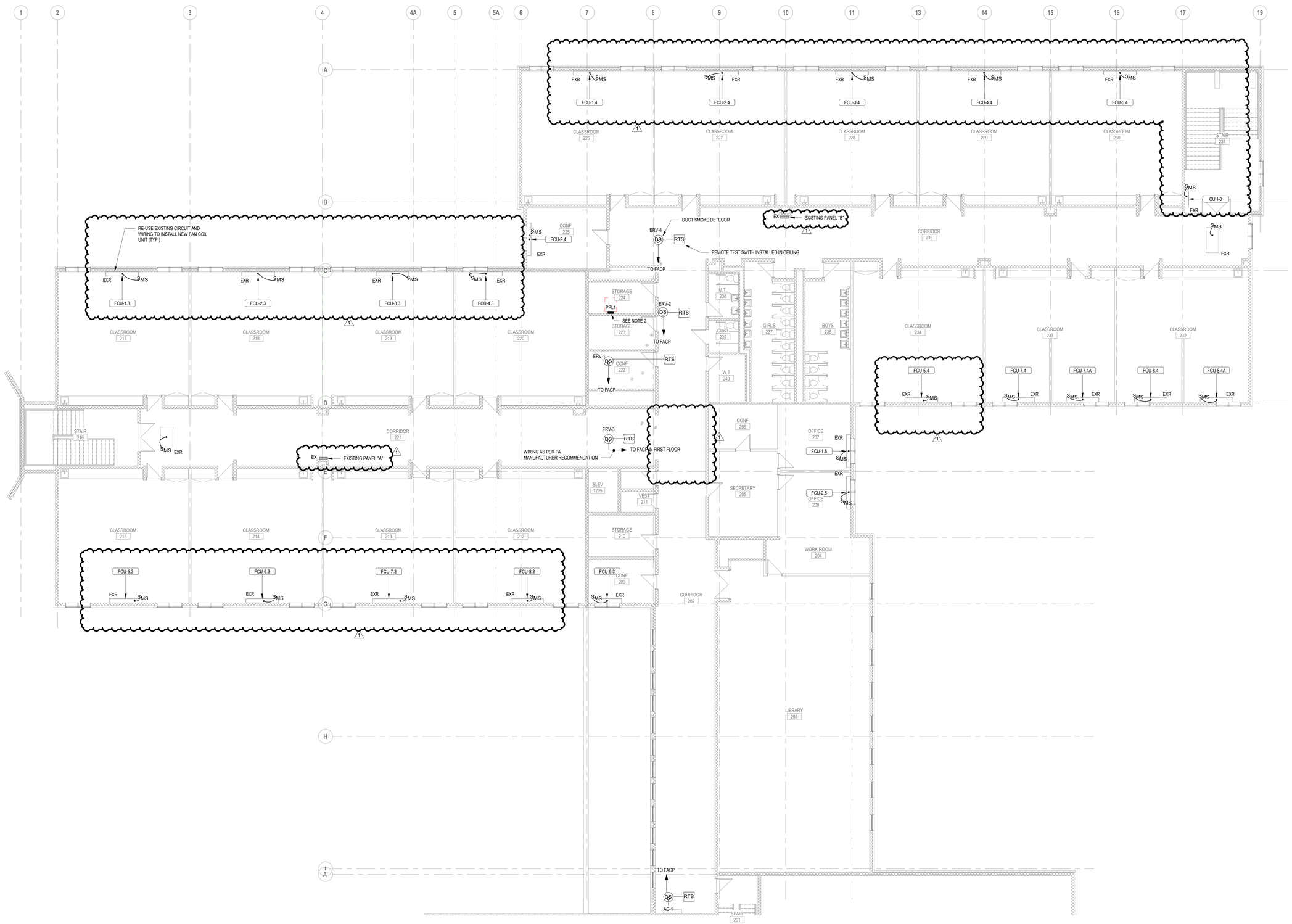
Drawing Title:

LEVEL 1 POWER PLAN PART B

Sheet Number:

E203

WESTON & SAMPSON COPYRIGHT 2018



1 E204 LEVEL 2 POWER PLAN PART A
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES
2. PROVIDE NEW 100A CIRCUIT BREAKER IN EXISTING MSB. RUN 4#1/0 & #6G IN EXISTING 1-1/2" CONDUIT TO NEW PANEL PPL1.

1

Project:

CITY OF BRISTOL, CT

HVAC SYSTEM UPGRADES AT SOUTH SIDE ELEMENTARY SCHOOL

21 Tuttle Rd.
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W&S Project No:	2170808

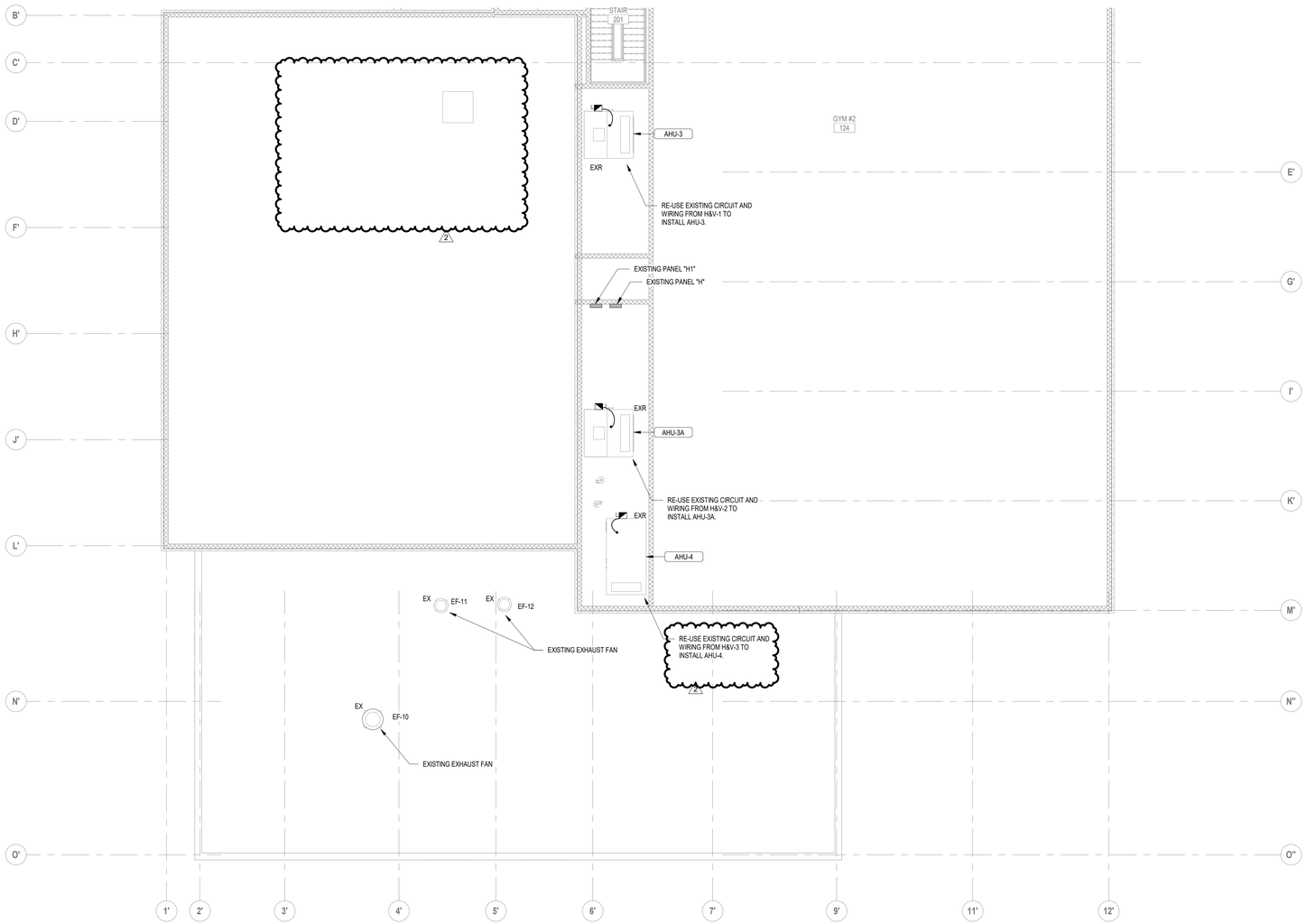
Drawing Title:

LEVEL 2 POWER PLAN PART A

Sheet Number:

E204

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1 / E205 LEVEL 2 POWER PLAN PART B
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES
2. CONTRACTOR TO PROVIDE SUPPORT FOR EXISTING TO REMAIN DEVICES.

ALTERNATE NOTE :

1. ALL WORK INCLUDED IN THIS DRAWING SHALL BE INCLUDED AS PART OF ALTERNATE 1

Project:

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W&S Project No:	2170808

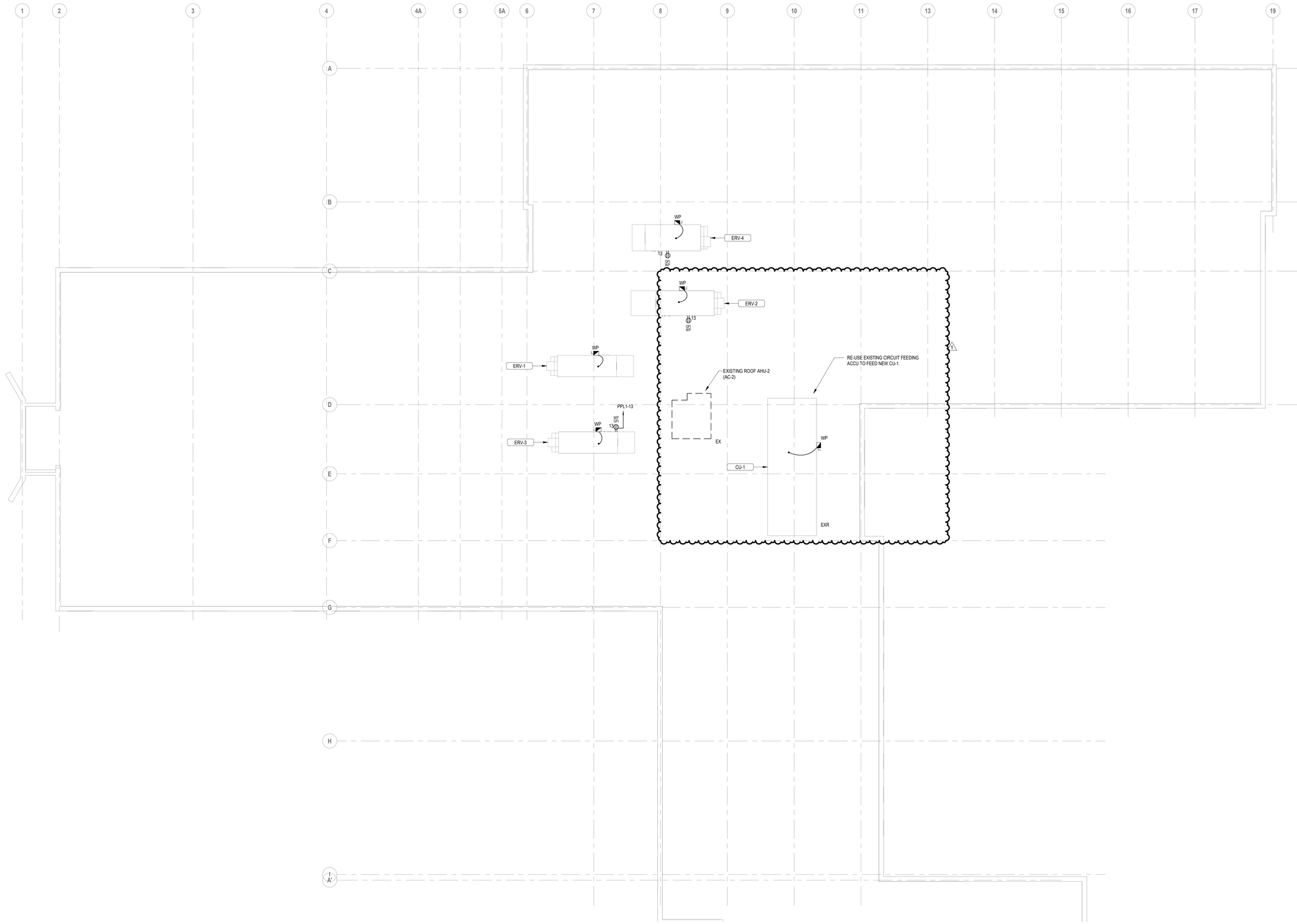
Drawing Title:

LEVEL 2 POWER PLAN PART B

Sheet Number:

E205

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1 E206 ROOF POWER PLAN PART A
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES

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W&S Project No:	2170808

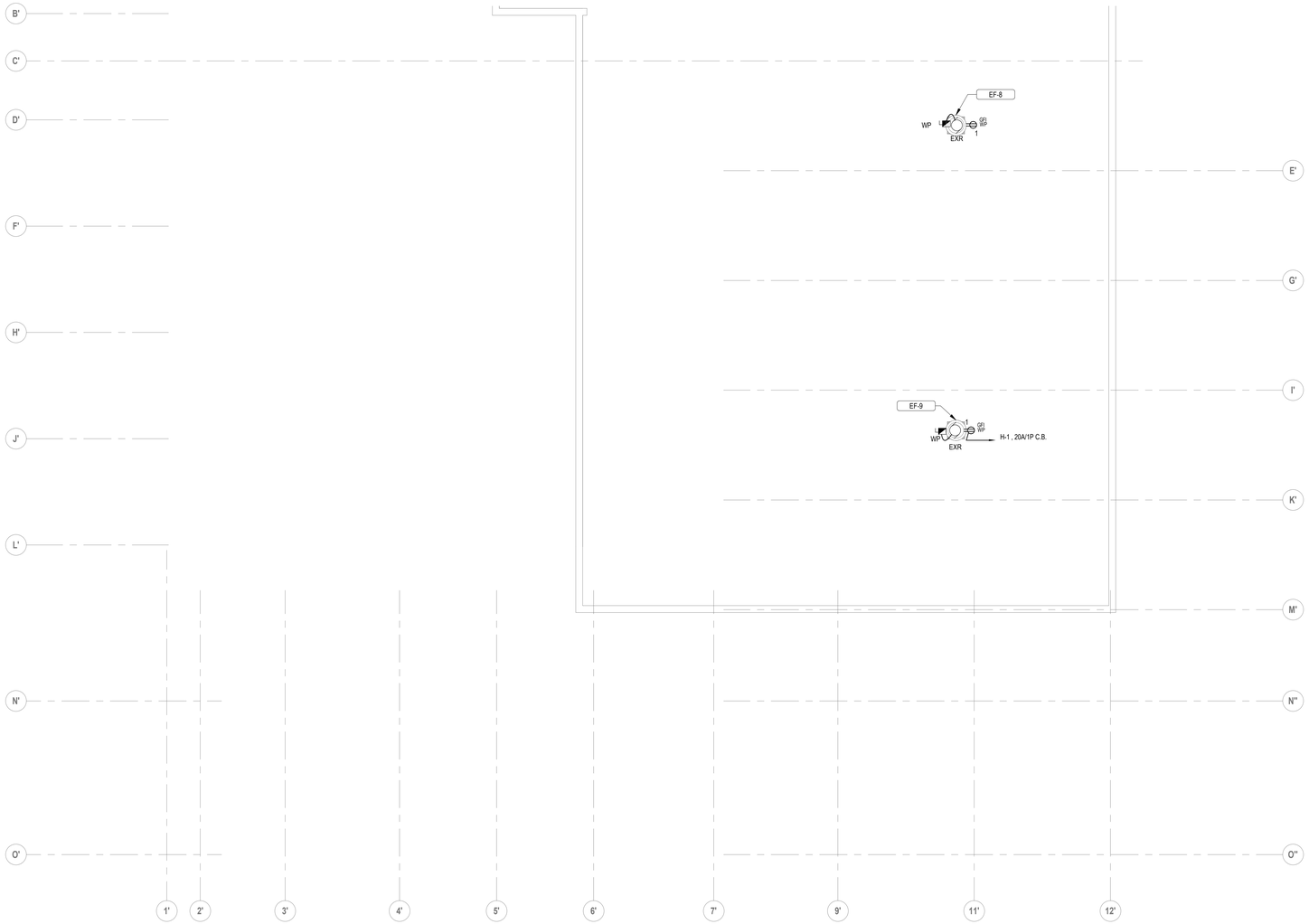
Drawing Title:

ROOF POWER PLAN PART A

Sheet Number:

E206

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1 / E207 ROOF POWER PLAN PART B
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES

ALTERNATE NOTE :

1. ALL WORK INCLUDED IN THIS DRAWING SHALL BE INCLUDED AS PART OF ALTERNATE 1

/1

Project:

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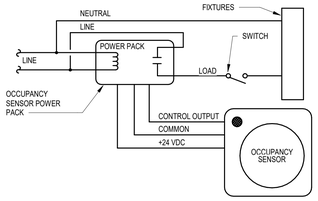
Drawing Title:

ROOF POWER PLAN PART B

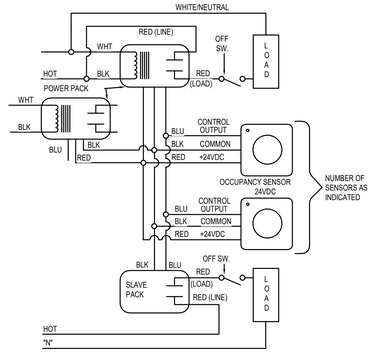
Sheet Number:

E207

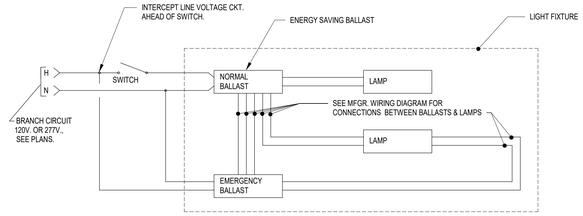
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2 E501 Ceiling Mounted Occupancy Sensor Wiring Diagram
NOT TO SCALE



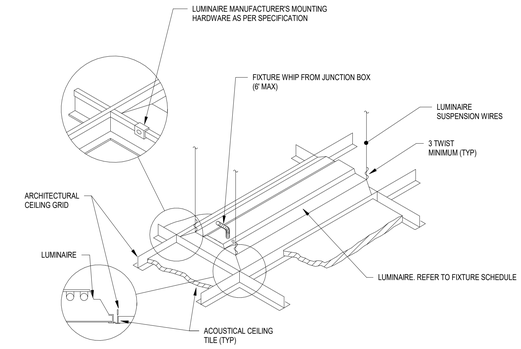
5 E501 Multiple Occupancy Sensor Wiring Diagram
NOT TO SCALE



NOTE:

1. EMERGENCY BALLAST SHALL BE INSTALLED BY LIGHTING FIXTURE MANUFACTURER WITH INDICATING LIGHTS.

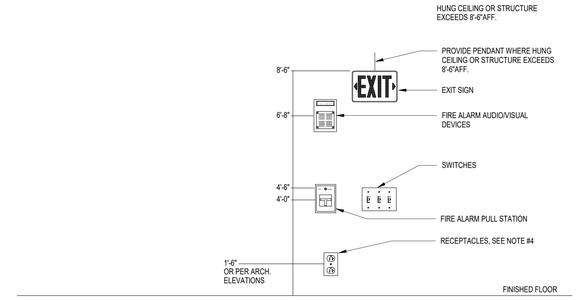
7 E501 TYICAL EMERGENCY BALLAS/LED DRIVER WIRING DIAGRAM
NOT TO SCALE



GENERAL NOTE:

1. INSTALL IN ACCORDANCE WITH MANUFACTURER'S MOUNTING INSTRUCTIONS AND USING THE RECOMMENDED MOUNTING HARDWARE.

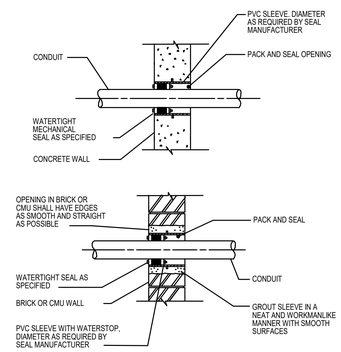
1 E501 LUMINAIRE MOUNTING - LAY-IN CEILING
1" = 1'-0"



NOTES:

1. ALL MOUNTING HEIGHTS SHALL BE MEASURED FROM FINISHED FLOOR TO CENTERLINE OF DEVICE EXCEPT EXIT SIGNS.
2. DEVICES SHALL BE INSTALLED ON A COMMON VERTICAL CENTERLINE WHEREVER POSSIBLE.
3. ALL DEVICES SHALL BE INSTALLED AT MOUNTING HEIGHTS AS INDICATED ON THIS DETAIL UNLESS OTHERWISE NOTED ON ARCH. ELEVATIONS & DETAILS.

8 E501 TYPICAL DEVICE MOUNTING HEIGHT DETAIL
NOT TO SCALE



4 E501 Watertight Conduit Penetration
NOT TO SCALE

Project:

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0' 4' 8' 16'
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Date: 04/02/2020
Drawn By: MK
Reviewed By: DNM
Approved By: RFM
W&S Project No: 2170808

Drawing Title:

ELECTRICAL DETAILS SHEET

Sheet Number:

E501

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LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	NO. OF LAMPS	LAMP TYPE	MOUNTING	VOLTAGE	LOAD (WATTS)	NOTES
D	2' X 4' LED RECESSED LIGHT FIXTURE	METALUX	24 CZ-LD5-35-UNV-L835-CD1-U	-	LED/ 3321 LUMENS/ 3500K	RECESSED GRID	120	25	
DE	2' X 4' EMERGENCY LED RECESSED LIGHT FIXTURE	METALUX	24 CZ-LD5-35-UNV-L835-CD1-U	-	LED/ 3321 LUMENS/ 3500K	RECESSED GRID	120	25	NOTE 1
X1	LED EXIT SIGN. MOUNTING, NUMBER OF FACES AND ARROWS AS SHOWN ON FLOOR PLANS	EMERGI-LITE	WPREMDNR	-	LED	UNIVERSAL	120	2.5	

NOTES:
1. PROVIDE WITH INTEGRAL EMERGENCY LED DRIVER

HVAC EQUIPMENT SCHEDULE

NO.	DESCRIPTION	LOCATION NAME	LOCATION NUMBER	LOAD HP	LOAD A	LOAD W	VOLT	PHASE	Panel	Circuit Number	CONDUIT & WIRE SIZE	STARTER COMPONENT	CONTROL DEVICE COMPONENT	DISCONNECT COMPONENT	NOTES
ERV-1	ENERGY RECOVERY VENTILATOR			5.00 hp	14.0 A	4539 W	208 V	3	PPL1	1,3,5	3/4"C., 3#10 & #10G	VFD	-	30AF/30AT	
ERV-2	ENERGY RECOVERY VENTILATOR			7.50 hp	21.1 A	6841 W	208 V	3	PPL1	7,9,11	1"C., 3#8 & #10G	VFD	-	60AF/45AT	
ERV-3	ENERGY RECOVERY VENTILATOR			5.00 hp	14.0 A	4539 W	208 V	3	PPL1	2,4,6	3/4"C., 3#10 & #10G	VFD	-	30AF/30AT	
ERV-4	ENERGY RECOVERY VENTILATOR			7.50 hp	21.1 A	6841 W	208 V	3	PPL1	8,10,12	1"C., 3#8 & #10G	VFD	-	60AF/45AT	
FCU-B.1	FAN COIL UNIT	CORRIDOR	127	0.00 hp	7.7 A	832 W	120 V	1	K	1	3/4"C., 2#12 & #12G	-	-	20A/1P	PROVIDE 20A/1P C.B. IN PANEL K
P-2	PUMP	BIOLER ROOM	013	7.50 hp	24.2 A	7847 W	208 V	3	BASEMENT WIRING TROUGH	1,3,5	1"C., 3#8 & #10G	VFD	-	60AF/60AT	
P-3	PUMP	BIOLER ROOM	013	7.50 hp	24.2 A	7847 W	208 V	3	BASEMENT WIRING TROUGH	2,4,6	1"C., 3#8 & #10G	VFD	-	60AF/60AT	

1

Panel ID: PPL1
Voltage: 208Y/120
Phase/Wire: 3/4
Fed From: MSB
Location: STORAGE 224

MCB Rating: 100.0 A
A.I.C. Rating: 10,000 AMPS SYMMETRICAL
Manufacturer:

CKT	DESCRIPTION	CB Size	Poles	A		B		C		Poles	CB Size	DESCRIPTION	CKT
1				1.7	1.7								2
3	ERV-1	30 A	3			1.7	1.7			3	30 A	ERV-3	4
5								1.7	1.7				6
7				2.5	2.5								8
9	ERV-2	45 A	3			2.5	2.5			3	45 A	ERV-4	10
11								2.5	2.5				12
13	RCPT	20 A	1	0.5	0.0								14
15	SPARE	20 A	1			0.0	0.0			3	20 A	SPARE	16
17	SPARE	20 A	1					0.0	0.0				18
19	SPACE	--	--	0.0	0.0					--	--	SPACE	20
21	SPACE	--	--			0.0	0.0			--	--	SPACE	22
23	SPACE	--	--					0.0	0.0	--	--	SPACE	24
25	SPACE	--	--	0.0	0.0					--	--	SPACE	26
27	SPACE	--	--			0.0	0.0			--	--	SPACE	28
29	SPACE	--	--					0.0	0.0	--	--	SPACE	30
		Total kVA:		9.0 kVA		8.4 kVA		8.4 kVA					

Total Connected Load (kVA) 25.8 kVA
Total Connected Current (Amps) 71.7 A

NOTE: PROVIDE 150A PANEL WITH 100A MCB

1

Project:

CITY OF BRISTOL, CT

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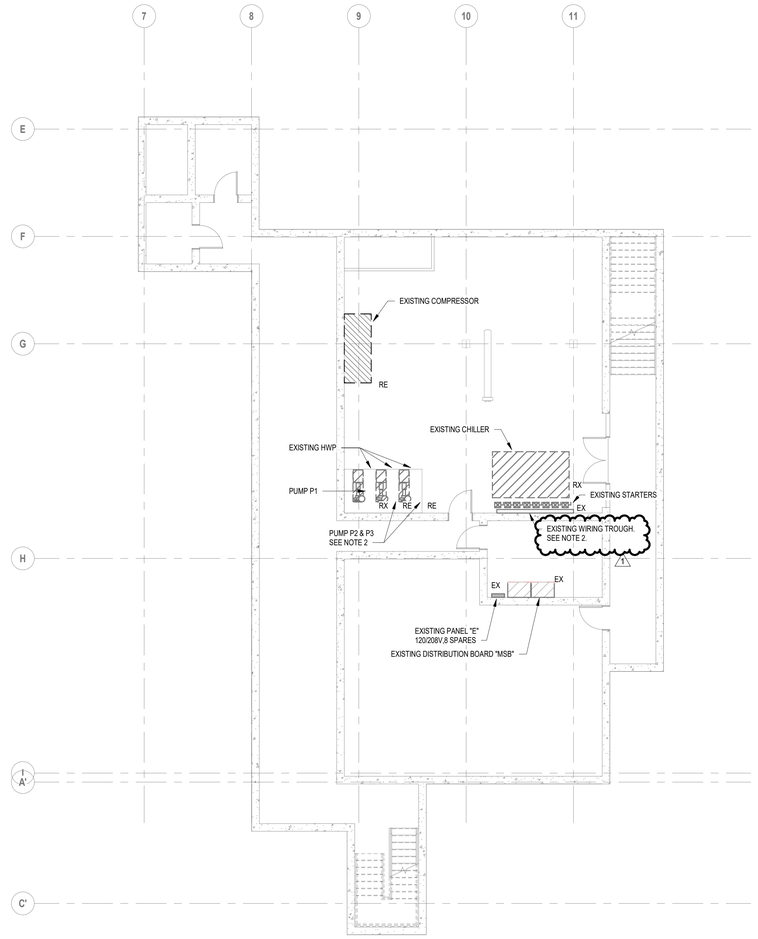
Drawing Title:

ELECTRICAL SCHEDULES SHEET

Sheet Number:

E601

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1 ED101 Overall-Demolition Plan-B
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES
2. DEMO AND REMOVE EXISTING STARTER FOR PUMPS P1, P2, & P3 LOCATED ON WIRING TROUGH. REMOVE BACK TO SOURCE WIRING AND CONDUIT FOR PUMPS P2 & P3 ONLY.

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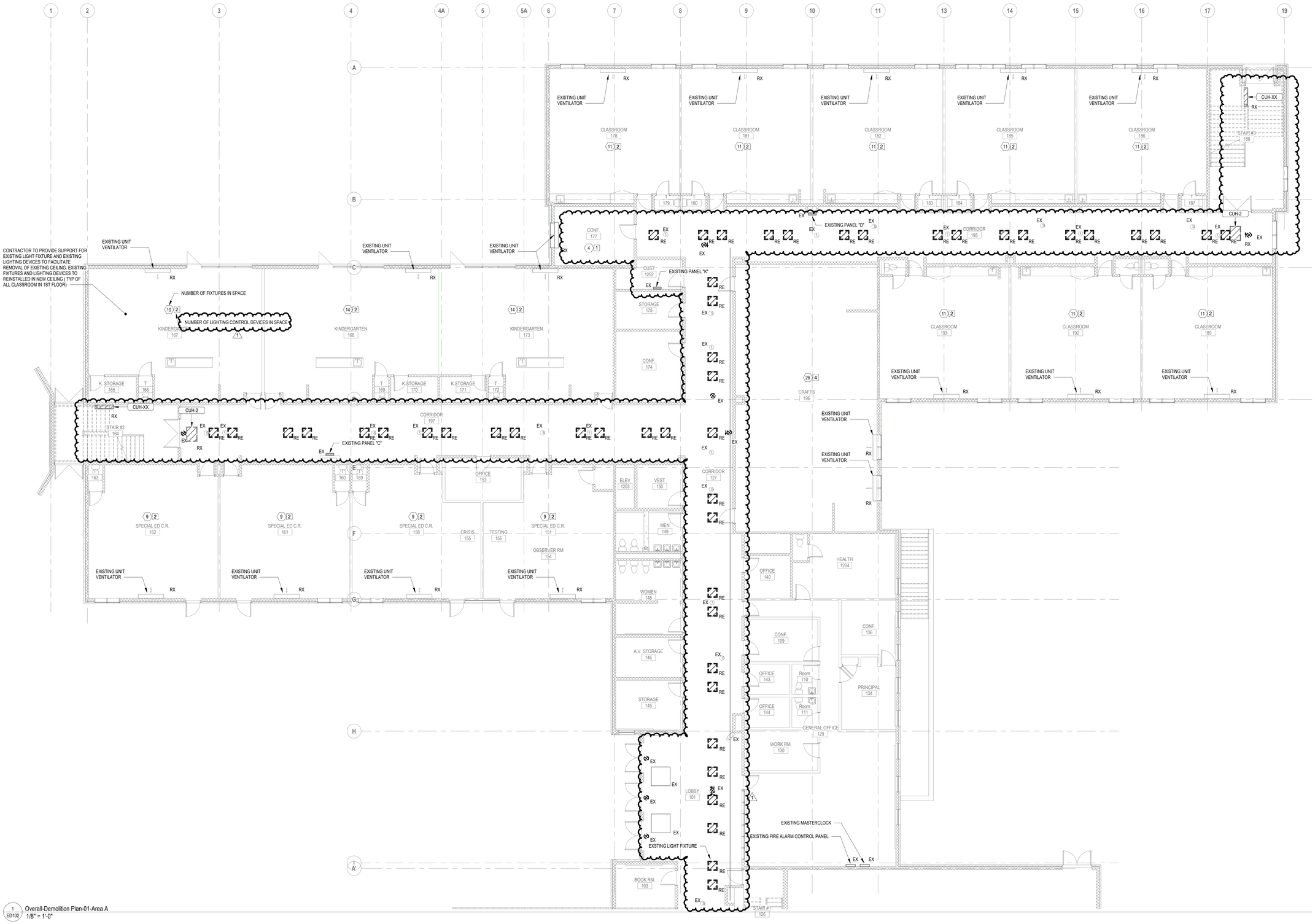
Drawing Title:

BASEMENT
DEMOLITION PLAN

Sheet Number:

ED101

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1 / ED102 Overall-Demolition Plan-01-Area A
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES
2. CONTRACTOR TO PROVIDE SUPPORT FOR EXISTING TO REMAIN DEVICES.

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W&S Project No: 2170808

Drawing Title:

LEVEL 1 DEMOLITION PLAN PART A

Sheet Number:

ED102

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1 / ED103 Overall-Demolition Plan-01-Area B
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES
2. CONTRACTOR TO PROVIDE SUPPORT FOR EXISTING TO REMAIN DEVICES.

ALTERNATE NOTE :

1. ALL WORK INCLUDED IN THIS DRAWING SHALL BE INCLUDED AS PART OF ALTERNATE 1

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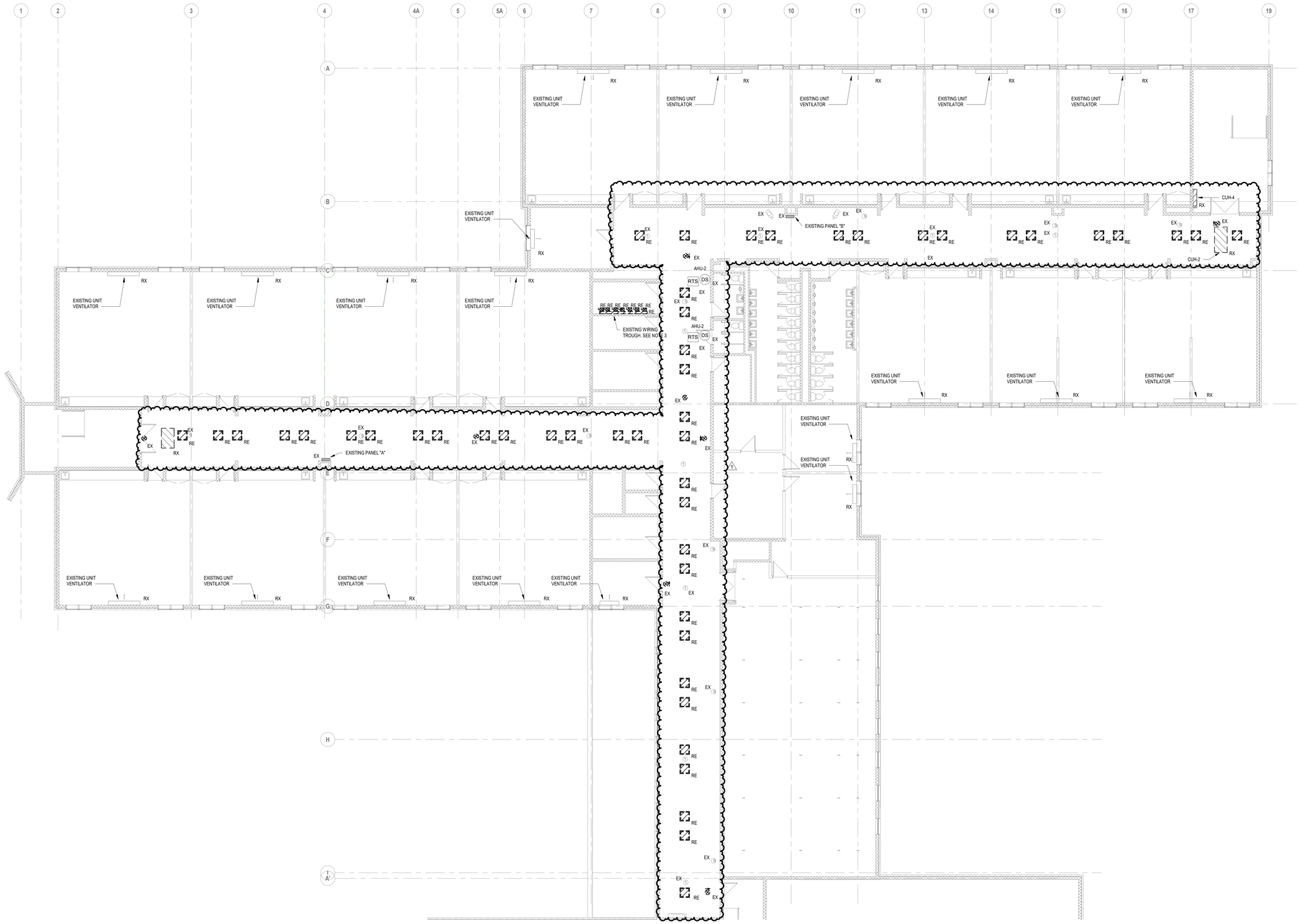
Drawing Title:

LEVEL 1
DEMOLITION PLAN
PART B

Sheet Number:

ED103

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1 ED104 Overall-Demolition Plan-02-Area A
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES
2. CONTRACTOR TO PROVIDE SUPPORT FOR EXISTING TO REMAIN DEVICES
3. DEMO AND REMOVE ALL EXISTING STARTER/DISCONNECT FOR EF-1 THROUGH EF-7, AND MAU BEING FED FROM THE WIRING TROUGH. REMOVE ALL WIRING FROM WIRING TROUGH TO MSB. REMOVE EXISTING 70A/3P BREAKER IN EXISTING SWITCHBOARD MSB AND REPLACE WITH NEW 100A/3P BREAKER. RUN NEW 4#1/0 & #6GND IN EXISTING 1-1/2"C TO NEW PANEL PPL1.

1

Project:

CITY OF BRISTOL, CT

HVAC SYSTEM UPGRADES
AT SOUTH SIDE
ELEMENTARY SCHOOL

21 Tuttle Rd.
Bristol, CT 06010

Weston & Sampson

Weston & Sampson Engineers, Inc.
100 Foxborough Boulevard Suite 250
Foxborough, MA 02035
(508) 698-3034 (800) SAMPSON
www.westonandsampson.com

Consultants:

QA+M architecture
QuisenberryArcariMalik
195 Scott Swamp Road
Farmington, CT 06032
(860) 677-4594
qamarch.com

EAGLE Environmental, Inc.

VANZELM ENGINEERS
VAN ZELM HEYWOOD & SHADFORD, INC.
CT: 860.284.5964 MA: 617.218.9928
10 TALCOTT NOTCH, FARMINGTON, CT 06032 - 1806
Connecticut | Massachusetts | North Carolina

Seal:

Revisions:

Rev	Date	Description
1	04/15/20	ADDENDUM #1

Issued For: BID SET

PROJECT TRUE

SCALE: AS NOTED

Date:	04/02/2020
Drawn By:	MK
Reviewed By:	DNM
Approved By:	RFM
W&S Project No:	2170808

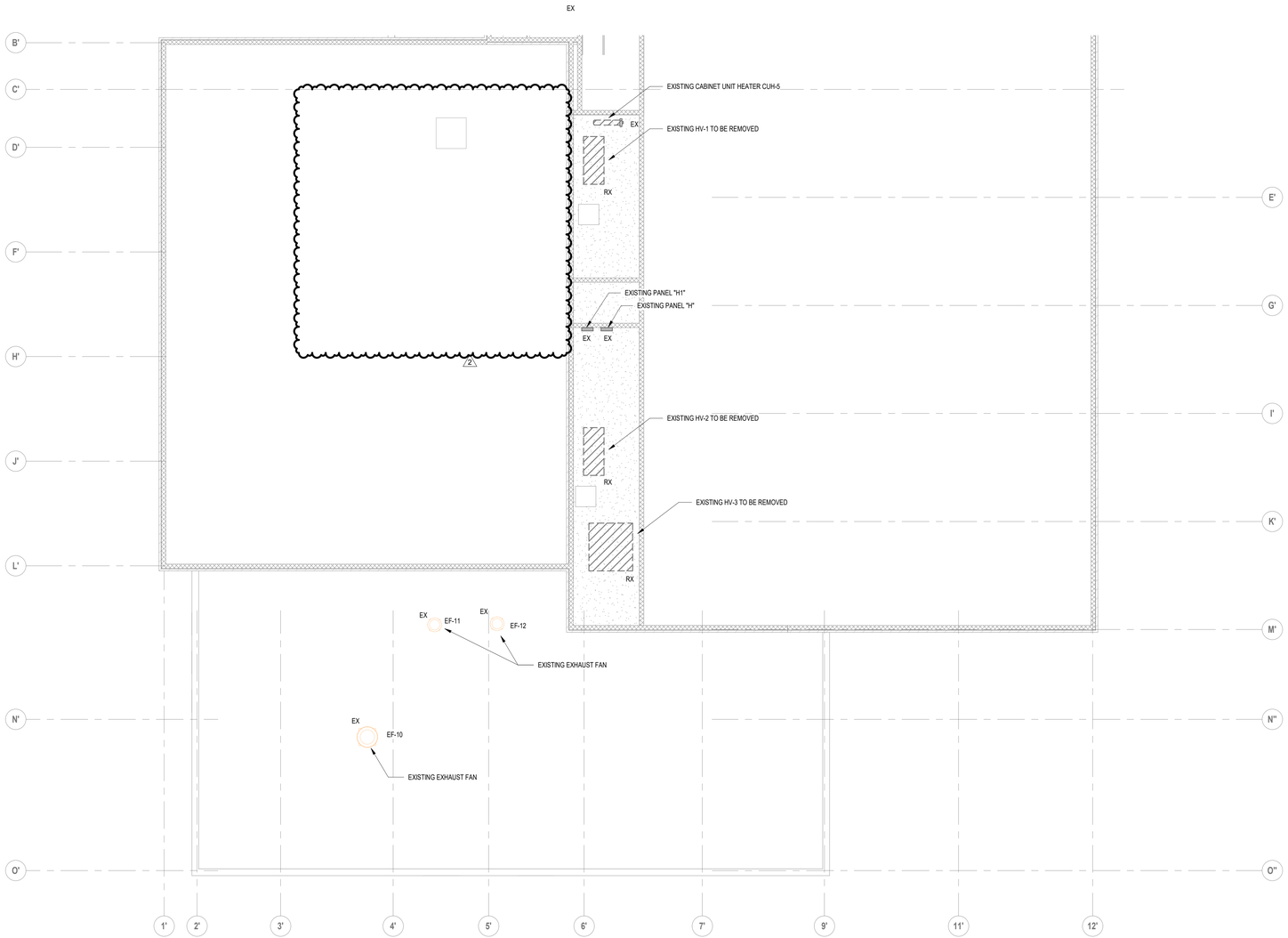
Drawing Title:

LEVEL 2
DEMOLITION PLAN
PART A

Sheet Number:

ED104

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1 ED105 Overall-Demolition Plan-02-Area B
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES
2. CONTRACTOR TO PROVIDE SUPPORT FOR EXISTING TO REMAIN DEVICES.

ALTERNATE NOTE :

1. ALL WORK INCLUDED IN THIS DRAWING SHALL BE INCLUDED AS PART OF ALTERNATE 1

Project:

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Seal:

Revisions:

Rev	Date	Description
1	04/15/20	ADDENDUM #1
2	04/23/20	ADDENDUM #2

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PROJECT TRUE

SCALE: AS NOTED

Date:	04/02/2020
Drawn By:	MK
Reviewed By:	DNM
Approved By:	RFM
W&S Project No:	2170808

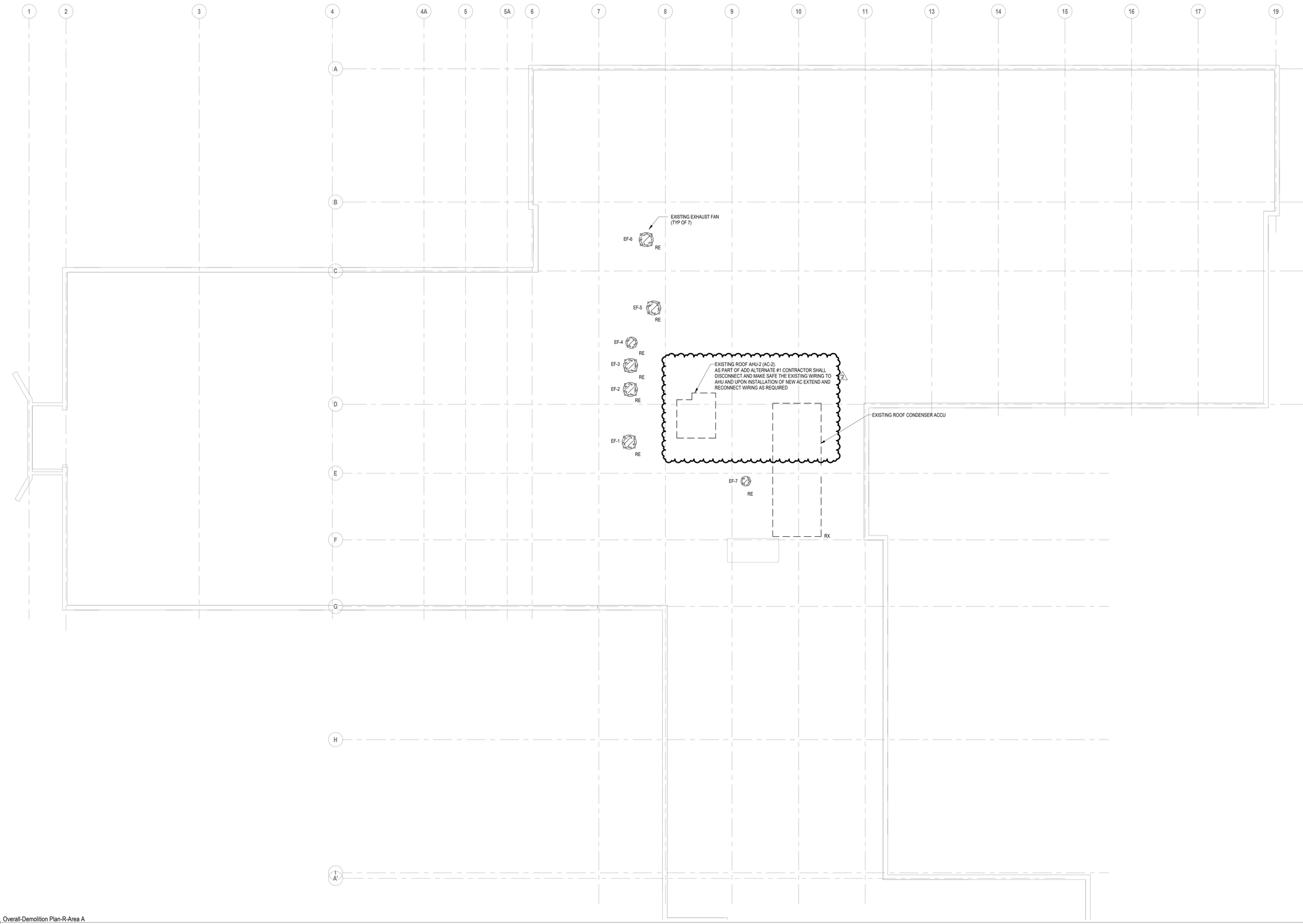
Drawing Title:

LEVEL 2
DEMOLITION PLAN
PART B

Sheet Number:

ED105

WESTON & SAMPSON COPYRIGHT 2018



1 / ED106 Overall-Demolition Plan-R-Area A
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES

Project:

CITY OF BRISTOL, CT

HVAC SYSTEM UPGRADES
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Seal:

Revisions:

Rev	Date	Description
1	04/15/20	ADDENDUM #1
2	04/23/20	ADDENDUM #2

Issued For: BID SET

PROJECT TRUE

SCALE: AS NOTED

Date: 04/02/2020
Drawn By: MK
Reviewed By: DNM
Approved By: RFM
W&S Project No: 2170808

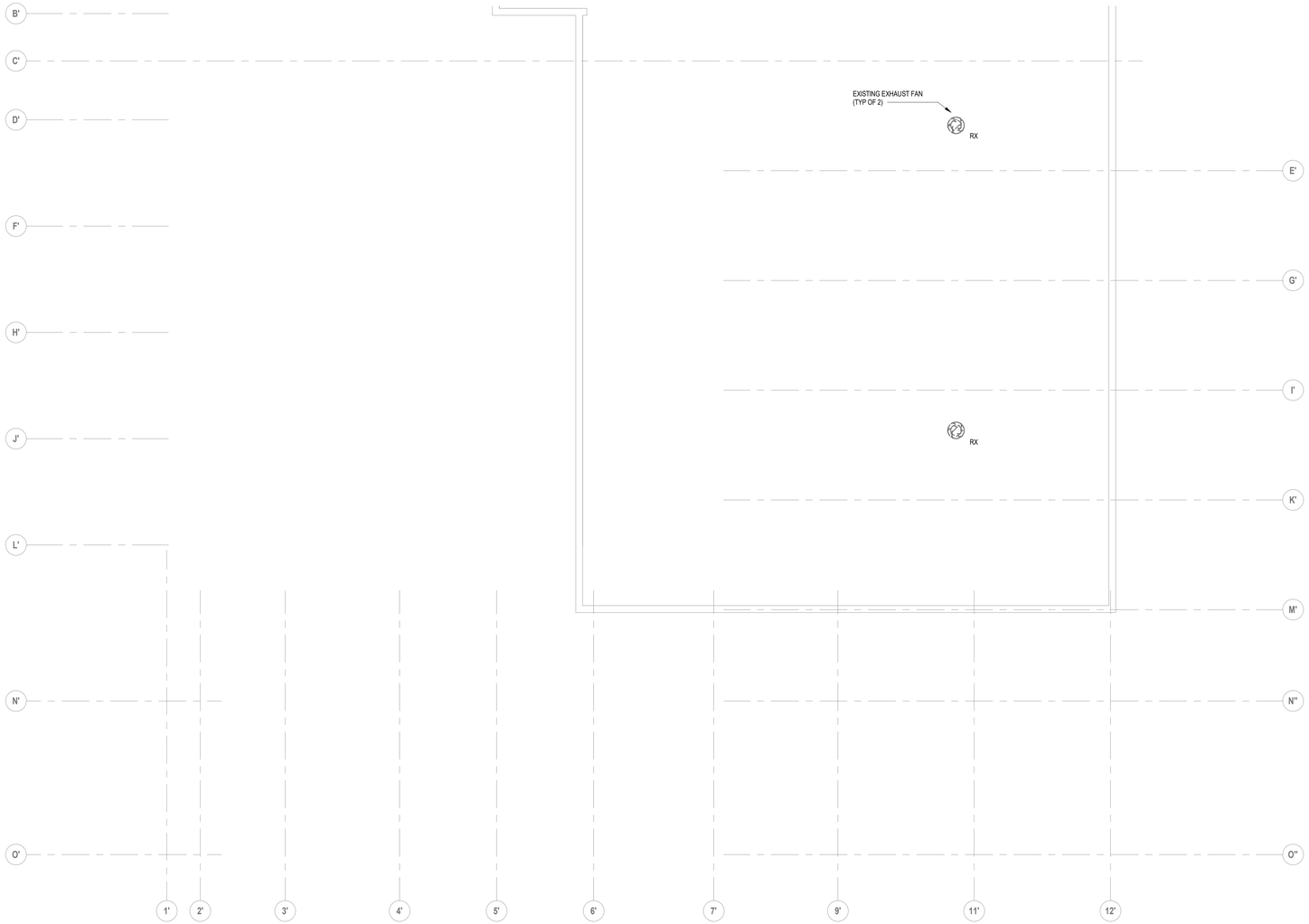
Drawing Title:

ROOF
DEMOLITION PLAN
PART A

Sheet Number:

ED106

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1 / ED107 Overall-Demolition Plan-R-Area B
1/8" = 1'-0"

DRAWING NOTE :

1. REFER TO DRAWING E001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES

ALTERNATE NOTE :

1. ALL WORK INCLUDED IN THIS DRAWING SHALL BE INCLUDED AS PART OF ALTERNATE 1

/1\

Project:

CITY OF BRISTOL, CT

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Seal:

Revisions:

Rev	Date	Description
1	04/15/20	ADDENDUM #1

Issued For: BID SET

PROJECT TRUE

SCALE: AS NOTED

Date:	04/02/2020
Drawn By:	MK
Reviewed By:	DNM
Approved By:	RFM
W&S Project No:	2170808

Drawing Title:

ROOF
DEMOLITION PLAN
PART B

Sheet Number:

ED107

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BRISTOL PUBLIC SCHOOLS

ENROLLMENT FIGURES
2022-2023

Kdg = 22
Grades 1 - 2 = 23
Grades 3 - 5 = 28

As of October 3, 2022 at 3:00 pm

Elem.School	Pre-K	Kgn.	1	2	3	4	5	Total	Total Prev. Yr.	DIFF.
Edgewood		21	23	19	21	21	23			
		21	21	18	19	22	23			
Total	**0**	**42**	**44**	**37**	**40**	**43**	**46**	**252**	**259**	**-7**
Ellen Hubbell		18	22	19	23	22	21			
		17	22	21	26	23	21			
		20	22	21	23	22	20			
Total	**0**	**55**	**66**	**61**	**72**	**67**	**62**	**383**	**369**	**14**

Greene-Hills	10	18	20	19	23	21	22			
	14	19	20	18	22	21	23			
		18	21	18	21	20	22			
		19	21	18	21	20	21			
		19	19	18		20				
Total	**24**	**93**	**101**	**91**	**87**	**102**	**88**	**586**	**593**	**-7**
Ivy Drive	15	18	20	18	23	17	23			
	13	18	19	19	23	17	23			
		17	21	19	21	17	22			
Total	**28**	**53**	**60**	**56**	**67**	**51**	**68**	**383**	**379**	**4**
Mt. View	12	22	23	19	18	20	20			
	13	22	23	21	21	20	20			
	12				20		19			
	16									
Total	**53**	**44**	**46**	**40**	**59**	**40**	**59**	**341**	**349**	**-8**
South Side	10	16	19	20	21	21	22			
	9	17	19	20	21	22	22			
	13	17	18	20	21	21	21			
	12	17	18		23		21			
Total	**44**	**67**	**74**	**60**	**86**	**64**	**86**	**481**	**503**	**-22**

Elem.School	Pre-K	Kgn.	1	2	3	4	5	Total	Total Prev. Yr.	DIFF.
Stafford		23	18	19	22	23	21			
		22	19	20	20	25	21			
		22	18	20	21		21			
Total	**0**	**67**	**55**	**59**	**63**	**48**	**63**	**355**	**336**	**19**
West Bristol		20	22	19	20	21	22			
		19	23	18	21	18	23			
		19	22	19	19	22	21			
		19	22	18	21	22	22			
		20	22	18	20					
Total	**0**	**97**	**111**	**92**	**101**	**83**	**88**	**572**	**557**	**15**
BECC	5									
	7									
	8									
	11									
	7									
	11									
	6									
	11									
	3									
	4									
	7									
	9									
	7									
	7									
Speech	28									
Total	131	**0**	**0**	**0**	**0**	**0**	**0**	**131**	**125**	**6**
TOTALS	**280**	**518**	**557**	**496**	**575**	**498**	**560**	**3484**	**3470**	**14**
Total K - 5		**518**	**557**	**496**	**575**	**498**	**560**	**3204**	**3182**	**22**

Elementary Class Size Averages

Pre-K	Kgn.	1	2	3	4	5	K-5
9.7	**19.2**	**20.6**	**19.1**	**21.3**	**20.8**	**21.5**	**20.4**

excludes Speech

Rangle 20-21							
Range 19-20	3-16	16-22	18-23	18-21	18-26	17-25	19-23

excludes Speech

Mid. School	6		7		8			Total	Total Prev. Yr.	DIFF.
BAIMS	86		87		82			**255**	**0**	**255**

Chippens Hill	199		196		214			**609**	**725**	**-116**
Greene-Hills	95		80		74			**249**	**301**	**-52**
Northeast	106		124		111			**341**	**399**	**-58**
West Bristol	72		95		85			**252**	**310**	**-58**
Total	**558**		**582**		**566**			**1706**	**1735**	**-29**

High School	**9**		**10**		**11**		**12**	**Total**	**Total Prev. Yr.**	**DIFF.**
BCHS	341		303		306		323	**1273**	**1234**	**39**
BEHS	284		303		267		288	**1142**	**1148**	**-6**
BPA	2		14		17		27	**60**	**47**	**13**
Total	**627**		**620**		**590**		**638**	**2475**	**2429**	**46**
Community/Vocational Program								**22**	**16**	**6**
								2497	**2445**	**52**

	Number Attending	**Total to Date**	**Total Prev. Yr.**	**DIFF.**
	Total PreK-5	**3484**	**3470**	**14**
	Total Gr. 6-8	**1706**	**1735**	**-29**
	Total Gr. 9-12	**2497**	**2445**	**52**
	Sub Total	**7687**	**7650**	**37**
Special Education Program: Citywide	**ASEP**	**14**	**24**	**-10**
	Sub Total	**7701**	**7674**	**27**
Bristol Students Enrolled But Not Attending a Bristol Public School	**Spec. Ed. Out Placed Private**	**124**	**103**	**21**
	Spec. Ed. Out Placed Public	**30**		**30**
	BTEC	**22**	**14**	**8**
	Sub Total	**176**	**117**	**59**
	Gr. Total Enrolled	**7877**	**7791**	**86**

Magnet Students	**241**	**243**	**-2**
Total	**8118**	**8034**	**84**

COMPARISON OF BRISTOL NUMBERS PREVIOUS YEAR TO CURRENT YEAR

SCHOOL	**C. YR.**		**PR. YR**		**DIFF.**
Edgewood	252		259		-7
Greene-Hills	586		593		-7

Hubbell	383		369		14
Ivy Drive	383		379		4
Mt. View	341		349		-8
South Side	481		503		-22
Stafford	355		336		19
West Bristol	572		557		15
BECC	131		125		6
EL. Subtotal	**3484**		**3470**		**14**
BAIMS	255		0		255
CHMS	609		725		-116
GH	249		301		-52
NEMS	341		399		-58
WB	252		310		-58
MS. Subtotal	**1706**		**1735**		**-29**
BCHS	1273		1234		39
BEHS	1142		1148		-6
BPA	60		47		13
HS. Subtotal	**2475**		**2429**		**46**
Comm/Voc	22		16		**6**
ASEP	14		24		**-10**
Subtotal	**36**		**40**		**-4**
Grand Total	**7701**		**7674**		**27**
Minus PreK	**7421**		**7386**		**35**

High School Class Load Teachers Over 130 Students

BCHS

Subject	22-23	21-22	Diff.
English	1	1	0
Math		1	-1
Science	3	1	2
Soc. Studies	1	0	1
World Lang.	1	1	0
Total	**6**	**4**	**2**

BEHS

Subject	22-23	21-22	Diff.
English		1	-1
Math		0	0
Science	1	0	1
Soc. Studies	1	1	0
World Lang.	1	1	0
Total	**3**	**3**	**0**

Sections per Grade

	*PreK	Kind.	1	2	3	4	5	Total PreK	Total K - 5
Edgewood	0	2	2	2	2	2	2	0.0	12
Ellen Hubbell	0	3	3	3	3	3	3	0.0	18
Greene-Hills	2	5	5	5	4	5	4	2.0	28
Ivy Drive	2	3	3	3	3	3	3	2.0	18

Mt. View	4	2	2	2	3	2	3	4.0	14
South Side	4	4	4	3	4	3	4	4.0	22
Stafford	0	3	3	3	3	2	3	0.0	17
West Bristol	0	5	5	5	5	4	4	0.0	28
BECC	14							14.0	
Total	**26**	**27**	**27**	**26**	**27**	**24**	**26**	**26.0**	**157**
								Total Sections	**183.0**
								Total Sec K-5	**157.0**

* Speech not included in Prek

	American Indian/ Native Alaskan					Asian American/ Pacific Islander					Black/ Not of Hispanic Orgin					White/ Not of Hispanic Orgin					Hispanic					Two	
Grade	**M**	**F**	**NB**	**Tot.**	**%**	**M**	**F**	**NB**	**Tot.**	**%**	**M**	**F**	**NB**	**Tot.**	**%**	**M**	**F**	**NB**	**Tot.**	**%**	**M**	**F**	**NB**	**Tot.**	**%**	**M**	**F**
Pre-K	0	0	0	0	0.0%	10	1	0	11	3.9%	5	3	0	8	2.9%	82	50	0	132	47.1%	55	41	0	96	34.3%	22	11
Kind.	1	0	0	1	0.2%	9	12	0	21	4.1%	18	22	0	40	7.7%	108	88	0	196	37.8%	112	109	0	221	42.7%	20	19
GR. 1	1	0	0	1	0.2%	14	2	0	16	2.9%	14	18	0	32	5.7%	133	121	0	254	45.6%	100	108	0	208	37.3%	23	23
GR. 2	0	0	0	0	0.0%	5	8	0	13	2.6%	23	18	0	41	8.3%	108	99	0	207	41.7%	101	98	0	199	40.1%	18	17
GR. 3	1	0	0	1	0.2%	6	9	0	15	2.6%	19	25	0	44	7.7%	151	114	0	265	46.1%	105	111	0	216	37.6%	17	17
GR. 4	0	0	0	0	0.0%	6	5	0	11	2.2%	19	16	0	35	7.0%	107	94	0	201	40.4%	103	111	0	214	43.0%	19	18
GR. 5	1	0	0	1	0.2%	9	6	0	15	2.7%	24	18	0	42	7.5%	139	134	0	273	48.8%	92	116	0	208	37.1%	12	9
GR. 6	0	1	0	1	0.2%	13	9	0	22	3.9%	22	25	0	47	8.4%	122	140	0	262	47.0%	107	94	0	201	36.0%	8	17
GR. 7	0	0	0	0	0.0%	6	14	0	20	3.4%	34	25	0	59	10.1%	121	140	0	261	44.8%	105	105	0	210	36.1%	20	12
GR. 8	0	0	0	0	0.0%	12	10	0	22	3.9%	15	34	0	49	8.7%	144	128	3	275	48.6%	89	110	0	199	35.2%	9	12
GR. 9	1	0	0	1	0.2%	15	11	0	26	4.1%	20	26	2	48	7.7%	158	133	3	294	46.9%	111	121	0	232	37.0%	14	12
GR. 10	0	0	0	0	0.0%	6	12	0	18	2.9%	25	25	0	50	8.1%	154	144	2	300	48.4%	113	107	0	220	35.5%	12	20
GR. 11	1	0	0	1	0.2%	7	12	0	19	3.2%	26	23	0	49	8.3%	145	151	0	296	50.2%	96	107	0	203	34.4%	12	10
GR. 12	0	2	0	2	0.3%	2	14	0	16	2.5%	25	24	0	49	7.7%	175	177	2	354	55.5%	92	94	0	186	29.2%	17	14
Total	6	3	0	9	0.1%	120	125	0	245	3.2%	289	302	2	593	7.7%	1847	1713	10	3570	46.6%	1381	1432	0	2813	36.7%	223	211

ELL Students	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
	329	315	355	341	354	377	370	415	397	423	479

or More Races			Native Hawaiian						Total				
NB	Tot.	%	M	F	NB	Tot.	%	Grade	M	F	NB	Tot.	%
0	33	11.8%	0	0	0	0	0.0%	**Pre-K**	174	106	0	280	52.9%
												0	
0	39	7.5%	0	0	0	0	0.0%	**Kind.**	268	250	0	518	62.0%
												0	
0	46	8.3%				0	0.0%	**GR. 1**	285	272	0	557	54.2%
												0	
0	35	7.1%	0	1	0	1	0.2%	**GR. 2**	255	240	0	496	58.3%
												0	
0	34	5.9%	0	0	0	0	0.0%	**GR. 3**	299	276	0	575	53.7%
												0	
0	37	7.4%				0	0.0%	**GR. 4**	254	244	0	498	59.6%
												0	
0	21	3.8%	0	0	0	0	0.0%	**GR. 5**	277	283	0	560	51.1%
												0	
0	25	4.5%	0	0	0	0	0.0%	**GR. 6**	272	286	0	558	52.9%
												0	
0	32	5.5%	0	0	0	0	0.0%	**GR. 7**	286	296	0	582	55.2%
												0	
0	21	3.7%				0	0.0%	**GR. 8**	269	294	3	566	51.4%
												0	
0	26	4.1%	0	0	0	0	0.0%	**GR. 9**	319	303	5	627	53.0%
												0	
0	32	5.2%	0	0	0	0	0.0%	**GR. 10**	310	308	2	620	51.6%
												0	
0	22	3.7%	0	0	0	0	0.0%	**GR. 11**	287	303	0	590	49.7%
												0	
0	31	4.9%	0	0	0	0	0.0%	**GR. 12**	311	325	2	638	44.2%
												0	
0	434	5.7%	0	1	0	1	0.0%	**Total**	3866	3786	12	7665	53.3%

BRISTOL PUBLIC SCHOOLS
RACIAL SURVEY BY SCHOOL
10/1/2022

School	American Indian	Asian	Black	White	Hispanic	Native Hawaiian	Two or More	Total
BCHS	0	26	85	610	493	0	59	1273
BEHS	4	60	94	609	325	0	50	1142
BAIMS	1	13	26	102	92	0	21	255
CHMS	0	21	61	273	231	1	22	609
NEMS	0	13	27	202	83	0	16	341
GH	3	25	61	381	315	0	50	835
WB	0	21	64	342	341	0	56	824
EDGE	0	10	10	112	99	0	21	252
EPH	0	14	34	137	172	0	26	383
ID	0	8	32	194	118	1	30	383
MTV	0	21	23	161	104	0	32	341
SSS	1	8	30	225	198	0	19	481
STAF	0	7	26	136	169	0	17	355
ASEP	0	0	3	4	7	0	0	14
COMM VO	0	0	1	15	4	0	2	22
BECC	0	2	3	64	46	0	16	131
BPA	0	1	6	25	26	0	2	60
TOTAL	9	250	586	3592	2823	2	439	7701

Percentage of Diversity in Student Body							
%					%	%	%
2022	2021	2020	2019	2018	2017	2016	2015
52.1%	49.9%	45.4%	43.4%	40.9%	39.6%	35.9%	35.6%
46.7%	44.7%	40.8%	37.2%	34.9%	31.4%	30.2%	30.9%
60.0%	n/a	n/a	n/a	n/a	n/a	n/a	n/a
55.2%	54.3%	53.5%	51.7%	48.2%	45.2%	37.2%	36.5%
40.8%	43.1%	42.8%	39.8%	35.1%	31.4%	26.9%	26.5%
54.4%	52.2%	49.8%	50.6%	49.9%	45.6%	42.1%	42.2%
58.5%	56.6%	58.2%	55.3%	51.3%	48.5%	44.6%	43.2%
55.6%	51.5%	49.8%	49.5%	46.4%	43.8%	38.1%	39.0%
64.2%	62.1%	58.7%	56.7%	55.3%	52.8%	51.1%	49.0%
49.3%	45.5%	44.4%	38.1%	37.6%	37.6%	33.7%	31.2%
52.8%	48.0%	41.3%	41.2%	41.3%	37.3%	36.3%	38.3%
53.2%	51.2%	45.9%	44.2%	44.4%	43.3%	38.2%	37.5%
61.7%	60.3%	59.4%	51.7%	51.6%	47.2%	41.1%	43.4%
71.4%	62.5%	50.0%	52.2%	58.8%	50.0%	50.0%	61.9%
31.8%	43.8%	31.8%	28.6%	37.5%	23.1%	25.0%	33.3%
51.1%	57.1%	51.9%	40.3%	41.2%	44.1%	36.6%	19.0%
58.3%	42.6%	43.5%	35.0%	52.8%	46.2%	39.1%	42.9%
53.4%	51.2%	48.6%	46.3%	44.3%	41.6%	37.7%	34.2%

BRISTOL PUBLIC SCHOOLS
ENROLLMENT FIGURES
PAROCHIAL SCHOOLS
10/1/2022

School	Pre-K	Kgn.	1	2	3	4	5	6	7	8	Total	Pr.Yr.	#Bristol
Immanuel Lu.	48	15	12	9	11	10	8	6	5	4	128	124	88
St. Joseph	36	15	9	14	16	17	19	20	20	18	184	163	144
St. Matthew	12	19	12	17	15	21	12	18	16	23	165	166	116
Total	96	49	33	40	42	48	39	44	41	45	477	453	348

School	9	10	11	12							Total	Pr.Yr.	#Bristol
St. Paul	112	79	109	101							401	420	96
Total	112	79	109	101							401	420	96

Parochial Totals

Level	22-23	Pr.Yr
Elementary	477	453
Secondary	401	420
Total	878	873

2022-2023 TEACHER CASE LOAD FOR BRISTOL ARTS AND INNOVATION MAGNET SCHOOL

Teacher Name	Dept	Course Name	Crs & Sec #	Exp	Term	Enr	TOT/TCHR	TOT SEC
Carroll, Lisa	TA	Dramatic Theater	B800003.1	1-2(A)	S1	19		
Carroll, Lisa	TA	Intermediate Acting	B800001.1	3-4(A)	S1	18	37	2
Gomes, Matthew	HE	Health I	B151302.1	1-2(A)	S1	6		
Gomes, Matthew	HE	Health I	B151302.2	3-4(A)	S1	14	20	2
Hill, Ryan	ART	2D Art	B800009.2	1-2(A)	S1	12		
Hill, Ryan	ART	Interior Design	B800008.3	3-4(A)	S1	7	19	2
Humerick, Jacob	MU	String Instruments	B800052.1	1-2(A)	S1	8		
Humerick, Jacob	MU	Modern Band	B800051.1	3-4(A)	S1	9	17	2
MacDonald, Theresa	MU	Vocal Ensemble	B800012.1	1-2(A)	S1	6		
MacDonald, Theresa	MU	A Cappella	B800015.1	3-4(A)	S1	7	13	2
Wadowski, Jon	CATE/TECH	Music Video Production	B800020.1	1-2(A)	S1	13		
Wadowski, Jon	CATE/TECH	Scenic Design and Construction (Fall)	B800017.1	3-4(A)	S1	8	21	2

BAIMS TOTALS

Department	5-Jan	10-Jun	15-Nov	16-20	21-25	26-30	>30	
CATE/TECH		2						
ART			1	1				
MU		3	1					
PE		2						
TA				2				

Students	Sections	Average	
17	2	8.5	
28	2	14	
34	4	8.5	
13	2	6.5	
34	2	17	

BRISTOL CENTRAL HIGH SCHOOL

TO: Dr. Catherine Carbone **FROM: Vicky Blais**

RE: Section Anaysis 22-23 S1 **DATE: October 1, 2022**

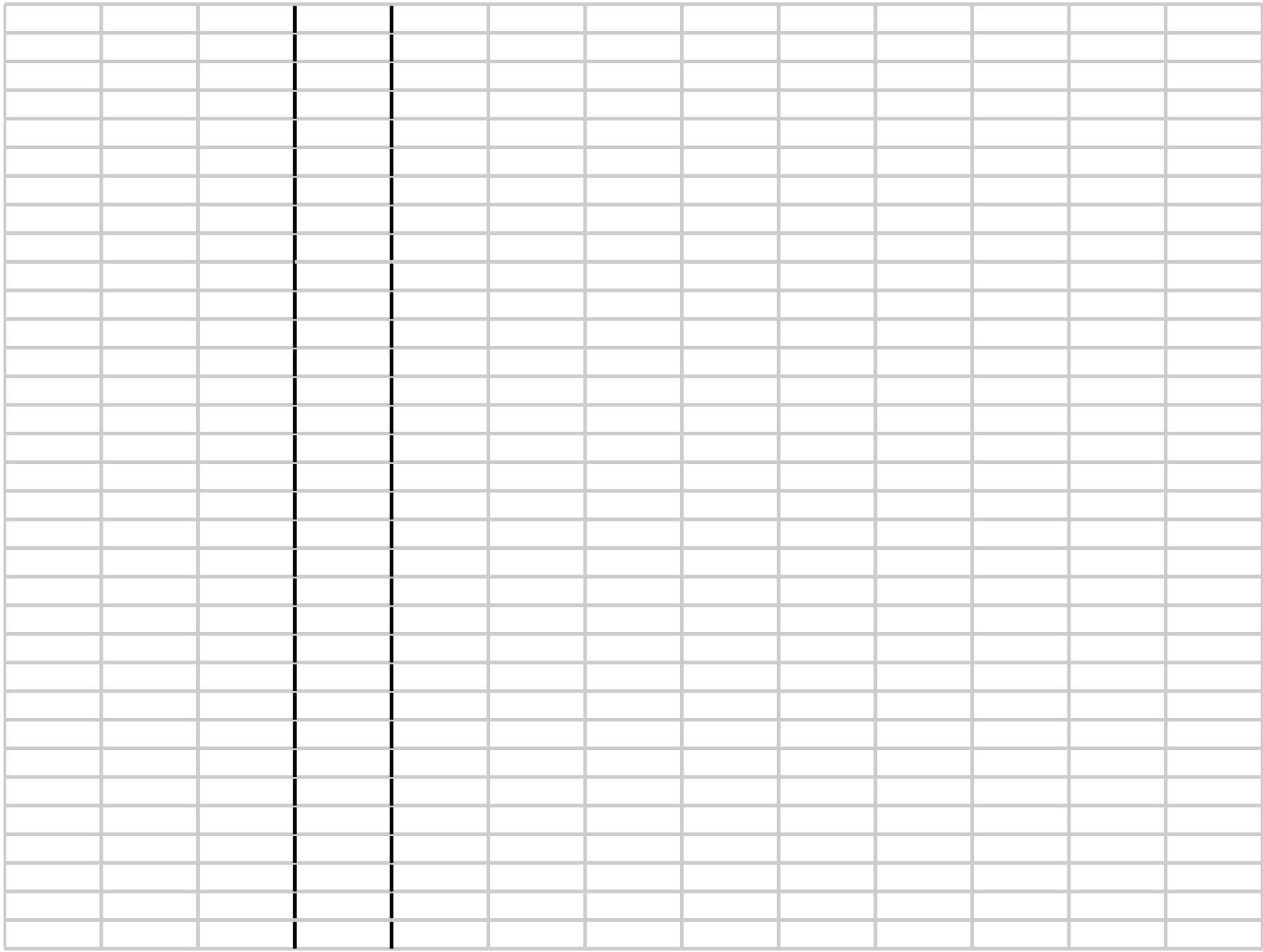
Based on Master Schedule

								October. 2022		
								Total	**Total**	**Section**
Department	**5-Jan**	**10-Jun**	**15-Nov**	**16-20**	**21-25**	**26-30**	**>30**	**Students**	**Sections**	**Average**
Art	0	1	3	4	10	0	0	350	18	19.44
AVID	0	0	1	3	0	0	0	70	4	17.5
CATE/BUS	0	1	1	15	17	0	0	308	34	9.06
CATE/FCS	0	0	4	8	0	0	0	205	18	11.39
CATE/MED	0	0	0	0	2	0	0	42	2	21
CATE/TECH	0	2	4	8	0	0	0	212	14	15.14
English	0	0	6	30	27	1	0	1272	64	19.88
English-Team										
English Total								**1272**	**64**	19.88
ELL	0	0	1	2	1	0	0	67	4	16.75
Math	0	0	11	35	27	1	0	1272	74	17.19
Math-Team										
Math Total								1272	74	17.19
Music	0	3	5	0	0	0	0	197	8	24.63
Band	0	0	0	0	0	1	1	60	2	30
Choir	0	0	1	0	0	1	0	40	2	20
Phys. Ed.	0	1	0	4	8	11	2	625	26	24.04
Health	0	0	2	6	10	0	0	359	18	19.94
Science	1	1	7	27	22	0	0	1104	58	19.03
Science-Team										

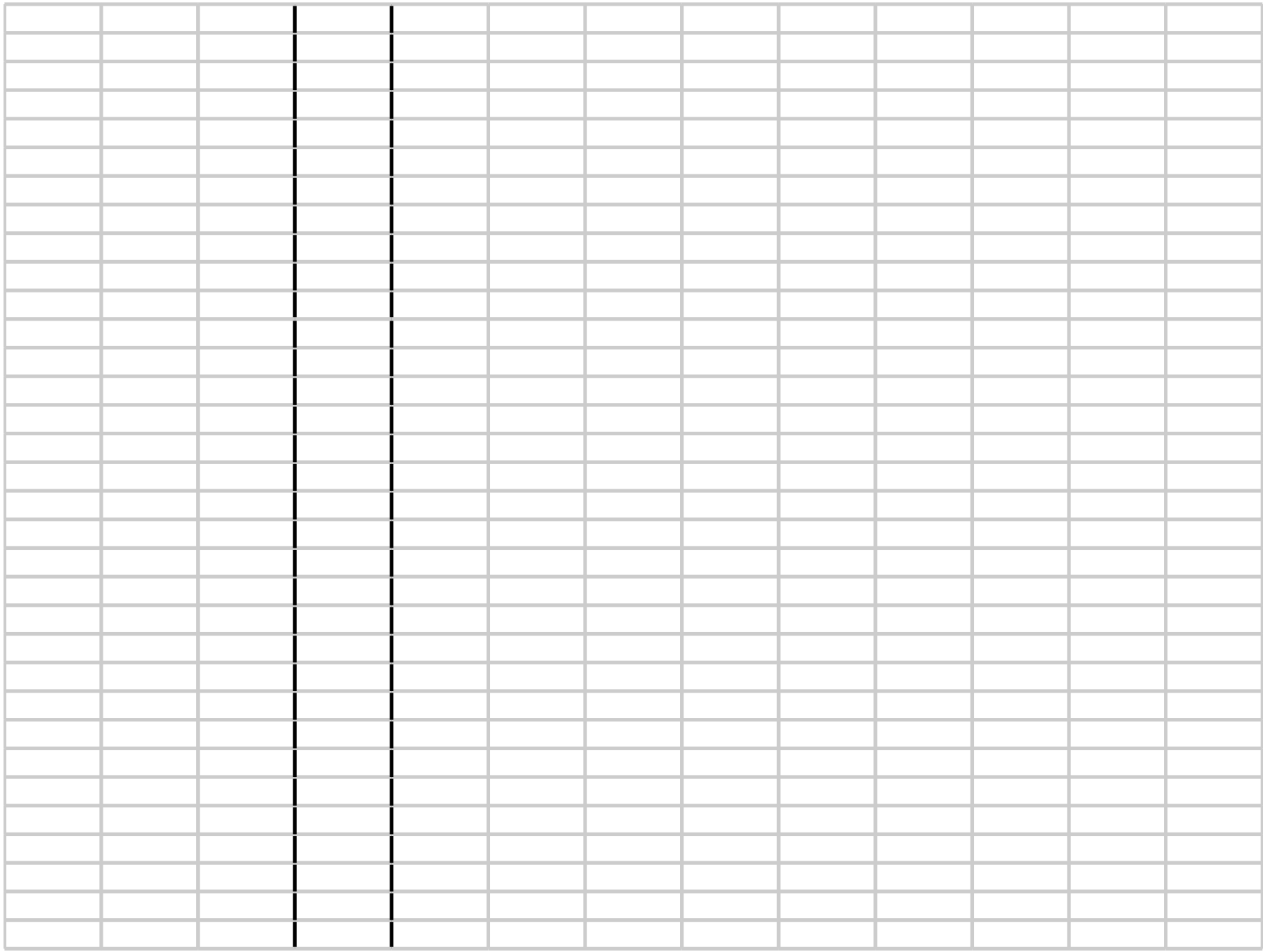
Science Total									1104	58	19.03	
Soc.Stud	1	0	13	31	12	0	0		1073	57	18.82	
Soc.Stud-Team												
Soc. Stud Total									1073	57	18.82	
Special Ed.	0	42	24	4	0	0	0		728	70	10.4	
World Lang.	2	5	7	10	19	2	0		829	45	18.42	
TOTALS										505		

October. 2021				October. 2020				October. 2019				C
Total Students	Total Sections	Section Average		Total Students	Total Sections	Section Average		Total Students	Total Sections	Section Average		Total Students
358	18	19.89		362	20	18.1		352	18	19.56		371
69	4	17.25		75	4	18.75		77	4	19.25		73
319	17	18.76		237	13	18.23		223	12	18.58		213
225	12	18.75		219	12	18.25		202	12	16.83		199
46	2	29.67										
195	12	16.25		201	12	16.75		176	12	14.67		164
1220	62	19.68		1033	51	20.25		970	51	19.02		975
				268	16	16.75		335	16	20.94		276
1220	62	19.68		1301	67	19.42		1305	67	19.48		1251
45	6	7.5		84	11	7.64		75	10	7.5		53
1128	62	18.19		926	52	17.81		909	47	19.34		899
				286	16	17.88		344	16	21.5		294
1173	68	14.78		1212	68	17.82		1253	63	19.89		1193
120	9	13.33		102	8	12.75		92	8	11.5		100
58	2	29		74	2	37		72	2	36		72
38	1	38		71	3	23.67		77	2	38.5		70
656	23	28.52		570	23	24.78		621	22	28.23		570
281	15	18.73		151	7	21.57		171	8	21.38		150
1133	61	18.57		867	45	19.27		810	44	18.41		767
				274	16	17.13		339	16	21.19		276

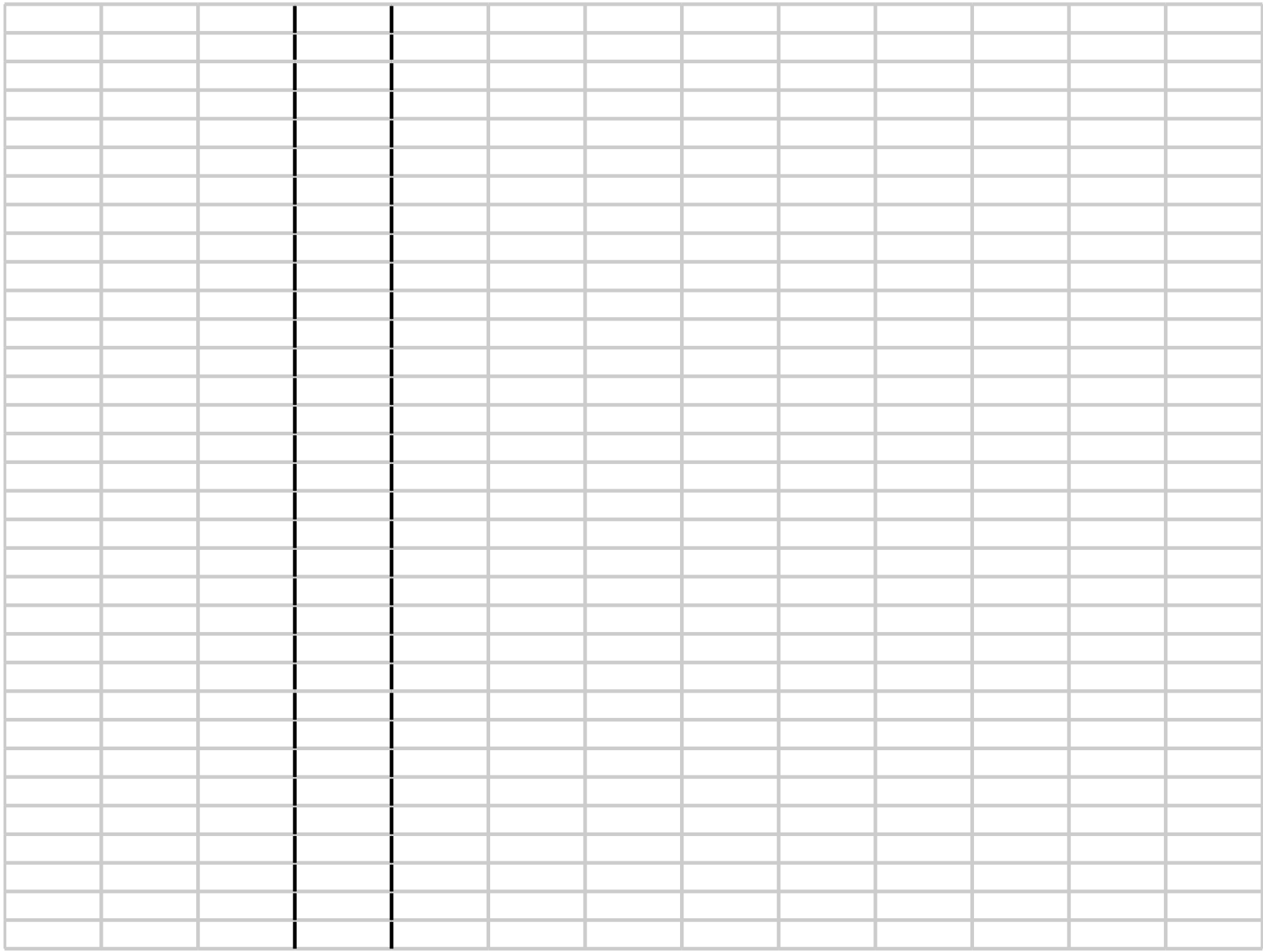
1133	61	24.45		1141	61	18.7		1149	60	19.15		1043
1181	67	17.63		865	46	18.8		829	45	18.42		902
				275	16	17.19		315	16	19.69		246
1181	67	17.63		1140	62	18.39		1144	61	18.75		1148
971	85	11.42		909	96	9.47		874	101	8.65		850
830	46	18.04		842	45	18.71		811	49	16.55		785
	504				**514**				**513**			

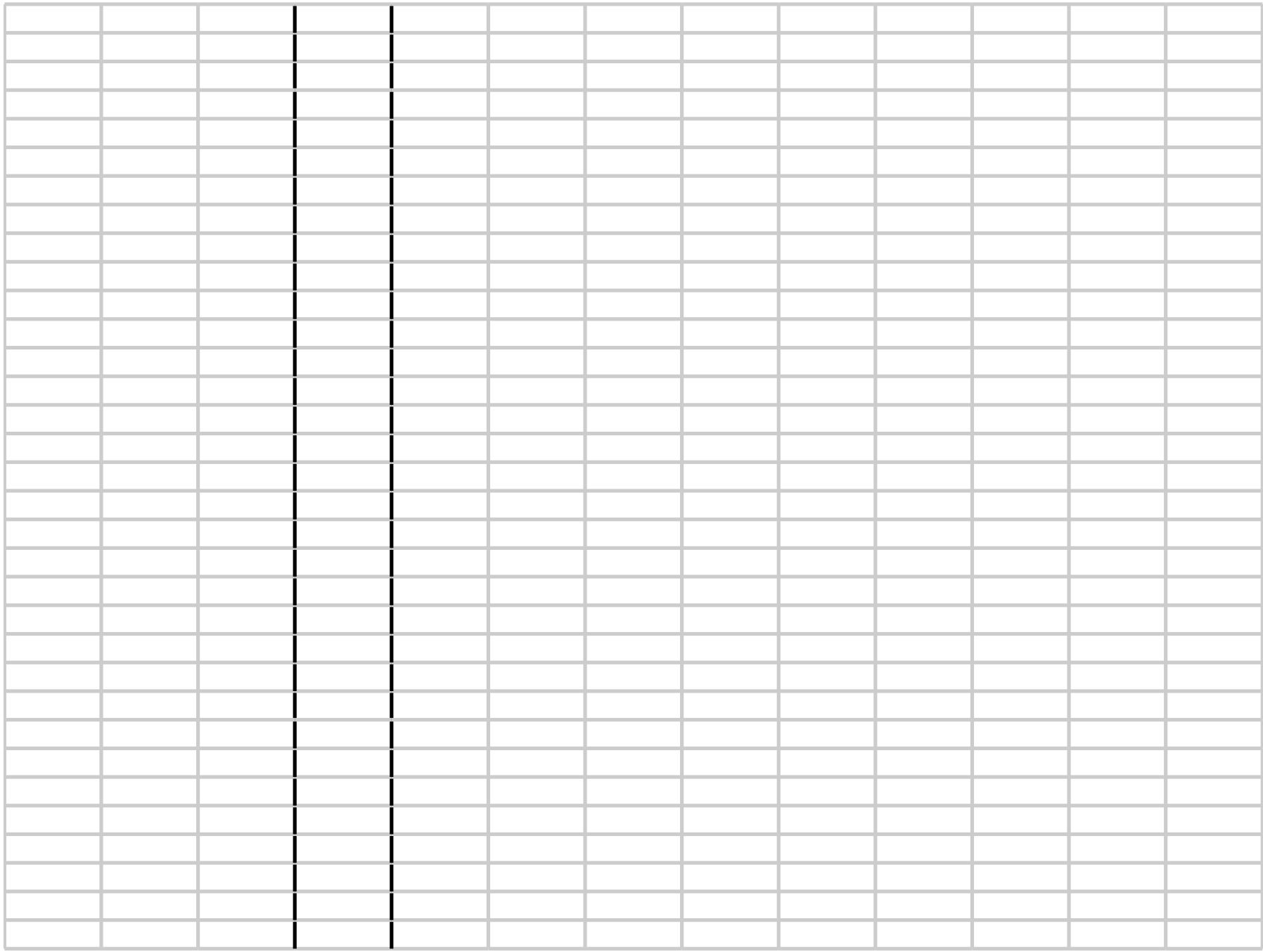


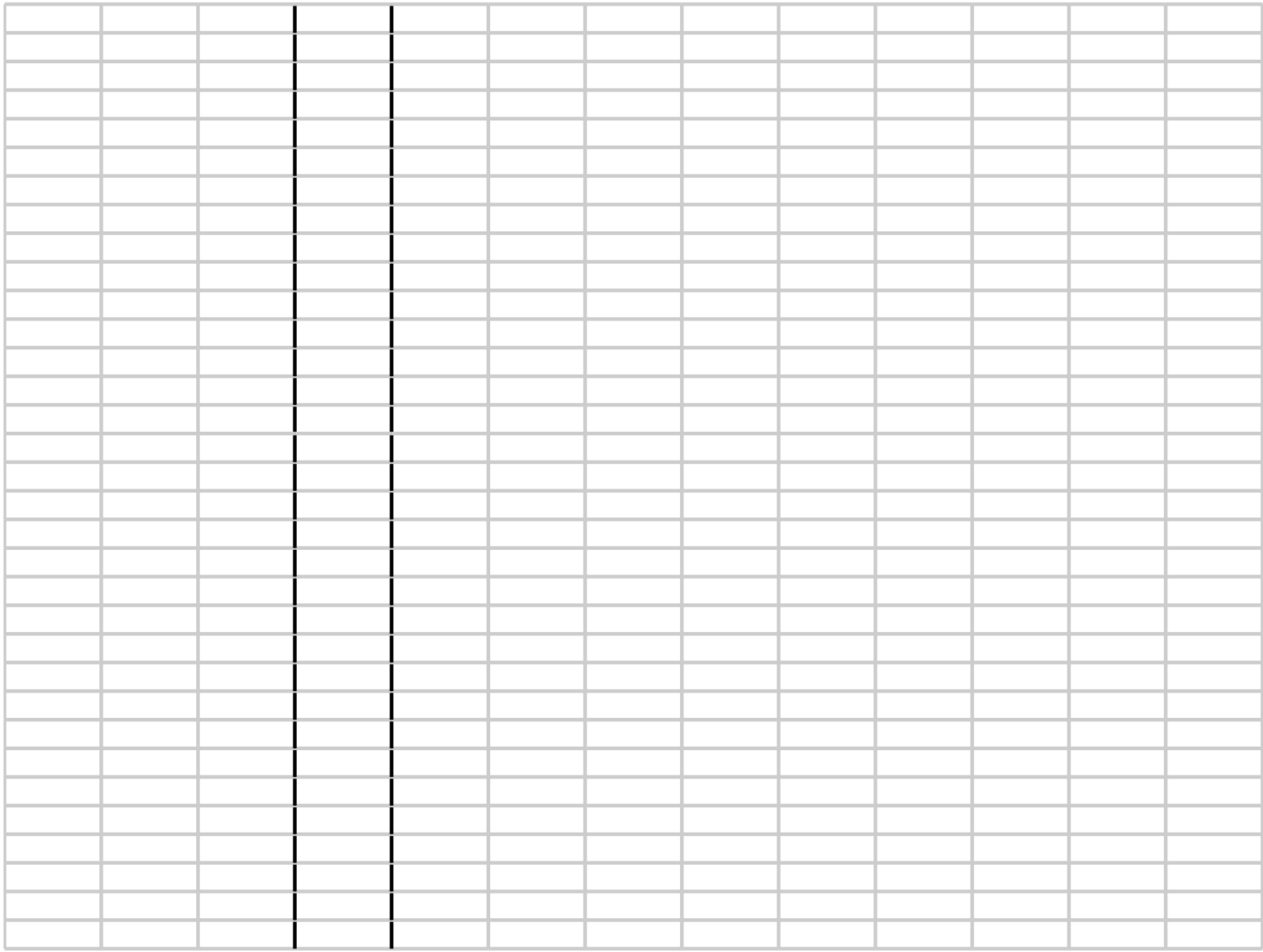




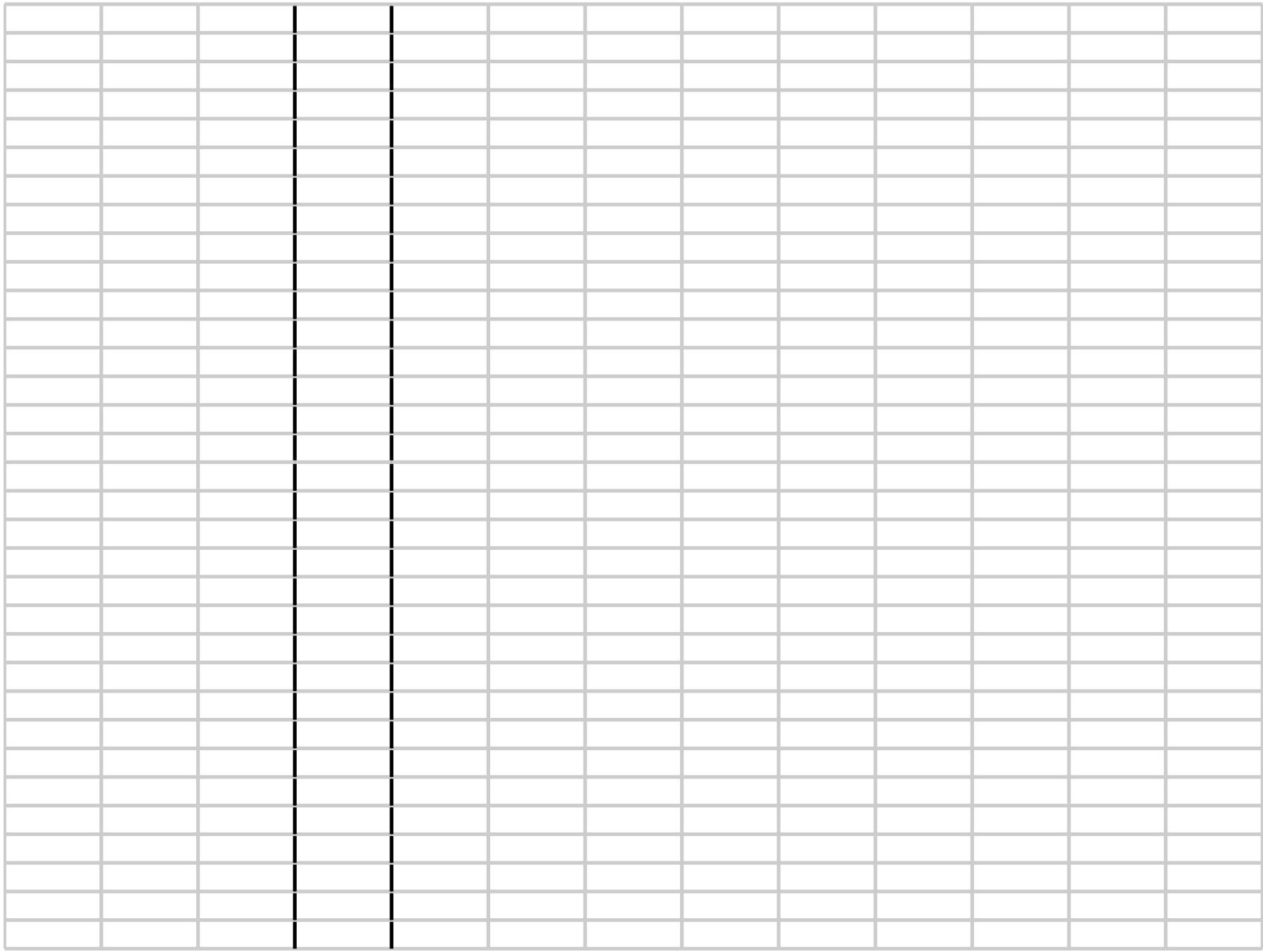


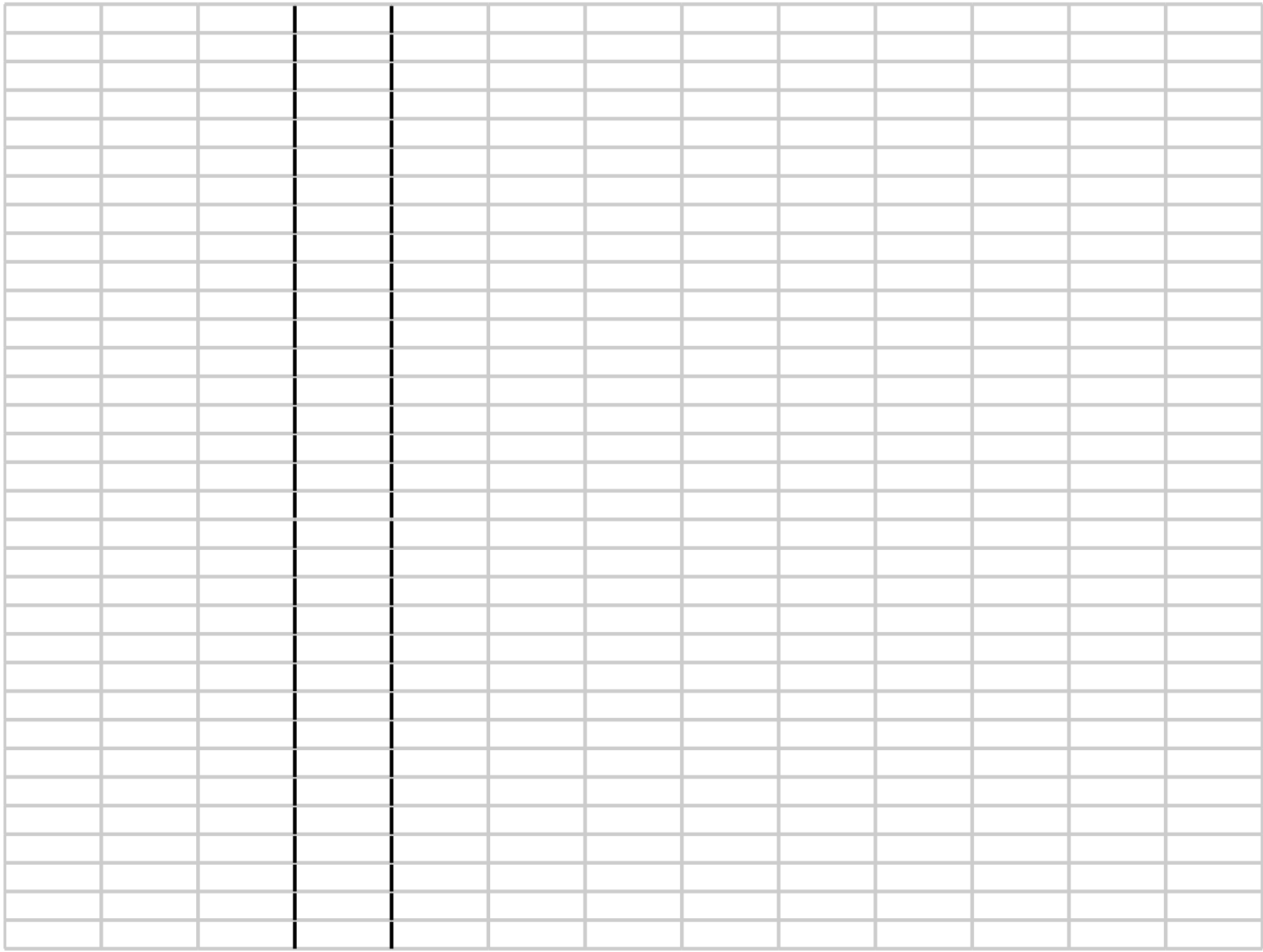


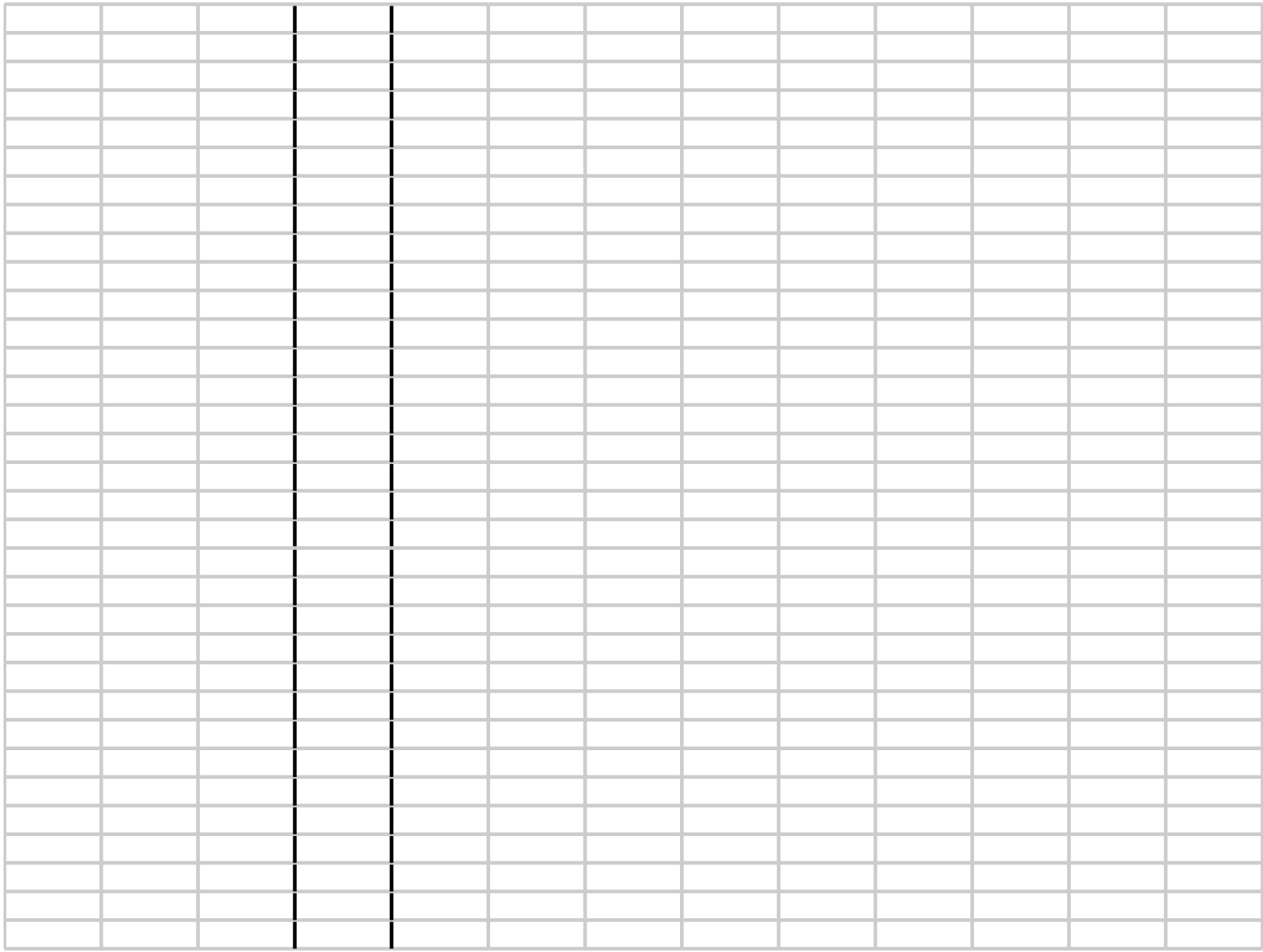


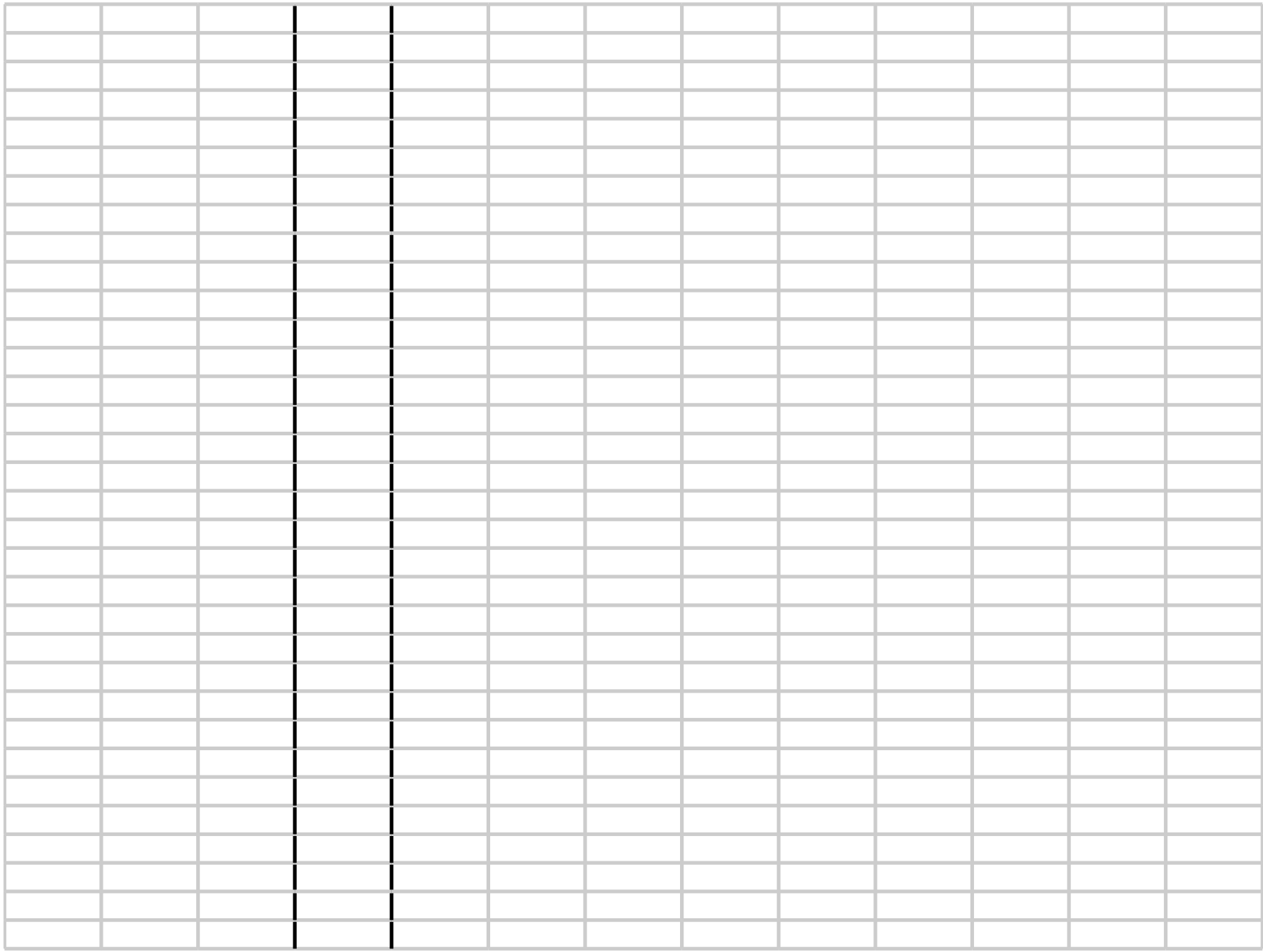


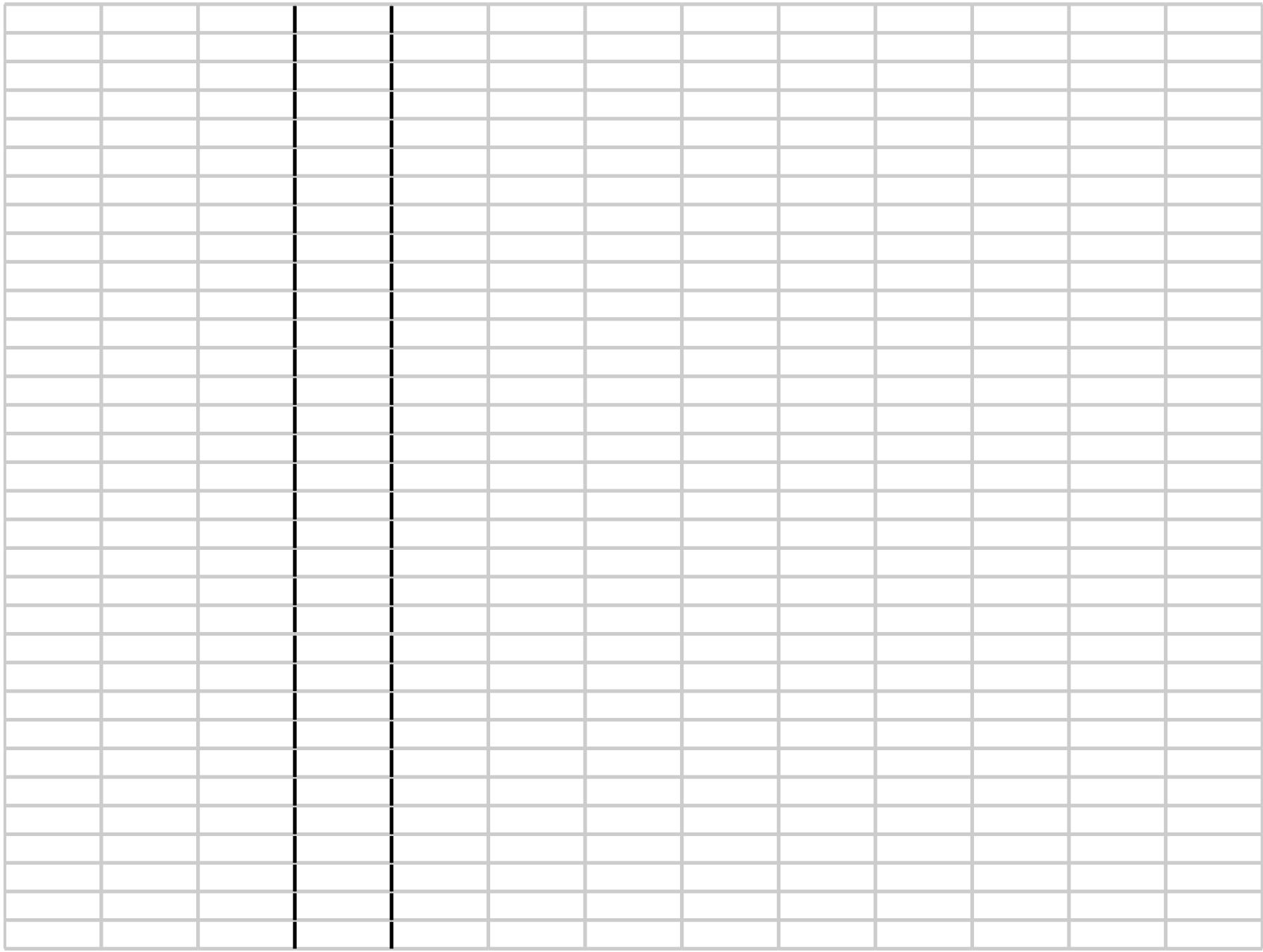


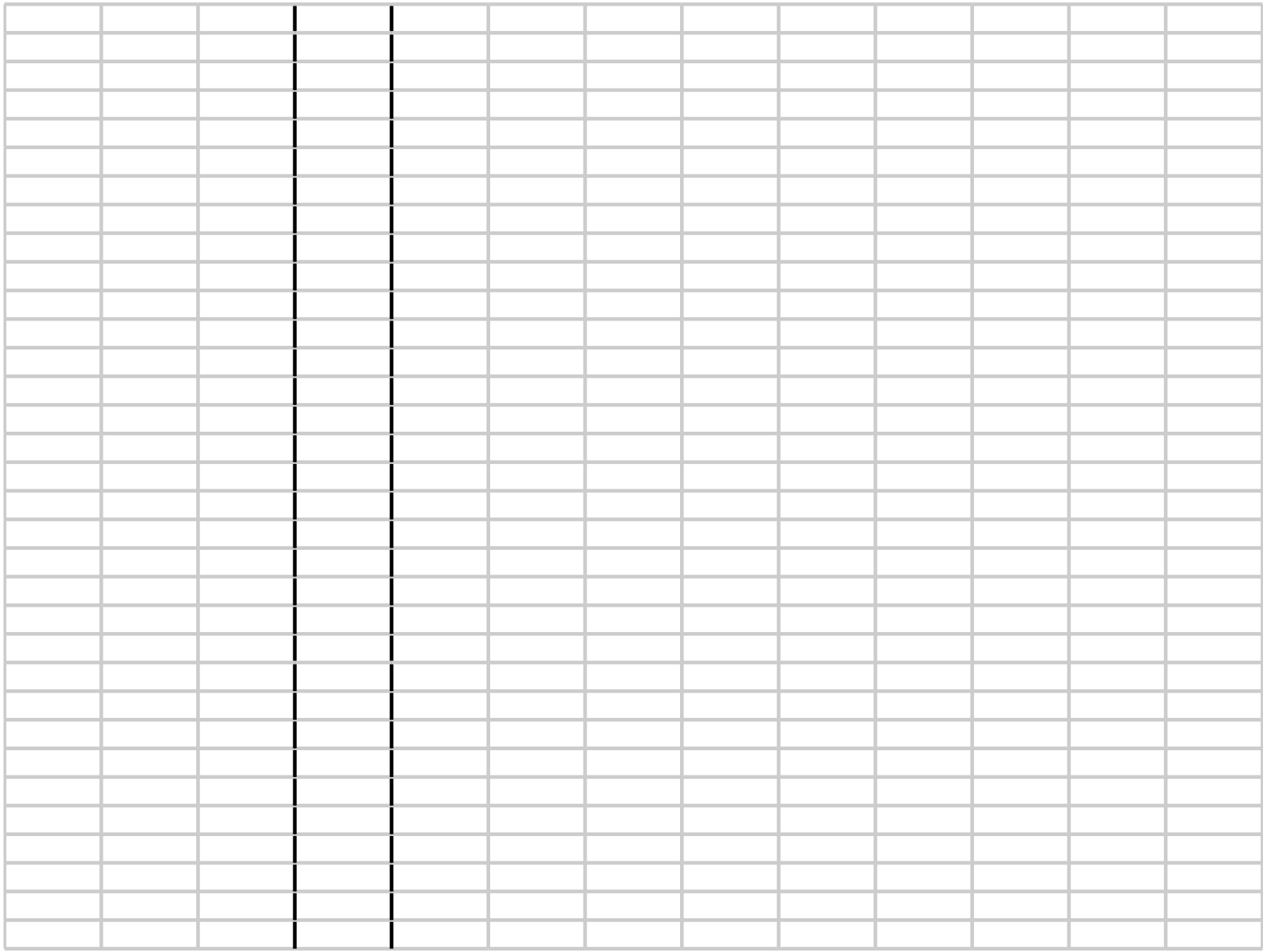


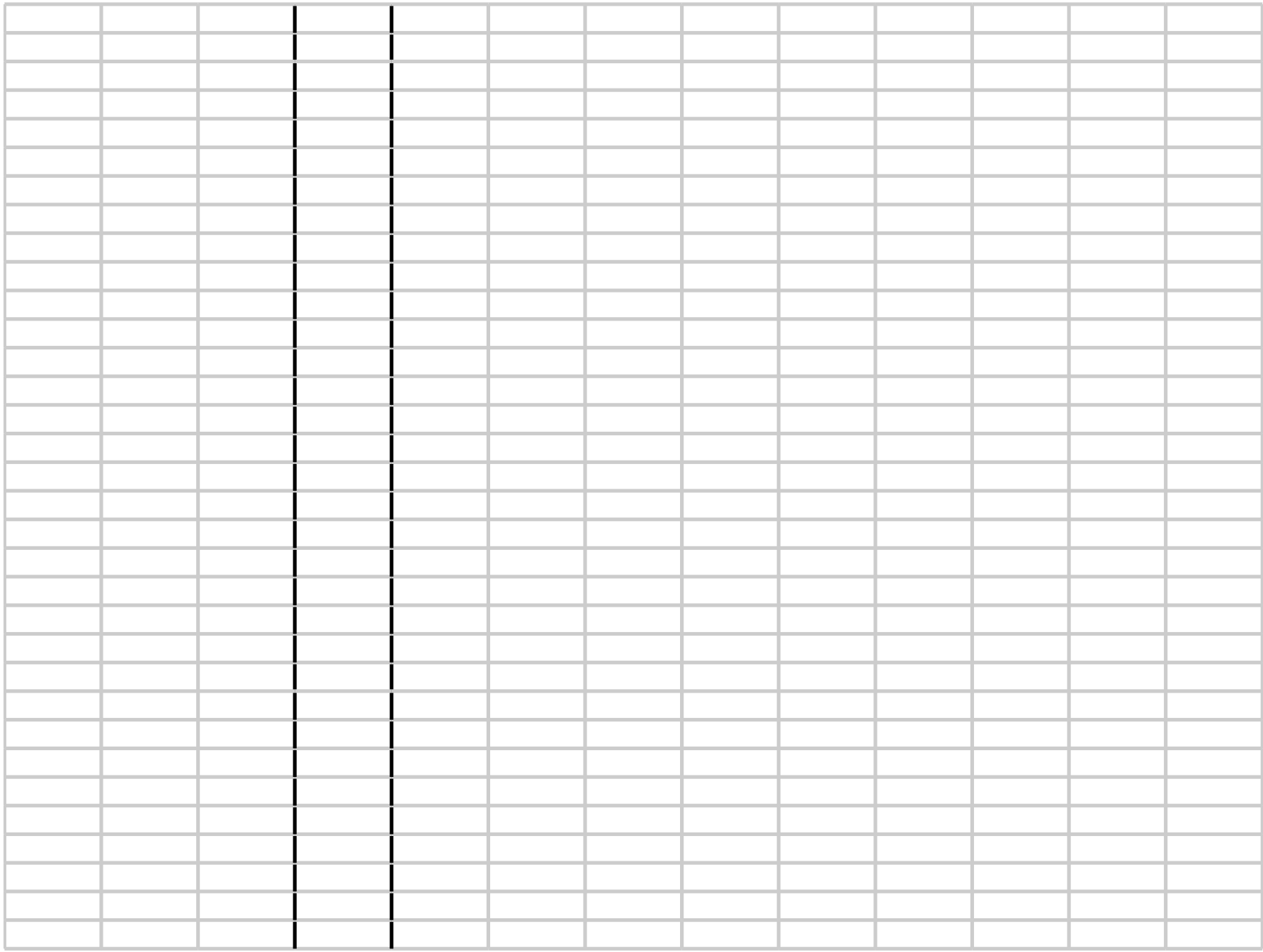


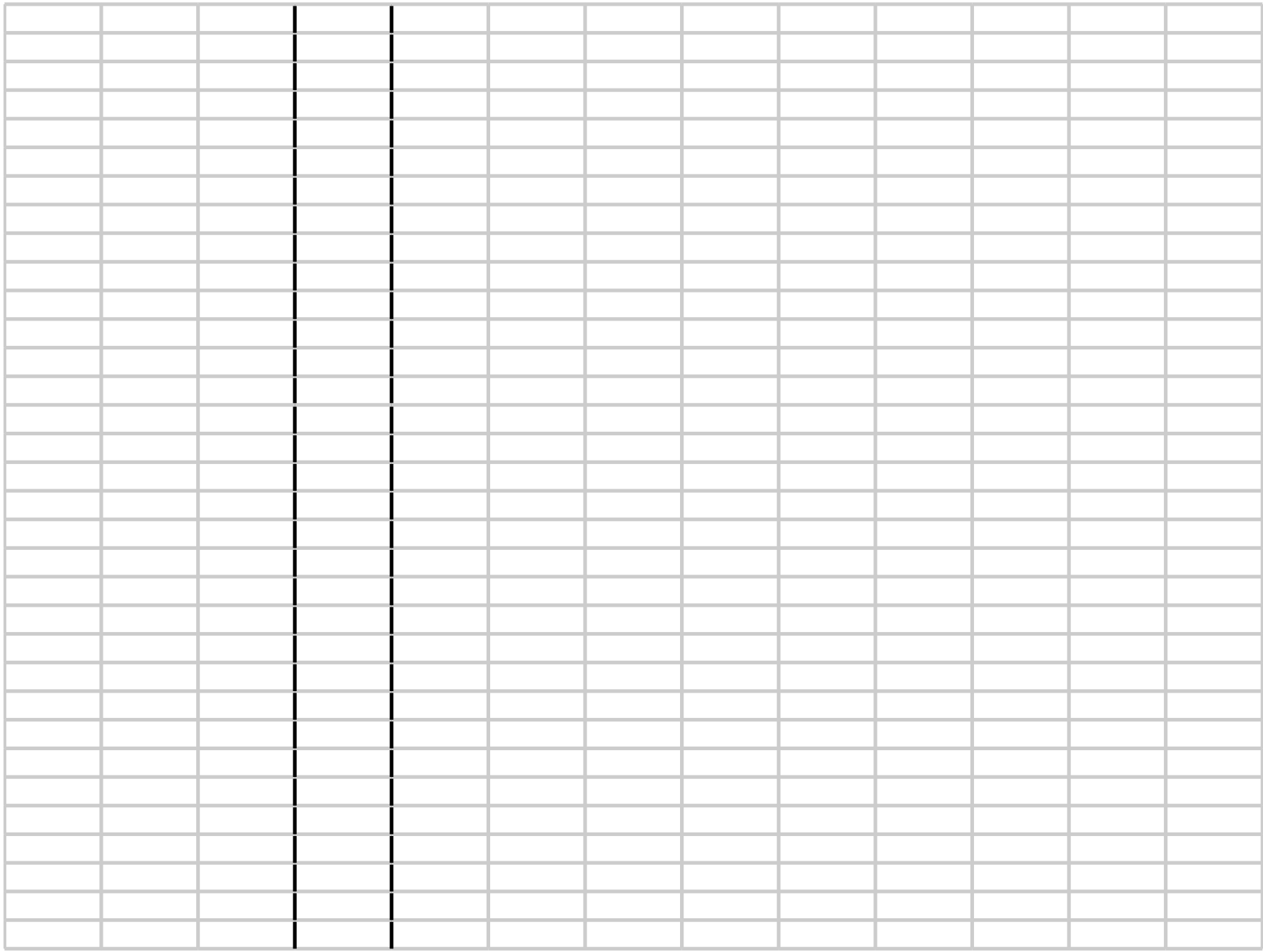


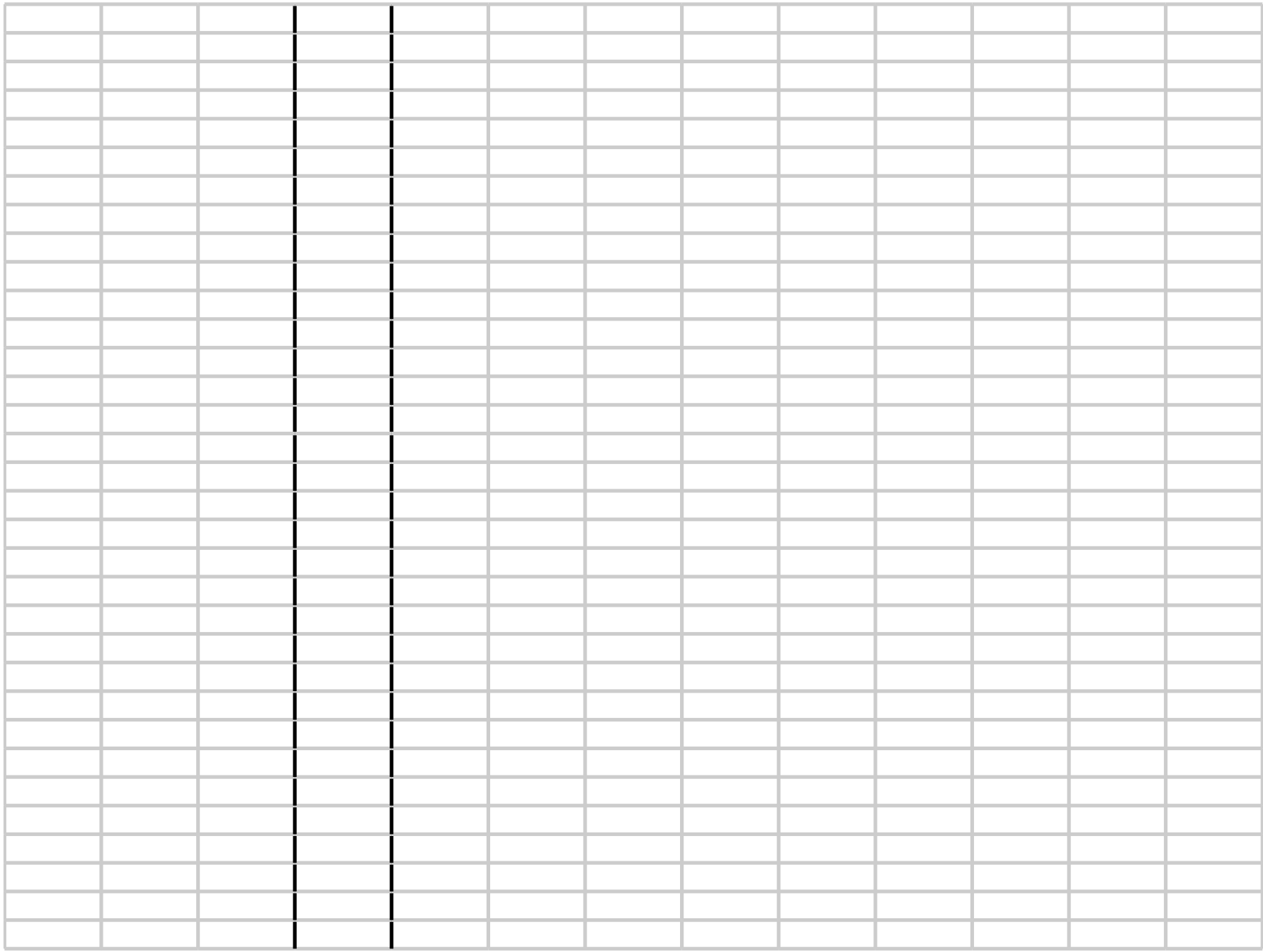


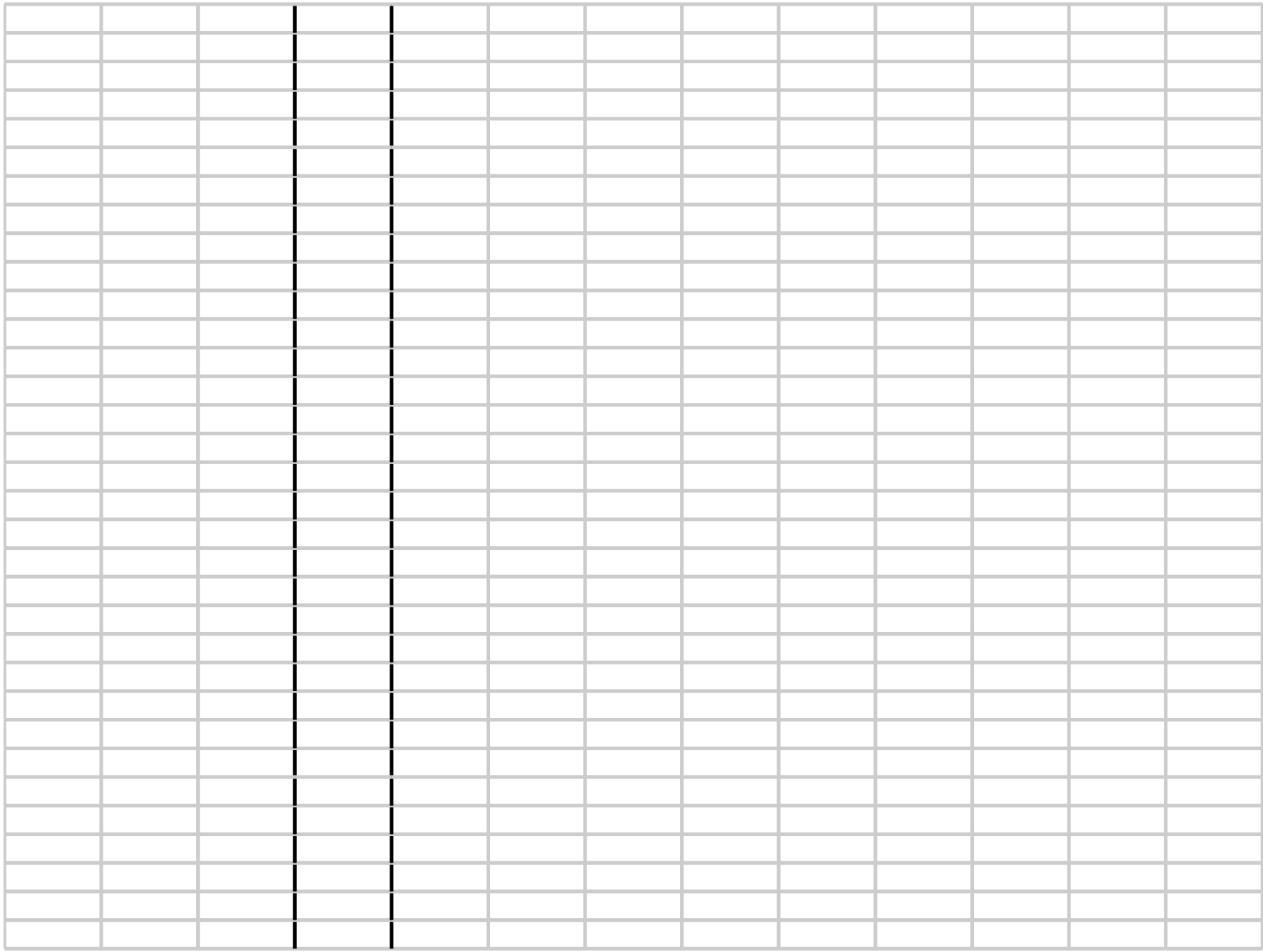














October, 2018	
Total Sections	Section Average
18	20.61
4	18.25
12	17.75
12	16.58
12	13.67
45	21.67
16	17.25
61	20.51
10	5.3
46	19.54
16	18.38
62	19.24
9	11.11
2	36
1	70
26	21.92
12	12.5
44	17.43
16	17.25

60	17.38
44	20.5
16	15.38
60	19.13
99	8.59
45	17.44
505	

2022-2023 TEACHER CASELOAD REPORT FOR BRISTOL CENTRAL HIGH SCHOOL					10/1/2022		
Teacher Name	Teacher Dept.	Course Name	Course #	Exp	Term	Students	Total /Teach
Fernandez, Leslie	Art	AP STUDIO ART & PORTFOLIO	61411	1-2(A)	22-23	8	
Fernandez, Leslie	Art	DESIGN 1	61371	1-2(B)	S1	20	
Fernandez, Leslie	Art	DRAW and PAINT 3	61032	3-4(A)	S1	14	
Fernandez, Leslie	Art	DRAW and PAINT 1	61012	3-4(B)	S1	23	
Fernandez, Leslie	Art	PHOTO AS ART	61402	5-6(A)	S1	13	
Fernandez, Leslie	Art	DRAW and PAINT 1	61012	5-6(B)	S1	23	101
Kosciukiewicz, Peter L	ART	DRAW and PAINT 2	61022	1-2(A)	S1	14	
Kosciukiewicz, Peter L	ART	DRAW and PAINT 1	61013	1-2(B)	S1	23	
Kosciukiewicz, Peter L	ART	DRAW and PAINT 1	61012	3-4(A)	S1	23	
Kosciukiewicz, Peter L	ART	SCULPTURE 1	61213	3-4(B)	S1	16	
Kosciukiewicz, Peter L	ART	SCULPTURE 1	61212	5-6(A)	S1	16	
Kosciukiewicz, Peter L	ART	DRAW and PAINT 1	61013	7-8(B)	S1	23	115
Monaco-Walsh, Kristine C	Art	POTTERY 1	61112	1-2(A)	S1	24	
Monaco-Walsh, Kristine C	Art	POTTERY 1	61112	1-2(B)	S1	23	
Monaco-Walsh, Kristine C	Art	SCULPTURE 1	61212	3-4(A)	S1	18	
Monaco-Walsh, Kristine C	Art	POTTERY 1	61112	3-4(B)	S1	24	
Monaco-Walsh, Kristine C	Art	POTTERY 2	61122	5-6(B)	S1	21	
Monaco-Walsh, Kristine C	Art	POTTERY 1	61112	7-8(A)	S1	24	134
Cote, Michelle	CATE/BUS	Information Processing	91422	1-2(A)	S1	20	
Cote, Michelle	CATE/BUS	SMALL BUSINESS OWNERSHIP	91472	1-2(B)	S1	17	

Cote, Michelle	CATE/BUS	Computer Programming & Video Game Design	91321	3-4(B)	S1	18	
Cote, Michelle	CATE/BUS	SMALL BUSINESS OWNERSHIP	91472	5-6(B)	S1	19	
Cote, Michelle	CATE/BUS	Intro to Cooperative Work Experience	91332	7-8(A)	S1	10	84
Ellison, Effrin	CATE/BUS	Introduction to Marketing	91513	1-2(B)	S1	20	
Ellison, Effrin	CATE/BUS	Introduction to Marketing	91513	3-4(A)	S1	19	
Ellison, Effrin	CATE/BUS	Introduction to Marketing	91512	3-4(B)	S1	20	
Ellison, Effrin	CATE/BUS	PERSONAL FINANCE & INVESTMENT	91463	5-6(A)	S1	20	
Ellison, Effrin	CATE/BUS	BUSINESS MANAGEMT	91413	5-6(B)	S1	20	
Ellison, Effrin	CATE/BUS	BUSINESS MANAGEMT	91412	7-8(A)	S1	19	118
Roberge, Laurie B	CATE/Bus	ACCOUNTING 1	91101	1-2(A)	22-23	13	
Roberge, Laurie B	CATE/Bus	PERSONAL FINANCE & INVESTMENT	91462	1-2(B)	S1	20	
Roberge, Laurie B	CATE/Bus	PERSONAL FINANCE & INVESTMENT	91462	3-4(A)	S1	20	
Roberge, Laurie B	CATE/Bus	PERSONAL FINANCE & INVESTMENT	91462	5-6(B)	S1	17	
Roberge, Laurie B	CATE/Bus	PERSONAL FINANCE & INVESTMENT	91463	7-8(A)	S1	19	
Roberge, Laurie B	CATE/Bus	PERSONAL FINANCE & INVESTMENT	91462	7-8(B)	S1	17	106
Silva, Alyson	CATE/FCS	CHILD, FAMILY, & COMMUNITY	102202	1-2(B)	S1	12	
Silva, Alyson	CATE/FCS	EARLY CHILDHOOD EDUCATION 1	102211	3-4(A)	S1	13	
Silva, Alyson	CATE/FCS	Rising Educators I	101212	5-6(A)	S1	12	

Silva, Alyson	CATE/FCS	CHILD, FAMILY, & COMMUNITY	102202	5-6(B)	S1	18	
Silva, Alyson	CATE/FCS	EARLY CHILDHOOD EDUCATION 1	102211	7-8(A)	S1	17	
Silva, Alyson	CATE/FCS	CHILD, FAMILY, & COMMUNITY	102202	7-8(B)	S1	19	91
Smith, Alison R	CATE/FCS	Intro Foods & Nutrition	101043	3-4(A)	S1	20	
Smith, Alison R	CATE/FCS	Intro Foods & Nutrition	101043	3-4(B)	S1	20	
Smith, Alison R	CATE/FCS	Baking & Patisserie	101072	5-6(A)	S1	19	
Smith, Alison R	CATE/FCS	Baking & Patisserie	101072	5-6(B)	S1	15	
Smith, Alison R	CATE/FCS	Intro Foods & Nutrition	101043	7-8(A)	S1	20	
Smith, Alison R	CATE/FCS	Intro Foods & Nutrition	101043	7-8(B)	S1	20	114
Horan, Jonathan D	CATE/Tech	ARCH CONCEPTS	81822	1-2(A)	S1	19	
Horan, Jonathan D	CATE/Tech	Intro to Digital Media Productions	81792	1-2(B)	S1	19	
Horan, Jonathan D	CATE/Tech	Intro to Digital Media Productions	81792	3-4(A)	S1	20	
Horan, Jonathan D	CATE/Tech	Introduction to Engineering	81551	3-4(B)	22-23	11	
Horan, Jonathan D	CATE/Tech	Intro to Digital Media Productions	81792	5-6(A)	S1	18	
Horan, Jonathan D	CATE/Tech	Principles of Engineering	81801	7-8(B)	22-23	7	94
Piotrowski, Nicholas J	CATE/Tech	TOOLS and MATERIALS	81862	1-2(A)	S1	17	
Piotrowski, Nicholas J	CATE/Tech	Intro to Computer Assisted Design	81321	1-2(B)	S1	14	
Piotrowski, Nicholas J	CATE/Tech	TOOLS and MATERIALS	81863	3-4(A)	S1	13	
Piotrowski, Nicholas J	CATE/Tech	CONSTRUCTION TECH	81082	3-4(B)	S1	16	
Piotrowski, Nicholas J	CATE/Tech	Civil Engineering & Architecture	81821	7-8(A)	22-23	11	
Piotrowski, Nicholas J	CATE/Tech	CONSTRUCTION TECH	81082	7-8(B)	S1	18	89

Wadowski, Jon	CATE/TECH	WEB SITE DESIGN	91482	1-2(B)	S1	20	
Wadowski, Jon	CATE/TECH	WEB SITE DESIGN	91483	3-4(B)	S1	9	29
Abreu, Debbie	ELL	English Support Skills	EL011450.2	1-2(A)	22-23	22	
Abreu, Debbie	ELL	English Support Skills	EL011450.7	1-2(B)	22-23	16	
Abreu, Debbie	ELL	English Support Skills	EL011450.1	5-6(B)	22-23	14	
Abreu, Debbie	ELL	English Support Skills	EL011450.5	7-8(B)	22-23	15	67
Boissonneault, Matthew E	Eng	ENGLISH 3/ACAD	11053	1-2(A)	22-23	22	
Boissonneault, Matthew E	Eng	CREATIVE WRITING	11152	1-2(B)	S1	18	
Boissonneault, Matthew E	Eng	ENGLISH 3/ACAD	11052	3-4(B)	22-23	20	
Boissonneault, Matthew E	Eng	ENGLISH LANGUAGE AP	11055	5-6(A)	22-23	16	
Boissonneault, Matthew E	Eng	ENGLISH LANGUAGE AP	11055	5-6(B)	22-23	20	
Boissonneault, Matthew E	Eng	ENGLISH 3/ACAD	11052	7-8(A)	22-23	20	116
Ceglarski, Joanne	Eng	ENGLISH 2/ACC	11021	1-2(B)	22-23	22	
Ceglarski, Joanne	Eng	ENGLISH 4/ACC	11042	3-4(A)	22-23	21	
Ceglarski, Joanne	Eng	ENGLISH 4/ACC	11041	3-4(B)	22-23	16	
Ceglarski, Joanne	Eng	ENGLISH 2/ACA	11022	7-8(A)	22-23	23	
Ceglarski, Joanne	Eng	ENGLISH 4/ACA	11042	5-6(A)	22-23	21	
Ceglarski, Joanne	Eng	ENGLISH 2/ACA	11023	7-8(B)	22-23	16	119
DECKER, COURTNEY	ENG	English 1/ACA	011012G.14	1-2(B)	22-23	10	10
Dinnan, Sarah	ENG	ENGLISH 2/ACA	11022	1-2(A)	22-23	24	
Dinnan, Sarah	ENG	ENGLISH 2/ACA	11022	1-2(B)	22-23	18	
Dinnan, Sarah	ENG	Strategic Reading B	11463	5-6(A)	22-23	12	
Dinnan, Sarah	ENG	ENGLISH 2/ACA	11023	5-6(B)	22-23	19	

Dinnan, Sarah	ENG	Strategic Reading B	11462	7-8(A)	22-23	12	
Dinnan, Sarah	ENG	ENGLISH 2/ACA	11023	3-4(B)	22-23	13	98
Hayes, Monica E	Eng	ENGLISH 1/ACC	11011	1-2(B)	22-23	23	
Hayes, Monica E	Eng	SAT LITERACY PREP	15122	3-4(A)	S1	34	
Hayes, Monica E	Eng	ENGLISH 2/ACA	11022	3-4(B)	22-23	13	
Hayes, Monica E	Eng	ENGLISH 1/ACA	11012	5-6(A)	22-23	17	
Hayes, Monica E	Eng	ENGLISH 1/ACA	11013	5-6(B)	22-23	16	
Hayes, Monica E	Eng	ENGLISH 1/ACA	11012	7-8(A)	22-23	17	120
Lattimer, David	Eng	MYTHOLOGY	11252	1-2(A)	S1	22	
Lattimer, David	Eng	ENGLISH 4/ACC	11041	1-2(B)	22-23	23	
Lattimer, David	Eng	ENGLISH 4/ACA	11043	3-4(B)	22-23	24	
Lattimer, David	Eng	MYTHOLOGY	11252	5-6(A)	S1	23	
Lattimer, David	Eng	ENGLISH 4/ACC	11041	5-6(B)	22-23	21	
Lattimer, David	Eng	SEMINAR AP	110005	7-8(A)	22-23	18	131
Lipscomb, Amy	ENG	ENGLISH 4/ACA	11042	3-4(A)	22-23	21	
Lipscomb, Amy	ENG	ENGLISH 1/ACC	11011	5-6(A)	22-23	23	
Lipscomb, Amy	ENG	ENGLISH 4/ACA	11042	5-6(B)	22-23	22	
Lipscomb, Amy	ENG	ENGLISH 1/ACA	11012	7-8(A)	22-23	16	
Lipscomb, Amy	ENG	ENGLISH 1/ACA	11013	7-8(B)	22-23	16	
Lipscomb, Amy	ENG	ENGLISH 1/ACA	11012	1-2(B)	22-23	21	119
Lundquist, Jessica	ENG	ENGLISH 1/ACC	11011	3-4(A)	22-23	21	
Lundquist, Jessica	ENG	ENGLISH 1/ACA	11013	3-4(B)	22-23	20	
Lundquist, Jessica	ENG	ENGLISH 1/ACC	11011	5-6(A)	22-23	25	
Lundquist, Jessica	ENG	ENGLISH 4/ACC	11041	7-8(A)	22-23	16	
Lundquist, Jessica	ENG	ENGLISH 4/ACA	11042	1-2(B)	22-23	22	
Lundquist, Jessica	ENG	ENGLISH 1/ACA	11013	5-6(B)	22-23	17	121
Platt, Adam J	Eng	ENGLISH 2/ACA	11022	1-2(B)	22-23	19	
Platt, Adam J	Eng	ENGLISH 1/ACA	11012	3-4(B)	22-23	17	
Platt, Adam J	Eng	ENGLISH 1/ACA	11013	5-6(A)	22-23	17	
Platt, Adam J	Eng	ENGLISH 2/ACC	11021	7-8(A)	22-23	20	
Platt, Adam J	Eng	ENGLISH 1/ACC	11011	7-8(B)	22-23	24	
Platt, Adam J	Eng	ENGLISH 1/ACA	11012	3-4(A)	22-23	18	115
Plourde, Jennifer H	Eng	English 4/AP	111454	3-4(A)	22-23	22	

Plourde, Jennifer H	Eng	ENGLISH 2/ACC	11021	3-4(B)	22-23	18	
Plourde, Jennifer H	Eng	ENGLISH 2/ACC	11021	5-6(B)	22-23	23	
Plourde, Jennifer H	Eng	English 4/AP	111454	7-8(B)	22-23	24	
Plourde, Jennifer H	Eng	ENGLISH 2/ACA	11022	5-6(A)	22-23	18	105
Revoir, Lindsay	ENG	ENGLISH 4/ACA	11042	1-2(A)	22-23	25	
Revoir, Lindsay	ENG	ENGLISH 3/ACC	11051	1-2(B)	22-23	24	
Revoir, Lindsay	ENG	DRAMA 1	11182	3-4(B)	S1	15	
Revoir, Lindsay	ENG	ENGLISH 3/ACC	11051	5-6(A)	22-23	18	
Revoir, Lindsay	ENG	ENGLISH 3/ACAD	11052	7-8(A)	22-23	17	
Revoir, Lindsay	ENG	DRAMA 1	11182	7-8(B)	S1	13	112
Talmadge, David	Eng	ENGLISH 3/ACAD	11053	1-2(B)	22-23	19	
Talmadge, David	Eng	ENGLISH 3/ACAD	11052	5-6(A)	22-23	23	
Talmadge, David	Eng	ENGLISH 3/ACC	11052	5-6(B)	22-23	21	
Talmadge, David	Eng	ENGLISH 3/ACC	11051	7-8(A)	22-23	16	
Talmadge, David	Eng	ENGLISH 3/ACAD	11052	1-2(A)	22-23	19	
Talmadge, David	Eng	ENGLISH 3/ACAD	11052	3-4(B)	22-23	18	116
Becce, Cassie	Math	STATISTICS/ACA	21272	1-2(A)	22-23	23	
Becce, Cassie	Math	GEOMETRY/ACA	21022	1-2(B)	22-23	18	
Becce, Cassie	Math	STATISTICS/ACA	21272	3-4(A)	22-23	15	
Becce, Cassie	Math	GEOMETRY/ACA	21023	3-4(B)	22-23	15	
Becce, Cassie	Math	GEOMETRY/ACC	21021	5-6(A)	22-23	20	
Becce, Cassie	Math	GEOMETRY/ACC	21022	7-8(B)	22-23	18	109
Brown, Ethan	MATH	CHEMISTRY/ACC	31071	1-2(A)	22-23	22	
Brown, Ethan	MATH	Principles of Chemistry	31083	3-4(A)	22-23	21	
Brown, Ethan	MATH	Principles of Chemistry	31083	3-4(B)	22-23	23	
Brown, Ethan	MATH	CHEMISTRY/ACC	31071	5-6(A)	22-23	12	
Brown, Ethan	MATH	CHEMISTRY/ACC	31072	7-8(B)	22-23	22	
Brown, Ethan	MATH	Principles of Chemistry	31082	1-2(B)	22-23	20	120
Brunetti, Colin	Math	ALGEBRA 2/ACA	21032	1-2(A)	22-23	17	
Brunetti, Colin	Math	ALGEBRA 2/ACC	21031	3-4(B)	22-23	21	
Brunetti, Colin	Math	ALGEBRA 2/ACC	21031	5-6(A)	22-23	15	
Brunetti, Colin	Math	ALGEBRA 2/ACA	21032	5-6(B)	22-23	20	
Brunetti, Colin	Math	PRE-CAL/ACA	21042	7-8(A)	22-23	21	

Brunetti, Colin	Math	ALGEBRA 2/ACA	21032	7-8(B)	22-23	17	111
Crouch, Tara	Math	GEOMETRY/ACA	21022	3-4(A)	22-23	20	
Crouch, Tara	Math	GEOMETRY/ACA	21022	3-4(B)	22-23	18	
Crouch, Tara	Math	GEOMETRY/ACA	21022	5-6(A)	22-23	21	
Crouch, Tara	Math	ALGEBRA 2/ACC	21032	7-8(B)	22-23	24	
Crouch, Tara	Math	GEOMETRY/ACA	21022	1-2(A)	22-23	20	103
Fisher, Ryan F	Math	ALGEBRA 1/ACA	21013	1-2(B)	22-23	22	
Fisher, Ryan F	Math	English Support - Mathematics	EL02101 3.1	3-4(A)	22-23	20	
Fisher, Ryan F	Math	English Support - Mathematics	EL02101 3.3	5-6(B)	22-23	13	
Fisher, Ryan F	Math	ALGEBRA 1/ACA	21013	5-6(A)	22-23	18	
Fisher, Ryan F	Math	ALGEBRA 1/ACC	21011	7-8(B)	22-23	23	
Fisher, Ryan F	Math	ALGEBRA 1/ACA	21012	7-8(A)	22-23	22	
Frant, Monika	Math	PRE-CAL/ACC	21041	1-2(A)	22-23	25	
Frant, Monika	Math	ALGEBRA 2/ACA	21032	1-2(B)	22-23	19	
Frant, Monika	Math	PRE-CAL/ACC	21041	3-4(B)	22-23	25	
Frant, Monika	Math	ALGEBRA 2/ACA	21032	5-6(A)	22-23	12	
Frant, Monika	Math	ALGEBRA 2/ACA	21033	5-6(B)	22-23	18	
Frant, Monika	Math	ALGEBRA 2/ACA	21032	3-4(A)	22-23	19	118
Gaudet, Steve M	Math	GEOMETRY (9)/ACC	21121	3-4(A)	22-23	25	
Gaudet, Steve M	Math	ALGEBRA 1/ACA	21012	3-4(B)	22-23	19	
Gaudet, Steve M	Math	ALGEBRA 2/ACC	21031	7-8(A)	22-23	15	
Gaudet, Steve M	Math	ALGEBRA 1/ACA	21012	7-8(B)	22-23	17	
Gaudet, Steve M	Math	ALGEBRA 2/ACA	21032	1-2(B)	22-23	21	
Gaudet, Steve M	Math	ALGEBRA 1/ACA	21012	5-6(A)	22-23	19	116
Greenleaf, David	Math	ALGEBRA 1/ACA	21012	3-4(A)	22-23	22	
Greenleaf, David	Math	GEOMETRY (9)/ACC	21121	5-6(A)	22-23	20	
Greenleaf, David	Math	GEOMETRY (9)/ACC	21121	5-6(B)	22-23	21	
Greenleaf, David	Math	PRE-CAL/ACC	21041	7-8(A)	22-23	23	
Greenleaf, David	Math	GEOMETRY/ACA	21022	1-2(B)	22-23	21	
Greenleaf, David	Math	ALGEBRA 1/ACA	21013	3-4(B)	22-23	19	126
McCabe, Kelly W	Math	STATISTICS/ACA	21272	1-2(B)	22-23	23	

McCabe, Kelly W	Math	STATISTICS/AP	21075	3-4(A)	22-23	25	
McCabe, Kelly W	Math	CALCULUS/ACC	21051	5-6(A)	22-23	17	
McCabe, Kelly W	Math	STATISTICS/AP	21075	5-6(B)	22-23	23	
McCabe, Kelly W	Math	AVID Tutoring 3	672000	7-8(A)	22-23	18	
McCabe, Kelly W	Math	STATISTICS/ACA	21272	3-4(B)	22-23	22	128
Oksanen, Benjamin J	Math	Calculus AB/AP S1	211651	1-2(A-B)	S1	15	
Oksanen, Benjamin J	Math	GEOMETRY/ACA	21022	5-6(B)	22-23	21	
Oksanen, Benjamin J	Math	GEOMETRY/ACA	21023	7-8(A)	22-23	19	
Oksanen, Benjamin J	Math	PRE-CAL/ACA	21043	7-8(B)	22-23	14	
Oksanen, Benjamin J	Math	GEOMETRY/ACA	21023	3-4(A)	22-23	19	88
Redline, Alicia A	Math	SAT Math	21163	3-4(A)	S1	34	
Redline, Alicia A	Math	Advanced Mathematical Decision Making	21172	3-4(B)	22-23	17	
Redline, Alicia A	Math	Advanced Mathematical Decision Making	21173	5-6(A)	22-23	17	
Redline, Alicia A	Math	Advanced Mathematical Decision Making	21173	5-6(B)	22-23	19	
Redline, Alicia A	Math	ALGEBRA 2/ACA	21032	7-8(A)	22-23	20	
Redline, Alicia A	Math	ALGEBRA 2/ACA	21033	7-8(B)	22-23	21	128
Walker, Reinhard L	Math	ALGEBRA 1/ACA	21013	1-2(B)	22-23	19	
Walker, Reinhard L	Math	ALGEBRA 2/ACA	21032	3-4(A)	22-23	11	
Walker, Reinhard L	Math	ALGEBRA 2/ACA	21032	3-4(B)	22-23	13	
Walker, Reinhard L	Math	ALGEBRA 1/ACA	21013	5-6(A)	22-23	18	
Walker, Reinhard L	Math	ALGEBRA 1/ACA	21012	5-6(B)	22-23	17	
Walker, Reinhard L	Math	ALGEBRA 1/ACC	21011	7-8(A)	22-23	23	101
Abucewicz, John	MU	MUSIC TECHNOLOGY	71442	1-2(A)	S1	15	
Abucewicz, John	MU	BAND	71302	1-2(B)	22-23	31	
Abucewicz, John	MU	BAND	71302	3-4(A)	22-23	29	60
Abucewicz, John	MU	MUSIC THEORY 1	71012	3-4(B)	S1	13	
Abucewicz, John	MU	MUSIC TECHNOLOGY	71442	7-8(A)	S1	15	
Abucewicz, John	MU	MUSIC TECHNOLOGY	71443	7-8(B)	S1	8	111
Nelson, David E	MU	PIANO/KEYBOARD	71412	1-2(A)	S1	14	
Nelson, David E	MU	GUITAR(ACOUSTIC)	71422	1-2(B)	S1	10	

Nelson, David E	MU	PIANO/KEYBOARD	71412	3-4(A)	S1	7	
Nelson, David E	MU	CONCERT CHOIR	71202	5-6(B)	22-23	27	
Nelson, David E	MU	CONCERT CHOIR	71203	7-8(A)	22-23	13	
Nelson, David E	MU	GUITAR(ACOUSTIC)	71422	7-8(B)	S1	15	113
Kalat, Kevin R	PE/HE	EARLY BIRD PE	151212	IND(A-B)	S1	27	
Pepper, Lance D.	PE/HE	Health II	151402	5-6(B)	S1	14	
Gomes, Matthew	PE/HE	Health II	151402	3-4(B)	S1	15	
Carriere, Christopher	PE/HE	Health and Wellness	151303	7-8(A)	S1	16	100
Gomes, Matthew	PE/HE	Health and Wellness	151302	1-2(B)	S1	17	
Pepper, Lance D.	PE/HE	Health II	151402	1-2(B)	S1	17	
Pepper, Lance D.	PE/HE	Health II	151403	5-6(A)	S1	17	
Gomes, Matthew	PE/HE	Health II	151402	5-6(B)	S1	19	
Carriere, Christopher	PE/HE	Health and Wellness	151302	3-4(A)	S1	20	
Carriere, Christopher	PE/HE	Health and Wellness	151303	7-8(B)	S1	21	
Pepper, Lance D.	PE/HE	Health II	151402	1-2(A)	S1	22	116
Pepper, Lance D.	PE/HE	Health II	151402	3-4(A)	S1	22	
Pepper, Lance D.	PE/HE	Health II	151403	7-8(B)	S1	22	
Carriere, Christopher	PE/HE	Health and Wellness	151303	5-6(B)	S1	23	
Carriere, Christopher	PE/HE	Health and Wellness	151302	1-2(A)	S1	24	
Carriere, Christopher	PE/HE	Health and Wellness	151303	3-4(B)	S1	24	
Gomes, Matthew	PE/HE	Health II	151402	7-8(A)	S1	24	
Richardson, Karlene	PE/HE	Intro to Allied Health Professions/UCONN	82112	3-4(B)	S1	21	138
Richardson, Karlene	PE/HE	Medical Terminology/UCONN	82122	1-2(B)	22-23	21	
Stafford-Kirk, Tamara	PE/HE	PE IND STUDY	155022	IND(B)	S1	7	
Bonilla-Jusino, Kiara	PE/HE	PHYS ED 10/11/12	151033	3-4(B)	S1	18	
DeFillippi, Joseph	PE/HE	PHYS ED 10/11/12	151032	1-2(B)	S1	18	64
Stafford-Kirk, Tamara	PE/HE	PHYS ED 10/11/12	151032	1-2(B)	S1	18	
Bonilla-Jusino, Kiara	PE/HE	PHYS ED 9	151003	1-2(B)	S1	19	
DeFillippi, Joseph	PE/HE	PHYS ED 10/11/12	151032	5-6(B)	S1	21	
Kalat, Kevin R	PE/HE	PHYS ED 10/11/12	151032	3-4(B)	S1	21	
Stafford-Kirk, Tamara	PE/HE	PHYS ED 10/11/12	151032	5-6(B)	S1	21	

Stafford-Kirk, Tamara	PE/HE	PHYS ED 10/11/12	151032	3-4(B)	S1	21	
Bonilla-Jusino, Kiara	PE/HE	PHYS ED 9	151002	1-2(A)	S1	21	
DeFillippi, Joseph	PE/HE	PHYS ED 9	151002	1-2(A)	S1	21	145
DeFillippi, Joseph	PE/HE	PHYS ED 10/11/12	151032	5-6(A)	S1	24	
Stafford-Kirk, Tamara	PE/HE	PHYS ED 10/11/12	151032	5-6(A)	S1	25	
Stafford-Kirk, Tamara	PE/HE	PHYS ED 9	151002	3-4(A)	S1	26	
Bonilla-Jusino, Kiara	PE/HE	PHYS ED 10/11/12	151033	5-6(A)	S1	27	144
Kalat, Kevin R	PE/HE	PHYS ED 10/11/12	151032	3-4(A)	S1	27	42
DeFillippi, Joseph	PE/HE	PHYS ED 9	151002	7-8(B)	S1	27	
DeFillippi, Joseph	PE/HE	PHYS ED 10/11/12	151032	3-4(A)	S1	28	
Kalat, Kevin R	PE/HE	PHYS ED 10/11/12	151032	1-2(A)	S1	28	
Bonilla-Jusino, Kiara	PE/HE	PHYS ED 10/11/12	151033	7-8(B)	S1	29	
Kalat, Kevin R	PE/HE	PHYS ED 10/11/12	151032	7-8(B)	S1	29	
Stafford-Kirk, Tamara	PE/HE	PHYS ED 10/11/12	151032	7-8(A)	S1	30	
Kalat, Kevin R	PE/HE	PHYS ED 9	151003	7-8(A)	S1	30	
Bonilla-Jusino, Kiara	PE/HE	PHYS ED 10/11/12	151032	7-8(A)	S1	31	
Kalat, Kevin R	PE/HE	PHYS ED 9	151003	5-6(B)	S1	31	208
Ieronimo, Amy	SCI	English Support - Science	EL03101 3.5	5(B)	22-23	2	
Lennon, Nancy M	Sci	BIOLOGY/AP	31045	7-8(A)	22-23	10	
Brewer, David	Sci	PHYS 1201: Physics I/UCONN	31395	5-6(A-B)	S1	12	
Brewer, David	Sci	PHYSICS/ACA	31102	7-8(B)	22-23	12	
Nettleton, Kimberly M	Sci	Meteorology	31242	7-8(A)	S1	14	
Brewer, David	Sci	PHYS 1201: Physics I/UCONN	31395	3-4(A-B)	S1	15	65
Imfeld, Isabel T	Sci	ANAT and PHYS/ACA	31132	3-4(A)	22-23	15	
Lennon, Nancy M	Sci	ANAT and PHYS/ACA	31132	3-4(A)	22-23	15	
Nettleton, Kimberly M	Sci	PHYSICAL SCI/ACA	31212	3-4(A)	22-23	15	
Brewer, David	Sci	ANAT and PHYS/ACA	31132	1-2(B)	22-23	16	
Ieronimo, Amy	SCI	Botany	31143	3-4(B)	S1	16	77
Ieronimo, Amy	SCI	Botany	31142	7-8(B)	S1	16	
Landro, Laura D	Sci	CHEMISTRY/ACC	31071	3-4(B)	22-23	16	

Lennon, Nancy M	Sci	ANAT and PHYS/ACA	31132	1-2(B)	22-23	16	
Nettleton, Kimberly M	Sci	Oceanography	31153	5-6(B)	S1	16	
Nettleton, Kimberly M	Sci	PHYSICAL SCI/ACA	31213	7-8(B)	22-23	16	
Barrette, Timothy	Sci	PHYSICAL SCI/ACA	31212	1-2(B)	22-23	17	97
Landro, Laura D	Sci	Principles of Chemistry	31082	7-8(A)	22-23	17	
Nagle, Corey E	Sci	PHYSICAL SCI/ACA	31212	5-6(A)	22-23	17	
Porter, Elizabeth	SCI	BIOLOGY/ACC	31041	3-4(B)	22-23	17	
Reichler, Jason E	Sci	PHYSICAL SCI/ACA	31212	5-6(A)	22-23	17	
Barrette, Timothy	Sci	Environmental Science/UCONN	31205	3-4(A)	22-23	18	
Imfeld, Isabel T	Sci	BIOLOGY/ACA	31043	3-4(B)	22-23	18	
Imfeld, Isabel T	Sci	BIOLOGY/ACA	31042	7-8(A)	22-23	18	
Lennon, Nancy M	Sci	ANAT and PHYS/ACA	31132	5-6(A)	22-23	18	140
Lennon, Nancy M	Sci	BIOLOGY/ACA	31043	3-4(B)	22-23	18	
Porter, Elizabeth	SCI	Principles of Chemistry	31082	1-2(A)	22-23	18	
Barrette, Timothy	Sci	PHYSICAL SCI/ACA	31212	7-8(B)	22-23	19	
Imfeld, Isabel T	Sci	Biotechnology and Forensics	39902	7-8(B)	22-23	19	
Nagle, Corey E	Sci	AVID Tutoring	670000	7-8(B)	22-23	19	93
Nettleton, Kimberly M	Sci	PHYSICAL SCI/ACA	31212	3-4(B)	22-23	19	
Porter, Elizabeth	SCI	BIOLOGY/ACA	31043	7-8(B)	22-23	19	
Reichler, Jason E	Sci	PHYSICAL SCI/ACA	31212	5-6(B)	22-23	19	
Barrette, Timothy	Sci	PHYSICAL SCI/ACA	31212	5-6(A)	22-23	20	
Landro, Laura D	Sci	Principles of Chemistry	31083	5-6(A)	22-23	20	
Nagle, Corey E	Sci	PHYSICAL SCI/ACA	31213	1-2(B)	22-23	20	117
Nagle, Corey E	Sci	English Support - Science	EL03101 3.1	3-4 (A)	22-23	20	
Imfeld, Isabel T	Sci	Biotechnology and Forensics	39902	1-2(B)	22-23	21	
Imfeld, Isabel T	Sci	BIOLOGY/ACA	31042	5-6(A)	22-23	21	
Landro, Laura D	Sci	Chemistry/UCONN	31076	1-2(A-B)	22-23	21	
Landro, Laura D	Sci	CHEMISTRY/ACC	31072	7-8(B)	22-23	21	
Lennon, Nancy M	Sci	BIOLOGY/ACA	31042	7-8(B)	22-23	21	125

Nagle, Corey E	Sci	PHYSICAL SCI/ACA	31212	7-8(A)	22-23	21	
Ieronimo, Amy	SCI	BIOLOGY/ACC	31041	5-6(A)	22-23	22	
Imfeld, Isabel T	Sci	BIOLOGY/ACA	31042	5-6(B)	22-23	22	
Porter, Elizabeth	SCI	BIOLOGY/ACA	31042	3-4(A)	22-23	22	
Porter, Elizabeth	SCI	Principles of Chemistry	31082	5-6(B)	22-23	22	
Reichler, Jason E	Sci	BIOLOGY/ACC	31041	7-8(B)	22-23	22	131
Brewer, David	Sci	PHYSICS/ACC	31101	1-2(A)	22-23	23	
Imfeld, Isabel T	Sci	BIOLOGY/ACA	31042	1-2(A)	22-23	23	
Nagle, Corey E	Sci	PHYSICAL SCI/ACC	31212	5-6(B)	22-23	23	
Porter, Elizabeth	SCI	Principles of Chemistry	31082	5-6(A)	22-23	23	
Reichler, Jason E	Sci	PHYSICAL SCI/ACC	31211	3-4(A)	22-23	23	
Barrette, Timothy	Sci	Environmental Science/UCONN	31205	5-6(B)	22-23	24	139
Barrette, Timothy	Sci	PHYSICAL SCI/ACC	31211	7-8(A)	22-23	24	
Ieronimo, Amy	SCI	BIOLOGY/ACC	31041	3-4(A)	22-23	24	
Ieronimo, Amy	SCI	BIOLOGY/ACC	31041	7-8(A)	22-23	24	
Nettleton, Kimberly M	Sci	PHYSICAL SCI/ACC	31211	5-6(A)	22-23	24	
Reichler, Jason E	Sci	PHYSICAL SCI/ACC	31211	3-4(B)	22-23	24	120
Gardiner, Kenneth H	SOC	PSYCHOLOGY/AP	41205	3-4(A)	22-23	8	
Godbout, Ginny	Soc	LAW and JUSTICE/ACA	41172	3-4(B)	S1	12	
Quintero, Juan D	SOC	Modern U.S. History	EL041483.2	3-4(B)	S1	12	
Quintero, Juan D	SOC	Modern U.S. History	EL041483.1	7-8(B)	S1	12	
Ray, Sumeet	Soc	Civics	41042	1-2(A)	S1	13	
Plourde, Gerard A	Soc	ECONOMICS/ACA	41122	3-4(A)	S1	14	
Plourde, Gerard A	Soc	MOD AMER HIST/ACA	41063	3-4(B)	22-23	14	
Sonstrom, Connor	SOC	MOD AMER HIST/ACA	41063	3-4(B)	22-23	14	
Gardiner, Kenneth H	SOC	PSYCHOLOGY/AP	41205	3-4(B)	22-23	15	
Gardiner, Kenneth H	SOC	AVID Tutoring 2	671001	5-6(A)	22-23	15	
Godbout, Ginny	Soc	LAW and JUSTICE/ACA	41172	5-6(A)	S1	15	

Hertzler, Sarah F	Soc	MOD AMER HIST/ACC	41061	7-8(A)	22-23	15	
Nass, Brian M	SOC	WORLD HISTORY/ACA	41012	1-2(B)	22-23	15	
Quintero, Juan D	SOC	WORLD HISTORY/ACA	41012	3-4(A)	22-23	15	75
Torreso, Ginny M	Soc	MOD AMER HIST/ACC	41062	7-8(A)	22-23	15	90
Gardiner, Kenneth H	SOC	PSYCHOLOGY/AP	41205	1-2(A)	22-23	16	
Godbout, Ginny	Soc	US HISTORY/AP	41115	5-6(B)	22-23	16	
Jandreau, Nathan D	Soc	WORLD HISTORY/ACA	41012	3-4(A)	22-23	16	
Nass, Brian M	SOC	AA/Black and PR/Latino Studies	41092	3-4(B)	22-23	16	
Plourde, Gerard A	Soc	MOD AMER HIST/ACA	41063	1-2(B)	22-23	16	
Quintero, Juan D	SOC	Human Geography AP	41155	1-2(B)	22-23	16	
Ray, Sumeet	Soc	Civics	41042	5-6(A)	S1	16	
Torreso, Ginny M	Soc	US GOVT and POL/AP	41125	5-6(A)	22-23	16	
Godbout, Ginny	Soc	MOD AMER HIST/ACA	41062	7-8(B)	22-23	17	
Ray, Sumeet	Soc	Civics	41042	3-4(B)	S1	17	
Torreso, Ginny M	Soc	US GOVT and POL/AP	41125	3-4(B)	22-23	17	
Torreso, Ginny M	Soc	US GOVT and POL/AP	41125	5-6(B)	22-23	17	
Collins, Michelle	Soc	SOCIOLOGY/ACA	41242	3-4(A)	S1	18	
Gardiner, Kenneth H	SOC	AVID Tutoring 4	673001	7-8(B)	22-23	18	104
Godbout, Ginny	Soc	MOD AMER HIST/ACA	41062	7-8(A)	22-23	18	105
Hertzler, Sarah F	Soc	MOD AMER HIST/ACC	41061	5-6(A)	22-23	18	
Hertzler, Sarah F	Soc	Civics	41043	1-2(B)	S1	18	107
Jandreau, Nathan D	Soc	WORLD HISTORY/ACA	41012	5-6(A)	22-23	18	
Nass, Brian M	SOC	WORLD HISTORY/ACA	41012	5-6(B)	22-23	18	
Torreso, Ginny M	Soc	US GOVT and POL/AP	41125	3-4(A)	22-23	18	
Collins, Michelle	Soc	GLOBAL ISSUES	41153	5-6(B)	S1	19	
Collins, Michelle	Soc	WORLD HISTORY/ACA	41012	7-8(A)	22-23	19	

Collins, Michelle	Soc	WORLD HISTORY/ACA	41012	5-6(A)	22-23	19	111
Nass, Brian M	SOC	AA/Black and PR/Latino Studies	41092	3-4(A)	22-23	19	
Plourde, Gerard A	Soc	MOD AMER HIST/ACA	41062	5-6(A)	22-23	19	95
Ray, Sumeet	Soc	Contemporary Psychology	41252	7-8(A)	S1	19	
Sonstrom, Connor	SOC	MOD AMER HIST/ACA	41063	7-8(B)	22-23	19	57
Collins, Michelle	Soc	WORLD HISTORY/ACA	41013	7-8(B)	22-23	20	
Godbout, Ginny	Soc	MOD AMER HIST/ACA	41062	1-2(A)	22-23	20	
Hertzler, Sarah F	Soc	Civics	41043	7-8(B)	S1	20	
Quintero, Juan D	SOC	WORLD HISTORY/ACA	41012	5-6(A)	22-23	20	
Sonstrom, Connor	SOC	Civics	41042	5-6(B)	S1	20	
Jandreau, Nathan D	Soc	WORLD HISTORY/ACA	41012	7-8(B)	22-23	21	101
Nass, Brian M	SOC	WORLD HISTORY/ACC	41012	5-6(A)	22-23	21	
Nass, Brian M	SOC	WORLD HISTORY/ACA	41013	7-8(A)	22-23	21	123
Gardiner, Kenneth H	SOC	MOD AMER HIST/ACA	41062	5-6(B)	22-23	22	
Hertzler, Sarah F	Soc	MOD AMER HIST/ACC	41061	5-6(B)	22-23	22	
Jandreau, Nathan D	Soc	WORLD HISTORY/ACC	41011	5-6(B)	22-23	22	
Plourde, Gerard A	Soc	DEVELOP PSYCHOLOGY	41262	1-2(A)	S1	22	
Collins, Michelle	Soc	WORLD HISTORY/ACC	41011	1-2(B)	22-23	24	
Hertzler, Sarah F	Soc	GLOBAL ISSUES	41152	3-4(A)	S1	24	
Ray, Sumeet	Soc	Contemporary Psychology	41252	5-6(B)	S1	24	
Ray, Sumeet	Soc	LAW and JUSTICE/ACA	41173	7-8(B)	S1	24	140

Torreso, Ginny M	Soc	MOD AMER HIST/ACC	41061	1-2(B)	22-23	24	
Jandreau, Nathan D	Soc	WORLD HISTORY/ACC	41011	3-4(B)	22-23	25	
Archibald, Brian	SPED	Geometry ACA	021022G.1	3-4(A)	22-23	6	
Lease, Noah P	SPED	Biology ACA	031042G.9	7-8(A)	22-23	6	
Magnan, Andrew J	SPED	Algebra 1/ACA	021012G.13	3-4(B)	22-23	6	
O'Meara-Cartwright, Jamie M	SPED	World History/ACA	041012G.3	3-4(A)	22-23	6	
Riley, Megan	SPED	Statistics Essentials	ESN021272.2	5-6(B)	22-23	6	18
Brown, Jessica	SPED	Vocational Education	ESN082006.1	7-8(A)	S1	7	
Hylan, Paul F	SPED	Physical Sci/ACA	031212G.1	3-4(B)	22-23	7	
Hylan, Paul F	SPED	Physical Sci/ACA	031212G.10	7-8(B)	22-23	7	33
O'Meara-Cartwright, Jamie M	SPED	World History/ACA	041012G.1	5-6(A)	22-23	7	
O'Meara-Cartwright, Jamie M	SPED	World History/ACA	041012G.11	7-8(B)	22-23	7	35
Rubbo, Nicola	SPED	English 2/ACA	011022G.2	5-6(A)	22-23	7	
Archibald, Brian	SPED	Geometry ACA	021022G.5	1-2(A)	22-23	8	
Brown, Jessica	SPED	Modern American History Essentials	ESN042063.12	3-4(B)	22-23	8	
Dunn, Kate E	SPED	English 4/ACA	011042G.12	5-6(A)	22-23	8	
Dunn, Kate E	SPED	English 1/ACA	011012G.3	5-6(B)	22-23	8	
Hylan, Paul F	SPED	Physical Sci/ACA	031212G.2	5-6(A)	22-23	8	

Magnan, Andrew J	SPED	English 12 Essentials	ESN012183.1	3-4(A)	22-23	8	
Papazian, Jeffrey A	SPED	Func Aca/English 9/10 & 11/12	900017	1-2(A)	S1	8	
Papazian, Jeffrey A	SPED	Func Aca/Science 9/10 & 11/12	903337	3-4(A)	S1	8	
Papazian, Jeffrey A	SPED	Func Aca/Life Skills & Vocational Skills 11/12	900307	5-6(A)	S1	8	
Papazian, Jeffrey A	SPED	Func Aca/Life Skills 9/10 & 11/12	900307	5-6(B)	S1	8	48
Riley, Megan	SPED	Statistics Essentials	ESN021272.1	1-2(B)	22-23	8	
Rubbo, Nicola	SPED	English 2/ACA	011022G.4	3-4(B)	22-23	8	
Wayton, Matthew	SPED	Principles of Chemistry	031082G.2	1-2(B)	22-23	8	
Dunn, Kate E	SPED	English 10 Essentials	ESN012163.4	1-2(B)	22-23	9	
Harris, Jessica	SPED	Algebra 2/ACA	021032G.12	1-2(B)	22-23	9	
Lease, Noah P	SPED	English 10 Essentials	ESN012163.3	5-6(A)	22-23	9	
Papazian, Jeffrey A	SPED	Func Aca/History 9/10 & 11/12	933337	3-4(B)	S1	9	
Riley, Megan	SPED	Statistics/ACA	021272G.1	3-4(B)	22-23	9	
Rubbo, Nicola	SPED	English 2/ACA	011022G.3	7-8(B)	22-23	9	45
Wayton, Matthew	SPED	English 3/ACA	011052G.2	3-4(B)	22-23	9	
Archibald, Brian	SPED	Geometry ACA	021022G.2	1-2(B)	22-23	10	
Archibald, Brian	SPED	Academic Support	660010	3-4(B)	22-23	10	
Brown, Jessica	SPED	Civics/ACA	041042G.2	1-2(B)	S1	10	

Holmes, Tyrell	SPED	World History	GL042183.2	3-4(B)	22-23	10	
Hylan, Paul F	SPED	Modern American History Essentials	ESN042063.2	3-4(A)	22-23	10	
Lease, Noah P	SPED	Biology Essentials	ESN032083.1	3-4(A)	22-23	10	
Lease, Noah P	SPED	Biology Essentials	ESN032083.2	3-4(B)	22-23	10	
Lease, Noah P	SPED	Biology ACA	031042G.2	5-6(B)	22-23	10	
Magnan, Andrew J	SPED	Algebra 1/ACA	021012G.4	7-8(A)	22-23	10	50
Papazian, Jeffrey A	SPED	Func Aca/Math 9/10 &11/12	9000337	1-2(B)	S1	10	
Wayton, Matthew	SPED	English 3/ACA	011052G.13	1-2(A)	22-23	10	
Archibald, Brian	SPED	Geometry Essentials	ESN022063.7	7-8(A)	22-23	11	61
Holmes, Tyrell	SPED	English 11 Essentials	GL011052.2	1-2(A)	22-23	11	
Holmes, Tyrell	SPED	Biology	GL032123.2	3-4(A)	22-23	11	
Holmes, Tyrell	SPED	Algebra 2 Essentials	GL021032.2	5-6(A)	22-23	11	
Holmes, Tyrell	SPED	Vocational Skills II	GL092123.3	5-6(B)	22-23	11	55
O'Meara-Cartwright, Jamie M	SPED	Modern Am History/ACA	041062G.12	7-8(A)	22-23	11	
Rubbo, Nicola	SPED	English 11 Essentials	ESN012173.1	1-2(A)	22-23	11	
Dunn, Kate E	SPED	English 1/ACA	011012G.2	3-4(A)	22-23	12	
Elliott, Tyler	SPED	Modern Am History/ACA	041062G.1	5-6(A)	22-23	12	

Elliott, Tyler	SPED	Biology	LC032263.1	5-6(B)	22-23	12	69
Harris, Jessica	SPED	Algebra 2/ACA	021032G.2	3-4(A)	22-23	12	
Harris, Jessica	SPED	Algebra 2 Essentials	ESN022073.4	3-4(B)	22-23	12	
Harris, Jessica	SPED	Principles of Chemistry	031082G.10	5-6(B)	22-23	12	60
Magnan, Andrew J	SPED	Algebra 1/ACA	021012G.12	5-6(A)	22-23	12	
Rubbo, Nicola	SPED	English 11 Essentials	ESN012173.12	1-2(B)	22-23	12	
Wayton, Matthew	SPED	Principles of Chemistry Essentials	ESN032063.3	3-4(A)	22-23	12	
Dunn, Kate E	SPED	English 9 Essentials	ESN012153.2	3-4(B)	22-23	13	
Elliott, Tyler	SPED	Algebra 1	LC021012.1	3-4(B)	22-23	13	
Hylan, Paul F	SPED	Physical Science Essentials	ESN032073.1	7-8(A)	22-23	13	
O'Meara-Cartwright, Jamie M	SPED	World History Essentials	ESN042053.3	5-6(B)	22-23	13	
Archibald, Brian	SPED	Geometry Essentials	ESN022063.3	5-6(B)	22-23	14	
Elliott, Tyler	SPED	World History	LC042253.1	3-4(A)	22-23	14	
Harris, Jessica	SPED	Algebra 2 Essentials	ESN022073.3	5-6(A)	22-23	14	
Wayton, Matthew	SPED	Principles of Chemistry Essentials	ESN032063.5	7-8(B)	22-23	14	69
Elliott, Tyler	SPED	Vocational Skills 2	LC092123.1	1-2(B)	22-23	15	
Brown, Jessica	SPED	Law & Justice Essentials	ESN042096.2	1-2(A)	S1	17	

Elliott, Tyler	SPED	English 11	LC011052.3	1-2(A)	22-23	17	
Magnan, Andrew J	SPED	Algebra 1 Essentials	ESN022053.3	1-2(B)	22-23	18	
Brown, Jessica	SPED	Career & Life Skills	ESN083006.1	7-8(B)	S1	19	86
Levesque, Sarah	WL	SPANISH 4/ACA	51242	3-4(B)	22-23	5	
Selmanaj, Edlira	WL	Italian ECE/UCONN & ITALIAN 4/ACA	51145	7-8(B)	22-23	5	81
Monahan-DiNoia, Kelly A	WL	LATIN 2/ACC	51521	3-4(B)	22-23	8	
Levesque, Sarah	WL	SPANISH 4/ACC	51241	3-4(B)	22-23	9	
Monahan-DiNoia, Kelly A	WL	LATIN 3/ACC	51551	7-8(B)	22-23	10	56
Rochester, Anya	WL	FRENCH 4/ACA & ACC	51042	5-6(B)	22-23	10	
Selmanaj, Edlira	WL	ITALIAN 3/ACA	51132	3-4(B)	22-23	10	
INFANTE, LUCIA	WL	ITALIAN 2/ACA	51122	5-6(A)	22-23	11	
Monahan-DiNoia, Kelly A	WL	LATIN 4/ACC	51561	5-6(A)	22-23	12	
Levesque, Sarah	WL	SPANISH 3/ACA	51232	3-4(A)	22-23	13	
Lindstrom, Sarah L	WL	Spanish UCONN ECE/AP	51275	3-4(B)	22-23	14	
Lindstrom, Sarah L	WL	SPANISH 4/ACC	51241	7-8(A)	22-23	14	
Levesque, Sarah	WL	SPANISH 3/ACA	51232	5-6(A)	22-23	15	
Levesque, Sarah	WL	SPANISH 3/ACC	51231	5-6(B)	22-23	15	79
Rochester, Anya	WL	FRENCH 2/ACA	51022	1-2(B)	22-23	16	
Troche, Steve G	WL	Spanish For Native Speakers/ACC	51272	5-6(A)	22-23	16	
Levesque, Sarah	WL	SPANISH 3/ACC	51231	1-2(B)	22-23	18	
Lindstrom, Sarah L	WL	SPANISH 2/ACA	51222	3-4(A)	22-23	18	
Troche, Steve G	WL	SPANISH 1/ACC	51211	1-2(A)	22-23	18	
Troche, Steve G	WL	Spanish For Native Speakers/ACC	51271	5-6(B)	22-23	18	
Rochester, Anya	WL	FRENCH 2/ACC	51021	3-4(B)	22-23	19	
Selmanaj, Edlira	WL	ITALIAN 1/ACA & ACC	51112	5-6(B)	22-23	19	
Levesque, Sarah	WL	SPANISH 3/ACA	51232	1-2(A)	22-23	20	

Troche, Steve G	WL	SPANISH 2/ACA	51222	7-8(B)	22-23	20	114
Selmanaj, Edlira	WL	ITALIAN 2/ACC	51121	3-4(A)	22-23	21	
Selmanaj, Edlira	WL	ITALIAN 3/ACC	51131	5-6(A)	22-23	21	
Lindstrom, Sarah L	WL	SPANISH 2/ACA	51222	5-6(B)	22-23	22	
Lindstrom, Sarah L	WL	SPANISH 2/ACC	51221	7-8(B)	22-23	22	126
Archibald, Kathleen	WL	SPANISH 1/ACA	51212	1-2(B)	22-23	23	
Archibald, Kathleen	WL	SPANISH 1/ACA	51212	7-8(B)	22-23	23	111
INFANTE, LUCIA	WL	SPANISH 1/ACA	51212	1-2(A)	22-23	23	
INFANTE, LUCIA	WL	SPANISH 1/ACA	51212	7-8(A)	22-23	23	69
Lindstrom, Sarah L	WL	SPANISH 2/ACA	51222	1-2(A)	22-23	23	
Rochester, Anya	WL	FRENCH 1/ACA	51012	7-8(A)	22-23	23	138
Selmanaj, Edlira	WL	ITALIAN 1/ACA & ACC	51113	1-2(A)	22-23	23	
Troche, Steve G	WL	SPANISH 1/ACA	51213	3-4(B)	22-23	23	
Archibald, Kathleen	WL	SPANISH 3/ACC	51231	5-6(A)	22-23	24	
Monahan-DiNoia, Kelly A	WL	Language and Culture A	52032	5-6(B)	S1	24	
Monahan-DiNoia, Kelly A	WL	Language and Culture A	52032	7-8(A)	S1	24	
Archibald, Kathleen	WL	SPANISH 1/ACA	51212	3-4(A)	22-23	25	
Monahan-DiNoia, Kelly A	WL	LATIN 1/ACC	51511	1-2(A)	22-23	25	
Rochester, Anya	WL	FRENCH 1/ACA & ACC	51013	1-2(A)	22-23	25	
Rochester, Anya	WL	FRENCH 3/ACA & ACC	51032	5-6(A)	22-23	25	
Troche, Steve G	WL	SPANISH 2/ACC	51221	7-8(A)	22-23	26	
Archibald, Kathleen	WL	SPANISH 2/ACC	51221	1-2(A)	22-23	28	

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2022-2023 TEACHER CASE LOAD FOR BRISTOL EASTERN HIGH SCHOOL October 1, 2022

Sorted by Department then Alpha by Teacher Last Name

Teacher Name	Dept	Course Name	Crs & Sec #	Exp	Term
Hill, Ryan	ART	POTTERY 1	061112	1-2(B)	S1
Hill, Ryan	ART	POTTERY 1	061112	3-4(B)	S1
Masse, Allison	ART	POTTERY 1	061112	1-2(A)	S1
Masse, Allison	ART	POTTERY 1	061113	5-6(B)	S1
Masse, Allison	ART	POTTERY 1	061113	7-8(B)	S1
Masse, Allison	ART	POTTERY 1	061113	3-4(A)	S1
Masse, Allison	ART	SCULPTURE 1	061212	1-2(B)	S1
Masse, Allison	ART	SCULPTURE 1	061212	7-8(A)	S1
MORFIS, JOHN	ART	DRAW and PAINT 1	061012	1-2(A)	S1
MORFIS, JOHN	ART	DRAW and PAINT 1	061012	3-4(B)	S1
MORFIS, JOHN	ART	DRAW and PAINT 1	061013	3-4(A)	S1
MORFIS, JOHN	ART	DRAW and PAINT 2	061022	1-2(B)	S1
MORFIS, JOHN	ART	DRAW and PAINT 3	061032	5-6(B)	S1
MORFIS, JOHN	ART	POTTERY 1	061112	7-8(A)	S1
WILLIAMS, SHARON	ART	AP STUDIO ART	061411	7-8(A)	22-23
WILLIAMS, SHARON	ART	DESIGN 1	061371	5-6(A)	S1
WILLIAMS, SHARON	ART	DESIGN 1	061371	1-2(B)	S1
WILLIAMS, SHARON	ART	DESIGN 1	061372	1-2(A)	S1
WILLIAMS, SHARON	ART	FIBER	061393	3-4(B)	S1
WILLIAMS, SHARON	ART	PRINTMAKING 1	061312	5-6(B)	S1
JACQUES, SHARON	CATE/BUS	ACCOUNTING 1	091101	1-2(A)	22-23
JACQUES, SHARON	CATE/BUS	PERSONAL FINANCE & INVESTMENT	091462	1-2(B)	S1
JACQUES, SHARON	CATE/BUS	PERSONAL FINANCE & INVESTMENT	091462	3-4(B)	S1
JACQUES, SHARON	CATE/BUS	ACCOUNTING 1	091101	5-6(A)	22-23

JACQUES, SHARON	CATE/BUS	ACCOUNTING 2	091111	7-8(B)	22-23
Micari, Brittany	CATE/BUS	Introduction to Marketing	091512	1-2(A)	S1
Micari, Brittany	CATE/BUS	Introduction to Marketing	091512	3-4(B)	S1
Micari, Brittany	CATE/BUS	Introduction to Marketing	091512	5-6(A)	S1
Micari, Brittany	CATE/BUS	SMALL BUSINESS OWNERSHIP	091472	5-6(B)	S1
Micari, Brittany	CATE/BUS	Information Processing	091423	7-8(A)	S1
Micari, Brittany	CATE/BUS	SMALL BUSINESS OWNERSHIP	091472	7-8(B)	S1
Bisson, Brett	CATE/FCS	PERSONAL FINANCE & INVESTMENT	091462	1-2(A)	S1
Bisson, Brett	CATE/FCS	PERSONAL FINANCE & INVESTMENT	091462	1-2(B)	S1
Bisson, Brett	CATE/FCS	WEB SITE DESIGN	091483	3-4(B)	S1
Bisson, Brett	CATE/FCS	PERSONAL FINANCE & INVESTMENT	091462	5-6(A)	S1
Bisson, Brett	CATE/FCS	WEB SITE DESIGN	091483	7-8(A)	S1
Bisson, Brett	CATE/FCS	Intro to Cooperative Work Experience	091332	7-8(B)	S1
Diaz, Elaine	CATE/FCS	CHILD, FAMILY, & COMMUNITY	102202	1-2(B)	S1
Diaz, Elaine	CATE/FCS	EARLY CHILDHOOD EDUCATION 1	102211	3-4(A)	S1
Diaz, Elaine	CATE/FCS	EARLY CHILDHOOD EDUCATION 1	102211	5-6(A)	S1
Diaz, Elaine	CATE/FCS	CHILD, FAMILY, & COMMUNITY	102202	5-6(B)	S1
Diaz, Elaine	CATE/FCS	CHILD, FAMILY, & COMMUNITY	102203	7-8(A)	S1
Diaz, Elaine	CATE/FCS	CHILD, FAMILY, & COMMUNITY	102202	7-8(B)	S1
Richardson, Karlene	CATE/ME	Medical Terminology/UCONN	082122	1-2(A)	22-23
Richardson, Karlene	CATE/ME	Intro to Allied Health Professions/UCONN	082112	3-4(A)	S1
LECLAIR, MICHAEL	CATE/TECH	Intro to Computer Assisted Design	081321	1-2(A)	S1
LECLAIR, MICHAEL	CATE/TECH	Introduction to Engineering	081551	1-2(B)	22-23
LECLAIR, MICHAEL	CATE/TECH	Intro to Computer Assisted Design	081321	3-4(A)	S1
LECLAIR, MICHAEL	CATE/TECH	Introduction to Engineering	081552	3-4(B)	22-23
LECLAIR, MICHAEL	CATE/TECH	Intro to Digital Media Productions	081793	5-6(A)	S1
LECLAIR, MICHAEL	CATE/TECH	Intro to Digital Media Productions	081792	5-6(B)	S1

Martino, Rocco	CATE/TECH	TOOLS and MATERIALS	081862	1-2(A)	S1
Martino, Rocco	CATE/TECH	CONSTRUCTION TECH	081082	1-2(B)	S1
Martino, Rocco	CATE/TECH	CONSTRUCTION TECH	081082	3-4(B)	S1
Martino, Rocco	CATE/TECH	TOOLS and MATERIALS	081862	5-6(A)	S1
Martino, Rocco	CATE/TECH	ENERGY and POWER TECH	081942	7-8(A)	S1
Martino, Rocco	CATE/TECH	ARCH CONCEPTS	081822	7-8(B)	S1
Bannon, Kathleen	ELL	English Support Skills	EL011450.5	1-2(A)	S1
Bannon, Kathleen	ELL	English Support Skills	EL011450.4	1-2(B)	S1
Bannon, Kathleen	ELL	English Support Skills	EL011450.1	5-6(A)	22-23
Bannon, Kathleen	ELL	English Support Skills	EL011450.2	5-6(B)	S1
Bannon, Kathleen	ELL	Strategic Reading B	011462	3-4(A)	22-23
Bannon, Kathleen	ELL	Modern U.S. History	EL041483.3	3-4(B)	S1
Brady, Jennie	ENG	ENGLISH 3/ACAD	011052	1-2(A)	22-23
Brady, Jennie	ENG	ENGLISH 2/ACA	011022	3-4(B)	22-23
Brady, Jennie	ENG	ENGLISH 2/ACA	011022	5-6(B)	22-23
Brady, Jennie	ENG	ENGLISH 2/ACA	011022	7-8(B)	22-23
Brady, Jennie	ENG	ENGLISH 2/ACA	011022	3-4(A)	22-23
Brady, Jennie	ENG	ENGLISH 2/ACA	011022	7-8(A)	22-23
BURDELSKI, ELIZABETH	ENG	MYTHOLOGY	011252	1-2(B)	S1
BURDELSKI, ELIZABETH	ENG	ENGLISH 1/ACA	011012	3-4(A)	22-23
BURDELSKI, ELIZABETH	ENG	MYTHOLOGY	011253	5-6(A)	S1
BURDELSKI, ELIZABETH	ENG	ENGLISH 1/ACA	011012	5-6(B)	22-23
BURDELSKI, ELIZABETH	ENG	ENGLISH 1/ACA	011012	7-8(A)	22-23
BURDELSKI, ELIZABETH	ENG	AVID Tutoring 2	671000	7-8(B)	22-23
GRIFFIN, DENNIS	ENG	ENGLISH 1/ACA	011012	1-2(B)	22-23
GRIFFIN, DENNIS	ENG	ENGLISH 4/ACA	011042	3-4(A)	22-23
GRIFFIN, DENNIS	ENG	ENGLISH 1/ACC	011012	3-4(B)	22-23

GRIFFIN, DENNIS	ENG	ENGLISH 1/ACA	011012	5-6(A)	22-23
GRIFFIN, DENNIS	ENG	ENGLISH 1/ACA	011012	7-8(B)	22-23
JANDREAU, KARA	ENG	ENGLISH 4/ACA	011042	3-4(A)	22-23
JANDREAU, KARA	ENG	DRAMA 1	011182	3-4(B)	S1
JANDREAU, KARA	ENG	AVID Tutoring 4	673000	5-6(B)	22-23
JANDREAU, KARA	ENG	ENGLISH 4/ACA	011043	7-8(B)	22-23
JANDREAU, KARA	ENG	ENGLISH 4/ACA	011042	1-2(A)	22-23
JANDREAU, KARA	ENG	ENGLISH 4/ACA	011042	5-6(A)	22-23
Levesque, Alanna	ENG	ENGLISH 2/ACA	011022	1-2(A)	22-23
Levesque, Alanna	ENG	ENGLISH 2/ACA	011022	1-2(B)	22-23
Levesque, Alanna	ENG	ENGLISH 2/ACA	011022	3-4(B)	22-23
Levesque, Alanna	ENG	ENGLISH 2/ACA	011022	7-8(A)	22-23
Levesque, Alanna	ENG	MEDIA LITERACY	011083	7-8(B)	S1
Levesque, Alanna	ENG	ENGLISH 2/ACA	011022	3-4(A)	22-23
MCELWEE, REBECCA	ENG	ENGLISH LANGUAGE AP	011055	3-4(A)	22-23
MCELWEE, REBECCA	ENG	ENGLISH 3/ACC	011051	3-4(B)	22-23
MCELWEE, REBECCA	ENG	ENGLISH 3/ACC	011051	5-6(A)	22-23
MCELWEE, REBECCA	ENG	ENGLISH 3/ACAD	011052	5-6(B)	22-23
MCELWEE, REBECCA	ENG	ENGLISH LANGUAGE AP	011055	7-8(A)	22-23
MCELWEE, REBECCA	ENG	ENGLISH 3/ACC	011051	7-8(B)	22-23
NOCERA, SHELLY	ENG	ENGLISH 3/ACAD	011052	3-4(A)	22-23
NOCERA, SHELLY	ENG	ENGLISH 1/ACA	011012	5-6(A)	22-23
NOCERA, SHELLY	ENG	ENGLISH 3/ACAD	011052	5-6(B)	22-23
NOCERA, SHELLY	ENG	ENGLISH 1/ACC	011011	7-8(B)	22-23
NOCERA, SHELLY	ENG	ENGLISH 3/ACAD	011052	3-4(B)	22-23
NOCERA, SHELLY	ENG	ENGLISH 3/ACAD	011052	7-8(A)	22-23
PELUSO, JOANNE	ENG	SEMINAR AP	110005	1-2(A)	22-23

PELUSO, JOANNE	ENG	ENGLISH 2/ACC	011021	1-2(B)	22-23
PELUSO, JOANNE	ENG	SEMINAR AP	110005	3-4(B)	22-23
PELUSO, JOANNE	ENG	English 4/UCONN	011050	5-6(A)	22-23
PELUSO, JOANNE	ENG	English 4/UCONN	011050	5-6(B)	22-23
PELUSO, JOANNE	ENG	ENGLISH 2/ACC	011021	7-8(A)	22-23
ROBERTS, KATHRYN	ENG	ENGLISH 4/ACA	011042	3-4(A)	22-23
ROBERTS, KATHRYN	ENG	ENGLISH 4/ACA	011042	3-4(B)	22-23
ROBERTS, KATHRYN	ENG	ENGLISH 4/ACA	011042	5-6(A)	22-23
ROBERTS, KATHRYN	ENG	ENGLISH 4/ACA	011042	5-6(B)	22-23
ROBERTS, KATHRYN	ENG	ENGLISH 3/ACAD	011052	7-8(A)	22-23
ROBERTS, KATHRYN	ENG	JOURNALISM	011242	7-8(B)	S1
RYSKOWSKI, PAUL	ENG	ENGLISH 1/ACA	011012	3-4(B)	22-23
RYSKOWSKI, PAUL	ENG	ENGLISH 1/ACC	011011	5-6(A)	22-23
RYSKOWSKI, PAUL	ENG	ENGLISH LANGUAGE AP	011056	5-6(B)	22-23
RYSKOWSKI, PAUL	ENG	ENGLISH 1/ACC	011012	7-8(A)	22-23
RYSKOWSKI, PAUL	ENG	ENGLISH 1/ACA	011012	7-8(B)	22-23
RYSKOWSKI, PAUL	ENG	Strategic Reading B	011462	3-4(A)	22-23
Baker, Lorenzo	HE	Health and Wellness	151302	1-2(A)	S1
Baker, Lorenzo	HE	Health II	151402	1-2(B)	S1
Baker, Lorenzo	HE	Health and Wellness	151302	5-6(A)	S1
Baker, Lorenzo	HE	Health II	151402	5-6(B)	S1
Baker, Lorenzo	HE	Health and Wellness	151302	7-8(A)	S1
Baker, Lorenzo	HE	Health II	151402	7-8(B)	S1
Julius, Anthony	HE	Health II	151402	1-2(A)	S1
Julius, Anthony	HE	Health and Wellness	151302	1-2(B)	S1
Julius, Anthony	HE	Health and Wellness	151303	3-4(B)	S1
Julius, Anthony	HE	Health II	151402	5-6(A)	S1

Julius, Anthony	HE	Health II	151402	7-8(A)	S1
Julius, Anthony	HE	Health and Wellness	151303	7-8(B)	S1
BOURKE, LOGAN	MATH	ALGEBRA 2/ACA	021032	1-2(B)	22-23
BOURKE, LOGAN	MATH	Cybersecurity (PLTW)	101311	3-4(A)	22-23
BOURKE, LOGAN	MATH	ALGEBRA 2/ACA	021032	5-6(A)	22-23
BOURKE, LOGAN	MATH	STATISTICS/ACA	021273	5-6(B)	22-23
BOURKE, LOGAN	MATH	STATISTICS/ACA	021273	7-8(B)	22-23
BOURKE, LOGAN	MATH	STATISTICS/ACA	021272	1-2(A)	22-23
BURNS, MICHELLE	MATH	GEOMETRY/ACA	021022	1-2(A)	22-23
BURNS, MICHELLE	MATH	ALGEBRA 2/ACC	021031	1-2(B)	22-23
BURNS, MICHELLE	MATH	GEOMETRY/ACA	021022	3-4(A)	22-23
BURNS, MICHELLE	MATH	ALGEBRA 2/ACA	021032	7-8(B)	22-23
BURNS, MICHELLE	MATH	ALGEBRA 2/ACA	021032	5-6(B)	22-23
BURNS, MICHELLE	MATH	ALGEBRA 2/ACA	021032	7-8(A)	22-23
Germain, Bridget	MATH	ALGEBRA 1/ACA	021012	1-2(B)	22-23
Germain, Bridget	MATH	ALGEBRA 1/ACA	021012	3-4(A)	22-23
Germain, Bridget	MATH	STATISTICS/ACA	021273	5-6(A-B)	S1
Germain, Bridget	MATH	STATISTICS/ACA	021273	5-6(A-B)	S1
Germain, Bridget	MATH	ALGEBRA 1/ACA	021012	7-8(A-B)	S1
Germain, Bridget	MATH	ALGEBRA 1/ACA	021012	7-8(A-B)	S1
Hahn, James	MATH	ALGEBRA 1/ACC	021012	1-2(B)	22-23
Hahn, James	MATH	ALGEBRA 2/ACA	021032	5-6(A-B)	S1
Hahn, James	MATH	ALGEBRA 2/ACA	021032	5-6(A-B)	S1
Hahn, James	MATH	ALGEBRA 2/ACA	021032	7-8(A)	22-23
Hahn, James	MATH	ALGEBRA 1/ACA	021012	3-4(A)	22-23
Hahn, James	MATH	ALGEBRA 1/ACA	021013	3-4(B)	22-23
JONES, KARA	MATH	ALGEBRA 1/ACC	021012	3-4(A)	22-23

JONES, KARA	MATH	STATISTICS/AP	021075	3-4(B)	22-23
JONES, KARA	MATH	GEOMETRY/ACC	021022	5-6(A)	22-23
JONES, KARA	MATH	ALGEBRA 1/ACA	021012	5-6(B)	22-23
JONES, KARA	MATH	ALGEBRA 1/ACC	021012	7-8(B)	22-23
KELLY, WILLIAM	MATH	Calculus BC/AP/Uconn	021066	1-2(A-B)	22-23
KELLY, WILLIAM	MATH	Calculus BC/AP/Uconn	021066	1-2(A-B)	22-23
KELLY, WILLIAM	MATH	GEOMETRY/ACA	021022	3-4(B)	22-23
KELLY, WILLIAM	MATH	GEOMETRY/ACA	021022	5-6(A)	22-23
KELLY, WILLIAM	MATH	GEOMETRY/ACA	021022	5-6(B)	22-23
KELLY, WILLIAM	MATH	PRE-CAL/ACC	021041	7-8(A)	22-23
MAESTRE, SARAH	MATH	Advanced Mathematical Decision Making	021172	1-2(A)	22-23
MAESTRE, SARAH	MATH	GEOMETRY/ACC	021021	1-2(B)	22-23
MAESTRE, SARAH	MATH	GEOMETRY/ACC	021021	5-6(B)	22-23
MAESTRE, SARAH	MATH	GEOMETRY/ACC	021021	7-8(A)	22-23
MAESTRE, SARAH	MATH	GEOMETRY/ACA	021022	3-4(B)	22-23
MAESTRE, SARAH	MATH	GEOMETRY/ACA	021022	5-6(A)	22-23
Roberts, Tyler	MATH	CALCULUS/ACC	021051	1-2(A)	22-23
Roberts, Tyler	MATH	PRE-CAL/ACA	021043	1-2(B)	22-23
Roberts, Tyler	MATH	ALGEBRA 2/ACA	021032	5-6(A)	22-23
Roberts, Tyler	MATH	ALGEBRA 2 FOUNDATIONS	021112E.1	5-6(A-B)	22-23
Roberts, Tyler	MATH	PRE-CAL/ACA	021042	7-8(A)	22-23
Roberts, Tyler	MATH	PRE-CAL/ACA	021042	7-8(B)	22-23
SALESKI, MARTHA	MATH	GEOMETRY/ACA	021022	1-2(B)	22-23
SALESKI, MARTHA	MATH	ALGEBRA 1/ACA	021012	3-4(A)	22-23
SALESKI, MARTHA	MATH	GEOMETRY/ACA	021022	3-4(B)	22-23
SALESKI, MARTHA	MATH	ALGEBRA 1/ACA	021013	5-6(A)	22-23
SALESKI, MARTHA	MATH	ALGEBRA 1/ACA	021012	5-6(B)	22-23

SALESKI, MARTHA	MATH	GEOMETRY/ACA	021023	7-8(A)	22-23
STEINFELD, ERIC	MATH	ALGEBRA 2/ACA	021032	1-2(A)	22-23
STEINFELD, ERIC	MATH	STATISTICS/ACA	021272	5-6(A)	22-23
STEINFELD, ERIC	MATH	ALGEBRA 2/ACC	021031	5-6(B)	22-23
STEINFELD, ERIC	MATH	STATISTICS/ACA	021272	7-8(A)	22-23
STEINFELD, ERIC	MATH	ALGEBRA 2/ACC	021032	7-8(B)	22-23
STEINFELD, ERIC	MATH	STATISTICS/ACA	021273	1-2(B)	22-23
Camerato, Kyle	MU	PIANO/KEYBOARD	071412	1-2(A)	S1
Camerato, Kyle	MU	PIANO/KEYBOARD	071412	1-2(B)	S1
Camerato, Kyle	MU	PIANO/KEYBOARD	071412	5-6(A)	S1
Camerato, Kyle	MU	BAND	071303	5-6(B)	22-23
Camerato, Kyle	MU	BAND	071302	7-8(A)	22-23
Camerato, Kyle	MU	PIANO/KEYBOARD	071412	7-8(B)	S1
CODERRE, MICHAEL	MU	MUSIC TECHNOLOGY	071442	1-2(A)	S1
CODERRE, MICHAEL	MU	CONCERT CHOIR	071202	1-2(B)	22-23
CODERRE, MICHAEL	MU	CONCERT CHOIR	071202	5-6(A)	22-23
CODERRE, MICHAEL	MU	GUITAR(ACOUSTIC)	071422	5-6(B)	S1
CODERRE, MICHAEL	MU	GUITAR(ACOUSTIC)	071422	7-8(A)	S1
CODERRE, MICHAEL	MU	GUITAR(ACOUSTIC)	071423	7-8(B)	S1
ARCHANGELO, STACIA	PE/HE	PHYS ED 9	151002	1-2(B)	S1
ARCHANGELO, STACIA	PE/HE	PHYS ED 9	151002	3-4(A)	S1
ARCHANGELO, STACIA	PE/HE	PHYS ED 10/11/12	151033	5-6(A)	S1
ARCHANGELO, STACIA	PE/HE	PHYS ED 9	151003	5-6(B)	S1
ARCHANGELO, STACIA	PE/HE	PHYS ED 10/11/12	151033	7-8(A)	S1
ARCHANGELO, STACIA	PE/HE	PHYS ED 10/11/12	151033	7-8(B)	S1
D'AMATO, CHRISTOPHER	PE/HE	PHYS ED 9	151003	1-2(A)	S1
D'AMATO, CHRISTOPHER	PE/HE	PHYS ED 10/11/12	151033	1-2(B)	S1

D'AMATO, CHRISTOPHER	PE/HE	PHYS ED 10/11/12	151033	3-4(B)	S1
D'AMATO, CHRISTOPHER	PE/HE	PHYS ED 9	151002	5-6(A)	S1
D'AMATO, CHRISTOPHER	PE/HE	PHYS ED 9	151002	7-8(A)	S1
D'AMATO, CHRISTOPHER	PE/HE	PHYS ED 10/11/12	151033	7-8(B)	S1
FLOYD, ANTHONY	PE/HE	PHYS ED 10/11/12	151032	1-2(A)	S1
FLOYD, ANTHONY	PE/HE	PHYS ED 10/11/12	151032	3-4(A)	S1
FLOYD, ANTHONY	PE/HE	PHYS ED 10/11/12	151032	3-4(B)	S1
FLOYD, ANTHONY	PE/HE	PHYS ED 10/11/12	151032	5-6(B)	S1
FLOYD, ANTHONY	PE/HE	PHYS ED 10/11/12	151032	7-8(A)	S1
FLOYD, ANTHONY	PE/HE	PHYS ED 10/11/12	151032	7-8(B)	S1
REDMAN, SCOTT	PE/HE	PHYS ED 9	151002	1-2(A)	S1
REDMAN, SCOTT	PE/HE	PHYS ED 10/11/12	151032	3-4(A)	S1
REDMAN, SCOTT	PE/HE	PHYS ED 10/11/12	151032	3-4(B)	S1
REDMAN, SCOTT	PE/HE	PHYS ED 10/11/12	151032	5-6(A)	S1
REDMAN, SCOTT	PE/HE	PHYS ED 10/11/12	151032	5-6(B)	S1
BITTEL, DAVID	SCI	COMPUTER SCIENCE/AP	032225	1-2(A)	22-23
BITTEL, DAVID	SCI	PHYS 1201: Physics I/UCONN	031395	1-2(B)	22-23
BITTEL, DAVID	SCI	PHYS 1201: Physics I/UCONN	031395	5-6(A-B)	S1
BITTEL, DAVID	SCI	PHYS 1201: Physics I/UCONN	031395	5-6(A-B)	S1
BITTEL, DAVID	SCI	PHYS 1401: Physics w/Calculus I/UCONN	031375	3-4(A-B)	S1
BITTEL, DAVID	SCI	PHYS 1401: Physics w/Calculus I/UCONN	031375	3-4(A-B)	S1
CODERRE, SARAH	SCI	BIOLOGY/ACA	031042	1-2(B)	22-23
CODERRE, SARAH	SCI	BIOLOGY/ACC	031042	3-4(B)	22-23
CODERRE, SARAH	SCI	BIOLOGY/ACA	031042	5-6(A)	22-23
CODERRE, SARAH	SCI	Botany	031143	7-8(A)	S1
CODERRE, SARAH	SCI	BIOLOGY/ACA	031042	1-2(A)	22-23
CODERRE, SARAH	SCI	BIOLOGY/ACA	031043	5-6(B)	22-23

DILERNIA, ELIZABETH	SCI	If You Love It, Teach It/UCONN	101225	1-2(B)	22-23
DILERNIA, ELIZABETH	SCI	Environmental Science/UCONN	031205	3-4(A)	22-23
DILERNIA, ELIZABETH	SCI	Oceanography	031152	3-4(B)	S1
DILERNIA, ELIZABETH	SCI	Rising Educators I	101212	5-6(A)	S1
DILERNIA, ELIZABETH	SCI	Rising Educators I	101212	5-6(B)	S1
DILERNIA, ELIZABETH	SCI	Oceanography	031153	7-8(A)	S1
Elliott, Lauri	SCI	CHEMISTRY/AP	031055	1-2(A-B)	22-23
Elliott, Lauri	SCI	CHEMISTRY/AP	031055	1-2(A-B)	22-23
Elliott, Lauri	SCI	Principles of Chemistry	031083	3-4(A)	22-23
Elliott, Lauri	SCI	CHEMISTRY/ACC	031071	3-4(B)	22-23
Elliott, Lauri	SCI	Principles of Chemistry	031083	7-8(A)	22-23
Elliott, Lauri	SCI	CHEMISTRY/ACC	031071	7-8(B)	22-23
KIELMA, CAROLYN	SCI	BIOLOGY/ACA	031042	1-2(A)	22-23
KIELMA, CAROLYN	SCI	Biotechnology and Forensics	039902	1-2(B)	22-23
KIELMA, CAROLYN	SCI	BIOLOGY/ACA	031042	3-4(A)	22-23
KIELMA, CAROLYN	SCI	Biotechnology and Forensics	039902	3-4(B)	22-23
KIELMA, CAROLYN	SCI	BIOLOGY/ACA	031042	5-6(A)	22-23
KIELMA, CAROLYN	SCI	Biotechnology and Forensics	039902	5-6(B)	22-23
MENDAL, ZOE	SCI	PHYSICAL SCI/ACA	031212	1-2(B)	22-23
MENDAL, ZOE	SCI	BIOLOGY/ACC	031041	3-4(A)	22-23
MENDAL, ZOE	SCI	PHYSICAL SCI/ACA	031212	3-4(B)	22-23
MENDAL, ZOE	SCI	BIOLOGY/ACC	031041	5-6(A)	22-23
MENDAL, ZOE	SCI	BIOLOGY/ACA	031042	5-6(B)	22-23
MENDAL, ZOE	SCI	BIOLOGY/ACA	031042	7-8(A)	22-23
Mercieri, Katie	SCI	PHYSICS/ACA	031102	3-4(A)	22-23
Mercieri, Katie	SCI	CHEMISTRY/ACC	031072	3-4(B)	22-23
Mercieri, Katie	SCI	PHYSICS/ACA	031103	7-8(B)	22-23

Mercieri, Katie	SCI	Principles of Chemistry	031082	1-2(B)	22-23
Mercieri, Katie	SCI	Principles of Chemistry	031082	5-6(A)	22-23
Mercieri, Katie	SCI	PHYSICAL SCI/ACA	031212	7-8(A)	22-23
MEYER, ERIN	SCI	BIOLOGY/ACC	031042	1-2(B)	22-23
MEYER, ERIN	SCI	ANAT and PHYS/ACA	031132	3-4(A)	22-23
MEYER, ERIN	SCI	BIOLOGY/ACC	031041	3-4(B)	22-23
MEYER, ERIN	SCI	ANAT and PHYS/ACA	031133	5-6(A)	22-23
MEYER, ERIN	SCI	BIOLOGY/AP	031045	5-6(B)	22-23
PETERSEN, TIINA	SCI	PHYSICAL SCI/ACA	031212	3-4(A)	22-23
PETERSEN, TIINA	SCI	Astronomy	031232	3-4(B)	S1
PETERSEN, TIINA	SCI	PHYSICAL SCI/ACA	031212	5-6(A)	22-23
PETERSEN, TIINA	SCI	PHYSICAL SCI/ACA	031212	5-6(B)	22-23
PETERSEN, TIINA	SCI	Astronomy	031233	7-8(A)	S1
PETERSEN, TIINA	SCI	Meteorology	031242	7-8(B)	S1
Stanley, Olivia	SCI	PHYSICAL SCI/ACC	031211	1-2(B)	22-23
Stanley, Olivia	SCI	Principles of Chemistry	031082	3-4(A)	22-23
Stanley, Olivia	SCI	PHYSICAL SCI/ACC	031211	3-4(B)	22-23
Stanley, Olivia	SCI	CHEMISTRY/ACC	031071	5-6(A)	22-23
Stanley, Olivia	SCI	CHEMISTRY/ACC	031071	7-8(A)	22-23
Stanley, Olivia	SCI	PHYSICAL SCI/ACC	031211	7-8(B)	22-23
VALLE, ORLANDO	SCI	PHYSICAL SCI/ACA	031212	1-2(B)	22-23
VALLE, ORLANDO	SCI	PHYSICAL SCI/ACC	031211	3-4(A)	22-23
VALLE, ORLANDO	SCI	PHYSICAL SCI/ACC	031211	3-4(B)	22-23
VALLE, ORLANDO	SCI	Principles of Chemistry	031082	5-6(A)	22-23
VALLE, ORLANDO	SCI	PHYSICAL SCI/ACA	031212	7-8(A)	22-23
VALLE, ORLANDO	SCI	Principles of Chemistry	031082	7-8(B)	22-23
ADAMS, WENDY	SOC	US GOVT and POL/AP	041126	1-2(A)	22-23

ADAMS, WENDY	SOC	MOD AMER HIST/ACA	041062	1-2(B)	22-23
ADAMS, WENDY	SOC	AA/Black and PR/Latino Studies	041092	3-4(A)	22-23
ADAMS, WENDY	SOC	MOD AMER HIST/ACA	041062	5-6(B)	22-23
ADAMS, WENDY	SOC	MOD AMER HIST/ACA	041062	7-8(A)	22-23
ADAMS, WENDY	SOC	AA/Black and PR/Latino Studies	041092	7-8(B)	22-23
BROWER, GINA	SOC	PSYCHOLOGY/AP	041205	1-2(B)	22-23
BROWER, GINA	SOC	PSYCHOLOGY/AP	041205	3-4(A)	22-23
BROWER, GINA	SOC	WORLD HISTORY/ACA	041013	3-4(B)	22-23
BROWER, GINA	SOC	WORLD HISTORY/ACC	041011	5-6(B)	22-23
BROWER, GINA	SOC	WORLD HISTORY/ACA	041013	7-8(A)	22-23
BROWER, GINA	SOC	WORLD HISTORY/ACA	041013	5-6(A)	22-23
CIRILLO, JASON	SOC	MOD AMER HIST/ACA	041062	1-2(A)	22-23
CIRILLO, JASON	SOC	MOD AMER HIST/ACA	041062	1-2(B)	22-23
CIRILLO, JASON	SOC	MOD AMER HIST/ACA	041062	3-4(A)	22-23
CIRILLO, JASON	SOC	MOD AMER HIST/ACC	041061	5-6(A)	22-23
CIRILLO, JASON	SOC	RESEARCH AP	110015	5-6(B)	22-23
CIRILLO, JASON	SOC	MOD AMER HIST/ACA	041062	7-8(B)	22-23
FLEISCHMAN, JEFFREY	SOC	Civics	041042	1-2(B)	S1
FLEISCHMAN, JEFFREY	SOC	US GOVT and POL/AP	041125	5-6(A)	22-23
FLEISCHMAN, JEFFREY	SOC	Civics	041042	3-4(A)	S1
FLEISCHMAN, JEFFREY	SOC	Modern U.S. History	EL041483.3	3-4(B)	S1
FLEISCHMAN, JEFFREY	SOC	Civics	041042	7-8(B)	S1
LAVOIE, THOMAS	SOC	Human Geography AP	041155	1-2(B)	22-23
LAVOIE, THOMAS	SOC	SOCIOLOGY/ACA	041242	3-4(A)	S1
LAVOIE, THOMAS	SOC	SOCIOLOGY/ACA	041243	5-6(A)	S1
LAVOIE, THOMAS	SOC	GLOBAL ISSUES	041152	5-6(B)	S1
LAVOIE, THOMAS	SOC	GLOBAL ISSUES	041153	7-8(A)	S1

LAVOIE, THOMAS	SOC	US HISTORY/AP	041115	7-8(B)	22-23
MCDANIEL, KATHLEEN	SOC	WORLD HISTORY/ACA	041012	1-2(B)	22-23
MCDANIEL, KATHLEEN	SOC	ECONOMICS/ACA	041122	3-4(A)	S1
MCDANIEL, KATHLEEN	SOC	ECONOMICS/ACA	041122	3-4(B)	S1
MCDANIEL, KATHLEEN	SOC	WORLD HISTORY/ACC	041011	5-6(A)	22-23
MCDANIEL, KATHLEEN	SOC	WORLD HISTORY/ACA	041012	5-6(B)	22-23
MCDANIEL, KATHLEEN	SOC	WORLD HISTORY/ACC	041011	7-8(A)	22-23
NUGENT, ALYSSA	SOC	LAW and JUSTICE/ACA	041172	1-2(A)	S1
NUGENT, ALYSSA	SOC	MOD AMER HIST/ACC	041061	1-2(B)	22-23
NUGENT, ALYSSA	SOC	MOD AMER HIST/ACC	041061	3-4(A)	22-23
NUGENT, ALYSSA	SOC	LAW and JUSTICE/ACA	041172	3-4(B)	S1
NUGENT, ALYSSA	SOC	AVID Tutoring 3	672000	5-6(A)	22-23
NUGENT, ALYSSA	SOC	LAW and JUSTICE/ACA	041172	7-8(B)	S1
ROCCO, LISA	SOC	MOD AMER HIST/ACA	041062	1-2(A)	22-23
ROCCO, LISA	SOC	Contemporary Psychology	041252	1-2(B)	S1
ROCCO, LISA	SOC	Contemporary Psychology	041253	5-6(A)	S1
ROCCO, LISA	SOC	Contemporary Psychology	041252	5-6(B)	S1
ROCCO, LISA	SOC	MOD AMER HIST/ACA	041062	3-4(A)	22-23
ROCCO, LISA	SOC	MOD AMER HIST/ACA	041063	7-8(B)	22-23
Sonstrom, Connor	SOC	WORLD HISTORY/ACA	041012	3-4(A)	22-23
Sonstrom, Connor	SOC	WORLD HISTORY/ACA	041012	5-6(A)	22-23
Sonstrom, Connor	SOC	AVID Tutoring	670000	7-8(A)	22-23
STAVENS, JOHN	SOC	Civics	041042	1-2(B)	S1
STAVENS, JOHN	SOC	Civics	041042	3-4(B)	S1
STAVENS, JOHN	SOC	Civics	041042	5-6(A)	S1
STAVENS, JOHN	SOC	DEVELOP PSYCHOLOGY	041262	7-8(A)	S1
STAVENS, JOHN	SOC	Civics	041042	7-8(B)	S1

Blauvelt, Libby	SPED	Func Aca/History 9/10 & 11/12	911117	1-2(A)	S1
Blauvelt, Libby	SPED	Func Aca/Science 9/10 & 11/12	901117	1-2(B)	S1
Blauvelt, Libby	SPED	Func Aca/Vocational Skills 9/10 & 11/12	901007	5-6(A)	S1
Blauvelt, Libby	SPED	Func Aca/Life Skills 9/10 & 11/12	900107	5-6(B)	S1
Blauvelt, Libby	SPED	Func Aca/English 9/10 & 11/12	900017	7-8(A)	S1
Blauvelt, Libby	SPED	Func Aca/Math 9/10 & 11/12	9000117	7-8(B)	S1
BRODERICK, COLIN	SPED	English 11	LC011052.1	1-2(A)	22-23
BRODERICK, COLIN	SPED	Algebra 2	LC021032.1	1-2(B)	22-23
BRODERICK, COLIN	SPED	Algebra 1/ACA	021012G.3	3-4(A)	22-23
BRODERICK, COLIN	SPED	Vocational Skills 2	LC092123.2	5-6(B)	22-23
BRODERICK, COLIN	SPED	Biology	LC032263.2	7-8(A)	22-23
BRODERICK, COLIN	SPED	World History	LC042253.2	7-8(B)	22-23
Croce, Jennifer	SPED	English 11	LC011052.2	1-2(A)	22-23
Croce, Jennifer	SPED	Algebra 2	LC021032.2	1-2(B)	22-23
Croce, Jennifer	SPED	Geometry ACA	021022G.4	3-4(B)	22-23
Croce, Jennifer	SPED	Vocational Skills 2	LC092123.3	5-6(A)	22-23
Croce, Jennifer	SPED	Biology	LC032263.15	7-8(A)	22-23
Croce, Jennifer	SPED	World History	LC042253.3	7-8(B)	22-23
DAVIES, JAMMY	SPED	Vocational Skills II	GL092123.1	1-2(A)	22-23
DAVIES, JAMMY	SPED	Algebra 2 Essentials	GL021032.1	1-2(B)	22-23
DAVIES, JAMMY	SPED	English 11 Essentials	GL011052.1	3-4(A)	22-23
DAVIES, JAMMY	SPED	World History	GL042183.1	3-4(B)	22-23
DAVIES, JAMMY	SPED	Biology	GL032123.1	5-6(B)	22-23
DAVIES, JAMMY	SPED	Language and Culture A	052032	7-8(A)	S1
DECKER, COURTNEY	SPED	English 4/ACA	011042G.11	1-2(A)	22-23
DIDOMINZIO, MICHAEL	SPED	Statistics Essentials	ESN021272.4	1-2(A)	22-23
DIDOMINZIO, MICHAEL	SPED	Statistics/ACA	021272G.3	1-2(B)	22-23

DIDOMINZIO, MICHAEL	SPED	Career & Life Skills	ESN083006.1	3-4(A)	S1
DIDOMINZIO, MICHAEL	SPED	Vocational Education	ESN082005.2	5-6(B)	22-23
DIDOMINZIO, MICHAEL	SPED	Algebra 2/ACA	021032G.32	7-8(A)	22-23
DIGIACOMO, DAVID	SPED	World History Essentials	ESN042053.2	1-2(B)	22-23
DIGIACOMO, DAVID	SPED	Modern Am History/ACA	041062G.13	3-4(A)	22-23
DIGIACOMO, DAVID	SPED	Geography Essentials	ESN042093.2	5-6(A)	S1
DIGIACOMO, DAVID	SPED	Modern American History Essentials	ESN042063.1	7-8(A)	22-23
DIGIACOMO, DAVID	SPED	Modern Am History/ACA	041062G.9	7-8(B)	22-23
GUMPERT, JESSE	SPED	Geometry Essentials	ESN022063.4	1-2(B)	22-23
GUMPERT, JESSE	SPED	Geometry Essentials	ESN022063.5	3-4(A)	22-23
GUMPERT, JESSE	SPED	Algebra 1/ACA	021012G.15	3-4(B)	22-23
GUMPERT, JESSE	SPED	Geometry ACA	021022G.16	5-6(A)	22-23
GUMPERT, JESSE	SPED	Algebra 1 Essentials	ESN022053.5	5-6(B)	22-23
KILRAY, MARK	SPED	Biology ACA	031042G.10	1-2(A)	22-23
KILRAY, MARK	SPED	Civics/ACA	041042G.1	3-4(A)	S1
KILRAY, MARK	SPED	Biology Essentials	ESN032083.2	5-6(A)	22-23
KILRAY, MARK	SPED	Biology ACA	031042G.11	5-6(B)	22-23
KILRAY, MARK	SPED	Civics/ACA	041042G.23	7-8(B)	S1
Maruca, Kayla	SPED	Func Aca/English 9/10 & 11/12	900017	1-2(A)	S1
Maruca, Kayla	SPED	Func Aca/Heath & Safety 9/10 & 11/12	955556	1-2(B)	S1
Maruca, Kayla	SPED	Func Aca/History 9/10 & 11/12	911117	5-6(A)	S1
Maruca, Kayla	SPED	Func Aca/Math 9/10 & 11/12	9000117	5-6(B)	S1
Maruca, Kayla	SPED	Func Aca/Science 9/10 & 11/12	901117	7-8(A)	S1
Maruca, Kayla	SPED	Func Aca/Life Skills 9/10 & 11/12	900107	7-8(B)	S1
MONTAGUE, THOMAS	SPED	Statistics/ACA	021272G.2	1-2(A)	22-23
MONTAGUE, THOMAS	SPED	Algebra 2 Essentials	ESN022073.5	3-4(A)	22-23
MONTAGUE, THOMAS	SPED	Algebra 2/ACA	021032G.10	5-6(B)	22-23

MONTAGUE, THOMAS	SPED	Algebra 2 Essentials	ESN022073.2	7-8(A-B)	S1
MONTAGUE, THOMAS	SPED	ALGEBRA 2/ACA	021032	5-6(B)	22-23
PHILIPPON, PAUL	SPED	English 12 Essentials	ESN012183.2	1-2(B)	22-23
PHILIPPON, PAUL	SPED	English 2/ACA	011022G.14	3-4(A)	22-23
PHILIPPON, PAUL	SPED	English 4/ACA	011042G.9	5-6(A)	22-23
PHILIPPON, PAUL	SPED	English 2/ACA	011022G.16	7-8(A)	22-23
PHILIPPON, PAUL	SPED	English 10 Essentials	ESN012163.2	7-8(B)	22-23
Riley, Megan	SPED	English 2/ACA	011022G.5	3-4(A)	22-23
Riley, Megan	SPED	English 1/ACA	011012G.5	5-6(A)	22-23
Riley, Megan	SPED	English 3/ACA	011052G.11	7-8(A)	22-23
Viets, Sharon	SPED	Physical Sci/ACA	031212G.13	7-8(A)	22-23
Viets, Sharon	SPED	Physical Science Essentials	ESN032073.3	7-8(B)	22-23
Viets, Sharon	SPED	Principles of Chemistry	031082G.4	1-2(B)	22-23
Viets, Sharon	SPED	Principles of Chemistry	031082G.5	5-6(A)	22-23
Viets, Sharon	SPED	Principles of Chemistry Essentials	ESN032063.1	3-4(B)	22-23
WEILAND, COLLEEN	SPED	English 1/ACA	011012G.16	7-8(B)	22-23
WEILAND, COLLEEN	SPED	English 11 Essentials	ESN012173.2	1-2(B)	22-23
WEILAND, COLLEEN	SPED	English 3/ACA	011052G.12	3-4(B)	22-23
WEILAND, COLLEEN	SPED	English 9 Essentials	ESN012153.3	7-8(A)	22-23
WEILAND, COLLEEN	SPED	World History/ACA	041012G.10	5-6(A)	22-23
Bantea, Emil	WL	Language and Culture A	052032	1-2(A)	S1
Bantea, Emil	WL	LATIN 1/ACC	051511	1-2(B)	22-23
Bantea, Emil	WL	LATIN 3/ACC	051551	3-4(B)	22-23
Bantea, Emil	WL	LATIN 2/ACC	051521	5-6(A)	22-23
Bantea, Emil	WL	LATIN 1/ACC	051511	5-6(B)	22-23
Bantea, Emil	WL	Language and Culture A	052032	7-8(A)	S1
CRUZ, PAULA	WL	SPANISH 3/ACA	051232	1-2(A)	22-23

CRUZ, PAULA	WL	SPANISH 2/ACC	051221	1-2(B)	22-23
CRUZ, PAULA	WL	SPANISH 3/ACA	051232	3-4(A)	22-23
CRUZ, PAULA	WL	SPANISH 2/ACA	051222	5-6(B)	22-23
CRUZ, PAULA	WL	SPANISH 2/ACC	051221	7-8(A)	22-23
CRUZ, PAULA	WL	SPANISH 2/ACA	051222	7-8(B)	22-23
Hayes, Linda	WL	FRENCH 2/ACA	051022	1-2(B)	22-23
Hayes, Linda	WL	FRENCH 1/ACA	051012	3-4(A)	22-23
Hayes, Linda	WL	FRENCH 4/ACC & ACA	051041	3-4(B)	22-23
Hayes, Linda	WL	FRENCH 2/ACC	051021	5-6(A)	22-23
Hayes, Linda	WL	FRENCH 3/ACC & ACA	051031	7-8(A)	22-23
Hayes, Linda	WL	FRENCH 1/ACA	051012	7-8(B)	22-23
INFANTE, LUCIA	WL	ITALIAN 3 & 4/ACC & ACA	051131	1-2(B)	22-23
INFANTE, LUCIA	WL	ITALIAN 2/ACC & ACA	051122	3-4(B)	22-23
INFANTE, LUCIA	WL	ITALIAN 1/ACA	051113	7-8(B)	22-23
Lanza, Claudia	WL	SPANISH 1/ACA	051213	1-2(A)	22-23
Lanza, Claudia	WL	SPANISH 1/ACA	051212	1-2(B)	22-23
Lanza, Claudia	WL	Spanish For Native Speakers/ACC	051271	3-4(A)	22-23
Lanza, Claudia	WL	Spanish For Native Speakers/ACC	051271	5-6(B)	22-23
Lanza, Claudia	WL	SPANISH 1/ACA	051213	7-8(A)	22-23
Lanza, Claudia	WL	SPANISH 1/ACA	051212	7-8(B)	22-23
MCDERMOTT, JUSTIN	WL	SPANISH 1/ACA	051212	1-2(A)	22-23
MCDERMOTT, JUSTIN	WL	SPANISH 1/ACC	051211	1-2(B)	22-23
MCDERMOTT, JUSTIN	WL	SPANISH 3/ACC	051231	3-4(A)	22-23
MCDERMOTT, JUSTIN	WL	SPANISH 3/ACC	051231	5-6(B)	22-23
MCDERMOTT, JUSTIN	WL	SPANISH 1/ACA	051212	7-8(B)	22-23
SCHACHT, ANDREA	WL	SPANISH 2/ACA	051222	1-2(A)	22-23
SCHACHT, ANDREA	WL	SPANISH 4/ACC	051241	1-2(B)	22-23

SCHACHT, ANDREA	WL	SPANISH 5/AP	051255	3-4(A)	22-23
SCHACHT, ANDREA	WL	SPANISH 4/ACA	051242	3-4(B)	22-23
SCHACHT, ANDREA	WL	SPANISH 2/ACA	051222	7-8(A)	22-23
SCHACHT, ANDREA	WL	SPANISH 4/ACC	051241	7-8(B)	22-23

BAIMS

Teacher Name	Dept	Course Name	Crs & Sec #	Exp	Term
Carroll, Lisa	TA	Dramatic Theater	B800003.1	1-2(A)	S1
Carroll, Lisa	TA	Intermediate Acting	B800001.1	3-4(A)	S1
Gomes, Matthew	HE	Health I	B151302.1	1-2(A)	S1
Gomes, Matthew	HE	Health I	B151302.2	3-4(A)	S1
Hill, Ryan	ART	2D Art	B800009.2	1-2(A)	S1
Hill, Ryan	ART	Interior Design	B800008.3	3-4(A)	S1
Humerick, Jacob	MU	String Instruments	B800052.1	1-2(A)	S1
Humerick, Jacob	MU	Modern Band	B800051.1	3-4(A)	S1
MacDonald, Theresa	MU	Vocal Ensemble	B800012.1	1-2(A)	S1
MacDonald, Theresa	MU	A Cappella	B800015.1	3-4(A)	S1
Wadowski, Jon	CATE/TECH	Music Video Production	B800020.1	1-2(A)	S1
Wadowski, Jon	CATE/TECH	Scenic Design and Construction (Fall)	B800017.1	3-4(A)	S1

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8		
9		
14	58	5
11		
13		
12		
15		
12	63	5
25		
12		
14		
12		
11		
19	93	6
26		

25		
19		
25		
27		
22	144	6
19		
19		
8		
13		
13		
18	90	6
6		
16		
21	43	3
25		
19		
14		
10		
22		
26	116	6
25		
16		
22		
23		
25	111	5
23		
14		

16		
11		
13		
17	94	6
Enr	TOT/TCHR	TOT SEC
19		
18	37	2
6		
14	20	2
12		
7	19	2
8		
9	17	2
6		
7	13	2
13		
8	21	2

BRISTOL EASTERN HIGH SCHOOL

TO: Dr. Catherine Carbone

FROM: Michael Higgins (Vanessa Janick)

RE: Section Anaysis 22-23 / S1

DATE: October 1, 2022

Based on the Master Schedule

DEPARTMENT	5-Jan	10-Jun	15-Nov	16 - 20	21 - 25	26 - 30	31+	(S1) 2022 Total Students	Total Sections	Section Average
Art		2	2	16				350	20	18
AVID		1	2	1				52	4	13
CATE/BUS		1		10				202	11	18
CATE/FCS			3	11				213	14	15
CATE/MED					2			46	2	23
CATE/TECH			3	9				202	12	17
ELL		1	5	1				77	7	11
English		1	9	22	21	5		1120	58	19
English Team										
EnglishTotal										
Math		5	11	21	20	2		1074	59	18
Math Team										
Math Total										

Music		4	4						88	8	11	
Music/Band					1	1			67	2	34	
Music/Chorus				1	1				41	2	21	
Health		1	2	4	2	3			226	12	19	
Phys. Ed		1	1		5	15	1		580	23	25	
Health & PE Total												
Science		4	11	27	23				1201	65	18	
Science Team												
Science Total												
Social Studies			5	26	19	3			1042	53	20	
Soc Stu Team												
Soc Stu Total												
Special Education	4	40	26	4					757	74	10	
World Language		3	10	10	12	3			691	38	18	
TOTAL	**4**	**64**	**94**	**163**	**106**	**32**	**1**		**8029**	**464**		
No longer needed per changes in report due to scheduling/course changes. Will be deleted 23-24.												
No Teams 21-22 & 22-23.												
Co-taught sections are counted as sections for regular ed teachers and sped teachers.												
AP Studio Art & & Portfolio counted as merged sections.												
AVID & ELL are counted separate from subject areas. (Except for ELL co-taughts count for both.)												

French & Italian Sections are counted as merged sections.

Health & Phys. Ed were put together in 2018 & 2019. Separated in 2020 and going forward.

22-23 Section Average - changed to whole numbers.

BRISTOL ARTS & INNOVATION MAGNET SCHOOL

TO: Dr. Catherine Carbone

FROM: Michael Higgins (Vanessa Janick)

RE: Section Anaysis 22-23 / S1

DATE: October 1, 2022

Based on the Master Schedule

DEPARTMENT	5-Jan	10-Jun	15-Nov	16 - 20	21 - 25	26 - 30	31+	(S1) 2022 Total Students	Total Sections	Section Average
ART		1	1					19	2	10
CATE/TECH		1	1					21	2	11
HEALTH		1	1					20	2	10
MUSIC		4						30	4	8
THEATRE ARTS				2				37	2	19

VRJ:EXCEL:22-23 OCTOBER REPORTS:Section Analysis 22-23.xlsx

(S1)				(S1)		
2021				2020		
Total Students	Total Sections	Section Average		Total Students	Total Sections	Section Average
341	21	16.24		340	21	16.19
44	4	11		58	4	14.5
320	17	18.82		253	14	18.07
89	5	17.8		86	5	17.2
41	2	20.5		21	1	21
200	12	16.67		213	12	17.75
63	6	10.5		80	6	13.33
1103	57	19.35		789	41	19.24
				296	16	18.5
1103	**57**	**19.35**		**1085**	**57**	**19.04**
1069	59	18.12		879	51	17.24
				217	14	15.5
1069	**59**	**18.12**		**1096**	**65**	**16.86**

86	8	10.75		86	8	10.75						
66	2	33		90	2	45						
55	2	27.5		71	2	35.5						
287	12	23.92		138	8	17.25						
579	24	24.13		547	22	24.86						
866	**36**	**24.06**		**685**	**30**	**22.83**						
1246	65	19.17		920	50	18.4						
				260	15	17.33						
1246	**65**	**19.17**		**1180**	**65**	**18.15**						
1042	53	19.66		794	42	18.9						
				257	14	18.36						
1042	**53**	**19.66**		**1051**	**56**	**18.77**						
903	86	10.5		1036	89	11.64						
731	41	17.83		725	41	17.68						
8265	**476**			8273	485							

VRJ:EXCEL:22-23 OCTOBER REPORTS:Section Analysis 22-23.xlsx
