## Spaulding High School

June 8, 2020

### A Message from the Principal

Our final week for students and student work is upon us. We continue to encourage our students to finish strong. Please contact teachers and/or counselors in regards to any questions about academics. No student work will be accepted after 3 PM on Friday, June 12th, so it is very important that students verify with their teachers any outstanding work that they need to complete. Final grades will be posted in IC by Friday, June 19th. If you have difficulty accessing IC, please contact Anna Ryan at aryanshs@buusd.org.

We will be sending surveys to students, parents and staff requesting feedback and information about our remote learning experience soon. We always are looking for ways to improve our system and grow from what we have learned. All feedback is greatly appreciated.

We will continue to send messages out throughout the summer, as guidance becomes available from Governor Scott and the Agency of Education (AoE). There are still many unkowns as we plan for the 2020-21 school year. We are incredibly anxious to be back at Spaulding and face to face with our students. Until then, please be safe!

### A Message for Seniors

Our final week of student days is upon us. There have been many emotions, especially during our remote learning weeks, and we are so happy and proud of all that has been accomplished during these weeks. The perseverance, resilience and positivity that many of you have shown through this difficult time is amazing. Challenges in life make us stronger - and you should know that you have it within you to overcome the challenges yet to come.

For some, however, there are still a few challenges to tackle before leaving SHS! All learning tasks and assessments/reassessments need to be completed by 3 PM on June 12th, as well as having completed your community service and the documentation. If you need support, please reach out to your teacher(s) and/or counselors. We want all of you to be part of the Graduating Class of 2020.

WCAX will continue with their tributes to seniors, and SHS will be featured. We anticipate that the feature will be aired Friday, June 12th.

Seniors and their parents should have received an email about the individual graduation ceremony, including how to sign up for the individual graduation ceremony. The ceremonies will be on June 17th and 18th from 8 AM to 6 PM and June 19th 8 AM to 11 AM. If you have questions about the sign up, please contact Beth Bicknell, <u>ebickshs@buusd.org</u>. If you are unable to attend the ceremony at SHS, please contact Brenda Waterhouse at <u>bwateshs@buusd.org</u> for a delivery ceremony. The delivery ceremonies will be on June 19th between 1 PM and 5 PM. Each graduate will have two cars that can attend to observe the graduate having their name called, walk across the stage, have a few words shared to commemmorate the event, accept their diploma and turn their tassel, followed by photographs.

The virtual graduation video link will be shared on our website at 11 AM on June 20th. The video includes the student speeches and class song, along with other elements of our traditional graduation. I encourage everyone to watch together and help celebrate our seniors, even if it is while physically distancing.

#### **Summer Reading**

Due to COVID-19/remote learning, SHS will not be able to distribute materials for our summer reading book group program. We still value reading, and your English teachers strongly encourage you to read the equivalent of at least one book over the summer. We encourage you to check out <u>https://www.spauldinglibrary.org/</u> to see what resources are available in either physical books, digital

books, or audio books. Requests for books to be signed out of the library need to be made by June 12th. To make a request, please contact our librarian, Christine Smith, at <u>csmitshs@buusd.org</u>.

### **Burdett Awards - Quarter 4**

The following Spaulding High School students were recognized with the Robert M. Burdett Memorial Award. Teachers and staff nominated students in one of the following categories: Good Citizen, Unsung Hero, Exceptional Growth/Improvement, and/or Exceptional Perseverance/Resilience. These students help build our school community and should be commended on their recognition.

Freshmen: Paige Allen, Riley Fleury, Kathryn Harding, Alysha Hull, Claire Isabelle, Omar LaBay, Lily LaCroix, Ella Lewis, Abigail Lindhiem, Rebecca McKelvey, Alaina Rueda, Chandler Wallin, and Charlotte Young. Sophomores: Madison Ashe, Ethan Bernier, Emma Blaisdell, Logan Bristow, Christian Day, Landen Farnham, Cydney Ferrer, Julia Fewer, Abrianna Gould, Caleb Huntington, Jonathan Jesmonth, Payton Lamberti, Emily Morris, Jake Picard, Emily Poulin, Lexie Royce, Kelly Sanders, Alyson Savoie, and Abbigail Smith. Juniors: Jacob Allen, Paige Bristow, Emma Cushman, Jake Darling, Allison Everett, Isabelle Fischer, Rachel Forlow, Theresa Hoar, Eamon Hogan, Anthony Ingalls, Benjamin Isabelle, Camden Kelley, Carson King, Savannah Light, Amina Malagic, Kiana Martin, Conner Neddo, Willem Pontbriand, David Poulin, Nathan Romeo, Anna Sancibrian, Jenna Sawyer, and Jasmine Sayah.
Seniors: Caleb Burns, Jack Dodd, Gavin Glosser, Grace Hardaker, Madison Henderson, Grace Parsons, Elizabeth Poirier, and Kaelyn Shannon.

### A Message from Natalie Soffen, Athletic Director

When I left Spaulding back in 2000, I never thought I would be back in Vermont, let alone at my old high school. As I continued my next journey I found myself talking about my hometown and my home state. I found a greater appreciation for the place that helped make me who I am. While pregnant with my 2nd child, I came to realize I wanted to raise my children back in Vermont. The job search began, what I knew, was that I wanted to be an Athletic Director, why? I love sports and I love kids; it is a different way for me to be a teacher. Sadly for me, the AD position at Spaulding was not open. I had to look elsewhere, and I found a nice fit at Peoples Academy, but still, I kept my family in Barre. My kids were happy here and so was I. I traveled 2 hours every day for 7 years. During those 7 years, if I was not at PA covering a game, I was at Spaulding supporting my Alma Mater and my community. Then, one day, I got a message saying "the Spaulding AD position is open;" it was a no brainer. Spaulding was the dream, not only for my family but for me. My first day, as cliche as it is, it felt like I was home. The place I was meant to be. During the fall sports meeting, I was nervous but excited. I have prided myself to get to know my students and allow them to get to know me; I love making connections. Face it, we see so much of each other, I see them as part of my family. What made my transition to Spaulding so great? The faculty, staff, and our students. Everyone accepted me and made me feel like I had never left. Everywhere I went I got flashbacks from when I was in HS, and it brought back so many great memories. I don't regret leaving after HS, that too, helped me grow as a person. Just remember, Barre and SHS will always welcome you home.

**To the seniors**: I am grateful that I was able to be a part of your senior year. I loved getting to know you, I just wish I had more time with you. You have represented your school and community very well and I don't doubt you will continue to do so in your next adventure. I hope to see you at future SHS events, and reach out to me if you ever need anything. Please enjoy the senior athletic <u>slideshow</u>.





## June 2020 INDUSTRY EDUCATION Director: Penny Chamberlin

## DIRECTOR CTE BYTES:

- CVCC 2020 Awards Ceremony -Was live streamed on June 9, 2020 at 5:30 p.m. See the website for links to see a recorded version from June 9th!
- Bake Shop silent auction of a few pieces of equipment happened the last week of May 25, 2020 with the final movement of furniture and other equipment the first week of June.
- ✤ <u>Team Leaders</u> met on May 26, 2020 reviewed <u>scholarship applications</u> and have determined awards and scholarships that will be awarded for year 2020.
- <u>2020-2021 Admissions</u> CVCC is planning to open in the Fall of 2020 with 180 students. Enrollment reports are included with this newsletter.
- Feasibility Study and Needs Assessment Phase 1. The Re-Envisioning Team and Lavallee Architects will present their results of Phase 1 to the BUUSD Board on June 25, 2020.
- Testing for Electrical, Plumbing and Heating and Cosmetology will take place after the close of school. The students in Electrical will be proctored from VTC online.
- VTLC (Jennifer Luck-Hill): has been working with VTVLC to offer CVCC Instructors and staff a free course facilitated by Jen, called Online Teaching Best Practices, to help them become better online teachers. The course is meant to help teachers who unexpectedly find themselves teaching online without having previous training in the pedagogy of online teaching. The course will offer a selection of materials from multiple classes by the Northeast Online Teaching Institute including Methods 1: Introduction to Online Teaching, Methods II: Online Teaching Tools & Techniques, and Online Teaching with Practicum. The class uses the seven National Standards for Quality Online Teaching to organize the class content. The course will run from June 10th June 19th and will offer teachers a certificate of 10 hours of professional learning towards their teacher relicensure. This course will help CVCC instructors to be better prepared for teaching online and will offer ideas and teaching strategies to help them to be more effective and engaging online teachers with better learning outcomes for students.
- Food Shelf Donation: CVCC staff and students held several fundraising events this year that were not able to come to fruition with group events/trips for the end of the year. In light of the COVID crisis, Team Leaders decided to use some of those associated funds to support the Career Center's regional food banks in the names of CVCC students. Therefore, CVCC will be donating \$1,000 worth of food (as determined by the foodbank) to 6 regional food banks in the sending district areas to support families and students in those areas. An article will be posted to the papers to recognize this donation. This will be done by late June as there will be school staff delivering these items to the food banks. CVCC staff worked hard with in-house businesses and program fundraisers. The gifts will help show that some of those funds were going to impact many of our students and families who are familiar with CVCC.

## **PROGRAM HIGHLIGHTS**

**BAKE SHOP:** Students completed their NRA (National Restaurant Association) baking exam toda. The final class of the offsite Baking Arts program wrapped up the year with all students achieving their National Restaurant Association Baking Certifications. This is a huge accomplishment for these students who dedicated their school year to learning this baking knowledge through reading, writing, researching, demonstrating, and practice. These students did not miss a beat beginning remote learning on 3/18/2020. Students remained active and engaged in their independent learning of food science, culinary history, culinary occupations, nutrition, and knife skills through the generosity of the free online KP Curriculum. Wendy and the CVCC staff are proud of the students for persevering in this trying time and practicing the art of open communication lines.

**COSMETOLOGY 1:** Cosmetology 1 class has been focusing on design and all of the places where you can gain inspiration. I tasked them with going outside and looking to nature. I was very impressed with their results; they were to observe color, texture, and movement. They were able to see the inspiration better than I had even hoped! Please enjoy the photos that the students took as well as their designs that they found online. One also created a look on their mannequin based on the ferns in their yard!

**CULINARY:** This was a final test: A composed dish..students had seared chicken before in class and prepared risotto. Now they prepared them together and made a composed dish while in their own homes. Kits were provided: half an onion, a box of Arborio rice, butter, stock, salt, pepper and a chicken breast. Students were encouraged to use other things to garnish with at home and to be creative..if they didn't have anything, that was fine. Here is an uploaded picture of a finished , composed dish.



**DMA 1:** Digital Media Arts students finished the year strong by making their own portfolios as actual live websites. After the school formed a partnership with the platform Portfoliobox to offer free design and hosting

services, each student presented six of their favorite projects created in the program alongside galleries, biographies, resumes, contact forms, and blog pages to showcase their media art creations from this past year. In the following days, members of the Digital Media Arts advisory board reviewed each students' portfolio and provided assessment and comments for students to receive and learn from. What's most exciting is that every student now has a live website to showcase their work for new professional opportunities! Visit the DMA student portfolios and learn more about the process on our class website at https://sites.google.com/buusd.org/cvcc-dma-2019-2020/final-portfolios

**PLUMBING AND HEATING:** All of the P&H students finished their final projects on time with only 4 mistakes for the entire class! The instructor and CVCC Staff are very, very proud of all the work they have done this year and in particular how they completed this project with very little support from their instructor! Special thanks to Granite Group for making this possible!



## STAFF HIGHLIGHTS

OUTSTANDING INSTRUCTIONAL STAFF MEMBER OF THE YEAR (BY STUDENT AND STAFF VOTE): **JENNIFER LUCK-HILL:** For her dedication to CVCC students and Staff. Jennifer was in each classroom providing IT support and helping with building student portfolios. She also headed off the online staff and student courses to provide additional training besides what was available on site.

OUTSTANDING SUPPORT STAFF MEMBER OF THE YEAR (BY STUDENT AND STAFF VOTE): **STEPHANIE OLSEN:**For her willingness to go above and beyond. She is always positive, telling jokes, and supporting staff and students by helping with whatever task comes up.

## STUDENT HIGHLIGHTS

Central Vermont Career Center (CVCC) would like to congratulate CVCC students for a job well done in Quarter 4 of 2019-2020, Congratulations CVCC students for a wonderful Quarter 4 in 2020!

### Program

Automotive Technology Baking Arts Building Trades Cosmetology 1 Cosmetology 2 Culinary Arts Digital Media Arts 1 Teacher Choice AwardeesEvan DudleySHSAlorria McDunnahSHSRyan StearnsTUHSSophia CallahanHmSITaigyn DraperPATama BelotserkovskyU32Danielle RickerSHS

Student Choice Awardees

Tyler GuyetteSHSTina TaylorCVCCLaven JohnsonHmSIElijah LaramoreSHSGuin BagleyHUHSKeagan DesjardinsSHSHannah KraghHmSI

Digital Media Arts 2 Electrical Technology	Elizabeth McCarthy Brayden Steele	MHS U32	William Nykiel Troy Bolduc	U32 U32
Emergency Services	Oskar Neuburger	MHS	Savannah Desjardins	SHS
Exploratory Technology	Leland Kennedy	U32	Lowell Deberville	U32
Human Services	Bridget Grant	U32	Jessica Farnham	HUHS
Medical Professions	Kaitlyn Andress	TUHS	Jordan Brimblecombe	TUHS
Natural Resources	Mae Dunham	MHS	Gavin Willett	SHS
Plumbing and Heating	Conner Magoon	SHS	Sebastian Kragh	HmSI
Co-op (off-campus)	Cooper Farnsworth	SHS	-	

## See recorded Awards Night: <u>https://youtu.be/qaibK8SN5pc</u>

## STUDENT OF THE CENTER: North Hodgson

North was chosen by the Faculty, Staff and Administrative Team. He received a \$1,500 Award and a plaque commemorating this honor. The nominating criteria for this honor consist of a student's:

- •instructor's recommendation
- •maintaining a "B" or better average,
- •having excellent attendance and

•exhibiting a strong interest in the technical field that he or she is exploring.

The outstanding student of the Center is a proven and exceptional student who has successfully combined academics with applied learning. This student has achieved some of our highest honors as well as attended three programs at CVCC. Some of this student's achievements include:

- inducted into the National Technical Honor Society
- completed the Introduction to College Course,
- earned college credits in through Dual Enrollment
- successful Co-op student
- played high school sports, all while holding near full-time employment in our community

North has grown remarkably in strength and character, to become a community leader who cares about people and the environment. This student's sense of humor, ability to work through challenges with grace, and ability to help others achieve at high levels, make North someone to honor and celebrate.

## 2020 CVCC Student of the Program- \$150.00 GIFT CARD

Lenny Cards/except for	
Culinary and Baking	
Automotive	Justin MaGill
Baking Arts	Zoe Petrella - Capital Kitchen
Building Trades	Iara Mesquita
Со-ор	North Hodgson
Cosmetology 1	Sophia Callahan
Cosmetology 2	Joy Sewall
Culinary	Marcus Meacham Capital Kitchen
DMA 1	Theo Labrusciano-Carris
DMA 2	Remy Maas
Electrical	Brayden Steele
Emergency Service	Savannah Desjardins

Exploratory Tech	Cameron Govea
Human Services	Alexis Huckins-Lennys
Medical Professions	Liam Poulin-Lennys
Natural Resources	Mae Dunham
Plumbing & Heating	Nathan Gravel
Leadership	Keagan Desjardins

## 2020 CVCC Scholar Awards Recipients - \$100.00 Gift Card

Со-ор	Cooper Farnsworth
Automotive	Andrew Stacy
Baking Arts	Tina Taylor
Building Trades	John Hebert
Cosmetology 1	N/A - she only has juniors
Cosmetology 2	Taigyn Draper
Culinary Arts	Tama Belotserkovsky
DMA 1	Danielle Ricker
DMA 2	Oliver Barrett
Electrical	Colby Hudson
Emergency Services	
Natural Resources	August Thompson
Plumbing & Heating	Conner Magoon
Pre-Tech	Leland Kennedy
Medical Professions	Kaitlyn Andress

## 2020 CVCC Students Awarded Scholarships:

Scholarship	Student Recipient (program)
American Legion Auxiliary Barre Unit 10	Jordan Brimblecombe: \$500.00
Barre Kiwanis Club	Jordan Brimblecomb: \$1,000.00
American Legion Barre Post #10	Nathan Gravel: \$500.00
Milford M. Leonard	Dalton Cody: \$3,500.00
Milford M. Leonard	Justin Magill: \$3,500.00
Melvin & Maria McKight	Kaitlyn Andress: \$500.00
Mitchell's Tee's & Design	Attilio Perantoni: \$250.00
Mutuo Soccorso Club	Nathan Gravel: \$1,500.00
Mutuo Soccorso Club	Jordan Brimblecombe: \$1,50.00
The Abilio Amor, Jr Memorial Scholarship	Kaitlyn Andress:\$2,500.00
The Abilio Amor, Jr Memorial Scholarship	John Hebert:\$2,500.00
Washington Electric Cooperative, Inc	Nick Hood: \$\$250.00
Wayside Restaurant-	Tina Taylor: \$20.00

Submitted by: CVCC Administrative Assistant 05.27.2020

UPCOMING EVENTS: End of Year Awards Ceremony

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## Central Vermont Career Center (CVCC) would like to congratulate CVCC students for a job well done in Quarter 4 of 2019-2020

Congratulations CVCC students for a wonderful Quarter 4 in 2020!

#### **Program**

Automotive Technology Baking Arts Building Trades Cosmetology 1 Cosmetology 2 Culinary Arts Digital Media Arts 1 Digital Media Arts 2 Electrical Technology **Emergency Services** Exploratory Technology Human Services Medical Professions Natural Resources Plumbing and Heating Co-op (off-campus)

### **Teacher Choice Awardees** Evan Dudley Alorria McDunnah SHS Ryan Stearns Sophia Callahan Taigyn Draper Tama Belotserkovsky Danielle Ricker Elizabeth McCarthy Brayden Steele Oskar Neuburger Leland Kennedy Bridget Grant Kaitlyn Andress Mae Dunham Conner Magoon SHS Cooper Farnsworth

SHS TUHS HmSl PA U32 SHS MHS U32 MHS U32 U32 TUHS MHS SHS

Student Choice Awardees Tyler Guyette SHS CVCC Tina Taylor Laven Johnson HmSl Elijah Laramore SHS Guin Bagley HUHS Keagan Desjardins SHS Hannah Kragh HmSl William Nykiel U32 Troy Bolduc U32 Savannah Desjardins SHS Lowell Deberville U32 Jessica Farnham HUHS Jordan Brimblecombe TUHS Gavin Willett SHS Sebastian Kragh HmSl

# © CENTRALCAREER VERMONT CENTER

**Central Vermont Career Center (CVCC) donated money to the VT Food Bank June 2020** This spring two CVCC programs, who had fundraised all year long for field trips, were unable to go on their trips due to the COVID crisis. CVCC also had students who worked daily in the in-house businesses raising funds for their program trips. Instructional leaders and administration spent many days discussing how to use some of those funds to benefit the students and their communities. It was decided that 5 food shelves in the sending region would receive a donation in the name of CVCC Students, Class of 2020.

# The following food shelves received \$1,000 in food donations:

Montpelier Food Pantry of Trinity Church

Waterbury Food Shelf

Capstone Community Action Food Shelf

Onion River Food Shelf

And...

\$2,000 donation will go to the VT Food Bank Thank you CVCC Class of 2020!



## **Central Vermont Career Center**

2020-2021 Calendar

<u>August</u>							
Μ	T	W	<u>Th</u>	F			
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Flex	Flex	Flex	Flex	Flex			
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*CVCC 1st day							
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Staff Dev. Days 4							
(1 Flex, 3 SD)							

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31						
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V=Student Vacation
Staff Meeting
Team Meetings
Parent/Teacher Conferences
\$=Payday
SD=Staff Dev./No school for students
08-20-2020= Career Pathways Team
11-11-2019= Planned by Support Team
01-18-2020= Planned by Instructional Team
OTHER SD PLANNING DAYS (TBD)

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**February** 

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\*Parent Conf. Student Days

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Students: 180 days
Teachers: 180 student days plus 10 SD
<b>Paras</b> : 180 student days plus 5 SD listed below;
(8/19, 8/20, 8/21) (TBD 11/11, 1/18 & 3/26)
April 5 & 8 = SkillsUSA
NTHS = March 25

'06/11/2020 FINAL

# Central Vermont Career Center Barre Supervisory Union- Student Calendar

2020-2021 Calendar

AUGUST							
Μ	T	W	Th	F			
17	18	SD	SD	SD			
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<u>*CVCC 1st day</u>							
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Student Days

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\*Awards Night 06-08-19

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## Student Days: 180

## V Student vacation

**SD** Inservice/No School

- **C** Parent-Teacher Conf (3:30-7)

E=End of Marking Period R=Report Cards Issued

<u>August 26</u>	First Day of School for CVCC	January 18	Inservice Day/No School
August 27	CVCC Picture Day	February 11	Parent-Teacher Conf 3:30-7:00pm
September 7	Labor Day – No School	Feb 22-Mar 2	Vacation - No School
October 08	Parent-Teacher Conf 3:30-7:00 pm	March 25	National Tech Honor Society
October 09	Inservice Day/No School	March 26	Inservice Day/No School
October 12	Holiday-No School	April 5-8 TBD	SkillsUSA
November 11	Inservice Day/No School	April 16	CVCC Quarter 3 Awards
November 19	CVCC Quarter 1 Awards	April 19-23	Vacation-No School
November 19	CVCC Open House/ College Fair 5:30	April 29 TBD	Spring Open House
November 25-27	Holiday-No School	May 28	CVCC Quarter 4 Awards
December 6	Holiday Vacation - No School	May 31	Holiday - No School
January 15	CVCC Quarter 2 Awards	June 08	CVCC Awards Ceremony
			FINAL 06/11/2020

# CVCC Regional Advisory Board Meeting Dates for 2020-21

## Penny Chamberlin

8:02 AM (1 hour ago)

to Brigid, Bryan, David, Renee, Flor, Giuliano, Guy, Ian, Janna, Jeff, Judy, Laurie, Libby, Mark, Mark, MaryLynne, Megan, Michael, Penny, Scott, Sharon, Steven, Tim, CVCC-Everyone

Good morning,

The Regional Advisory Board was not able to act on our meeting schedule for next year due to school closure. We have met in the past on Mondays from 4:00-5:30 p.m.

I am proposing this same schedule for next year's quarterly meetings on the following dates:

Monday, October 5 Monday, December 7 Monday, February 8 Monday, May 3

We will plan to hold meetings in different program classrooms/shops and showcase that program as part of our meetings.

More details will come out in August when you receive an agenda and past meeting minutes along with other documents that need to be shared.

If you have concerns with the dates listed above, please do not hesitate to contact me.

Have a wonderful summer!

Stay safe and be well, Penny

- October 5
- December 7
- February 8
- May 3

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## Penny Chamberlin, M.Ed. (she/her) Director/Principal

Central Vermont Career Center 155 Ayers Street, Suite #2 Barre, VT 05641 (802) 476-6237, ext. 1138 (802) 476-4045 fax <u>www.cvtcc.org</u>

> "Do the best you can until you know better. Then when you know better, do better." ~ Maya Angelou

## Occupational AOE Data 2016 to 2026

		Threshold	# of occupations	
High Wage		\$19.10/hr	285	
In Demand		24 openings	257	
High Skill	Included Excluded	***	315 204	
	Any occup Any occup Any occup	ation requiring	kill g education above high school g related work experience g long-term on-the-job training <b>ria on the "highskill" tab</b>	OR OR

# **Occupational Projections 2016-2026**

# **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

1 - Occupational Employment and Wages, <u>www.vtlmi.info/occupation.cfm#oes.</u> Median wage is an hourly rate except for occupations normally paid an annual rate, as noted. + Wage is equal to or greater than \$100.00 per hour or \$208,000 per year. Source: Vermont Department of Labor, Economic and Labor Market Information, Employment Projections and Occupational Employment and Wages Programs, in cooperation with the U.S. Bureau of Labor Statistics

		Emplo	yment		-	Annual Job	Openings	5	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
29-1061	Anesthesiologists	100	100	0.0%	2	1	C	) 3		Doctoral or professional degree		Internship/residency
29-1067	Surgeons	353	353	0.0%	5	4	0	) 9		Doctoral or professional degree		Internship/residency
29-1064	Obstetricians and Gynecologists	171	172	0.1%	2	2	C	) 4		Doctoral or professional degree		Internship/residency
29-1063	Internists, General	282	282	0.0%	4	3	C	) 7		Doctoral or professional degree		Internship/residency
29-1062	Family and General Practitioners	382	384	0.1%	6	6 4	C	) 10	\$96.75	Doctoral or professional degree	None	Internship/residency
13-1011	Agents and Business Managers of Artists, Performers, and Athletes	46	50	0.8%	2	4	0	) 6	\$88.37	Bachelor's degree	Less than 5 years	None
29-1066	Psychiatrists	234	234	0.0%	3	3	C	6		Doctoral or professional degree		Internship/residency
29-1065	Pediatricians, General	245	244	0.0%	4	3	C	) 7		Doctoral or professional degree		Internship/residency
29-1069	Physicians and Surgeons, All Other	1,202	1,239	0.3%	18	14	4	4 36		Doctoral or professional degree		Internship/residency
29-1041	Optometrists	116	120	0.3%	2	2	C	) 4		dogroo		None
29-1051	Pharmacists	504	520	0.3%	12	10	2	2 24	\$67.30	Doctoral or professional degree	None	None
11-9041	Architectural and Engineering Managers	266	268	0.1%	5	13	0	) 18	\$58.62	Bachelor's degree	5 years or more	None
11-2022	Sales Managers	528	545	0.3%	12			2 47		Bachelor's degree	Less than 5 years	None
	Computer and Information Systems Managers	351	372		6	20		2 28		Bachelor's degree	5 years or more	None
	Chief Executives	533	496		15		Î.				5 years or more	None
	Industrial Production Managers	413	397	-0.4%	9	18		2 25		Bachelor's degree	5 years or more	None
	Marketing Managers	418	455	0.9%	10			40	-		5 years or more	None
	Software Developers, Systems Software	927	1,033	1.1%	13	1	1			Bachelor's degree	None	None
	Physician Assistants	320	410	2.5%	6	13	9	28	-	Master's degree	None	None
	Purchasing Managers	155	159		5	8	0	) 13		Bachelor's degree	5 years or more	None
	Electronics Engineers, Except Computer	68	71 2,660		2 72	3	0	) 5 104		Bachelor's degree	None	None
	Managers, All Other Financial Managers	2,665 803	2,660	0.0% 1.3%	20		11	184 184 173		Bachelor's degree Bachelor's degree	Less than 5 years 5 years or more	None None
	Nurse Practitioners	547	680	2.2%	12	1	1			Master's degree	None	None
	Electrical Engineers	502	535		12			3 36	\$48.70	Bachelor's degree	None	None
	Veterinarians	310	340	0.9%	6	5	3	30 30 31	\$46.52	Doctoral or professional	None	None
11-2011	Advertising and Promotions Managers	49	48	-0.2%	1	4	0	5	\$46.47	Bachelor's degree	Less than 5 years	None
	Software Developers, Applications	1,103	1,384	2.3%	17	61	28	3 106		Bachelor's degree	None	None
	Human Resources Managers	226	234	0.3%	6	12	1	19	-	Bachelor's degree	5 years or more	None
	Natural Sciences Managers	75	81		2	4	1	7		Bachelor's degree	5 years or more	None
29-1161	Nurse Midwives	49	54	1.0%	1	2	0	) 3	\$43.97	Master's degree	None	None
	Radiation Therapists	48	53	1.0%	1	1	0	2	\$43.75	Associate's degree	None	None
11-2031	Public Relations and Fundraising Managers	204	210	0.3%	5	12	1	18	\$43.00	Bachelor's degree	5 years or more	None

## released: Projections: July 2018, Wage: April 2019

	, 	Emplo	oyment		1	Annual Job	J Opening	·	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
33-1012	First-Line Supervisors of Police and Detectives	182	2 186		5 5	6	, c	0 11	11 542.661	High school diploma or equivalent	Less than 5 years	Moderate-term on-the- job training
11-9021	Construction Managers	1,328	3 1,391	1 0.5%	31	. 60	6	6 97		Ű	None	Moderate-term on-the- job training
23-1011		1,947					_	2 83	3 \$41.98	degree	None	None
	Mechanical Engineers	493						2 33		Ų	None	None
		844								Ű.	Less than 5 years	None
27-1011	Art Directors	399	9 386	-0.3%	5 19	12	1′	1 30			5 years or more	None
49-9051	Electrical Power-Line Installers and Repairers	410	423			22	1	1 33	3 \$40.55	equivalent	None	Long-term on-the-job training
17-2081	Environmental Engineers	110	0 118	3 0.7%	3	<u>5</u> ′	' <u>1</u> ا	9'	\$40.38	Bachelor's degree	None	None
33-3021	Detectives and Criminal Investigators	232	2 251	1 0.8%	6	8	2	2 16		High school diploma or equivalent	Less than 5 years	Moderate-term on-the- job training
11-3071	Transportation, Storage, and Distribution Managers	130	0 141	1 0.8%	3	7	1	1 11	11 539941	High school diploma or quivalent	5 years or more	None
	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	66			12'	13'	'و رو	נ 5'	\$39.88	Bachelor's degree	None	None
	Food Scientists and Technologists	67			<u> </u>	15'	/0′	י <mark>7</mark>		Ų	None	None
15-2031	Operations Research Analysts	59				2'	1′	<u>4'</u>		Ŭ.	None	None
	Training and Development Managers	47				3'	<u>ر</u> ار	4 ر		Ĵ.	5 years or more	None
15-1122	Information Security Analysts	82				4'	/0′	<sup>י</sup> 6 ر			Less than 5 years	None
	Magnetic Resonance Imaging Technologists	39	-			1'	0'	ا2 ر		Ű	Less than 5 years	None
	Computer Network Architects	154				8'	'0	0 10	· · · · ·		5 years or more	None
17-3023	Electrical and Electronics Engineering Technicians	319	302	2 -0.5%	5 10	) 16	6 -2	2 24		4 Associate's degree	None	None
	Farmers, Ranchers, and Other Agricultural Managers	5,835	5 6,123			) 89	9 29	9 468	\$ \$37.71	equivalent	5 years or more	None
	Fashion Designers	53				1 <u>3'</u>	<u>ر</u> ا	ا5 ر		Ų	None	None
	Diagnostic Medical Sonographers	77	, <u> </u>			2'	2'	<u>- 6'</u>		Ű	None	None
	General and Operations Managers	2,871	-			2 178	8 21			Ĵ	5 years or more	None
29-1122	Occupational Therapists	329	384	4 1.6%	<u> </u>	' 10	6	6 23	\$37.32	2 Master's degree	None	None
	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	625				. 43	3	3 67		Ű	None	Moderate-term on-the- job training
	Engineers, All Other	71				<u> </u>	0′	ر 5		, , , , , , , , , , , , , , , , , , ,	None	None
	Social Scientists and Related Workers, All Other	41				<u>1</u> 3'	<u> </u>	ب4 ر	1 1	Ŭ.	None	None
	Electrical and Electronics Drafters	44	1 17			<u>1 2'</u>	0′	ر <u>ع</u> ار		J J	None	None
	Management Analysts	1,000							-	Ŭ Ŭ	Less than 5 years	None
	Computer Systems Analysts	509						4 38	1 1	, and the second	None	None
17-2112	Industrial Engineers	542	2 549	9 0.1%	5 12	2 22	<u>  1</u> '	1 35	\$36.66	6 Bachelor's degree	None	None
	Financial Examiners	54				2	'	4		č	None	Long-term on-the-job training
11-3011	Administrative Services Managers	425	5 456	6 0.7%	5 13	8 22	<u>  3</u> '	3 38			Less than 5 years	None
	Physical Therapists	903					_		\$36.01	degree	None	None
13-2051	Financial Analysts	177	7 189	0.7%	<u>4'</u>	12	1′	1 17		Ų	None	None
	First-Line Supervisors of Non-Retail Sales Workers	1,821				) 100	-4	4 156	s \$35./5	equivalent	Less than 5 years	None
	Emergency Management Directors	30				11'	-[0'	י2ار		1	5 years or more	None
15-1131	Computer Programmers	484	4 430	-1.2%	<u> </u>	3 20	<u>/ -5</u> '	5 23	\$35.42	2 Bachelor's degree	None	None
	Compliance Officers	2,248								Ű	None	Moderate-term on-the- job training
15-1141	Database Administrators	236	5 251	1 0.6%	5'	5 10	<u>2</u> ′	2 17	\$35.09	Bachelor's degree	None	None
· آ	Securities, Commodities, and Financial Services Sales Agents	542	2 561	1 0.3%	5 14	36	۔ '7 آد	2 52	\$35.05	5 Bachelor's degree	None	Moderate-term on-the- job training

bit         bit <th></th> <th></th> <th>Emplo</th> <th>yment</th> <th></th> <th></th> <th>Annual Job</th> <th>Openings</th> <th></th> <th>Median</th> <th></th> <th></th> <th>Typical on-the-job</th>			Emplo	yment			Annual Job	Openings		Median			Typical on-the-job
17 NMColvir appore18074807480748148	SOC Code	Job Title			Growth Rate (compound average)			-		2018 (hourly except as noted)	needed for entry	in a related occupation	training needed to attain competency in the occupation
19208Education Administration, M Origen of Substration, M Origen of Su						2	6	0	8		0		
27304         Entrant Waters         212         124         0.06         1.0         1.0         2.00         0.00						18	42	5	65		v		
17.400         1000         1000         1000         1000         1000         1000         1000         10000         1000000000000000000000000000000000000	11-9039	Education Administrators, All Other	115	119	0.3%	3	5	0	8	\$34.50	Bachelor's degree	Less than 5 years	
12112         Special-Language End Language End Lan						4	8	1				•	training
21400         Partial Disploxing and Trading Pactitioner, All Oper         Conc         Non-         Non-         Non-           21410         Market Mannartason         1,95         1,85         3,85         2,85         3,85         3,85         3,85         3,85         3,85         3,85         3,85         3,85         3,85         3,855<						4		2			0		
15112       Decamb and Computer System Administration       1,00       1,80       0,81       0,82       0,842 <td></td> <td></td> <td></td> <td></td> <td></td> <td>8</td> <td>-</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td>						8	-	1					
29201         Depart Hygenish         777         0.35         0.75         1.10         1.10         1.10         2.10         0.25         <								2					
13203     Sadgat Analysis     Sadgat Analysis     Sadgat Analysis     Saddat Analysis     None     Monten one the Monten one Monten one the Monten one Monten one the Monten one the Monten on			-					2					
13-200     Inancial specifies Al Other     Indication and the specifies A							1/	2	47	-			
13409114mcal speciality. All Other123124124134.0112134.012134.012134.014 <td></td> <td>- ·</td> <td></td> <td></td> <td></td> <td>Ζ</td> <td>4</td> <td>1</td> <td>/</td> <td></td> <td></td> <td>NOTE</td> <td></td>		- ·				Ζ	4	1	/			NOTE	
17-101Architects, Eased nutrikande and Navail1642 $422$ $422$ $422$ $424$ </td <td></td> <td>•</td> <td></td> <td></td> <td></td> <td>4</td> <td>7</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td>job training</td>		•				4	7	1					job training
39-303     Morticians, Undertakers, and Funced Directors     Separation     Separa						4	7	1			v		
34 Aug         Month Galacy, under function for control         Gala         Gala<	17-1011	Architects, Except Landscape and Naval	432	422	-0.2%	11	19	-1	29	\$33.21	Bachelor's degree	None	
12-102         12-102	39-4031	Morticians, Undertakers, and Funeral Directors	98	91	-0.7%	5	7	-1	11	\$33.06	Associate's degree	None	training
1.1.131       Pastmaters and Mail Superintendents       1.1.7k       1.1.7							34	5					training
11 913195th Sector1211	19-1023	Zoologists and Wildlife Biologists	122	131	0.7%	3	8	1	12	-	•	None	
49902Percommunications Line Installers and Repairers1101101101101101101101101101100 </td <td>11-9131</td> <td>Postmasters and Mail Superintendents</td> <td>124</td> <td>104</td> <td>-1.7%</td> <td>3</td> <td>5</td> <td>-2</td> <td>6</td> <td>537.66</td> <td></td> <td>Less than 5 years</td> <td></td>	11-9131	Postmasters and Mail Superintendents	124	104	-1.7%	3	5	-2	6	537.66		Less than 5 years	
4949002         Determinunctions lute instations une instations une instations due instatins due instatins due instations due instations due instations du	13-2011	Accountants and Auditors	3,713	3,923	0.6%	113	220	21	354	-	•	None	None
29-901Orcupational Health and Safety Specialists10121207\$31.94Bachelor's degreeNoneNone15-2041Statisticians40512.5%1214\$31.64Bachelor's degreeNoneNone33-1021First-Line Supervisors of Fire Fighting and Prevention Workers55580.2%212104\$31.64Bachelor's degreeNoneNone13-103Clains Adjusters, Examiners, and Investigators255226-0.5%614-110\$31.9Bachelor's degreeNoneNone29-1126Respiratory Therapists2252251.9%65415\$30.9Asociate's degreeNoneNone21-102Probation Officers and Correctional Treatment Specialists2162280.5%7122120\$30.83Bachelor's degreeNoneNone21-903Gresters0.00887-0.2%3838-274\$30.83Bachelor's degreeNoneNone21-914Initiative Law Judges, Adjudicators, and Hearing Officers85050.0%1121220\$30.81Bachelor's degreeNoneNone21-924Aministrative Law Judges, Adjudicators, and Hearing Officers81.6484.840.0%2507\$30.81Bachelor's degreeNoneNone21-924Aministrative Law Judges, Adjudicators, and Hearing Officers	49-9052	Telecommunications Line Installers and Repairers	160	134	-1.8%	4	11	-3	12			None	
15-2041Statisticians4051 $2.5\%$ 1 $2$ $1$ $2$ $31.74$ $43.1cr'_{3}$	13-1081	Logisticians	158	171	0.8%	4	12	1	17	\$31.96	Bachelor's degree	None	None
29-1141Registered Nurses5,980 $6,757$ 1.2%18219878398 $531.61$ Bachelor's degreeNone <td></td> <td></td> <td></td> <td></td> <td></td> <td>3</td> <td>4</td> <td>0</td> <td>7</td> <td>-</td> <td>•</td> <td></td> <td></td>						3	4	0	7	-	•		
3-102First-line Supervisors of Fire Fighting and Prevention Workers57580.2%2204\$31.60Poissecondary non-degree award degree awardIes than 5 yearsModerate-ierm on-the-job training13-103Caims Adjusters, Examiners, and Investigators2592460.5%614-119\$31.39Poissecondary non- degree awardNoneCong-term on-the-job training29-1126Respiratory Therapists2152591.9%65415530.90Associate's degreeNoneNone21-102Probation Officers and Correctional Treatment Specialists2162280.5%712120\$30.83Bachelor's degreeNoneNone19-031Chernists216280.5%711218\$30.81Bachelor's degreeNoneNone19-1031Chernists216280.5%711218\$30.81Bachelor's degreeNoneNone19-1031Chernists11731880.9%511218\$30.81Bachelor's degreeNoneNone23-1021Administrative Law Judges, Adjudicators, and Repairers1,1681,2160.4%396155050.07Fight school diploma or equivalentSyars or moreSyars or more13-1191Business Operations Specialists, All Other9621,0250.6%3157694\$30.79Hig			10			1	2	1	4				
33-102irist-line supervisors of the righting and revention workers57580.2%204531.00degree awardLess than Syearspotraining13-103claims Adjusters, Examiners, and Investigators2252280.9%60.41.11.933.33equivalentNoneLong-term on-the-job training29-1126Repiratory Therapists22152281.9%6541.553.09Associate's degreeNoneNoneNone21-109Probation Officers and Correctional Teatment Specialists2162280.5%71.21.12.0\$50.08Bachelor's degreeNoneNoneNone27-304Writers and Authors907840.0%2507\$30.82Bachelor's degreeNoneNoneNone19-103Foresters1.731.880.0%51.121.8\$30.78Bachelor's degreeNoneNoneNone23-101Administrative Law Judges, Adjudicators, and Hearing Officers1.731.880.0%51.121.8\$30.79Bachelor's degreeNoneNoneNone23-101Administrative Law Judges, Adjudicators, and Repairers1.1,1681.2160.4%31.5769\$30.79Bachelor's degreeNoneNone13-109Basiness Operations Specialists, All Other2.662.620.0%3.11.7569.4\$30.78 <t< td=""><td>29-1141</td><td>Registered Nurses</td><td>5,980</td><td>6,757</td><td>1.2%</td><td>182</td><td>138</td><td>78</td><td>398</td><td></td><td>u u u u u u u u u u u u u u u u u u u</td><td>None</td><td></td></t<>	29-1141	Registered Nurses	5,980	6,757	1.2%	182	138	78	398		u u u u u u u u u u u u u u u u u u u	None	
13-1031Claims Adjusters, Examiners, and investigators279279279270	33-1021	First-Line Supervisors of Fire Fighting and Prevention Workers	57	58	0.2%	2	2	0	4	\$31.60	degree award	Less than 5 years	
21-102 2 Probation Officers and Correctional Treatment Specialists2162280.5%712120\$30.83Bachelor's degreeNoneShort-term on-the-job training27-3043Writers and Authors90788-0.2%3838-274\$30.83Bachelor's degreeNoneCong-term on-the-job training19-1032Foresters64840.0%2507\$30.82Bachelor's degreeNoneNone23-1021Administrative Law Judges, Adjudicators, and Hearing Officers55500.0%1102\$30.75Cotoral or professional degreeShort-term on-the-job training31-101First-Line Supervisors of Mechanics, Installers, and Repairers11,181,2160.4%396615105\$30.75ess ton 5 years or moreShort-term on-the-job training13-1019Business Operations Specialists, All Other266262-0.2%915024\$30.78Bachelor's degreeNoneNone17-1021First-Line Supervisors of Construction Trades and Extraction Workers1,891,990.5%6212210019\$30.75High school diploma or equivalentsears or moreNone17-3026Industrial Engineering Technicians1,2451,163-0.7%3863-893\$30.42Sao.78High school diploma or equivalentsyars or moreNone17-3026Industrial Engineerin	13-1031	Claims Adjusters, Examiners, and Investigators	259	246	-0.5%	6	14	-1	19	53139	•	None	с ,
21-102Production Officers and Correctional Ireatment specialists21-102	29-1126	Respiratory Therapists	215	259	1.9%	6	5	4	15	\$30.90	Associate's degree	None	None
27-304Write's and Authors90880-0.2%38-38-274530.83Bacheor's degreeNoneItaning19-031Foresters6000507530.83Bacheor's degreeNoneNone19-031ChemistsChemists1731890.9%511218530.81Bacheor's degreeNoneNone23-1021Administrative Law Judges, Adjudicators, and Hearing Officers5505500.0%-11218530.81Doctoral or professional degreeSpars or moreShort-term on-the-jod training49-1011First-Line Supervisors of Mechanics, Installers, and Repairers1,1681,2160.4%39665105\$30.78High school diplomar equivalentless than 5 yearsNone13-1199Business Operations Specialists, All Other9621,0250.6%3157694\$30.78Bacheor's degreeNoneNone17-102Commercial and Industrial Designers2.662.62-0.2%915024\$30.60Bachelor's degreeNoneNone17-3026Industrial Engineering Technicians1,2451,163-0.7%3863-893\$30.42Associat's degreeNoneNone19-2041Environmental Scientists and Specialists, Including Health4765090.7%1134348\$30.23Bachelor's degreeNone <td< td=""><td>21-1092</td><td>Probation Officers and Correctional Treatment Specialists</td><td>216</td><td>228</td><td>0.5%</td><td>7</td><td>12</td><td>1</td><td>20</td><td>\$30.83</td><td>Bachelor's degree</td><td>None</td><td>training</td></td<>	21-1092	Probation Officers and Correctional Treatment Specialists	216	228	0.5%	7	12	1	20	\$30.83	Bachelor's degree	None	training
19-2031Chemists1731890.9%511218\$30.81Bachelor's degreeNoneNone23-1021Administrative Law Judges, Adjudicators, and Hearing Officers50500.0%111102\$30.81Doctoral or professional degreeShort-term on-the-jobShort-term on-the-job49-1011First-Line Supervisors of Mechanics, Installers, and Repairers1,1681,2160.4%39615105\$30.79High school diploma or equivalentLess than 5 yearsNone13-1199Business Operations Specialists, All Other9621,0250.6%3157694\$30.78Bachelor's degreeNoneNone27-1021Commercial and Industrial Designers266262-0.2%915024\$30.60Bachelor's degreeNoneNone47-1011First-Line Supervisors of Construction Trades and Extraction Workers1,8921,9890.5%6212210194\$30.78High school diploma or equivalent\$years or moreNone17-2026Industrial Engineering Technicians1,2451,163-0.7%3863-893\$30.42Associate's degreeNoneNone19-2041Environmental Scientists and Specialists, Including Health4765090.7%1134348\$30.22Bachelor's degreeNoneModerate-term on-the- job training13-1051Cost Estimators354	27-3043	Writers and Authors	907	887	-0.2%	38	38	-2	74	\$30.83	Bachelor's degree	None	
23-1021Administrative Law Judges, Adjudicators, and Hearing Officers5050500.0%1102\$30.81Doctoral or professional degree5 years or moreShort-term on-the-job training49-1011First-Line Supervisors of Mechanics, Installers, and Repairers1.1681.2160.4%39615105\$30.79High school diploma or equivalentless than 5 yearsNone13-109Business Operations Specialists, All Other9621.0250.6%3157694\$30.78Bachelor's degreeNoneNone27-1021Commercial and Industrial Designers266262-0.2%915024\$30.60Bachelor's degreeNoneNone47-1011First-Line Supervisors of Construction Trades and Extraction Workers1.8921.9890.5%6212210194\$30.57High school diploma or equivalentNone17-3026Industrial Engineering Technicians1.2451.163-0.7%3863-893\$30.42Associate's degreeNoneNone13-1051Cost Estimators3.543630.3%1123135\$30.27Bachelor's degreeNoneModerate-term on-the-job training13-1051Cost Estimators3.543630.3%1123135\$30.27Bachelor's degreeNoneModerate-term on-the-job training			_			2	5	0	7	-	~		
23-1021Administrative Law Judges, Adjudicators, and Hearing Officers5 of5 of5 of0 of1 of0 of2 stansdegree5 years or moretraining49-1011First-Line Supervisors of Mechanics, Installers, and Repairers1,1681,2160.4%39661550500.07High school diploma or equivalentless than 5 yearsNone13-109Business Operations Specialists, All Other9621,0250.6%3157694\$30.78Bachelor's degreeNoneNone27-102Commercial and Industrial Designers9621,0250.6%3157694\$30.60Bachelor's degreeNoneNone47-1011First-Line Supervisors of Construction Trades and Extraction Workers1,8921,9890.5%66212210194\$30.67High school diploma or equivalent\$years or moreNone17-302Industrial Engineering Technicians1,2451,163-0.7%3863-893\$30.42Asocial's degreeNoneNone19-2041Environmental Scientists and Specialists, Including Health4765090.7%1134348\$30.23Bachelor's degreeNoneNone13-105Cost Estimators63636361351353530.67Bachelor's degreeNoneNone13-105Cost Estimators636363636363530.27Bachel	19-2031	Chemists	173	189	0.9%	5	11	2	18		Ŧ		
49-101First-Line Supervisors of Mechanics, installers, and Repairers1,1681,2160.4%39615105\$30.79equivalentLess than 5 yearsNone13-1199Business Operations Specialists, All Other9621,0250.6%3157694\$30.78Bachelor's degreeNoneNone27-1021Commercial and Industrial Designers266262-0.2%915024\$30.60Bachelor's degreeNoneNone47-1011First-Line Supervisors of Construction Trades and Extraction Workers1,8921,9890.5%6212210194\$30.70High school diploma or equivalent\$years or moreNone17-3026Industrial Engineering Technicians1,2451,163-0.7%38663-893\$30.42Associate's degreeNoneNone19-2041Environmental Scientists and Specialists, Including Health4765090.7%1134348\$30.27Bachelor's degreeNoneModerate-term on-the- job training13-1051Cost Estimators3543630.3%1123135\$30.27Bachelor's degreeNoneModerate-term on-the- job training	23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	50	50	0.0%	1	1	0	2	530.81		5 years or more	
27-1021Commercial and Industrial Designers266262-0.2%915024\$30.60Bachelor's degreeNoneNone47-1011First-Line Supervisors of Construction Trades and Extraction Workers1,8921,9890.5%6212210194\$30.67High school diploma or equivalent5 years or moreNone17-3026Industrial Engineering Technicians1,2451,163-0.7%3863-893\$30.42Associate's degreeNoneNone19-2041Environmental Scientists and Specialists, Including Health4765090.7%1134348\$30.32Bachelor's degreeNoneNone13-1051Cost Estimators3543630.3%1123135\$30.27Bachelor's degreeNoneModerate-term on-the- job training	49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	1,168	1,216	0.4%	39	61	5	105	53079	-	Less than 5 years	None
47-101First-Line Supervisors of Construction Trades and Extraction Workers1,8921,9890.5%6212210194\$30.57High school diploma or equivalentSyears or moreNone17-3026Industrial Engineering Technicians1,2451,163-0.7%3863-893\$30.42Associate's degreeNoneNone19-2041Environmental Scientists and Specialists, Including Health4765090.7%1134348\$30.32Bachelor's degreeNoneNone13-1051Cost Estimators3543630.3%1123135\$30.27Bachelor's degreeNoneModerate-term on-the- job training	13-1199	Business Operations Specialists, All Other	962	1,025	0.6%	31	57	6	94	\$30.78	Bachelor's degree	None	None
47-1011First-Line Supervisors of Construction Frades and Extraction Workers1,8921,9890.5%6212210194530.7equivalent5 years or moreNone17-3026Industrial Engineering Technicians1,2451,163-0.7%3863-893\$30.42Associate's degreeNoneNone19-2041Environmental Scientists and Specialists, Including Health4765090.7%1134348\$30.32Bachelor's degreeNoneNone13-1051Cost Estimators3543630.3%1123135\$30.27Bachelor's degreeNoneModerate-term on-the-job training	27-1021	Commercial and Industrial Designers	266	262	-0.2%	9	15	0	24		-	None	None
19-2041Environmental Scientists and Specialists, Including Health4765090.7%1134348\$30.32Bachelor's degreeNoneNone13-1051Cost Estimators3543630.3%1123135\$30.27Bachelor's degreeNoneModerate-term on-the- job training	47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	1,892	1,989	0.5%	62	122	10	194	530.57		5 years or more	None
13-1051       Cost Estimators       354       363       0.3%       11       23       1       35       \$30.27       Bachelor's degree       None       Moderate-term on-the- job training	17-3026	Industrial Engineering Technicians	1,245	1,163	-0.7%	38	63	-8	93		1	None	None
13-1051 Cost Estimators 354 363 0.3% 11 23 1 35 \$30.27 Bachelor's degree None job training			476		0.7%			3	48			None	None
13-2041         Credit Analysts         100         102         0.2%         2         6         0         8         \$30.03         Bachelor's degree         None         None	13-1051	Cost Estimators	354	363	0.3%	11	23	1	35	\$30.27	Bachelor's degree	None	
	13-2041	Credit Analysts	100	102	0.2%	2	6	0	8	\$30.03	Bachelor's degree	None	None

1	1	Empl/	loyment	,		Annual Jol	b Openings	,s	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	<b>Change</b> [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
51-1011	First-Line Supervisors of Production and Operating Workers	1,852	2 1,808		6 58	8 117	/	4 171	11 529.431	High school diploma or equivalent	Less than 5 years	None
13-1075	Labor Relations Specialists	140	0 120	0 -1.5%	<u>4</u>	/ 8'	8 -2	2 10		, and the second	Less than 5 years	None
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	196				5 12	<u>2</u> 1	1 18	8 \$29.42	degree award	None	Long-term on-the-job training
	<b>0 0</b>	408		_				5 27		Ŭ	None	None
11-9151	Social and Community Service Managers	723	.3 814	4 1.2%	6 25	5 40	و	9 74			Less than 5 years	None
	Aircraft Mechanics and Service Technicians	211				7 10	ر 1	1 18	8 \$29.30	degree award	None	None
	Cartographers and Photogrammetrists	43		_		2'	<u>/</u> 1	<u>1</u> 4'		J	None	None
19-2042	Geoscientists, Except Hydrologists and Geographers	49	9 52	2 0.6%	<u> </u>	. 4'	<u>+ 0</u>	ر 5 <sup>1</sup> ک		Ŭ.	None	None
19-3031	Clinical, Counseling, and School Psychologists	783	3 825	5 0.5%	6 20	31	4	4 55	5 \$29.13	degree	None	Internship/residency
51-8013	Power Plant Operators	107	07 108	8 0.1%	3	7	/o	0 10	0 \$29.12	equivalent	None	Long-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,585	5 2,647	7 0.2%	6 86	5 175	6	6 267	/1 5/8./6	High school diploma or equivalent	None	Moderate-term on-the- job training
	Agricultural Inspectors	37				. 3	3 O	5 ر		č	None	Moderate-term on-the- job training
31-2011	Occupational Therapy Assistants	81	94	4 1.5%	4'	6'	َ 1	1 11		Ŭ	None	None
43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	185	5 165	5 -1.1%	7	5	-2	2 10	0 \$28.26	equivalent	None	Short-term on-the-job training
47-5021	Earth Drillers, Except Oil and Gas	73	3 75	5 0.3%	2	6	c ک	8 (	81 \$28,231	High school diploma or equivalent	None	Moderate-term on-the- job training
13-2072	Loan Officers	615	.5 652	2 0.6%	6 15	5 35	<u>م</u>	4 54			None	Moderate-term on-the- job training
11-9081	Lodging Managers	583	3 690	0 1.7%	6 22	2 41	1 11	1 74	4 \$28.17	equivalent	Less than 5 years	None
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	147	7 152	2 0.3%	4	7	· 0	0 11	11 \$28.091	High school diploma or equivalent	None	Moderate-term on-the- job training
	Insurance Underwriters	186				9	<i>,</i> -3	3 10		č	None	Moderate-term on-the- job training
13-1141	Compensation, Benefits, and Job Analysis Specialists	190	0 198	8 0.4%	<u>+                                     </u>	5 10	·/	1 16		Bachelor's degree High school diploma or	Less than 5 years	None
	Property, Real Estate, and Community Association Managers	1,253						8 105	5 \$27.94	equivalent	Less than 5 years	None
		182		_		4 11	<u>-</u>	1 16		J J	None	None
	Training and Development Specialists Market Research Analysts and Marketing Specialists	693		_			- 4 - 2'	4 72			Less than 5 years None	None None
-	Market Research Analysts and Marketing Specialists Dietitians and Nutritionists	1,694 243				++	7 <u>32</u> 72	2 208 2 17			None None	None Internship/residency
	Construction and Building Inspectors	243		1 1		,	2 7	2 24	4 \$27.39	High school diploma or		Moderate-term on-the- job training
33-2021	Fire Inspectors and Investigators	33	3 38	8 1.4%	, 2	2	2 (	J 4	4 \$27.25	Postsecondary non-	5 years or more	Moderate-term on-the- job training
19-1022	Microbiologists	40	0 42	2 0.5%	رر	<u>ر ع</u>	<u>) </u>	ა <u> </u>		, , , , , , , , , , , , , , , , , , ,	None	None
	Engineering Technicians, Except Drafters, All Other	35	5 34			2'	در	ງ3'	3 \$27.13	Associate's degree	None	None
41-9022	Real Estate Sales Agents	637	630	0 -0.1%	6 32	2 25	1- ز	1 56	61 577111	High school diploma or equivalent	None	Moderate-term on-the- job training
43-1011	First-Line Supervisors of Office and Administrative Support Workers	2,035	5 2,040	0 0.0%	6 79	9 118	3 C	0 197	7 \$27.06	High school diploma or	Less than 5 years	None
21-1022	Healthcare Social Workers	450	0 528	8 1.6%	6 18	8 31	1 8	8 57			None	Internship/residency
	Human Resources Specialists	1,113				3 75		6 114	-		None	None
25-3011	Adult Basic and Secondary Education and Literacy Teachers and Instructors	151	136	6 -1.0%	9'	<u> </u>	7 -2	2 14	¢\$26.80	Bachelor's degree	None	None

	1	Emplc	oyment	· · · · · · · · · · · · · · · · · · ·		Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	[a]	Transfers [b]	Change [C]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	95	5 99		3	7	0	10	\$26.78	Postsecondary non- degree award	None	Moderate-term on-the- job training
25-4012	Curators	51	L 56	5 0.9%	,2	3	0	5	\$26.68	Master's degree	None	None
29-2011	Medical and Clinical Laboratory Technologists	180	200	) 1.1%	6	6	2	14		Bachelor's degree	None	None
29-2012	Medical and Clinical Laboratory Technicians	249	9 276	5 1.0%	8	8	, 3	19	\$26.68	Associate's degree	None	None
39-5094	Skincare Specialists	272	2 280	0.3%	5 17	14	. 1	32	\$26.68	Postsecondary non- degree award	None	None
21-1091	Health Educators	214	1 229	0.7%	5 10	16	, 2	28		Bachelor's degree	None	None
	Physical Therapist Assistants	158				13	, 3	24		Associate's degree	None	None
	Music Directors and Composers	117					-1	9		Bachelor's degree	Less than 5 years	None
	Web Developers	861				46	, 8	71	-	Associate's degree	None	None
25-1194	Vocational Education Teachers, Postsecondary	108	3 99	-0.9%	4'	4	-1	7	\$26.40	Bachelor's degree	Less than 5 years	None
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	437	7 453	3 0.4%	5 14	31	2	47	\$26.23	equivalent	Less than 5 years	None
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	610	626	5 0.3%	5 20	42	. 2	64	\$26.23	High school diploma or equivalent	Less than 5 years	None
51-4111	Tool and Die Makers	126	5 110	) -1.3%	5	6	-2	9	\$26.19	degree award	None	Long-term on-the-job training
43-4011	Brokerage Clerks	52			1	4	0	5	\$26.07	High school diploma or equivalent	None	Moderate-term on-the- job training
23-2099	Legal Support Workers, All Other	98	3 107	7 0.9%	. 4	5	, 1	10	\$25.99	Associate's degree	None	None
13-2081	Tax Examiners and Collectors, and Revenue Agents	108	3 114			4	. 1	8		Bachelor's degree	None	Moderate-term on-the- job training
25-9099	Education, Training, and Library Workers, All Other	90	92	2 0.2%	4'	4	0	8		Bachelor's degree	None	None
43-4061	Eligibility Interviewers, Government Programs	65	69	0.6%	3	3	0	6	\$25.77	equivalent	None	Moderate-term on-the- job training
11-9051	Food Service Managers	886	5 894	4 0.1%	28	66	1	95	\$25.72	equivalent	Less than 5 years	None
43-6011	Executive Secretaries and Executive Administrative Assistants	2,182	2 1,748	3 -2.2%	5 106	103	-43	166	\$25.72	equivalent	Less than 5 years	None
	Brickmasons and Blockmasons	168				9	0	14	\$25.69	equivalent	None	Apprenticeship
17-3019	Drafters, All Other	45	5 43	3 -0.5%	<u> </u>	2	. 0	3	\$25.40	Associate's degree	None	None
33-1099	First-Line Supervisors of Protective Service Workers, All Other	121	L 122	2 0.1%	6	6	, O	12	\$25.34	High school diploma or equivalent	Less than 5 years	None
13-1021	Buyers and Purchasing Agents, Farm Products	117	7 110	0 -0.6%	5	8	-1	12	\$25.26	Bachelor's degree	None	Moderate-term on-the- job training
	Wholesale and Retail Buyers, Except Farm Products	547		+		38	-4	55		Bachelor's degree	None	Moderate-term on-the- job training Moderate-term on-the-
	Purchasing Agents, Except Wholesale, Retail, and Farm Products	557		+				42	-	Bachelor's degree High school diploma or	None	job training Moderate-term on-the-
	Police and Sheriff's Patrol Officers Surveyors	1,321 107				52	2	86	\$25.18 \$25.10	equivalent Bachelor's degree	None None	job training Internship/residency
	Producers and Directors	457				29	3	44	-	Bachelor's degree	Less than 5 years	None
	Plumbers, Pipefitters, and Steamfitters	885		1 1				99	\$25.02	High school diploma or	None	Apprenticeship
49-9041	Industrial Machinery Mechanics	622	2 658	3 0.6%	5 22	33	4	59	\$25.02	High school dinloma or	None	Long-term on-the-job training
17-3031	Surveying and Mapping Technicians	153	3 157	7 0.3%	5	11	. 0	16	\$25.01	equivalent	None	Moderate-term on-the- job training
41-3099	Sales Representatives, Services, All Other	1,104	1,150	0.4%	36	97	5	138	\$25.00	High school diploma or equivalent	None	Moderate-term on-the- job training

	1	Emplo	oyment	,		Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
	Civil Engineering Technicians	389						36		Associate's degree	None	None
27-3031	Public Relations Specialists	1,103	3 1,150	0.4%	32	76	5	113	-	Bachelor's degree	None	None
43-5041	Meter Readers, Utilities	63	3 58	3 -0.8%	2	2	0	4	I 574781	High school diploma or equivalent	None	Short-term on-the-job training
19-4031	Chemical Technicians	72	2 73	3 0.1%	2	4	0	6	\$24.68	Associate's degree	None	Moderate-term on-the- job training Moderate-term on-the-
21-2011	Clergy	1,145	5 1,151	L 0.1%	53	70	1	. 124	\$24.67	Bachelor's degree	None	job training
	Instructional Coordinators	615				26	2	58		Master's degree	5 years or more	None
17-1012	Landscape Architects	224	1 226	6 0.1%	6	10	0	16	\$24.58	Bachelor's degree	None	Internship/residency
	Appraisers and Assessors of Real Estate	242				7	2	18		Bachelor's degree	None	Long-term on-the-job training
19-1031	Conservation Scientists	114	122	2 0.7%	2	7	1	. 10		Bachelor's degree	None	None
47-2111	Electricians	1,353	3 1,371	L 0.1%	47	101	2	150	\$24.45	equivalent	None	Apprenticeship
53-7021	Crane and Tower Operators	93	92	2 -0.1%	3	6	0	9	\$24.35	High school diploma or equivalent	Less than 5 years	Moderate-term on-the- job training
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	814	\$58	3 0.5%	27	50	4	81	\$24.19	equivalent	Less than 5 years	None
	Maintenance Workers, Machinery	76	5 83			5	1	9	\$24.17	High school diploma or equivalent	None	Long-term on-the-job training
21-1021	Child, Family, and School Social Workers	1,609	9 1,777	7 1.0%	61	108	17	186		Bachelor's degree	None	None
	Security and Fire Alarm Systems Installers	74	1 84			6	1	10	\$23.86	equivalent	None	Moderate-term on-the- job training
23-2011	Paralegals and Legal Assistants	705	5 764	4 0.8%	24	49	6	79			None	None
	Tax Preparers	370				18	1	. 39	\$23.82	equivalent	None	Moderate-term on-the- job training
-	Environmental Engineering Technicians	91				5	1	9		Associate's degree	None	None
	Fundraisers	466					5	50		Bachelor's degree Postsecondary non-	None	None Long-term on-the-job
	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,095		7 0.2%	30	74	2	106	\$23.72	degree award Postsecondary non-	None	training Moderate-term on-the-
	Telecommunications Equipment Installers and Repairers, Except Line Installers Mechanical Engineering Technicians	770				50	-13	60	\$23./1	Postsecondary non- degree award Associate's degree	None	job training
		41 91	+			<u> </u>		2 S		Associate's degree	None	None
								12		High school diploma or		Long-term on-the-job
	Molders, Shapers, and Casters, Except Metal and Plastic	127		+ +		8	-1	12	\$23.50	equivalent Some college, no	None	training
	Computer User Support Specialists	1,243					10		\$23.43	degree Postsecondary non-	None	None
	Licensed Practical and Licensed Vocational Nurses	1,375					4	101	Ş23.40	degree award	None	None
	Educational, Guidance, School, and Vocational Counselors	805				54	4	. 88		Master's degree	None	None
27-1025	Interior Designers	99	95	-0.4%	3	6	0	9	\$23.36	Bachelor's degree	None	None Moderate-term on-the-
	Medical Equipment Repairers	74				3	0	6		Associate's degree	None	job training
11-9031	Education Administrators, Preschool and Childcare Center/Program	371			10	17	<u> </u>	. 28		Bachelor's degree High school diploma or	Less than 5 years	None Long-term on-the-job
51-8031	Water and Wastewater Treatment Plant and System Operators	354	359	9 0.1%	10	19	0	29	\$23.08	equivalent High school diploma or	None	training
49-9044	Millwrights	96	5 98	3 0.2%	3	6	0	9	\$22.051	equivalent	None	Apprenticeship
15-1152	Computer Network Support Specialists	355	5 383	3 0.8%	8	19	3	30		Associate's degree	None	None
43-5061	Production, Planning, and Expediting Clerks	451	L 458	3 0.2%	16	30	1	47	577.77	High school diploma or equivalent	None	Moderate-term on-the- job training

		Emplo	yment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
43-6012	Legal Secretaries	358	278	-2.5%	17	17	-8	26	\$22.58	High school diploma or equivalent	None	Moderate-term on-the- job training
25-4011	Archivists	39	42	0.7%	2	2	0	4	\$22.57		None	None
27-1024	Graphic Designers	876	880	0.0%	31	49	0	80			None	None
29-2031	Cardiovascular Technologists and Technicians	48	54	1.2%	1	1	1	3	\$22.38	Associate's degree	None	None
43-5052	Postal Service Mail Carriers	737	690	-0.7%	28	20	-5	43	\$22.37	equivalent	None	Short-term on-the-job training
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	87	86	-0.1%	3	4	0	7	\$22.35	No formal educational credential	None	Moderate-term on-the- job training
27-3041	Editors	492	461	-0.6%	16	30	-3	43		~	Less than 5 years	None
41-3011	Advertising Sales Agents	316	285	-1.0%	11	26	-3	34	\$22.26	equivalent	None	Moderate-term on-the- job training
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	190	176	-0.8%	7	14	-1	20	\$22.19	equivalent	None	Moderate-term on-the- job training
29-2081	Opticians, Dispensing	110	115	0.4%	4	4	0	8	577 181	equivalent	None	Long-term on-the-job training
43-5051	Postal Service Clerks	429	401	-0.7%	21	11	-3	29	\$21.88	High school diploma or equivalent	None	Short-term on-the-job training
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	775	830	0.7%	25	46	6	77	\$21.87	High school dinloma or	None	Long-term on-the-job training
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	222	236	0.6%	7	14	1	22	\$21.85	High school diploma or equivalent	None	Long-term on-the-job training
51-2041	Structural Metal Fabricators and Fitters	92	74	-2.2%	3	6	-2	7	\$21.85	equivalent	None	Moderate-term on-the- job training
	First-Line Supervisors of Retail Sales Workers	4,754		-0.3%	173	315	-14	474	\$21.77	High school diploma or equivalent	Less than 5 years	None
13-1121	Meeting, Convention, and Event Planners	389	432	1.1%	16	31	4	51	\$21.76		None	None
43-5031	Police, Fire, and Ambulance Dispatchers	287	286	0.0%	10	15	0	25	\$21.76	equivalent	None	Moderate-term on-the- job training
47-2081	Drywall and Ceiling Tile Installers	326	306	-0.6%	10	18	-2	26	\$21.71	No formal educational credential	None	Moderate-term on-the- job training
19-4099	Life, Physical, and Social Science Technicians, All Other	64	69	0.8%	3	5	0	8	\$21.67		None	None
51-4199	Metal Workers and Plastic Workers, All Other	136	127	-0.7%	5	9	-1	13	\$21.67	High school diploma or equivalent	None	Moderate-term on-the- job training
17-3011	Architectural and Civil Drafters	201	199	-0.1%	6	11	0	17			None	None
29-2099	Health Technologists and Technicians, All Other	185	209	1.2%	6	6	2	14	\$21.55	degree award	None	None
51-9122	Painters, Transportation Equipment	35	35	0.0%	1	3	0	4	\$21.49	equivalent	None	Moderate-term on-the- job training
47-2022	Stonemasons	165	166	0.1%	5	9	0	14	\$21.46	High school diploma or equivalent Postsecondary non-	None	Apprenticeship
31-9091	Dental Assistants	515	532	0.3%	27	30	2	59	\$21.17	degree award	None	None
51-8021	Stationary Engineers and Boiler Operators	57	54	-0.5%	2	4	0	6	\$21.02	High school diploma or equivalent High school diploma or	None	Long-term on-the-job training
43-3051	Payroll and Timekeeping Clerks	337	322	-0.5%	14	18	-2	30	570 981	equivalent High school diploma or	None	Moderate-term on-the- job training
43-4199	Information and Record Clerks, All Other	206	220	0.7%	10	13	1	24	\$20.88	equivalent High school diploma or	None	Short-term on-the-job training Short-term on-the-job
	Office and Administrative Support Workers, All Other	317	323	0.2%	14	20	1	35	\$20.88	equivalent High school diploma or	None	training
39-1021	First-Line Supervisors of Personal Service Workers	962	1,021	0.6%	48	45	6	99	\$20.83	equivalent	Less than 5 years	None

		Emple	oyment	,		Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	[a]	Transfers [b]	Change [C]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
27-4021	Photographers	870	0 842		37	30	-3	3 64	\$20.78	High school diploma or equivalent	None	Long-term on-the-job training
29-2057	Ophthalmic Medical Technicians	215	5 224	0.4%	7	10	1	18	\$20.76	Postsecondary non-	None	None
53-3032	Heavy and Tractor-Trailer Truck Drivers	4,351	1 4,294	4 -0.1%	5 183	272	-6	5 449	\$20.73	Postsecondary non- degree award	None	Short-term on-the-job training
51-4194	Tool Grinders, Filers, and Sharpeners	74	4 64	-1.4%	2	6	-1	. 7	\$20.72	equivalent	None	Moderate-term on-the- job training
47-2211	Sheet Metal Workers	381	1 385	5 0.1%	5 13	26	0	) 39	\$20.64	equivalent	None	Apprenticeship
47-2041	Carpet Installers	136	6 134	-0.1%	4	7	0	) 11	\$20.63	credential	None	Short-term on-the-job training
25-3021	Self-Enrichment Education Teachers	1,067	7 1,148	3 0.7%	68	52	8	3 128	\$20.59	equivalent	Less than 5 years	None
35-1011	Chefs and Head Cooks	463	3 481	L 0.4%	5 15	43	2	2 60	\$20.56	equivalent	5 years or more	None
47-2221	Structural Iron and Steel Workers	62	2 65	5 0.5%	2	5	0	7	\$20.55	equivalent	None	Apprenticeship
47-2031	Carpenters	6,970	0 7,038	3 0.1%	5 241	389	7	637	\$20.54	High school diploma or equivalent	None	Apprenticeship
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	113	3 112	2 -0.1%	6	3	0	) 9	\$20.52		None	Long-term on-the-job training
43-4031	Court, Municipal, and License Clerks	756	6 956	5 2.4%	38	34	20	92	\$20.51	equivalent	None	Moderate-term on-the- job training
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	304	4 325	5 0.7%	5 10	31	2	2 43	\$20.35	equivalent	Less than 5 years	None
43-3061	Procurement Clerks	135	5 129	-0.5%	6	9	-1	L 14	\$20.28	equivalent	None	Moderate-term on-the- job training
	Highway Maintenance Workers	1,548					_	L 156	\$20.25	equivalent	None	Moderate-term on-the- job training
25-4021	Librarians	737	7 723	3 -0.2%	6 40	27	-1	L 66	\$20.24	Master's degree	None	None
43-9031	Desktop Publishers	62	2 54	-1.4%	2	4	-1	. 5	\$20.23	Associate's degree	None	Short-term on-the-job training
47-2073	Operating Engineers and Other Construction Equipment Operators	1,194	4 1,238	3 0.4%	6 46	85	4	135	\$20.20	equivalent	None	Moderate-term on-the- job training
51-5111	Prepress Technicians and Workers	58	8 50	) -1.5%	2	4	-1	. 5	\$20.20	degree award	None	None
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	230	0 240	0.4%	9	13	1	L 23	\$20.18	equivalent	None	Short-term on-the-job training
51-4041	Machinists	622	2 580	) -0.7%	5 21	39	-4	1 56	\$20.04	equivalent	None	Long-term on-the-job training
	Transportation Security Screeners	81				3	0	7	\$19.90	equivalent	None	Short-term on-the-job training
19-4021	Biological Technicians	114	4 125	5 0.9%	3'	8	, 1	L 12	\$19.89	Bachelor's degree	None	None
31-9099	Healthcare Support Workers, All Other	127	7 140	0 1.0%	8	8	1	L 17	\$19.88	equivalent	None	None
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	1,922	2 2,009	0.4%	88	188	9	285	\$19.88	equivalent	Less than 5 years	None
39-9031	Fitness Trainers and Aerobics Instructors	1,155	5 1,232	2 0.6%	5 78	119	8	3 205	\$19.85	equivalent	None	Short-term on-the-job training
53-3021	Bus Drivers, Transit and Intercity	447	7 499	9 1.1%	37	19	5	61	\$19.83	High school diploma or equivalent	None	Moderate-term on-the- job training

		Emplo	yment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
43-3031	Bookkeeping, Accounting, and Auditing Clerks	6,075	5,857	-0.4%	369	287	-22	634	519.821	Some college, no degree	None	Moderate-term on-the- job training
49-3021	Automotive Body and Related Repairers	730	755	0.3%	26	44	2	72	51987	High school diploma or equivalent	None	Long-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	393	384	-0.2%	10	30	-1	39	51963	High school diploma or equivalent	None	Moderate-term on-the- job training
27-4032	Film and Video Editors	35	38	0.8%	1	2	0	3	\$19.58	Bachelor's degree	None	None
41-3041	Travel Agents	228	195	-1.6%	11	13	-3	21	\$19.56	High school diploma or equivalent	None	Moderate-term on-the- job training
47-2051	Cement Masons and Concrete Finishers	269	278	0.3%	10	19	1	30	\$19.47	No formal educational credential	None	Moderate-term on-the- job training
43-4111	Interviewers, Except Eligibility and Loan	340	365	0.7%	19	22	2	43	519441	High school diploma or equivalent	None	Short-term on-the-job training
43-3011	Bill and Account Collectors	405	385	-0.5%	15	26	-2	39	519.43	High school diploma or equivalent	None	Moderate-term on-the- job training
43-5032	Dispatchers, Except Police, Fire, and Ambulance	364	345	-0.5%	12	19	-2	29	<10 J XI	High school diploma or equivalent	None	Moderate-term on-the- job training
43-9011	Computer Operators	61	47	-2.6%	2	3	-1	4	519331	High school diploma or equivalent	None	Moderate-term on-the- job training
43-9041	Insurance Claims and Policy Processing Clerks	594	606	0.2%	26	34	1	61	\$19.30	High school diploma or equivalent	None	Moderate-term on-the- job training
53-7032	Excavating and Loading Machine and Dragline Operators	209	208	0.0%	8	15	0	23	\$19.29	High school diploma or equivalent	Less than 5 years	Moderate-term on-the- job training
49-9031	Home Appliance Repairers	145	133	-0.9%	7	6	-1	12	\$19.20	High school diploma or equivalent	None	Moderate-term on-the- job training
49-3023	Automotive Service Technicians and Mechanics	2,636	2,705	0.3%	84	161	7	252	519.18	Postsecondary non- degree award	None	Short-term on-the-job training
31-9094	Medical Transcriptionists	179	166	-0.8%	12	9	-1	20	519.17	Postsecondary non- degree award	None	None
00-000	Total, All Occupations	371,407	381,799	0.3%	17,696	22,793	1,039	41,528	\$19.10			

# **Occupational Projections 2016-2026**

# **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

1 - Occupational Employment and Wages, <u>www.vtlmi.info/occupation.cfm#oes.</u> Median wage is an hourly rate except for occupations normally paid an annual rate, as noted. + Wage is equal to or greater than \$100.00 per hour or \$208,000 per year. Source: Vermont Department of Labor, Economic and Labor Market Information, Employment Projections and Occupational Employment and Wages Programs, in cooperation with the U.S. Bureau of Labor Statistics release

Source: Ve	ermont Department of Labor, Economic and Labor Market Information, Employment Projections and Oc	cupational I	Employmen	t and Wages	Programs, ir	cooperation	with the U.S	. Bureau of L	abor Statistics		released: Projections:	July 2018, Wage: April 2019
		Emplo	yment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
41-2011	Cashiers	9,934	9,558	-0.4%	915	893	-38	1,770	S11.57	No formal educational credential	None	Short-term on-the-job training
39-9021	Personal Care Aides	7,539	9,777	2.6%	691	520	224	1,435	\$13.24	equivalent	None	Short-term on-the-job training
41-2031	Retail Salespersons	9,834	9,612	-0.2%	616	772	-22	1,366		credential	None	Short-term on-the-job training
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	6,291	6,939	1.0%	586	613	65	1,264	\$11.91	No formal educational credential	None	Short-term on-the-job training
35-3031	Waiters and Waitresses	5,628	5,952	0.6%	429	657	32	1,118	\$15.33	credential	None	Short-term on-the-job training
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	5,517	5,781	0.5%	368	355	26	749	\$14.15	credential	None	Short-term on-the-job training
37-3011	Landscaping and Groundskeeping Workers	4,995	5,321	0.6%	241	368	33	642	•	No formal educational credential	None	Short-term on-the-job training
47-2031	Carpenters	6,970	7,038	0.1%	241	389	7	637	\$20.54	High school diploma or equivalent	None	Apprenticeship
43-3031	Bookkeeping, Accounting, and Auditing Clerks	6,075	5,857	-0.4%	369	287	-22	634		degree	None	Moderate-term on-the- job training
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	6,059	5,444	-1.1%	310	301	-62	549	\$17.41	equivalent	None	Short-term on-the-job training
37-2012	Maids and Housekeeping Cleaners	4,007	4,161	0.4%	302	228	15	545	•	credential	None	Short-term on-the-job training
41-1011	First-Line Supervisors of Retail Sales Workers	4,754	4,619	-0.3%	173	315	-14	474	\$21.77	High school diploma or equivalent	Less than 5 years	None
25-9041	Teacher Assistants	4,863	4,739	-0.3%	264	219	-12	471	S31.700/vr	Some college, no degree	None	None
11-9013	Farmers, Ranchers, and Other Agricultural Managers	5,835	6,123	0.5%	350	89	29	468	\$37.71	High school diploma or equivalent	5 years or more	None
43-4051	Customer Service Representatives	3,503	3,567	0.2%	181	265	6	452	\$17.17	High school diploma or equivalent	None	Short-term on-the-job training
53-3032	Heavy and Tractor-Trailer Truck Drivers	4,351	4,294	-0.1%	183	272	-6	449	\$20.73	degree award	None	Short-term on-the-job training
31-1014	Nursing Assistants	3,515	3,686	0.5%	219	182	17	418	514.38	Postsecondary non- degree award	None	None
39-9011	Childcare Workers	2,905	2,908	0.0%	237	180	0	417	\$13.27	High school diploma or equivalent	None	Short-term on-the-job training
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	2,889	2,991	0.3%	146	251	10	407		credential	None	Short-term on-the-job training
	Substitute Teachers	3,810	3,752		230			401	\$13.45	equivalent	None	None
29-1141	Registered Nurses	5,980	6,757	1.2%	182	138	78	398	\$31.61	Bachelor's degree	None	None
	Cooks, Restaurant	2,553	2,736		155			385		No formal educational credential	Less than 5 years	Moderate-term on-the- job training
13-2011	Accountants and Auditors	3,713	3,923	0.6%	113	220	21	354	\$32.36	Bachelor's degree	None	None

		Emplo	oyment			Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
43-5081	Stock Clerks and Order Fillers	2,702	2,784	0.3%	150	195	8	353	\$13.35	High school diploma or equivalent	None	Short-term on-the-job training
21-1093	Social and Human Service Assistants	2,557	2,823	1.0%	120	192	27	339	\$16.41	equivalent	None	Short-term on-the-job training
43-4171	Receptionists and Information Clerks	2,556	2,584	0.1%	160	171	3	334	\$15.72	High school diploma or equivalent	None	Short-term on-the-job training
35-3011	Bartenders	1,973	1,988	0.1%	95	227	2	324	\$17.31	credential	None	Short-term on-the-job training
49-9071	Maintenance and Repair Workers, General	2,874	3,086	0.7%	121	166	21	308	\$18.75	equivalent	None	Moderate-term on-the- job training
35-2021	Food Preparation Workers	1,782	1,846	0.4%	145	157	6	308	\$12.42	credential	None	Short-term on-the-job training
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	1,922	2,009	0.4%	88	188	9	285	\$19.88	equivalent	Less than 5 years	None
53-3033	Light Truck or Delivery Services Drivers	2,658	2,680	0.1%	113	168	2	283	\$15.43	equivalent	None	Short-term on-the-job training
	Construction Laborers	2,634	2,658	0.1%	92	174	2	268	\$16.89	credential	None	Short-term on-the-job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,585	2,647	0.2%	86	175	6	267	-	equivalent	None	Moderate-term on-the- job training
11-1021	General and Operations Managers	2,871	3,084	0.7%	62	178	21				5 years or more	None
27-2022	Coaches and Scouts	1,875	1,949	0.4%	107	144	7	258	\$29,200/yr	<b>.</b>	None	None
39-9032	Recreation Workers	1,418	1,528	0.7%	96	147	11	254		loquivalont	None	Short-term on-the-job training
49-3023	Automotive Service Technicians and Mechanics	2,636	2,705	0.3%	84	161	7	252	\$19.18	degree award	None	Short-term on-the-job training
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	1,142	-		137			245		credential	None	Short-term on-the-job training
25-2021	Elementary School Teachers, Except Special Education	3,462	3,330	-0.4%	112	126	-13	225	\$59,100/yr	Bachelor's degree	None	None
35-9021	Dishwashers	1,437	1,443	0.0%	106	115	1	222	\$11.95	No formal educational credential	None	Short-term on-the-job training
53-3041	Taxi Drivers and Chauffeurs	1,886	2,105	1.1%	118	81	22	221	\$12.29	No formal educational credential	None	Short-term on-the-job training
39-5012	Hairdressers, Hairstylists, and Cosmetologists	1,799	1,848	0.3%	122	91	5	218		degree award	None	None
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	1,151	1,361	1.7%	46	143	21	210	1 51357	No formal educational credential	None	Short-term on-the-job training
	Compliance Officers	2,248						208		Bachelor's degree	None	Moderate-term on-the- job training
13-1161	Market Research Analysts and Marketing Specialists	1,694	2,017	1.8%	49	127	32	208	\$27.64	Bachelor's degree	None	None
39-9031	Fitness Trainers and Aerobics Instructors	1,155	1,232	0.6%	78	119	8	205	\$19.85	equivalent	None	Short-term on-the-job training
43-1011	First-Line Supervisors of Office and Administrative Support Workers	2,035	2,040	0.0%	79	118	0	197	\$27.06	equivalent	Less than 5 years	None
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	1,892	1,989	0.5%	62	122	10	194	\$30.57	equivalent	5 years or more	None
	Office Clerks, General	1,755	-					189	-	equivalent	None	Short-term on-the-job training
21-1021	Child, Family, and School Social Workers	1,609	1,777	1.0%	61	108	17	186	\$23.90	Ū	None	None
	Insurance Sales Agents	1,951		0.0%				184		equivalent	None	Moderate-term on-the- job training
11-9199	Managers, All Other	2,665	2,660	0.0%	72	112	0	184	\$48.94	Bachelor's degree	Less than 5 years	None

		Emplo	oyment			Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	1,072	1,092	0.2%	96	86	2	184	I S12.16	No formal educational credential	None	Short-term on-the-job training
53-3022	Bus Drivers, School or Special Client	1,392	1,436	0.3%	111	58	4	173	\$17.94	equivalent	None	Short-term on-the-job training
51-1011	First-Line Supervisors of Production and Operating Workers	1,852	1,808	-0.2%	58	117	-4	171	\$29.43	High school diploma or equivalent	Less than 5 years	None
43-6011	Executive Secretaries and Executive Administrative Assistants	2,182	1,748	-2.2%	106	103	-43	166	\$25.72	equivalent	Less than 5 years	None
43-5071	Shipping, Receiving, and Traffic Clerks	1,742	1,698	-0.3%	67	102	-4	165	\$16.27	High school diploma or equivalent	None	Short-term on-the-job training
35-2012	Cooks, Institution and Cafeteria	1,128	1,176	0.4%	68	92	5	165	\$14.74	No formal educational credential	None	Short-term on-the-job training
51-9111	Packaging and Filling Machine Operators and Tenders	1,410	1,429	0.1%	67	94	2	163	\$15.42	High school diploma or equivalent	None	Moderate-term on-the- job training
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	2,440	2,360	-0.3%	74	90	-8	156	\$63,890/yr	Bachelor's degree	None	None
41-1012	First-Line Supervisors of Non-Retail Sales Workers	1,821	1,779	-0.2%	60	100	-4	156	\$35.75	equivalent	Less than 5 years	None
47-4051	Highway Maintenance Workers	1,548	1,554	0.0%	66	89	1	156	\$20.25	equivalent	None	Moderate-term on-the- job training
43-4081	Hotel, Motel, and Resort Desk Clerks	940	1,004	0.7%	54	96	6	156		equivalent	None	Short-term on-the-job training
47-2141	Painters, Construction and Maintenance	1,922	1,868	-0.3%	65	94	-5	154	\$18.47	credential	None	Moderate-term on-the- job training
33-9032	Security Guards	1,124	1,151	0.2%	68	80	3	151	I n/ai	High school diploma or equivalent	None	Short-term on-the-job training
47-2111	Electricians	1,353	1,371	0.1%	47	101	2	150	\$24.45	High school diploma or equivalent	None	Apprenticeship
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	787	936	1.7%	32	98	15	145	I \$15.56	No formal educational credential	None	Short-term on-the-job training
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	615	636	0.3%	72	68	2	142	I S11./4	No formal educational credential	None	Short-term on-the-job training
41-3099	Sales Representatives, Services, All Other	1,104	1,150	0.4%	36	97	5	138	\$25.00	High school diploma or equivalent	None	Moderate-term on-the- job training
47-2073	Operating Engineers and Other Construction Equipment Operators	1,194	1,238	0.4%	46	85	4	135	I S20.20	High school diploma or equivalent	None	Moderate-term on-the- job training
21-1023	Mental Health and Substance Abuse Social Workers	1,086	1,229	1.2%	42	74	14	130	\$18.44	Master's degree	None	Internship/residency
25-3021	Self-Enrichment Education Teachers	1,067	1,148	0.7%	68	52	8	128	\$20.59	High school diploma or equivalent	Less than 5 years	None
43-6013	Medical Secretaries	994	1,126	1.3%	57	56	13	126	\$18.38	equivalent	None	Moderate-term on-the- job training
39-2021	Nonfarm Animal Caretakers	722	828	1.4%	53	62	11	126	\$11.91	High school diploma or equivalent	None	Short-term on-the-job training
21-2011	Clergy	1,145	1,151	0.1%	53	70	1	124	\$24.67	Bachelor's degree	None	Moderate-term on-the- job training
31-9011	Massage Therapists	1,085	1,160	0.7%	73	40	8	121	\$17.58	Postsecondary non- degree award	None	None
41-2021	Counter and Rental Clerks	931	946	0.2%	49	69	2	120	\$15.63	credential	None	Short-term on-the-job training
53-7064	Packers and Packagers, Hand	764	795	0.4%	53	64	3	120		credential	None	Short-term on-the-job training
43-3021	Billing and Posting Clerks	1,087	1,176	0.8%	48	62	9	119	I \$18.61	High school diploma or equivalent	None	Moderate-term on-the- job training

		Emplo	oyment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
	Human Resources Specialists	1,113	1,170	0.5%	33	75	6	114		Bachelor's degree	None	None
	Preschool Teachers, Except Special Education	1,144	1,159	0.1%	50	62	2	114		Associate's degree	None	None
27-3031	Public Relations Specialists	1,103	1,150	0.4%	32	76	5	113	-	Bachelor's degree High school diploma or	None	None
51-2092	Team Assemblers	1,372	1,087	-2.3%	52	89	-28	113	\$14.36	equivalent	None	Moderate-term on-the- job training
51-3011	Bakers	756	788	0.4%	50	58	3	111	I S14.49	credential	None	Long-term on-the-job training
43-3071	Tellers	1,121	985	-1.3%	54	68	-14	108	\$14.51	High school diploma or equivalent	None	Short-term on-the-job training
21-1014	Mental Health Counselors	849	978	1.4%	34	60	13	107		Master's degree	None	Internship/residency
15-1132	Software Developers, Applications	1,103	1,384	2.3%	17	61	28	106	\$45.68	Bachelor's degree	None	None
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,095	1,117	0.2%	30	74	2	106	\$23.72	Postsecondary non- degree award	None	Long-term on-the-job training
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	1,168	1,216	0.4%	39	61	5	105	530.79	High school diploma or equivalent	Less than 5 years	None
11-9141	Property, Real Estate, and Community Association Managers	1,253	1,332	0.6%	54	43	8	105	\$27.94	High school diploma or equivalent	Less than 5 years	None
15-1151	Computer User Support Specialists	1,243	1,339	0.7%	26	66	10	102	I 523.43	Some college, no degree	None	None
29-2061	Licensed Practical and Licensed Vocational Nurses	1,375	1,419	0.3%	49	48	4	101	\$23.40	Postsecondary non- degree award	None	None
53-7081	Refuse and Recyclable Material Collectors	719	811	1.2%	35	56	9	100	\$16.27	No formal educational	None	Short-term on-the-job training
39-3091	Amusement and Recreation Attendants	408	443	0.8%	45	51	4	100	\$11.75	No formal educational credential	None	Short-term on-the-job training
47-2152	Plumbers, Pipefitters, and Steamfitters	885	935	0.6%	33	61	5	99	\$25.02	High school diploma or equivalent	None	Apprenticeship
39-1021	First-Line Supervisors of Personal Service Workers	962	1,021	0.6%	48	45	6	99	\$20.83	High school diploma or equivalent	Less than 5 years	None
51-9198	HelpersProduction Workers	532	646	2.0%	32	56	11	99	1 513.96	High school diploma or equivalent	None	Short-term on-the-job training
13-1111	Management Analysts	1,000	1,096	0.9%	34	54	10	98	\$36.79	Bachelor's degree	Less than 5 years	None
53-7051	Industrial Truck and Tractor Operators	860	887	0.3%	30	65	3	98	\$18.26	No formal educational credential	None	Short-term on-the-job training
11-9021	Construction Managers	1,328	1,391	0.5%	31	60	6	97	\$42.06	Bachelor's degree	None	Moderate-term on-the- job training
11-9051	Food Service Managers	886	894	0.1%	28	66	1	95	I 572 77	High school diploma or equivalent	Less than 5 years	None
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	364	392	0.7%	52	40	3	95	\$11.70	No formal educational credential	None	Short-term on-the-job training
13-1199	Business Operations Specialists, All Other	962	1,025	0.6%	31	57	6	94	\$30.78	Bachelor's degree	None	None
31-1011	Home Health Aides	572	763	2.9%	41	34	19	94	\$13.41	High school diploma or equivalent	None	Short-term on-the-job training
17-3026	Industrial Engineering Technicians	1,245	1,163	-0.7%	38	63	-8	93	\$30.42	Associate's degree	None	None
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	1,107	993	-1.1%	29	74	-11	92	n/a	equivalent	None	Moderate-term on-the- job training
43-4031	Court, Municipal, and License Clerks	756	956	2.4%	38	34	20	92	\$20.51	High school diploma or equivalent	None	Moderate-term on-the- job training
21-1012	Educational, Guidance, School, and Vocational Counselors	805	840	0.4%	30	54	4	88		Master's degree	None	None
53-3031	Driver/Sales Workers	833	837	0.0%	35	52	0	87	1 51537	High school diploma or equivalent	None	Short-term on-the-job training

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2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
53-7061	Cleaners of Vehicles and Equipment	591	623	0.5%	31	53		87	\$13.72	credential	None	Short-term on-the-job training
15-1142	Network and Computer Systems Administrators	1,363	1,385	0.2%	19	65	2	86	\$34.32	· · · · ·	None	None
33-3051	Police and Sheriff's Patrol Officers	1,321	1,344	0.2%	32	52	2	86		equivalent	None	Moderate-term on-the- job training
31-9092	Medical Assistants	659	771	1.6%	31	44	11	86	\$17.45	degree award	None	None
43-4151	Order Clerks	814	776	-0.5%	37	52	-4	85	I S17.06	equivalent	None	Short-term on-the-job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	883	753	-1.6%	34	63	-13	84	\$18.50	equivalent	None	Moderate-term on-the- job training
23-1011		1,947	1,970		39			83		professional degree	None	None
11-9111	Medical and Health Services Managers	844	974	1.4%	25	44	13	82		· · · · ·	Less than 5 years	None
33-9091	Crossing Guards	433	458	0.6%	62	18	2	82	Ş14.84	credential	None	Short-term on-the-job training
35-2011	Cooks, Fast Food	665	607	-0.9%	37	51	-6	82	I <u>S114/</u>	credential	None	Short-term on-the-job training
	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	814	858	0.5%	27	50	4	81		equivalent	Less than 5 years	None
	Graphic Designers	876 705	880 764	0.0% 0.8%	31 24			80 79		<b>v</b>	None None	None
	Paralegals and Legal Assistants Rehabilitation Counselors	643	784	1.3%	24			79		-	None	None None
	Bus and Truck Mechanics and Diesel Engine Specialists	775			25			73	\$21.87	High school diploma or	None	Long-term on-the-job training
51-6011	Laundry and Dry-Cleaning Workers	587	572	-0.3%	39	39	-2	76	\$11.46	No formal educational	None	Short-term on-the-job training
27-3043	Writers and Authors	907	887	-0.2%	38	38	-2	74	\$30.83	Bachelor's degree	None	Long-term on-the-job training
11-9151	Social and Community Service Managers	723	814	1.2%	25	40	9	74	\$29.39		Less than 5 years	None
	Lodging Managers	583	690		22	41	11	74		equivalent	Less than 5 years	None
	Financial Managers	803	910		20			73			5 years or more	None
	Software Developers, Systems Software	927	1,033		13			72		Ų	None	None
13-1151	Training and Development Specialists	693	737	0.6%	22	46	4	72		-	Less than 5 years	None
49-3021	Automotive Body and Related Repairers	730	755	0.3%	26	44	2	72	\$19.82	equivalent	None	Long-term on-the-job training
	Parts Salespersons	589	586		26			72	\$16.93	credential	None	Moderate-term on-the- job training
15-1134	Web Developers	861	936	0.8%	17	46	8	71	\$26.43	7	None	None
25-4031	Library Technicians	544	545	0.0%	43	28	0	71		degree award	None	None
39-9041	Residential Advisors	408	421	0.3%	28	41	1	70	\$16.18	equivalent	None	Short-term on-the-job training
	Cooks, Short Order	538	508		31			70	\$13.39	credential	None	Short-term on-the-job training
21-1099	Community and Social Service Specialists, All Other	504	555	1.0%	24	39	5	68	\$17.64	Bachelor's degree	None	None
	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	625	652		21			67			None	Moderate-term on-the- job training
	Librarians Civil Engineers	737 822	723 869		40 18			66 65			None	None
17-2031		ō22	809	0.0%	18	42	5	20	ې54.04	Bachelor's degree	None	None

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	Solar Photovoltaic Installers	406	556		19	31		65		equivalent	None	Moderate-term on-the- job training
25-2022	Middle School Teachers, Except Special and Career/Technical Education	987	951	-0.4%	32	36	-4	64	\$57,230/yr	Ŭ	None	None
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	610	626	0.3%	20	42	2	64	\$26.23	equivalent	Less than 5 years	None
27-4021	Photographers	870	842	-0.3%	37	30	-3	64	\$20.78	equivalent	None	Long-term on-the-job training
	Food Batchmakers	460	461	0.0%	25	38		63		equivalent	None	Moderate-term on-the- job training
11-9032	Education Administrators, Elementary and Secondary School	871	848	-0.3%	24	39	-2	61	\$90,800/yr	Master's degree	5 years or more	None
53-3021	Bus Drivers, Transit and Intercity	447	499	1.1%	37	19	5	61	\$19.83	equivalent	None	Moderate-term on-the- job training
43-9041	Insurance Claims and Policy Processing Clerks	594	606	0.2%	26	34	1	61	\$19.30	High school diploma or equivalent	None	Moderate-term on-the- job training
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	770	643	-1.8%	23	50	-13	60	S23./1	Postsecondary non- degree award	None	Moderate-term on-the- job training
35-1011	Chefs and Head Cooks	463	481	0.4%	15	43	2	60	\$20.56	High school diploma or equivalent	5 years or more	None
29-1123	Physical Therapists	903	1,089	1.9%	19	21	19	59		professional degree	None	None
49-9041	Industrial Machinery Mechanics	622	658	0.6%	22	33	4	59	1 525.021	High school diploma or equivalent	None	Long-term on-the-job training
	Dental Assistants	515	532	0.3%	27	30	2	59		degree award	None	None
	Instructional Coordinators	615			30	26	2	58			5 years or more	None
21-1022	Healthcare Social Workers	450	528	1.6%	18	31	8	57	\$27.03	Master's degree	None	Internship/residency
13-2052	Personal Financial Advisors	671	718	0.7%	17	34	5	56	\$32.86	6	None	Long-term on-the-job training
41-9022	Real Estate Sales Agents	637	630	-0.1%	32	25	-1	56	\$27.11	equivalent	None	Moderate-term on-the- job training
51-4041	Machinists	622	580	-0.7%	21	39	-4	56	\$20.04	equivalent	None	Long-term on-the-job training
35-3041	Food Servers, Nonrestaurant	366	381	0.4%	28	26	2	56	\$13.08	credential	None	Short-term on-the-job training
19-3031	Clinical, Counseling, and School Psychologists	783	825	0.5%	20	31	4	55	\$29.13	Doctoral or professional degree	None	Internship/residency
13-1022	Wholesale and Retail Buyers, Except Farm Products	547	508	-0.7%	21	38	-4	55	\$25.26	5	None	Moderate-term on-the- job training
21-1094	Community Health Workers	398	445	1.1%	19	31	5	55	\$14.78	equivalent	None	Short-term on-the-job training
51-2099	Assemblers and Fabricators, All Other	566	500	-1.2%	23	39	-7	55	\$14.36	High school diploma or equivalent	None	Moderate-term on-the- job training
	Loan Officers	615		0.6%	15	35		54		2	None	Moderate-term on-the- job training
21-1011	Substance Abuse and Behavioral Disorder Counselors	427	493	1.4%	17	30	7	54	\$19.09	Bachelor's degree	None	None
	Securities, Commodities, and Financial Services Sales Agents	542		0.3%	14	36		52		5	None	Moderate-term on-the- job training
13-1121	Meeting, Convention, and Event Planners	389	432	1.1%	16	31	4	51	\$21.76	Ģ	None	None Object to see the interview
	Protective Service Workers, All Other	197			28	21		50		equivalent	None	Short-term on-the-job training
13-1131	Fundraisers	466	497	0.6%	15	32	3	50	\$23.77	Bachelor's degree	None	None

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47-2181	Roofers	498	508	0.2%	14	34	1	49	\$16.60	No formal educational credential	None	Moderate-term on-the- job training
45-2041	Graders and Sorters, Agricultural Products	366		0.0%	15		0	49	+====	credential	None	Short-term on-the-job training
19-2041	Environmental Scientists and Specialists, Including Health	476	509	0.7%	11	34	3	48	\$30.32	Bachelor's degree	None	None
	Pharmacy Technicians	532	581	0.9%	18		5	48	+	equivalent	None	Moderate-term on-the- job training
	Special Education Teachers, Kindergarten and Elementary School	739		-0.4%	24			47		Bachelor's degree	None	None
	Sales Managers	528			12			47			Less than 5 years	None
29-2021	Dental Hygienists	752	777	0.3%	28	17	2	47	\$34.15	Associate's degree	None	None
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	437	453	0.4%	14	31	2	47	\$26.23	equivalent	Less than 5 years	None
43-5061	Production, Planning, and Expediting Clerks	451	458	0.2%	16	30	1	47	\$22.72	equivalent	None	Moderate-term on-the- job training
	Production Workers, All Other	383		0.5%	15			46	1 -	equivalent	None	Moderate-term on-the- job training
	Teachers and Instructors, All Other, Except Substitute Teachers	415			25			45		0	None	None
	Producers and Directors Nurse Practitioners	457 547	483 680	0.6%	12 12			44		Bachelor's degree Master's degree	Less than 5 years None	None None
	Postal Service Mail Carriers	737			28		-5	43		High school diploma or	None	Short-term on-the-job training
27-3041	Editors	492	461	-0.6%	16	30	-3	43	\$22.28	Bachelor's degree	Less than 5 years	None
	First-Line Supervisors of Farming, Fishing, and Forestry Workers	304		0.7%	10	31		43		High school diploma or	Less than 5 years	None
43-4111	Interviewers, Except Eligibility and Loan	340	365	0.7%	19	22	2	43	519.44		None	Short-term on-the-job training
43-5021	Couriers and Messengers	442	467	0.6%	21	20	2	43	\$15.72	High school diploma or equivalent	None	Short-term on-the-job training
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	557	520	-0.7%	16	30	-4	42		Bachelor's degree	None	Moderate-term on-the- job training
43-4121	Library Assistants, Clerical	286	295	0.3%	23	18	1	42	\$12.94	equivalent	None	Short-term on-the-job training
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	491	414	-1.7%	17	32	-8	41	\$14.63	equivalent	None	Moderate-term on-the- job training
39-7011	Tour Guides and Escorts	213	236	1.0%	20	19	2	41	\$12.53	equivalent	None	Moderate-term on-the- job training
	English Language and Literature Teachers, Postsecondary	553		-0.2%	20			40	,	Doctoral or professional degree	None	None
11-2021	Marketing Managers	418	455	0.9%	10	26	4	40	\$52.49	Bachelor's degree	5 years or more	None
13-2082	Tax Preparers	370	377	0.2%	20	18	1	39	\$23.82	equivalent	None	Moderate-term on-the- job training
47-2211	Sheet Metal Workers	381	385	0.1%	13	26	0	39	\$20.64	equivalent	None	Apprenticeship
51-4121	Welders, Cutters, Solderers, and Brazers	393	384	-0.2%	10	30	-1	39	\$19.63	equivalent	None	Moderate-term on-the- job training
	Bill and Account Collectors	405		-0.5%	15			39		equivalent	None	Moderate-term on-the- job training
29-2056	Veterinary Technologists and Technicians	408	464	1.3%	14	19	6	39	\$16.53	Associate's degree	None	None
	Data Entry Keyers	486		-2.6%	22			39		equivalent	None	Short-term on-the-job training
	Computer Systems Analysts	509			10			38		Bachelor's degree	None	None
11-3011	Administrative Services Managers	425	456	0.7%	13	22	3	38	\$36.20	Bachelor's degree	Less than 5 years	None

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51-9071	Jewelers and Precious Stone and Metal Workers	428	388	-1.0%	24	18	-4	38	\$17.57	equivalent	None	Long-term on-the-job training
51-7011	Cabinetmakers and Bench Carpenters	440	388	-1.2%	19	23	-5	37	\$17.99	High school diploma or equivalent	None	Moderate-term on-the- job training
29-1069	Physicians and Surgeons, All Other	1,202	1,239	0.3%	18	14	4	36		Doctoral or professional degree	None	Internship/residency
	Electrical Engineers	502	535		12			36		Bachelor's degree	None	None
17-3022	Civil Engineering Technicians	389	413	0.6%	13	21	2	36	\$24.82	Associate's degree	None	None
29-2071	Medical Records and Health Information Technicians	496	546	1.0%	15	16	5	36	\$18.76	Postsecondary non- degree award	None	None
17-2112	Industrial Engineers	542	549	0.1%	12	22	1	35	\$36.66	Bachelor's degree	None	None
13-1051	Cost Estimators	354	363	0.3%	11	23	1	35		Bachelor's degree	None	Moderate-term on-the- job training
43-9199	Office and Administrative Support Workers, All Other	317	323	0.2%	14	20	1	35	520.88	High school diploma or equivalent	None	Short-term on-the-job training
41-3011	Advertising Sales Agents	316	285	-1.0%	11	26	-3	34	\$22.26	High school diploma or equivalent	None	Moderate-term on-the- job training
25-2054	Special Education Teachers, Secondary School	471	471	0.0%	16	17	0	33	\$61,780/yr	Bachelor's degree	None	None
25-2012	Kindergarten Teachers, Except Special Education	361	349		15					Bachelor's degree	None	None
17-2141	Mechanical Engineers	493	508	0.3%	10	21	2	33	\$41.75	0	None	None
49-9051	Electrical Power-Line Installers and Repairers	410	423	0.3%	10	22	1	33	\$40.55	High school diploma or equivalent	None	Long-term on-the-job training
51-5112	Printing Press Operators	332	322	-0.3%	13	21	-1	33	\$18.93	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	271	290	0.7%	10	21	2	33	31/.0/	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	312	301	-0.4%	11	23	-1	33	\$15.68	High school diploma or equivalent	None	Moderate-term on-the- job training
29-2041	Emergency Medical Technicians and Paramedics	489	520	0.6%	9	21	3	33	\$15.67	Postsecondary non- degree award	None	None
11-1011	Chief Executives	533	496	-0.7%	15	21	-4	32	\$53.61	Bachelor's degree	5 years or more	None
39-5094	Skincare Specialists	272	280	0.3%	17	14	1	32	\$26.68	Postsecondary non- degree award	None	None
51-9196	Paper Goods Machine Setters, Operators, and Tenders	329	314	-0.5%	12	21	-2	31	\$18.39	High school diploma or	None	Moderate-term on-the- job training
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	294	300	0.2%	12	18	1	31	\$17.35	High school diploma or	None	Moderate-term on-the- job training
27-1011	Art Directors	399	386	-0.3%	19	12	-1	30			5 years or more	None
15-1152	Computer Network Support Specialists	355	383	0.8%	8	19	3	30		Associate's degree	None	None
43-3051	Payroll and Timekeeping Clerks	337	322	-0.5%	14	18	-2	30	\$20.98	High school diploma or equivalent	None	Moderate-term on-the- job training
47-2051	Cement Masons and Concrete Finishers	269	278	0.3%	10	19	1	30	\$19.47	No formal educational	None	Moderate-term on-the- job training
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	236	245	0.4%	11	18	1	30		No formal educational	None	Short-term on-the-job training
11-9033	Education Administrators, Postsecondary	399	394	-0.1%	11	18	0	29	n/a	Master's degree	Less than 5 years	None
	Architects, Except Landscape and Naval	432	422	-0.2%	11	19	-1	29			None	Internship/residency
51-8031	Water and Wastewater Treatment Plant and System Operators	354	359	0.1%	10	19	0	29	\$23.08	High school diploma or equivalent	None	Long-term on-the-job training
43-5051	Postal Service Clerks	429	401	-0.7%	21	11	-3	29	\$21,88	High school diploma or	None	Short-term on-the-job training

		Emplo	oyment			Annual Job	Opening	S	Median		Mark	Typical on-the-job
2010 SOC Code	Job Title	itle 2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
43-5032	Dispatchers, Except Police, Fire, and Ambulance	364	345	-0.5%	12	19	-2	2 29	\$19.38	High school diploma or equivalent	None	Moderate-term on-the- job training
49-9099	Installation, Maintenance, and Repair Workers, All Other	305	309	0.1%	11	18	0	29	\$17.30	High school diploma or equivalent	None	Moderate-term on-the- job training
11-3021	Computer and Information Systems Managers	351	372	0.6%	6	20	2	2 28	\$53.91	Bachelor's degree	5 years or more	None
29-1071	Physician Assistants	320	410	2.5%	6	13	9	28	\$50.35	Master's degree	None	None
21-1091	Health Educators	214	229	0.7%	10	16	2	2 28	\$26.61	Bachelor's degree	None	None
11-9031	Education Administrators, Preschool and Childcare Center/Program	371	377	0.2%	10	17	1	28	\$23.13	Bachelor's degree	Less than 5 years	None
31-9097	Phlebotomists	235	266	1.2%	11	14	3	8 28	\$16.47	Postsecondary non- degree award	None	None
47-3012	HelpersCarpenters	195	207	0.6%	8	19	1	28	\$15.89	No formal educational credential	None	Short-term on-the-job training
29-2034	Radiologic Technologists	408	454	1.1%	11	11	5	5 27	\$29.40	Associate's degree	None	None
45-4022	Logging Equipment Operators	280	231	-1.9%	9	23	-5	5 27	\$18.59	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	214	221	0.3%	8	18	1	27	\$15.62	High school diploma or equivalent	None	Moderate-term on-the- job training
25-1121	Art, Drama, and Music Teachers, Postsecondary	351	352	0.0%	13	13	0	26	i n/a	Master's degree	None	None
43-6012	Legal Secretaries	358	278	-2.5%	17	17	-8	3 26	\$22.58	High school diploma or equivalent	None	Moderate-term on-the- job training
47-2081	Drywall and Ceiling Tile Installers	326	306	-0.6%	10	18	-2	2 26	\$21.71	No formal educational credential	None	Moderate-term on-the- job training
27-3091	Interpreters and Translators	276	288	0.4%	13	12	1	26	\$18.32	Bachelor's degree	None	None
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	286	262	-0.9%	10	18	-2	2 26	\$17.93	Postsecondary non- degree award	None	Short-term on-the-job training
51-3021	Butchers and Meat Cutters	205	214	0.4%	9	16	1	26	\$16.48	No formal educational credential	None	Long-term on-the-job training
27-3011	Radio and Television Announcers	328	295	-1.1%	13	16	-3	3 26	\$14.79	<u> </u>	None	None
51-6031	Sewing Machine Operators	276	261	-0.6%	15	13	-2	2 26	\$12.52	No formal educational credential	None	Short-term on-the-job training
51-9081	Dental Laboratory Technicians	175	213	2.0%	8	13	4	25	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
11-3051	Industrial Production Managers	413	397	-0.4%	9	18	-2	2 25	\$52.57		5 years or more	None
43-5031	Police, Fire, and Ambulance Dispatchers	287	286	0.0%	10	15	0	) 25	\$21.76	High school diploma or equivalent	None	Moderate-term on-the- job training
43-4131	Loan Interviewers and Clerks	236	254	0.7%	9	14	2	2 25	\$19.00	equivalent	None	Short-term on-the-job training
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	259	248	-0.4%	7	19	-1	25	\$17.81	High school diploma or equivalent	None	Moderate-term on-the- job training

# **Occupational Projections 2016-2026**

# **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

1 - Occupational Employment and Wages, <u>www.vtlmi.info/occupation.cfm#oes.</u> Median wage is an hourly rate except for occupations normally paid an annual rate, as noted. + Wage is equal to or greater than \$100.00 per hour or \$208,000 per year. Source: Vermont Department of Labor, Economic and Labor Market Information, Employment Projections and Occupational Employment and Wages Programs, in cooperation with the U.S. Bureau of Labor Statistics release

Source: Vermont Department of Labor, Economic and Labor Market Information,					-						uly 2018, Wage: April 2019
	Emplo	oyment			Annual Job	Openings	5	Median		Work	Typical on-the-job
2010 SOC Job Title Code	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	experience in a related occupation	training needed to attain competency in the occupation
29-2035 Magnetic Resonance Imaging Technologists	39	43		1	1	0	2	\$38.53	Associate's degree	Less than 5 years	None
39-4031 Morticians, Undertakers, and Funeral Directors	98	91	-0.7%	5	7	-1	11	\$33.06	Associate's degree	None	Long-term on-the-job training
19-4031 Chemical Technicians	72	73	0.1%	2	4	0	6	\$24.68	Associate's degree	None	Moderate-term on-the- job training
49-9062 Medical Equipment Repairers	74	70		3	3	0	6	-	Associate's degree	None	Moderate-term on-the- job training
29-1124 Radiation Therapists	48	53		1	1	0	2		Associate's degree	None	None
17-3023 Electrical and Electronics Engineering Technicians	319	302		10	16	-2	24	-	Associate's degree	None	None
29-2032 Diagnostic Medical Sonographers	77	96		2	2	2	6		Associate's degree	None	None
17-3012 Electrical and Electronics Drafters	44	47		1	2	0	3		Associate's degree	None	None
29-2021 Dental Hygienists	752	777		28	17	2	47	\$34.15	Associate's degree	None	None
29-1126 Respiratory Therapists	215	259	1.9%	6	5	4	15	\$30.90	Associate's degree	None	None
17-3026 Industrial Engineering Technicians	1,245	1,163	-0.7%	38	63	-8	93	\$30.42	Associate's degree	None	None
29-2034 Radiologic Technologists	408	454	1.1%	11	11	5	27	\$29.40	Associate's degree	None	None
31-2011 Occupational Therapy Assistants	81	94	1.5%	4	6	1	11	\$28.26	Associate's degree	None	None
17-3029 Engineering Technicians, Except Drafters, All Other	35	34	-0.3%	1	2	0	3	\$27.13	Associate's degree	None	None
29-2012 Medical and Clinical Laboratory Technicians	249	276	1.0%	8	8	3	19	\$26.68	Associate's degree	None	None
31-2021 Physical Therapist Assistants	158	191	1.9%	8	13	3	24	\$26.61	Associate's degree	None	None
15-1134 Web Developers	861	936	0.8%	17	46	8	71	\$26.43	Associate's degree	None	None
23-2099 Legal Support Workers, All Other	98	107	0.9%	4	5	1	10	\$25.99	Associate's degree	None	None
17-3019 Drafters, All Other	45	43	-0.5%	1	2	0	3	\$25.40	Associate's degree	None	None
17-3022 Civil Engineering Technicians	389	413	0.6%	13	21	2	36	\$24.82	Associate's degree	None	None
23-2011 Paralegals and Legal Assistants	705	764	0.8%	24	49	6	79	\$23.85	Associate's degree	None	None
17-3025 Environmental Engineering Technicians	91	102	1.1%	3	5	1	9	\$23.80	Associate's degree	None	None
17-3027 Mechanical Engineering Technicians	41	40	-0.2%	1	2	0	3	\$23.58	Associate's degree	None	None
17-3013 Mechanical Drafters	91	86	-0.6%	3	5	0	8	\$23.54	Associate's degree	None	None
15-1152 Computer Network Support Specialists	355	383	0.8%	8	19	3	30	\$22.99	Associate's degree	None	None
29-2031 Cardiovascular Technologists and Technicians	48	54	1.2%	1	1	1	3	\$22.38	Associate's degree	None	None
19-4099 Life, Physical, and Social Science Technicians, All Other	64	69	0.8%	3	5	0	8	\$21.67	Associate's degree	None	None
17-3011 Architectural and Civil Drafters	201	199	-0.1%	6	11	0	17	\$21.55	Associate's degree	None	None
43-4161 Human Resources Assistants, Except Payroll and Timekeeping	168	161	-0.4%	7	11	-1	17	\$18.39	Associate's degree	None	None
19-4091 Environmental Science and Protection Technicians, Including He	alth 85	98	1.4%	4	7	1	12	\$17.47	Associate's degree	None	None
29-2056 Veterinary Technologists and Technicians	408	464	1.3%	14	19	6	39	\$16.53	Associate's degree	None	None
25-2011 Preschool Teachers, Except Special Education	1,144	1,159	0.1%	50	62	2	114	\$15.64	Associate's degree	None	None
29-2051 Dietetic Technicians	38	42	1.0%	1	2	0	3	\$13.90	Associate's degree	None	None
43-9031 Desktop Publishers	62	54	-1.4%	2	4	-1	5	\$20.23	Associate's degree	None	Short-term on-the-job training
27-4012 Broadcast Technicians	73	72	-0.1%	2	4	0	6	\$15.45	Associate's degree	None	Short-term on-the-job training
11-9041 Architectural and Engineering Managers	266	268	0.1%	5	13	0	18	\$58.62	Bachelor's degree	5 years or more	None
11-3021 Computer and Information Systems Managers	351	372	0.6%	6	20	2	28	\$53.91	Bachelor's degree	5 years or more	None
11-1011 Chief Executives	533	496	-0.7%	15	21	-4	32		Bachelor's degree	5 years or more	None
11-3051 Industrial Production Managers	413	397	-0.4%	9	18		25		Bachelor's degree	5 years or more	None

		Emplo	Employment Annual Job Openings		1	Median			Typical on-the-job			
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
11-2021	Marketing Managers	418	455	0.9%	10	26	4	40	\$52.49	Bachelor's degree	5 years or more	None
11-3061	Purchasing Managers	155	159	0.3%	5	8	0	13	\$49.58	Bachelor's degree	5 years or more	None
11-3031	Financial Managers	803	910	1.3%	20	42	11	73	\$48.90	Bachelor's degree	5 years or more	None
11-3121	Human Resources Managers	226	234	0.3%	6	12	1	19	\$44.69	Bachelor's degree	5 years or more	None
11-9121	Natural Sciences Managers	75	81	0.8%	2	4	1	7	7 \$44.55	Bachelor's degree	5 years or more	None
11-2031	Public Relations and Fundraising Managers	204	210	0.3%	5	12	1	18	\$43.00	Bachelor's degree	5 years or more	None
	Art Directors	399	386	-0.3%	19	12	-1	30	\$40.82	Bachelor's degree	5 years or more	None
11-3131	Training and Development Managers	47	49	0.4%	1	3	0	4	\$38.77	Bachelor's degree	5 years or more	None
	Computer Network Architects	154	156	0.1%	2	8	0	10	\$38.00	Bachelor's degree	5 years or more	None
11-1021	General and Operations Managers	2,871	3,084	0.7%	62	178	21	261	\$37.35	Bachelor's degree	5 years or more	None
	Emergency Management Directors	30	32	0.6%	1	1	0	2	\$35.62	Bachelor's degree	5 years or more	None
	Career/Technical Education Teachers, Secondary School	236	226	-0.4%	7	9	-1	15		Bachelor's degree	Less than 5 years	None
	Agents and Business Managers of Artists, Performers, and Athletes	46	50		2	4	0	6		Bachelor's degree	Less than 5 years	None
	Sales Managers	528	545		12	33	2	47		Bachelor's degree	Less than 5 years	None
	Managers, All Other	2,665	2,660		72		0	184		Bachelor's degree	Less than 5 years	None
	Advertising and Promotions Managers	49	48		1	4	0			Bachelor's degree	Less than 5 years	None
	Medical and Health Services Managers	844	974	1.4%	25	44	13	82		Bachelor's degree	Less than 5 years	None
	Information Security Analysts	82	87		23	4	0	CZ		Bachelor's degree	Less than 5 years	None
	Management Analysts	1,000	1,096		34	54	10	98		Bachelor's degree	Less than 5 years	None
	Administrative Services Managers	425	456		13			38		Bachelor's degree	Less than 5 years	None
	Education Administrators, All Other	115	119		3	5	0	50		Bachelor's degree	Less than 5 years	None
	Labor Relations Specialists	110	110	-1.5%	J	8	-2	10		Bachelor's degree	Less than 5 years	None
	Social and Community Service Managers	723	814	1.3%	25	-	9	74		Bachelor's degree	Less than 5 years	None
	Compensation, Benefits, and Job Analysis Specialists	190	198		25	10		16		Bachelor's degree	Less than 5 years	None
	Training and Development Specialists	693	737		22			72		Bachelor's degree	Less than 5 years	
	Music Directors and Composers	117	110			40	-1	/2		Bachelor's degree	Less than 5 years	None None
	Vocational Education Teachers, Postsecondary	117	99		0	4	-1			Bachelor's degree	Less than 5 years	None
	Producers and Directors	457	483		12	29	-1	44		Bachelor's degree	,	None
	Education Administrators, Preschool and Childcare Center/Program	457 371	483		12		3	28		Bachelor's degree	Less than 5 years	None
		492		-0.6%	10		1			Bachelor's degree	Less than 5 years	None
27-3041	Technical Writers	129	461 140		10	30	-3	43		Bachelor's degree	Less than 5 years Less than 5 years	Short-term on-the-job
					4	8	T	1.		•	Less than 5 years	training
	Architects, Except Landscape and Naval	432	422		11	19	-1	29		Bachelor's degree	None	Internship/residency
29-1031	Dietitians and Nutritionists	243	264	0.8%	8	7	2	17		Bachelor's degree	None	Internship/residency
17-1022	Surveyors	107	111	0.4%	3	4	0	7	\$25.10	Bachelor's degree	None	Internship/residency
17-1012	Landscape Architects	224	226	0.1%	6	10	0	16	\$\$24.58	Bachelor's degree	None	Internship/residency
13-2061	Financial Examiners	54	57	0.5%	2	2	0	2	\$36.50	Bachelor's degree	None	Long-term on-the-job training
13-2052	Personal Financial Advisors	671	718	0.7%	17	34	5	56	5 \$32.86	Bachelor's degree	None	Long-term on-the-job training
27-3043	Writers and Authors	907	887	-0.2%	38	38	-2	74	\$30.83	Bachelor's degree	None	Long-term on-the-job training
13-2021	Appraisers and Assessors of Real Estate	242	258	0.6%	9	7	2	18	3 \$24.52	Bachelor's degree	None	Long-term on-the-job training
27-1013	Fine Artists, Including Painters, Sculptors, and Illustrators	113	112	-0.1%	6	3	0	ç	\$20.52	Bachelor's degree	None	Long-term on-the-job training
13-2071	Credit Counselors	40	42	0.5%	1	2	0	3	3 n/a	Bachelor's degree	None	Moderate-term on-the- job training
41-9031	Sales Engineers	102	96	-0.6%	2	8	-1	ç	) n/a	Bachelor's degree	None	Moderate-term on-the- job training
11-9021	Construction Managers	1,328	1,391	0.5%	31	60	6	97	7 \$42.06	Bachelor's degree	None	Moderate-term on-the- job training

			yment			Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	625	652	0.4%	21	43	3	67	\$37.19	Bachelor's degree	None	Moderate-term on-the- job training
13-1041	Compliance Officers	2,248	2,475	1.0%	66	119	23	208	\$35.12	Bachelor's degree	None	Moderate-term on-the- job training
41-3031	Securities, Commodities, and Financial Services Sales Agents	542	561	0.3%	14	36	2	52	\$35.05	Bachelor's degree	None	Moderate-term on-the- job training
13-2099	Financial Specialists, All Other	133	146	0.9%	4	7	1	12	\$33.43	Bachelor's degree	None	Moderate-term on-the- job training
13-1051	Cost Estimators	354	363	0.3%	11	23	1	35	\$30.27	Bachelor's degree	None	Moderate-term on-the- job training
45-2011	Agricultural Inspectors	37	38	0.3%	2	3	0	5	\$28.58	Bachelor's degree	None	Moderate-term on-the- job training
13-2072	Loan Officers	615	652	0.6%	15	35	4	54	\$28.20	Bachelor's degree	None	Moderate-term on-the- job training
13-2053	Insurance Underwriters	186	160	-1.5%	4	9	-3	10	\$28.08	Bachelor's degree	None	Moderate-term on-the- job training
13-2081	Tax Examiners and Collectors, and Revenue Agents	108	114	0.5%	3	4	1	8	\$25.86	Bachelor's degree	None	Moderate-term on-the- job training
13-1021	Buyers and Purchasing Agents, Farm Products	117	110	-0.6%	5	8	-1	12	\$25.26	Bachelor's degree	None	Moderate-term on-the- job training
13-1022	Wholesale and Retail Buyers, Except Farm Products	547	508	-0.7%	21	38	-4	55	\$25.26	Bachelor's degree	None	Moderate-term on-the- job training
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	557	520	-0.7%	16	30	-4	42	\$25.26	Bachelor's degree	None	Moderate-term on-the- job training
21-2011	Clergy	1,145	1,151	0.1%	53	70	1	124	\$24.67	Bachelor's degree	None	Moderate-term on-the- job training
	Secondary School Teachers, Except Special and Career/Technical Education	2,440			74						None	None
	Special Education Teachers, Middle School	229	221	-0.4%	8	8				Bachelor's degree	None	None
	Special Education Teachers, Secondary School	471	471		16	17	0			Bachelor's degree	None	None
	Special Education Teachers, Preschool	94	94	0.0%	3	3	0			Bachelor's degree	None	None
	Special Education Teachers, Kindergarten and Elementary School	739	712	-0.4%	24					Bachelor's degree	None	None
	Elementary School Teachers, Except Special Education	3,462	3,330		112					Bachelor's degree	None	None
	Middle School Teachers, Except Special and Career/Technical Education	987	951	-0.4%	32					Bachelor's degree	None	None
	Kindergarten Teachers, Except Special Education	361	349		15			33	-	Bachelor's degree	None	None
	Athletic Trainers	88	99		2	3		6		Bachelor's degree	None	None
	Teachers and Instructors, All Other, Except Substitute Teachers	415	419		25					Bachelor's degree	None	None
	Coaches and Scouts	1,875	1,949		107					Bachelor's degree	None	None
	Software Developers, Systems Software	927	1,033		13	48	11	72		Bachelor's degree	None	None
	Electronics Engineers, Except Computer Electrical Engineers	68 502	71 535	0.4% 0.6%	12	21	0	36		Bachelor's degree Bachelor's degree	None None	None None
	Software Developers, Applications	1,103	1,384		12			1	-	Bachelor's degree	None	None
	Mechanical Engineers	493	508		10			33	-	Bachelor's degree	None	None
	Environmental Engineers	110	118		3	5	1	33	-	Bachelor's degree	None	None
	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	66	66		2	3	0	5	-	Bachelor's degree	None	None
	Food Scientists and Technologists	67	66		2	5	0	7		Bachelor's degree	None	None
	Operations Research Analysts	59	72		1	2	1	4		Bachelor's degree	None	None
	Fashion Designers	53	54		2	3	0			Bachelor's degree	None	None
	Engineers, All Other	71	70		2	3	0	5	-	Bachelor's degree	None	None
	Social Scientists and Related Workers, All Other	41	45		1	3	0	4		Bachelor's degree	None	None
	Computer Systems Analysts	509	546		10	24	4	38		Bachelor's degree	None	None
	Industrial Engineers	542	549	0.1%	12			35		Bachelor's degree	None	None
	Financial Analysts	177	189		4	12		17	-	Bachelor's degree	None	None
15-1131	Computer Programmers	484	430	-1.2%	8	20	-5	23	\$35.42	Bachelor's degree	None	None
15-1141	Database Administrators	236	251	0.6%	5	10	2	17	\$35.09	Bachelor's degree	None	None

		Emplo	yment		Annual Job Openings			Median			Typical on-the-job	
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
17-2051	Civil Engineers	822	869	0.6%	18	42	5	65	\$34.64	Bachelor's degree	None	None
15-1199	Computer Occupations, All Other	207	224	0.8%	4	10	2	16		Bachelor's degree	None	None
15-1142	Network and Computer Systems Administrators	1,363	1,385	0.2%	19	65	2	86	\$34.32	Bachelor's degree	None	None
13-2031	Budget Analysts	88	94	0.7%	2	4	1	7	\$33.90	Bachelor's degree	None	None
21-1029	Social Workers, All Other	106	118	1.1%	4	7	1	12	\$33.36	Bachelor's degree	None	None
19-1023	Zoologists and Wildlife Biologists	122	131	0.7%	3	8	1	12		Bachelor's degree	None	None
13-2011	Accountants and Auditors	3,713	3,923	0.6%	113	220	21	354	\$32.36	Bachelor's degree	None	None
13-1081	Logisticians	158	171	0.8%	4	12	1	17	\$31.96	Bachelor's degree	None	None
29-9011	Occupational Health and Safety Specialists	125	128	0.2%	3	4	0	7	\$31.94	Bachelor's degree	None	None
29-1141	Registered Nurses	5,980	6,757	1.2%	182	138	78	398	\$31.61	Bachelor's degree	None	None
19-1032	Foresters	84	84	0.0%	2	5	0	7	\$30.82	Bachelor's degree	None	None
19-2031	Chemists	173	189	0.9%	5	11	2	18	\$30.81	Bachelor's degree	None	None
13-1199	Business Operations Specialists, All Other	962	1,025	0.6%	31	57	6	94	\$30.78	Bachelor's degree	None	None
27-1021	Commercial and Industrial Designers	266	262	-0.2%	9	15	0	24	\$30.60	Bachelor's degree	None	None
19-2041	Environmental Scientists and Specialists, Including Health	476	509	0.7%	11	34	3	48	\$30.32	Bachelor's degree	None	None
13-2041	Credit Analysts	100	102	0.2%	2	6	0	8	\$30.03	Bachelor's degree	None	None
17-1021	Cartographers and Photogrammetrists	43	50	1.5%	1	2	1	4	\$29.27	Bachelor's degree	None	None
	Geoscientists, Except Hydrologists and Geographers	49	52	0.6%	1	4	0	5	\$29.24	Bachelor's degree	None	None
	Market Research Analysts and Marketing Specialists	1,694	2,017	1.8%	49	127	32	208		Bachelor's degree	None	None
	Microbiologists	40	42	0.5%	1	3	0	4		Bachelor's degree	None	None
	Human Resources Specialists	1,113	1,170		33	75	6	114	-	Bachelor's degree	None	None
	Adult Basic and Secondary Education and Literacy Teachers and Instructors	, 151	136	-1.0%	9	7	-2	14	-	Bachelor's degree	None	None
	Medical and Clinical Laboratory Technologists	180	200	1.1%	6	6	2	14	-	Bachelor's degree	None	None
-	Health Educators	214	229	0.7%	10	16	2	28		Bachelor's degree	None	None
	Education, Training, and Library Workers, All Other	90	92		4	4	0	8		Bachelor's degree	None	None
	Public Relations Specialists	1,103	1,150	0.4%	32	76	5	113		Bachelor's degree	None	None
	Conservation Scientists	114	122	0.7%	2	7	1	10		Bachelor's degree	None	None
	Child, Family, and School Social Workers	1,609	1,777	1.0%	61	108	17			Bachelor's degree	None	None
	Fundraisers	466	497	0.6%	15	32	3	50		Bachelor's degree	None	None
	Interior Designers	99	95	-0.4%	3	6	0	9		Bachelor's degree	None	None
-	Graphic Designers	876	880	0.4%	31	49	0	80		Bachelor's degree	None	None
	Meeting, Convention, and Event Planners	389	432	1.1%	16	31	0	51		Bachelor's degree	None	None
	Biological Technicians	114	125	0.9%	3		1	12		Bachelor's degree	None	None
	Film and Video Editors	35	38		1	2	0	3		Bachelor's degree	None	None
	Substance Abuse and Behavioral Disorder Counselors	427	493	1.4%	17	30	7	54		Bachelor's degree	None	None
	Museum Technicians and Conservators	38	43	1.4%	2	30	, ,	J4		Bachelor's degree	None	None
	Recreational Therapists	36	37	0.3%	<u></u>	2	0	4		Bachelor's degree	None	None
	Interpreters and Translators	276	288		13	12	1	26		Bachelor's degree	None	None
	Camera Operators, Television, Video, and Motion Picture	139	150		15	12	1	14	-	Bachelor's degree	None	None
	Community and Social Service Specialists, All Other	504	555	1.0%	24	39		68	-	Bachelor's degree	None	None
	Reporters and Correspondents	196	180		24	12	2	16	-	Bachelor's degree	None	None
	Radio and Television Announcers	328	295	-0.8%	13	12		26		Bachelor's degree	None	None
27-5011		520	295	-1.1%	15	10	-5	20	\$14.79	bachelor s degree	None	Short-term on-the-job
21-1092	Probation Officers and Correctional Treatment Specialists	216	228	0.5%	7	12	1	20	\$30.83	Bachelor's degree	None	training
23-1023	Judges, Magistrate Judges, and Magistrates	95	95	0.0%	2	2	0	4	n/a	Doctoral or professional degree	5 years or more	Short-term on-the-job training
23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	50	50	0.0%	1	1	0	2	\$30.81	Doctoral or professional degree	5 years or more	Short-term on-the-job training
25-1071	Health Specialties Teachers, Postsecondary	103	117	1.3%	4	4	1	9	n/a	Doctoral or professional degree	Less than 5 years	None
25-1081	Education Teachers, Postsecondary	177	175	-0.1%	6	7	0	13	n/a	Doctoral or	Less than 5 years	None

		Emplo	oyment			Annual Job	Opening	5	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
29-1061	Anesthesiologists	100	100		2	1	0	3	I \$100.00+	Doctoral or professional degree	None	Internship/residency
29-1067	Surgeons	353	353	0.0%	5	4	0	9	\$100.00+	Doctoral or professional degree	None	Internship/residency
29-1064	Obstetricians and Gynecologists	171	172	0.1%	2	2	0	4	\$99.24	Doctoral or professional degree	None	Internship/residency
29-1063	Internists, General	282	282	0.0%	4	3	0	7	\$98.55	Doctoral or professional degree	None	Internship/residency
29-1062	Family and General Practitioners	382	384	0.1%	6	4	0	10	59675	Doctoral or professional degree	None	Internship/residency
29-1066	Psychiatrists	234	234	0.0%	3	3	0	6	1 586.58	Doctoral or professional degree	None	Internship/residency
29-1065	Pediatricians, General	245	244	0.0%	4	3	0	7	1 5/4.83	Doctoral or professional degree	None	Internship/residency
29-1069	Physicians and Surgeons, All Other	1,202	1,239	0.3%	18	14	4	36	\$72.61	Doctoral or professional degree	None	Internship/residency
19-3031	Clinical, Counseling, and School Psychologists	783	825	0.5%	20	31	4	55		professional degree	None	Internship/residency
25-1011	Business Teachers, Postsecondary	184	195	0.6%	7	7	1	. 15	n/a	Doctoral or professional degree	None	None
25-1021	Computer Science Teachers, Postsecondary	77	75	-0.3%	3	3	0	6	l n/a	Doctoral or professional degree	None	None
25-1022	Mathematical Science Teachers, Postsecondary	197	193	-0.2%	7	7	0	14	l n/a	Doctoral or professional degree	None	None
25-1042	Biological Science Teachers, Postsecondary	237	245	0.3%	9	9	1	. 19	n/a	Doctoral or professional degree	None	None
25-1054	Physics Teachers, Postsecondary	46	46	0.0%	2	2	0	) 4	l n/a	Doctoral or professional degree	None	None
25-1063	Economics Teachers, Postsecondary	119	118	-0.1%	4	4	0	8	l n/a	Doctoral or professional degree	None	None
25-1064	Geography Teachers, Postsecondary	41	40	-0.2%	2	2	0	4	l n/a	Doctoral or professional degree	None	None
25-1067	Sociology Teachers, Postsecondary	94	92	-0.2%	3	4	0	) 7	l n/a	Doctoral or professional degree	None	None
25-1122	Communications Teachers, Postsecondary	105	103	-0.2%	4	4	0	8	l n/a	Doctoral or professional degree	None	None
25-1123	English Language and Literature Teachers, Postsecondary	553	544	-0.2%	20	21	-1	. 40	n/a	Doctoral or professional degree	None	None
25-1124	Foreign Language and Literature Teachers, Postsecondary	270	271	0.0%	10	10	0	20	n/a	Doctoral or professional degree	None	None
25-1125	History Teachers, Postsecondary	196	194	-0.1%	7	7	0	14	l n/a	Doctoral or professional degree	None	None
25-1126	Philosophy and Religion Teachers, Postsecondary	173	176	0.2%	6	7	0	13	l n/a	Doctoral or professional degree	None	None
25-1193	Recreation and Fitness Studies Teachers, Postsecondary	42	41	-0.2%	2	2	0	4	n/a	Doctoral or professional degree	None	None
25-1199	Postsecondary Teachers, All Other	302	296	-0.2%	11	11	-1	. 21	n/a	Doctoral or	None	None
29-1011	Chiropractors	166	167	0.1%	3	1	0	4	n/a	Doctoral or	None	None
29-1021	Dentists, General	285	300	0.5%	5	2	2	9	n/a	Doctoral or	None	None

		Emplo	yment			Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
29-1041	Optometrists	116	120	0.3%	2	2	0	4	\$68.21	Doctoral or professional degree	None	None
29-1051	Pharmacists	504	520	0.3%	12	10	2	24	\$67.30	Doctoral or professional degree	None	None
29-1131	Veterinarians	310	340	0.9%	6	5	3	14	\$46.52	Doctoral or professional degree	None	None
23-1011	Lawyers	1,947	1,970	0.1%	39	42	2	83	\$41.98	Doctoral or professional degree	None	None
29-1123	Physical Therapists	903	1,089	1.9%	19	21	19	59	\$36.01	Doctoral or professional degree	None	None
47-4011	Construction and Building Inspectors	203	224	1.0%	10	12	2	24	\$27.39	High school diploma or equivalent	5 years or more	Moderate-term on-the- job training
11-3071	Transportation, Storage, and Distribution Managers	130	141	0.8%	3	7	1	11	\$39.94	High school diploma or equivalent	5 years or more	None
11-9013	Farmers, Ranchers, and Other Agricultural Managers	5,835	6,123	0.5%	350	89	29	468	\$37.71	High school diploma or equivalent	5 years or more	None
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	1,892	1,989	0.5%	62	122	10	194	\$30.57	High school diploma or equivalent	5 years or more	None
35-1011	Chefs and Head Cooks	463	481	0.4%	15	43	2	60	\$20.56	High school diploma or equivalent	5 years or more	None
33-1012	First-Line Supervisors of Police and Detectives	182	186	0.2%	5	6	0	11	\$42.66	High school diploma or equivalent	Less than 5 years	Moderate-term on-the- job training
33-3021	Detectives and Criminal Investigators	232	251	0.8%	6	8	2	16	,	equivalent	Less than 5 years	Moderate-term on-the- job training
11-9131	Postmasters and Mail Superintendents	124	104	-1.7%	3	5	-2	6	\$32.66	equivalent	Less than 5 years	Moderate-term on-the- job training
53-7021	Crane and Tower Operators	93	92	-0.1%	3	6	0	9	\$24.35	High school diploma or equivalent	Less than 5 years	Moderate-term on-the- job training
53-7032	Excavating and Loading Machine and Dragline Operators	209	208	0.0%	8	15	0	23	\$19.29	High school diploma or equivalent	Less than 5 years	Moderate-term on-the- job training
41-1012	First-Line Supervisors of Non-Retail Sales Workers	1,821	1,779	-0.2%	60	100	-4	156	\$35.75	equivalent	Less than 5 years	None
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	1,168	1,216	0.4%	39	61	5	105	\$30.79	equivalent	Less than 5 years	None
51-1011	First-Line Supervisors of Production and Operating Workers	1,852	1,808	-0.2%	58	117	-4	171	\$29.43	equivalent	Less than 5 years	None
11-9081	Lodging Managers	583	690	1.7%	22	41	11	74	\$28.17	High school diploma or equivalent	Less than 5 years	None
11-9141	Property, Real Estate, and Community Association Managers	1,253	1,332	0.6%	54	43	8	105	\$27.94	High school diploma or equivalent	Less than 5 years	None
43-1011	First-Line Supervisors of Office and Administrative Support Workers	2,035	2,040	0.0%	79	118	0	197	\$27.06	High school diploma or equivalent	Less than 5 years	None
53-1021	First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	437	453	0.4%	14	31	2	47	\$26.23	High school diploma or equivalent	Less than 5 years	None
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	610	626	0.3%	20	42	2	64	\$26.23	High school diploma or equivalent	Less than 5 years	None
11-9051	Food Service Managers	886	894	0.1%	28	66	1	95	\$25.72	High school diploma or equivalent	Less than 5 years	None
43-6011	Executive Secretaries and Executive Administrative Assistants	2,182	1,748	-2.2%	106	103	-43	166	\$25.72	equivalent	Less than 5 years	None
33-1099	First-Line Supervisors of Protective Service Workers, All Other	121	122	0.1%	6	6	0	12	\$25.34	High school diploma or equivalent	Less than 5 years	None

		Emplo	oyment			Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
37-1012	First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	814	858	0.5%	27	50	4	81	\$24.19	High school diploma or equivalent	Less than 5 years	None
41-1011	First-Line Supervisors of Retail Sales Workers	4,754	4,619	-0.3%	173	315	-14	474	\$21.77	High school diploma or equivalent	Less than 5 years	None
39-1021	First-Line Supervisors of Personal Service Workers	962	1,021	0.6%	48	45	6	99	\$20.83	High school diploma or equivalent	Less than 5 years	None
25-3021	Self-Enrichment Education Teachers	1,067	1,148	0.7%	68	52	8	128	\$20.59	equivalent	Less than 5 years	None
45-1011	First-Line Supervisors of Farming, Fishing, and Forestry Workers	304	325	0.7%	10	31	2	43	\$20.35	equivalent	Less than 5 years	None
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	1,922	2,009	0.4%	88	188	9	285	\$19.88	equivalent	Less than 5 years	None
47-2021	Brickmasons and Blockmasons	168	168	0.0%	5	9	0	14	\$25.69	equivalent	None	Apprenticeship
47-2152	Plumbers, Pipefitters, and Steamfitters	885	935	0.6%	33	61	5	99	\$25.02	equivalent	None	Apprenticeship
47-2111	Electricians	1,353	1,371	0.1%	47	101	2	150	\$24.45	equivalent	None	Apprenticeship
49-9044	Millwrights	96	98	0.2%	3	6	0	9	\$23.05	equivalent	None	Apprenticeship
47-2022	Stonemasons	165	166	0.1%	5	9	0	14	\$21.46	equivalent	None	Apprenticeship
47-2211	Sheet Metal Workers	381	385	0.1%	13	26	0	39		loguin alogt	None	Apprenticeship
47-2221	Structural Iron and Steel Workers	62	65	0.5%	2	5	0	7	\$20.55	High school diploma or equivalent	None	Apprenticeship
47-2031	Carpenters	6,970	7,038	0.1%	241	389	7	637	\$20.54	High school diploma or equivalent	None	Apprenticeship
49-9094	Locksmiths and Safe Repairers	75	70	-0.7%	4	3	0	7	n/a	High school diploma or equivalent	None	Long-term on-the-job training
49-9051	Electrical Power-Line Installers and Repairers	410	423	0.3%	10	22	1	33	\$40.55	High school diploma or equivalent	None	Long-term on-the-job training
49-9052	Telecommunications Line Installers and Repairers	160	134	-1.8%	4	11	-3	12	\$32.28	High school diploma or equivalent	None	Long-term on-the-job training
13-1031	Claims Adjusters, Examiners, and Investigators	259	246	-0.5%	6	14	-1	19	\$31.39	equivalent	None	Long-term on-the-job training
51-8013	Power Plant Operators	107	108	0.1%	3	7	0	10	\$29.12	High school diploma or equivalent	None	Long-term on-the-job training
49-9041	Industrial Machinery Mechanics	622	658	0.6%	22	33	4	59	\$25.02	High school diploma or equivalent	None	Long-term on-the-job training
49-9043	Maintenance Workers, Machinery	76	83	0.9%	3	5	1	9	\$24.17	High school diploma or equivalent	None	Long-term on-the-job training
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	127	120	-0.6%	5	8	-1	12	\$23.50	High school diploma or equivalent	None	Long-term on-the-job training
51-8031	Water and Wastewater Treatment Plant and System Operators	354	359	0.1%	10	19	0	29	\$23.08	equivalent	None	Long-term on-the-job training
29-2081	Opticians, Dispensing	110	115	0.4%	4	4	0	8	\$22.18	High school diploma or equivalent	None	Long-term on-the-job training
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	775	830	0.7%	25	46	6	77	\$21.87	High school diploma or equivalent	None	Long-term on-the-job training
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	222	236	0.6%	7	14	1	22	\$21.85	High school diploma or equivalent	None	Long-term on-the-job training

		Emplo	oyment			Annual Job	Openings	6	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
51-8021	Stationary Engineers and Boiler Operators	57	54	-0.5%	2	4	0	6	\$21.02	High school diploma or equivalent	None	Long-term on-the-job training
27-4021	Photographers	870	842	-0.3%	37	30	-3	64		equivalent	None	Long-term on-the-job training
51-4041	Machinists	622	580	-0.7%	21	39	-4	56	I \$20.04	High school diploma or equivalent	None	Long-term on-the-job training
49-3021	Automotive Body and Related Repairers	730	755	0.3%	26	44	2	72	\$19.82	equivalent	None	Long-term on-the-job training
49-3051	Motorboat Mechanics and Service Technicians	124	123	-0.1%	5	8	0	13	\$18.39	equivalent	None	Long-term on-the-job training
51-9071	Jewelers and Precious Stone and Metal Workers	428	388	-1.0%	24	18	-4	38		equivalent	None	Long-term on-the-job training
	Farm Equipment Mechanics and Service Technicians	132	142	0.7%	4	9	1	14	\$16.16	equivalent	None	Long-term on-the-job training
	Education Administrators, Elementary and Secondary School	871	848	-0.3%	24						5 years or more	None
	Instructional Coordinators	615	633	0.3%	30			58		Master's degree	5 years or more	None
-	Education Administrators, Postsecondary	399	394	-0.1%	11			29		Master's degree	Less than 5 years	None
	Speech-Language Pathologists	418	429		8	13		22	-	Master's degree	None	Internship/residency
	Healthcare Social Workers	450	528		18			57		Master's degree	None	Internship/residency
	Mental Health Counselors	849	978		34					Master's degree	None	Internship/residency
	Mental Health and Substance Abuse Social Workers	1,086	1,229	1.2%	42				-	Master's degree	None	Internship/residency
	Art, Drama, and Music Teachers, Postsecondary	351	352	0.0%	13			26		Master's degree	None	None
	Physician Assistants	320	410		6	13		28		Master's degree	None	None
	Nurse Practitioners	547	680		12	18	13	43		Master's degree	None	None
	Nurse Midwives	49	54		1	2		3		Master's degree	None	None
	Occupational Therapists	329	384	1.6%	7	10	6	23		Master's degree	None	None
	Economists	106	109		2	6	0	8		Master's degree	None	None
	Health Diagnosing and Treating Practitioners, All Other	265	286		11	3	2	16		Master's degree	None	None
	Statisticians	40	51	2.5%	1	2	1	4		Master's degree	None	None
	Urban and Regional Planners	182	196		4	11	1	16		Master's degree	None	None
25-4012		51	56		2	3	0	5		Master's degree	None	None
	Educational, Guidance, School, and Vocational Counselors	805	840		30	54	4	88		Master's degree	None	None
	Archivists	39	42	0.7%	2	2	0	4	-	Master's degree	None	None
	Librarians	737	723	-0.2%	40			66		Master's degree	None	None
21-1015	Rehabilitation Counselors	643	731	1.3%	25	45	9	79		Master's degree	None	None
35-2014	Cooks, Restaurant	2,553	2,736	0.7%	155	212	18	385	\$14.72	No formal educational credential	Less than 5 years	Moderate-term on-the- job training
51-3021	Butchers and Meat Cutters	205	214	0.4%	9	16	1	26	\$16.48	credential	None	Long-term on-the-job training
51-3011	Bakers	756	788	0.4%	50	58	3	111	\$14.49	No formal educational credential	None	Long-term on-the-job training
33-2021	Fire Inspectors and Investigators	33	38	1.4%	2	2	0	4	\$27.25	Postsecondary non- degree award	5 years or more	Moderate-term on-the- job training
33-1021	First-Line Supervisors of Fire Fighting and Prevention Workers	57	58	0.2%	2	2	0	4	\$31.60	Postsecondary non- degree award	Less than 5 years	Moderate-term on-the- job training
29-2053	Psychiatric Technicians	253	268	0.6%	8	12	2	22	\$18.97	Postsecondary non- degree award	Less than 5 years	Short-term on-the-job training
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	196	202	0.3%	5	12	1	18		Postsecondary non-	None	Long-term on-the-job training
51-4111	Tool and Die Makers	126	110	-1.3%	5	6	-2	9	\$26.19	Postsecondary non- degree award	None	Long-term on-the-job training

		Emplo	oyment			Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,095	1,117	0.2%	30	74	2	106	\$23.72	Postsecondary non- degree award	None	Long-term on-the-job training
33-2011	Firefighters	236	245	0.4%	5	10	1	16	\$16.70	Postsecondary non- degree award	None	Long-term on-the-job training
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	95	99	0.4%	3	7	0	10	\$26.78	Postsecondary non- degree award	None	Moderate-term on-the- job training
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	770	643	-1.8%	23	50	-13	60	\$23.71	Postsecondary non- degree award	None	Moderate-term on-the- job training
29-9099	Healthcare Practitioners and Technical Workers, All Other	70	77	1.0%	2	2	1	5	n/a	Postsecondary non- degree award	None	None
49-3011	Aircraft Mechanics and Service Technicians	211	223	0.6%	7	10	1	18	\$29.30	Postsecondary non- degree award	None	None
39-5094	Skincare Specialists	272	280	0.3%	17	14	1	32	\$26.68	Postsecondary non- degree award	None	None
29-2061	Licensed Practical and Licensed Vocational Nurses	1,375	1,419	0.3%	49	48	4	101	\$23.40	Postsecondary non- degree award	None	None
29-2099	Health Technologists and Technicians, All Other	185	209	1.2%	6	6	2	14	\$21.55	degree award	None	None
31-9091	Dental Assistants	515	532	0.3%	27	30	2	59	\$21.17	Postsecondary non- degree award	None	None
29-2057	Ophthalmic Medical Technicians	215	224	0.4%	7	10	1	18	\$20.76	Postsecondary non- degree award	None	None
51-5111	Prepress Technicians and Workers	58	50	-1.5%	2	4	-1	5	\$20.20	Postsecondary non- degree award	None	None
31-9094	Medical Transcriptionists	179	166	-0.8%	12	9	-1	20	\$19.17	Postsecondary non- degree award	None	None
29-2071	Medical Records and Health Information Technicians	496	546	1.0%	15	16	5	36	\$18.76	Postsecondary non- degree award	None	None
29-2055	Surgical Technologists	78	87	1.1%	3	4	1	8	\$18.73	Postsecondary non- degree award	None	None
31-9011	Massage Therapists	1,085	1,160	0.7%	73	40	8	121	\$17.58	Postsecondary non- degree award	None	None
31-9092	Medical Assistants	659	771	1.6%	31	44	11	86	\$17.45	Postsecondary non- degree award	None	None
31-9097	Phlebotomists	235	266	1.2%	11	14	3	28	\$16.47	Postsecondary non- degree award	None	None
29-2041	Emergency Medical Technicians and Paramedics	489	520	0.6%	9	21	3	33	\$15.67	Postsecondary non- degree award	None	None
25-4031	Library Technicians	544	545	0.0%	43	28	0	71	\$15.62	Postsecondary non- degree award	None	None
31-1014	Nursing Assistants	3,515	3,686	0.5%	219	182	17	418	\$14.38	Postsecondary non- degree award	None	None
39-5012	Hairdressers, Hairstylists, and Cosmetologists	1,799	1,848	0.3%	122	91	5	218	\$13.15	Postsecondary non- degree award	None	None
53-3032	Heavy and Tractor-Trailer Truck Drivers	4,351	4,294	-0.1%	183	272	-6	449	\$20.73	Postsecondary non- degree award	None	Short-term on-the-job training
49-3023	Automotive Service Technicians and Mechanics	2,636	2,705	0.3%	84	161	7	252		Postsecondary non-	None	Short-term on-the-job training
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	286	262	-0.9%	10	18	-2	26	\$17.93	Postsecondary non- degree award	None	Short-term on-the-job training
27-4011	Audio and Video Equipment Technicians	113	123	0.9%	3	7	1	11	\$17.56	Postsecondary non-	None	Short-term on-the-job training

		Emplo	yment			Annual Job	Openings	1	Median		Work	Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
49-3052	Motorcycle Mechanics	42	40	-0.5%	2	2	0	4	I S14.03	Postsecondary non- degree award	None	Short-term on-the-job training
43-3031	Bookkeeping, Accounting, and Auditing Clerks	6,075	5,857	-0.4%	369	287	-22	634	I S19.82	Some college, no degree	None	Moderate-term on-the- job training
25-9041	Teacher Assistants	4,863	4,739	-0.3%	264	219	-12	471	I S31./00/vr	Some college, no degree	None	None
15-1151	Computer User Support Specialists	1,243	1,339	0.7%	26	66	10	102	Ş23.43	Some college, no degree	None	None
49-2011	Computer, Automated Teller, and Office Machine Repairers	104	98	-0.6%	3	6	-1	8	I S14.76	Some college, no degree	None	Short-term on-the-job training

**OCCUPATIONS NOT INCLUDED - Please review** 

# **Occupational Projections 2016-2026**

#### Vermont Statewide

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	yment			Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
37-2021	Pest Control Workers	83	89	0.7%	3	8	1	12	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
41-3021	Insurance Sales Agents	1,951	1,947	0.0%	79	105	0	184	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2021	Coil Winders, Tapers, and Finishers	36	30	-1.8%	2	2	-1	3	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-3092	Food Batchmakers	460	461	0.0%	25	38	0	63	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-3093	Food Cooking Machine Operators and Tenders	52	62	1.8%	3	5	1	9	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	1,107	993	-1.1%	29	74	-11	92	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	42	36	-1.5%	1	3	-1	3	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9081	Dental Laboratory Technicians	175	213	2.0%	8	13	4	25	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
53-2012	Commercial Pilots	89	90	0.1%	2	6	0	8	S80.110/vr	High school diploma or equivalent	INONE	Moderate-term on-the- job training
27-2023	Umpires, Referees, and Other Sports Officials	74	76	0.3%	4	6	0	10	\$34,440/yr	High school diploma or equivalent	None	Moderate-term on-the- job training
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,585	2,647	0.2%	86	175	6	267	\$28.76	High school diploma or equivalent	None	Moderate-term on-the- job training
47-5021	Earth Drillers, Except Oil and Gas	73	75	0.3%	2	6	0	8	\$28.23	High school diploma or equivalent	None	Moderate-term on-the- job training

		Emplo	oyment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	<b>Change</b> [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	147	152	0.3%	4	7	0	11	\$28.09	High school diploma or equivalent	None	Moderate-term on-the- job training
41-9022	Real Estate Sales Agents	637	630	-0.1%	32	25	-1	56	\$27.11	High school diploma or equivalent	None	Moderate-term on-the- job training
43-4011	Brokerage Clerks	52	55	0.6%	1	4	0	5		equivalent	None	Moderate-term on-the- job training
43-4061	Eligibility Interviewers, Government Programs	65	69	0.6%	3	3	0	6	\$25.77	equivalent	None	Moderate-term on-the- job training
33-3051	Police and Sheriff's Patrol Officers	1,321	1,344	0.2%	32	52	2	86	I 525 181	equivalent	None	Moderate-term on-the- job training
17-3031	Surveying and Mapping Technicians	153	157	0.3%	5	11	0	16	\$25.01	equivalent	None	Moderate-term on-the- job training
41-3099	Sales Representatives, Services, All Other	1,104	1,150	0.4%	36	97	5	138		equivalent	None	Moderate-term on-the- job training
49-2098	Security and Fire Alarm Systems Installers	74	84	1.3%	3	6	1	10	I S23.86I	equivalent	None	Moderate-term on-the- job training
13-2082	Tax Preparers	370	377	0.2%	20	18	1	39	\$23.82	equivalent	None	Moderate-term on-the- job training
43-5061	Production, Planning, and Expediting Clerks	451	458	0.2%	16	30	1	47		equivalent	None	Moderate-term on-the- job training
43-6012	Legal Secretaries	358	278	-2.5%	17	17	-8	26	I 577.58I	equivalent	None	Moderate-term on-the- job training
41-3011	Advertising Sales Agents	316	285	-1.0%	11	26	-3	34	\$22.26		None	Moderate-term on-the- job training
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	190	176	-0.8%	7	14	-1	20		equivalent	None	Moderate-term on-the- job training
51-2041	Structural Metal Fabricators and Fitters	92	74	-2.2%	3	6	-2	7	S71851	High school diploma or equivalent	None	Moderate-term on-the- job training
43-5031	Police, Fire, and Ambulance Dispatchers	287	286	0.0%	10	15	0	25		equivalent	None	Moderate-term on-the- job training
51-4199	Metal Workers and Plastic Workers, All Other	136	127	-0.7%	5	9	-1	13	1 5/16/1	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9122	Painters, Transportation Equipment	35	35	0.0%	1	3	0	4	\$21.49	High school diploma or equivalent	None	Moderate-term on-the- job training
43-3051	Payroll and Timekeeping Clerks	337	322	-0.5%	14	18	-2	30		equivalent	None	Moderate-term on-the- job training
51-4194	Tool Grinders, Filers, and Sharpeners	74	64	-1.4%	2	6	-1	7	I S20.721	High school diploma or equivalent	None	Moderate-term on-the- job training
43-4031	Court, Municipal, and License Clerks	756	956	2.4%	38	34	20	92	I 570.511	High school diploma or equivalent	None	Moderate-term on-the- job training
43-3061	Procurement Clerks	135	129	-0.5%	6	9	-1	14	\$20.28	High school diploma or equivalent	None	Moderate-term on-the- job training
47-4051	Highway Maintenance Workers	1,548	1,554	0.0%	66	89	1	156	\$20.25	High school diploma or equivalent	None	Moderate-term on-the- job training
47-2073	Operating Engineers and Other Construction Equipment Operators	1,194	1,238	0.4%	46	85	4	135	\$20.20	equivalent	None	Moderate-term on-the- job training
53-3021	Bus Drivers, Transit and Intercity	447	499	1.1%	37	19	5	61	\$19.83	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4121	Welders, Cutters, Solderers, and Brazers	393	384	-0.2%	10	30	-1	39	1 51963	High school diploma or equivalent	None	Moderate-term on-the- job training
41-3041	Travel Agents	228	195	-1.6%	11	13	-3	21	\$19.56	High school diploma or equivalent	None	Moderate-term on-the- job training

		Emplo	oyment			Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
43-3011	Bill and Account Collectors	405	385	-0.5%	15	26	-2	39	\$19.43	High school diploma or equivalent	None	Moderate-term on-the- job training
43-5032	Dispatchers, Except Police, Fire, and Ambulance	364	345	-0.5%	12	19	-2	29	\$19.38	equivalent	None	Moderate-term on-the- job training
43-9011	Computer Operators	61	47	-2.6%	2	3	-1	4	\$19.33	High school diploma or equivalent	None	Moderate-term on-the- job training
43-9041	Insurance Claims and Policy Processing Clerks	594	606	0.2%	26	34	1	61	\$19.30	High school diploma or equivalent	None	Moderate-term on-the- job training
49-9031	Home Appliance Repairers	145	133	-0.9%	7	6	-1	12	\$19.20	High school diploma or equivalent	None	Moderate-term on-the- job training
51-5112	Printing Press Operators	332	322	-0.3%	13	21	-1	33	\$18.93	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2031	Engine and Other Machine Assemblers	48	37	-2.6%	1	3	-1	3	\$18.87	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2022	Electrical and Electronic Equipment Assemblers	129	111	-1.5%	6	8	-2	12	\$18.85	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2023	Electromechanical Equipment Assemblers	69	50	-3.2%	3	4	-2	5	\$18.85	High school diploma or equivalent	None	Moderate-term on-the- job training
49-9071	Maintenance and Repair Workers, General	2,874	3,086	0.7%	121	166	21	308	\$18.75	High school diploma or equivalent	None	Moderate-term on-the- job training
43-3021	Billing and Posting Clerks	1,087	1,176	0.8%	48	62	9	119	\$18.61	High school diploma or equivalent	None	Moderate-term on-the- job training
45-4022	Logging Equipment Operators	280	231	-1.9%	9	23	-5	27			None	Moderate-term on-the- job training
33-9011	Animal Control Workers	85	92	0.8%	4	5	1	10	\$18.58	Illah askaal dulataa ay	None	Moderate-term on-the- job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	883	753	-1.6%	34	63	-13	84	\$18.50	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	117	153	2.7%	4	11	4	19	\$18.44	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9196	Paper Goods Machine Setters, Operators, and Tenders	329	314	-0.5%	12	21	-2	31	\$18.39	High school diploma or equivalent	None	Moderate-term on-the- job training
43-6013	Medical Secretaries	994	1,126	1.3%	57	56	13	126	\$18.38	High school diploma or equivalent	None	Moderate-term on-the- job training
47-2231	Solar Photovoltaic Installers	406	556	3.2%	19	31	15	65	\$18.27	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	75	56	-2.9%	2	4	-2	4	\$18.26	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	170	139	-2.0%	5	11	-3	13	\$18.21	High school diploma or equivalent	None	Moderate-term on-the- job training
51-7011	Cabinetmakers and Bench Carpenters	440	388	-1.2%	19	23	-5	37	\$17.99	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	271	290	0.7%	10	21	2	33	\$17.87	High school diploma or equivalent	None	Moderate-term on-the- job training
47-4041	Hazardous Materials Removal Workers	126	141	1.1%	5	10	2	17	\$17.82	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	259	248	-0.4%	7	19	-1	25	\$17.81	High school diploma or	None	Moderate-term on-the- job training
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	50	46	-0.8%	1	3	0	4	\$17 77	High school diploma or	None	Moderate-term on-the- job training
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	276	224	-2.1%	10	18	-5	23		High school diploma or	None	Moderate-term on-the- job training

		Emplo	yment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
45-4023	Log Graders and Scalers	39	30	-2.6%	1	3	-1	3	\$17.63	High school diploma or equivalent	None	Moderate-term on-the- job training
49-3022	Automotive Glass Installers and Repairers	145	148	0.2%	6	8	0	14		equivalent	None	Moderate-term on-the- job training
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	195	165	-1.7%	6	14	-3	17	\$17.50	equivalent	None	Moderate-term on-the- job training
51-9083	Ophthalmic Laboratory Technicians	55	47	-1.6%	2	3	-1	4	I <u>S1746</u>	High school diploma or equivalent	None	Moderate-term on-the- job training
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	294	300	0.2%	12	18	1	31	\$17.35	equivalent	None	Moderate-term on-the- job training
49-9099	Installation, Maintenance, and Repair Workers, All Other	305	309	0.1%	11	18	0	29	\$17.30	High school diploma or equivalent	None	Moderate-term on-the- job training
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	98	113	1.4%	5	8	2	15	\$17.27	equivalent	None	Moderate-term on-the- job training
51-5113	Print Binding and Finishing Workers	154	155	0.1%	12	8	0	20	516.76	equivalent	None	Moderate-term on-the- job training
31-9093	Medical Equipment Preparers	105	116	1.0%	7	7	1	15		equivalent	None	Moderate-term on-the- job training
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	312	301	-0.4%	11	23	-1	33	I \$15.68I	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	214	221	0.3%	8	18	1	27	\$15.62	equivalent	None	Moderate-term on-the- job training
29-2052	Pharmacy Technicians	532	581	0.9%	18	25	5	48	\$15.48		None	Moderate-term on-the- job training
51-9111	Packaging and Filling Machine Operators and Tenders	1,410	1,429	0.1%	67	94	2	163		equivalent	None	Moderate-term on-the- job training
27-1023	Floral Designers	208	190	-0.9%	7	11	-2	16	I <u>S1540</u>	High school diploma or equivalent	None	Moderate-term on-the- job training
51-6093	Upholsterers	36	32	-1.2%	2	2	0	4	1 514.87	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	132	125	-0.5%	5	10	-1	14	1 514751	High school diploma or equivalent	None	Moderate-term on-the- job training
39-6012	Concierges	33	35	0.6%	2	3	0	5	\$14.73	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	194	180	-0.7%	5	14	-1	18	514.66	High school diploma or equivalent	None	Moderate-term on-the- job training
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	491	414	-1.7%	17	32	-8	41	\$14.63	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9199	Production Workers, All Other	383	403	0.5%	15	29	2	46	S14 3 / I	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2092	Team Assemblers	1,372	1,087	-2.3%	52	89	-28	113	\$14.36	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2099	Assemblers and Fabricators, All Other	566	500	-1.2%	23	39	-7	55	\$14.36	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9193	Cooling and Freezing Equipment Operators and Tenders	161	169	0.5%	6	12	1	19	S14 18	High school diploma or equivalent	None	Moderate-term on-the- job training
39-7011	Tour Guides and Escorts	213	236	1.0%	20	19	2	41	1 517531	High school diploma or equivalent	None	Moderate-term on-the- job training
31-9099	Healthcare Support Workers, All Other	127	140	1.0%	8	8	1	17	\$19.88	High school diploma or equivalent	None	None
25-3098	Substitute Teachers	3,810	3,752	-0.2%	230	177	-6	401	\$13.45	High school diploma or equivalent	None	None

		Emplo	oyment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
33-9032	Security Guards	1,124	1,151	0.2%	68	80	3	151	n/a	High school diploma or equivalent	None	Short-term on-the-job training
33-9099	Protective Service Workers, All Other	197	206	0.4%	28	21	1	50		equivalent	None	Short-term on-the-job training
43-5053	Postal Service Mail Sorters, Processors, and Processing Machine Operators	185	165	-1.1%	7	5	-2	10	\$28.26	equivalent	None	Short-term on-the-job training
43-5041	Meter Readers, Utilities	63	58	-0.8%	2	2	0	4	I 57478I	equivalent	None	Short-term on-the-job training
43-5052	Postal Service Mail Carriers	737	690	-0.7%	28	20	-5	43	7	equivalent	None	Short-term on-the-job training
43-5051	Postal Service Clerks	429	401	-0.7%	21	11	-3	29	\$21.88	equivalent	None	Short-term on-the-job training
43-4199	Information and Record Clerks, All Other	206	220	0.7%	10	13	1	24	\$20.88	equivalent	None	Short-term on-the-job training
43-9199	Office and Administrative Support Workers, All Other	317	323	0.2%	14	20	1	35	I 570 881	equivalent	None	Short-term on-the-job training
43-5111	Weighers, Measurers, Checkers, and Samplers, Recordkeeping	230	240	0.4%	9	13	1	23		equivalent	None	Short-term on-the-job training
33-9093	Transportation Security Screeners	81	81	0.0%	4	3	0	7	\$19.90	equivalent	None	Short-term on-the-job training
39-9031	Fitness Trainers and Aerobics Instructors	1,155	1,232	0.6%	78	119	8	205	\$19.85	equivalent	None	Short-term on-the-job training
43-4111	Interviewers, Except Eligibility and Loan	340	365	0.7%	19	22	2	43	\$19.44		None	Short-term on-the-job training
43-4131	Loan Interviewers and Clerks	236	254	0.7%	9	14	2	25		equivalent	None	Short-term on-the-job training
43-5011	Cargo and Freight Agents	59	65	1.0%	2	3	1	6	S18.47	High school diploma or equivalent	None	Short-term on-the-job training
39-4021	Funeral Attendants	70	65	-0.7%	6	4	0	10	\$18.45	equivalent	None	Short-term on-the-job training
53-3022	Bus Drivers, School or Special Client	1,392	1,436	0.3%	111	58	4	173	517941	High school diploma or equivalent	None	Short-term on-the-job training
27-3099	Media and Communication Workers, All Other	163	176	0.8%	8	7	1	16	\$17.91	High school diploma or equivalent	None	Short-term on-the-job training
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	47	45	-0.4%	2	3	0	5	\$17.87	equivalent	None	Short-term on-the-job training
43-6014	Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	6,059	5,444	-1.1%	310	301	-62	549	\$17.41	equivalent	None	Short-term on-the-job training
43-4051	Customer Service Representatives	3,503	3,567	0.2%	181	265	6	452	I <u>S1717</u>	High school diploma or equivalent	None	Short-term on-the-job training
43-4151	Order Clerks	814	776	-0.5%	37	52	-4	85		equivalent	None	Short-term on-the-job training
43-9051	Mail Clerks and Mail Machine Operators, Except Postal Service	131	121	-0.8%	7	7	-1	13	I S16.95I	High school diploma or equivalent	None	Short-term on-the-job training
31-2022	Physical Therapist Aides	77	92	1.8%	4	6	2	12	\$16.87	equivalent	None	Short-term on-the-job training
43-9021	Data Entry Keyers	486	375	-2.6%	22	28	-11	39	1 \16511	High school diploma or equivalent	None	Short-term on-the-job training
21-1093	Social and Human Service Assistants	2,557	2,823	1.0%	120	192	27	339	\$16.41	High school diploma or equivalent	None	Short-term on-the-job training
43-9061	Office Clerks, General	1,755	1,665	-0.5%	100	98	-9	189	\$16.37	High school diploma or equivalent	None	Short-term on-the-job training

		Emplo	oyment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
43-5071	Shipping, Receiving, and Traffic Clerks	1,742	1,698	-0.3%	67	102	-4	165	\$16.27	High school diploma or equivalent	None	Short-term on-the-job training
39-9041	Residential Advisors	408	421	0.3%	28	41	1	70		equivalent	None	Short-term on-the-job training
43-4171	Receptionists and Information Clerks	2,556	2,584	0.1%	160	171	3	334	I S15./2	High school diploma or equivalent	None	Short-term on-the-job training
43-5021	Couriers and Messengers	442	467	0.6%	21	20	2	43	I <u>515</u> 77	High school diploma or equivalent	None	Short-term on-the-job training
53-3033	Light Truck or Delivery Services Drivers	2,658	2,680	0.1%	113	168	2	283	\$15.43	High school diploma or equivalent	None	Short-term on-the-job training
53-3031	Driver/Sales Workers	833	837	0.0%	35	52	0	87	\$15.32	High school diploma or equivalent	None	Short-term on-the-job training
21-1094	Community Health Workers	398	445	1.1%	19	31	5	55	I S14.78	High school diploma or equivalent	None	Short-term on-the-job training
43-3071	Tellers	1,121	985	-1.3%	54	68	-14	108	\$14.51	equivalent	None	Short-term on-the-job training
49-3093	Tire Repairers and Changers	118	114	-0.3%	4	10	0	14	\$14.50	High school diploma or equivalent	None	Short-term on-the-job training
51-7021	Furniture Finishers	274	232	-1.7%	14	9	-4	19	514.38	High school diploma or equivalent	None	Short-term on-the-job training
43-2011	Switchboard Operators, Including Answering Service	207	162	-2.4%	12	12	-4	20	I S14.30	High school diploma or equivalent	None	Short-term on-the-job training
27-1026	Merchandise Displayers and Window Trimmers	209	208	0.0%	7	12	0	19		loguin alogt	None	Short-term on-the-job training
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	121	137	1.2%	7	12	2	21	\$14.23	equivalent	None	Short-term on-the-job training
49-9098	HelpersInstallation, Maintenance, and Repair Workers	158	165	0.4%	8	12	1	21	\$14.18	High school diploma or equivalent	None	Short-term on-the-job training
43-9071	Office Machine Operators, Except Computer	87	66	-2.7%	3	5	-2	6	1 \$14.15	High school diploma or equivalent	None	Short-term on-the-job training
43-4181	Reservation and Transportation Ticket Agents and Travel Clerks	200	212	0.6%	9	12	1	22	\$14.03	High school diploma or equivalent	None	Short-term on-the-job training
51-9198	HelpersProduction Workers	532	646	2.0%	32	56	11	99	\$13.96	High school diploma or equivalent	None	Short-term on-the-job training
39-9099	Personal Care and Service Workers, All Other	69	71	0.3%	5	5	0	10	1 51360	High school diploma or equivalent	None	Short-term on-the-job training
47-3015	HelpersPipelayers, Plumbers, Pipefitters, and Steamfitters	50	55	1.0%	2	5	0	7	I \$13.54	High school diploma or equivalent	None	Short-term on-the-job training
31-1011	Home Health Aides	572	763	2.9%	41	34	19	94	\$13.41	High school diploma or equivalent	None	Short-term on-the-job training
43-5081	Stock Clerks and Order Fillers	2,702	2,784	0.3%	150	195	8	353	\$13.35	High school diploma or equivalent	None	Short-term on-the-job training
39-9011	Childcare Workers	2,905	2,908	0.0%	237	180	0	417	\$13.27	High school diploma or equivalent	None	Short-term on-the-job training
39-9021	Personal Care Aides	7,539	9,777	2.6%	691	520	224	1,435	\$13.24	High school diploma or equivalent	None	Short-term on-the-job training
43-4081	Hotel, Motel, and Resort Desk Clerks	940	1,004	0.7%	54	96	6	156	\$13.09	High school diploma or equivalent	None	Short-term on-the-job training
43-4121	Library Assistants, Clerical	286	295	0.3%	23	18	1	42		High school diploma or	None	Short-term on-the-job training
39-9032	Recreation Workers	1,418	1,528	0.7%	96	147	11	254	\$12.91	High school diploma or equivalent	None	Short-term on-the-job training

		Emplo	oyment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
39-2021	Nonfarm Animal Caretakers	722	828		53	62	11	126	\$11.91	High school diploma or equivalent	None	Short-term on-the-job training
39-6011	Baggage Porters and Bellhops	156	166	0.6%	8	14	1	23	\$11.64	High school diploma or equivalent	None	Short-term on-the-job training
31-9095	Pharmacy Aides	210	184	-1.3%	13	13	-3	23	\$11.28	High school diploma or equivalent	None	Short-term on-the-job training
47-2082	Tapers	79	75	-0.5%	2	4	0	6	n/a	No formal educational credential	None	Moderate-term on-the- job training
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	87	86	-0.1%	3	4	0	7	\$22.35	No formal educational credential	None	Moderate-term on-the- job training
47-2081	Drywall and Ceiling Tile Installers	326	306	-0.6%	10	18	-2	26	\$21.71	No formal educational credential	None	Moderate-term on-the- job training
47-2051	Cement Masons and Concrete Finishers	269	278	0.3%	10	19	1	30	\$19.47	No formal educational credential	None	Moderate-term on-the- job training
47-2141	Painters, Construction and Maintenance	1,922	1,868	-0.3%	65	94	-5	154	\$18.47	credential	None	Moderate-term on-the- job training
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	167	161	-0.4%	7	12	-1	18	\$17.98	No formal educational credential	None	Moderate-term on-the- job training
41-2022	Parts Salespersons	589	586	-0.1%	26	46	0	72	\$16.93	No formal educational credential	None	Moderate-term on-the- job training
47-2181	Roofers	498	508	0.2%	14	34	1	49	S16.60	No formal educational credential	None	Moderate-term on-the- job training
51-3099	Food Processing Workers, All Other	57	57	0.0%	2	4	0	6		credential	None	Moderate-term on-the- job training
35-2019	Cooks, All Other	40	42	0.5%	2	3	0	5	516.11	No formal educational credential	None	Moderate-term on-the- job training
51-9022	Grinding and Polishing Workers, Hand	128	100	-2.4%	4	8	-3	9	\$13.92	No formal educational credential	None	Moderate-term on-the- job training
41-9041	Telemarketers	67	62	-0.8%	4	6	0	10	n/a	No formal educational credential	None	Short-term on-the-job training
47-2041	Carpet Installers	136	134	-0.1%	4	7	0	11	\$20.63	No formal educational credential	None	Short-term on-the-job training
47-2131	Insulation Workers, Floor, Ceiling, and Wall	151	147	-0.3%	4	11	0	15	518.42	No formal educational credential	None	Short-term on-the-job training
53-7051	Industrial Truck and Tractor Operators	860	887	0.3%	30	65	3	98	\$18.26	No formal educational credential	None	Short-term on-the-job training
47-2151	Pipelayers	58	64	1.0%	2	4	1	7	\$18.23	No formal educational credential	None	Short-term on-the-job training
35-3011	Bartenders	1,973	1,988	0.1%	95	227	2	324	\$17.31	No formal educational credential	None	Short-term on-the-job training
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	236	245	0.4%	11	18	1	30	\$16.94	No formal educational credential	None	Short-term on-the-job training
47-2061	Construction Laborers	2,634	2,658	0.1%	92	174	2	268	\$16.89	No formal educational credential	None	Short-term on-the-job training
47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	141	147	0.4%	6	14	1	21	\$16.61	No formal educational credential	None	Short-term on-the-job training
53-7081	Refuse and Recyclable Material Collectors	719	811	1.2%	35	56	9	100	516.27	No formal educational credential	None	Short-term on-the-job training
47-3012	HelpersCarpenters	195	207	0.6%	8	19	1	28	\$15.89	No formal educational credential	None	Short-term on-the-job training
51-9031	Cutters and Trimmers, Hand	85	80	-0.6%	3	6	0	9	\$15.76	No formal educational credential	None	Short-term on-the-job training

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2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
41-2021	Counter and Rental Clerks	931	946	0.2%	49	69	2	120	I S15.63	No formal educational credential	None	Short-term on-the-job training
45-2092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	787	936	1.7%	32	98	15	145	\$15.56	No formal educational credential	None	Short-term on-the-job training
35-3031	Waiters and Waitresses	5,628	5,952	0.6%	429	657	32	1,118	I S15.33	No formal educational credential	None	Short-term on-the-job training
37-3011	Landscaping and Groundskeeping Workers	4,995	5,321	0.6%	241	368	33	642	I \$15.07	No formal educational credential	None	Short-term on-the-job training
33-9091	Crossing Guards	433	458	0.6%	62	18	2	82	\$14.84	No formal educational credential	None	Short-term on-the-job training
53-7011	Conveyor Operators and Tenders	64	56	-1.3%	3	5	-1	7	\$14.83	No formal educational credential	None	Short-term on-the-job training
35-2012	Cooks, Institution and Cafeteria	1,128	1,176	0.4%	68	92	5	165	S14.74	No formal educational credential	None	Short-term on-the-job training
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	5,517	5,781	0.5%	368	355	26	749	I S14.15	No formal educational credential	None	Short-term on-the-job training
47-3016	HelpersRoofers	65	68	0.5%	3	6	0	9	\$14.11	No formal educational credential	None	Short-term on-the-job training
51-3023	Slaughterers and Meat Packers	42	42	0.0%	2	3	0	5	S14.09	No formal educational credential	None	Short-term on-the-job training
53-7061	Cleaners of Vehicles and Equipment	591	623	0.5%	31	53	3	87	I S13./2	No formal educational credential	None	Short-term on-the-job training
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	1,151	1,361	1.7%	46	143	21	210		laradantial	None	Short-term on-the-job training
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	2,889	2,991	0.3%	146	251	10	407	\$13.45	No formal educational credential	None	Short-term on-the-job training
35-2015	Cooks, Short Order	538	508	-0.6%	31	42	-3	70	\$13.39	No formal educational credential	None	Short-term on-the-job training
41-9011	Demonstrators and Product Promoters	86	87	0.1%	9	6	0	15	I \$13,21	No formal educational credential	None	Short-term on-the-job training
53-7064	Packers and Packagers, Hand	764	795	0.4%	53	64	3	120	\$13.15	No formal educational credential	None	Short-term on-the-job training
35-3041	Food Servers, Nonrestaurant	366	381	0.4%	28	26	2	56	\$13.08	No formal educational credential	None	Short-term on-the-job training
41-2031	Retail Salespersons	9,834	9,612	-0.2%	616	772	-22	1,366	\$12.72	No formal educational credential	None	Short-term on-the-job training
53-6021	Parking Lot Attendants	133	144	0.8%	8	12	1	21	I S12.70	No formal educational credential	None	Short-term on-the-job training
51-6031	Sewing Machine Operators	276	261	-0.6%	15	13	-2	26	\$12.52	No formal educational credential	None	Short-term on-the-job training
35-9099	Food Preparation and Serving Related Workers, All Other	76	78	0.3%	7	6	0	13	\$12.50	No formal educational credential	None	Short-term on-the-job training
35-2021	Food Preparation Workers	1,782	1,846	0.4%	145	157	6	308	\$12.42	No formal educational credential	None	Short-term on-the-job training
45-2041	Graders and Sorters, Agricultural Products	366	365	0.0%	15	34	0	49	\$12.34	No formal educational credential	None	Short-term on-the-job training
53-3041	Taxi Drivers and Chauffeurs	1,886	2,105	1.1%	118	81	22	221	\$12.29	No formal educational credential	None	Short-term on-the-job training
37-2012	Maids and Housekeeping Cleaners	4,007	4,161	0.4%	302	228	15	545	\$12.17	No formal educational credential	None	Short-term on-the-job training
35-9011	Dining Room and Cafeteria Attendants and Bartender Helpers	1,072	1,092	0.2%	96	86	2	184	\$12.16	No formal educational credential	None	Short-term on-the-job training

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2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
35-9021	Dishwashers	1,437	1,443	0.0%	106	115	1	222	S11.95	No formal educational credential	None	Short-term on-the-job training
39-3031	Ushers, Lobby Attendants, and Ticket Takers	50	56	1.1%	7	6	1	14	S11.93	No formal educational credential	None	Short-term on-the-job training
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	6,291	6,939	1.0%	586	613	65	1,264	S11.91	No formal educational credential	None	Short-term on-the-job training
39-3091	Amusement and Recreation Attendants	408	443	0.8%	45	51	4	100	\$11.75	No formal educational credential	None	Short-term on-the-job training
35-9031	Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	615	636	0.3%	72	68	2	142	S11.74	No formal educational credential	None	Short-term on-the-job training
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	364	392	0.7%	52	40	3	95	S11.70	No formal educational credential	None	Short-term on-the-job training
41-2011	Cashiers	9,934	9,558	-0.4%	915	893	-38	1,770	S11.57	No formal educational credential	None	Short-term on-the-job training
35-3022	Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	1,142	1,146	0.0%	137	108	0	245	\$11.54	No formal educational credential	None	Short-term on-the-job training
35-2011	Cooks, Fast Food	665	607	-0.9%	37	51	-6	82	S11.47	No formal educational credential	None	Short-term on-the-job training
51-6011	Laundry and Dry-Cleaning Workers	587	572	-0.3%	39	39	-2	76	S11.46	No formal educational credential	None	Short-term on-the-job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	yment			Annual Job	Openings		Median		14/1	Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
00-000	Total, All Occupations	371,407	381,799	0.3%	17,696	22,793	1,039	41,528	\$19.10			
11-0000	Management Occupations											
11-1011	Chief Executives	533	496	-0.7%	15	21	-4	32		Bachelor's degree	5 years or more	None
11-1021	General and Operations Managers	2,871	3,084	0.7%	62	178	21	261	\$37.35	Bachelor's degree	5 years or more	None
11-2011	Advertising and Promotions Managers	49	48	-0.2%	1	4	0	5	\$46.47	Bachelor's degree	Less than 5 years	None
11-2021	Marketing Managers	418	455	0.9%	10	26	4	40	\$52.49	Bachelor's degree	5 years or more	None
11-2022	Sales Managers	528	545	0.3%	12	33	2	47	\$54.43	Bachelor's degree	Less than 5 years	None
11-2031	Public Relations and Fundraising Managers	204	210	0.3%	5	12	1	18	\$43.00	Bachelor's degree	5 years or more	None
11-3011	Administrative Services Managers	425	456	0.7%	13	22	3	38	\$36.20	Bachelor's degree	Less than 5 years	None
	Computer and Information Systems Managers	351	372	0.6%	6	20	2	28		0	5 years or more	None
	Financial Managers	803	910	1.3%	20	42	11	73		•	5 years or more	None
	Industrial Production Managers	413	397	-0.4%	9	18	-2	25	-		5 years or more	None
	Purchasing Managers	155	159	0.3%	5	8	0	13			5 years or more	None
	Transportation, Storage, and Distribution Managers	130	141	0.8%	3	7	1	11		High school diploma or	5 years or more	None
11-3121	Human Resources Managers	226	234	0.3%	6	12	1	19	\$44.69	Bachelor's degree	5 years or more	None
	Training and Development Managers	47	49	0.3%	1	3	0	4		-	5 years or more	None
	Farmers, Ranchers, and Other Agricultural Managers	5,835	6,123	0.5%	350	89	29	468	\$37,71	High school dinloma or	5 years or more	None
11-9021	Construction Managers	1,328	1,391	0.5%	31	60	6	97		•	None	Moderate-term on-the job training
11-9031	Education Administrators, Preschool and Childcare Center/Program	371	377	0.2%	10	17	1	28	\$23.13	Bachelor's degree	Less than 5 years	None
11-9032	Education Administrators, Elementary and Secondary School	871	848	-0.3%	24	39	-2	61	\$90,800/yr	Master's degree	5 years or more	None
11-9033	Education Administrators, Postsecondary	399	394	-0.1%	11	18	0	29	n/a	Master's degree	Less than 5 years	None
11-9039	Education Administrators, All Other	115	119	0.3%	3	5	0	8	\$34.50	Bachelor's degree	Less than 5 years	None
11-9041	Architectural and Engineering Managers	266	268	0.1%	5	13	0	18	\$58.62	Bachelor's degree	5 years or more	None
	Food Service Managers	886	894	0.1%	28	66	1	95		High school dinloma or	Less than 5 years	None
11-9081	Lodging Managers	583	690	1.7%	22	41	11	74	\$28.17	High school diploma or equivalent	Less than 5 years	None
11-9111	Medical and Health Services Managers	844	974	1.4%	25	44	13	82	\$41.65	Bachelor's degree	Less than 5 years	None
11-9121	Natural Sciences Managers	75	81	0.8%	2	4	1	7	\$44.55	Bachelor's degree	5 years or more	None
11-9131	Postmasters and Mail Superintendents	124	104	-1.7%	3	5	-2	6	I 537.66	High school diploma or equivalent	Less than 5 years	Moderate-term on-the job training
11-9141	Property, Real Estate, and Community Association Managers	1,253	1,332	0.6%	54	43	8	105	\$27.94	High school diploma or equivalent	Less than 5 years	None
11-9151	Social and Community Service Managers	723	814	1.2%	25	40	9	74	\$29.39	Bachelor's degree	Less than 5 years	None
	Emergency Management Directors	30	32	0.6%	1	1	0	2		-	5 years or more	None
	Managers, All Other	2,665	2,660	0.0%	72	112	0	184			Less than 5 years	None
	Business and Financial Operations Occupations	,	,							<b>5</b>	,	
	Agents and Business Managers of Artists, Performers, and Athletes	46	50	0.8%	2	4	0	6	\$88.37	Bachelor's degree	Less than 5 years	None
	Buyers and Purchasing Agents, Farm Products	117	110	-0.6%	5	8	-1	12			None	Moderate-term on-the

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	yment			Annual Job	Openings	5	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
13-1022	Wholesale and Retail Buyers, Except Farm Products	547	508	-0.7%	21	38	-4	55	\$25.26	Bachelor's degree	None	Moderate-term on-the- job training
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	557	520	-0.7%	16	30	-4	42	-	Bachelor's degree	None	Moderate-term on-the- job training
13-1031	Claims Adjusters, Examiners, and Investigators	259	246	-0.5%	6	14	-1	19	531.39	High school diploma or equivalent	None	Long-term on-the-job training
13-1041	Compliance Officers	2,248	2,475	1.0%	66	119	23	208	\$35.12	Bachelor's degree	None	Moderate-term on-the- job training
	Cost Estimators	354	363	0.3%	11	23	1	35	-	Bachelor's degree	None	Moderate-term on-the- job training
13-1071	Human Resources Specialists	1,113	1,170	0.5%	33	75	6	114	-	Bachelor's degree	None	None
13-1075	Labor Relations Specialists	140	120	-1.5%	4	8	-2	10	\$29.42	Bachelor's degree	Less than 5 years	None
13-1081	Logisticians	158	171	0.8%	4	12	1	17		Bachelor's degree	None	None
13-1111	Management Analysts	1,000	1,096	0.9%	34	54	10	98	\$36.79	Bachelor's degree	Less than 5 years	None
13-1121	Meeting, Convention, and Event Planners	389	432	1.1%	16	31	4	51	\$21.76	Bachelor's degree	None	None
13-1131	Fundraisers	466	497	0.6%	15	32	3	50	\$23.77	Bachelor's degree	None	None
13-1141	Compensation, Benefits, and Job Analysis Specialists	190	198	0.4%	5	10	1	16	\$28.00	Bachelor's degree	Less than 5 years	None
13-1151	Training and Development Specialists	693	737	0.6%	22	46	4	72	\$27.80	Bachelor's degree	Less than 5 years	None
13-1161	Market Research Analysts and Marketing Specialists	1,694	2,017	1.8%	49	127	32	208	\$27.64	Bachelor's degree	None	None
	Business Operations Specialists, All Other	962	1,025	0.6%	31	57	6	94		Bachelor's degree	None	None
	Accountants and Auditors	3,713	3,923	0.6%	113	220	21			Bachelor's degree	None	None
	Appraisers and Assessors of Real Estate	242	258	0.6%	9	7	2	18		Bachelor's degree	None	Long-term on-the-job training
13-2031	Budget Analysts	88	94	0.7%	2	4	1	7	\$33.90	Bachelor's degree	None	None
13-2041	Credit Analysts	100	102	0.2%	2	6	0	8	\$30.03	Bachelor's degree	None	None
13-2051	Financial Analysts	177	189	0.7%	4	12	1	17	\$35.85	Bachelor's degree	None	None
13-2052	Personal Financial Advisors	671	718	0.7%	17	34	5	56	\$32.86	Bachelor's degree	None	Long-term on-the-job training
13-2053	Insurance Underwriters	186	160	-1.5%	4	9	-3	10	\$28.08	Bachelor's degree	None	Moderate-term on-the- job training
13-2061	Financial Examiners	54	57	0.5%	2	2	0	4	\$36.50	Bachelor's degree	None	Long-term on-the-job training
13-2071	Credit Counselors	40	42	0.5%	1	2	0	3	n/a	Bachelor's degree	None	Moderate-term on-the- job training
13-2072	Loan Officers	615	652	0.6%	15	35	4	54	\$28.20	Bachelor's degree	None	Moderate-term on-the- job training
13-2081	Tax Examiners and Collectors, and Revenue Agents	108	114	0.5%	3	4	1	8	-	Bachelor's degree	None	Moderate-term on-the- job training
13-2082	Tax Preparers	370	377	0.2%	20	18	1	39	57387	High school diploma or equivalent	None	Moderate-term on-the- job training
	Financial Specialists, All Other	133	146	0.9%	4	7	1	12	\$33.43	Bachelor's degree	None	Moderate-term on-the- job training
	Computer and Mathematical Occupations											
	Computer Systems Analysts	509	546		10	24	4	38		ÿ	None	None
	Information Security Analysts	82	87		2	4	0	6		Bachelor's degree	Less than 5 years	None
15-1131	Computer Programmers	484	430	-1.2%	8	20	-5	23	\$35.42	Bachelor's degree	None	None

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	yment			Annual Job	Openings		Median			
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]		<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	Typical on-the-job training needed to attain competency in the occupation
15-1132	Software Developers, Applications	1,103	1,384	2.3%	17	61	28	106	\$45.68	Bachelor's degree	None	None
15-1133	Software Developers, Systems Software	927	1,033	1.1%	13	48	11	72	\$51.75	Bachelor's degree	None	None
15-1134	Web Developers	861	936	0.8%	17	46	8	71	\$26.43	Associate's degree	None	None
15-1141	Database Administrators	236	251	0.6%	5	10	2	17	\$35.09	Bachelor's degree	None	None
15-1142	Network and Computer Systems Administrators	1,363	1,385	0.2%	19	65	2	86	\$34.32	Bachelor's degree	None	None
15-1143	Computer Network Architects	154	156	0.1%	2	8	0	10	\$38.00	Bachelor's degree	5 years or more	None
15-1151	Computer User Support Specialists	1,243	1,339	0.7%	26	66	10	102	\$23.43	Some college, no degree	None	None
15-1152	Computer Network Support Specialists	355	383	0.8%	8	19	3	30	\$22.99	Associate's degree	None	None
15-1199	Computer Occupations, All Other	207	224	0.8%	4	10	2	16	\$34.37	Bachelor's degree	None	None
15-2031	Operations Research Analysts	59	72	2.0%	1	2	1	4	\$39.16	Bachelor's degree	None	None
15-2041	Statisticians	40	51	2.5%	1	2	1	4	\$31.71	Master's degree	None	None
17-0000	Architecture and Engineering Occupations											
17-1011	Architects, Except Landscape and Naval	432	422	-0.2%	11	19	-1	29	\$33.21	Bachelor's degree	None	Internship/residency
17-1012	Landscape Architects	224	226	0.1%	6	10	0	16	\$24.58	Bachelor's degree	None	Internship/residency
	Cartographers and Photogrammetrists	43	50	1.5%	1	2	1	4		Bachelor's degree	None	None
	Surveyors	107	111	0.4%	3	4	0	7	\$25.10	Bachelor's degree	None	Internship/residency
17-2051	Civil Engineers	822	869	0.6%	18	42	5	65	\$34.64	Bachelor's degree	None	None
17-2071	Electrical Engineers	502	535	0.6%	12	21	3	36	\$48.70	Bachelor's degree	None	None
17-2072	Electronics Engineers, Except Computer	68	71	0.4%	2	3	0	5	\$49.43	Bachelor's degree	None	None
	Environmental Engineers	110	118	0.7%	3	5	1	9	\$40.38	Bachelor's degree	None	None
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	66	66	0.0%	2	3	0	5	\$39.88	Bachelor's degree	None	None
17-2112	Industrial Engineers	542	549	0.1%	12	22	1	35	\$36.66	Bachelor's degree	None	None
17-2141	Mechanical Engineers	493	508	0.3%	10	21	2	33	\$41.75	Bachelor's degree	None	None
	Engineers, All Other	71	70		2	3	0	5		Bachelor's degree	None	None
17-3011	Architectural and Civil Drafters	201	199	-0.1%	6	11	0	17	\$21.55	Associate's degree	None	None
17-3012	Electrical and Electronics Drafters	44	47	0.7%	1	2	0	3	\$37.05	Associate's degree	None	None
17-3013	Mechanical Drafters	91	86	-0.6%	3	5	0	8		Associate's degree	None	None
17-3019	Drafters, All Other	45	43	-0.5%	1	2	0	3		Associate's degree	None	None
17-3022	Civil Engineering Technicians	389	413	0.6%	13	21	2	36	\$24.82	Associate's degree	None	None
17-3023	Electrical and Electronics Engineering Technicians	319	302	-0.5%	10	16	-2	24	\$37.94	Associate's degree	None	None
17-3025	Environmental Engineering Technicians	91	102	1.1%	3	5	1	9	\$23.80	Associate's degree	None	None
17-3026	Industrial Engineering Technicians	1,245	1,163	-0.7%	38	63	-8	93		Associate's degree	None	None
17-3027	Mechanical Engineering Technicians	41	40	-0.2%	1	2	0	3	\$23.58	Associate's degree	None	None
17-3029	Engineering Technicians, Except Drafters, All Other	35	34	-0.3%	1	2	0	3	\$27.13	Associate's degree	None	None
17-3031	Surveying and Mapping Technicians	153	157	0.3%	5	11	0	16	525.01	High school diploma or equivalent	None	Moderate-term on-the- job training
19-0000	Life, Physical, and Social Science Occupations											
19-1012	Food Scientists and Technologists	67	66		2	5	0	7		Bachelor's degree	None	None
19-1022	Microbiologists	40	42	0.5%	1	3	0	4	\$27.19	Bachelor's degree	None	None
19-1023	Zoologists and Wildlife Biologists	122	131		3	8	1	12		Bachelor's degree	None	None
19-1031	Conservation Scientists	114	122	0.7%	2	7	1	10	\$24.48	Bachelor's degree	None	None
19-1032	Foresters	84	84	0.0%	2	5	0	7	\$30.82	Bachelor's degree	None	None

### **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	yment			Annual Job	Opening	5	Median		18/orth	Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
19-2031	Chemists	173	189	0.9%	5	11	2	18	\$30.81	Bachelor's degree	None	None
19-2041	Environmental Scientists and Specialists, Including Health	476	509	0.7%	11	34	3	48	\$30.32	Bachelor's degree	None	None
19-2042	Geoscientists, Except Hydrologists and Geographers	49	52	0.6%	1	4	0	5	\$29.24	Bachelor's degree	None	None
19-3011	Economists	106	109	0.3%	2	6	0	8	\$34.85	Master's degree	None	None
19-3031	Clinical, Counseling, and School Psychologists	783	825	0.5%	20	31	4	55	\$29.13	Doctoral or professional degree	None	Internship/residency
19-3051	Urban and Regional Planners	182	196	0.7%	4	11	1	16	\$27.84	Master's degree	None	None
19-3099	Social Scientists and Related Workers, All Other	41	45	0.9%	1	3	0	4		Bachelor's degree	None	None
19-4021	Biological Technicians	114	125	0.9%	3	8	1	12	\$19.89	Bachelor's degree	None	None
	Chemical Technicians	72	73	0.1%	2	4	0	6		Associate's degree	None	Moderate-term on-the- job training
19-4091	Environmental Science and Protection Technicians, Including Health	85	98	1.4%	4	7	1	12	\$17.47	Associate's degree	None	None
19-4099	Life, Physical, and Social Science Technicians, All Other	64	69	0.8%	3	5	0	8	\$21.67	Associate's degree	None	None
21-0000	Community and Social Service Occupations											
21-1011	Substance Abuse and Behavioral Disorder Counselors	427	493	1.4%	17	30	7	54	\$19.09	Bachelor's degree	None	None
21-1012	Educational, Guidance, School, and Vocational Counselors	805	840	0.4%	30	54	4	88	\$23.39	Master's degree	None	None
21-1014	Mental Health Counselors	849	978	1.4%	34	60	13	107	\$19.09	Master's degree	None	Internship/residency
21-1015	Rehabilitation Counselors	643	731	1.3%	25	45	9	79	\$18.62	Master's degree	None	None
21-1021	Child, Family, and School Social Workers	1,609	1,777	1.0%	61	108	17	186	\$23.90	Bachelor's degree	None	None
21-1022	Healthcare Social Workers	450	528	1.6%	18	31	8	57	\$27.03	Master's degree	None	Internship/residency
21-1023	Mental Health and Substance Abuse Social Workers	1,086	1,229	1.2%	42	74	14	130	\$18.44	Master's degree	None	Internship/residency
21-1029	Social Workers, All Other	106	118	1.1%	4	7	1	12	\$33.36	Bachelor's degree	None	None
21-1091	Health Educators	214	229	0.7%	10	16	2	28	\$26.61	Bachelor's degree	None	None
21-1092	Probation Officers and Correctional Treatment Specialists	216	228	0.5%	7	12	1	20			None	Short-term on-the-job training
21-1093	Social and Human Service Assistants	2,557	2,823	1.0%	120	192	27	339	S16.41	High school diploma or equivalent	None	Short-term on-the-job training
21-1094	Community Health Workers	398	445	1.1%	19	31	5	55	\$14.78	High school diploma or equivalent	None	Short-term on-the-job training
21-1099	Community and Social Service Specialists, All Other	504	555	1.0%	24	39	5	68	\$17.64	Bachelor's degree	None	None
21-2011	Clergy	1,145	1,151	0.1%	53	70	1	124	\$24.67	Bachelor's degree	None	Moderate-term on-the job training
23-0000	Legal Occupations											
23-1011	Lawyers	1,947	1,970	0.1%	39	42	2	83	\$41.98	Doctoral or professional degree	None	None
23-1021	Administrative Law Judges, Adjudicators, and Hearing Officers	50	50	0.0%	1	1	0	2	\$30.81	Doctoral or professional degree	5 years or more	Short-term on-the-job training
23-1023	Judges, Magistrate Judges, and Magistrates	95	95	0.0%	2	2	0	4	n/a	Doctoral or professional degree	5 years or more	Short-term on-the-job training
23-2011	Paralegals and Legal Assistants	705	764	0.8%	24	49	6	79	\$23.85	Associate's degree	None	None
23-2099	Legal Support Workers, All Other	98	107	0.9%	4	5	1	10	\$25.99	Associate's degree	None	None
25-0000	Education, Training, and Library Occupations											
25-1011	Business Teachers, Postsecondary	184	195	0.6%	7	7	1	15	n/a	Doctoral or professional degree	None	None

### **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

Source: Ve	ermont Department of Labor, Economic and Labor Market Information, Employment Projections and	nd Occupational	Employmer	nt and Wages	Programs, ir	n cooperation	with the U.S	6. Bureau of L	abor Statistics	<b></b>	released: Projections: J	uly 2018, Wage: April 2019
		Emplo	yment			Annual Job	Opening	5	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
25-1021	Computer Science Teachers, Postsecondary	77	75	-0.3%	3	3	C	6	n/a	Doctoral or professional degree	None	None
25-1022	Mathematical Science Teachers, Postsecondary	197	193	-0.2%	7	7	0	14	n/a	Doctoral or professional degree	None	None
25-1042	Biological Science Teachers, Postsecondary	237	245	0.3%	9	9	1	. 19	n/a	Doctoral or professional degree	None	None
25-1054	Physics Teachers, Postsecondary	46	46	0.0%	2	2	0	) 4	n/a	Doctoral or professional degree	None	None
25-1063	Economics Teachers, Postsecondary	119	118	-0.1%	4	4	0	8	n/a	Doctoral or professional degree	None	None
25-1064	Geography Teachers, Postsecondary	41	40	-0.2%	2	2	C	) 4	n/a	Doctoral or professional degree	None	None
25-1067	Sociology Teachers, Postsecondary	94	92	-0.2%	3	4	0	) 7	n/a	Doctoral or professional degree	None	None
25-1071	Health Specialties Teachers, Postsecondary	103	117	1.3%	4	4	1	. 9	n/a	Doctoral or professional degree	Less than 5 years	None
25-1081	Education Teachers, Postsecondary	177	175		6	7	0	13	-	Doctoral or professional degree	Less than 5 years	None
25-1121	Art, Drama, and Music Teachers, Postsecondary	351	352	0.0%	13	13	0	26	n/a	Master's degree	None	None
25-1122	Communications Teachers, Postsecondary	105	103	-0.2%	4	4	0	8	n/a	Doctoral or professional degree	None	None
25-1123	English Language and Literature Teachers, Postsecondary	553	544	-0.2%	20	21	-1	. 40	n/a	Doctoral or professional degree	None	None
25-1124	Foreign Language and Literature Teachers, Postsecondary	270	271	0.0%	10	10	o	20	n/a	Doctoral or professional degree	None	None
25-1125	History Teachers, Postsecondary	196	194	-0.1%	7	7	C	14	n/a	Doctoral or professional degree	None	None
25-1126	Philosophy and Religion Teachers, Postsecondary	173	176	0.2%	6	7	C	13		Doctoral or professional degree	None	None
25-1193	Recreation and Fitness Studies Teachers, Postsecondary	42	41	-0.2%	2	2	0	4	n/a	Doctoral or professional degree	None	None
25-1194	Vocational Education Teachers, Postsecondary	108	99	-0.9%	4	4	-1	. 7	\$26.40	Bachelor's degree	Less than 5 years	None
	Postsecondary Teachers, All Other	302	296		11	11	-1	. 21		Doctoral or professional degree	None	None
	Preschool Teachers, Except Special Education	1,144	1,159	0.1%	50	62		2 114		Associate's degree	None	None
	Kindergarten Teachers, Except Special Education	361	349	-0.3%	15	19				Bachelor's degree	None	None
	Elementary School Teachers, Except Special Education	3,462	3,330	-0.4%	112					Bachelor's degree	None	None
	Middle School Teachers, Except Special and Career/Technical Education	987	951	-0.4%	32	36				Bachelor's degree	None	None
	Secondary School Teachers, Except Special and Career/Technical Education	2,440	2,360	-0.3%	74	90	-8			Bachelor's degree	None	None
	Career/Technical Education Teachers, Secondary School	236	226		7	9	-1	. 15		Bachelor's degree	Less than 5 years	None
	Special Education Teachers, Preschool	94	94		3	3	0	6		Bachelor's degree	None	None
	Special Education Teachers, Kindergarten and Elementary School	739	712		24	26	-3			Bachelor's degree	None	None
	Special Education Teachers, Middle School	229	221		8	8	-1			Bachelor's degree	None	None
25-2054	Special Education Teachers, Secondary School	471	471	0.0%	16	17	0	33	\$61,780/yr	Bachelor's degree	None	None

## **Vermont Statewide**

occupations with 30+ employment in 2016

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		Emplo	oyment			Annual Job	Openings	5	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
25-3011	Adult Basic and Secondary Education and Literacy Teachers and Instructors	151	136	-1.0%	9	7	-2	14	\$26.80	Bachelor's degree	None	None
25-3021	Self-Enrichment Education Teachers	1,067	1,148	0.7%	68	52	8	128	\$20.59	High school diploma or equivalent	Less than 5 years	None
25-3097	Teachers and Instructors, All Other, Except Substitute Teachers	415	419	0.1%	25	20	0	45		Bachelor's degree	None	None
25-3098	Substitute Teachers	3,810	3,752	-0.2%	230	177	-6	401	\$13.45	High school diploma or equivalent	None	None
25-4011	Archivists	39	42	0.7%	2	2	0	4	\$22.57	Master's degree	None	None
25-4012	Curators	51	56	0.9%	2	3	0	5	\$26.68	Master's degree	None	None
25-4013	Museum Technicians and Conservators	38	43		2	2	0	4	\$18.64	Bachelor's degree	None	None
25-4021	Librarians	737	723	-0.2%	40	27	-1	66	\$20.24	Master's degree	None	None
25-4031	Library Technicians	544	545	0.0%	43	28	0	71	\$15.62	Postsecondary non- degree award	None	None
25-9031	Instructional Coordinators	615	633	0.3%	30	26	2	58	\$24.62	Master's degree	5 years or more	None
25-9041	Teacher Assistants	4,863	4,739	-0.3%	264	219	-12	471	\$31,700/yr	Some college, no degree	None	None
25-9099	Education, Training, and Library Workers, All Other	90	92	0.2%	4	4	0	8	\$25.86	Bachelor's degree	None	None
27-0000	Arts, Design, Entertainment, Sports, and Media Occupations											
27-1011	Art Directors	399	386	-0.3%	19	12	-1	30	\$40.82	Bachelor's degree	5 years or more	None
	Fine Artists, Including Painters, Sculptors, and Illustrators	113	112		6	3	0	9	-	Bachelor's degree	None	Long-term on-the-job training
	Commercial and Industrial Designers	266	262		9	15	0	24		Bachelor's degree	None	None
27-1022	Fashion Designers	53	54	0.2%	2	3	0	5		Bachelor's degree	None	None
27-1023	Floral Designers	208	190		7	11	-2	16	\$15.40	High school diploma or equivalent	None	Moderate-term on-the- job training
	Graphic Designers	876	880		31	49	0	80		Bachelor's degree	None	None
27-1025	Interior Designers	99	95	-0.4%	3	6	0	9		Bachelor's degree	None	None
	Merchandise Displayers and Window Trimmers	209	208		7	12	0	19	\$14.29	equivalent	None	Short-term on-the-job training
	Producers and Directors	457	483		12	29	1	44		Bachelor's degree	Less than 5 years	None
27-2022	Coaches and Scouts	1,875	1,949	0.4%	107	144	7	258		Bachelor's degree	None	None
	Umpires, Referees, and Other Sports Officials	74	76	0.3%	4	6	0	10	\$34,440/yr	equivalent	None	Moderate-term on-the- job training
	Music Directors and Composers	117	110		6	4	-1	9		Bachelor's degree	Less than 5 years	None
	Radio and Television Announcers	328	295		13	16		26		Bachelor's degree	None	None
	Reporters and Correspondents	196			6	12		16		Bachelor's degree	None	None
	Public Relations Specialists	1,103	1,150		32	76		113	-	Bachelor's degree	None	None
	Editors Technical Writers	492 129	461 140		16 4	30 8	-3	43 13		Bachelor's degree Bachelor's degree	Less than 5 years Less than 5 years	None Short-term on-the-job
27-3043	Writers and Authors	907	887	-0.2%	38	38	-2	74	\$30.83	Bachelor's degree	None	training Long-term on-the-job training
27-3091	Interpreters and Translators	276	288	0.4%	13	12	1	26	\$18.32	Bachelor's degree	None	None
	Media and Communication Workers, All Other	163	176		8	7	1	16	\$17.91	High school diploma or	None	Short-term on-the-job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	yment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
27-4011	Audio and Video Equipment Technicians	113	123	0.9%	3	7	1	11	\$17.56	Postsecondary non- degree award	None	Short-term on-the-job training
27-4012	Broadcast Technicians	73	72	-0.1%	2	4	0	6	-	Associate's degree	None	Short-term on-the-job training
	Photographers	870	842	-0.3%	37	30	-3	64	\$20.78	equivalent	None	Long-term on-the-job training
	Camera Operators, Television, Video, and Motion Picture	139	150	0.8%	4	9	1	14		Bachelor's degree	None	None
	Film and Video Editors	35	38	0.8%	1	2	. 0	3	\$19.58	Bachelor's degree	None	None
	Healthcare Practitioners and Technical Occupations Chiropractors	166	167	0.1%	3	1	0	4	n/a	professional degree	None	None
	Dentists, General	285	300	0.5%	5	2	2	9	n/a	Doctoral or professional degree	None	None
29-1031	Dietitians and Nutritionists	243	264	0.8%	8	7	2	17	-	Bachelor's degree	None	Internship/residency
29-1041	Optometrists	116	120	0.3%	2	2	0	4	\$68.21	Doctoral or professional degree	None	None
29-1051	Pharmacists	504	520	0.3%	12	10	2	24	\$67.30	Doctoral or professional degree	None	None
29-1061	Anesthesiologists	100	100	0.0%	2	1	0	3	\$100.00+	Doctoral or professional degree	None	Internship/residency
29-1062	Family and General Practitioners	382	384	0.1%	6	4	0	10	\$96.75	Doctoral or professional degree	None	Internship/residency
29-1063	Internists, General	282	282	0.0%	4	3	0	7	\$98.55	Doctoral or professional degree	None	Internship/residency
29-1064	Obstetricians and Gynecologists	171	172	0.1%	2	2	0	4	\$99.24	Doctoral or professional degree	None	Internship/residency
29-1065	Pediatricians, General	245	244	0.0%	4	3	0	7	\$74.83	Doctoral or professional degree	None	Internship/residency
29-1066	Psychiatrists	234	234	0.0%	3	3	0	6	\$86.58	professional degree	None	Internship/residency
29-1067	Surgeons	353	353	0.0%	5	4	0	9	\$100.00+	Doctoral or professional degree	None	Internship/residency
	Physicians and Surgeons, All Other	1,202	1,239	0.3%	18	14		36	\$72.61	professional degree	None	Internship/residency
	Physician Assistants	320	410	2.5%	6	13		28	-	Master's degree	None	None
29-1122	Occupational Therapists	329	384	1.6%	7	10	6	23	\$37.32	Master's degree	None	None
	Physical Therapists	903	1,089	1.9%	19	21	19	59		Doctoral or professional degree	None	None
	Radiation Therapists	48	53	1.0%	1	1	. 0	2		Associate's degree	None	None
	Recreational Therapists	36	37	0.3%	1	1 -	0	2		Bachelor's degree	None	None
	Respiratory Therapists	215 418	259 429	1.9% 0.3%	6	13	4	15 22		Associate's degree Master's degree	None	None Internship/residency
	Speech-Language Pathologists				ŏ	13			Ş34.34	Doctoral or	None	
29-1131	Veterinarians	310	340	0.9%	6	5	3	14	\$46.52	Doctoral or professional degree	None	None

### **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

Source: Vermont Department of Labor, Economic and Labor Market Information, Employment Projections and C	Occupational	Employmer	nt and Wages	Programs, ir	n cooperation	with the U.S	. Bureau of La	abor Statistics		released: Projections:	uly 2018, Wage: April 2019
	Emplo	oyment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Job Title Code	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
29-1141 Registered Nurses	5,980	6,757	1.2%	182	138	78	398		Bachelor's degree	None	None
29-1161 Nurse Midwives	49	54	1.0%	1	2	0	3	\$43.97	Master's degree	None	None
29-1171 Nurse Practitioners	547			12	18	13	43	\$48.87	Master's degree	None	None
29-1199 Health Diagnosing and Treating Practitioners, All Other	265			11	3	2	16		Master's degree	None	None
29-2011 Medical and Clinical Laboratory Technologists	180			6	6	2	14	\$26.68	Bachelor's degree	None	None
29-2012 Medical and Clinical Laboratory Technicians	249			8	8	3	19	\$26.68	Associate's degree	None	None
29-2021 Dental Hygienists	752	777	0.3%	28	17	2	47	\$34.15	Associate's degree	None	None
29-2031 Cardiovascular Technologists and Technicians	48	54	1.2%	1	1	1	3	\$22.38	Associate's degree	None	None
29-2032 Diagnostic Medical Sonographers	77	96	2.2%	2	2	2	6	\$37.59	Associate's degree	None	None
29-2034 Radiologic Technologists	408	454	1.1%	11	11	5	27	\$29.40	Associate's degree	None	None
29-2035 Magnetic Resonance Imaging Technologists	39	43	1.0%	1	1	0	2	\$38.53	Associate's degree	Less than 5 years	None
29-2041 Emergency Medical Technicians and Paramedics	489	520	0.6%	9	21	3	33	\$15.67	Postsecondary non- degree award	None	None
29-2051 Dietetic Technicians	38	42	1.0%	1	2	0	3	\$13.90	Associate's degree	None	None
29-2052 Pharmacy Technicians	532			18	25	5	48		High school diploma or	None	Moderate-term on-the- job training
29-2053 Psychiatric Technicians	253	268	0.6%	8	12	2	22	\$18.97	Postsecondary non-	Less than 5 years	Short-term on-the-job training
29-2055 Surgical Technologists	78	87	1.1%	3	4	1	8	\$18.73	Postsecondary non-	None	None
29-2056 Veterinary Technologists and Technicians	408	464	1.3%	14	19	6	39	\$16.53	Associate's degree	None	None
29-2057 Ophthalmic Medical Technicians	215			7	10	1	18		Postsecondary non- degree award	None	None
29-2061 Licensed Practical and Licensed Vocational Nurses	1,375	1,419	0.3%	49	48	4	101	\$23.40	Postsecondary non- degree award	None	None
29-2071 Medical Records and Health Information Technicians	496	546	1.0%	15	16	5	36		Postsecondary non-	None	None
29-2081 Opticians, Dispensing	110	115	0.4%	4	4	0	8	\$22.18	degree award High school diploma or	None	Long-term on-the-job training
29-2099 Health Technologists and Technicians, All Other	185	209	1.2%	6	6	2	14	\$21.55	equivalent Postsecondary non-	None	None
29-9011 Occupational Health and Safety Specialists	125	128	0.2%	2		0	7	¢21.04	degree award Bachelor's degree	None	None
29-9091 Athletic Trainers	88			3	4	1	,		Bachelor's degree	None	None
	00	33	1.270	2	3	±	0	330,910/yi	Postsecondary non-	None	NONE
29-9099 Healthcare Practitioners and Technical Workers, All Other	70	77	1.0%	2	2	1	5	n/a	degree award	None	None
31-0000 Healthcare Support Occupations											
31-1011 Home Health Aides	572	763	2.9%	41	34	19	94	51341	High school diploma or equivalent	None	Short-term on-the-job training
31-1014 Nursing Assistants	3,515	3,686		219	182	17	418		degree award	None	None
31-2011 Occupational Therapy Assistants	81	94	1.5%	4	6	1	11	\$28.26	Associate's degree	None	None
31-2021 Physical Therapist Assistants	158	191	1.9%	8	13	3	24		Associate's degree	None	None
31-2022 Physical Therapist Aides	77	92	1.8%	4	6	2	12	516.87	High school diploma or equivalent	None	Short-term on-the-job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

Source: Ve	rmont Department of Labor, Economic and Labor Market Information, Employment Projections and Oc	cupational f	Employmen	t and Wages	Programs, ir	n cooperation	with the U.S	. Bureau of La	abor Statistics		released: Projections: J	uly 2018, Wage: April 2019
		Emplo	yment			Annual Job	Openings	;	Median		Morte	Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
31-9011	Massage Therapists	1,085	1,160	0.7%	73	40	8	121	517.58	Postsecondary non- degree award	None	None
31-9091	Dental Assistants	515	532	0.3%	27	30	2	59	\$21.17	Postsecondary non- degree award	None	None
31-9092	Medical Assistants	659	771	1.6%	31	44	11	86	\$17.45	Postsecondary non- degree award	None	None
31-9093	Medical Equipment Preparers	105	116	1.0%	7	7	1	15	516.65	High school diploma or equivalent	None	Moderate-term on-the- job training
31-9094	Medical Transcriptionists	179	166	-0.8%	12	9	-1	20	\$19.17	Postsecondary non- degree award	None	None
31-9095	Pharmacy Aides	210	184	-1.3%	13	13	-3	23	\$11.28	equivalent	None	Short-term on-the-job training
31-9096	Veterinary Assistants and Laboratory Animal Caretakers	121	137	1.2%	7	12	2	21	\$14.23	High school diploma or equivalent	None	Short-term on-the-job training
31-9097	Phlebotomists	235	266	1.2%	11	14	3	28	\$16.47	Postsecondary non- degree award	None	None
31-9099	Healthcare Support Workers, All Other	127	140	1.0%	8	8	1	17	519.88	High school diploma or equivalent	None	None
33-0000	Protective Service Occupations											Manhamata tanun an tha
33-1012	First-Line Supervisors of Police and Detectives	182	186	0.2%	5	6	0	11	\$42.66	equivalent	Less than 5 years	Moderate-term on-the- job training
33-1021	First-Line Supervisors of Fire Fighting and Prevention Workers	57	58	0.2%	2	2	0	4	\$31.60	dogroo oward	Less than 5 years	Moderate-term on-the- job training
33-1099	First-Line Supervisors of Protective Service Workers, All Other	121	122	0.1%	6	6	0	12		High school diploma or equivalent	Less than 5 years	None
33-2011	Firefighters	236	245	0.4%	5	10	1	16	516.70	Postsecondary non- degree award	None	Long-term on-the-job training
33-2021	Fire Inspectors and Investigators	33	38	1.4%	2	2	0	4	57775	Postsecondary non- degree award	5 years or more	Moderate-term on-the- job training
33-3021	Detectives and Criminal Investigators	232	251	0.8%	6	8	2	16	\$39.99	High school diploma or equivalent	Less than 5 years	Moderate-term on-the- job training
33-3051	Police and Sheriff's Patrol Officers	1,321	1,344	0.2%	32	52	2	86	525.18	High school diploma or equivalent	None	Moderate-term on-the- job training
33-9011	Animal Control Workers	85	92	0.8%	4	5	1	10	518.58	High school diploma or equivalent	None	Moderate-term on-the- job training
33-9032	Security Guards	1,124	1,151	0.2%	68	80	3	151	n/a	High school diploma or equivalent	None	Short-term on-the-job training
33-9091	Crossing Guards	433	458	0.6%	62	18	2	82	\$14.84	No formal educational credential	None	Short-term on-the-job training
33-9092	Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	364	392	0.7%	52	40	3	95	511.70	No formal educational credential	None	Short-term on-the-job training
33-9093	Transportation Security Screeners	81	81	0.0%	4	3	0	7	\$19.90	High school diploma or equivalent	None	Short-term on-the-job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

Source: Vermont Department of Labor, Economic and Labor Market Information, Employment Projections and Oc	cupational	Employmer	nt and Wages	Programs, ir	n cooperation	with the U.S	. Bureau of L	abor Statistics	5	released: Projections:	July 2018, Wage: April 2019
	Emplo	oyment			Annual Job	Openings		Median		Mark	Typical on-the-job
2010 SOC Job Title Code	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
33-9099 Protective Service Workers, All Other	197	206	0.4%	28	21	1	50	n/a	High school diploma or equivalent	None	Short-term on-the-job training
35-0000 Food Preparation and Serving Related Occupations											
35-1011 Chefs and Head Cooks	463	481	0.4%	15	43	2	60		High school diploma or equivalent		None
35-1012 First-Line Supervisors of Food Preparation and Serving Workers	1,922	2,009	0.4%	88	188	9	285	\$19.88	High school diploma or equivalent	Less than 5 years	None
35-2011 Cooks, Fast Food	665	607	-0.9%	37	51	-6	82	\$11.47	No formal educational credential	None	Short-term on-the-job training
35-2012 Cooks, Institution and Cafeteria	1,128	1,176	0.4%	68	92	5	165	\$14.74	No formal educational credential	None	Short-term on-the-job training
35-2014 Cooks, Restaurant	2,553	2,736	0.7%	155	212	18	385	\$14.72	No formal educational credential	Less than 5 years	Moderate-term on-the- job training
35-2015 Cooks, Short Order	538	508	-0.6%	31	42	-3	70	S13.39	No formal educational credential	None	Short-term on-the-job training
35-2019 Cooks, All Other	40	42	0.5%	2	3	0	5	\$16.11	No formal educational credential	None	Moderate-term on-the- job training
35-2021 Food Preparation Workers	1,782	1,846	0.4%	145	157	6	308	\$12.42	No formal educational credential	None	Short-term on-the-job training
35-3011 Bartenders	1,973	1,988	0.1%	95	227	2	324	\$17.31	No formal educational credential	None	Short-term on-the-job training
35-3021 Combined Food Preparation and Serving Workers, Including Fast Food	6,291	6,939	1.0%	586	613	65	1,264	\$11.91	Icrodontial	None	Short-term on-the-job training
35-3022 Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	1,142	1,146	0.0%	137	108	0	245	\$11.54	No formal educational credential	None	Short-term on-the-job training
35-3031 Waiters and Waitresses	5,628	5,952	0.6%	429	657	32	1,118	\$1533	No formal educational credential	None	Short-term on-the-job training
35-3041 Food Servers, Nonrestaurant	366	381	0.4%	28	26	2	56	\$13.08	No formal educational credential	None	Short-term on-the-job training
35-9011 Dining Room and Cafeteria Attendants and Bartender Helpers	1,072	1,092	0.2%	96	86	2	184	\$12.16	No formal educational credential	None	Short-term on-the-job training
35-9021 Dishwashers	1,437	1,443	0.0%	106	115	1	222	\$11.95	No formal educational credential	None	Short-term on-the-job training
35-9031 Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	615	636	0.3%	72	68	2	142	\$11.74	No formal educational credential	None	Short-term on-the-job training
35-9099 Food Preparation and Serving Related Workers, All Other	76	78	0.3%	7	6	0	13	\$12.50	No formal educational credential	None	Short-term on-the-job training
37-0000 Building and Grounds Cleaning and Maintenance Occupations											
37-1012 First-Line Supervisors of Landscaping, Lawn Service, and Groundskeeping Workers	814	858	0.5%	27	50	4	81	574 19	equivalent	Less than 5 years	None
37-2011 Janitors and Cleaners, Except Maids and Housekeeping Cleaners	5,517	5,781	0.5%	368	355	26	749		credential	None	Short-term on-the-job training
37-2012 Maids and Housekeeping Cleaners	4,007	4,161	0.4%	302	228	15	545	S12.1/	No formal educational credential	None	Short-term on-the-job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	oyment			Annual Job	Openings	5	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]		<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
37-2021	Pest Control Workers	83	89	0.7%	3	8	1	12	n/a	equivalent	None	Moderate-term on-the- job training
37-3011	Landscaping and Groundskeeping Workers	4,995	5,321	0.6%	241	368	33	642	\$15.07	No formal educational credential	None	Short-term on-the-job training
39-0000	Personal Care and Service Occupations						1	1				
39-1021	First-Line Supervisors of Personal Service Workers	962	1,021	0.6%	48	45	6	99	\$20.83	High school diploma or equivalent	Less than 5 years	None
39-2021	Nonfarm Animal Caretakers	722	828	1.4%	53	62	11	126	\$11.91	High school diploma or equivalent	None	Short-term on-the-job training
39-3031	Ushers, Lobby Attendants, and Ticket Takers	50	56	1.1%	7	6	1	14	\$11.93	No formal educational credential	None	Short-term on-the-job training
39-3091	Amusement and Recreation Attendants	408	443	0.8%	45	51	4	100	\$11.75	No formal educational credential	None	Short-term on-the-job training
39-4021	Funeral Attendants	70	65	-0.7%	6	4	0	10	\$18.45	High school diploma or equivalent	None	Short-term on-the-job training
39-4031	Morticians, Undertakers, and Funeral Directors	98	91	-0.7%	5	7	-1	11	\$33.06	Associate's degree	None	Long-term on-the-job training
39-5012	Hairdressers, Hairstylists, and Cosmetologists	1,799	1,848	0.3%	122	91	5	218	\$13.15	Postsecondary non- degree award	None	None
39-5094	Skincare Specialists	272	280	0.3%	17	14	1	32	\$26.68	Postsecondary non- degree award	None	None
39-6011	Baggage Porters and Bellhops	156	166	0.6%	8	14	1	23	\$11.64	High school diploma or equivalent	None	Short-term on-the-job training
39-6012	Concierges	33	35	0.6%	2	3	0	5	\$14.73	High school diploma or equivalent	None	Moderate-term on-the- job training
39-7011	Tour Guides and Escorts	213	236	1.0%	20	19	2	41	\$12.53	High school diploma or equivalent	None	Moderate-term on-the- job training
39-9011	Childcare Workers	2,905	2,908	0.0%	237	180	0	417	\$13.27	lequivalent	None	Short-term on-the-job training
39-9021	Personal Care Aides	7,539	9,777	2.6%	691	520	224	1,435	\$13.24	High school diploma or equivalent	None	Short-term on-the-job training
39-9031	Fitness Trainers and Aerobics Instructors	1,155	1,232	0.6%	78	119	8	205	\$19.85	High school diploma or equivalent	None	Short-term on-the-job training
39-9032	Recreation Workers	1,418	1,528	0.7%	96	147	11	254	\$12.91	High school diploma or equivalent	None	Short-term on-the-job training
39-9041	Residential Advisors	408	421	0.3%	28	41	1	70	\$16.18	High school diploma or equivalent	None	Short-term on-the-job training
39-9099	Personal Care and Service Workers, All Other	69	71	0.3%	5	5	0	10	\$13.60	High school diploma or equivalent	None	Short-term on-the-job training
41-0000	Sales and Related Occupations							1				
41-1011	First-Line Supervisors of Retail Sales Workers	4,754	4,619	-0.3%	173	315	-14	474	\$21.77	equivalent	Less than 5 years	None
41-1012	First-Line Supervisors of Non-Retail Sales Workers	1,821	1,779	-0.2%	60	100	-4	156	\$35.75	High school diploma or equivalent	Less than 5 years	None

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

Source: Vermont Department of Labor, Economic and Labor Market Information, Employment Projections and C	ccupational	Employmer	t and Wages	Programs, ii	n cooperation	with the U.S.	Bureau of La	abor Statistics	; [	released: Projections: J	uly 2018, Wage: April 2019
	Emplo	oyment			Annual Job	Openings		Median		) <b>N</b> ( a sh	Typical on-the-job
2010 SOC Job Title Code	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
41-2011 Cashiers	9,934	9,558		915	893	-38	1,770	\$11.57	No formal educational credential	None	Short-term on-the-job training
41-2021 Counter and Rental Clerks	931	946	0.2%	49	69	2	120	\$15.63	No formal educational credential	None	Short-term on-the-job training
41-2022 Parts Salespersons	589	586	-0.1%	26	46	0	72	\$16.93	credential	None	Moderate-term on-the- job training
41-2031 Retail Salespersons	9,834	9,612	-0.2%	616	772	-22	1,366	\$12.72	credential	None	Short-term on-the-job training
41-3011 Advertising Sales Agents	316	285	-1.0%	11	26	-3	34	\$22.26	equivalent	None	Moderate-term on-the- job training
41-3021 Insurance Sales Agents	1,951	1,947	0.0%	79	105	0	184	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
41-3031 Securities, Commodities, and Financial Services Sales Agents	542	561	0.3%	14	36	2	52	\$35.05	Bachelor's degree	None	Moderate-term on-the- job training
41-3041 Travel Agents	228	195	-1.6%	11	13	-3	21	\$19.56	equivalent	None	Moderate-term on-the- job training
41-3099 Sales Representatives, Services, All Other	1,104	1,150	0.4%	36	97	5	138	\$25.00	High school diploma or equivalent	None	Moderate-term on-the- job training
41-4011 Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	625	652	0.4%	21	43	3	67	\$37.19	Bachelor's degree	None	Moderate-term on-the- job training
41-4012 Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	2,585	2,647	0.2%	86	175	6	267	\$28.76	equivalent	None	Moderate-term on-the- job training
41-9011 Demonstrators and Product Promoters	86	87	0.1%	9	6	0	15	\$13.21	No formal educational credential	None	Short-term on-the-job training
41-9022 Real Estate Sales Agents	637	630	-0.1%	32	25	-1	56	\$27.11	High school diploma or equivalent	None	Moderate-term on-the- job training
41-9031 Sales Engineers	102	96	-0.6%	2	8	-1	9	n/a	Bachelor's degree	None	Moderate-term on-the- job training
41-9041 Telemarketers	67	62	-0.8%	4	6	0	10	n/a	No formal educational credential	None	Short-term on-the-job training
43-0000 Office and Administrative Support Occupations								1	High school diploma or		
43-1011 First-Line Supervisors of Office and Administrative Support Workers	2,035	2,040	0.0%	79	118	0	197	\$27.06	equivalent	Less than 5 years	None
43-2011 Switchboard Operators, Including Answering Service	207	162	-2.4%	12	12	-4	20	\$14.30	equivalent	None	Short-term on-the-job training
43-3011 Bill and Account Collectors	405	385	-0.5%	15	26	-2	39	\$19.43	equivalent	None	Moderate-term on-the- job training
43-3021 Billing and Posting Clerks	1,087	1,176	0.8%	48	62	9	119	\$18.61	equivalent	None	Moderate-term on-the- job training
43-3031 Bookkeeping, Accounting, and Auditing Clerks	6,075	5,857	-0.4%	369	287	-22	634	\$19.82	degree	None	Moderate-term on-the- job training
43-3051 Payroll and Timekeeping Clerks	337	322	-0.5%	14	18	-2	30	\$20.98	High school diploma or equivalent	None	Moderate-term on-the- job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

	Emplo	yment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Job Title Code	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
43-3061 Procurement Clerks	135	129	-0.5%	6	9	-1	14	\$20.28	High school diploma or equivalent	None	Moderate-term on-the- job training
43-3071 Tellers	1,121	985	-1.3%	54	68	-14	108	\$14.51	equivalent	None	Short-term on-the-job training
43-4011 Brokerage Clerks	52	55	0.6%	1	4	0	5	\$26.07	equivalent	None	Moderate-term on-the- job training
43-4031 Court, Municipal, and License Clerks	756	956	2.4%	38	34	20	92	\$20.51	equivalent	None	Moderate-term on-the- job training
43-4051 Customer Service Representatives	3,503	3,567	0.2%	181	265	6	452	\$17.17	equivalent	None	Short-term on-the-job training
43-4061 Eligibility Interviewers, Government Programs	65	69	0.6%	3	3	0	6	\$25.77	equivalent	None	Moderate-term on-the- job training
43-4081 Hotel, Motel, and Resort Desk Clerks	940	1,004	0.7%	54	96	6	156	\$13.09	equivalent	None	Short-term on-the-job training
43-4111 Interviewers, Except Eligibility and Loan	340	365	0.7%	19	22	2	43	\$19.44	equivalent	None	Short-term on-the-job training
43-4121 Library Assistants, Clerical	286	295	0.3%	23	18	1	42	\$12.94	equivalent	None	Short-term on-the-job training
43-4131 Loan Interviewers and Clerks	236	254	0.7%	9	14	2	25	\$19.00	equivalent	None	Short-term on-the-job training
43-4151 Order Clerks	814	776		37			85	\$17.06	equivalent	None	Short-term on-the-job training
43-4161 Human Resources Assistants, Except Payroll and Timekeeping	168	161	-0.4%	7	11	-1	17	\$18.39	Associate's degree	None	None
43-4171 Receptionists and Information Clerks	2,556	2,584	0.1%	160	171	3	334	\$15.72	equivalent	None	Short-term on-the-job training
43-4181 Reservation and Transportation Ticket Agents and Travel Clerks	200	212	0.6%	9	12	1	22	\$14.03	equivalent	None	Short-term on-the-job training
43-4199 Information and Record Clerks, All Other	206	220	0.7%	10	13	1	24	\$20.88	equivalent	None	Short-term on-the-job training
43-5011 Cargo and Freight Agents	59	65	1.0%	2	3	1	6	\$18.47	equivalent	None	Short-term on-the-job training
43-5021 Couriers and Messengers	442	467	0.6%	21	20	2	43	\$15.72	equivalent	None	Short-term on-the-job training
43-5031 Police, Fire, and Ambulance Dispatchers	287	286	0.0%	10	15	0	25	\$21.76	equivalent	None	Moderate-term on-the- job training
43-5032 Dispatchers, Except Police, Fire, and Ambulance	364	345	-0.5%	12	19	-2	29	\$19.38	High school diploma or equivalent High school diploma or	None	Moderate-term on-the- job training
43-5041 Meter Readers, Utilities	63	58	-0.8%	2	2	0	4	\$24.78	equivalent High school diploma or	None	Short-term on-the-job training
43-5051 Postal Service Clerks	429	401	-0.7%	21	11	-3	29	\$21.88	equivalent	None	Short-term on-the-job training
43-5052 Postal Service Mail Carriers	737	690	-0.7%	28	20	-5	43	\$22.37	High school diploma or equivalent	None	Short-term on-the-job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

	Emplo	oyment			Annual Job	Openings		Median		Work	Typical on-the-job
2010 SOC Job Title Code	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	experience in a related occupation	training needed to attain competency in the occupation
43-5053 Postal Service Mail Sorters, Processors, and Processing Machine Operators	185	165	-1.1%	7	5	-2	10	\$28.26	High school diploma or equivalent	None	Short-term on-the-job training
43-5061 Production, Planning, and Expediting Clerks	451	458	0.2%	16	30	1	47	\$22.72	High school diploma or equivalent	None	Moderate-term on-the- job training
43-5071 Shipping, Receiving, and Traffic Clerks	1,742	1,698	-0.3%	67	102	-4	165	\$16.27	High school diploma or equivalent	None	Short-term on-the-job training
43-5081 Stock Clerks and Order Fillers	2,702	2,784	0.3%	150	195	8	353	\$13.35	High school diploma or equivalent	None	Short-term on-the-job training
43-5111 Weighers, Measurers, Checkers, and Samplers, Recordkeeping	230	240	0.4%	9	13	1	23	\$20.18	equivalent	None	Short-term on-the-job training
43-6011 Executive Secretaries and Executive Administrative Assistants	2,182	1,748	-2.2%	106	103	-43	166	\$25.72	equivalent	Less than 5 years	None
43-6012 Legal Secretaries	358	278	-2.5%	17	17	-8	26	\$22.58	equivalent	None	Moderate-term on-the- job training
43-6013 Medical Secretaries	994	1,126	1.3%	57	56	13	126	\$18.38	equivalent	None	Moderate-term on-the- job training
43-6014 Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	6,059	5,444	-1.1%	310	301	-62	549	\$17.41	High school diploma or equivalent	None	Short-term on-the-job training
43-9011 Computer Operators	61	47	-2.6%	2	3	-1	4	\$19.33	equivalent	None	Moderate-term on-the- job training
43-9021 Data Entry Keyers	486	375	-2.6%	22	28	-11	39	\$16.51	High school diploma or equivalent	None	Short-term on-the-job training
43-9031 Desktop Publishers	62	54	-1.4%	2	4	-1	5	\$20.23	Associate's degree	None	Short-term on-the-job training
43-9041 Insurance Claims and Policy Processing Clerks	594	606	0.2%	26	34	1	61	\$19.30	equivalent	None	Moderate-term on-the- job training
43-9051 Mail Clerks and Mail Machine Operators, Except Postal Service	131	121	-0.8%	7	7	-1	13	\$16.95	equivalent	None	Short-term on-the-job training
43-9061 Office Clerks, General	1,755	1,665	-0.5%	100	98	-9	189	\$16.37	High school diploma or equivalent	None	Short-term on-the-job training
43-9071 Office Machine Operators, Except Computer	87	66	-2.7%	3	5	-2	6	\$14.15	equivalent	None	Short-term on-the-job training
43-9199 Office and Administrative Support Workers, All Other	317	323	0.2%	14	20	1	35	\$20.88	High school diploma or equivalent	None	Short-term on-the-job training
45-0000 Farming, Fishing, and Forestry Occupations									High school diploma or		
45-1011 First-Line Supervisors of Farming, Fishing, and Forestry Workers	304	325	0.7%	10	31	2	43	\$20.35	High school diploma or equivalent	Less than 5 years	None
45-2011 Agricultural Inspectors	37	38	0.3%	2	3	0	5	\$28.58	Bachelor's degree	None	Moderate-term on-the
45-2041 Graders and Sorters, Agricultural Products	366	365	0.0%	15	34	0	49	\$12.34	credential	None	Short-term on-the-job training
45-2092 Farmworkers and Laborers, Crop, Nursery, and Greenhouse	787	936	1.7%	32	98	15	145	\$15.56	No formal educational credential	None	Short-term on-the-job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	yment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
45-2093	Farmworkers, Farm, Ranch, and Aquacultural Animals	1,151	1,361	1.7%	46	143	21	210	\$13.57	No formal educational credential	None	Short-term on-the-job training
45-4022	Logging Equipment Operators	280	231	-1.9%	9	23	-5	27	\$18.59	High school diploma or equivalent	None	Moderate-term on-the- job training
45-4023	Log Graders and Scalers	39	30	-2.6%	1	3	-1	3	\$17.63	High school diploma or equivalent	None	Moderate-term on-the- job training
47-0000	Construction and Extraction Occupations											
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	1,892	1,989	0.5%	62	122	10	194	\$30.57	High school diploma or equivalent	5 years or more	None
47-2021	Brickmasons and Blockmasons	168	168	0.0%	5	9	0	14	\$25.69	High school diploma or equivalent	None	Apprenticeship
47-2022	Stonemasons	165	166	0.1%	5	9	0	14	\$21.46	High school diploma or equivalent	None	Apprenticeship
47-2031	Carpenters	6,970	7,038	0.1%	241	389	7	637	\$20.54	High school diploma or equivalent	None	Apprenticeship
47-2041	Carpet Installers	136	134	-0.1%	4	7	0	11	\$20.63	No formal educational credential	None	Short-term on-the-job training
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	87	86	-0.1%	3	4	0	7	\$22.35	No formal educational credential	None	Moderate-term on-the- job training
47-2051	Cement Masons and Concrete Finishers	269	278	0.3%	10	19	1	30	\$19.47	No formal educational credential	None	Moderate-term on-the- job training
47-2061	Construction Laborers	2,634	2,658	0.1%	92	174	2	268	\$16.89	No formal educational credential	None	Short-term on-the-job training
47-2073	Operating Engineers and Other Construction Equipment Operators	1,194	1,238	0.4%	46	85	4	135	\$20.20	High school diploma or equivalent	None	Moderate-term on-the- job training
47-2081	Drywall and Ceiling Tile Installers	326	306	-0.6%	10	18	-2	26	\$21.71	No formal educational credential	None	Moderate-term on-the- job training
47-2082	Tapers	79	75	-0.5%	2	4	0	6	n/a	No formal educational credential	None	Moderate-term on-the- job training
47-2111	Electricians	1,353	1,371	0.1%	47	101	2	150	\$24.45	High school diploma or equivalent	None	Apprenticeship
47-2131	Insulation Workers, Floor, Ceiling, and Wall	151	147	-0.3%	4	11	0	15	\$18.42	No formal educational credential	None	Short-term on-the-job training
47-2141	Painters, Construction and Maintenance	1,922	1,868	-0.3%	65	94	-5	154	\$18.47	No formal educational credential	None	Moderate-term on-the- job training
47-2151	Pipelayers	58	64	1.0%	2	4	1	7	\$18.23	credential	None	Short-term on-the-job training
47-2152	Plumbers, Pipefitters, and Steamfitters	885	935	0.6%	33	61	5	99	\$25.02	High school diploma or equivalent	None	Apprenticeship
47-2181	Roofers	498	508	0.2%	14	34	1	49	\$16.60	No formal educational credential	None	Moderate-term on-the- job training
47-2211	Sheet Metal Workers	381	385	0.1%	13	26	0	39	520.64	High school diploma or equivalent	None	Apprenticeship

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	oyment			Annual Job	Openings	;	Median		Monte	Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
47-2221	Structural Iron and Steel Workers	62	65	0.5%	2	5	0	7	\$20.55	High school diploma or equivalent	None	Apprenticeship
47-2231	Solar Photovoltaic Installers	406	556	3.2%	19	31	15	65	\$18.27	equivalent	None	Moderate-term on-the- job training
47-3011	HelpersBrickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	141	147	0.4%	6	14	1	21	\$16.61	credential	None	Short-term on-the-job training
47-3012	HelpersCarpenters	195	207	0.6%	8	19	1	28	•	credential	None	Short-term on-the-job training
47-3015	HelpersPipelayers, Plumbers, Pipefitters, and Steamfitters	50	55	1.0%	2	5	0	7	513.54	equivalent	None	Short-term on-the-job training
47-3016	HelpersRoofers	65	68	0.5%	3	6	0	9	\$14.11	credential	None	Short-term on-the-job training
47-4011	Construction and Building Inspectors	203	224	1.0%	10	12	2	24	\$27.39	equivalent	5 years or more	Moderate-term on-the job training
47-4041	Hazardous Materials Removal Workers	126	141	1.1%	5	10	2	17	\$17.82	equivalent	None	Moderate-term on-the job training
47-4051	Highway Maintenance Workers	1,548	1,554	0.0%	66	89	1	156	•	High school diploma or equivalent	None	Moderate-term on-the job training
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	98	113	1.4%	5	8	2	15	\$17.27	equivalent	None	Moderate-term on-the job training
	Earth Drillers, Except Oil and Gas	73	75	0.3%	2	6	0	8	\$28.23	High school diploma or equivalent	None	Moderate-term on-the job training
	Installation, Maintenance, and Repair Occupations			• • • •			_		40.0.00	High school diploma or		
	First-Line Supervisors of Mechanics, Installers, and Repairers	1,168			39	61		105		equivalent	Less than 5 years	None Short-term on-the-job
49-2011	Computer, Automated Teller, and Office Machine Repairers	104	98	-0.6%	3	6	-1	8	\$14.76	degree	None	training
49-2022	Telecommunications Equipment Installers and Repairers, Except Line Installers	770	643	-1.8%	23	50	-13	60	\$23.71	Postsecondary non- degree award	None	Moderate-term on-the job training
49-2094	Electrical and Electronics Repairers, Commercial and Industrial Equipment	196	202	0.3%	5	12	1	18	\$29.42	degree award	None	Long-term on-the-job training
49-2097	Electronic Home Entertainment Equipment Installers and Repairers	286	262	-0.9%	10	18	-2	26	\$17.93	degree award	None	Short-term on-the-job training
49-2098	Security and Fire Alarm Systems Installers	74	84	1.3%	3	6	1	10	\$23.86	equivalent	None	Moderate-term on-the job training
49-3011	Aircraft Mechanics and Service Technicians	211	223	0.6%	7	10	1	18	\$29.30	degree award	None	None
49-3021	Automotive Body and Related Repairers	730	755	0.3%	26	44	2	72	\$19.82	equivalent	None	Long-term on-the-job training
49-3022	Automotive Glass Installers and Repairers	145	148	0.2%	6	8	0	14	\$17.57	High school diploma or equivalent	None	Moderate-term on-the job training
19-3023	Automotive Service Technicians and Mechanics	2,636	2,705	0.3%	84	161	7	252	\$19.18	Postsecondary non- degree award	None	Short-term on-the-job training

### **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	yment			Annual Job	Openings	;	Median		Marila	Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
49-3031	Bus and Truck Mechanics and Diesel Engine Specialists	775	830	0.7%	25	46	6	77	\$21.87	High school diploma or equivalent	None	Long-term on-the-job training
49-3041	Farm Equipment Mechanics and Service Technicians	132	142	0.7%	4	9	1	14	\$16.16	High school diploma or equivalent	None	Long-term on-the-job training
49-3042	Mobile Heavy Equipment Mechanics, Except Engines	222	236	0.6%	7	14	1	22	\$21.85	High school diploma or equivalent	None	Long-term on-the-job training
49-3051	Motorboat Mechanics and Service Technicians	124	123	-0.1%	5	8	0	13	\$18.39	High school diploma or equivalent	None	Long-term on-the-job training
49-3052	Motorcycle Mechanics	42	40	-0.5%	2	2	0	4	\$14.03	degree award	None	Short-term on-the-job training
49-3053	Outdoor Power Equipment and Other Small Engine Mechanics	294	300	0.2%	12	18	1	31	\$17.35	High school diploma or equivalent	None	Moderate-term on-the- job training
49-3093	Tire Repairers and Changers	118	114	-0.3%	4	10	0	14	\$14.50	equivalent	None	Short-term on-the-job training
49-9012	Control and Valve Installers and Repairers, Except Mechanical Door	147	152	0.3%	4	7	0	11	\$28.09	High school diploma or equivalent	None	Moderate-term on-the- job training
49-9021	Heating, Air Conditioning, and Refrigeration Mechanics and Installers	1,095	1,117	0.2%	30	74	2	106	\$23.72	Postsecondary non- degree award	None	Long-term on-the-job training
49-9031	Home Appliance Repairers	145	133	-0.9%	7	6	-1	12	\$19.20	High school diploma or equivalent	None	Moderate-term on-the- job training
49-9041	Industrial Machinery Mechanics	622	658	0.6%	22	33	4	59	\$25.02	equivalent	None	Long-term on-the-job training
49-9043	Maintenance Workers, Machinery	76	83	0.9%	3	5	1	9	\$24.17	High school diploma or equivalent	None	Long-term on-the-job training
49-9044	Millwrights	96	98	0.2%	3	6	0	9	\$23.05	High school diploma or equivalent	None	Apprenticeship
49-9051	Electrical Power-Line Installers and Repairers	410	423	0.3%	10	22	1	33	\$40.55	High school diploma or equivalent	None	Long-term on-the-job training
49-9052	Telecommunications Line Installers and Repairers	160	134	-1.8%	4	11	-3	12	\$32.28	High school diploma or equivalent	None	Long-term on-the-job training
49-9062	Medical Equipment Repairers	74	70	-0.6%	3	3	0	6	\$23.21	Associate's degree	None	Moderate-term on-the- job training
49-9071	Maintenance and Repair Workers, General	2,874	3,086	0.7%	121	166	21	308	\$18.75	equivalent	None	Moderate-term on-the- job training
49-9091	Coin, Vending, and Amusement Machine Servicers and Repairers	47	45	-0.4%	2	3	0	5	\$17.87	High school diploma or equivalent	None	Short-term on-the-job training
49-9094	Locksmiths and Safe Repairers	75	70	-0.7%	4	3	0	7	n/a	High school diploma or equivalent	None	Long-term on-the-job training
49-9098	HelpersInstallation, Maintenance, and Repair Workers	158	165	0.4%	8	12	1	21	\$14.18	equivalent	None	Short-term on-the-job training
49-9099	Installation, Maintenance, and Repair Workers, All Other	305	309	0.1%	11	18	0	29	\$17.30	High school diploma or equivalent	None	Moderate-term on-the- job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

Source: Ve	rmont Department of Labor, Economic and Labor Market Information, Employment Projections and Oc	-		it and Wages		-					released: Projections: J	uly 2018, Wage: April 2019
		Emplo	yment	Annual		Annual Job	Openings		Median Wage <sup>1</sup>	Typical education	Work experience	Typical on-the-job training
2010 SOC Code	Job Title	2016	2026	Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	<b>2018</b> (hourly except as noted)	needed for entry	in a related occupation	needed to attain competency in the occupation
51-1011	First-Line Supervisors of Production and Operating Workers	1,852	1,808	-0.2%	58	117	-4	171	\$29.43	High school diploma or equivalent	Less than 5 years	None
51-2021	Coil Winders, Tapers, and Finishers	36	30	-1.8%	2	2	-1	3	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2022	Electrical and Electronic Equipment Assemblers	129	111	-1.5%	6	8	-2	12	\$18.85	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2023	Electromechanical Equipment Assemblers	69	50	-3.2%	3	4	-2	5	\$18.85	equivalent	None	Moderate-term on-the- job training
51-2031	Engine and Other Machine Assemblers	48	37	-2.6%	1	3	-1	3	\$18.87	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2041	Structural Metal Fabricators and Fitters	92	74	-2.2%	3	6	-2	7	\$21.85	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2092	Team Assemblers	1,372	1,087	-2.3%	52	89	-28	113	\$14.36	High school diploma or equivalent	None	Moderate-term on-the- job training
51-2099	Assemblers and Fabricators, All Other	566	500	-1.2%	23	39	-7	55	\$14.36	equivalent	None	Moderate-term on-the- job training
51-3011	Bakers	756	788	0.4%	50	58	3	111	\$14.49	No formal educational credential	None	Long-term on-the-job training
51-3021	Butchers and Meat Cutters	205	214	0.4%	9	16	1	26	\$16.48	credential	None	Long-term on-the-job training
51-3022	Meat, Poultry, and Fish Cutters and Trimmers	236	245	0.4%	11	18	1	30	\$16.94	credential	None	Short-term on-the-job training
51-3023	Slaughterers and Meat Packers	42	42	0.0%	2	3	0	5	\$14.09	No formal educational credential	None	Short-term on-the-job training
51-3091	Food and Tobacco Roasting, Baking, and Drying Machine Operators and Tenders	167	161	-0.4%	7	12	-1	18	\$17.98	credential	None	Moderate-term on-the- job training
51-3092	Food Batchmakers	460	461	0.0%	25	38	0	63	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-3093	Food Cooking Machine Operators and Tenders	52	62	1.8%	3	5	1	9	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-3099	Food Processing Workers, All Other	57	57	0.0%	2	4	0	6	\$16.38	credential	None	Moderate-term on-the- job training
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	1,107	993	-1.1%	29	74	-11	92	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	95	99	0.4%	3	7	0	10	\$26.78	Postsecondary non- degree award	None	Moderate-term on-the- job training
51-4021	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	194	180	-0.7%	5	14	-1	18	\$14.66	equivalent	None	Moderate-term on-the- job training
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	195	165	-1.7%	6	14	-3	17	\$17.50	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4033	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	170	139	-2.0%	5	11	-3	13	\$18.21	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4034	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	50	46	-0.8%	1	3	0	4	\$17.77	High school diploma or equivalent	None	Moderate-term on-the- job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

Source. ve	ermont Department of Labor, Economic and Labor Market Information, Employment Projections and Oc	1	yment	it and wages	FTOgrams, n	Annual Job			Median			uly 2018, Wage: April 2019
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	Transfers [b]	Change [c]	Total [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	Typical on-the-job training needed to attain competency in the occupation
51-4035	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	75	56	-2.9%	2	4	-2	4	\$18.26	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4041	Machinists	622	580	-0.7%	21	39	-4	56	\$20.04	High school diploma or equivalent	None	Long-term on-the-job training
51-4072	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	132	125	-0.5%	5	10	-1	14	\$14.75	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4111	Tool and Die Makers	126	110	-1.3%	5	6	-2	9	\$26.19	degree award	None	Long-term on-the-job training
51-4121	Welders, Cutters, Solderers, and Brazers	393	384	-0.2%	10	30	-1	39	\$19.63	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4193	Plating and Coating Machine Setters, Operators, and Tenders, Metal and Plastic	42	36	-1.5%	1	3	-1	3	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4194	Tool Grinders, Filers, and Sharpeners	74	64	-1.4%	2	6	-1	7	\$20.72	High school diploma or equivalent	None	Moderate-term on-the- job training
51-4199	Metal Workers and Plastic Workers, All Other	136	127	-0.7%	5	9	-1	13	\$21.67	High school diploma or equivalent	None	Moderate-term on-the- job training
51-5111	Prepress Technicians and Workers	58	50	-1.5%	2	4	-1	5	\$20.20	Postsecondary non- degree award	None	None
51-5112	Printing Press Operators	332	322	-0.3%	13	21	-1	33	\$18.93	High school diploma or equivalent	None	Moderate-term on-the- job training
51-5113	Print Binding and Finishing Workers	154	155	0.1%	12	8	0	20	\$16.76	High school diploma or equivalent	None	Moderate-term on-the- job training
51-6011	Laundry and Dry-Cleaning Workers	587	572	-0.3%	39	39	-2	76	\$11.46	No formal educational credential	None	Short-term on-the-job training
51-6031	Sewing Machine Operators	276	261	-0.6%	15	13	-2	26	\$12.52	No formal educational credential	None	Short-term on-the-job training
51-6093	Upholsterers	36	32	-1.2%	2	2	0	4	\$14.87	High school diploma or equivalent	None	Moderate-term on-the- job training
51-7011	Cabinetmakers and Bench Carpenters	440	388	-1.2%	19	23	-5	37	\$17.99	High school diploma or equivalent	None	Moderate-term on-the- job training
51-7021	Furniture Finishers	274	232	-1.7%	14	9	-4	19	\$14.38	High school diploma or equivalent	None	Short-term on-the-job training
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	276	224	-2.1%	10	18	-5	23	\$17.73	High school diploma or equivalent	None	Moderate-term on-the- job training
51-7042	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	491	414	-1.7%	17	32	-8	41	\$14.63	High school diploma or equivalent	None	Moderate-term on-the- job training
51-8013	Power Plant Operators	107	108	0.1%	3	7	0	10	\$29.12	High school diploma or	None	Long-term on-the-job training
51-8021	Stationary Engineers and Boiler Operators	57	54	-0.5%	2	4	0	6	\$21.02	High school diploma or equivalent	None	Long-term on-the-job training
51-8031	Water and Wastewater Treatment Plant and System Operators	354	359	0.1%	10	19	0	29	\$23.08	High school diploma or equivalent	None	Long-term on-the-job training
51-9012	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	117	153	2.7%	4	11	4	19	\$18.44	High school diploma or equivalent	None	Moderate-term on-the- job training

## **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

		Emplo	yment			Annual Job	Openings		Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
51-9021	Crushing, Grinding, and Polishing Machine Setters, Operators, and Tenders	190	176	-0.8%	7	14	-1	20	\$22.19	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9022	Grinding and Polishing Workers, Hand	128	100	-2.4%	4	8	-3	9	\$13.92	No formal educational credential	None	Moderate-term on-the- job training
51-9023	Mixing and Blending Machine Setters, Operators, and Tenders	271	290	0.7%	10	21	2	33	\$17.87	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9031	Cutters and Trimmers, Hand	85	80	-0.6%	3	6	0	9	\$15.76	No formal educational credential	None	Short-term on-the-job training
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	312	301	-0.4%	11	23	-1	33	\$15.68	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9041	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	214	221	0.3%	8	18	1	27	\$15.62	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	883	753	-1.6%	34	63	-13	84	\$18.50	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9071	Jewelers and Precious Stone and Metal Workers	428	388	-1.0%	24	18	-4	38	\$17.57	High school diploma or equivalent	None	Long-term on-the-job training
51-9081	Dental Laboratory Technicians	175	213	2.0%	8	13	4	25	n/a	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9083	Ophthalmic Laboratory Technicians	55	47	-1.6%	2	3	-1	4	\$17.46	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9111	Packaging and Filling Machine Operators and Tenders	1,410	1,429	0.1%	67	94	2	163	\$15.42	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9121	Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	259	248	-0.4%	7	19	-1	25	\$17.81	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9122	Painters, Transportation Equipment	35	35	0.0%	1	3	0	4	\$21.49	High school diploma or equivalent	None	Moderate-term on-the- job training
51-9193	Cooling and Freezing Equipment Operators and Tenders	161	169	0.5%	6	12	1	19	\$14.18	equivalent	None	Moderate-term on-the- job training
51-9195	Molders, Shapers, and Casters, Except Metal and Plastic	127	120	-0.6%	5	8	-1	12	\$23.50	equivalent	None	Long-term on-the-job training
51-9196	Paper Goods Machine Setters, Operators, and Tenders	329	314	-0.5%	12	21	-2	31	\$18.39	equivalent	None	Moderate-term on-the- job training
51-9198	HelpersProduction Workers	532	646	2.0%	32	56	11	99	\$13.96	equivalent	None	Short-term on-the-job training
	Production Workers, All Other	383	403	0.5%	15	29	2	46	\$14.37	High school diploma or equivalent	None	Moderate-term on-the- job training
	Transportation and Material Moving Occupations First-Line Supervisors of Helpers, Laborers, and Material Movers, Hand	437	453	0.4%	14	31	2	47	I 57673	High school diploma or equivalent	Less than 5 years	None
53-1031	First-Line Supervisors of Transportation and Material-Moving Machine and Vehicle Operators	610	626	0.3%	20	42	2	64	\$26.23	High school diploma or	Less than 5 years	None
53-2012	Commercial Pilots	89	90	0.1%	2	6	0	8	\$80,110/yr	High school diploma or	None	Moderate-term on-the- job training

#### **Vermont Statewide**

occupations with 30+ employment in 2016

n/a - Wage data not available

Source: Ve	rmont Department of Labor, Economic and Labor Market Information, Employment Projections and Oc	cupational	Employmer	t and Wages	Programs, ir	n cooperation	with the U.S	. Bureau of L	abor Statistics		released: Projections: J	uly 2018, Wage: April 2019
		Emplo	oyment			Annual Job	Openings	;	Median			Typical on-the-job
2010 SOC Code	Job Title	2016	2026	Annual Growth Rate (compound average)	Exits [a]	<b>Transfers</b> [b]	Change [c]	<b>Total</b> [a+b+c]	Wage <sup>1</sup> 2018 (hourly except as noted)	Typical education needed for entry	Work experience in a related occupation	training needed to attain competency in the occupation
53-3021	Bus Drivers, Transit and Intercity	447	499	1.1%	37	19	5	61	519.83	High school diploma or equivalent	None	Moderate-term on-the- job training
53-3022	Bus Drivers, School or Special Client	1,392	1,436	0.3%	111	58	4	173	51794	High school diploma or equivalent	None	Short-term on-the-job training
53-3031	Driver/Sales Workers	833	837	0.0%	35	52	0	87	515.32	High school diploma or equivalent	None	Short-term on-the-job training
53-3032	Heavy and Tractor-Trailer Truck Drivers	4,351	4,294	-0.1%	183	272	-6	449	S20.73	Postsecondary non- degree award	None	Short-term on-the-job training
53-3033	Light Truck or Delivery Services Drivers	2,658	2,680	0.1%	113	168	2	283	515 43	High school diploma or equivalent	None	Short-term on-the-job training
53-3041	Taxi Drivers and Chauffeurs	1,886	2,105	1.1%	118	81	22	221	S12.29	No formal educational credential	None	Short-term on-the-job training
53-6021	Parking Lot Attendants	133	144	0.8%	8	12	1	21	S12 70	No formal educational credential	None	Short-term on-the-job training
53-7011	Conveyor Operators and Tenders	64	56	-1.3%	3	5	-1	7	\$14.83	No formal educational credential	None	Short-term on-the-job training
53-7021	Crane and Tower Operators	93	92	-0.1%	3	6	0	9	574 35	High school diploma or equivalent	Less than 5 years	Moderate-term on-the- job training
53-7032	Excavating and Loading Machine and Dragline Operators	209	208	0.0%	8	15	0	23	S14 /4	High school diploma or equivalent	Less than 5 years	Moderate-term on-the- job training
53-7051	Industrial Truck and Tractor Operators	860	887	0.3%	30	65	3	98	\$18.26	No formal educational credential	None	Short-term on-the-job training
53-7061	Cleaners of Vehicles and Equipment	591	623	0.5%	31	53	3	87	\$13.72	No formal educational credential	None	Short-term on-the-job training
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	2,889	2,991	0.3%	146	251	10	407	S13 //5	No formal educational credential	None	Short-term on-the-job training
53-7064	Packers and Packagers, Hand	764	795	0.4%	53	64	3	120	\$13.15	No formal educational credential	None	Short-term on-the-job training
53-7081	Refuse and Recyclable Material Collectors	719	811	1.2%	35	56	9	100	\$16.27	No formal educational credential	None	Short-term on-the-job training

#### Vermont Long Term Occupational Projections 2016 - 2026

#### **Methodology & Technical Notes**

Long Term Occupational Projections use the 2016-2026 Long Term Industry Projections and Vermont May 2016 Occupational Employment Statistics (OES) data to project employment levels for over 500 occupations in Vermont in 2026. The process takes into account expected rates of change in relative demand for occupations over time within each industry as well as rates at which workers leave an occupation.

Long term projections are designed to assist the educational community, workforce development specialists, and individuals planning for the future. They can be used to identify occupations that will show stability, growth and good incomes over the long run. The methods used to produce long term projections ignore the peaks and valleys of business cycles and focus on the fundamental elements that affect the demand for a particular occupation.

Employment projections are estimating the mix of jobs in the future based on trends in the job market in Vermont and on the overall economy. Speculation regarding policy changes, localized economic events such as strikes, or large unexpected events such as hurricanes are not included. Occupations included in projections are necessarily only jobs that already exist in sufficient numbers to be coded and counted. In other words, jobs that do not yet exist or are just emerging cannot be projected. It is partly through collecting new job titles and duties from employers for the data used in projections that new occupations are identified for inclusion.

The results provide a general guide for the direction and relative strength of occupational demand but are not intended to indicate absolute levels of employment in an occupation.

#### **New Separations Methodology**

The Projections methodology has been updated to more accurately capture the way workers change jobs over the course of their careers. Workers once entered the labor force at a young age, working until retirement in the same occupation. New, younger workers would replace them once they retired. Workers today are more likely to work in a number of occupations during their lifetimes. The Separations methodology accounts for this workforce trend, capturing reasons workers leave an occupation other than retirement, such as changing careers, being promoted into management, or completing a retraining program.

Projections are to be used for relative comparisons for occupations, and to help inform where training for the future workforce should be focused based on trends. Projections from the Replacements methodology should not be compared with projections derived from the Separations methodology. Any past projections become outdated when actual employment catches up with them or new projections are released, and are no longer an accurate representation of the workforce.

For more information about the Separations methodology, visit: <a href="http://www.bls.gov/emp/ep\_separations.htm">www.bls.gov/emp/ep\_separations.htm</a>

This workforce product was funded by a grant awarded by the U.S. Department of Labor's Employment and Training Administration. The product was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, or ownership. This product is copyrighted by the institution that created it. Internal use by an organization and/or personal use by an individual for non-commercial purposes is permissible. All other uses require the prior authorization of the copyright owner.

Resignation from New Hire for FY21

------ Forwarded message ------From: Margaret Dippen <<u>peggydippen@gmail.com</u>> Date: Wed, Jun 24, 2020 at 8:01 AM Subject: To share To: Chris Hennessey <<u>chennbce@buusd.org</u>>

Dear Chris,

It is with regret & sadness that I need to inform you that I will be unable to work with you, the team, & teach the children at Barre City School next year.

Because of the court date & agreements set forth, Oak needs to attend preschool in his town of residence & the timing just cannot work for me to get to school by the contractual time.

I am deeply sorry for this change of plans.

Divorce is such a complicated experience. I appreciate your understanding & compassion.

I truly wish you all the best.

Be well.

In gratitude, Peggy

# **BARRE UNIFIED UNION SCHOOL DISTRICT**

# **NEW HIRE NOTIFICATION FORM**

Complete and Submit to the Central Office (please submit via email to <u>hr@buusd.org</u>) Date Received by Central Office:

06/18/2020

To be Completed by Hiring Administrator: (please leave notes for Central Office on the back page) Name: Shayna Guild Location: BCEMS Submission Date: |6/18/2020 Administrator Action/Checklist Complete: Y N Grade (If Applicable): 4 Position: Teacher **Endorsement (If Applicable):** Hourly-Non Exempt Elementary Salary-Exempt a.m. to 3:35 Scheduled Hours: 8:05 Hours Per Day: 7.5 p.m. Account Code: Replacement? 🖌 🛛 Y Ν Salary Rate: \$| 68,907.00 If Yes, For Whom? Paula Beaudet Administrator Approval: Hayden Coon Signature Date: 6/18/2020 **REVERSE SIDE:** Complete the New Hire Checklist prior to emailing candidate packet for Superintendent review. For Central Office Use Only: DOH **Contract Complete Date Offer Letter Complete Date Total Years of Experience: Salary Placement: \$** R Step:  $\bigcirc$ NA 38.430 (Fy2)Seniority Date: Hourly Rate: \$ Salary Rate: \$ Contract Type: LX Teacher Para | Replacement Interim Offer/Non-Contracted Letters AFSCME N/A 38.930 (1440) Contract Days: 19() Days Per Year: (U) Salary: \$ Vending **Teacher: AOE Endorsement:** NO If No, Required: **Provisional** Emergency Apprenticeship YES NO (If NO)  $\rightarrow$  ParaPro Para-Educator: Associates Degree YES has passed ParaPro NO will need to take ParaPro IJυ 18 Superintendent Approval Signature Date

# **Shayna Guild**

shaynaguild@gmail.com | 802.917.4200 | Williamstown, VT | linkedin.com/shayna-guild

I am committed to building inclusive classrooms for students at an early age and believe that each student will succeed in the classroom when there are the right tools, opportunities, and support. I am eager to contribute to a Vermont school that always puts students' needs first.

### **EDUCATION**

### **VT Teaching Licensure**

**B.A. in Elementary Education and English** 

Saint Michael's College, Colchester, VT

## **Education and Literature Program**

Advance Studies of England, Bath, England

## TEACHING EXPERIENCE

## Student Teacher

Rick Marcotte Central School, South Burlington, VT

- Co-teach a third grade classroom of twenty-four students
- 0 Design and implement units in all subject areas
- Solo teach for two weeks with responsibility over all classroom jobs and communications

## **Elementary School Substitute Teacher**

Barre Town Elementary School, Barre, VT

- Maintain classroom management through restorative practice for kindergarten through grade five
- Teach lessons based on teacher's lesson plan

## **Kindergarten Classroom Aid**

St. Andrew's Church of England Primary School, Bath, England

- Supported the teachers and students with phonics, math, reading, and art/history
- Worked one-on-one with students who needed additional help or supervision 0
- Designed and taught two lessons, one based around reading comprehension and the other based on Vermont history through art

## Senior Camp Counselor and Head of Boating

Lotus Lake Camp, Williamstown, VT

- Responsible for the safety and supervision of up to 25 children at a time, ages 6-14. Manage, 0 train, evaluate, and resolve conflict for a staff of 15
- Create and teach outdoor and team-building activities for the eleven and twelve year olds for each two-week session
- Assist in designing camp wide activities and themes for each two-week session
- Present to parents and recognize campers' achievements at each sessions award ceremony

## **Mathematics and Literacy Tutor**

Waterbury, VT and Barre, VT

- Worked one-on-one and with small groups of students in 1<sup>st</sup>-6<sup>th</sup> grade to teach academic content aligned with coursework
- Created lesson plans and using resources supplied by teachers.
- Developed assignments, assessed progress and provided feedback

### **Autumn 2018**

2016-2018

## 2013-Present

Summers 2018, 2019

**Autumn 2018** 

May 2020

May 2020

January 2020-April 2020

Barre City Elementary & Middle School

**Spaulding High School** 

Lisa Perreault, SFO Business Manager

Jessica Barewicz Director of Curriculum, Instruction, and Assessment

Donald E. McMahon, M.Ed. Stacy Anderson, M.Ed. Co-Directors of Special Services

Annotto Phoados



### **Barre Unified Union School District**

**120 Ayers Street, Barre, VT 05641** Phone: 802-476-5011 Fax: 802-476-4944 or 802-477-1132 www.buusd.org

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John Pandolfo Superintendent of Schools

Doing whatever it takes to ensure success for every child.

6.3 Barre Town Middle & Elementary School

**Central Vermont Career Center** 

*Carol Marold* Director of Human Resources

*Emmanuel Ajanma* Director of Technology

*Lauren May* Early Education Director

> Jamie Evans Director of Facilities

# **BTMES ROOF DECK DEMOLITION-SUMMER 2020**

K. Bellavance Landworks & Hauling	\$65,300
EF Wall Construction	\$69,755
Lajuenesse Construction	\$60,020 (Recommended)

\*Superintendent's Recommendation: Lajuenesse Construction

# BARRE UNIFIED UNION SCHOOL DISTRICT SPAULDING EDUCATIONAL ALTERNATIVES FACILITY

Architectural		

- A0.1CODE REVIEW & FLOOR PLANSA0.2CODE REVIEW & FLOOR PLANS
- A1.1 FLOOR PLANS
- A1.2 ENLARGED FLOOR PLAN A1.3 ENLARGED FLOOR PLAN
- A1.4 REFLECTED CEILING PLAN
- A1.5 REFLECTED CEILING PLAN
- A2.1 ELEVATIONS
- A4.1 SECTIONA5.1 STAIR SECTION & DETAILS
- A6.1 FIXTURES & ACCESSORIES
- A7.1 OPENINGS
- A8.1 SPECIFICATIONS

S0.1	STRU
S0.2	STRU
S1.0	PART
	SECO
S1.1	PART
S2.0	WALI
S2.1	FOUN
S3.0	TYPIO
S3.1	FRAM
S3.2	BRAC

Structural

Structural / Civil: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET PO BOX 1576 MONTPELIER, VT 05601-1576 T: (802) 223-4727 91 ALLEN STREET BARRE, VT 05641

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COVER

P1.01 PLUMBING PIPING SECOND FLOOR PLAN

JCTURAL NOTES JCTURAL NOTES FIAL FOUNDATION PLAN AND OND FLOOR FRAMING PLAN FIAL ROOF FRAMING PLAN L ELEVATIONS AND SECTIONS NDATION DETAILS CAL DETAILS MING DETAILS CING DETAILS

Mechanic	cal
M1.00	MECHANCIAL SHEETMETAL + PIPING FIRST FLOOR PLAN
M1.00	MECHANICAL SHEETMETAL + PIPING SECOND FLOOR PLAN
M2.00	MECHANICAL DETAILS
M3.00	MECHANICAL SCHEDULES
MD1.00	MECHANICAL DEMOLITION & EXISTING CONDITIONS FIRST FLOOR PLAN
MD1.01	MECHANICAL DEMOLITION & EXISTING CONDITIONS SECOND FLOOR PLAN
Plumbing	
P1.00	PLUMBING PIPING FIRST FLOOR PLAN

DAVID LAURIN ARCHITECT PLLC P.O. BOX 1382 WHITE RIVER JCT., VT 05001 t: (802) 295-9263 c: (603) 443-3867 e: david.@laurinarch.com

Mechanical: KURT MAGNUSSON, P.E. MECHANICAL SYSTEMS ENGINEERS 10 FOREST FALLS DRIVE - SUITE #10 YARMOUTH, MAINE 04096 T: (207) 846-1441 C: (207) 615-9375

Electrical

E0.0

E0.1

E0.2

E1.0

E1.1

E1.2

E1.3

E2.0

E2.1

# 22.JUNE.2020

ELECTRICAL GENERAL NOTES AND LEGEND EXISTING ELECTRICAL POWER AND SYSTEMS PLAN FIRST FLOOR EXISTING ELECTRICAL POWER AND SYSTEMS PLAN SECOND FLOOR

ELECTRICAL POWER AND SYSTEMS PLAN FIRST FLOOR

ELECTRICAL POWER AND SYSTEMS PLAN SECOND FLOOR

ELECTRICAL PANEL SCHEDULES

ELECTRICAL ONE LINE DIAGRAM

ELECTRICAL LIGHTING AND FIRE ALARM PLAN FIRST FLOOR ELECTRICAL LIGHTING AND FIRE ALARM PLAN SECOND FLOOR

> Electrical: TIM MATTHEWS, P.E. SWIFTCURRENT ENGINEERING SERVICES 10 FOREST FALLS DRIVE, UNIT 8B YARMOUTH, MAINE 04096 T: (207) 847-9280 F: (207) 847-9281

REVISION DATE

COMMENTS

# **SPAULDING EDUCATIONAL ALTERNATIVES FACILITY** 91 ALLEN STREET

BARRE, VT

CODES IN EFFECT JULY 20, 2020:

2015 STATE OF VERMONT FIRE AND BUILDING SAFETY CODE VERMONT ELECTRICAL SAFETY RULES 2017 EDITION VERMONT PLUMBING RULES 2018 EDITION 2012 VERMONT ACCESS RULES AND 2010 ADA STANDARDS FOR ACCESSIBLE BUILDINGS NFPA 1 UNIFORM FIRE CODE 2015 EDITION NFPA 101 LIFE SAFETY CODE 2015 EDITION; CHAPTERS 1 THRU 11 AND NEW OCCUPANCY. THE INTERNATIONAL BUILDING CODE, IBC 2015 EDITION; EXCEPT CHAPTERS 8, 10, 11, 13, 27, 28, 29, & 33 NFPA 70 NATIONAL ELECTRIC CODE, 2017 EDITION ICC INTERNATIONAL PLUMBING CODE, 2015 EDITION 2020 VERMONT COMMERCIAL BUILDING ENERGY STANDARDS NFPA 10 STANDARD FOR PORTABLE FIRE EXTINGUISHERS, 2013 EDITION NFPA 13 STANDARD FOR INSTALLATION OF SPRINKLER SYSTEMS, 2013 EDITION NFPA 72 NATIONAL FIRE ALARM CODE 2013 EDITION NFPA 90A STANDARD FOR THE INSTALLATION OF AIR CONDITIONING AND VENTILATION SYSTEMS NFPA 96 STANDARD FOR VENTILATION CONTROL AND FIRE PROTECTION OF COMMERCIAL COOKING

# **PROJECT SUMMARY:**

CONSTRUCTION OF 10,000 GROSS SF 1 STORY BUILDING FOR EDUCATIONAL PURPOSES. **IBC** 

# **CHAPTER 3 - USE AND OCCUPANCY CLASSIFICATION:**

305 - EDUCATIONAL GROUP E

# **CHAPTER 4 - SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY:**

406.8 REPAIR GARAGES: CONSTRUCT PER IFC 406.8.1 THROUGH 406.8.6

406.8.1 MIXED USES: MIXED USES SHALL BE ALLOWED IN THE SAME BUILDING AS A REPAIR GARAGE SUBJECT TO THE PROVISIONS OF SECTION 508.1

406.8.2 VENTILATION: SHALL BE MECHANICALLY VENTILATED PER IMC AND CONTROLLED AT THE ENTRANCE TO THE GARAGE

406.8.6 AUTOMATIC SPRINKLER SYSTEM: A REPAIR GARAGE SHALL BE EQUIPPED WITH AN AUTOMATIC SPRINKLER SYSTEM PER SECTION 903.3.9.1

# **CHAPTER 5 - BUILDING HEIGHTS AND AREAS:**

TABLE 504.3 ALLOWABLE BUILDING HEIGHT:

OCCUPANCY: E SPRINKLER SYSTEM: YES CONSTRUCTION TYPE: IIB ALLOWABLE HEIGHT: 75' PROPOSED BUILDING HEIGHT: 25'. BUILDING COMPLIES

TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE: 3. PROPOSED BUILDING IS 1 STORY ABOVE GRADE: BUILDING COMPLIES.

TABLE 506.2 ALLOWABLE AREA: TYPE 11B BASE AREA = S1 = 58,000SFTOTAL ALLOWABLE AREA: 58,000 SF PROPOSED BUILDING AREA: 10,000 SF TOTAL BUILDING AREA: 10,000SF < 58,000 ALLOWABLE SF. BUILDING COMPLIES.

TABLE 508.4 REQUIRED SEPARATION OF OCCUPANCIES: OCCUPANCY E FROM OCCUPANCY U (AUTO SHOP) = NS FOR A FULLY SPRINKLERED BUILDING AND 1 HR REQUIRED IF NS.

 TABLE 509 INCIDENTAL USES

 GROUP E OCCUPANCIES, LABORATORIES AND VOCATIONAL SHOPS NOT CLASSIFIED AS GROUP H = 1 HR OR PROVIDE AUTOMATIC SPRINKLER SYSTEM

# **CHAPTER 6 TYPES OF CONSTRUCTION:**

TABLE 601 FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS: PRIMARY STRUCTURAL FRAME: 0 EXTERIOR WALLS PER TABLE 602: 0 NONBEARING WALLS AND PARTITIONS: 0 **ROOF CONSTRUCTION: 0** 

# **REFER TO NFPA 1 SECTION 13.6: FOR FIRE EXTINGUISHERS.**

TABLE 13.6.1.2: REQUIRED IN EDUCATIONAL OCCUPANCY.

13.6.2.4 CLASSIFICATION OF HAZARDS 13.6.2.4.1 CLASSIFYING OCCUPANCY HAZARD: ROOMS OR AREAS SHALL BE CLASSIFIED AS BEING LIGHT HAZARD, ORDINARY HAZARD, OR EXTRA HAZARD.

13.6.2.4.1.1 LIGHT HAZARD OCCUPANCIES CAN INCLUDE BUILDINGS OR ROOMS OCCUPIED AS OFFICES, CLASSROOMS..... A13.6.2.4.1.3 EXTRA HAZARD OCCUPANCIES COULD CONSIST OF WOODWORKING; VEHICLE REPAIRS.....;COOKING AREAS... 13.6.3.1.3.8.1: INSTALL NO HIGHER THAN 5' TO TOP OF EXTINGUISHER.

TABLE 13.6.3.2.1.1:MINIMUM RATED EXTINGUISHER = 2-A AT LIGHT AND ORDINARY HAZARD AND 4-A AT EXTRA ORDINARY HAZARD MAXIMUM FLOOR AREA PER EXTINGUISHER: 3,000 SF AT LIGHT HAZARD, 1,500 SF AT ORDINARY HAZARD, AND 1,000 SF AT EXTRA ORDINARY HAZARD.

MAXIMUM TRAVEL DISTANCE TO A FIRE EXTINGUISHER: 75'

# NFPA 2015

CHAPTER 6 - CLASSIFICATION OF OCCUPANCY:

6.1.3 - EDUCATIONAL; SEE ALSO CHAPTER 14 FOR NEW CONSTRUCTION 6.1.14.3.1 MIXED OCCUPANCIES 6.1.14.3.2 EACH PORTION OF THE BUILDING SHALL BE CLASSIFIED AS TO 6.1.14.3.2 THE BUILDING SHALL COMPLY WITH THE MOST RESTRICTIVE R SAFE-GUARDS ARE APPROVED. 6.2.2 CLASSIFICATION OF HAZARD OF CONTENTS 6.2.2.3 ORDINARY HAZARD CONTENTS

CHAPTER 7 - MEANS OF EGRESS

TABLE 7.3.1.2 - OCCUPANT LOAD: EDUCATIONAL OCCUPANCY: 20 SF NET

### TOTAL OCCUPANT LOAD:

7.4 NUMBER OF MEANS OF EGRESS; NOT LESS THAN 2 REQUIRED WITH O

3 EXITS FROM CORRIDORS SHOWN. EXIT CAPACITY = 510P. EGRESS COM

TABLE A.7.6 - TRAVEL DISTANCE; SPRINKLERED BUILDING: COMMON PATH: 100' DEAD END:50' TRAVEL TO EXIT: 200'

## **BUILDING COMPLIES WITH TRAVEL DISTANCES.**

### **CHAPTER 14 NEW EDUCATIONAL OCCUPANCIES**

14.2.3.2 MINIMUM CORRIDOR WIDTH - 6' CLEAR WIDTH REQUIRED.

14.2.4 NUMBER OF MEANS OF EGRESS:

14.2.4.2 NOT LESS THAN 2 SEPARATE EXITS REQUIRED; 3 PROVIDED.

14.2.5.6 DOORS THAT SWING INTO AN EXIT ACCESS CORRIDOR SHALL BE ARRAN 7.2.1.4.3.1 DURING ITS SWING, ANY DOOR LEAF INA MEANS OF EGRESS SHA CORRIDOR, OR PASSAGEWAY.

14.2.11.1.1 EVERY ROOM OR SPACE GREATER THAN 250 SF AND USED FOR CLASS OCCUPANCY SHALL HAVE NOT LESS THAN 1 OUTSIDE WINDOW FOR EMERGEN

14.2.11.1.2 (1) BUILDING IS PROTECTED THROUGHOUT BY AN APPROVED, SUPER'

14.3.6 CORRIDORS: CORRIDORS TO BE SEPARATED FROM OTHER PARTS OF THE (2) BUILDING IS PROTECTED THROUGHOUT BY AN APPROVED, SUPERV

(a) CORRIDOR WALLS TO BE CONSTRUCTED AS SMOKE PARTITIONS (N

**2020 VERMONT COMMERCIAL ENERGY STANDARDS (CBES)** 

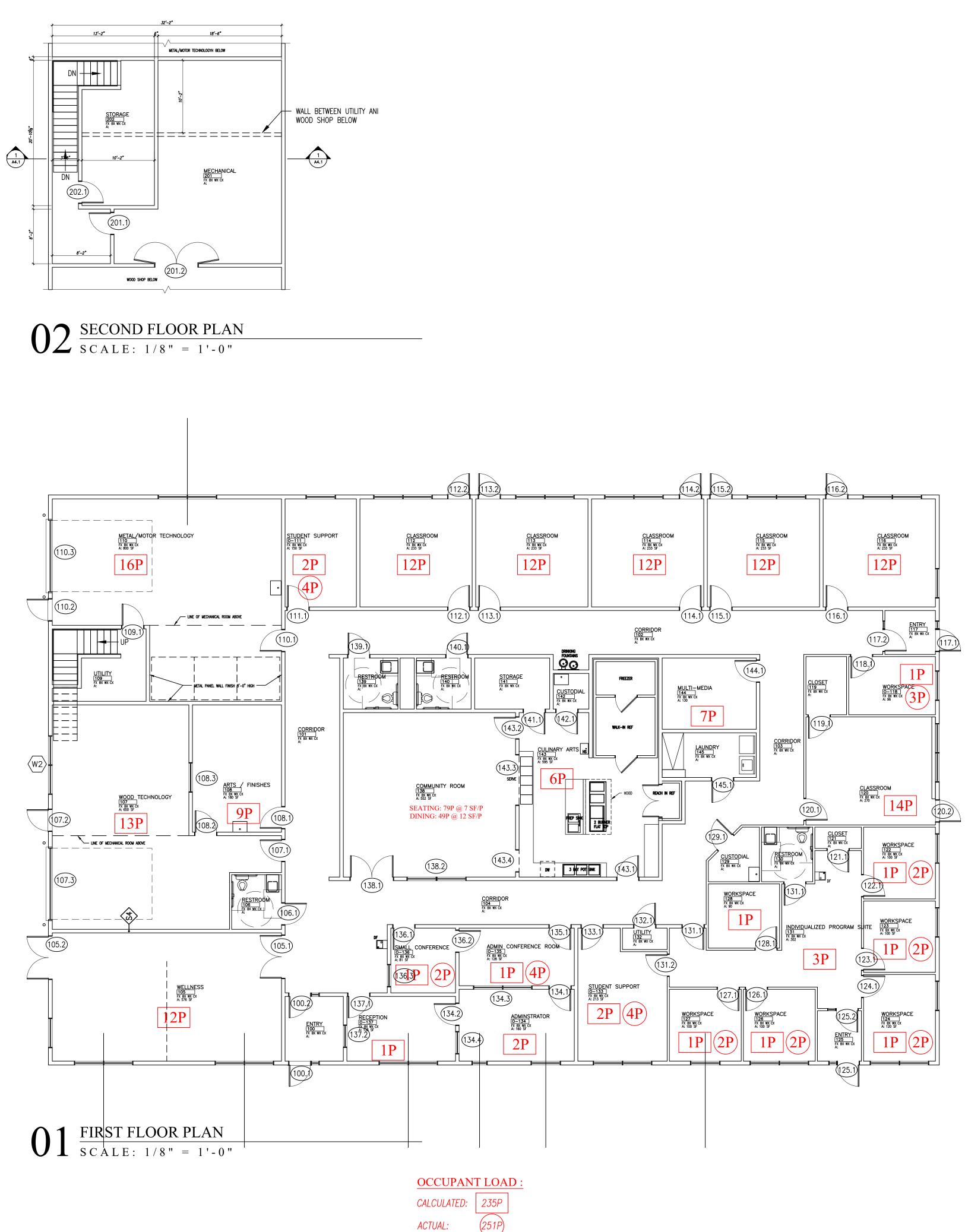
### BUILDING: METAL BUILDING

ITEM	CODE REQUIREMENT	AS DESIGNED
ROOF:	R-40 CI	R-41
WALLS - ABOVE GRADE: METAL BUILDING	ASHRAE 90.1 2013 R-13 + R-15ci U < 0.052	R-25; U-0.04
WALLS - BELOW GRADE:	R-15 ci	R-15 ci
FLOORS - SLAB ON GRADE: UNHEATED	R-10	R-10
ENTRY DOORS: SWINGING:	MAX. U: 0.37	U: 0.083
UPWARD ACTION SECTIONAL	: R-10	R-17.5; U.057
WINDOWS: SHGC (PF < 0.2) FIXED: S,E,W N OPERABLE:	(Max. 30% wall) U 0.40 U 0.53 U 0.43	Does not exceed 30% U: 0.29 U: 0.29 U: 0.22
AIR LEAKAGE:	Tested Air Leakage is not greater than 0.50 cfm/sf of shell area at 50 Pa per ASTM E779	SEE BELOW

WINDOWS: 0.20 max cfm/sfCOMMERCIAL GLAZED ENTRY DOORS:1.00 mac cfm/sf AIR BARRIER: CONTINUOUS & SEALED SEE DRAWINGS

ENVELOPE AND AIR TESTING WILL BE BY ZERO BY DEGREES, LLC

	DAVID LAURIN ARCHITECT PLLC P.O. BOX 1382 WHITE RIVER JCT., VT 05001 t (802) 295-9263 c (603) 443-3867 david@laurinarch.com CONSULTANTS: CIVIL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576
ITS USE PER SECTION 6.1 REQUIREMENTS OF THE OCCUPANCIES INVOLVED, UNLESS SEPARATE	T: (802) 223-4727 STRUCTURAL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727
T / P AT CLASSROOMS; SHOPS = 50 SF NET / P. OFFICE 100 SF NET /P.	MECHANICAL ENGINEER: KURT MAGNUSSON, P.E. MECHANICAL SYSTEMS ENGINEERS 10 FOREST FALLS DRIVE - SUITE #10 YARMOUTH, MAINE 04096 T: (207) 846-1441 C: (207) 615-9375
DCCUPANT LOAD < 500P. IPLIES.	ELECTRICAL ENGINEER: TIM MATHEWS, P.E. SWIFTCURRENT ENGINEERING SERVICES 10 FOREST FALLS DRIVE, UNIT 8B YARMOUTH, MAINE 04096 T: (207) 847-9280 C: (207) 847-9281
NGED TO PREVENT INTERFERENCE WITH CORRIDOR TRAVEL (REF 7.2.1.4.3). ALL LEAVE NOT LESS THAN ONE-HALF OF THE REQUIRED WIDTH OF AN AISLE,	
SROOM OR OTHER EDUCATIONAL PURPOSES OR NORMALLY SUBJECT TO STUDENT ICY RESCUE UNLESS:	
VISED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 9.7	
STORY BY WALLS HAVING A 1 HR. FIRE-RESISTANCE RATING UNLESS: VISED AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH SECTION 9.7 THEN; NOT RATED).	KEY PLAN:
	REVISION DATE COMMENTS
	PROJECT:
$2_{0}$	BARRE UNIFIED UNION SCHOOL DISTRICT
	SPAULDING EDUCATIONAL ALTERNATIVES FACILITIES
	91 ALLEN STREET BARRE, VT 05641 ISSUED:
	DESIGN PROGRESS DRAWING TITLE:
	CODE PLAN
	DATE: 22 IUNE 2020
	22 JUNE 2020 SHEET NUMBER:
	A0.1



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A0.2
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DATE:	22 JUNE 2020

DRAWING TITLE: CODE PLAN

SHEET NUMBER:

DESIGN PROGRESS

91 ALLEN STREET BARRE, VT 05641

SPAULDING EDUCATIONAL **ALTERNATIVES FACILITIES** 

BARRE UNIFIED UNION SCHOOL DISTRICT

PROJECT:

REVISION DATE

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KEY PLAN:

MECHANICAL SYSTEMS ENGINEERS 10 FOREST FALLS DRIVE - SUITE #10 YARMOUTH, MAINE 04096 T: (207) 846-1441 C: (207) 615-9375 ELECTRICAL ENGINEER: TIM MATHEWS, P.E. SWIFTCURRENT ENGINEERING SERVICES

10 FOREST FALLS DRIVE, UNIT 8B

YARMOUTH, MAINE 04096 T: (207) 847-9280 C: (207) 847-9281

MONTPELIER, VT 05601-1576 T: (802) 223-4727 MECHANICAL ENGINEER: KURT MAGNUSSON, P.E.

**317 RIVER STREET** MONTPELIER, VT 05601-1576 T: (802) 223-4727 STRUCTURAL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET

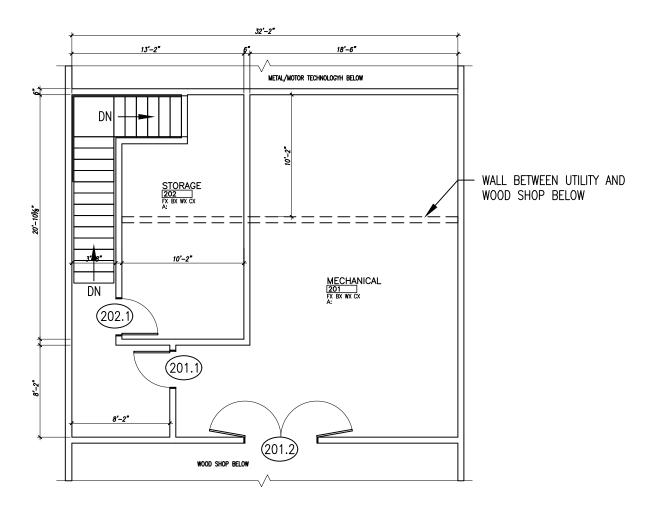
DEWOLFE ENGINEERING ASSOCIATES

CONSULTANTS:

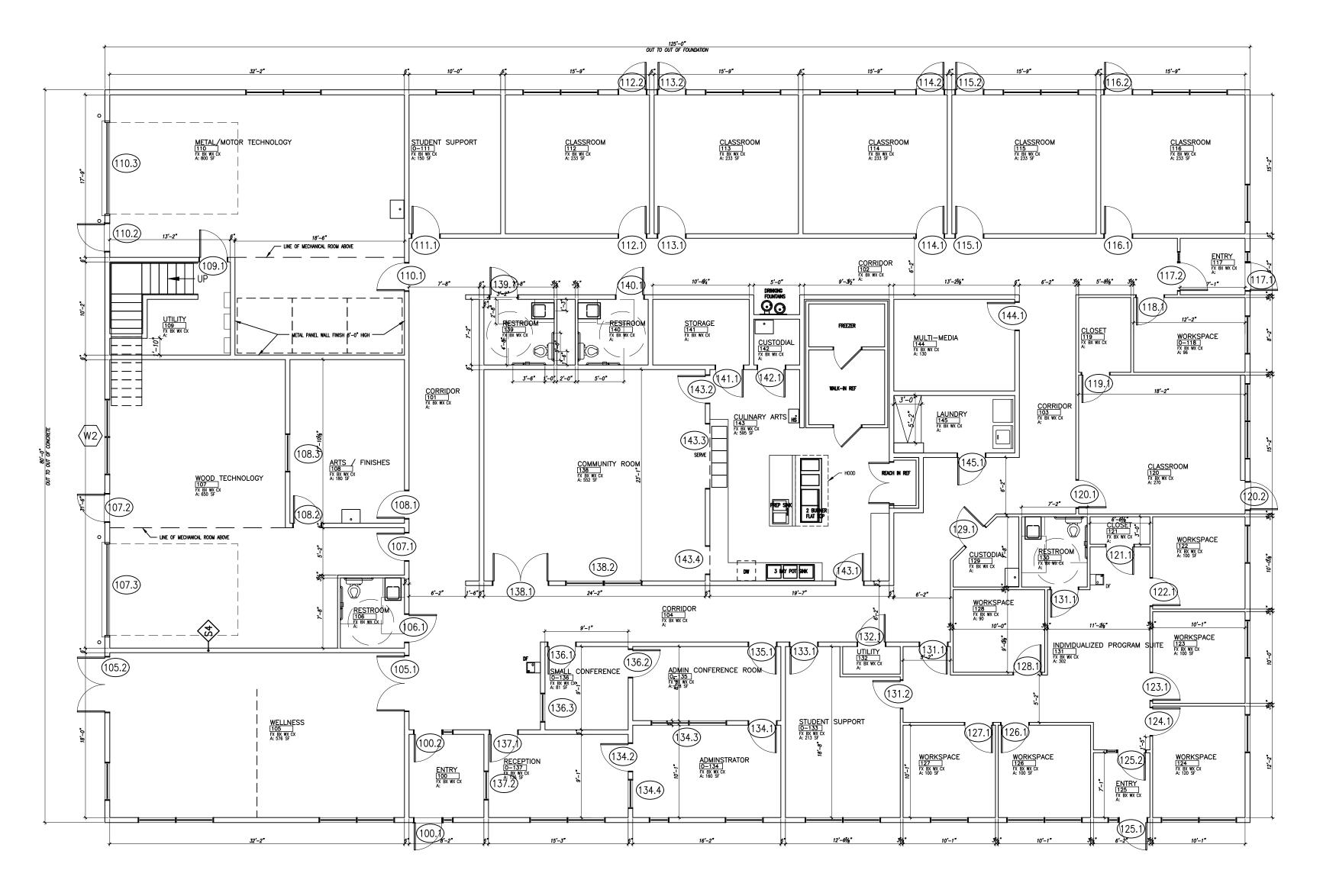
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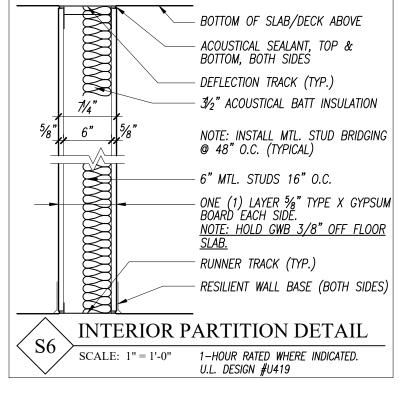
DAVID LAURIN ARCHITECT PLLC







 $01 \quad \frac{\text{FIRST FLOOR PLAN}}{\text{SCALE: } 1/8" = 1'-0"}$ 



 $03 \frac{\text{WALL TYPES}}{\text{SCALE: AS NOTED}}$ 



INTERIOR FIN	ISHES		1
FLOOR	BASE	WALLS	CEILING
F1 SEALED CONCRETE SLAB F2 RUBBER FLOORING F3 CERAMIC TILE	<i>B1 6" RESILIENT COVE BASE B2 CERAMIC TILE</i>	W1 PAINTED G.W.B.	C1 SUSPENDED A.C.T. & GRID C2 FIRE TAPED G.W.B. C3 EXPOSED STRUCTURE PAINTED

DATE:

OVERALL FLOOR PLANS

ISSUED: DESIGN PROGRESS

BARRE UNIFIED UNION

SPAULDING EDUCATIONAL

ALTERNATIVES FACILITIES

SCHOOL DISTRICT

91 ALLEN STREET BARRE, VT 05641

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david@laurinarch.com

DEWOLFE ENGINEERING ASSOCIATES

DEWOLFE ENGINEERING ASSOCIATES

MECHANICAL SYSTEMS ENGINEERS

10 FOREST FALLS DRIVE - SUITE #10

SWIFTCURRENT ENGINEERING SERVICES

10 FOREST FALLS DRIVE, UNIT 8B YARMOUTH, MAINE 04096 T: (207) 847-9280 C: (207) 847-9281

CONSULTANTS:

CIVIL ENGINEER:

317 RIVER STREET

T: (802) 223-4727

317 RIVER STREET

T: (802) 223-4727

MONTPELIER, VT 05601-1576

STRUCTURAL ENGINEER:

MONTPELIER, VT 05601-1576

MECHANICAL ENGINEER: KURT MAGNUSSON, P.E.

YARMOUTH, MAINE 04096 T: (207) 846-1441 C: (207) 615-9375

ELECTRICAL ENGINEER:

TIM MATHEWS, P.E.

KEY PLAN:

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DRAWING TITLE:

SHEET NUMBER:

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NOTE: HOLD GWB 3/8" OFF FLOOR SLAB.

– RUNNER TRACK (TYP.)

47/8"

5/8" <u>5</u>5/8" 5/8"

 $\langle S4 \rangle$ 

\_ All

BOTTOM OF SLAB/DECK ABOVE

BOTTOM, BOTH SIDEŚ

@ 48" O.C. (TYPICAL)

- RUNNER TRACK (TYP.)

**INTERIOR PARTITION DETAIL** 

SCALE: 1" = 1'-0" 1-HOUR RATED WHERE INDICATED.

U.L. DESIGN #U419

35/8" MTL. STUDS 16" O.C.

— DEFLECTION TRACK (TYP.)

ACOUSTICAL SEALANT, TOP &

 $-3/_2$ " Acoustical batt insulation

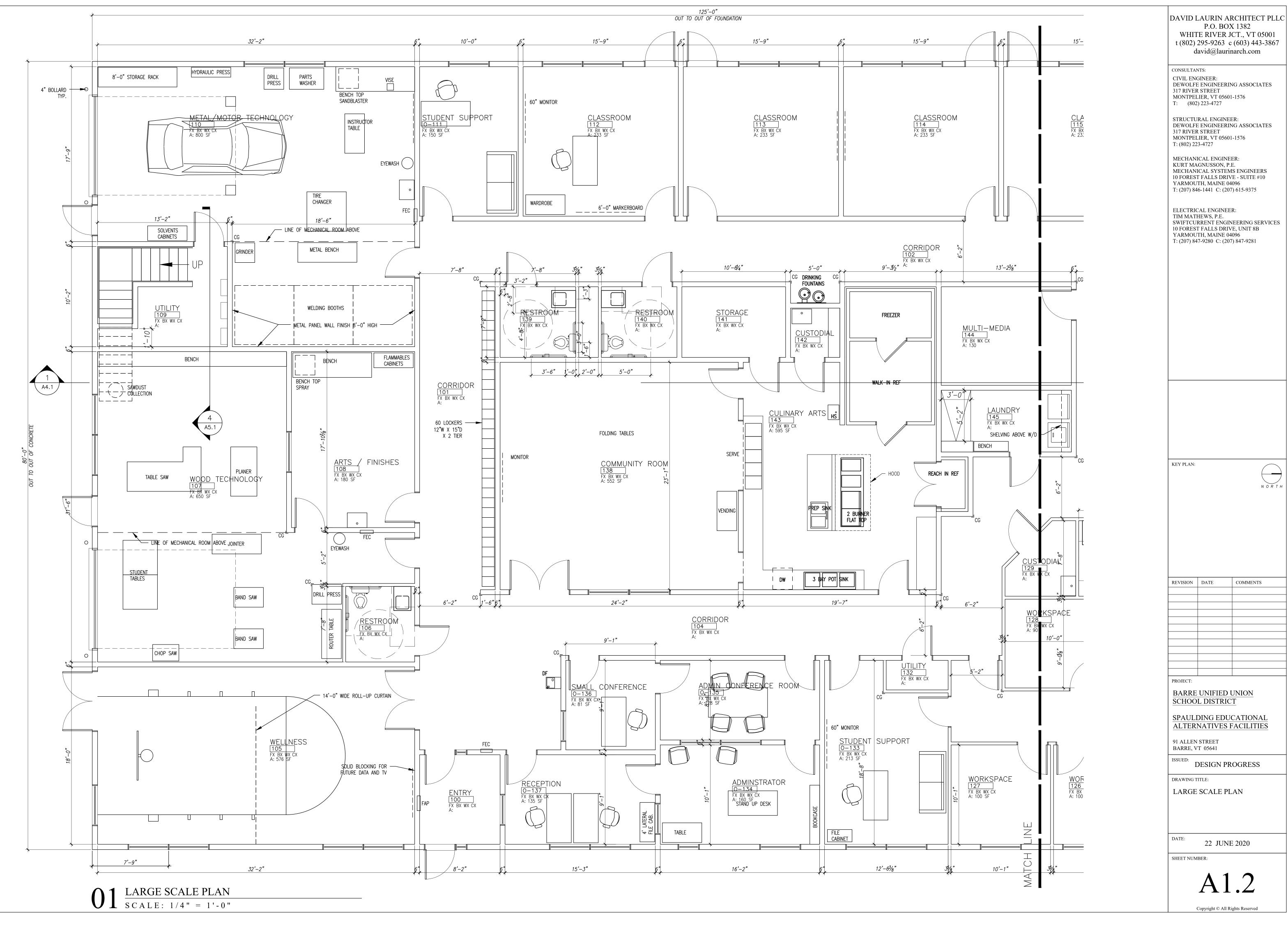
NOTE: INSTALL MTL. STUD BRIDGING

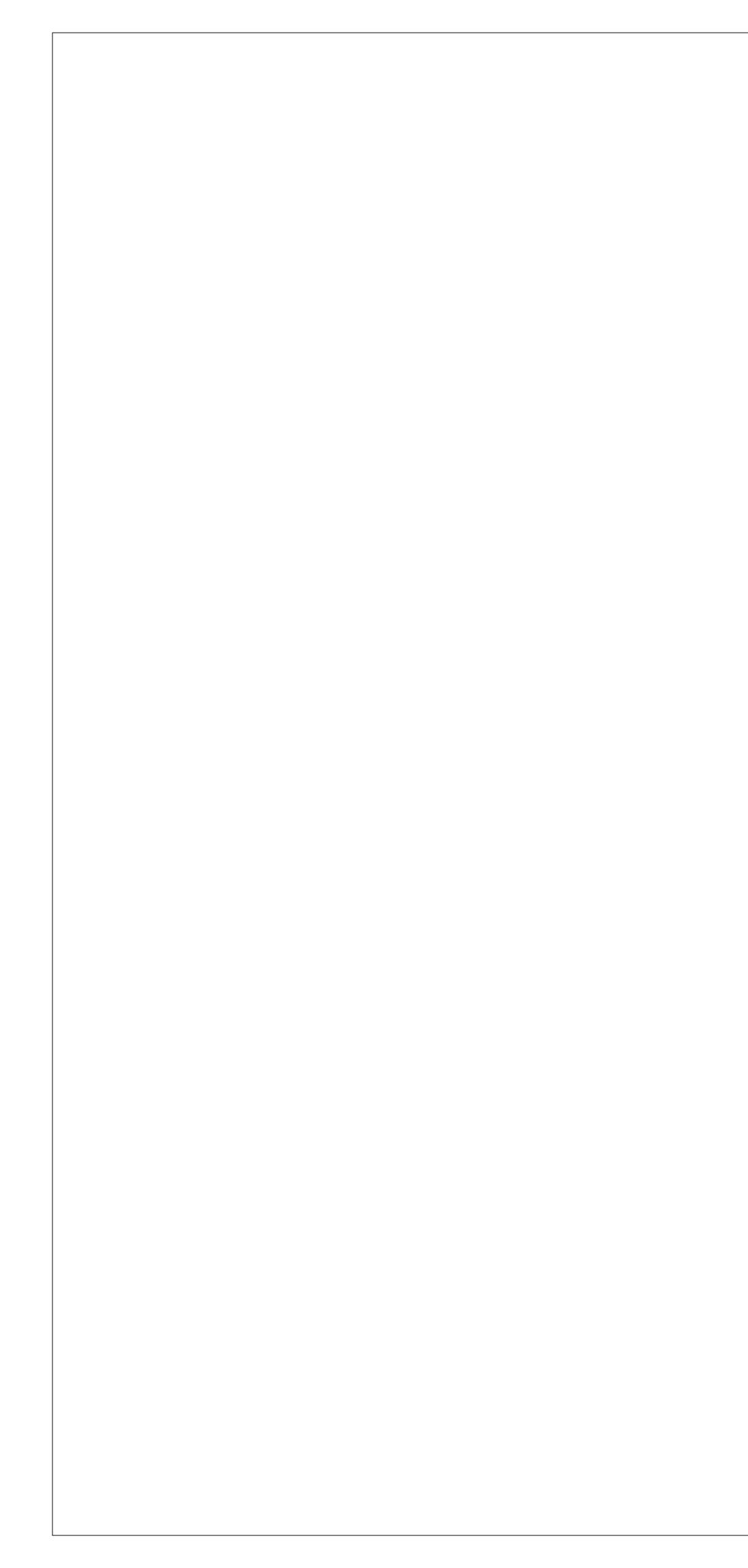
- ONE (1) LAYER 5/8" TYPE X GYPSUM BOARD EACH SIDE.

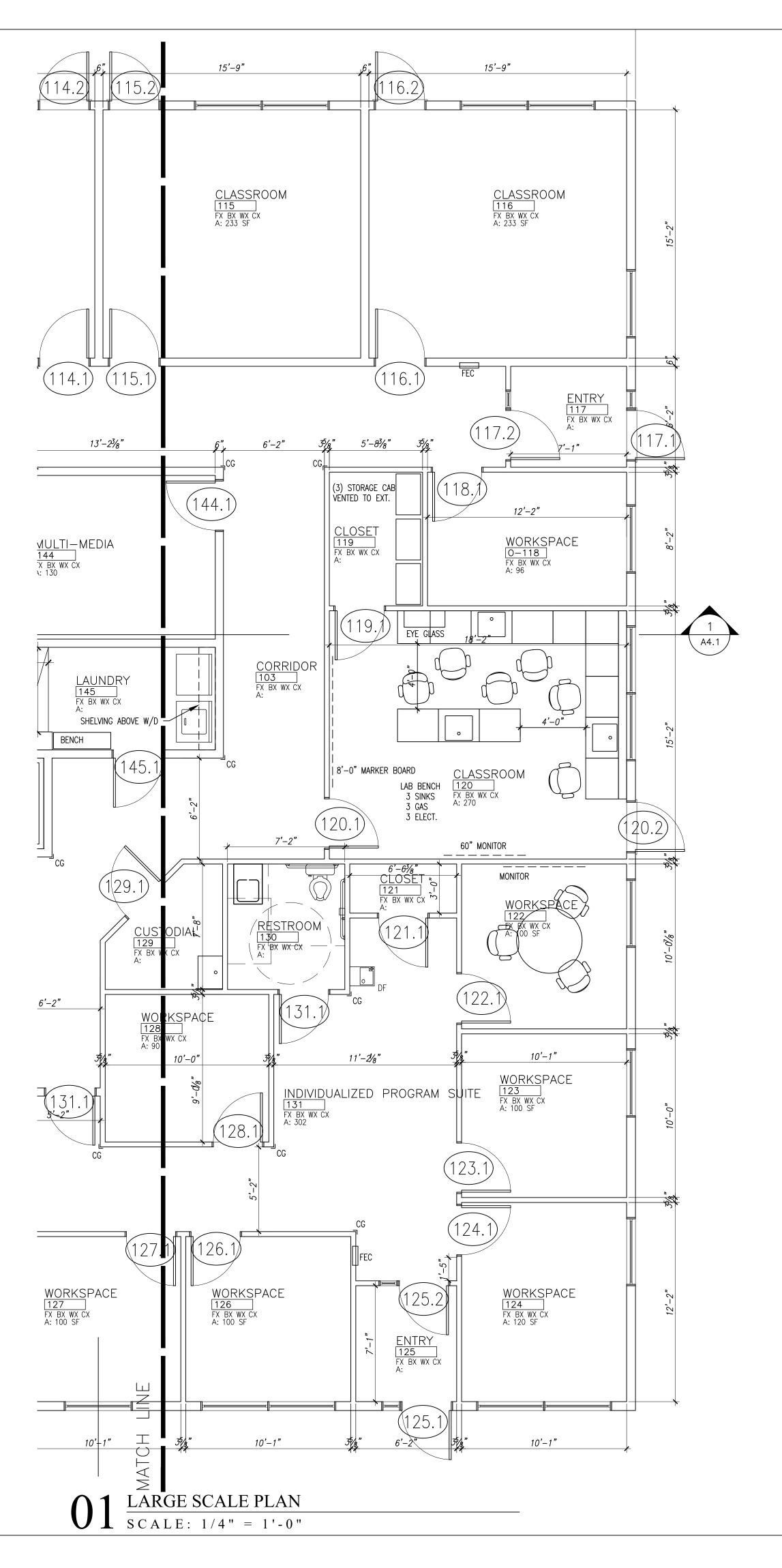
NOTE: HOLD GWB 3/8" OFF FLOOR SLAB.

- RESILIENT WALL BASE (BOTH SIDES)

– RESILIENT WALL BASE (BOTH SIDES)







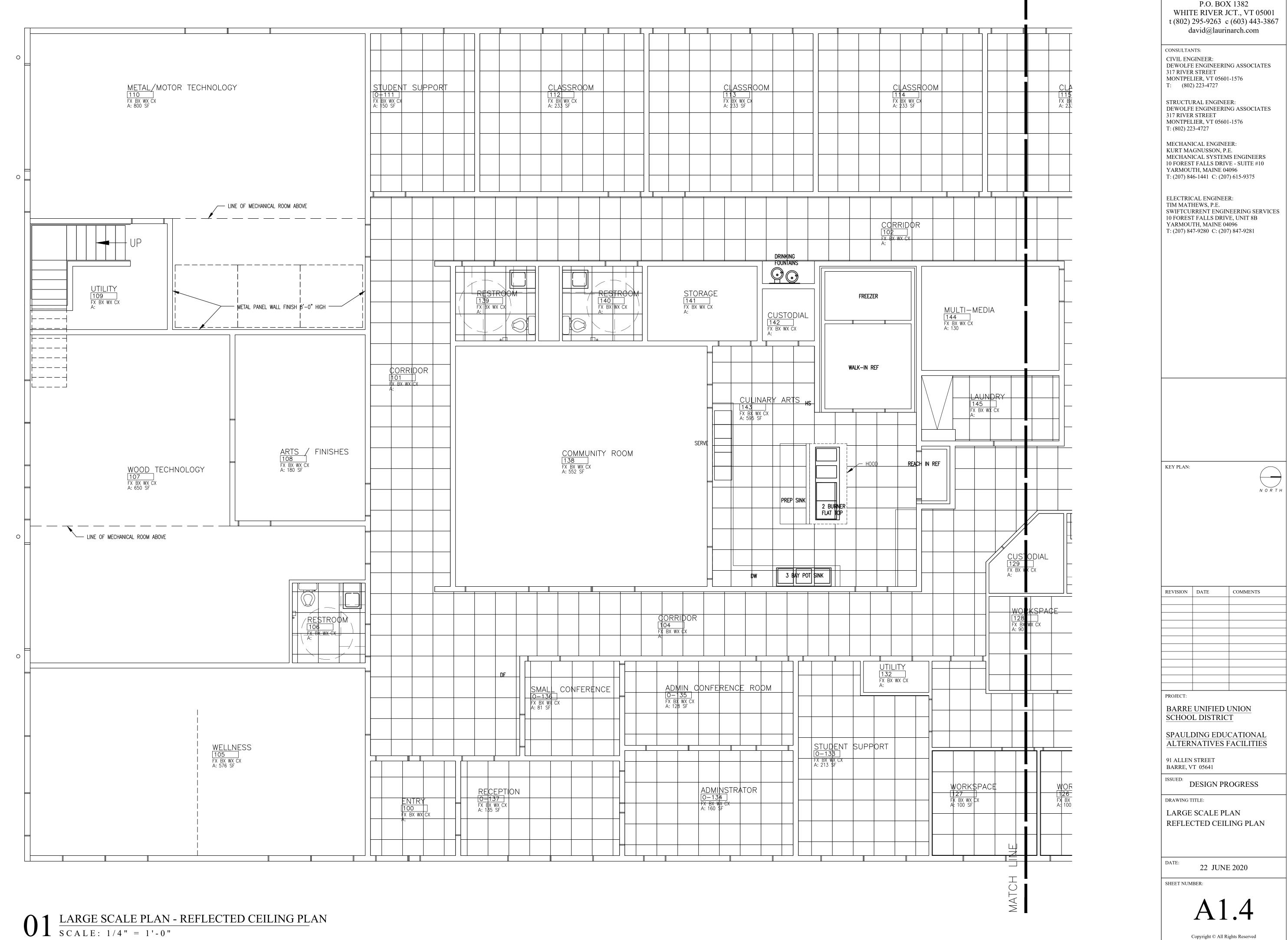
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ELECTRIC TIM MATI SWIFTCU 10 FORES YARMOU	CAL ENGINEE HEWS, P.E. RRENT ENGIN I FALLS DRIV TH, MAINE 04	R: IEERING SERVICES E, UNIT 8B 096
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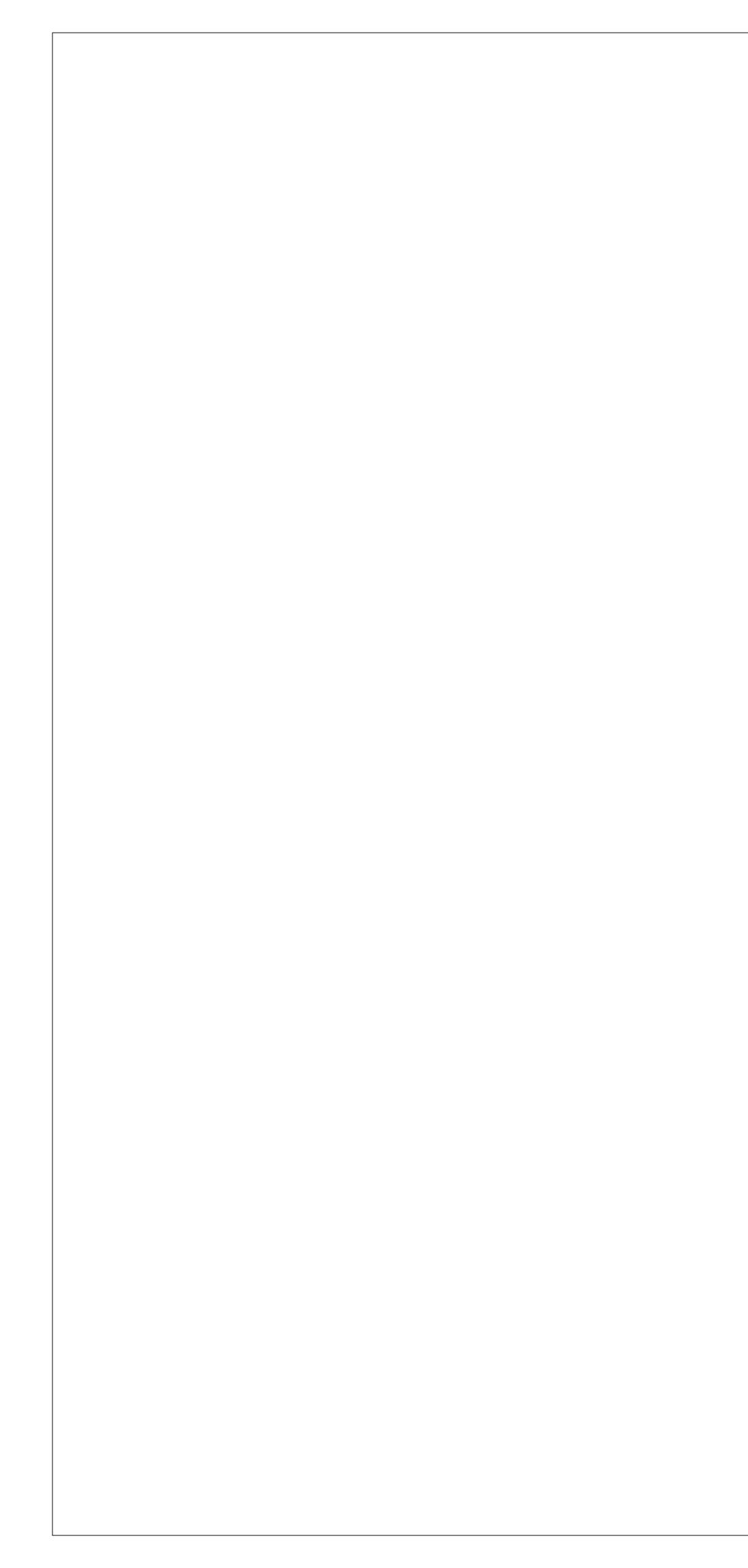
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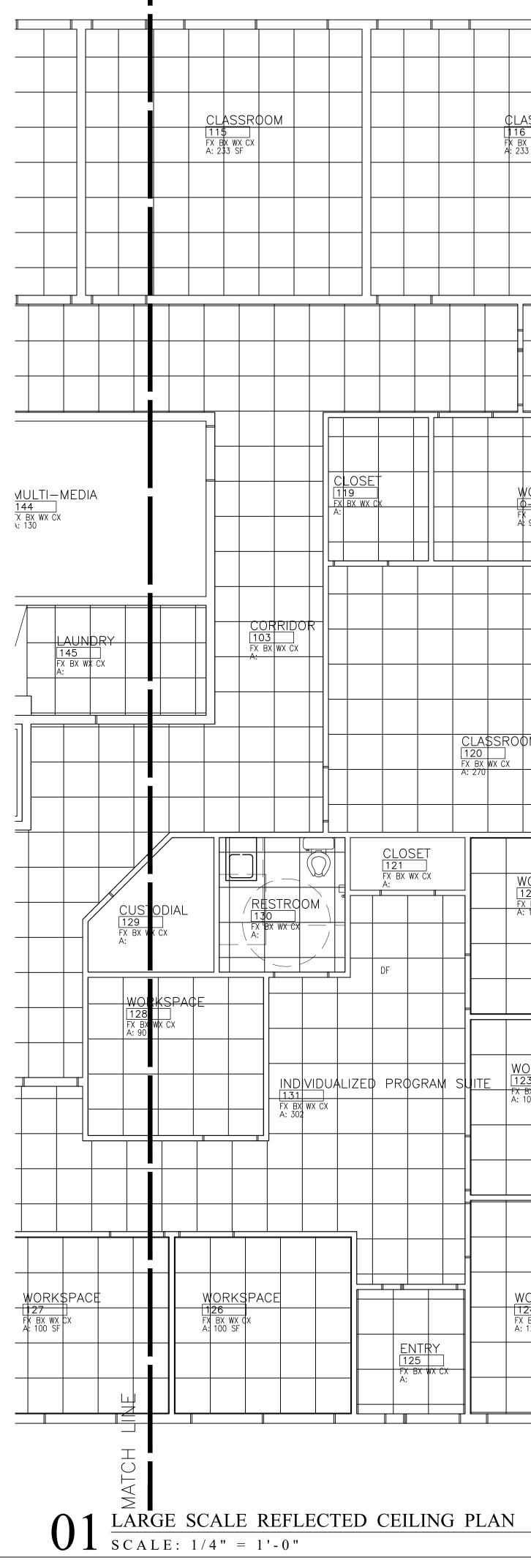
david@laurinarch.com

CONSULTANTS:



DAVID LAURIN ARCHITECT PLLC





			11	
CLOSE 121 FX BX WX A: DF DF ED PROG				
		WORKS 124 FX BX WX A: 120 SF		

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317 RIVED MONTPE			ATES
DEWOLF 317 RIVE	JRAL ENGINE E ENGINEERI R STREET LIER, VT 0560 23-4727	NG ASSOC	ATES
KURT MA MECHAN 10 FORES YARMOU	ICAL ENGINE AGNUSSON, P ICAL SYSTEM T FALLS DRIV ITH, MAINE 04 46-1441 C: (20	E. 1S ENGINE 7E - SUITE 4096	
TIM MAT SWIFTCU 10 FORES YARMOU	CAL ENGINEE HEWS, P.E. RRENT ENGII T FALLS DRIV JTH, MAINE 04 47-9280 C: (20	NEERING S /e, unit 81 4096	
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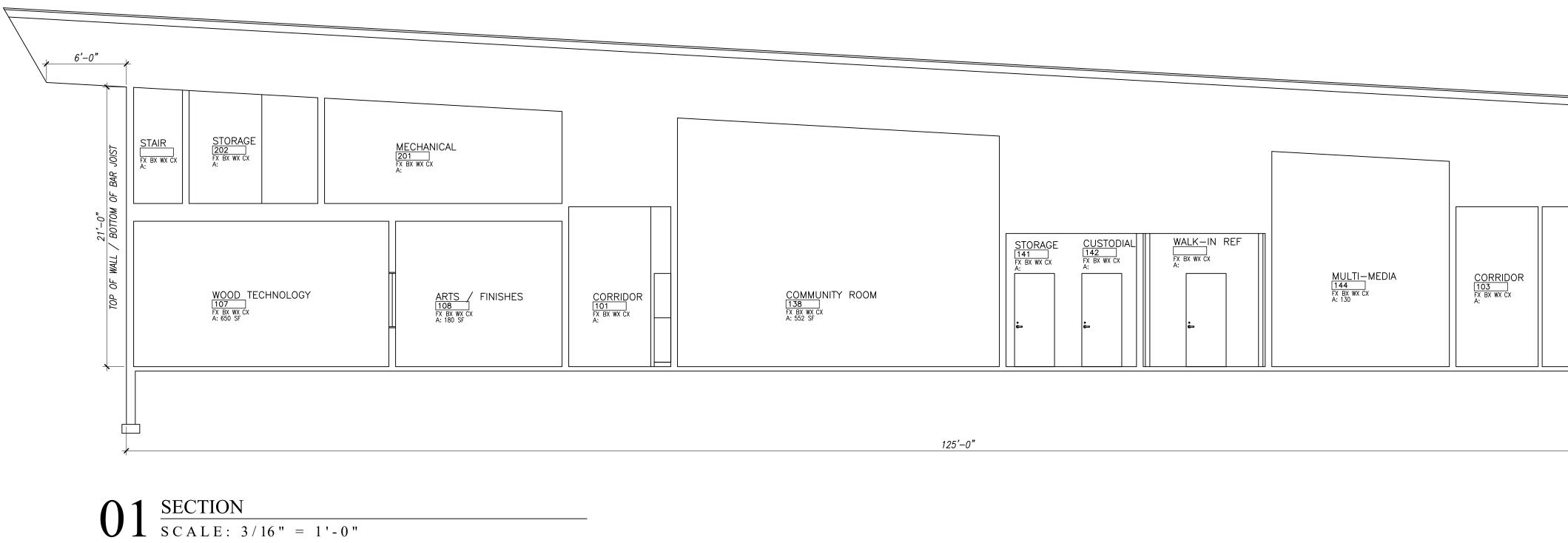
DAVID LAURIN ARCHITECT PLLC

	COLO
Color c $01 \frac{\text{NORTH ELEVATION}}{\text{SCALE: } 1/8" = 1' - 0"}$	
$03 \frac{\text{SOUTH ELEVATION}}{\text{SCALE: } 1/8" = 1' - 0"}$	





COLOR A COLOR B	DAVID LAURIN ARCHITECT PLLC P.O. BOX 1382 WHITE RIVER JCT., VT 05001 t (802) 295-9263 c (603) 443-3867 david@laurinarch.com CONSULTANTS: CIVIL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727 STRUCTURAL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727 MECHANICAL ENGINEER: KURT MAGNUSSON, P.E. MECHANICAL SYSTEMS ENGINEERS 10 FOREST FALLS DRIVE - SUITE #10 YARMOUTH, MAINE 04096 T: (207) 846-1441 C: (207) 615-9375 ELECTRICAL ENGINEER: TIM MATHEWS, P.E. SWIFTCURRENT ENGINEERING SERVICES 10 FOREST FALLS DRIVE, UNIT 8B YARMOUTH, MAINE 04096 T: (207) 847-9280 C: (207) 847-9281
	KEY PLAN:         REVISION         DATE         COMMENTS         I         I         I         I         I         I
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## CONSULTANTS:

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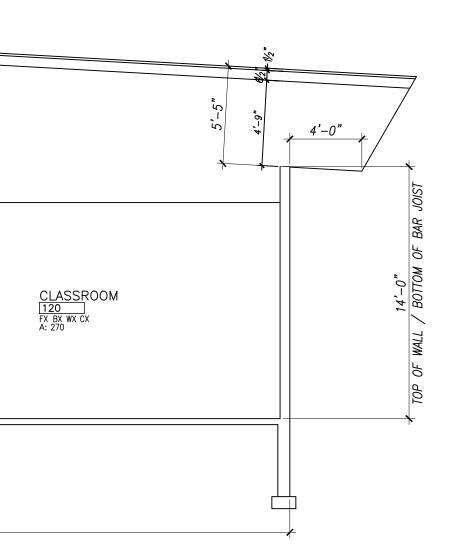
STRUCTURAL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727

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KEY PLAN:

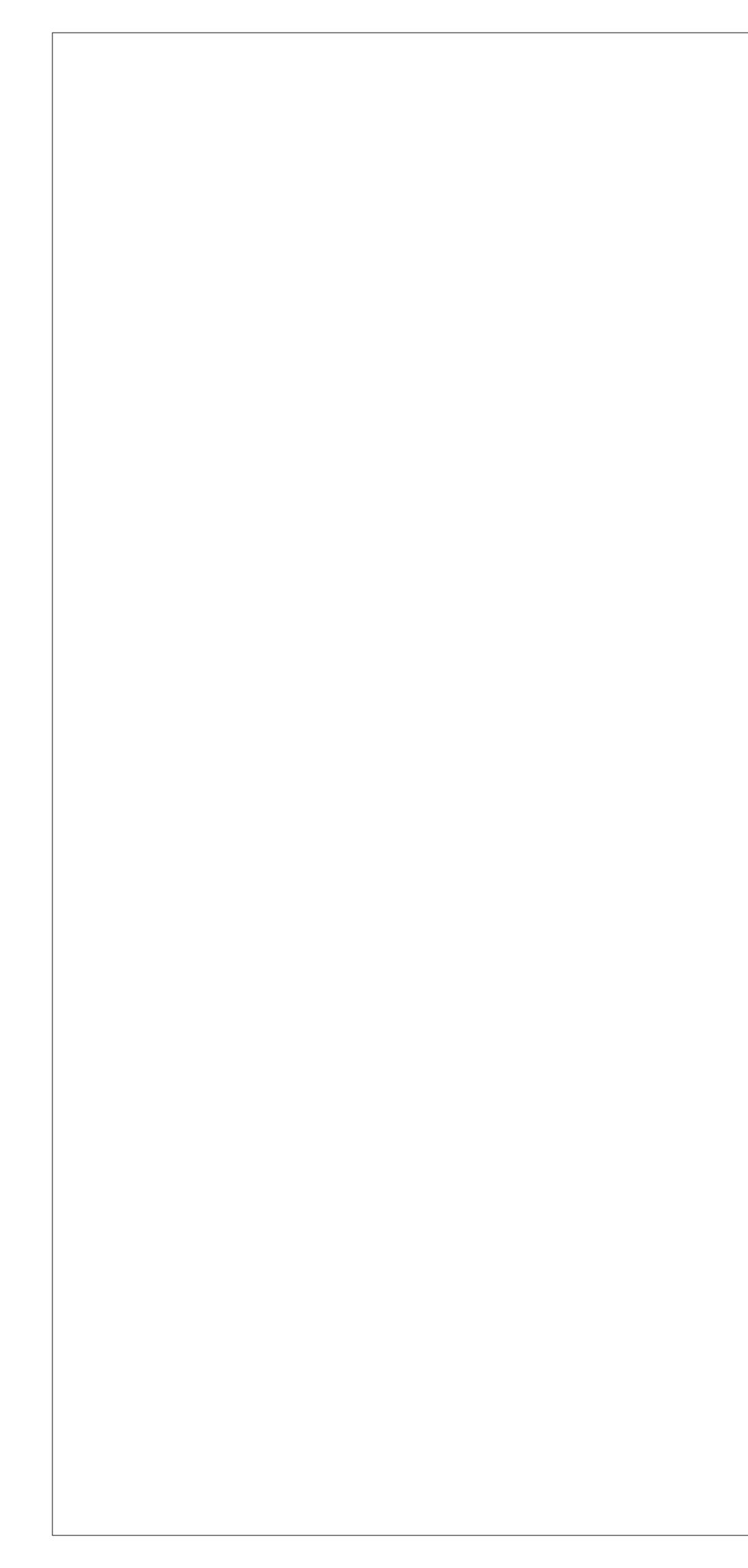
NORTH



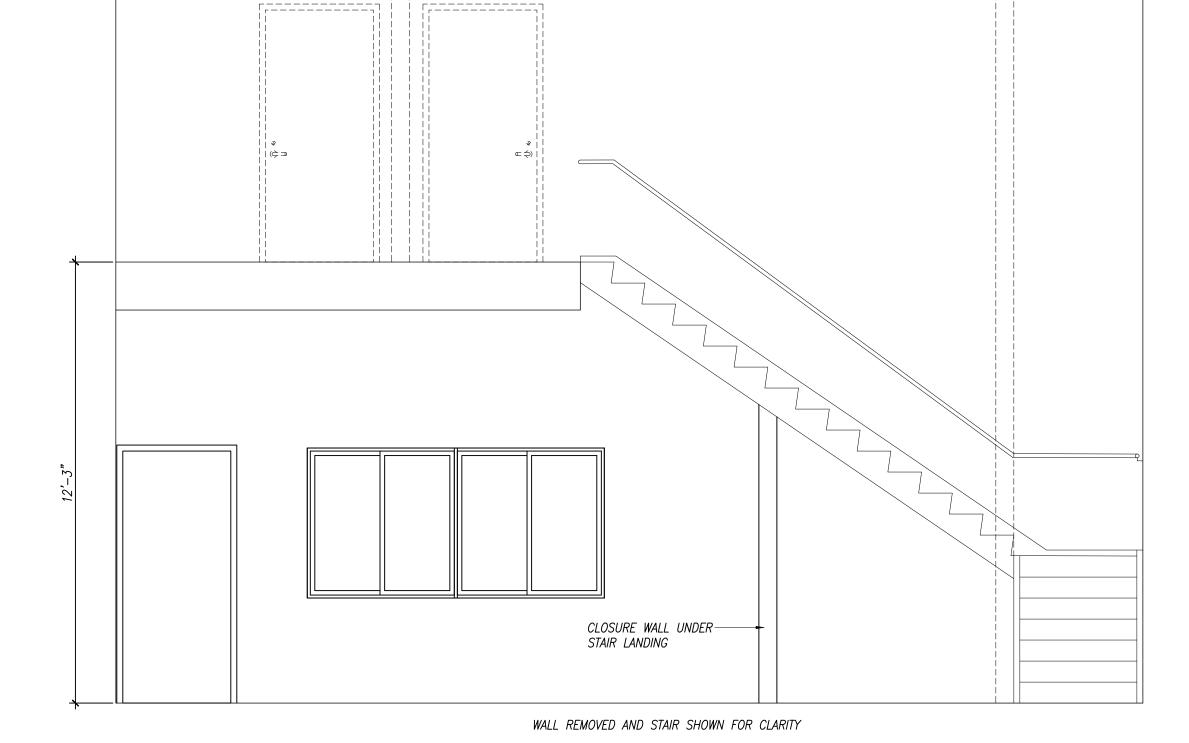
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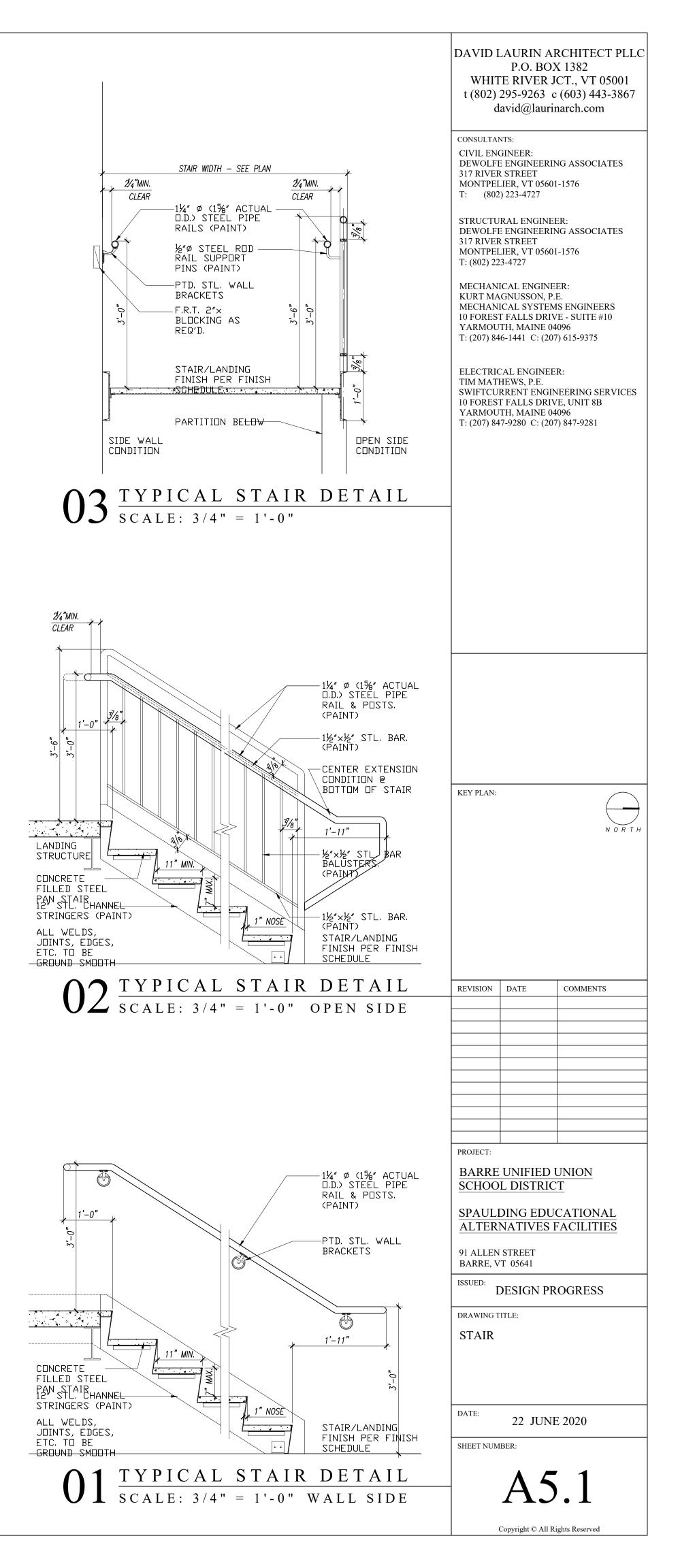
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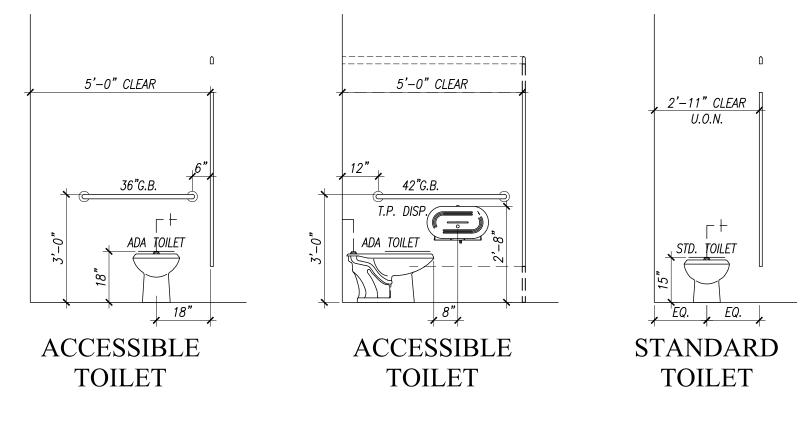
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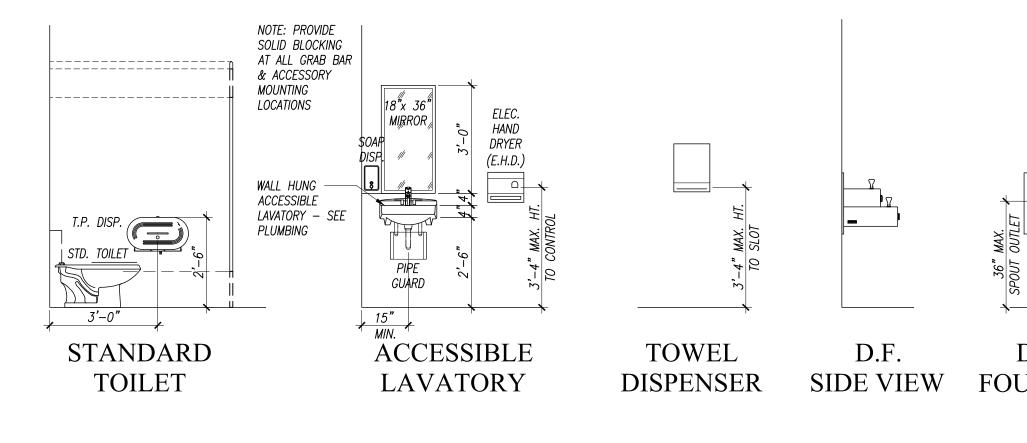












**TOILET ROOM ACCESSORIES:** 

INSTALL BLOCKING FOR ALL TOILET ROOM ACCESSORIES WHETHER INSTALLED BY CONTRACTOR OR OWNER.

TOILET PARTITIONS: SOLID PLASTIC WITH PLASTIC SHOES AND WRAP AROUND HINGES. HIGH RECYCLED CONTENT.

TOILET PAPER DISPENSERS: SUPPLIED BY OWNER; GEORGIA PACIFIC; #57893

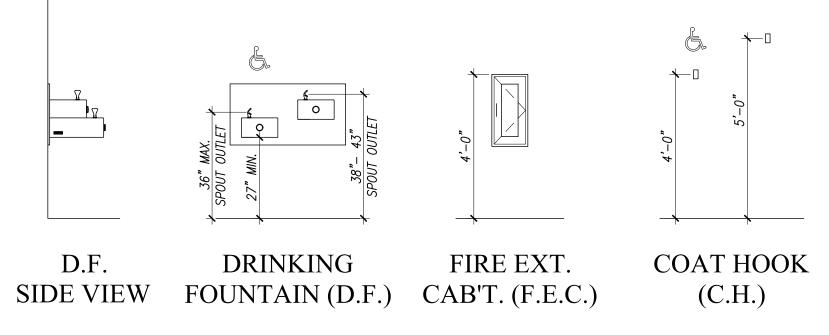
**ELECTRIC HAND DRYERS:** XLERATOR XL-C WITH RECESS KIT.

PAPER TOWEL DISPENSERS: SUPPLIED BY OWNER.

NON SLIP TEXTURE.

**ROBE HOOK:** BOBRICK B-76727

SURFACE MOUNTED SANITARY NAPKIN DISPOSAL: BOBRICK B-254



MIRRORS: MODEL B-290 SS 1836 BY BOBRICK.

GRAB BARS: MODEL B-6206 - 1 <sup>1</sup>/<sub>2</sub>" DIAMETER SS BY BOBRICK. CONCEALED ANCHORAGE. 1 1/2" CLEARANCE BETWEEN WALL AND INSIDE FACE OF BAR. STANDARD

DAVID LAURIN ARCHITECT PLLC P.O. BOX 1382 WHITE RIVER JCT., VT 05001 t (802) 295-9263 c (603) 443-3867 david@laurinarch.com

CONSULTANTS: CIVIL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727

STRUCTURAL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727

MECHANICAL ENGINEER: KURT MAGNUSSON, P.E. MECHANICAL SYSTEMS ENGINEERS 10 FOREST FALLS DRIVE - SUITE #10 YARMOUTH, MAINE 04096 T: (207) 846-1441 C: (207) 615-9375

# ELECTRICAL ENGINEER:

TIM MATHEWS, P.E. SWIFTCURRENT ENGINEERING SERVICES 10 FOREST FALLS DRIVE, UNIT 8B YARMOUTH, MAINE 04096 T: (207) 847-9280 C: (207) 847-9281

KEY PLAN:

NORTH

REVISION DATE

PROJECT:

COMMENTS

BARRE UNIFIED UNION SCHOOL DISTRICT

SPAULDING EDUCATIONAL ALTERNATIVES FACILITIES

91 ALLEN STREET BARRE, VT 05641

ISSUED: DESIGN PROGRESS

DRAWING TITLE: TOILETS

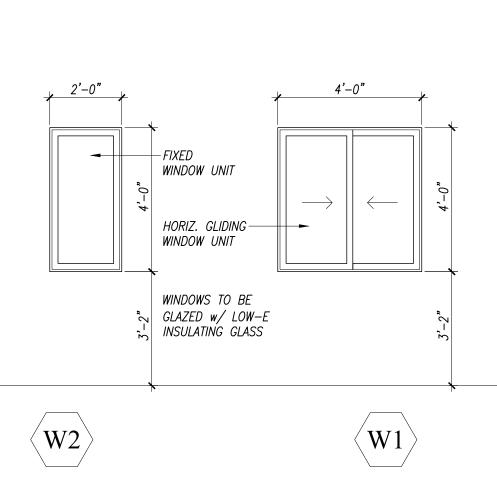
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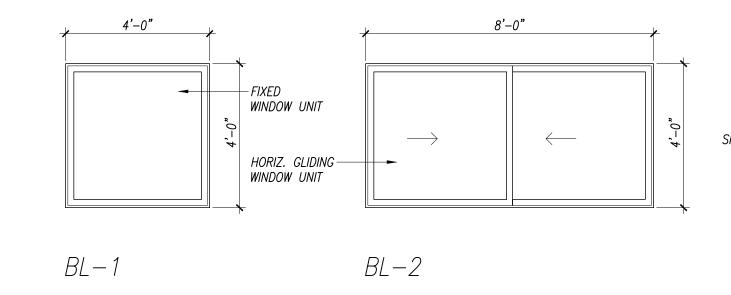
22 JUNE 2020

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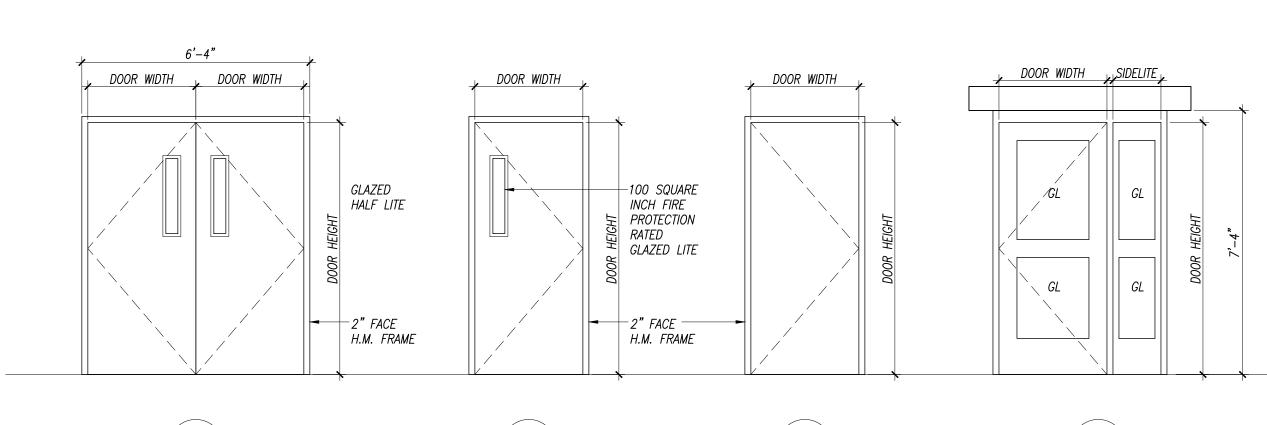






# DOOR TYPES

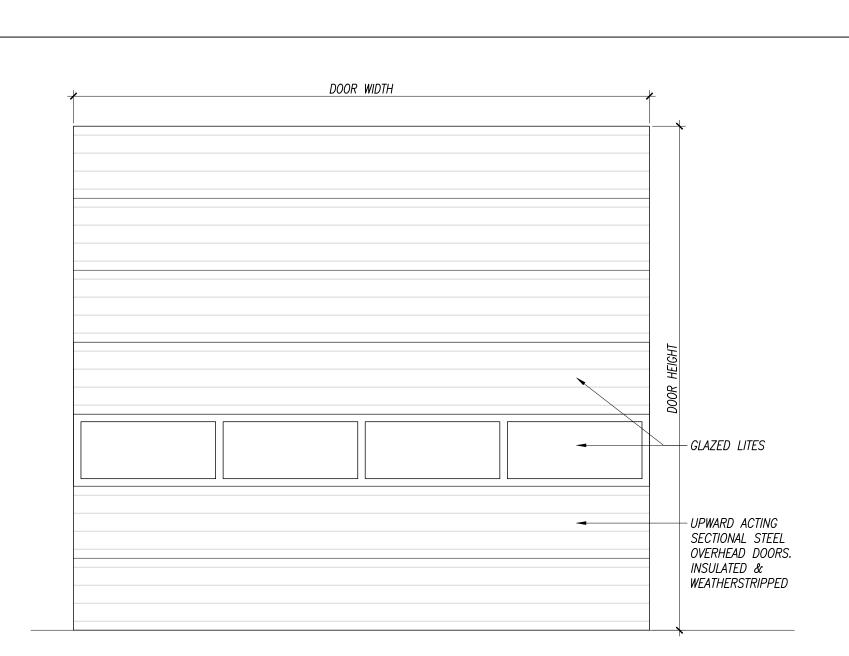
(D4)



(D2)

(D3)





NOTES:

MEDIUM STILE SINGLE DOOR.

 $-1 \frac{1}{2}$  PAIR BUTT HINGES (CLEAR ANODIZED) – ADAMS RITE 1850MS DEADLOCK W/ INTERIOR THUMBTURN (CLEAR ANODIZED) – EXTERIOR CYLINDER (SFIC HOUSING FINAL KEYING BY OTHERS) – ULTRA LINE 1" DIAMETER OFFSET PUSH/PULL (CLEAR ANODIZED)

– CLOSER BY OTHERS – DOOR SWEEP (CLEAR ANODIZED)

– 12" BOTTOM RAIL (BONE WHITE) – 4" GSG THRESHOLD (MILL)

PROVIDE AT DOOR 100.1 ONLY: – VON DUPRIN SERIES 6000 ELECTRIC STRIKE. – HORTON EASY ACCESS SERIES 7100 SURFACE APPLIED POWER SWING DOOR OPERATOR WITH PUSH BUTTON ACTUATOR

AUTOMATIC DOOR OPERATOR ALUM HEADER (BOX) MOUNTED ABOVE OPENING.

\* 10RD900 WIRELESS RECEIVER (RX) IS WIRED INTO TERMINAL STRIP INSIDE OF \* 10TD900PB WIRELESS TRANSMITTER (TX) IS INSIDE BEA SURFACE (SM) OR FLUSH (FM) MOUNTED BOX. PUSH PLATE SWITCH FASTENS TO THE FACE OF THE SM OR FM BOX. ONE TX REQUIRED PER WIRELESS PUSH PLATE SWITCH.

DOOR AND FRAME FINISH TO BE EFCO BONE WHITE.

EXTERIOR GLAZING TO BE 1" INSULATED UNITS WITH HEIGHT PERFORMANCE SB60 LOW-E

COATING ON THE #2 SURFACE, TEMPERED AND INTERNAL WHITE GRIDS. CAULKING TO BE DOW CORNING CWS, COLOR TO MATCH.

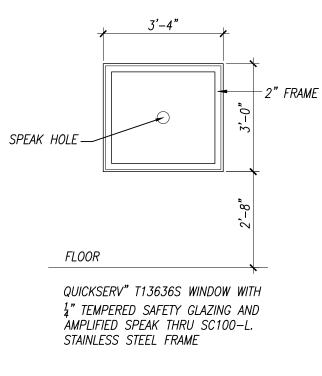
1) COORDINATE ALL HARDWARE AND KEYING REQUIREMENTS WITH OWNER. 2) DOORS 100.1, 117.1, & 125.1 TO BE COMMERCIAL ENTRY DOORS AS FOLLOWS: EFCO 403 SERIES STOREFRONT FRAME WITH 2"X4 ½" THERMALLY BROKEN PROFILE TO INCLUDE A NON-THERMAL EFCO 402 DOOR FRAME AND 3'-0" X 7'-0" EFCO T300

INTERIOR GLAZING TO BE 1" INSULATED CLEAR UNITS WITH INTERNAL WHITE GRIDS.



	JR	X	F.	KA.	ME		CΗ	EDUL	E	WHITE RIVER JCT., VT 05001 t (802) 295-9263 c (603) 443-3867
NO. LOCATION	TYPE	DO MAT'L.	ORS WIDTH	HEIGHT	FRA MAT'L.	AMES THRESH.	GLASS	LABEL HDWR. SET	NOTES:	david@laurinarch.com
100.1 ENTRY 100 TO EXTERIOR	D1	ALUM.	3'-0"	7'-0"	ALUM.	ALUM.	INSUL.		CARD ACCESS	CIVIL ENGINEER:
100.2 CORRIDOR 101 TO ENTRY 100	D1	Н.М.	3'-0"	7'-0"	H.M.		LAM.		CARD ACCESS	DEWOLFE ENGINEERING ASSOCIATES
105.1 CORRIDOR 101 TO WELLNESS 105	D3	H.M.	6'-0"	7'-0"	H.M.		LAM.			317 RIVER STREET MONTPELIER, VT 05601-1576
105.2 WELLNESS 105 TO EXTERIOR 106.1 RESTROOM 106 TO CORRIDOR 101	D3 D2	H.M. H.M.	<u>6'-0"</u> 3'-0"	<u>7'-0"</u> 7'-0"	H.M. H.M.	ALUM. MARBLE	INSUL.		INSUL. CORE & CARD ACCESS	T: (802) 223-4727
107.1 CORRIDOR 101 TO WOOD TECH 107	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			
107.2 WOOD TECH 107 TO EXTERIOR	D3	H.M.	3'-0"	7'-0"	H.M.	ALUM.	INSUL.		INSUL. CORE & CARD ACCESS	STRUCTURAL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES
107.3WOOD TECH107TOEXTERIOR108.1CORRIDOR101TOART/FIN108	D5	OHD H.M.	<u>8'-0"</u> 3'-0"	<u>    14'-0"    </u> 7'-0"	Н.М.		LAM.		INSUL. OHD	317 RIVER STREET
108.1 CORRIDOR 101 TO ART/FIN 108 108.2 WOOD TECH 107 TO ART/FIN 108	D3 D3	н.м.	$3^{-0}$	7'-0"	Н.М.		LAM.			MONTPELIER, VT 05601-1576 T: (802) 223-4727
108.3 ART/FIN 108 TO WOOD TECH 107	BL-1		0 0	, 0	H.M.		LAM.		4'-0" X 4'-0"	
109.1 UTILITY 109 TO METAL/MOTOR 110	D2	H.M.	3'-0"	7'-0"	H.M.					MECHANICAL ENGINEER: KURT MAGNUSSON, P.E.
110.1CORR.102TOMETAL/MOTOR110110.2METAL/MOTOR110TOEXTERIOR	D3 D3	H.M. H.M.	<u> </u>	<u>7'-0"</u> 7'-0"	H.M. H.M.	ALUM.	LAM. INSUL.		INSUL. CORE & CARD ACCESS	MECHANICAL SYSTEMS ENGINEERS
110.3 METAL/MOTOR 110 TO EXTERIOR	D5	OHD	<u> </u>	14'-0"	11.101.	ALOWI.	INSUL.		INSUL. OHD	10 FOREST FALLS DRIVE - SUITE #10 YARMOUTH, MAINE 04096
111.1 CORR. 102 TO STUDENT SUP. 111	D3	Н.М.	3'-0"	7'-0"	H.M.		LAM.			T: (207) 846-1441 C: (207) 615-9375
112.1 CORRIDOR 102 TO CLASSROOM 112	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			
112.2CLASSROOM112TOEXTERIOR113.1CORRIDOR102TOCLASSROOM113	D2 D3	H.M. H.M.	<u> </u>	<u>7'-0"</u> 7'-0"	H.M. H.M.	ALUM.	LAM.		INSUL. CORE	ELECTRICAL ENGINEER:
113.2 CLASSROOM 113 TO EXTERIOR	D3	H.M.	3'-0"	7'-0"	H.M.	ALUM.			INSUL. CORE	TIM MATHEWS, P.E.
114.1 CORRIDOR 102 TO CLASSROOM 114	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			SWIFTCURRENT ENGINEERING SERVICES 10 FOREST FALLS DRIVE, UNIT 8B
114.2 CLASSROOM 114 TO EXTERIOR 115.1 CORRIDOR 102 TO CLASSROOM 115	D2 D3	H.M. H.M.	<u> </u>	<u>7'-0"</u> 7'-0"	H.M. H.M.	ALUM.	LAM.		INSUL. CORE	YARMOUTH, MAINE 04096
115.1CORRIDOR102TOCLASSROOM115115.2CLASSROOM115TOEXTERIOR	D3 D2	н.м. Н.М.	<u> </u>	7'-0"	н.м. Н.М.	ALUM.			INSUL. CORE	T: (207) 847-9280 C: (207) 847-9281
116.1 CORRIDOR 102 TO CLASSROOM 116	D3	H.M.	3'-0"	7'-0"	H.M.					
116.2 CLASSROOM 116 TO EXTERIOR	D2	H.M.	3'-0"	7'-0"	H.M.	ALUM.			INSUL. CORE	
117.1         ENTRY         117         TO         EXTERIOR           117.2         CORRIDOR         102         TO         ENTRY         117	D1 D1	ALUM. H.M.	<u> </u>	<u>7'-0"</u> 7'-0"	ALUM. H.M.	ALUM.	INSUL.		CARD ACCESS CARD ACCESS	
118.1 CORRIDOR 102 TO WORKSPACE 118	D3	H.M.	<u> </u>	7'-0"	H.M.		LAM.			
119.1 CLOSET 119 TO CLASSROOM 120	D2	Н.М.	3'-0"	7'-0"	H.M.					
120.1 CORRIDOR 103 TO CLASSROOM 120	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			
120.2 CLASSROOM 120 TO EXTERIOR 121.1 CLOS.121 TO INDIV PROG SUITE 131	D2 D2	H.M. H.M.	<u> </u>	<u>7'-0"</u> 7'-0"	H.M. H.M.	ALUM.			INSUL. CORE	
122.1 INDIV PROG SUITE 131 TO WORKSP 122	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			
123.1 INDIV PROG SUITE 131 TO WORKSP 123	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			
124.1INDIVPROGSUITE131TOWORKSP124125.1ENTRY125TOEXTERIOR	D3 D1	H.M. ALUM.	<u> </u>	<u>7'-0"</u> 7'-0"	H.M. ALUM.	ALUM.	LAM. INSUL.		CARD ACCESS	
125.2 INDIV PROG SUITE 131 TO ENTRY 125	D1	H.M.	3'-0"	7'-0"	H.M.		LAM.		CARD ACCESS	
126.1 INDIV PROG SUITE 131 TO WORKSP 126	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			
127.1INDIVPROGSUITE131TOWORKSP127128.1INDIVPROGSUITE131TOWORKSP128	D3	H.M.	<u> </u>	<u>7'-0"</u> 7'-0"	H.M.		LAM.			
128.1INDIVPROGSUITE131TOWORKSP128129.1CUSTODIAL129TOCORRIDOR103	D3 D2	H.M. H.M.	<u> </u>	7'-0"	H.M. H.M.		LAM.			
130.1 RESTROOM 130 TO INDIV PROG SUITE 131	D2	Н.М.	3'-0"	7'-0"	H.M.	MARBLE				
131.1 CORRIDOR 104 TO INDIV PROG SUITE 131	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			
131.2INDIVPROGSUITE131TOSTUDENTSUP133132.1UTILITY132TOCORRIDOR104	D3 D2	H.M. H.M.	<u> </u>	<u>7'-0"</u> 7'-0"	H.M. H.M.		LAM.			
133.1 CORRIDOR 104 TO STUDENT SUP 133	D2	H.M.	<u> </u>	7'-0"	H.M.		LAM.			
134.1 ADMIN CONF. RM. 135 TO ADMINISTRATOR 134	D3	Н.М.	3'-0"	7'-0"	H.M.		LAM.			
134.2 ADMINISTRATOR 134 TO RECEPTION 137	D3	H.M.	3'-0"	7'-0"	H.M. H.M.		LAM.			
134.3ADMINISTRATOR134TOADMINCONF.RM.135134.4ADMINISTRATOR134TORECEPTION137	BL-2 BL-1				Н.М.		LAM.		8'-0" WIDE X 4'-0" TALL 8'-0" WIDE X 4'-0" TALL	
135.1 CORRIDOR 104 TO ADMIN CONF. RM. 135	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			
136.1 CORRIDOR 104 TO SM CONF 136	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			KEY PLAN:
136.2         SM         CONF         136         TO         ADMIN         CONF.         RM.         135           136.3         SM         CONF         136         TO         CORRIDOR         101	D3 BL-1	H.M.	3'-0"	7'-0"	H.M. H.M.		LAM.		4'-0" WIDE X 4'-0" TALL	
137.1 CORRIDOR 101 TO RECEPTION 137	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			N O R T H
137.2 RECEPTION 137 TO ENTRY 100	BL-3			•	S.S					
138.1CORRIDOR104TOCOMMUNITYRM138138.2COMMUNITYRM138TOCORRIDOR104	D4 BL-2	H.M.	3'-0"	7'-0"	H.M. H.M.		LAM.			
139.1 RESTROOM 139 TO CORRIDOR 102	D2	H.M.	3'-0"	7'-0"	н.м. Н.М.	MARBLE			8'-0" WIDE X 4'-0" TALL	
140.1 RESTROOM 140 TO CORRIDOR 102	D2	Н.М.	3'-0"	7'-0"	H.M.	MARBLE				
141.1STORAGE141TOCULINARYARTS143142.1CUSTODIAL142TOCULINARYARTS143	D2 D2	H.M. H.M.	<u> </u>	<u> </u>	H.M. H.M.					
142.1CUSTODIAL142TOCULINARYARTS143143.1CORRIDOR104TOCULINARYARTS143	D2 D3	н.м. Н.М.	$3^{-0}$	7'-0"	н.м. Н.М.		LAM.			
143.2 CULINARY ARTS 143 TO COMMUNITY RM 138	D3	H.M.	3'-0"	7'-0"	H.M.		LAM.			
143.3 COILING COUNTER DOOR										
143.4COILINGCOUNTERDOOR144.1CORRIDOR103TOMULTI-MEDIA144	D3	H.M.	3'-0"	7'-0"	Н.М.		LAM.			
145.1 LAUNDRY 145 TO CORRIDOR 103	D3	H.M.	<u> </u>	7'-0"	H.M.	MARBLE				REVISION DATE COMMENTS
201.1MECHANICAL201TOUTILITY109201.2MECHANICAL201TO107BELOW	D2 D4	H.M. H.M.	<u> </u>	<u> </u>	H.M. H.M.				NO VISION PANELS	
201.2 MECHANICAL 201 TO TO BELOW 202.1 MECHANICAL 201 TO STORAGE 202	D4 D2	н.м. Н.М.	<u> </u>	7'-0"	н.м. Н.М.					
			-							
NOTES:										

<u>NOTES:</u> 1. COORDINATE ALL HARDWARE AND KEYING REQUIREMENTS WITH OWNER. 2. SEE SPECIFICATIONS FOR DOOR HARDWARE.





# DOOR & FRAME SCHEDULE

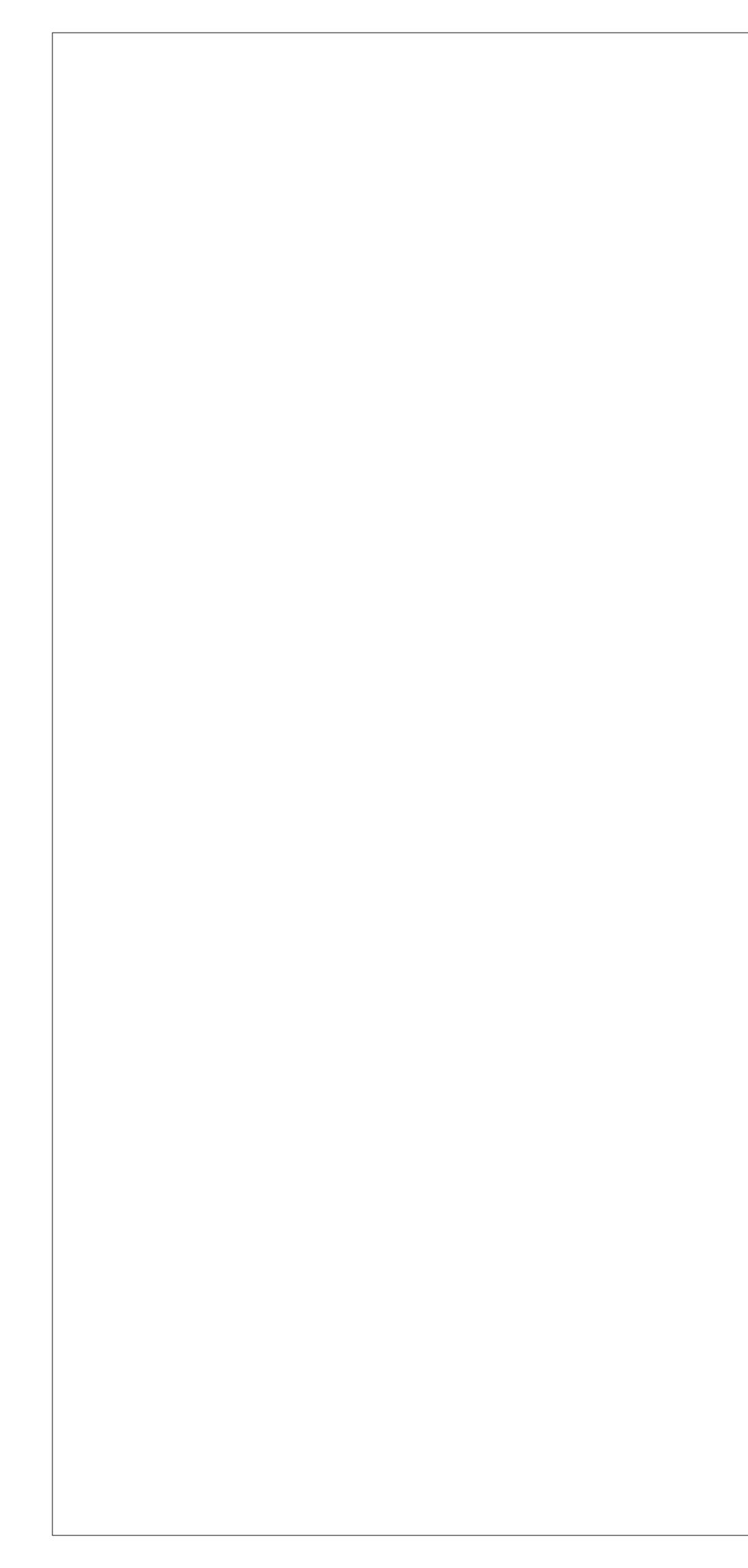
MENTS PROJECT: BARRE UNIFIED UNION SCHOOL DISTRICT SPAULDING EDUCATIONAL ALTERNATIVES FACILITIES 91 ALLEN STREET BARRE, VT 05641 ISSUED: DESIGN PROGRESS DRAWING TITLE: **OPENINGS** DATE: 22 JUNE 2020 SHEET NUMBER:

DAVID LAURIN ARCHITECT PLLC

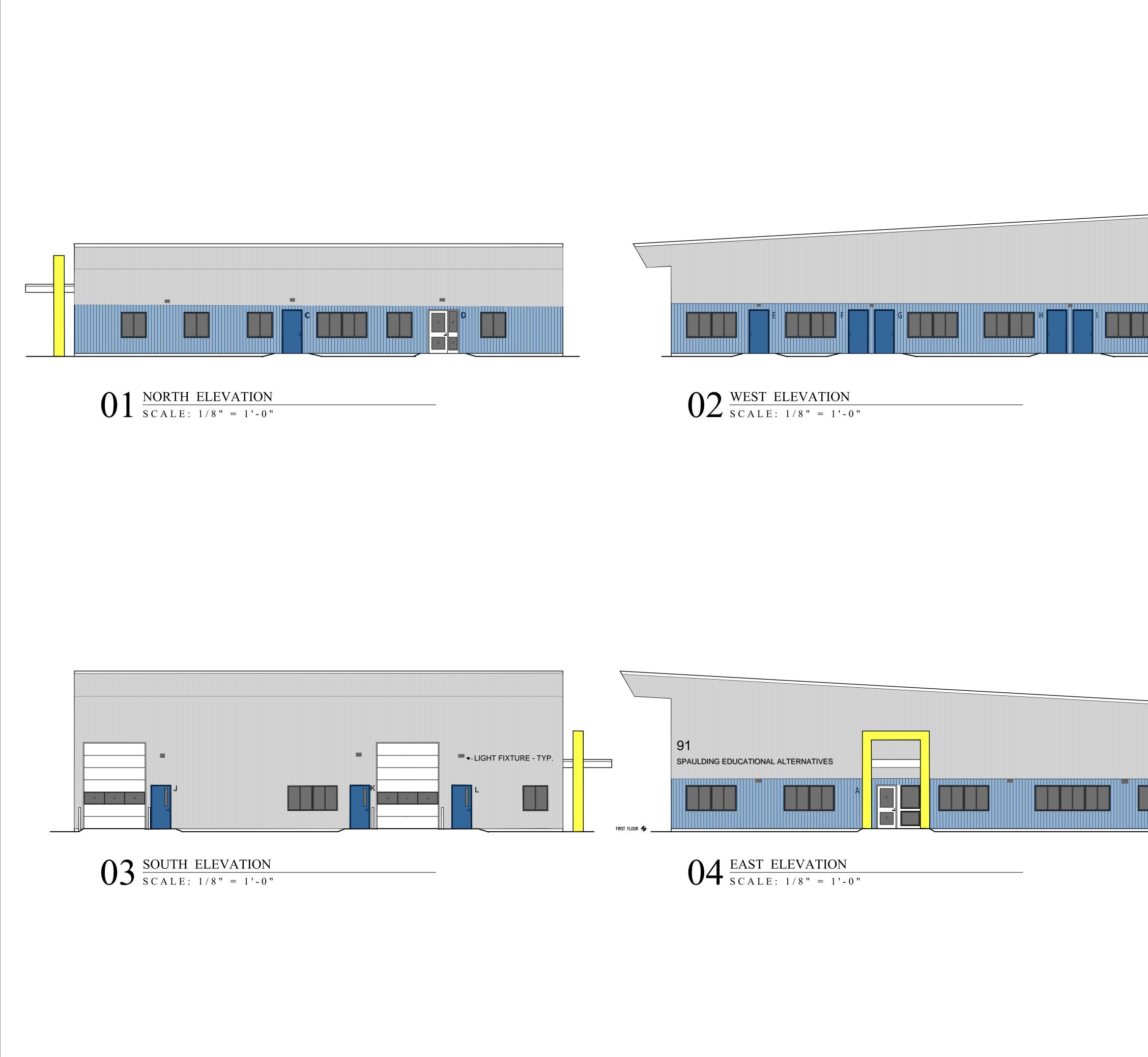
P.O. BOX 1382

WHITE RIVER JCT., VT 05001





	LAURIN AF P.O. BOX	K 1382	
t (802)	TE RIVER J 295-9263 c avid@laurir	(603) 44.	3-3867
317 RIVER MONTPEI	GINEER: E ENGINEERIN		ATES
DEWOLFI 317 RIVEF	LIER, VT 05601	IG ASSOCIA	ATES
KURT MA MECHAN 10 FORES YARMOU	ICAL ENGINE GNUSSON, P.J ICAL SYSTEM I FALLS DRIV TH, MAINE 04 66-1441 C: (207	E. S ENGINEE E - SUITE # 096	
TIM MATI SWIFTCU 10 FORES YARMOU	CAL ENGINEE HEWS, P.E. RRENT ENGIN F FALLS DRIV TH, MAINE 04 7-9280 C: (207	IEERING SE E, UNIT 8B 096	ERVICES
KEY PLAN:			
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DATE: SHEET NUM	22 JUNE	E 2020	
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SHEET NUMBER:

DATE:

27 MAY 2020

DRAWING TITLE: EXTERIOR ELEVATIONS

ISSUED: DESIGN PROGRESS

91 ALLEN STREET BARRE, VT 05641

# SPAULDING EDUCATIONAL ALTERNATIVES FACILITIES

PROJECT: BARRE UNIFIED UNION SCHOOL DISTRICT

REVISION DATE

COMMENTS

\_\_\_\_\_

NORTH

KEY PLAN:

COLOR A COLOR B 🔶 FIRST FLOOR

# DAVID LAURIN ARCHITECT PLLC P.O. BOX 1382 WHITE RIVER JCT., VT 05001 t (802) 295-9263 c (603) 443-3867 david@laurinarch.com

317 RIVER STREET MONTPELIER, VT 05601-1576

MONTPELIER, VT 05601-1576

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T: (802) 223-4727

**317 RIVER STREET** 

T: (802) 223-4727

CIVIL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES

STRUCTURAL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES

MECHANICAL SYSTEMS ENGINEERS 10 FOREST FALLS DRIVE - SUITE #10 YARMOUTH, MAINE 04096 T: (207) 846-1441 C: (207) 615-9375

ELECTRICAL ENGINEER: TIM MATHEWS, P.E. SWIFTCURRENT ENGINEERING SERVICES 10 FOREST FALLS DRIVE, UNIT 8B

CONSULTANTS:

	LEGEND	
EXISTING		PROPOSED
	PROPERTY LINE	
	ABUTTER'S PROPERTY LINE	
	EASEMENT LINE -	
	ZONING SETBACK LINE -	
· ·	ZONING BOUNDARY	
500	• SOIL TYPE BOUNDARY MAJOR CONTOUR -	
501	MINOR CONTOUR -	501
• • • • • • • • • • • • • • • • • • • •		1 1 1 1 1 1 1 1 1 1 1
	BUILDING OVERHANG - ROADWAY CENTERLINE -	
	EDGE OF PAVEMENT	
	CURB EDGE OF GRAVEL -	
	• TRAIL •	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	STONE WALL	
	TREE LINE	~~~~~.
	• WETLAND/ SHORELINE BUFFER	
<u> </u>	EDGE OF WATER	
<b>—</b> ···· <b>—</b> ··· <b>—</b> ··· <b>—</b>	FLOOD PLAIN BOUNDARY     DITCH LINE -	
		· · · · · · · · · · · · · · · · · · ·
x x	BARBED WIRE FENCE	x x
o	CHAIN LINK FENCE -	
 0	• WOOD RAIL - • GUARDRAIL •	° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °
Dε Dε	STORM DRAIN LINE	D
Se Se	SEWER LINE -	S FM
— — Gr — — — Gr — — —	GAS LINE -	GG
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		UGE UGE
OHE <sub>E</sub>		OHE
UGUE		UGU
	UNDERGROUND UTILITY & ELECTRIC	
OHU−Εε	OVERHEAD UTILITY & ELECTRIC	OHU-E
		CF CF CF SF SF SF
		sc sc sc
	LIMIT OF DISTURBANCE -	LOD
_0_	COFFER DAM · · SIGN	
ф	LIGHTS	*
$\Phi_{TP}$	TEST PITS	
$- \bigoplus_{M \in M} M W$	MONITORING WELLS	
	BORING LOCATIONS SPOT GRADES	496.88
<b>E</b>	CATCH BASINS	8
О <sub><i>с.о.</i></sub>	CLEAN OUTS	•
6		C.O.
0	DRAINAGE MANHOLES	0
E	ELECTRIC PADS/ HANDHOLDS	-
		© ⊑ ►
E	ELECTRIC PADS/ HANDHOLDS GATES VALVES	0
	ELECTRIC PADS/ HANDHOLDS GATES VALVES HYDRANTS	© ⊑ ₩ \$
الے ایک ایک ایک ایک	ELECTRIC PADS/ HANDHOLDS GATES VALVES HYDRANTS SEWER MANHOLES FELEPHONE/ UTILITY PADS & VAULTS UTILITY POLES	
الے ایک ایک ایک ایک	ELECTRIC PADS/ HANDHOLDS GATES VALVES HYDRANTS SEWER MANHOLES FELEPHONE/ UTILITY PADS & VAULTS	© ⊑ ► ₹ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$
	ELECTRIC PADS/ HANDHOLDS GATES VALVES HYDRANTS SEWER MANHOLES FELEPHONE/ UTILITY PADS & VAULTS UTILITY POLES POTABLE WATER WELLS	
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الے ایک (5) ال ال ال ال ال ال ال ال ال ال ال ال ال	ELECTRIC PADS/ HANDHOLDS GATES VALVES HYDRANTS SEWER MANHOLES TELEPHONE/ UTILITY PADS & VAULTS UTILITY POLES POTABLE WATER WELLS WATER SHUT OFFS GUY POLES GUY WIRES CATCH BASIN SEDIMENT TRAPS	
الے ایک (5) ال ال ال ال ال ال ال ال ال ال ال ال ال	ELECTRIC PADS/ HANDHOLDS GATES VALVES HYDRANTS SEWER MANHOLES TELEPHONE/ UTILITY PADS & VAULTS UTILITY POLES POTABLE WATER WELLS WATER SHUT OFFS GUY POLES GUY WIRES CATCH BASIN SEDIMENT TRAPS HAY BALES	
الے ایک (5) ال ال ال ال ال ال ال ال ال ال ال ال ال	ELECTRIC PADS/ HANDHOLDS GATES VALVES HYDRANTS SEWER MANHOLES TELEPHONE/ UTILITY PADS & VAULTS UTILITY POLES POTABLE WATER WELLS WATER SHUT OFFS GUY POLES GUY WIRES CATCH BASIN SEDIMENT TRAPS	
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# PROJECT NOTES 1 GENERAL

- 1.1 ALL WORK SHALL BE PERFORMED IN A FIRST CLASS MANNER, AND IN ACCORDANCE WITH STATE CODE (IBC 2015 WITH LATEST SUPPLEMENTS), AND LOCAL CODES AND ORDINANCES.
- 1.2 ALL EXISTING UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL CONTACT DIG-SAFE (1-888-DIG-SAFE) AT LEAST 48 HOURS AND LESS THAN 30 DAYS PRIOR TO STARTING CONSTRUCTION AND SHALL VERIFY ALL UTILITY LOCATIONS IN THE FIELD.
- 1.3 THE LIMITS OF SITE WATER AND SEWER WORK SHALL TERMINATE 2'-0" INSIDE THE BUILDING. THE SITE CONTRACTOR SHALL PROVIDE PIPING. GENERAL CONTRACTOR SHALL PROVIDE SLEEVES AS NECESSARY.
- 1.4 GAS AND ELECTRIC LINES SHALL BE EXCAVATED AND BACKFILLED BY THE SITE CONTRACTOR. PIPING SHALL BE PROVIDED AND INSTALLED BY THE APPROPRIATE SUBCONTRACTOR.
- 1.5 USE THESE CIVIL DRAWINGS IN CONJUNCTION WITH THE ARCHITECTURAL. STRUCTURAL, ELECTRICAL. LANDSCAPING & MECHANICAL DRAWINGS. SHOULD A CONFLICT DEVELOP, NOTIFY THE ENGINEER BEFORE PROCEEDING
- 1.6 ALL DIMENSIONS AND ELEVATIONS SHOWN MUST BE VERIFIED BY THE CONTRACTOR DURING CONSTRUCTION BY THE AID OF DRAWINGS, FIELD CHECKS, AND SUBCONTRACTORS SHOP DRAWINGS.
- 1.7 CONTRACTOR SHALL PROTECT EXISTING FACILITIES, STRUCTURES, AND UTILITY LINES FROM ALL DAMAGE.
- 1.8 CONTRACTOR IS RESPONSIBLE FOR ADEQUATE BRACING OF WALLS AND/OR SHORING OF EXCAVATIONS DURING CONSTRUCTION.
- 1.9 THE CONTRACTOR SHALL REVIEW AND STAMP ALL SHOP DRAWINGS AND SUBMITTALS BEFORE SUBMISSION TO THE ENGINEER; THUS, PROVIDING ANY INFORMATION REQUIRED OF THE FABRICATOR SUCH AS FIELD DIMENSIONS, ELEVATIONS, ETC. OTHERWISE THE SHOP DRAWINGS OR SUBMITTALS WILL BE REJECTED UNTIL SUCH INFORMATION IS FURNISHED BY THE CONTRACTOR.
- 1.10 BACKFILL INSIDE OF FOUNDATION WALLS, UNDER CONCRETE SURFACES, AND UNDER PAVED SURFACES WITH IMPORTED GRAVEL FOR SUBBASE, OR SELECT ON-SITE MATERIAL THAT WILL MEET STRUCTURAL BACKFILL SIEVE ANALYSIS AND COMPACTION CRITERIA. AS DETERMINED BY THE TESTING LABORATORY. IN 8" LIFTS TO 95% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. ASTM D1557
- 1.11 GENERAL BACKFILL SHALL BE COMPACTED TO 90% OF THE MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT, ASTM D1557

1.12 ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED, TO BE TOPSOILED, SEEDED, AND MULCHED. 2 CONCRETE:

- 2.1 ALL CONCRETE AND REINFORCING WORK SHALL BE IN STRICT ACCORDANCE WITH THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-14)". EXTERIOR CONCRETE SHALL BE AIR-ENTRAINED WITH AIR CONTENT OF 6% +OR- 1.5%, REINFORCED EXTERIOR SLAB CONCRETE SHALL HAVE A CORROSION INHIBITIVE ADMIXTURE. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS. SUBMIT CONCRETE MIX DESIGN FOLLOWING PROCEDURES OUTLINED IN THE FLOW CHART IN CHAPTER 5 OF ACI 301 FOR REVIEW OF ENGINEER. CONTRACTOR SHALL TAKE 4 TEST CYLINDERS OF CONCRETE FOR EACH 50 CUBIC YARDS OF CONCRETE OR FOR EACH DAYS POUR IF LESS THAN 50 C.Y. TESTING WILL BE AT OWNER'S EXPENSE.
- 2.2 MAXIMUM W/C RATIO FOR 4000 PSI CONCRETE: 0.44 2.3 CONCRETE SHALL BE PROTECTED FROM FREEZING. CONTRACTOR SHALL FOLLOW THE "RECOMMENDED PRACTICE
- FOR COLD WEATHER CONCRETING (ACI 306, LATEST EDITION). 2.4 ALL CONCRETE SHALL BE PLACED IN THE DRY. PUMP WATER FROM EXCAVATIONS AS NECESSARY.
- 2.5 USE A PLASTICIZER ADDITIVE FOR SLAB ON GRADE CONCRETE. PROVIDE THE STANDARD MIX, EXCEPT THE SLUMP BEFORE ADDING THE MID RANGE PLASTICIZER SHALL BE 2" +OR- 1". SLUMP SHALL NOT EXCEED 6". DO NOT EXCEED SPECIFIED WATER CEMENT RATIOS.
- 2.6 CONCRETE SHALL BE SO PROPORTIONED SO AS TO HAVE A MAXIMUM SLUMP OF 4", EXCEPT CONCRETE SPECIFIED TO HAVE A PLASTICIZER SHALL HAVE A SLUMP OF 2" +OR- 1".
- 2.7 THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE SETTING SCREEDS AND FORMS. FORM RELEASE OIL SHALL BE AN APPROVED NON-TOXIC LIQUID.
- 2.8 SLABS SHALL BE WET CURED USING BURLAP COVER TO KEEP ENTIRE SURFACE CONTINUOUSLY MOIST FOR A MINIMUM OF SEVEN DAYS.
- 2.9 DURING PLACEMENT OF CONCRETE, USE TREMIE OR OTHER MEANS TO LIMIT FREE-FALL OF CONCRETE TO 5 FEET. 2.10 CONCRETE SHALL BE CONSOLIDATED BY VIBRATION, SPADING, OR RODDING SO THE CONCRETE IS THOROUGHLY WORKED AROUND THE REINFORCEMENT, EMBEDDED ITEMS, AND INTO CORNERS OF FORMS, ELIMINATING ALL AIR OR STONE POCKETS WHICH MAY CAUSE HONEYCOMBING. (CARE SHALL BE TAKEN NOT TO OVER VIBRATE AND CAUSE SEGREGATION).
- 3 REINFORCING STEEL:
- 3.1 REINFORCING STEEL SHALL BE NEW BILLET STEEL, ASTM A615, Fy=60 KSI.
- 3.2 THE MINIMUM CLEAR DISTANCE FROM REINF. STEEL TO ADJACENT SURFACE SHALL BE: 3" FROM BOTTOM OF SLAB ON GRADE AND 2" FROM EDGES OF SLAB ON GRADE.
- 3.3 PROVIDE LAP SPLICES OF ALL SLAB REINFORCEMENT AS FOLLOWS: #5 BAR 2'-4" MINIMUM, #7 BAR 3'-8" MINIMUM. AT CHANGES IN DIRECTION OF SLAB, PROVIDE CORNER BARS WITH LEGS EQUAL TO BAR LAP SPLICE LENGTH (MINIMUM)
- 3.4 REINFORCEMENT SHALL BE SECURELY TIED IN ITS PROPER PLACE BEFORE AND DURING CONCRETE PLACEMENT OPERATIONS USING APPROVED TIES. CHAIRS, AND SPACERS AS REQUIRED, NO BARS SHALL BE CUT OR OMITTED IN THE FIELD WITHOUT THE APPROVAL OF THE ENGINEER. USE PLASTIC TIPPED ACCESSORIES IN CONCRETE EXPOSED TO WEATHER. WATER. OR VIEW.
- 4 PRECAST CONCRETE:
- 4.1 PRECAST CONCRETE SHALL BE THE PRODUCT OF A MANUFACTURER WHO HAS DEMONSTRATED THE ABILITY TO PRODUCE PRECAST PRODUCTS AND HAS BEEN IN BUSINESS FOR AT LEAST THE LAST THREE YEARS. THE MANUFACTURING PLANT AND METHODS SHALL CONFORM TO THE LATEST STANDARDS OF THE PRECAST CONCRETE INSTITUTE. THE DESIGN OF THE PRECAST MEMBERS SHALL BE BY A REGISTERED ENGINEER EXPERIENCED IN THE DESIGN OF PRECAST. PRESTRESSED CONCRETE DESIGN. PRECAST CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 5.000 PSI AT 28 DAYS OR HIGHER STRENGTH AS DEEMED NECESSARY BY
- DESIGN. ALL STEEL CONNECTION MATERIAL SHALL BE HOT-DIPPED GALVANIZED. 4.1.1 THE SUPERIMPOSED DESIGN LOADS ON ALL BURIED STRUCTURES SHALL MEET OR EXCEED AASHTO HS-20 LOADING UNLESS OTHERWISE NOTED.
- 5 MATERIAL SPECIFICATIONS:
- 5.1 CONTRACTOR TO PROVIDE SUBMITTALS TO ENGINEER FOR ALL MATERIALS SHOWN ON THE DESIGN PLANS AND/OR ANY MATERIALS WHICH ARE TO BE SUBSTITUTED FOR USE ON SITE FOR APPROVAL PRIOR TO CONSTRUCTION.
- 5.2 MATERIALS NOT SPECIFIED HEREIN SHALL MEET OR EXCEED VERMONT AGENCY OF TRANSPORTATION (VAOT) STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- 5.3 GENERAL FILL SHALL BE A COMPACTABLE SAND OR GRAVEL REASONABLY FREE FROM LOAM, SILT, CLAY AND ORGANIC MATERIALS AND SHALL HAVE 0-20 PERCENT PASSING THE NO. 100 SIEVE AND 40-100 PERCENT PASSING THE NO. 4 SIEVE.
- 5.4 GRAVEL FOR SUBBASE SHALL BE FREE FROM LOAM, SILT, CLAY AND ORGANIC MATERIALS AND SHALL HAVE 20-60 PERCENT PASSING A NO. 4 SIEVE, 0-12 PERCENT PASSING A NO. 100 SIEVE AND 0-6 PERCENT PASSING A NO. 200
- 5.5 CRUSHED GRAVEL FOR SUBBASE SHALL BE FREE FROM LOAM, SILT, CLAY AND ORGANIC MATERIALS AND SHALL HAVE 100 PERCENT PASSING A 2 INCH SIEVE, 90-100 PERCENT PASSING A 1 INCH SIEVE 30-60 PERCENT PASSING A NO. 4 SIEVE, 0-12 PERCENT PASSING A NO. 100 SIEVE AND 0-6 PERCENT PASSING A NO. 200 SIEVE.
- 5.6 DENSE GRADED CRUSHED STONE SHALL BE FREE FROM LOAM, SILT, CLAY AND ORGANIC MATERIALS AND SHALL HAVE 100 PERCENT PASSING A 3 <sup>1</sup>/<sub>2</sub>" SIEVE, 90-100 PERCENT PASSING A 3 INCH SIEVE, 75-100 PERCENT PASSING A 2 INCH SIEVE, 50-80 PERCENT PASSING A 1 INCH SIEVE, 30-60 PERCENT PASSING A <sup>1</sup>/<sub>2</sub>" SIEVE, 15-40 PERCENT PASSING A NO. 4 SIEVE, AND 0-6 PERCENT PASSING A NO. 200 SIEVE.
- 6 PROJECT PERMITS: IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF AND ABIDE BY THE CONDITIONS OF THE PERMITS LISTED.
- 6.1 LOCAL APPROVALS 6.3 VERMONT STORMWATER MANAGEMENT DIVISION
- CONSTRUCTION EROSION CONTROL PERMIT 3-9020 6.4 VERMONT DRINKING WATER AND GROUNDWATER PROTECTION DIVISION
- WASTEWATER SYSTEM AND POTABLE WATER SUPPLY PERMIT 6.5 VERMONT DIVISION OF FIRE SAFETY
- UNDERGROUND SPRINKLER SYSTEM PIPING

# **EROSION CONTROL DURING CONSTRUCTION**

- BEFORE ANY CLEARING, GRUBBING, OR DEMOLITION OF THE SITE IS INITIATED, AND DURING ALL EARTHWORK PHASES, EROSION CONTROL MEASURES SHALL BE CONSTRUCTED AND MAINTAINED AT THE INLET OF ANY STORM DRAINS, SWALES, AND DITCHES RECEIVING WATER FROM THE PROJECT. SEE TYPICAL DETAILS AND PLANS FOR TYPES AND LOCATIONS.
- SILT FENCE SHALL BE PLACED DOWN GRADIENT OF ALL DISTURBED AREAS. IF THE DISTURBED AREA IS 100' OR LESS FROM THE WATERS OF THE STATE THE SILT FENCE SHALL BE WIRE MESH REINFORCED.
- 3. ALL STOCKPILED SOIL SHALL BE ENCIRCLED WITH SILT FENCE, UNLESS AN EXISTING BARRIER WILL ENTRAP ALL EROSION FROM SUCH A STOCKPILE OR THE STOCKPILE IS COMPLETELY COVERED WITH VEGETATION THAT PREVENTS EROSION
- NO MORE THAN 500 FEET OF TRENCH SHALL BE OPEN AT ONE TIME AND EXCAVATED MATERIAL TO BE USED FOR BACKFILL SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH. ALL OTHER EXCAVATED MATERIAL SHALL BE DISPOSED OF OFF-SITE AT AN APPROVED LOCATION.
- STONE CHECK DAMS SHALL BE PLACED IN NEWLY CONSTRUCTED SWALES DITCHES OR OTHER WATERWAYS DURING THE CONSTRUCTION PERIOD. STONE INLET PROTECTION OR SEDIMENT CATCH BASIN INSERTS SHALL BE PLACED IN ALL NEW AND EXISTING CATCH BASIN WHICH RECEIVE RUNOFF FROM DISTURBED AREAS. THE PLACING OF THESE TRAPS AND DAMS SHALL BE AS SHOWN ON THE PLANS.
- EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM NUMBER REQUIRED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO USE ADDITIONAL BARRIERS AS FIELD CONDITIONS DICTATE AND TO INSURE THAT ANY EROSION CREATED BY THIS PROJECT DOES NOT REACH THE STATE'S WATERWAYS OR LEAVE THE SITE.
- NEW SWALES AND DITCHES (AND ANY OTHER AREA SUBJECT TO CONCENTRATED STORM RUNOFF) SHALL BE FERTILIZED AND SEEDED WITH THE WET AREA SEED MIXTURE AS IN #10 TO AT LEAST TWO (2) FEET ABOVE THE CHANNEL BOTTOM AND SHALL HAVE MULCH APPLIED AT THE RATE OF 2 TONS PER ACRE.
- 8. IN ALL NEW SWALES AND DITCHES, AND WHERE SLOPE GRADE EXCEEDS 25 PERCENT (1 ON 4 SLOPE), JUTE MATTING SECURELY ATTACHED TO THE GROUND SHALL BE PLACED OVER MULCH AND MAINTAINED UNTIL A PERMANENT GRASS COVER IS ESTABLISHED.
- 9. ALL DISTURBED TERRAIN AT FINAL GRADE SHALL BE SEEDED AND MULCHED WITHIN 48 HOURS OF COMPLETION, AND BY SEPTEMBER 15TH AT THE LATEST. BEFORE APPLYING FINAL SEEDING FOUR (4) INCH AVERAGE DEPTH OF TOPSOIL SHALL BE PLACED IN ALL DISTURBED AREAS TO BE SEEDED. SEED MIXTURES SHALL BE ONE AS SPECIFIED ON LANDSCAPING PLAN. IF NO SEED MIXTURE IS SPECIFIED IT SHALL BE ONE OF THE FOLLOWING, AS APPROPRIATE

URBAN AREAS CONS	ERVATION	MIX
NAME	LBS/ACRE	% WT.
CREEPING RED FESCUE	34.0	42.5
PERENNIAL RYE GRASS	8.0	10.0
KENTUCKY BLUE GRASS	34.0	42.5
ANNUAL RYEGRASS	4.0	5.0
	80.0	5.0
RURAL AREAS CONS	ERVATION	MIX
NAME	LBS/ACRE	% WT.
CREEPING RED FESCUE	22.5	37.5
TALL FESCUE	22.5	37.5
RED TOP	3.0	5.0
BIRDSFOOT TREFOIL	9.0	15.0
ANNUAL RYEGRASS	3.0	5.0
	60.0	100%
LOW GROW/FINE I	FESCUE MIX	X
NAME	LBS/ACRE	% WT.
CREEPING RED FESCUE	-	38
SPARTAN HARD FESCUE	-	29
AZAY SHEEP'S FESCUE	-	15
ANNUAL RYEGRASS	-	15
INERTS	-	3
	-	100%

WET AREA SE	ED MIX			GRAVEL SITES CONS	SERVATION	MIX
NAME	% N	ΛIX	]	NAME	LBS/ACRE	% WT
VIRGINIA WILD RYE	20	n		SWITCH GRASS	4.0	32.0
GRASS	20			BIG BLUESTEM	4.0	32.0
FOX SEDGE	1(	C		LITTLE BLUESTEM	2.0	16.0
AMERICAN MANNAGRASS	; 20	0		SAND LOVEGRASS	2.0	16.0
GIANT BUR-REED	1(	C	]	BLACKEYED SUSAN	1.0	8.0
COMMON THREE-SQUARE	20	20			13.0	100.0
SOFT-STEM BULRUSH	10			UPLAND NATIVE MIX	FOR DRY SI	TES
CANADA RUSH	1(	C		NAME	LBS/ACRE	% WT
	10	0	]	JAPANESE MILLET OR BARLEY	10.0	40.0
RETENTION BA	SIN MIX		_			
NAME	LBS/ACRE	% WT.		BIG BLUESTEM	6.5	26.0
RED TOP	5.0	20.0		LITTLE BLUESTEM	3.5	14.0
CREEPING BENTGRASS	5.0	20.0		INDIANGRASS	3.5	14.0
RIVERBANK WILD RYE	5.0	20.0		SWITCHGRASS	1.5	6.0
FOWL BLUEGRASS	5.0	20.0			25.0	100%
ALKALIGRASS	5.0	20.0				
	25.0	100%				

- 10. ALL NEWLY SEEDED AREAS SHALL BE MULCHED AT A RATE OF TWO (2) TONS PER ACRE OF HAY OR STRAW. DURING WINTER CONSTRUCTION MULCH SHALL BE APPLIED AT A RATE OF 4 TONS PER ACRE. JUTE OR OTHER EQUAL NETTING SHALL BE USED WHERE WIND OR WATER MAY ERODE NEWLY-PLACED SEED OR MULCH OR WHERE GRADE EXCEEDS 25% (1:4). ALL NETTING, WHERE USED, SHALL BE STAKED TO THE GROUND IN COMPLIANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- 11. ALL AREAS THAT REACH FINISHED GRADE DURING THE WINTER CONSTRUCTION SEASON SHALL BE MULCHED AT A RATE OF 4 TONS/ACRE AND TACKED DOWN TO PREVENT WINDTHROW WITHIN 24 HOURS OF REACHING FINAL S SPECIFIED IN NOTE 10 IN THE SPRING AS SOON AS WEATH
- 12. ALL HAY MULCH SHALL BE TACKED DOWN TO PREVENT WINDTHROW. JUTE MATTING OR EQUIVALENT SHALL BE USED WHERE INDICATED ON PLANS. IN ALL OTHER AREAS MULCHED SHALL BE TRACKED WITH A BULLDOZER. THE CLEATS OF THE BULLDOZER SHALL BE PARALLEL TO THE CONTOURS. DURING THE WINTER CONSTRUCTION SEASON NETTING OR JUTE MATTING SHALL BE USED TO TACK DOWN ALL MULCH.
- 13. ALL DISTURBED AREAS NOT AT FINAL GRADE THAT WILL NOT BE DISTURBED AGAIN FOR A PERIOD OF GREATER THAN THIRTY (30) DAYS SHALL BE SEEDED WITH A TEMPORARY RAPID-GROWING COVER CROP SLICH AS RYE GRASS AND MILLET, AND SHALL BE MULCHED, NETTING SHALL ALSO BE APPLIED, AS SPECIFIED IN ITEM 13, TO STABILIZE THE MULCH AND SEED.
- 14. ALL DISTURBED AREAS MUST HAVE TEMPORARY OR FINAL STABILIZATION WITHIN 14 DAYS OF THE INITIAL DISTURBANCE. AFTER THIS TIME. ANY DISTURBANCE IN THE AREA MUST BE STABILIZED AT THE END OF EACH WORK DAY. THE FOLLOWING EXCEPTIONS APPLY: i) STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA IN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS. ii) STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E. NO OUTLET) WITH A DEPTH OF 2-FEET OR GREATER (E.G. FOUNDATION EXCAVATION, UTILITY TRENCHES).
- 15. DURING WINTER CONSTRUCTION ALL DISTURBED AREAS MUST HAVE TEMPORARY OR FINAL STABILIZATION AT THE END OF EACH WORK DAY. THE FOLLOWING EXCEPTIONS APPLY: I) STABILIZATION IS NOT REQUIRED IF WORK IS TO CONTINUE IN THE AREA IN THE NEXT 24 HOURS AND THERE IS NO PRECIPITATION FORECAST FOR THE NEXT 24 HOURS. ii) STABILIZATION IS NOT REQUIRED IF THE WORK IS OCCURRING IN A SELF-CONTAINED EXCAVATION (I.E. NO OUTLET) WITH A DEPTH OF 2-FEET OR GREATER (E.G. FOUNDATION EXCAVATION, UTILITY TRENCHES).
- 16. ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS OF PERMANENT STABILIZATION OF THE SITE.
- 17. EROSION CONTROLS SHALL BE INSPECTED WEEKLY AS WELL AS BEFORE AND AFTER ANY RAIN EVENT BY THE ON-SITE COORDINATOR, WHO WILL BE RESPONSIBLE FOR RECTIFYING ANY PROBLEMS FOUND. ALL INSPECTION FORMS SHALL BE KEPT ON-SITE AS RECORDS OF THE CONDITION OF THE EROSION CONTROL MEASURES. TEMPORARY EROSION CONTROL MEASURE SHALL BE REMOVE WITH 30 DAYS OF PERMANENT SITE STABILIZATION. DURING THE WINTER CONSTRUCTION SEASON SPECIAL ATTENTION SHALL BE PAID TO THE CHANGES IN WEATHER THAT COULD CAUSE SIGNIFICANT SNOW MELT AND RUNOFF.
- 18. NO MORE THAN 3 ACRES SHALL BE DISTURBED (WITHOUT TEMPORARY OR FINAL STABILIZATION) AT ANY ONE TIME. 19. SEEDING MUST BE COMPLETED BY SEPTEMBER 15.
- 20. CONTRACTOR SHALL APPLY DUST CONTROL MEASURES AS NECESSARY OR AS DIRECTED BY THE ENGINEER TO
- PREVENT THE AIR MOVEMENT OF DUST. ACCEPTABLE METHODS OF DUST CONTROL ARE VEGETATIVE COVER. MULCHING, SPRINKLING OF WATER, OR THE USE OF CALCIUM CHLORIDE.
- 21. AT THE COMPLETION OF THE PROJECT, ALL STORMWATER DRAINAGE FACILITIES INCLUDING DITCHES, GRASSED SWALES, CATCH BASINS, SUMPS, CULVERTS, STORM DRAINS, STORM MANHOLES, OUTLET STRUCTURES, STORM FILTERS, ETC SHALL BE CLEANED AND FREE OF SILT, SEDIMENT OR DEBRIS WHICH MIGHT IMPAIR THE PROPER OPERATION OF THE FACILITIES.

# LEAKAGE TESTING OF WATER DISTRIBUTION PIPING

- 1. USE LEAKAGE/ PRESSURE TESTING PROCEDURE PRESCRIBED IN NFPA 24 OR AWWA C600 AS APPROPRIATE.
- 2. CONTRACTOR SHALL NOTIFY ENGINEER 48 HOURS PRIOR TO TESTING. ENGINEER MUST BE PRESENT AT TEST FOR ACCEPTANCE.
- 3. AFTER TESTING AND PRIOR TO ACCEPTANCE THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH AS-BUILT DRAWINGS. A. AFTER PIPE HAS BEEN LAID, ALL NEWLY LAID PIPE OR ANY VALVED SECTION THEREOF SHALL BE SUBJECTED
- TO A HYDROSTATIC PRESSURE OF AT LEAST 200 PSI OR 50 PSI IN EXCESS OF THE SYSTEM WORKING PRESSURE, WHICH EVER IS GREATER, AND SHALL MAINTAIN THAT PRESSURE FOR NOT LESS THAN 2 HOURS.
- B. BEFORE APPLYING THE SPECIFIED TEST PRESSURE, ALL AIR SHALL BE REMOVED FROM THE TEST SECTION. D. TESTING ALLOWANCE SHALL BE DEFINED AS THE QUANTITY OF MAKEUP WATER THAT MUST BE SUPPLIED
- INTO THE NEWLY LAID PIPE OR ANY VALVED SECTION THEREOF TO MAINTAIN PRESSURE WITHIN 5 PSI OF THE SPECIFIED TEST PRESSURE AFTER THE PIPE HAS BEEN FILLED WITH WATER AND THE AIR HAS BEEN EXPELLED.
- E. NO PIPE INSTALLATION SHALL BE ACCEPTED IF THE AMOUNT OF MAKEUP WATER IS GREATER THAN THAT ALLOWED BE NFPA 24 OR AWWA C600.
- F. PREPARE REPORTS FOR PRESSURE TESTING RESULTS.

# CLEANING AND DISINFECTION OF WATER DISTRIBUTION PIPING 1. PURGE NEW WATER DISTRIBUTION PIPING SYSTEMS AND PARTS OF EXISTING SYSTEMS THAT HAVE BEEN

2. USE PURGING AND DISINFECTING PROCEDURE PRESCRIBED BY AUTHORITY HAVING JURISDICTION OR, IF METHOD IS NOT PRESCRIBED BY THAT AUTHORITY. USE PROCEDURE DESCRIBED IN AWWA C651 AS DESCRIBED BELOW:

DISINFECTION OF WATER LINES PER AWWA C651 IS TO BE BY THE CONTINUOUS FEED METHOD OR THE SLUG METHOD. THE TABLET METHOD DESCRIBED IN AWWA C651 NOT ACCEPTABLE AND IS HEREBY STRICTLY PROHIBITED

2.2. COMPLY WITH NFPA 24 FOR FLUSHING OF PIPING. FLUSH PIPING SYSTEM WITH CLEAN, POTABLE WATER UNTIL DIRTY WATER DOES NOT APPEAR AT POINTS OF OUTLET.

2.3. FILL SYSTEM OR PART OF SYSTEM WITH WATER/CHLORINE SOLUTION CONTAINING AT LEAST 25 PARTS PER MILLION OF CHLORINE. ISOLATE (VALVE OFF) SYSTEM OR PART THEREOF AND ALLOW TO STAND FOR 24

2.4. MEASURE FREE CHLORINE RESIDUAL AFTER 24 HOUR STANDING PERIOD. IF THE FREE CHLORINE RESIDUAL IS LESS THAN 10 mg/l, FLUSH AND REFILL THE LINE AND REPEAT CHLORINATION FOR AN ADDITIONAL 24 HOURS.

2.5. FOLLOWING ALLOWED STANDING TIME, FLUSH SYSTEM WITH CLEAN, POTABLE WATER UNTIL CHLORINE DOES NOT REMAIN IN WATER COMING FROM SYSTEM.

2.6. A MINIMUM OF TWO WATER SAMPLES MUST BE COLLECTED A MINIMUM OF 24 HOURS APART FOR BACTERIOLOGICAL TESTING. SUBMIT WATER SAMPLES IN STERILE BOTTLES TO A LABORATORY APPROVED BY THE VERMONT DEPARTMENT OF HEALTH (OR AUTHORITY HAVING JURISDICTION) FOR DRINKING WATER ANALYSIS. REPEAT PROCEDURE IF BIOLOGICAL EXAMINATION MADE BY AUTHORITY SHOWS EVIDENCE OF CONTAMINATION

2.7. PREPARE REPORTS FOR PURGING AND DISINFECTING ACTIVITIES. CONTRACTOR SHALL SEND ENGINEER TEST RESULTS.

# 3. DECHLORINATION

2.1.

3.2.

ALTERED, EXTENDED, OR REPAIRED PRIOR TO USE.

3.1. DO NOT KEEP HEAVILY CHLORINATED WATER IN CONTACT WITH PIPE FOR MORE THAN 48 HOURS AFTER THE APPLICABLE RETENTION PERIOD IN ORDER TO PREVENT DAMAGE TO THE PIPE LINING OR CORROSION DAMAGE TO THE PIPE ITSELF. FLUSH THE HEAVILY CHLORINATED WATER FROM THE MAIN FITTINGS. VALVES. AND BRANCHES UNTIL CHLORINE MEASUREMENTS SHOW THAT THE CONCENTRATION IN THE WATER LEAVING THE MAIN IS NO HIGHER THAN THAT GENERALLY PREVAILING IN THE DISTRIBUTION SYSTEM OR IS ACCEPTABLE FOR DOMESTIC USE. TAKE ALL STEPS NECESSARY TO DECHLORINATE WATER PER PARAGRAPH 3.2 AND 3.3 BELOW

NEUTRALIZE THE CHLORINE RESIDUAL OF THE WATER BEING DISPOSED OF BY TREATING WITH ONE OF THE CHEMICALS LISTED IN TABLE 4 BELOW. SELECT AN ALTERNATIVE DISPOSAL SITE IF A SANITARY SEWER SYSTEM IS UNAVAILABLE FOR DISPOSAL OF THE CHLORINATED WATER.

3.3. THE PROPOSED ALTERNATIVE DISPOSAL SITE SHALL BE INSPECTED AND APPROVED BY THE ENGINEER. APPLY A REDUCING AGENT TO THE CHLORINATED WATER TO BE WASTED TO COMPLETELY NEUTRALIZE THE CHLORINE RESIDUAL REMAINING IN THE WATER (SEE TABLE A FOR NEUTRALIZING CHEMICALS DO NOT OVERDOSE NEUTRALIZING CHEMICALS AS THIS MAY RESULT IN ADVERSE ENVIRONMENTAL IMPACTS. ONLY DOSE THE AMOUNT REQUIRED TO NEUTRALIZE THE AMOUNT OF CHLORINE PRESENT). CONTACT FEDERAL STATE AND LOCAL REGULATORY AGENCIES, WHERE NECESSARY, TO DETERMINE SPECIAL PROVISIONS FOR THE DISPOSAL OF HEAVILY CHLORINATED WATER.

POUNDS OF CHEMICAL REQUIRED TO NEUTRALIZE VARIOUS RESIDUAL CHLORINE CONCENTRATIONS IN 100,000 GALLONS OF WATER

RESIDUAL CHLORINE CONCENTRATION (MG/L)	SULFUR DIOXIDE (LBS)	SODIUM BISULFATE (LBS)	SODIUM SULFITE (LBS)	SODIUM THIOSULFATE (LBS)	ASCORBIC ACID (LBS)
1	0.8	1.2	1.4	1.2	2.1
2	1.7	2.5	2.9	2.4	4.2
10	8.3	12.5	14.6	12.0	20.9
50	41.7	62.6	73.0	60.0	104.0

3.4. TEST FOR CHLORINE RESIDUAL THROUGHOUT THE DISPOSAL PROCESS TO BE SURE THAT THE CHLORINE IS NEUTRALIZED

3.5. SUBMIT A PLAN OF DISPOSAL OF FLUSHED WATER TO ENGINEER FOR APPROVAL.

3.6. DISCHARGE OF CHLORINATED WATER INTO WATERS OF THE STATE IS STRICTLY PROHIBITED. LEAKAGE TESTING OF SEWER PIPING AND MANHOLES

1. USE LEAKAGE TESTING PROCEDURE PRESCRIBED BY AUTHORITY HAVING JURISDICTION OR, IF METHOD IS NOT PRESCRIBED BY THAT AUTHORITY, USE PROCEDURE DESCRIBED IN VERMONT ENVIRONMENTAL PROTECTION RULES, CHAPTER 1, WASTEWATER SYSTEM AND POTABLE WATER SUPPLY RULES, EFFECTIVE SEPTEMBER 29, 2007, APPENDIX 1-A. DESIGN GUIDELINES. SECTION 1-A-03

2. CONTRACTOR SHALL NOTIFY ENGINEER AND MUNICIPALITY 48 HOURS PRIOR TO TESTING. ENGINEER MUST BE

3. AFTER TESTING AND PRIOR TO ACCEPTANCE THE CONTRACTOR SHALL SUPPLY THE ENGINEER WITH AS-BUILT DRAWINGS.

# MANHOLE TESTING

С.

PIPING TESTING

A. ALL MANHOLES SHALL BE TESTED FOR LEAKAGE. LEAKAGE TESTING OF GRAVITY SEWERS UTILIZING THE VACUUM OR HYDROSTATIC TESTING PROCEDURE WHICH TAKE INTO ACCOUNT THE LEAKAGE FROM ONE MANHOLE IN THE TEST SECTION. OTHER MANHOLES SHALL BE TESTED IN ACCORDANCE WITH THIS PROCEDURE.

B. FOR THE VACUUM TEST ALL INFLOW AND OUTFLOW PIPES SHALL BE PLUGGED AND THE MANHOLE SHALL NOT BE BACKFILLED PRIOR TO TESTING. MANHOLES THAT HAVE BEEN BACKFILLED SHALL BE EXCAVATED TO EXPOSE THE ENTIRE EXTERIOR OR THE MANHOLE SHALL BE HYDROSTATICALLY TESTED. A INFLATABLE RUBBER RING SHALL BE FITTED TO THE TOP OF THE MANHOLE AND INFLATED WITH AIR TO A PRESSURE ADEQUATE TO PREVENT LEAKAGE OF AIR AIR SHALL THEN BE PUMPED OUT OF THE MANHOLE TO CREATE A VACULUM EQUAL TO 10 INCHES OF MERCURY. ONCE COMPLETE THE TEST WILL BEGIN AND THE PRESSURE MUST NOT DROP BELOW 9 INCHES OF MERCURY DURING THE 2 MINUTE TEST TIME.

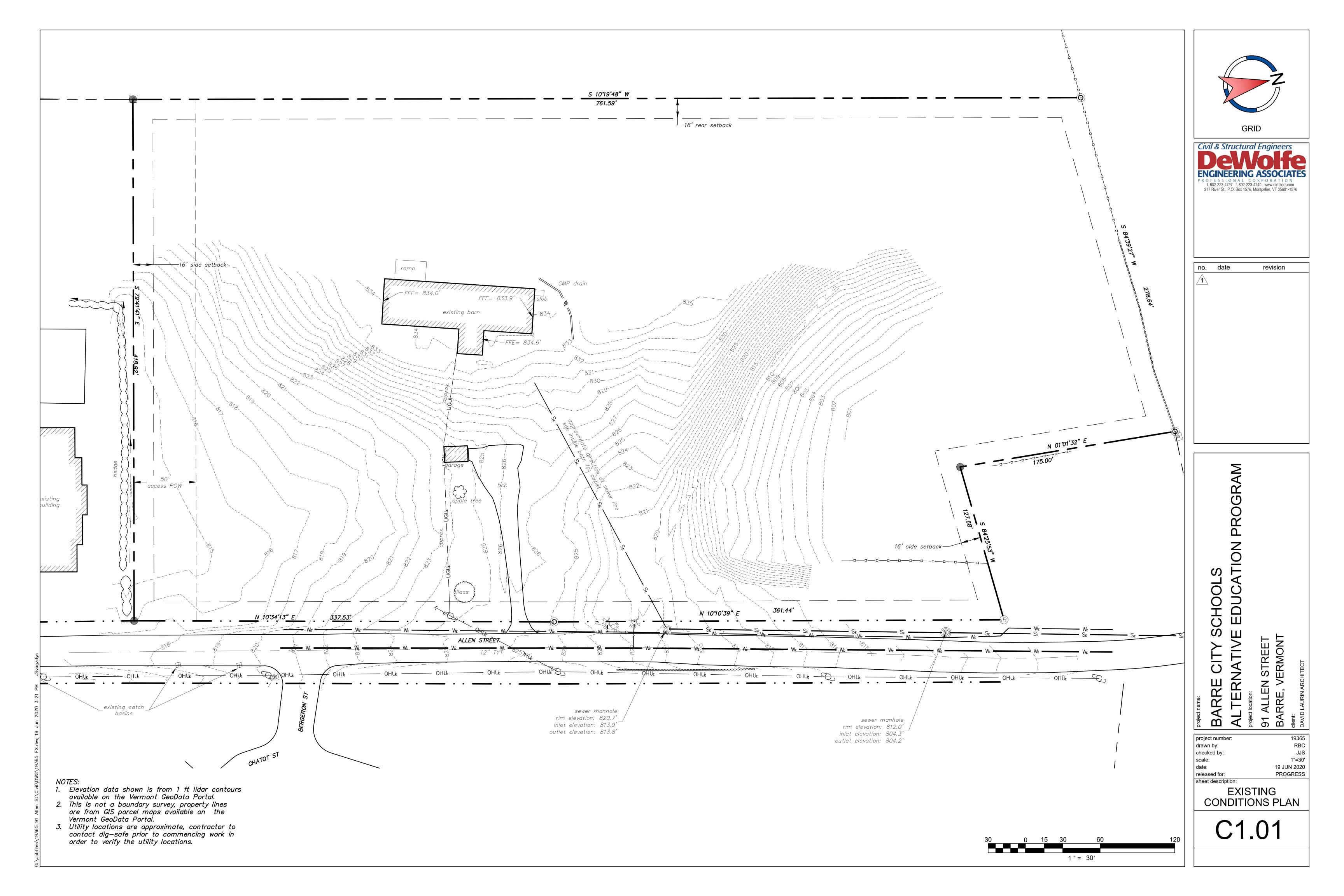
FOR THE HYDROSTATIC TEST ALL INFLOW AND OUTFLOW PIPES SHALL BE PLUGGED AND THE MANHOLE FILLED WITH WATER TO THE TOP OF THE CONE SECTION A STABILIZATION PERIOD OF ONE HOUR SHALL BE PROVIDED TO ALLOW FOR ABSORPTION. AT THE END OF THIS PERIOD. THE MANHOLE SHALL BE REFILLED TO THE TOP OF THE CONE, IF NECESSARY, AND THE TEST TIME OF AT LEAST 6 HOURS BEGUN. AT THE END OF THE TEST PERIOD, THE MANHOLE SHALL BE REFILLED TO THE TOP OF THE CONE, MEASURING THE VOLUME OF WATER ADDED. THE LEAKAGE FOR EACH MANHOLE SHALL NOT EXCEED ONE GALLON PER VERTICAL FOOT FOR A 24 HOUR PERIOD AND THERE SHALL BE NO VISIBLE INFILTRATION.

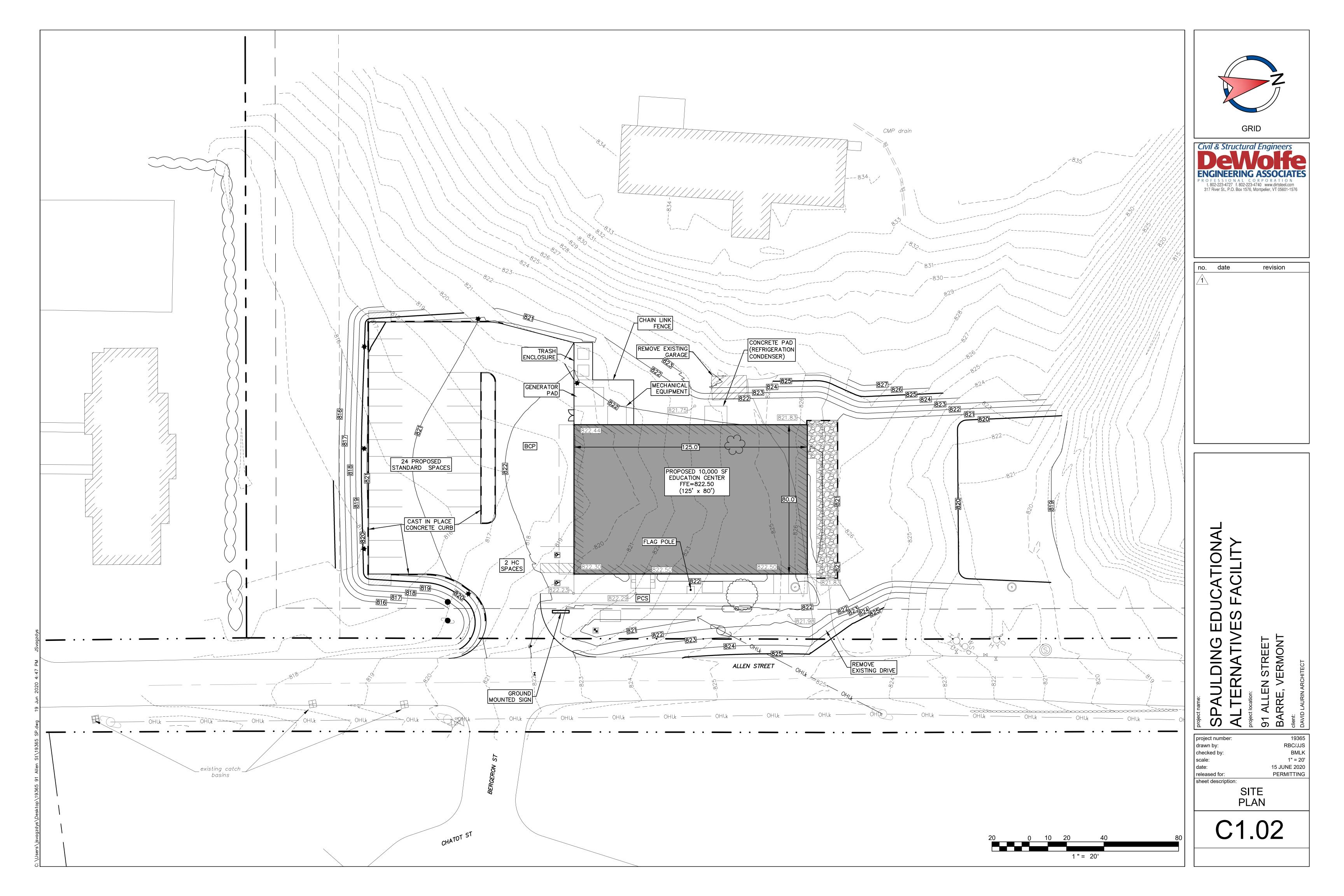
A. ALL NEWLY LAID SANITARY SEWERS SHALL BE TESTED FOR LEAKAGE. EITHER THE WATER METHOD OR THE AIR METHOD AS SPECIFIED IN THE VERMONT ENVIRONMENTAL PROTECTION RULES IS ACCEPTABLE AT THE OPTION OF THE CONTRACTOR.

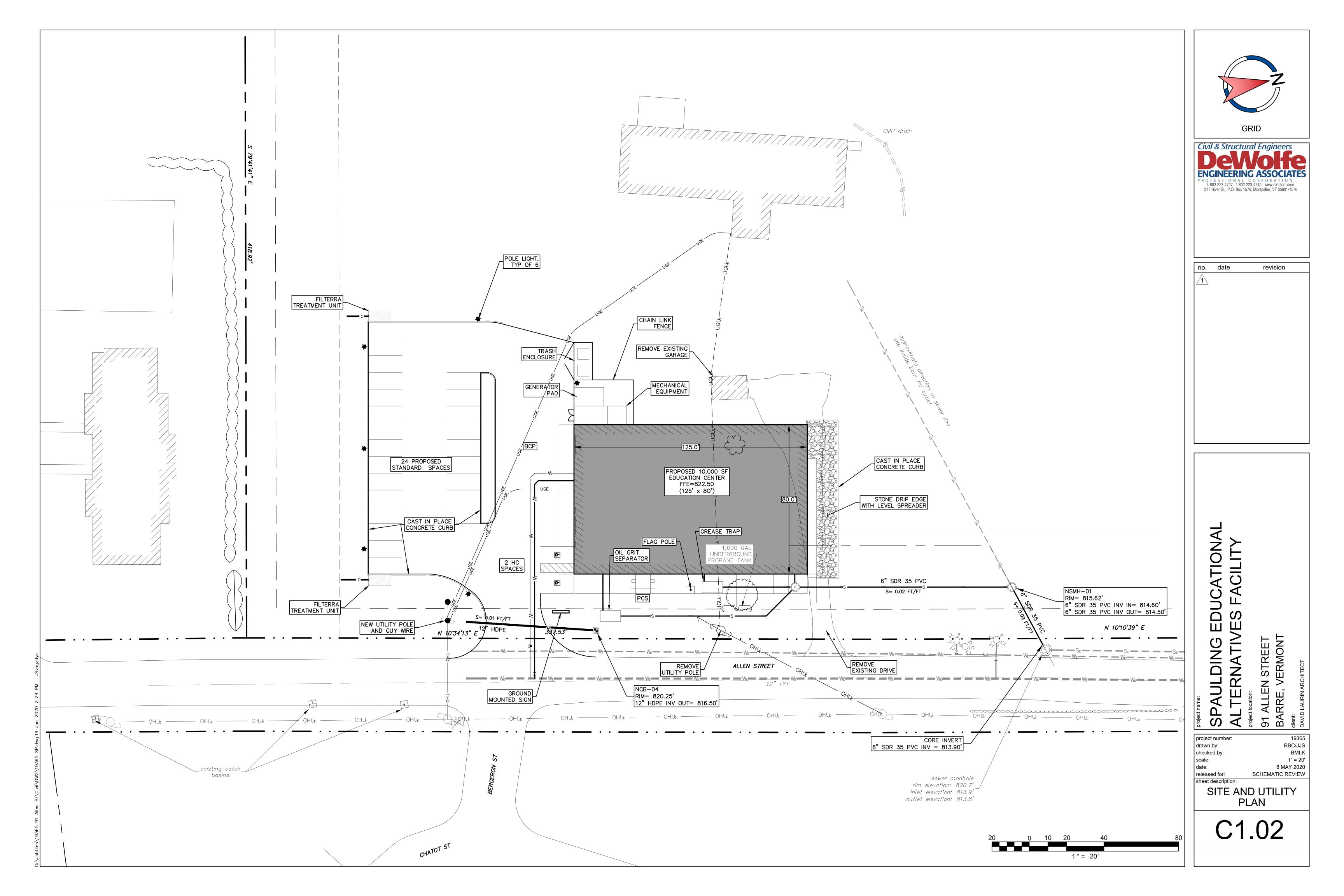
B. THE MAXIMUM LEAKAGE SHALL BE 200 GALLONS PER INCH OF PIPE DIAMETER PER MILE OF PIPE PER DAY FOR THE WATER TEST METHOD. THE WATER TEST SHALL BE CONDUCTED UNDER 2 FEET OF HEAD ABOVE THE HIGHEST POINT TESTED OR ABOVE THE HIGHEST KNOWN WATER TABLE, WHICHEVER IS HIGHER.

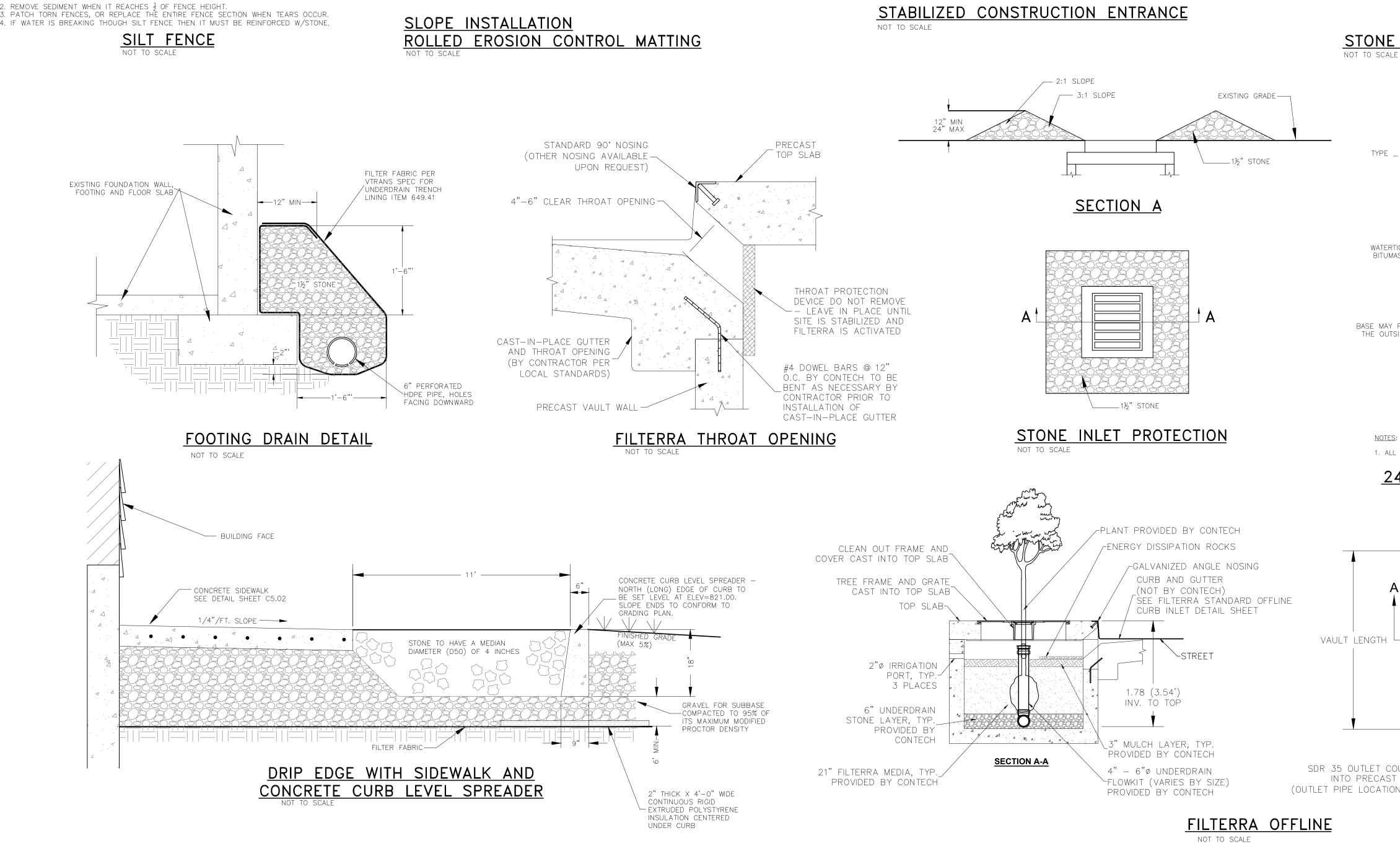
AIR TESTING SHALL BE PERFORMED IN ACCORDANCE WITH ASTM STANDARD C828-80. THE MINIMUM ALLOWED TIME FOR A PRESSURE DROP FROM 3.5 PSI TO 2.5 PSI SHALL BE 1.2 MINUTES PER 100 FEET OF 8" PIPE AND 0.7 MINUTES PER 100 FEET OF 6" PIPE. SEE VERMONT ENVIRONMENTAL PROTECTION RULES, APPENDIX 1, TABLE 1-A-3 FOR OTHER PIPE SIZES.

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4. IF WATER IS BREAKING THOUGH SILT FENCE THEN IT MUST BE REINFORCED W/STONE.

10. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT. <u>MAINTENANCE NOTE:</u> 1. CHECK AFTER EVERY RAINFALL EVENT AND WEEKLY.

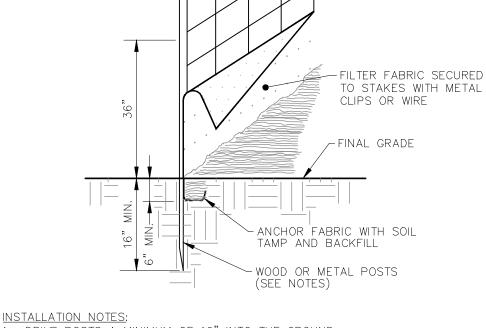
MAXIMUM MESH OPENING. 9. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED TOGETHER.

THE BASE OF THE FENCE SHALL BE AT CONSTANT ELEVATION OR LEVEL. 6. USE A CONTINUOUS SHEET OF GEOTEXTILE TO PREVENT FAILURE AT JOINTS. 7. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES. WIRE FENCE REINFORCEMENT REQUIRED WITHIN 100 FT UPSLOPE OF RECEIVING WATERS. 8. GEOTEXTILE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH WIRE TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 6"

3.3. WITHOUT WIRE MESH AND FABRIC ELONGATION IS LESS THAN 50%, STAKE SPACING SHALL NOT EXCEED 6'-0". 4. MAINTAIN A 10'-0" BORDER BETWEEN THE SILT FENCE AND CONSTRUCTION ACTIVITY. 5. INSTALL SILT FENCE PARALLEL TO CONTOUR LINES, I.E. THE GROUND ELEVATION AT

POST SPACING SHALL BE AS FOLLOWS: 3.1. FOR WIRE MESH BACKED FENCE, SPACING SHALL NOT EXCEED 10'-0". 3.2. WITHOUT WIRE MESH AND FABRIC ELONGATION IS GREATER THAN OR EQUAL TO 50%, POST SPACING SHALL NOT EXCEED 4'-0"

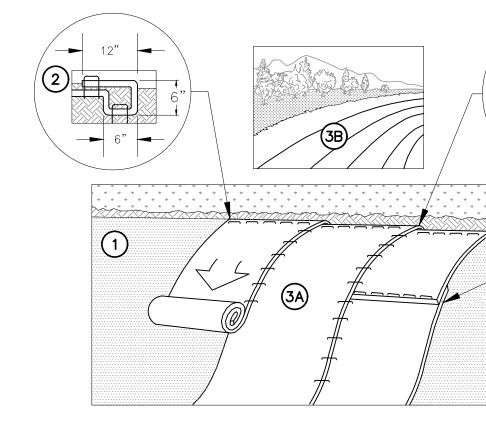
DRIVE POSTS A MINIMUM OF 16" INTO THE GROUND. EMBED GEOTEXTILE PLACED IN A 8"x8" TRENCH.



WOVEN WIRE FENCE (MIN 14 GAUGE W/

OF RECEIVING WATERS

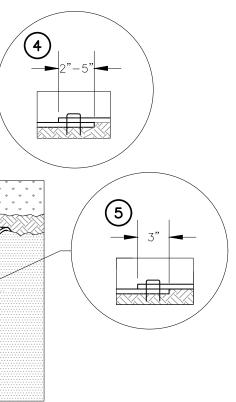
-MAX 6" SPACING) REQUIRED WITHIN 100'



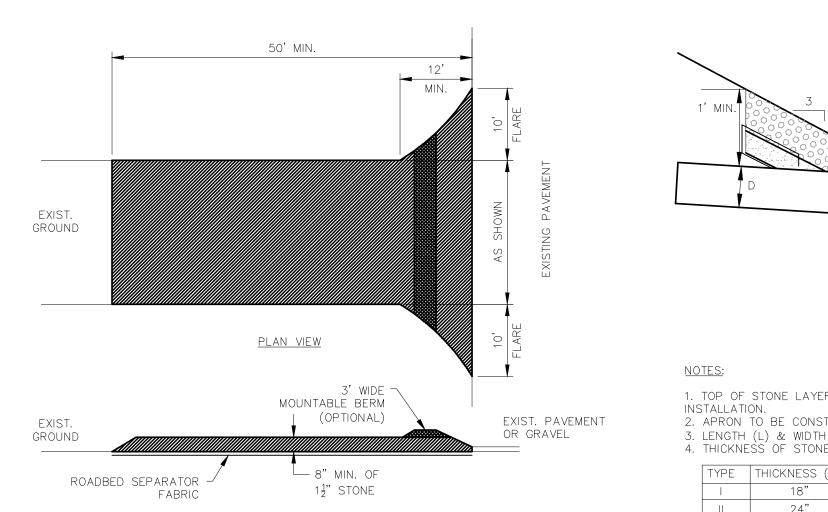
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER AND SEED. 2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE

- RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP's.
- 3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
- 4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2" TO 5" OVERLAP DEPENDING
- ON RECP's TYPE.
- APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS
- 5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN
- GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

# ENTIRE RECP'S WIDTH. NOTE: \*IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS



<u>NOTES:</u>



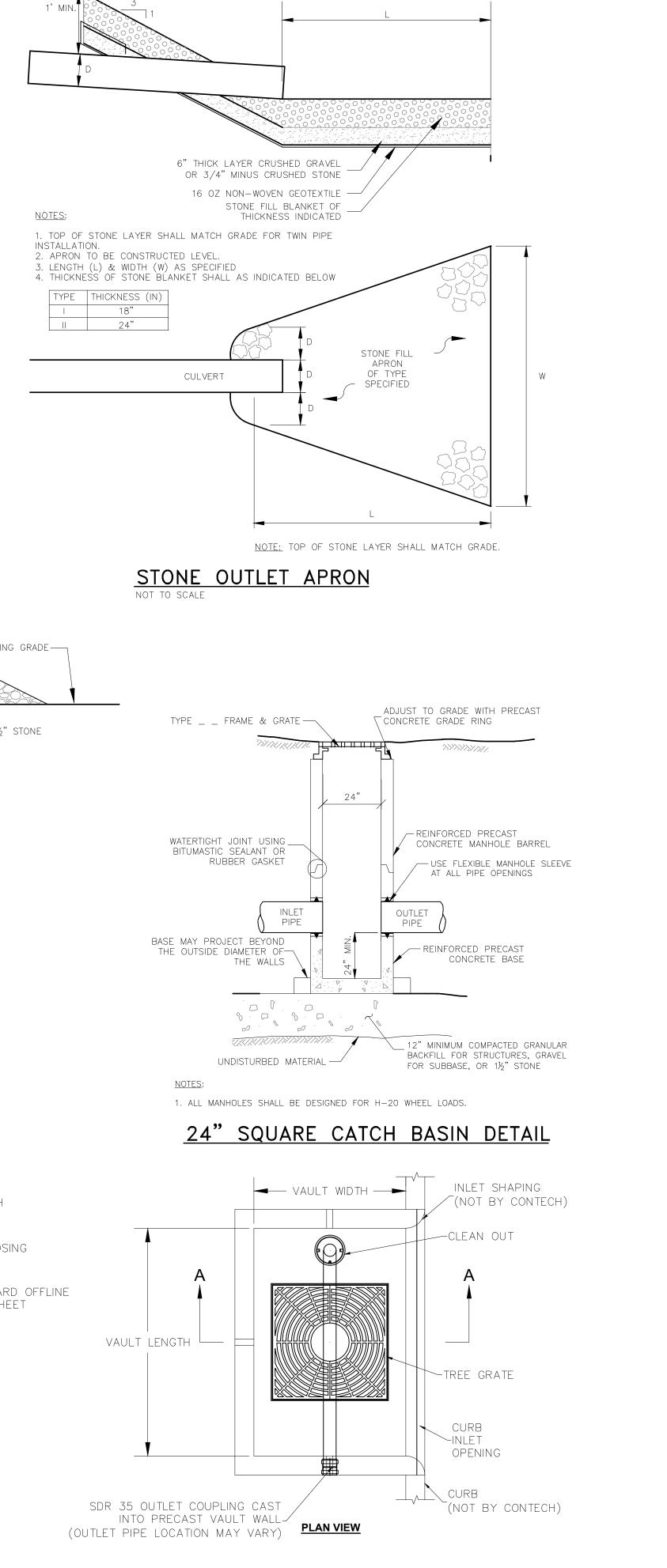
### 1. THE PURPOSE IS TO REMOVE MUD FROM TIRES OF CONSTRUCTION VEHICLES. WHEN STONE BECOMES CLOGGED AND INEFFECTIVE, TOPDRESS WITH 3" OF NEW STONE OR REPLACE ENTIRE PAD.

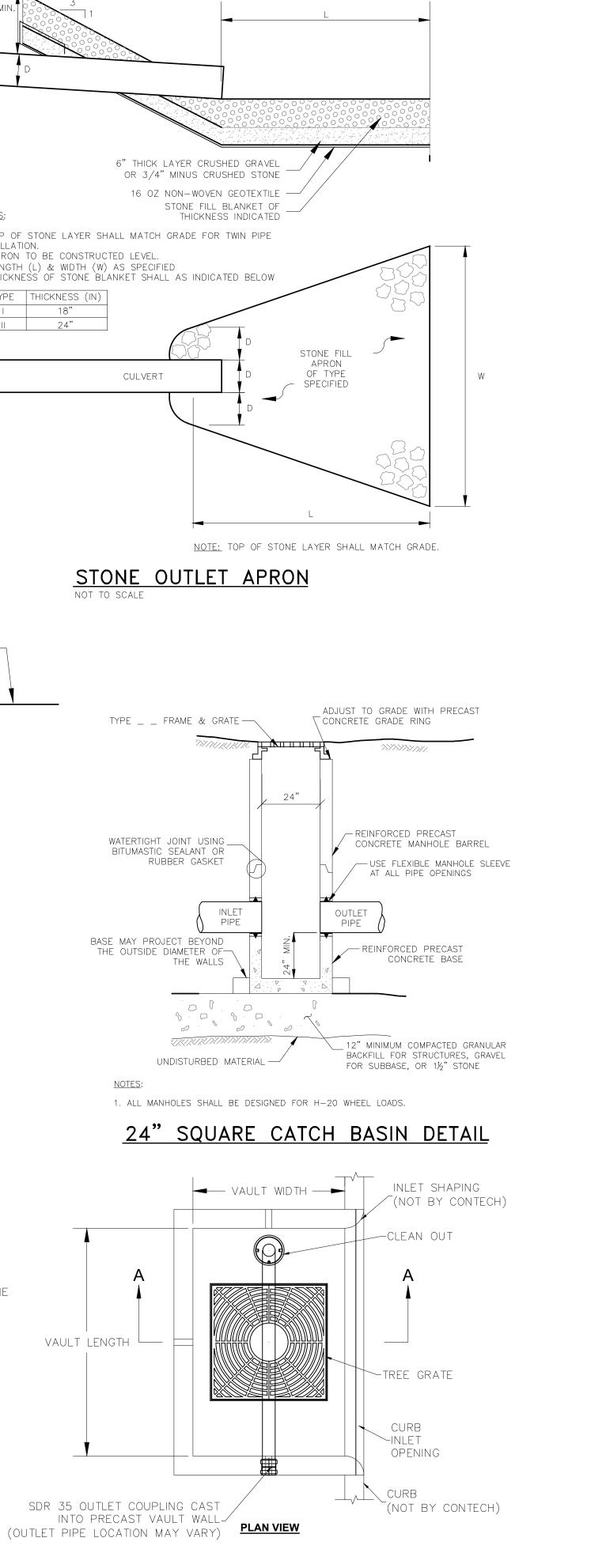
IF TIRE WASHING IS REQUIRED, WASH WATER SHALL DRAIN INTO AN APPROVED SEDIMENT TRAPPING DEVICE.

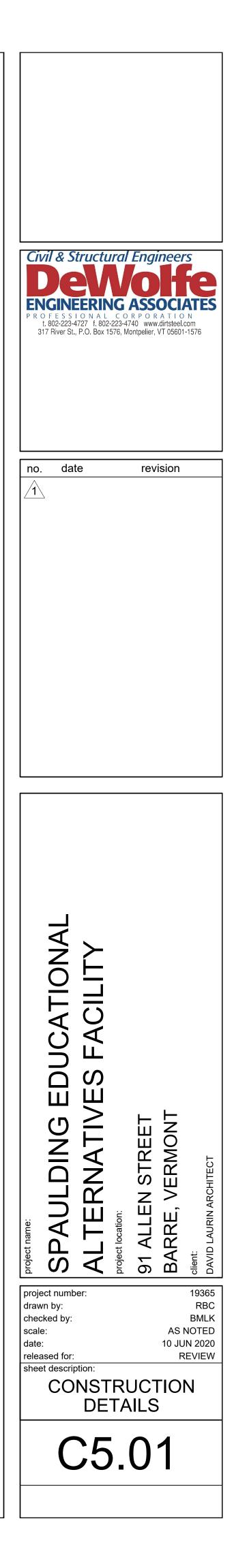
<u>PROFILE VIEW</u>

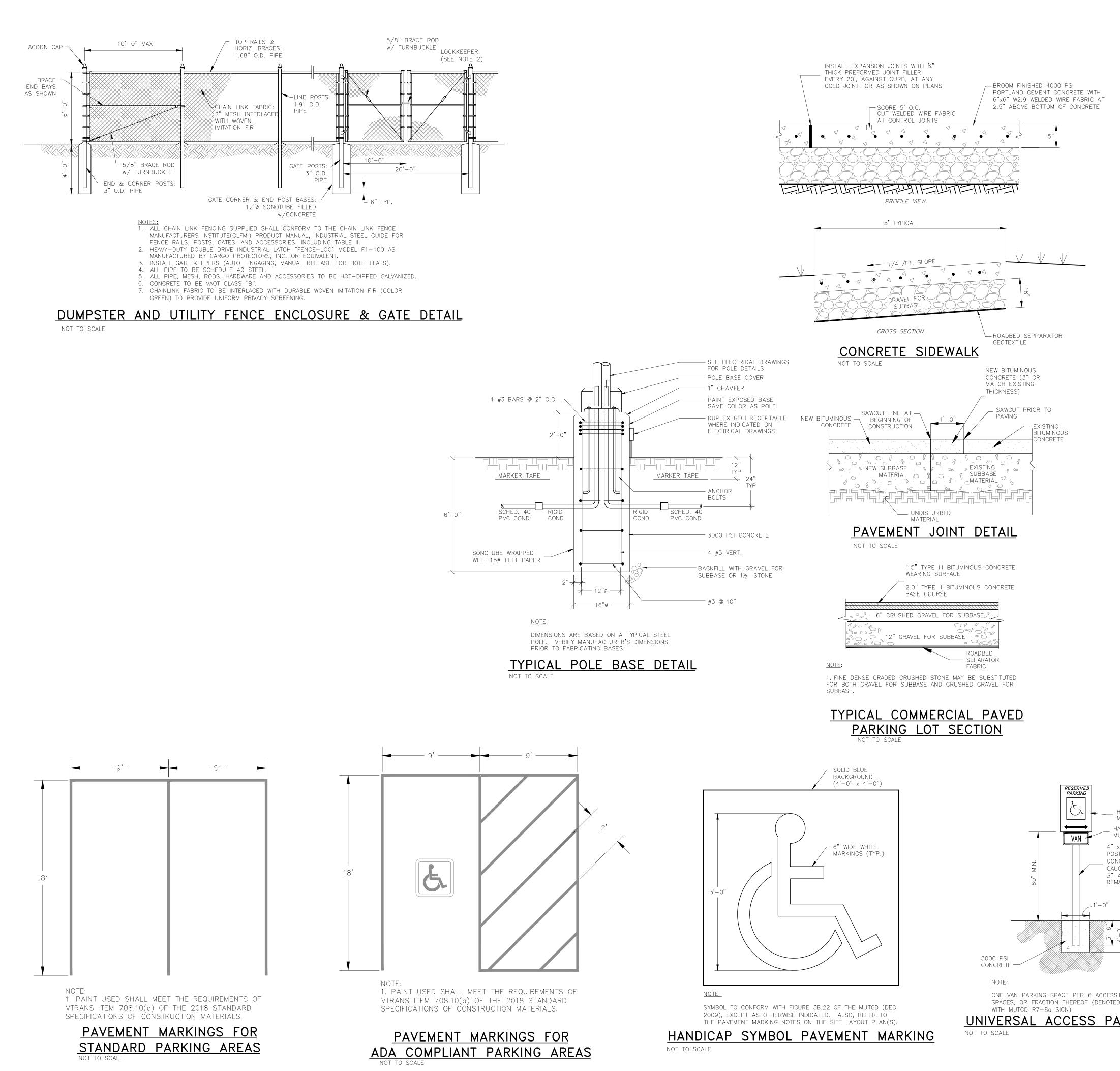
- STONE SIZE- USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE 4. EQUIVALENT
- 5. SURFACE WATER- ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED BENEATH THE ENTRANCE. IF PIPING IS IMPRACTICAL, A
- MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED 6. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY, ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY
- MUST BE REMOVED IMMEDIATELY USING CLOSED-BROOM EQUIPMENT. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED ACCORDING TO PERMIT REQUIREMENTS

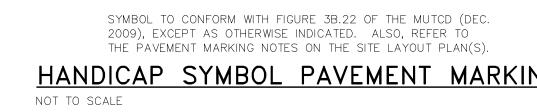


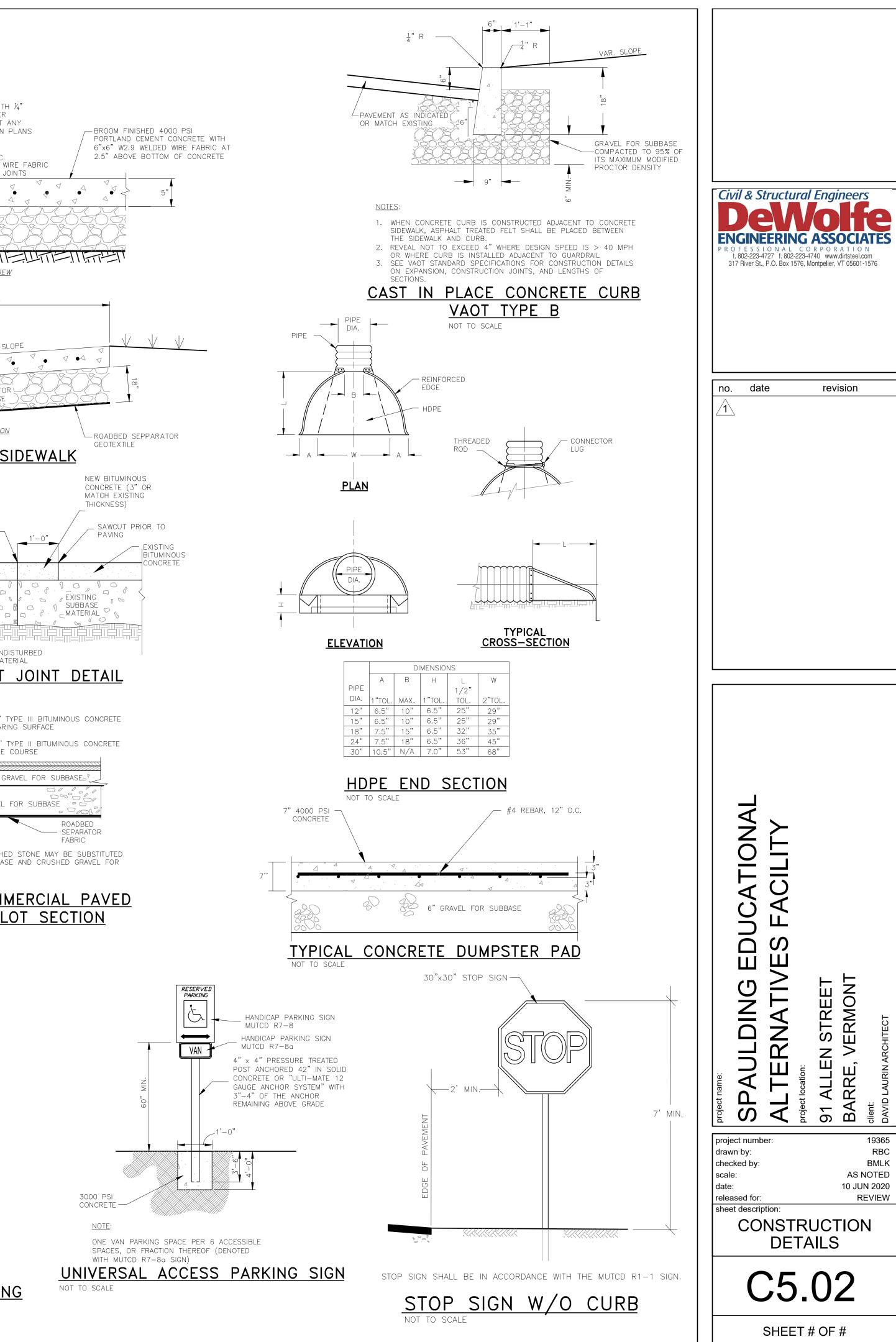


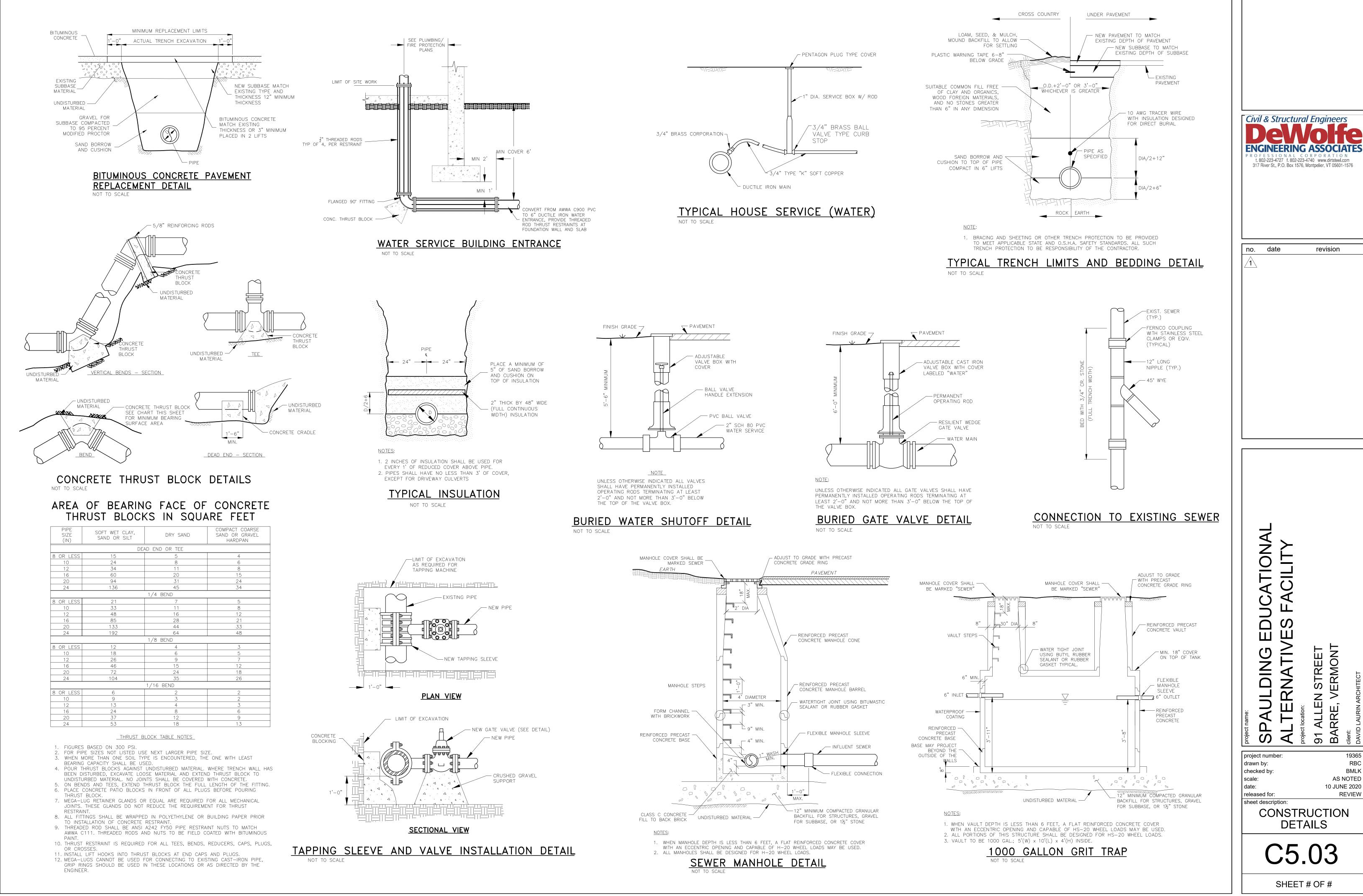


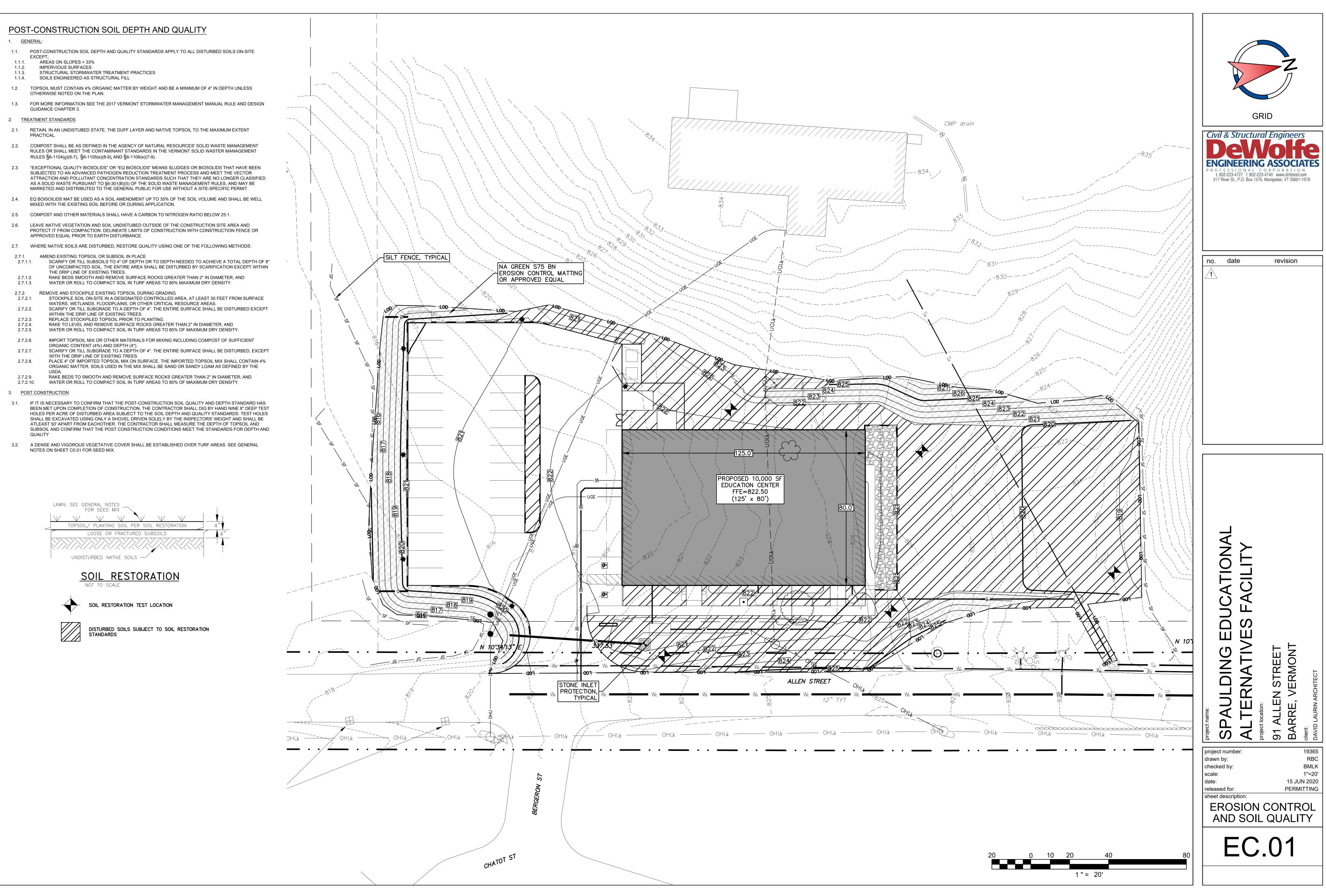


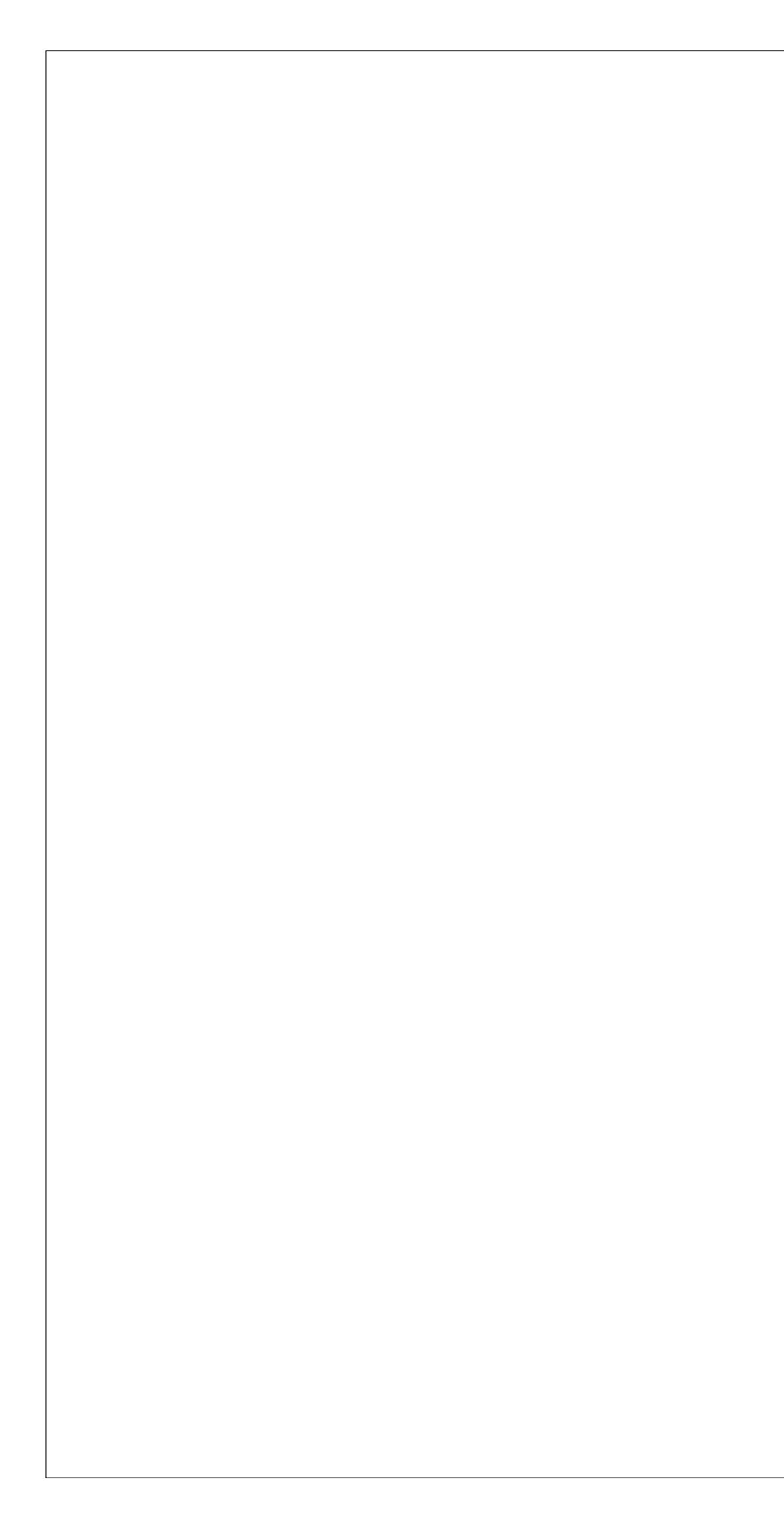












WALL REINFORCEMENT SEE SECTIONS	WALL REINFORCEMENT SEE SECTIONS PROVIDE <sup>3</sup> / <sub>4</sub> "øx3'-0" LONG SMOOTH BAR CENTERED ON JOINT	CORNER HORIZON WHERE LARGER PLAN
TYPICAL WALL	TYPICAL WALL	TYPICAL
CONSTRUCTION JOINT	CONTROL JOINT	CORNER
NOT TO SCALE INDICATED BY "WCNJ" ON PLANS	NOT TO SCALE 25'0" MAXIMUM SPACING INDICATED BY "WCJ" ON PLANS	SCALE: N.T.S.

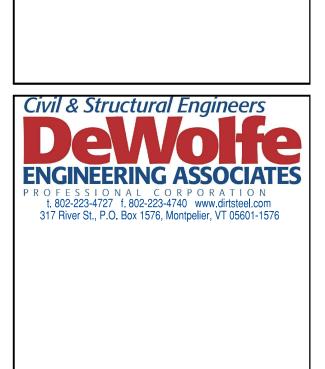
(1)—**#**4, E.F. ALL FOUR SIDES

REINFORCING SPLICE LENGTHS				
Fy=60 KSI	F'c=	3 KSI	F'c=	4 KSI
BAR	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS
3	17"	13"	15 <b>"</b>	12"
4	23"	18"	20"	15"
5	28"	22"	25"	19"
6	34"	26"	26" 29"	
7	7 49" 38"		43"	33"
8	56"	43"	49"	37"
9	63 <b>"</b>	48"	55 <b>"</b>	42"

ING	SPLICE	LENGTHS

CHART BASED ON THE FOLLOWIN BAR SPACING 5" MINIMUM	G:	
CLEAR COVER 2 BAR DIAMETER	RS MINIMUM	
REFER TO ACI 318-14 FOR OTH		
TOP BARS ARE HORIZONTAL BAR	S WITH MORE THAN	12" OF FRESH CONCRETE

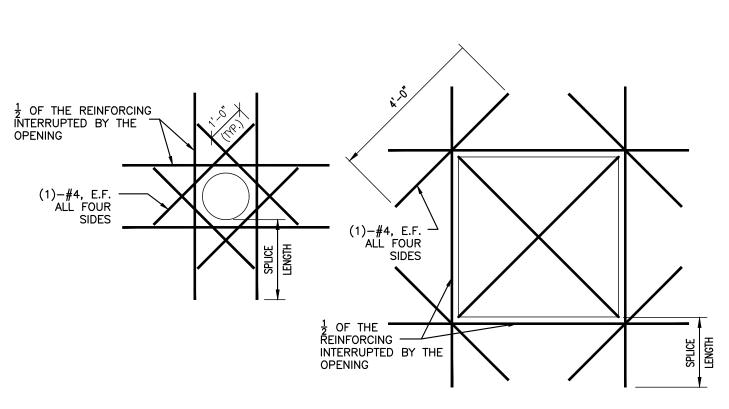
ABE	REVIATIONS
T.O.S.	TOP OF SLAB
EL.	ELEVATION
DIM.	DIMENSION
T.O.W.	TOP OF WALL
T.O.SH.	TOP OF SHELF
F.O.C.	FACE OF CONCRETE
E.O.D.	EDGE OF DECK
E.O.S.	EDGE OF SLAB
T.C.X.	TOP CHORD EXTENSION
E.F.	EACH FACE
E.W.	EACH WAY
U.O.N.	UNLESS OTHERWISE NOTED
C.J.	SLAB CONTROL JOINT
CONT.	CONTINUOUS
NTS.	NOT TO SCALE
TYP.	TYPICAL
F.D.	FLOOR DRAIN
¢.	CENTERLINE
DIA.	DIAMETER
DWL.	DOWEL
CL.	CLEAR
LLV	LONG LEG VERTICAL
LLH	LONG LEG HORIZONTAL
DWGS.	DRAWINGS
LG	LIGHT GAUGE



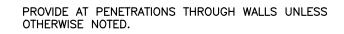
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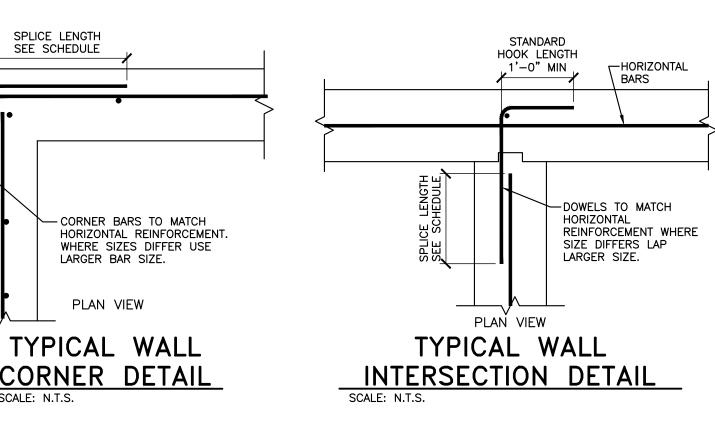
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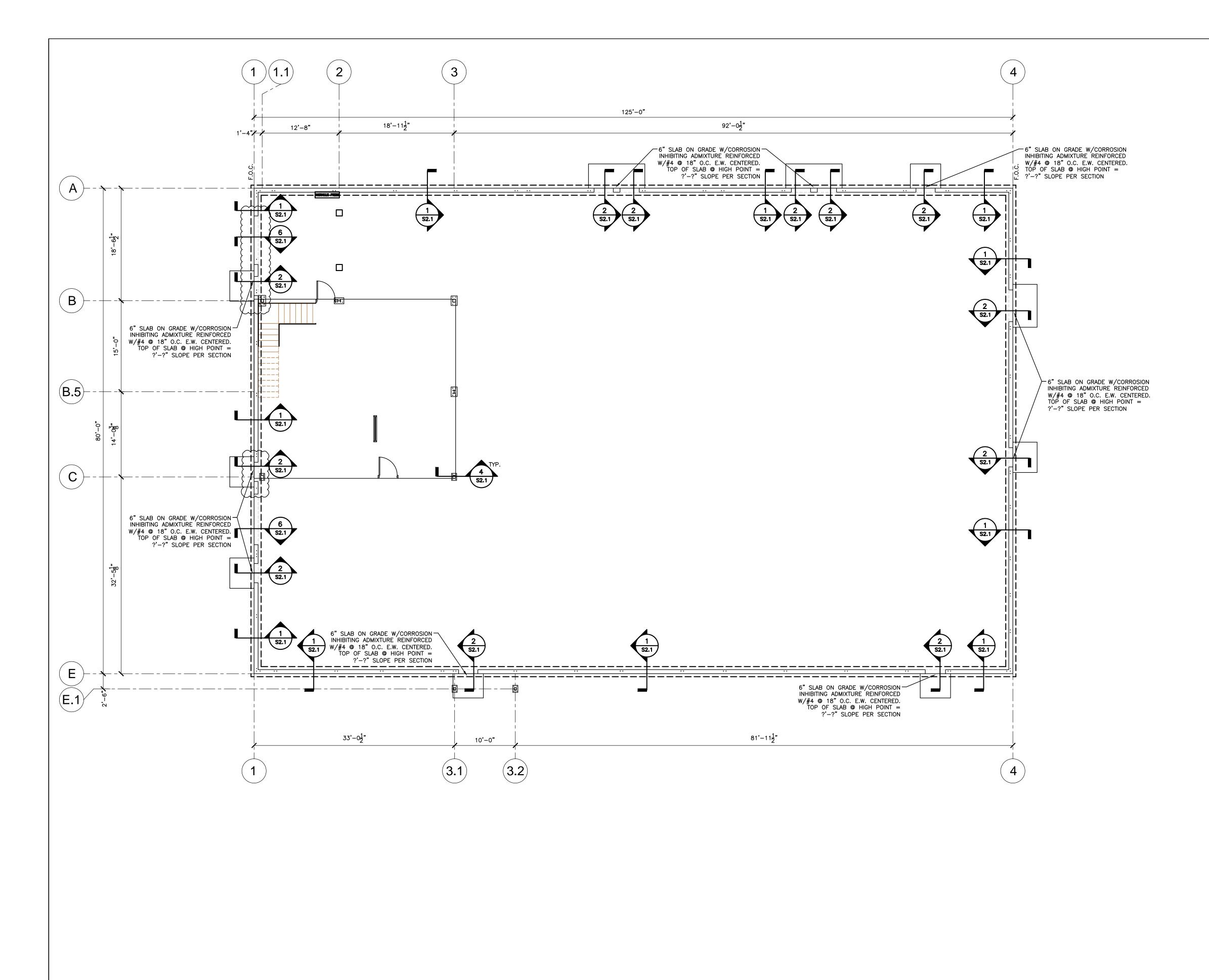


# TYPICAL OPENING REINFORCEMENT



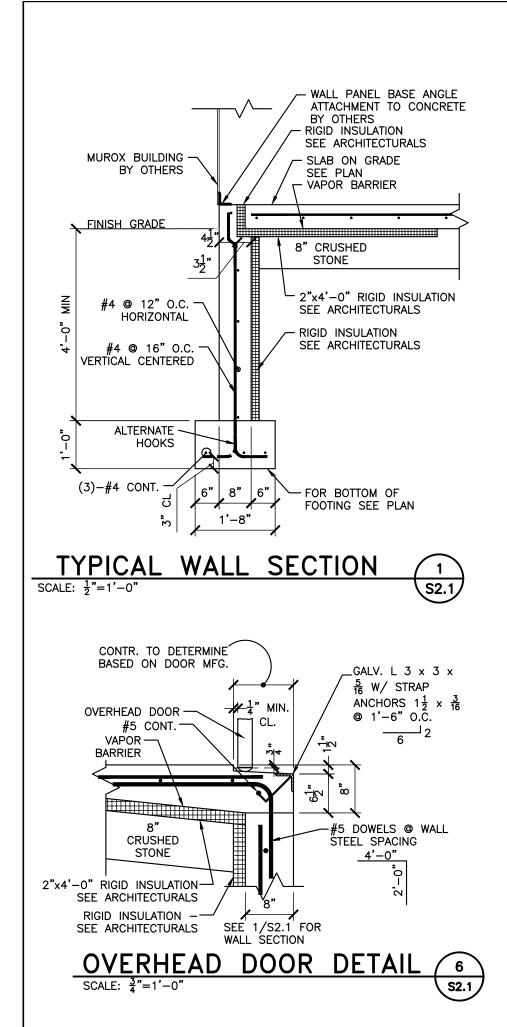


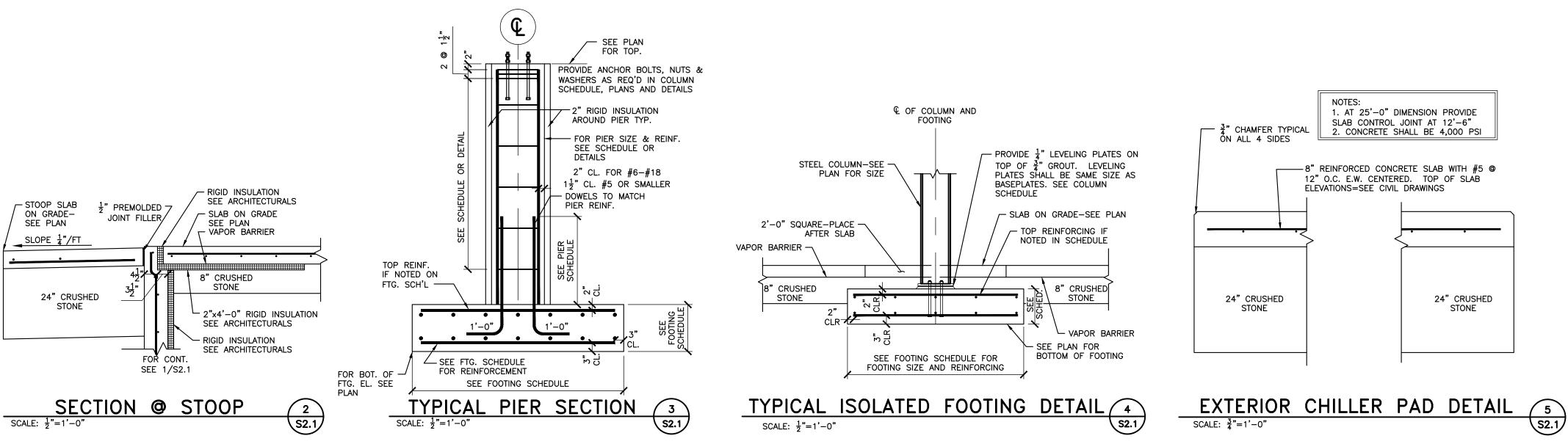




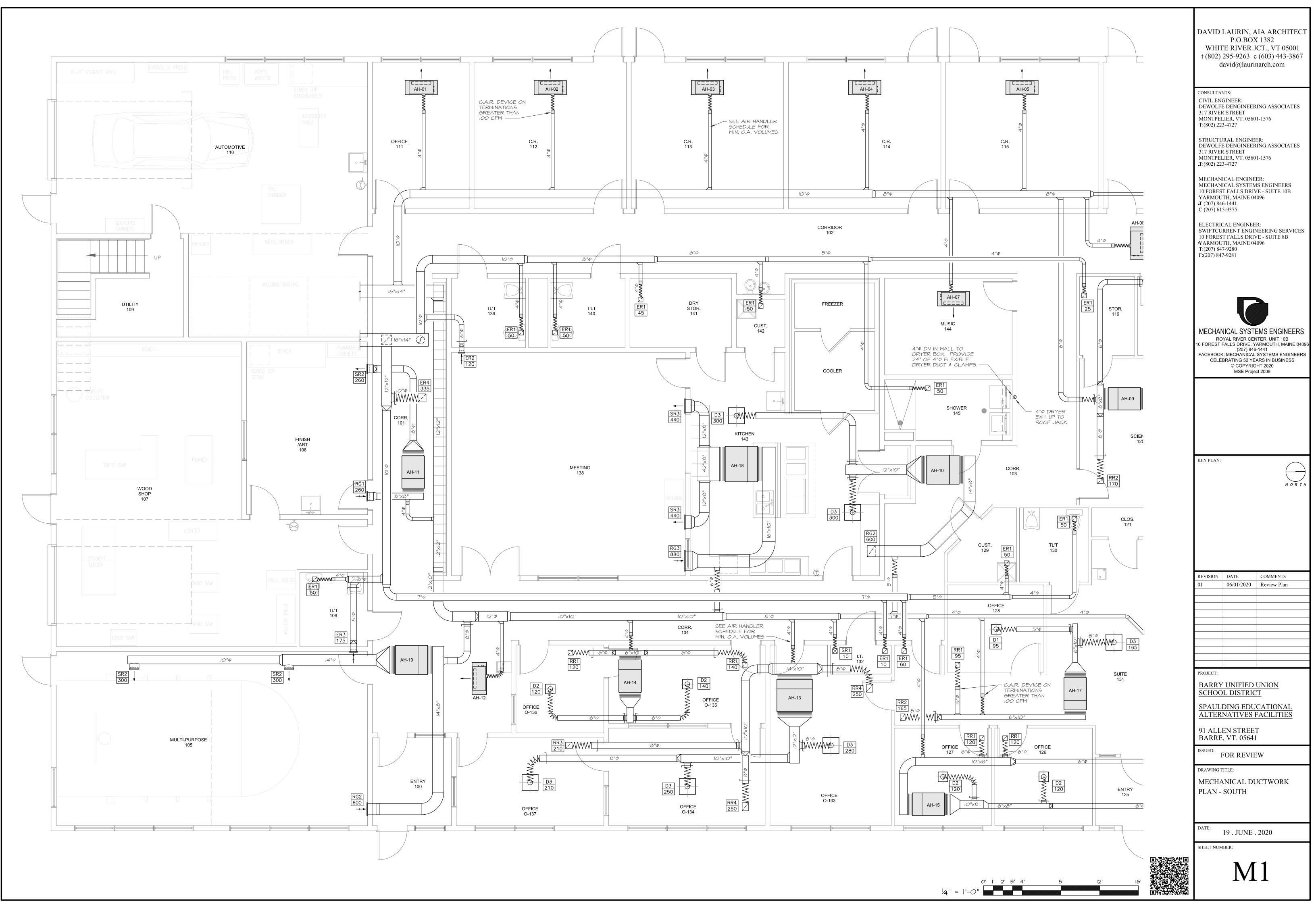
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						С Ц
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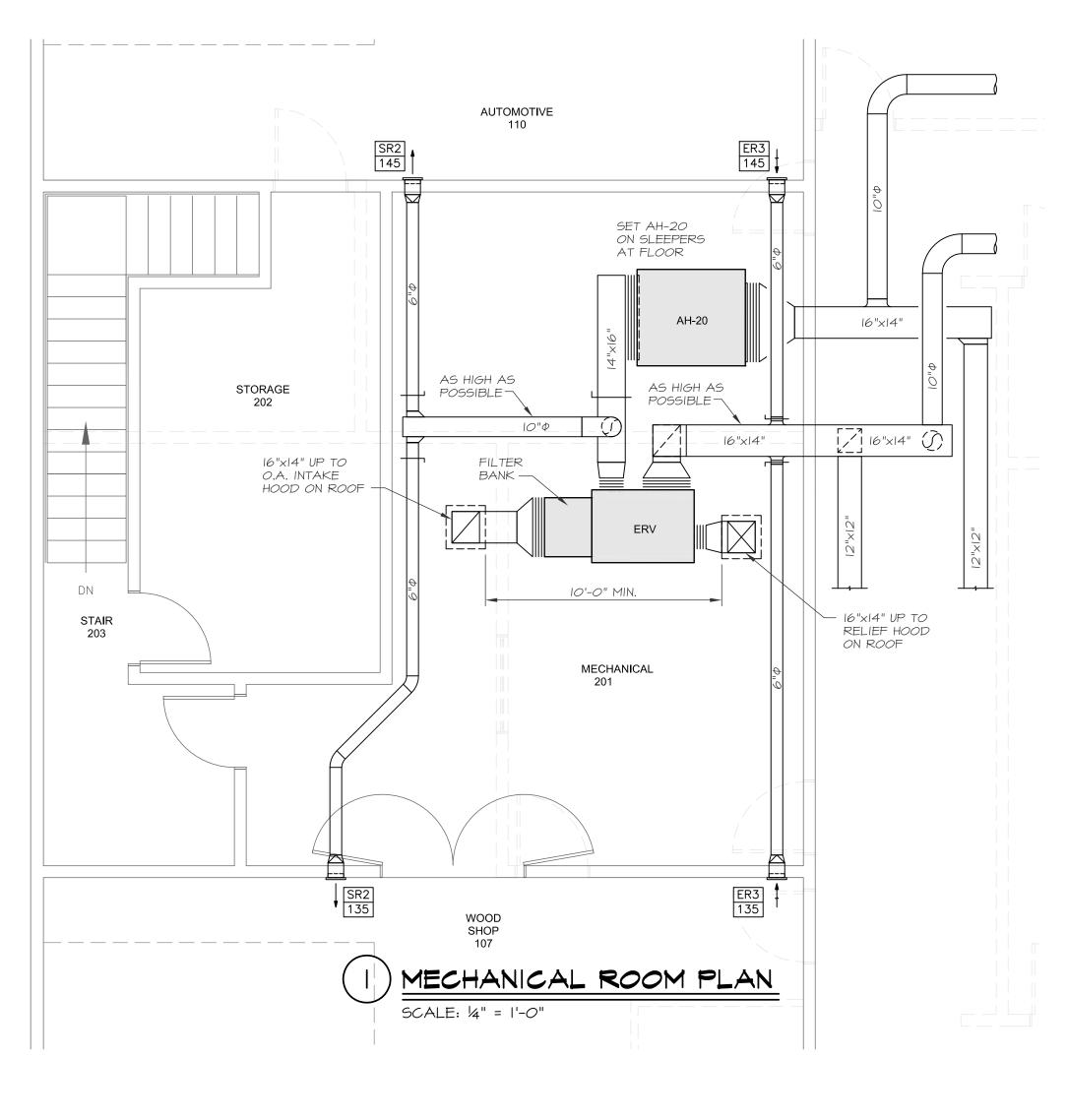


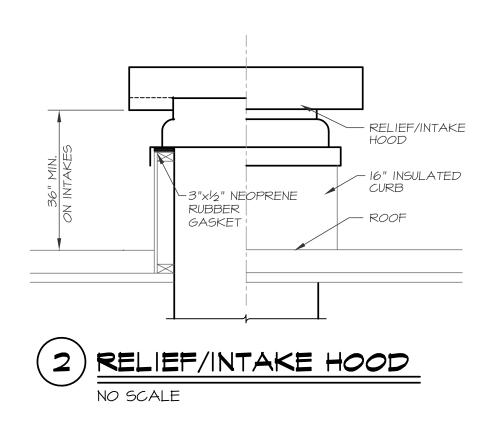


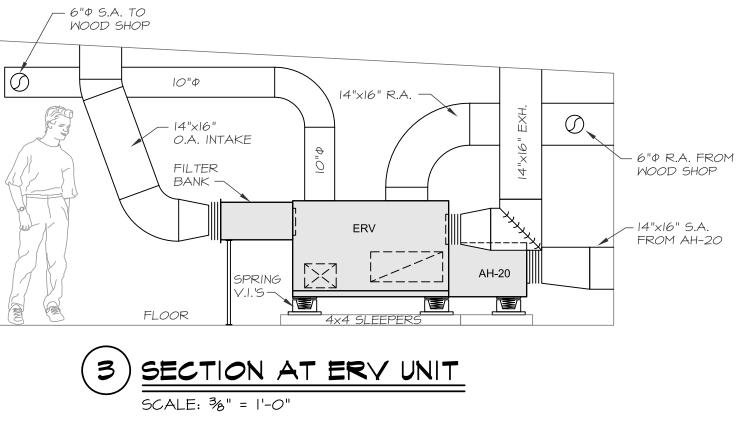
	ASSOCIATES R P O R A T I O N 40 www.dirtsteel.com
no. date	revision
project name: <b>SPAULDING EDUCATIONAL</b> <b>ALTERNATIVES FACILITIES</b> project location:	91 ALLEN STREET BARRE, VERMONT dient: DAVID LAURIN ARCHITECTS
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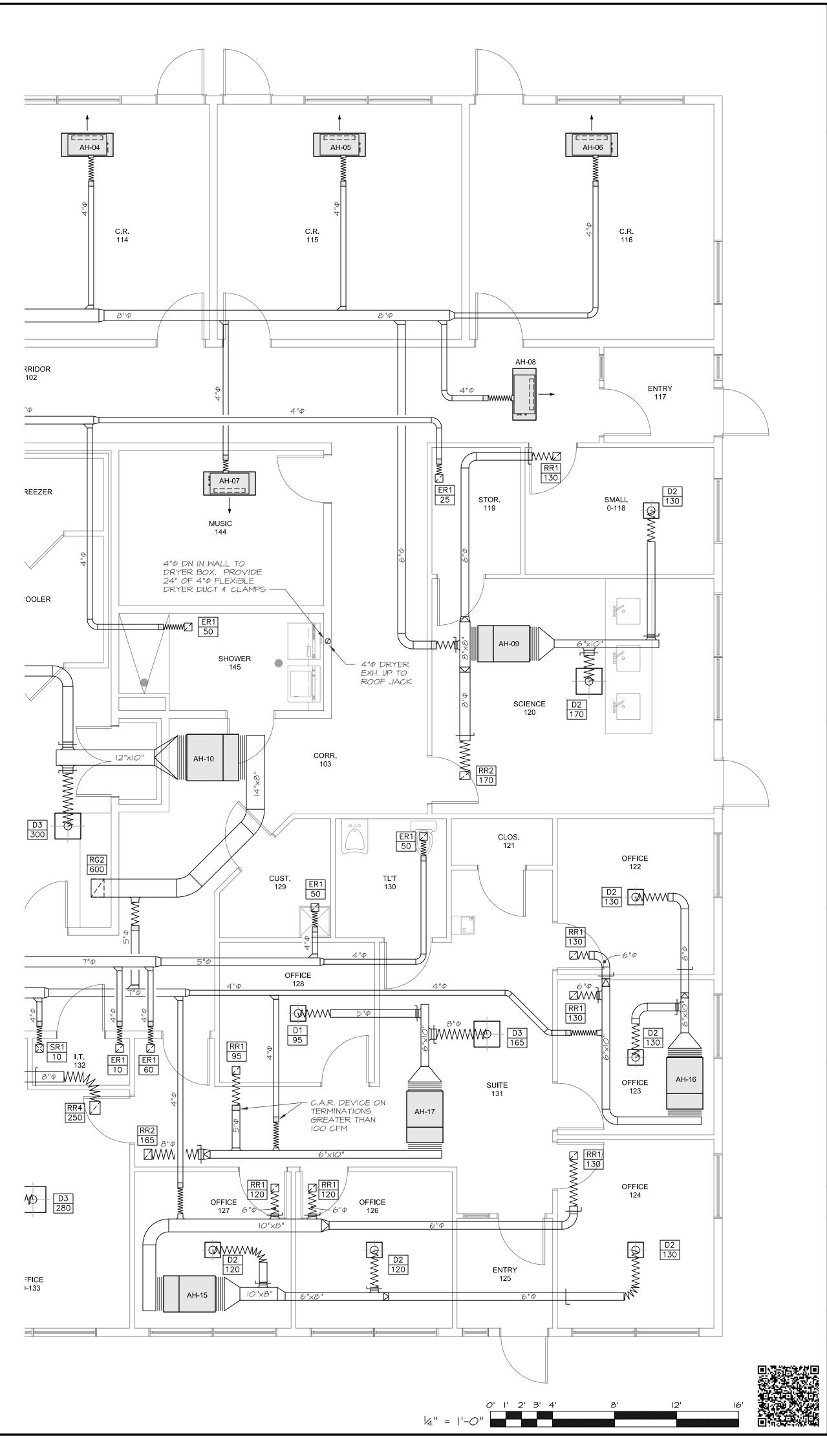


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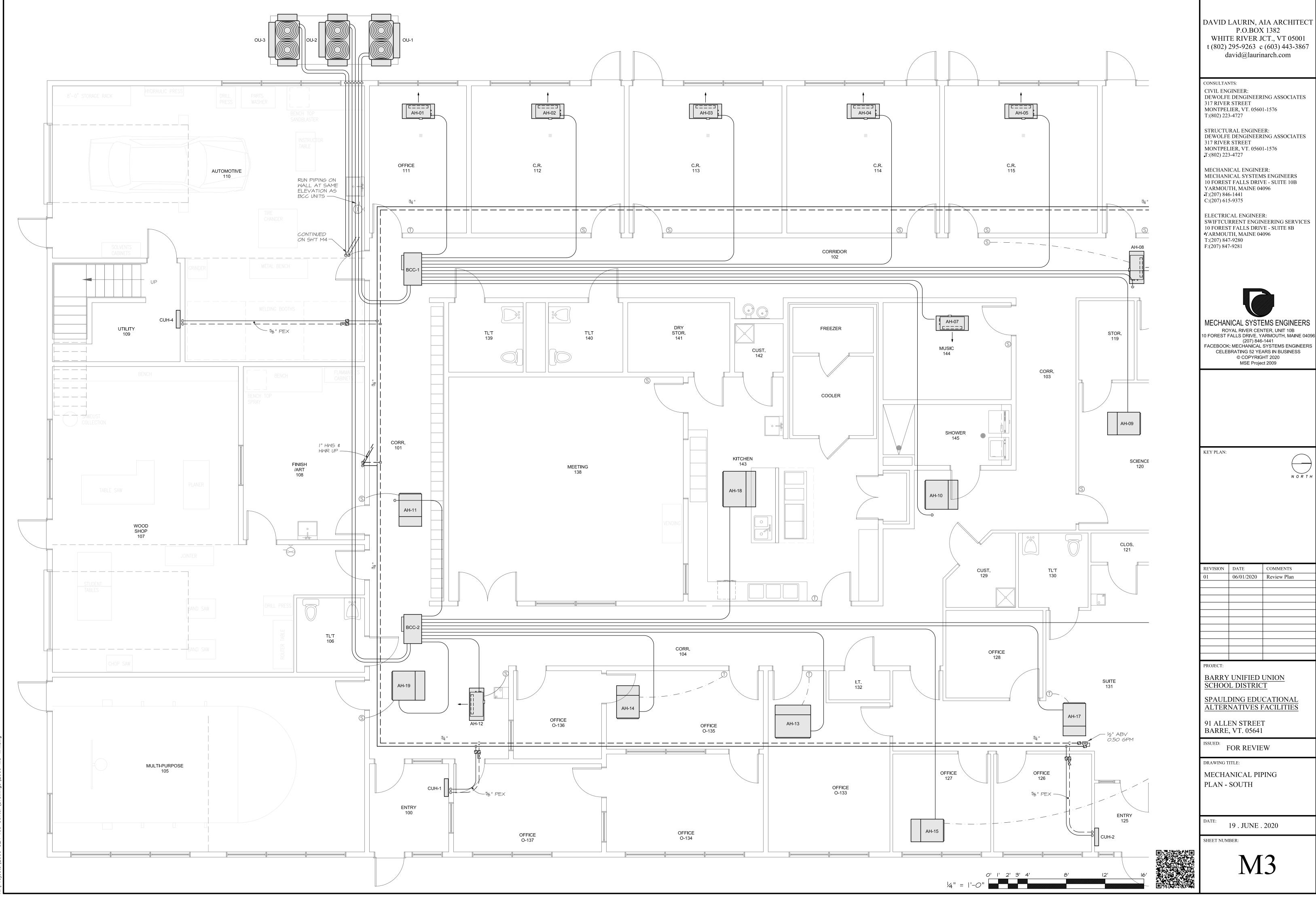




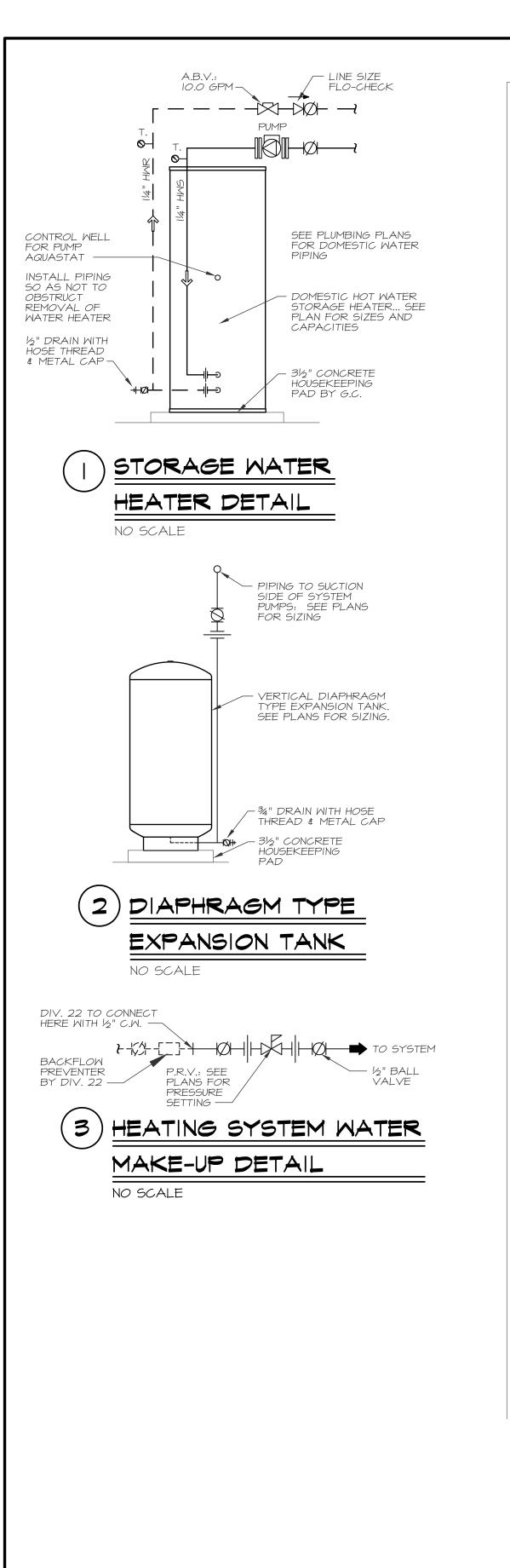


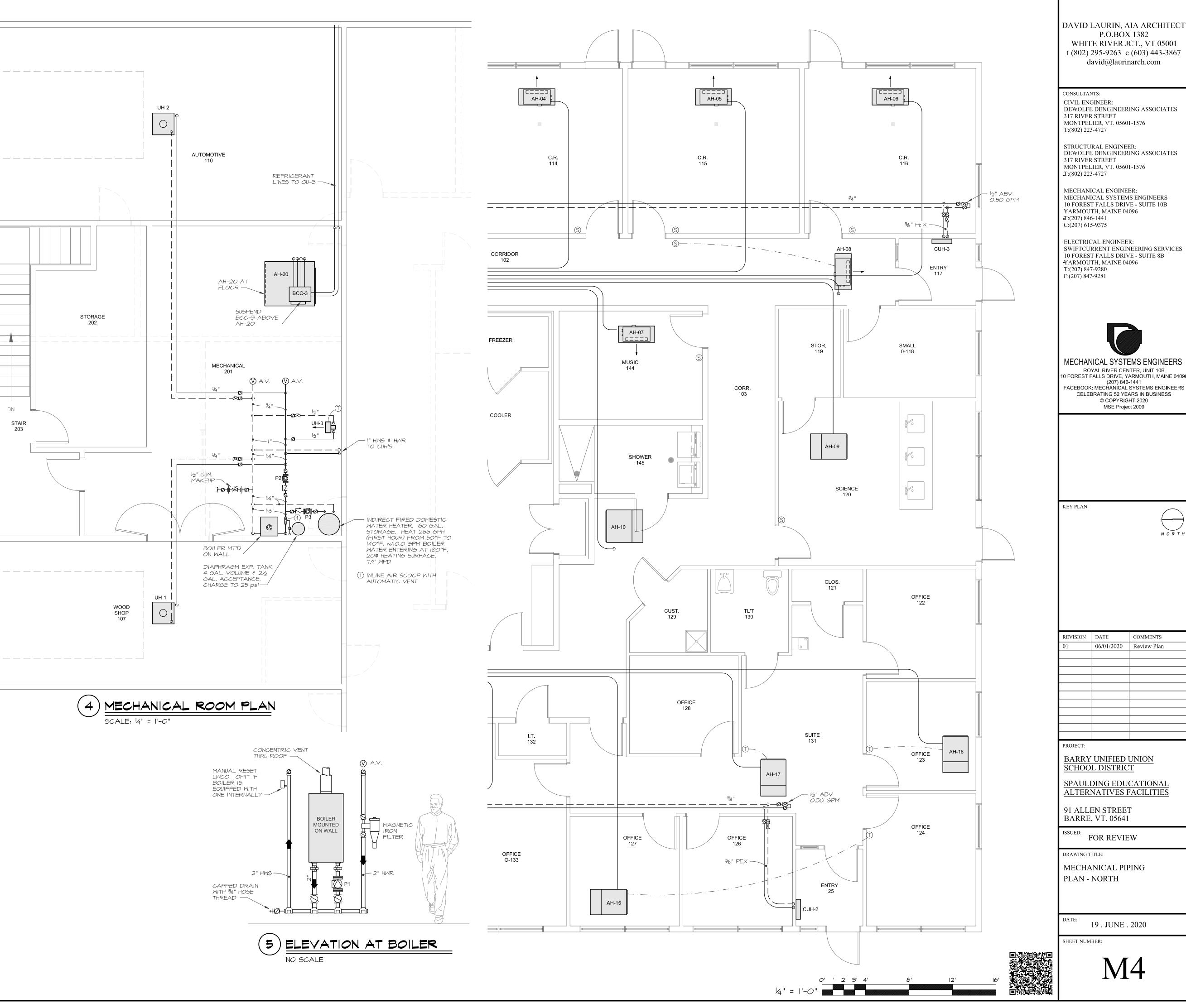


t (802)	P.O.BOX TE RIVER J	CT., VT 05001 (603) 443-3867		
CONSULTANTS: CIVIL ENGINEER: DEWOLFE DENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT. 05601-1576 T:(802) 223-4727				
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KEY PLAN:				
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REVISION 01	DATE 06/01/2020	COMMENTS Review Plan		
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01 PROJECT: BARRY SCHOO SPAULJ	06/01/2020	COMMENTS Review Plan		
01 PROJECT: BARRY SCHOO SPAULI ALTER 91 ALLI BARRE	06/01/2020	COMMENTS Review Plan		
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NORTH

# ABBREVIATIONS

<u>add</u>	REVIATIONS	P
A	AMPERE	٥٦
AC AFF	ALTERNATING CURRENT ABOVE FINISHED FLOOR	。)
AFG	ABOVE FINISHED GRADE	$\bot$
AIC AL	AMPERES INTERRUPTING CAPACITY ALUMINUM	-
ASYM	ASYMMETRICAL	~
ATS AUX	AUTOMATIC TRANSFER SWITCH AUXILIARY	1111
AWG BKR	AMERICAN WIRE GAUGE BREAKER	Ĩ
С	CONDUIT	
CAB CB	CABINET CIRCUIT BREAKER	$\subset$
CKT	CIRCUIT	$\neg$
CT CU	CURRENT TRANSFORMER COPPER	JC
DC	DIRECT CURRENT	$\Rightarrow$
DISC EG	DISCONNECT EQUIPMENT GROUND	
EH	ELECTRICALLY HELD	\$
EM EMT	EMERGENCY ELECTRICAL METALLIC TUBING	÷
EO		$\overline{\mathbf{O}}$
EPR EQUIP	ETHYLENE PROPYLENE RUBBER EQUIPMENT	Ŧ
EX FA	EXTERIOR FIRE ALARM	
FA FC	FOOT-CANDLE	$\bigcirc$
FDR FLUOR	FEEDER FLUORESCENT	
FS	FLOW SWITCH (FA SYSTEM)	HP
FVNR FVR	FULL VOLTAGE NON REVERSING FULL VOLTAGE REVERSING	IJ
GEN	GENERATOR	
GF GFI	GROUND FAULT GROUND FAULT CIRCUIT INTERRUPTER	Р
GND	GROUND	
H HOA	HAND HOLE HAND-OFF-AUTOMATIC	Т
HP	HORSE POWER	СВ
HPS HV	HIGH PRESSURE SODIUM HIGH VOLTAGE	
HZ	HERTZ	Ø
IG IMC	ISOLATED GROUND INTERMEDIATE METAL CONDUIT	
INCAND	INCANDESCENT	
JB KCMIL	JUNCTION BOX THOUSAND CIRCULAR MILS	<b></b>
KV		L
KVA KW	KILO VOLT–AMPERE KILOWATT	
KWH LPS	KILOWATT HOUR LOW PRESSURE SODIUM	$\square$
LTG	LIGHTING	
LSW LV	LIGHT SWITCH LOW VOLTAGE	$ \Phi $
MCB MCC	MAIN CIRCUIT BREAKER MOTOR CONTROL CENTER	
MCP	MOTOR CIRCUIT PROTECTION	
MH EMH	METAL HALIDE ELECTRICAL MANHOLE	
MLO	MAIN LUGS ONLY	
MO MOD	MECHANICALLY OPERATED MOTOR OPERATED DAMPER	
MTS	MANUAL TRANSFER SWITCH	
MV MVA	MERCURY VAPOR	
	MFGAVOLT-AMPERF	3R F-
NC	MEGAVOLT-AMPERE NORMALLY CLOSED	3R F-
NC NO OH		3R F-
NO OH OL	NORMALLY CLOSED NORMALLY OPENED OVERHEAD OVER LOAD	3R F-
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NO OH OL OOA OSY P	NORMALLY CLOSED NORMALLY OPENED OVERHEAD OVER LOAD ON-OFF-AUTOMATIC OUTSIDE STEM & YOKE VALVE (FA SYSTEM) POLE	
NO OH OL OOA OSY	NORMALLY CLOSED NORMALLY OPENED OVERHEAD OVER LOAD ON-OFF-AUTOMATIC OUTSIDE STEM & YOKE VALVE (FA SYSTEM)	
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-2'       GROUND CONNECTION       Image: stream of the stream of	POWE	<u>r symbols</u>	FIRE	ALARM
↓       GROUND CONNECTION       ₩       PRE LARM         ↓       LD1-2       HOME RUN TO PANEL (CKT. NO. AS SHOWN)       ₩       STROBE UN (STGRE NO         ↓       TRANSFORMER       ₩       ₩       NON-SYSTE         ↓       CURRENT TRANSFORMER       ♥       SMOKE DET (STGF OR PT         ↓       OURENT TRANSFORMER       ♥       SMOKE DET (STGF OR PT         ↓       20 AMPERE, 120 VOLT DUPLEX RECEPTACLE, +18" AFF       ₩ECP       OUGE LAW (STGF OR PT         ↓       20 AMPERE, 120 VOLT DUPLEX RECEPTACLE, +18" AFF       ₩       WEMP         ↓       20 AMPERE, 120 VOLT DUPLEX GFG RECEPTACLE, +18" AFF       ₩       MONINCAIL         ↓       20 AMPERE, 120 VOLT DUPLEX GFG RECEPTACLE, +18" AFF       ₩       MONINCAIL         ↓       20 AMPERE, 120 VOLT DUPLEX GFG RECEPTACLE, +18" AFF       ₩       MONINCAIL         ↓       NOTHER POWER RECEPTACLE       ₩       ₩       MONINCAIL         ↓       JUNCTION BOX       ₩       ₩       MONINCAIL         ↓       JUNCTION BOX       ₩       ₩       MONINCAIL         ↓       ELECTRICAL PANEL       ₩       ₩       MONINCAIL         ↓       ELECTRICAL PANEL       ₩       ₩       MONINCAIL         ↓	°)	CIRCUIT BREAKER	F	PULL STATIO
LP1-2       HOME RUN TO PANEL (GKT. NO. AS SHOW)       Image: Strobe units (SKT. NO. AS SHOW)         Image: Strobe units (GKT. NO. AS SHOW)       Image: Strobe units (SKT. NO. AS SHOW)       Image: Strobe units (SKT. NO. AS SHOW)         Image: Strobe units (GKT. NO. AS SHOW)       Image: Strobe units (SKT. NO. AS SHOW)       Image: Strobe units (SKT. NO. AS SHOW)         Image: Strobe units (SKT. NO. AS SHOW)       Image: Strobe units (SKT. NO. AS SHOW)       Image: Strobe units (SKT. NO. AS SHOW)         Image: Strobe units (SKT. NO. AS SHOW)       Image: Strobe units (SKT. NO. AS SHOW)       Image: Strobe units (SKT. NO. AS SHOW)         Image: Strobe units (ST. Strobe units)       Image: Strobe units (ST. Strobe units)       Image: Strobe units (ST. Strobe units)         Image: Strobe units (ST. Strobe units)       Image: Strobe units)       Image: Strobe units)         Image: Strobe units)       Image: Strobe units)       Image: Strobe units)         Image: Strobe units)       Image: Strobe units)       Image: Strobe units)         Image: Strobe units)       Image: Strobe units)       Image: Strobe units)       Image: Strobe units)         Image: Strobe units)       Image: Strobe units)       Image: Strobe units)       Image: Strobe units)       Image: Strobe units)         Image: Strobe units)       Image: Strobe units)       Image: Strobe units)       Image: Strobe units)       Image: Strobe units)       Image: Strobe units) </td <td>Ţ</td> <td>GROUND CONNECTION</td> <td>XX V</td> <td>FIRE ALARM</td>	Ţ	GROUND CONNECTION	XX V	FIRE ALARM
UNIT       TRANSFORMER       120√€         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transforme	LP1-2			STROBE UN
ECT       CURRENT TRANSFORMER       ©       SMOKE DEI         CT       CURRENT TRANSFORMER       ©       SMOKE DEI         C       20 AMPERE, 120 VOLT DUPLEX       VECP       VECP         C       20 AMPERE, 120 VOLT DUPLEX       VECP       COMMAND         C       20 AMPERE, 120 VOLT DUPLEX       VECP       COMMAND         C       20 AMPERE, 120 VOLT DUPLEX       VECP       COMMAND         C       20 AMPERE, 120 VOLT DUPLEX       Co       DUCT SMOL         C       20 AMPERE, 120 VOLT DUPLEX       Co       DUCT SMOL         C       20 AMPERE, 120 VOLT DUPLEX       Co       DUCT SMOL         C       CONTROL + 118" AFF       Co       DUCT SMOL         C       OTHER POWER RECEPTACLE       II       REMOTE TE         JUNCTION BOX       III       MONTOR       IIII         III       INCTION BOX       IIIIIII       MONTOR         IIII       TEANSFORMER       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		, , , , , , , , , , , , , , , , , , ,	•	NON-SYSTE
Image: Second State Procession States Procession Processi		TRANSFORMER	•	LOW FREQU
Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image: Construct transformer       Image: Construct transformer         Image: Construct transformer       Image:	E <sub>ct</sub>	CURRENT TRANSFORMER		SMOKE DET
Construct       20 AMPERE, 120 VOLT DUPLEX RECEPTACLE, +18" AFF       VECEP       COMMAND I COMMAND I         Construct       20 AMPERE, 120 VOLT DUPLEX RECEPTACLE       MINIX       ANNUNCATI DUPLEX RECEPTACLE       DIGITAL CO COMMAND I         Construct       20 AMPERE, 120 VOLT SINGLE       MINIX       ANNUNCATI DUPLEX RECEPTACLE       DIGITAL CO COMMAND I         Construct       20 AMPERE, 120 VOLT DUPLEX RECEPTACLE       Co       DIGITAL CO COMMAND I         Construct       Co       AMPERE, 120 VOLT DUPLEX CONSTRUCT       Co       DIGITAL CO COMMAND I         Co       Construct       FIE       SPRINKLER       III       Receptacle         Co       JUNCTION BOX       FIE       SPRINKLER       IIII       Record Ampere         JUNCTION BOX       FIE       SPRINKLER       IIIIIIII       Record Ampere       SPRINKLER         Co       JUNCTION BOX       FIE       SPRINKLER       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		POTENTIAL TRANSFORMER		(135F OR 2
RECEPTACLE, +18 AFF       VELCH       COMMAND         Image: Comparison of the component of the comparison of the co		-		FIRE ALARM
TDUPLEX RECEPTACLE, +18" AFFDIMOLEX RECEPTACLE, +18" AFFDIMOLEX RECEPTACLE $\Theta$ 20 AMPERE, 120 VOLT DUPLEX $\mathfrak{Sp}$ DIGTAL CO $\mathcal{G}$ CRECEPTACLE, +18" AFF $\mathfrak{Sp}$ DIGTAL CO $\mathcal{O}$ XXOTHER POWER RECEPTACLETREMOTE TE $\mathcal{O}$ XXOTHER POWER RECEPTACLETREMOTE TE $\mathcal{O}$ XXOTHER POWER RECEPTACLETREMOTE TE $\mathcal{O}$ XXDUPLEX RECEPTACLETREMOTE TE $\mathcal{O}$ XXDUPLEX RECEPTACLETREMOTE TE $\mathcal{O}$ AMPERECIRCUIT BREAKERCQ, RED MASTE $\mathcal{O}$ CIRCUIT BREAKERCQ, RED MASTE $\mathcal{O}$ ELECTRICAL PANELEXT $\mathcal{O}$ BUS DUCTRECEPTACLE $\mathcal{O}$ FLOOR RECEPTACLET $\mathcal{O}$ FLOOR RECEPTACLE $\mathcal{O}$ $\mathcal{O}$ RECEPTACLE/DATA BOX $\mathcal{V}$ $\mathcal{O}$ CONDUIT INSTALLED IN SLAB $\mathcal{V}$ $\mathcal{O}$ FLOOR RECEPTACLE $\mathcal{O}$ $\mathcal{O}$ RATING AS NOTED $\mathcal{V}$ $\mathcal{O}$ RATING AS NOTED $\mathcal{V}$ $\mathcal{O}$ RATING AS NOTED $\mathcal{V}$ $\mathcal{V}$ COMUNITED $\mathcal{V}$ $\mathcal{V}$ POLES $\mathcal{V}$ $\mathcal{V}$ MANDER TOGCLE $\mathcal{V}$ $\mathcal{V}$ MANDER TOGCLE $\mathcal{V}$ <td>-#</td> <td></td> <td></td> <td>COMMAND F</td>	-#			COMMAND F
RECEPTACLE       ME       MASTER EC         ■       20 AMPERE, 120 VOLT DUPLEX GFCI RECEPTACLE, 18" AFF       Sb       DUCT SMOK         ●       CFCI RECEPTACLE, 18" AFF       T       REMOTE TE         ●       NEMA DESIGNATION AS NOTED       TS       SPRINKLER         ●       JUNCTION BOX       PS       SPRINKLER         ●       MOTOR       PS       SPRINKLER         ●       POWER POLE CONNECTION TO       EM       CONTROL M         P       POWER POLE CONNECTION TO       EM       CONTROL M         P       POWER POLE CONNECTION TO       EM       CONTROL M         T       TRANSFORMER       IZOV\$       NON-SYSTE         CEX.x       SIZED AS NOTED       EXE       HOOD EXT         ●       BUS DUCT       EXE       HOOD EXT         ●       PLOOR RECEPTACLE/DATA BOX       ▼       COMBINATIC         ●       PLOOR NOUNTED       IN FLOOR IN       IN FLOOR IN         ●       POLES       SAFETY SWITCH,       IN FLOOR IN		DUPLEX RECEPTACLE, +18" AFF		DIGITAL CON
GFCI RECEPTACLE, +18" AFF       Spb       DUCL SIMO	- <del>0</del>		MB	MASTER BO
WX       NEMA DESIGNATION AS NOTED       TS       SPRINKLER         Image: Second to the second to	ŧ		©₽	DUCT SMOK
Image: Product of the second state	$\bigcirc_{xx}$			REMOTE TES
J       JUNCTION BOX       ES       SPRINKLER         J       POWER POLE CONNECTION TO       EM       MONITOR M         T       TRANSFORMER       1200 (\$)       NON-SYSTE         T       TRANSFORMER       U.R.       STR =         CEXX       SIZED AS NOTED       EM       KMX MONITOR M         ELECTRICAL PANEL       EXE       HOOD EXT       DOOR HOLD         EM       BUS DUCT       EXE       HOOD EXT       DOOR HOLD         EM       FLOOR RECEPTACLE       EXE       HOOD EXT       DOOR HOLD         EM       FLOOR RECEPTACLE       COMUNITED       Y       COMBINATIC         INFUSED SAFETY SWITCH,       RECEPTACLE/OATA BOX       V       COMBINATIC         VINFUSED SAFETY SWITCH,       FUSE SECURITY S       SECURITY S       CATV JACK         200/3       FUSED SAFETY SWITCH,       DS       SECURITY S         RET       FRAING AS NOTED       ELECTRIC MOTOR STARTER,       SF)       INTERCOM         X				
Image: Power Pole Connection to MODULAR FURNITURE WHIP       Image: Power Pole Connection to MODULAR FURNITURE WHIP         T       TRANSFORMER       1200 (\$)         T       TRANSFORMER       1200 (\$)         T       TRANSFORMER       IC, RED MASTE         Image: Power Pole Connection to MODULAR FURNITURE WHIP       Image: Power Pole Connection to MODULAR FURNITURE WHIP       Image: Power Pole Connection to MODULAR FURNITURE WHIP         Image: Power Pole Connection to MODULAR FURNITURE WHIP       Image: Power Pole Connection to MODULAR FURNITURE WHIP       Image: Power Pole Connection to MODULAR FURNITURE WHIP         Image: Power Pole Connection to MODULAR FURNITURE WHIP       Image: Power Pole Connection to MODULAR FURNITURE WHIP       Image: Power Pole Connection to MODULAR FURNITURE WHIP         Image: Power P		IUNCTION BOY		SPRINKLER
P       MODULAR FURNITURE WHIP       IM       CONTROL WIP         T       TRANSFORMER       120V\$       NON-SYSTE         CB       XX       SIZED AS NOTED       IM       NON-SYSTE         CB       ELECTRICAL PANEL       IM       NON-SYSTE         Image: Control BREAKER       Image: Control BREAKER       Image: Control BREAKER       Image: Control BREAKER         Image: Control BREAKER       Image: Control BREAKER       Image: Control BREAKER       Image: Control BREAKER         Image: Control BREAKER       Electrical Panel       Image: Control BREAKER       Image: Control BREAKER         Image: Control Breaker       Bus Duct       Image: Control BREAKER       Image: Control BREAKER         Image: Control Breaker       Function Breaker       Image: Control BREAKER       Image: Control BREAKER         Image: Control Breaker       Function Breaker       Image: Control BREAKER       Image: Control BREAKER         Image: Control Breaker       Function Breaker       Image: Control BREAKER       Image: Control BREAKER         Image: Control Breaker       Function Breaker       Image: Control BREAKER       Image: Control BREAKER         Image: Control Breaker       Function Breaker       Image: Control BREAKER       Image: Control BREAKER         Image: Controct Normally Controcontrol Breaker				MONITOR M
T       TRANSFORMER       STR =         CB       XX       SIZED AS NOTED       QA       RED MASTE         CB       XX       SIZED AS NOTED       EXE       HOOD EXT         ELECTRICAL PANEL       EXE       HOOD EXT       EXE       HOOD EXT         ED       BUS DUCT       FLOOR RECEPTACLE       EVEN HOOD EXT       SYSTEMS SI         CD       FLOOR RECEPTACLE       COMBINATIC       SYSTEMS SI       SI         CD       FLOOR MOUNTED       V       COMBINATIC         W       WALL MOUNTED       V       COMBINATIC         UNFUSED SAFETY SWITCH, W = WALL MOUNTED       V       Carty JACK         V       POLES       INT       INTERCOM         JR E <sup>+</sup> XXAF       FRAMESIZE       FUSED SAFETY SWITCH, RATING AS NOTED       INT         V       RAMPERES       INT       INTERCOM         SR E <sup>+</sup> XXAF       FRAMESIZE       EL       ELECTRIC E         VXAT       FRAMESIZE       FUSE JTRIP       INT       INTERCOM         MANUAL TOGGLE       POLES       INT       INTERCOM       INTERCOM         M       MANUAL TOGGLE OPERATED       INT       INTERCOM       INT         W       MANUAL TOGGLE OPERATED	P			NON-SYSTE
CB XX       SIZED AS NOTED       U, RED MASTE         ELECTRICAL PANEL       KNOX BOX,         ELECTRICAL PANEL       EXT. HOOD EXT.         D       BUS DUCT       FCPS         AMPERE RATING AS NOTED       SYSTEMS         D       FLOOR RECEPTACLE         CONDUIT INSTALLED IN SLAB       ▼         TELEPHONE       SYSTEMS         D       FLOOR MOUNTED         W       WALL MOUNTED         W       WALL MOUNTED         W       WALL MOUNTED         UNFUSED SAFETY SWITCH,       DS         200/3       RATING AS NOTED         AMPERES       INT         SR EFLXAF       FUSED SAFETY SWITCH,         V       CATV JACK         MAGNETIC MOTOR STARTER,       DS         V       RATING AS NOTED         MAGNETIC MOTOR STARTER,       SP         MAGNETIC MOTOR STARTER,       SP         MAGNETIC MOTOR STARTER       INT         MAGNETIC ACTUATED VALVE       ELECTRIC ACTUATED VALVE         M       MAGNETIC ACTUATED VALVE         MAGNETIC MOTOR CONTACTOR       INT         M       MOTOR CONTACTOR         M       MOTOR CONTACTOR         M       MOTOR CONT	Т		.200 0	STR =
ELECTRICAL PANEL       EXT       HOOD EXT         BD       BUS DUCT       DOR HOLD         AMPERE RATING AS NOTED       SYSTEMS S         SYSTEMS S       SIGNAL POL         SYA	CB XX			RED MASTE
BID       BUS DUCT AMPERE RATING AS NOTED       DOOR HOLL FGPS       SIGNAL POIN SYSTEMS         CD       FLOOR RECEPTACLE CONDUIT INSTALLED IN SLAB       ▼       TELEPHONE         CD       FLOOR RECEPTACLE CONDUIT INSTALLED IN SLAB       ▼       TELEPHONE         CD       FLOOR MOUNTED W = WALL MOUNTED       ▼       COMBINATIC IN FLOOR MOUNTED         CD       UNFUSED SAFETY SWITCH, RATING AS NOTED       ▼       CELLING MC ACCESS PC         SR       FUSED SAFETY SWITCH, RATING AS NOTED       DS       SECURITY S         SR       FUSED SAFETY SWITCH, RATING AS NOTED       DS       SECURITY S         SR       FUSED SAFETY SWITCH, RATING AS NOTED       DS       SECURITY S         SR       FUSED SAFETY SWITCH, FRAMESIZE       DS       SECURITY S         VAAP       FRAMESIZE FUSE/TRIP       INTERCOM       DS       SECURITY S         NAGNETIC MOTOR STARTER, RATING AS NOTED       MAGNETIC MOTOR STARTER, RATING AS NOTED       SP       INTERCOM         M       MAOTOR STARTER       INT       INTERCOM       INTERCOM         M       MAOTOR CONTACTOR       INT       INTERCAM       INT       INTERCAM         M       MOTOR CONTACTOR       IND       AUTOMATIC       INT       INTERCAM         M       MOTOR	8			KNOX BOX,
BD       BUS DUCT AMPERE RATING AS NOTED       FCPES       SIGNAL POIN SYSTEMS         Image: Display to the state of the state		ELECTRICAL PANEL		
AMPERE RATING AS NOTED       SYSTEMS S         Image: System status       FLOOR RECEPTACLE CONDUIT INSTALLED IN SLAB       TELEPHONE         Image: System status       Status       TELEPHONE         Image: System status       Status       Combination         Image: System status       Status       Combination         Image: System status       Image: System status       Image: System status       Combination         Image: System status         Image: System status       Image: System status       Image: System status       Image: System status       Image: System status         Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status         Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System status       Image: System	Вр	BUS DUCT		SIGNAL POV
Image: Conduit installed in SLAB       Image: Conduit installed in SLAB       Image: Conduit installed ins			<u>SYST</u>	<u>ems s`</u>
Image: Comparison of the second state of the second st	$\square$		▼	TELEPHONE
W = WALL MOUNTED       Image: Combination in Floor in	ф <b>у</b> х		$\mathbf{V}$	COMBINATIO
Image: Poles amperes amperes       Poles amperes       Image: Poles amperes amperes       Image: Poles amperes amperes amperes amperes       Image: Poles amperes a				COMBINATIO IN FLOOR E
2007 0       POLES       WAP       ACCESS PC         AMPERES       TV       CATV JACK         3R       FUSED SAFETY SWITCH, RATING AS NOTED       DS       SECURITY S         XXAT       FRAMESIZE       EL       ELECTRIC D         FUSED SAFETY SWITCH, NEMA RATING       MS       SECURITY S         MAGNETIC MOTOR STARTER, RATING AS NOTED       SP       INTERCOM S         MAGNETIC MOTOR STARTER, RATING AS NOTED       SP       INTERCOM S         M       MAONAL TOGGLE OPERATED MOTOR STARTER       INT       INTERCOM S         M       MANUAL TOGGLE OPERATED       INT       INTERCOM S         M       MOTOR STARTER       INT       INTERCOM S         M       MANUAL TOGGLE       PUSH BUTT         CABLE TRAY       DOOR BELL       PUSH BUTT         M       MOTOR CONTACTOR       EX       CAMERA         M       MOTOR CONTACTOR       AUTOMATIC         M       MOTOR CONTACTOR       AUTOMATIC         M       MOTOR CONTACTOR       ES       ELECTRIC S         M       MOTOR CONTACTOR       ES       ELECTRIC S         M       MOTOR CONTACTOR       ES       ELECTRIC S         M       MOTOR CONTACTOR       ES <td< td=""><td></td><td></td><td></td><td>CEILING MO</td></td<>				CEILING MO
IV       CATV JACK         IV       RATING AS NOTED         IV       FRAMESIZE         FUSE/TRIP       ELECTRIC IC         IV       NEMA RATING         IV       NAGNETIC MOTOR STARTER,         IV       MANUAL TOGGLE OPERATED         IV       MANUAL TOGGLE OPERATED         IV       SMOKE DAMPER TOGGLE         IV       ELECTRIC ACTUATED VALVE         IV       ELECTRIC ACTUATED VALVE         IV       CONTACT NORMALLY OPEN         IV       CONTACT NO		POLES	$\mathbf{U}$	ACCESS PO
3R FF XXAF       RATING AS NOTED       EL       ELECTRIC E         XXAT       FRAMESIZE       EL       ELECTRIC E         FUSE/TRIP       KP       SECURITY S         NEMA RATING       KP       SECURITY S         MAGNETIC MOTOR STARTER,       SP       INTERCOM S         M       MANUAL TOGGLE OPERATED       INT       INTERCOM S         M       MAUTOR STARTER       INT       INTERCOM S         M       MOTOR CONTACTOR       INT       INTERCOM S         M       MOTOR CONTACTOR       ADD       AUTOMATIC         M       MOTOR CONTACTOR       ADD       AUTOMATIC         I       CONTACT NORMALLY OPEN       ADD       AUTOMATIC         M       CONTACT NORMALLY CLOSED       ES       ELECTRIC S         SELECTOR SWITCH       SELECTOR SWITCH       INTERCON       INTERCON				CATV JACK
Image: Fuse / TRIP       Image: Fuse / TRIP         Image: Fuse / TRIP       NEMA RATING         Image: Fuse / TRIP       NEMA RATING         Image: Fuse / TRIP       Image: Fuse / TRIP         Image: Fuse / TRIP		RATING AS NOTED		
MAGNETIC MOTOR STARTER, RATING AS NOTED $\widehat{SP}$ INTERCOM :MMANUAL TOGGLE OPERATED MOTOR STARTERINTINTERCOM :MMANUAL TOGGLE OPERATED MOTOR STARTERINTINTERCOM :MSMOKE DAMPER TOGGLEImage: DBDOOR BELL CRImage: DBCONTACT NORMALLY OPENImage: DDAUTOMATIC Image: DEImage: DCCONTACT NORMALLY CLOSEDImage: DEImage: DEImage: DCCONTACT NORMALLY CLOSEDImage: DEImage: DEImage: DCSELECTOR SWITCHImage: DEImage: DE				
Image: Note of the state				INTERCOM S
MANUAL TOGGLE OPERATED       Image: Cable Transmitted         MOTOR STARTER       Image: Cable Transmitted         M       SMOKE DAMPER TOGGLE       Image: Push Butte         Image: DB       DOOR BELL         Image: DB       CARD READ         Image: DB       CARD READ         Image: DB       CARD READ         Image: DB       CONTACT NORMALLY OPEN         Image: DB       ADO         Image: DB       CONTACT NORMALLY CLOSED         Image: DB       CONTACT NORMALLY CLOSED         Image: DB       SELECTOR SWITCH	$\boxtimes$	•		INTERCOM
SMOKE DAMPER TOGGLE       DB       DOOR BELL         DB       DOOR BELL         CR       CARD READ         M       MOTOR CONTACTOR $\Box$ H       CONTACT NORMALLY OPEN       AUTOMATIC         I       CONTACT NORMALLY CLOSED       REX         REX       REQUEST T         SELECTOR SWITCH       SELECTOR SWITCH	М			CABLE TRAY
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	ĭ Z			PUSH BUTT
ELECTRIC ACTUATED VALVE M MOTOR CONTACTOR M MOTOR CONTACTOR M MOTOR CONTACTOR M MOTOR CONTACTOR M MOTOR CONTACTOR M ADO M AUTOMATIC M REX M REQUEST T M ES ELECTRIC S M SELECTOR SWITCH		SMORE DAMPER TOGGLE	DB	DOOR BELL
$\begin{array}{c} \swarrow \\ \square \\$			CR	CARD READ
(M) MOTOR CONTACTOR 4D = 4 C/ ADO AUTOMATIC ADO AUTOMATIC REX REQUEST T CONTACT NORMALLY CLOSED ES ELECTRIC S SELECTOR SWITCH	AC	ELECTRIC ACTUATED VALVE	X	CAMERA
Image: Contact Normally OPEN     Image: Contact Normally OPEN       Image: Contact Normally Closed     Image: Contact Normally Closed       Image: Contact Normally Closed     Image: Contact Normally Closed </td <td>M</td> <td>MOTOR CONTACTOR</td> <td></td> <td>-4D = 4 CA</td>	M	MOTOR CONTACTOR		-4D = 4 CA
REX REQUEST T CONTACT NORMALLY CLOSED ES ELECTRIC S SELECTOR SWITCH		CONTACT NORMALLY OPEN	ADO	AUTOMATIC
SELECTOR SWITCH			REX	REQUEST TO
	$\rightarrow \uparrow$	CONTACT NORMALLY CLOSED	ES	ELECTRIC S
TEMPERATURE SWITCH		SELECTOR SWITCH		
TEMPERATURE SWITCH	σLo			
R PILOT LIGHT	с С	TEMPERATURE SWITCH		
	R	PILOT LIGHT		

# <u>ARM SYMBOLS</u>

|--|

JLL STATION	o	LIGHT FIXTURE
RE ALARM AUDIBLE/VISIBLE DTIFICATION APPLIANCE (GENERAL EVACUATION)	L X	
ROBE UNIT XX= CANDELA	X	LIGHT FIXTURE W/ EMERGENCY BATTERY BALLAST
DN-SYSTEM STROBE UNIT		
W FREQUENCY MINI HORN UNIT		WALL MOUNTED LIGHT FIXTURE
IOKE DETECTOR KED TEMP HEAT DETECTOR 35F OR 200F)	·×	PENDANT MOUNTED LIGHT FIXTURE
RE ALARM CONTROL PANEL		
DICE EVACUATION SYSTEM	∟ ° ×	STRIP/WRAP LIGHT FIXTURE
INUNCIATOR	L x	EXTERIOR WALL-PACK
GITAL COMMUNICATOR	¤×	ROUND RECESSED CEILING MOUNTED FIXTURE
ASTER BOX		SURFACE MOUNTED FIXTURE
JCT SMOKE DETECTOR	$\mathfrak{O}_{x}$	SONTACE MOUNTED TIXTORE
MOTE TEST STATION	р <sub>х</sub>	WALL MOUNTED
PRINKLER TAMPER SWITCH	<u> </u>	LIGHTING FIXTURE
PRINKLER FLOW SWITCH	Δx	WALL SCONCE
PRINKLER PRESSURE SWITCH		
ONITOR MODULE	$\nabla \nabla \nabla X$	TRACK LIGHTING FIXTURE (TRACK MOUNTED FIXTURE TYPE MAY VARY)
DN—SYSTEM SMOKE DETECTOR STR = DENOTES INTEGRAL STROBE FOR H/C UNITS		EMERGENCY LED EXIT SIGN
ED MASTER BOX LIGHT		COMBINATION EMERGENCY
NOX BOX, FBO		EXIT SIGN & LIGHTING FIXTURE WITH DUAL LAMPS HEADS
DOD EXT SYSTEM		BATTERY AND CHARGER
OOR HOLDER	1 N	EMERGENCY LIGHTING FIXTURE
GNAL POWER EXTENDER		WITH DUAL LAMPS HEADS BATTERY AND CHARGER
<u>IS SYMBOLS</u>	<i>↓</i> WP	REMOTE EMERGENCY LIGHTING LAMP HEAD
LEPHONE SYSTEM WALL JACK		- WATER PROOF
DMBINATION VOICE/DATA SYSTEM OUTLET	Sx a	LIGHT SWITCH
MBINATION VOICE/DATA SYSTEM OUTLET FLOOR BOX. FURNISH 1" CONDUIT IN SLAB		- DENOTES FIXTURE SWITCHED - D = DIMMER (WHERE NOTED)
EILING MOUNTED JACK FOR WIRELESS CESS POINT.		3 = 3 - WAY (WHERE NOTED) 4 = 4 - WAY (WHERE NOTED) P = PILOT LIGHT (WHERE NOTED)
ATV JACK	ተ	T = TIMER SWITCH
CURITY SYSTEM DOOR SWITCH	\$ <sub>LV</sub>	LOW VOLTAGE LIGHT SWITCH
ECTRIC DOOR LOCK SET	$\Theta_{v}$	
CURITY SYSTEM CARD ACCESS PAD	Î	OCCUPANCY SENSOR
TERCOM SYSTEM SPEAKER		C = CEILING MOUNTED W = WALL MOUNTED
TERCOM MASTER STATION		48" AFF (TO TOP)
ABLE TRAY	TC	TIME CLOCK
JSH BUTTON	LC	LIGHTING CONTACTOR
	PC	PHOTOCELL
DOR BELL		
ARD READER		
MERA		

= 4 CAMERA DOME

OMATIC DOOR OPENER

QUEST TO EXIT

ECTRIC STRIKE

# <u>GENERAL NOTES</u>

- 1. ALL WORK SHALL BE IN COMPLIANCE WITH NFPA-70, NATIONAL ELECTRICAL CODE.
- 2. ALL MOTOR SAFETY SWITCHES, DISCONNECTS AND MOTOR STARTERS ARE FURNISHED BY DIVISION 16000 UNLESS NOTED AS FURNISHED WITH EQUIPMENT (FWE).
- 3. ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH A UL APPROVED FIRE SEALANT MATERIAL TO MAINTAIN THE RATING OF THE SEPARATION.
- BY LEVITON, PASS & SEYMOUR, OR APPROVED EQUAL.

- COPPER.
- CONNECTION TO VIBRATING EQUIPMENT IN THE MECHANICAL ROOM.
- 9. MOUNTING HEIGHTS FOR EQUIPMENT SHALL BE AS FOLLOWS: CONVENIENCE RECEPTACLES: 18" AFF TO BOTTOM OF BOX LIGHTING TOGGLE SWITCHES: 48" AFF TO TOP OF BOX UNIT LOAD CENTERS: SUCH THAT HIGHEST BREAKER SWITCH DOES NOT EXCEED 48" AFF UNIT INTERCOM: 48" TO TOP OF BOX. FIRE ALARM AUDIO/VISUAL DEVICES: 80" AFF OR 6" BELOW CEILING TO TOP OF DEVICE. FIRE ALARM PULL STATIONS: 48" TO TOP OF BOX.

4. LIGHTING TOGGLE SWITCHES SHALL BE COMMERCIAL SPECIFICATION GRADE, 120 VOLT, SIDE WIRED AS MANUFACTURED

5. CONVENIENCE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE UNLESS SHOWN OTHERWISE, GROUNDING TYPE, NEMA 5-20R, SIDE WIRED, AS MANUFACTURED BY LEVITON, PASS & SEYMOUR, OR APPROVED EQUAL.

6. DEVICE COVERPLATES SHALL BE THERMOPLASTIC NYLON TYPE WITH IVORY FINISH IN ALL FINISHED SPACES. MECHANICAL ROOMS, ELECTRICAL ROOM, AND UTILITY ROOMS SHALL BE FURNISHED WITH BRUSHED STAINLESS STEEL COVERPLATES.

7. UNLESS OTHERWISE NOTED ALL HOMERUNS FOR 15 OR 20A CIRCUITS SHALL BE 2#12AWG & #12GND. HOMERUNS FED FROM 20A, 1P CIRCUITS IN EXCESS OF 100 FEET (FOR 120V CIRCUITS) SHALL BE #10AWG. ALL WIRING SHALL BE

8. CONDUIT SYSTEMS: EXPOSED INTERIOR CONDUITS SHALL BE EMT, 3/4" MINIMUM. PROPERLY SUPPORTED MC CABLE ASSEMBLIES MAY BE USED ABOVE CEILINGS AND IN WALLS. FLEXIBLE LIQUIDTIGHT CONDUIT WHIPS SHALL BE USED FOR

## DAVID LAURIN ARCHITECT PLLC P.O. BOX 1382 WHITE RIVER JCT., VT 05001 t (802) 295-9263 c (603) 443-3867 david@laurinarch.com

CONSULTANTS:

CIVIL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727

STRUCTURAL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727

MECHANICAL ENGINEER: KURT MAGNUSSON, P.E. MECHANICAL SYSTEMS ENGINEERS 10 FOREST FALLS DRIVE - SUITE #10 YARMOUTH, MAINE 04096 T: (207) 846-1441 C: (207) 615-9375

ELECTRICAL ENGINEER: TIM MATHEWS, P.E.

SWIFTCURRENT ENGINEERING SERVICES 10 FOREST FALLS DRIVE, UNIT 8B YARMOUTH, MAINE 04096 T: (207) 847-9280 C: (207) 847-9281

KEY PLAN:

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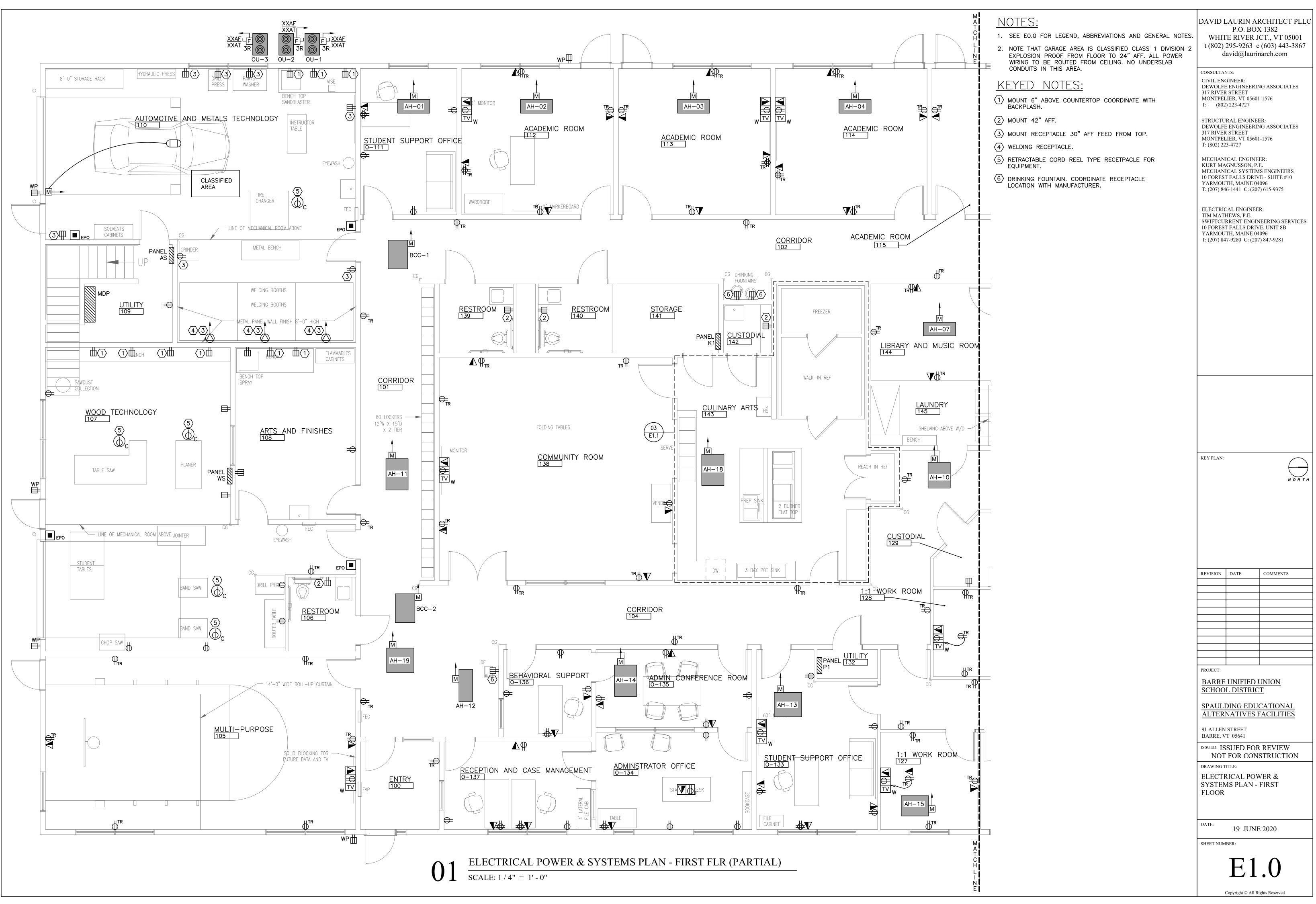
REVISION	DATE	COMMENTS		
PROJECT: <u>BARRE UNIFIED UNION</u> <u>SCHOOL DISTRICT</u>				
		CATIONAL FACILITIES		
91 ALLEN STREET BARRE, VT 05641				
ISSUED: ISSUED FOR REVIEW NOT FOR CONSTRUCTION				
DRAWING TITLE: ELECTRICAL GENERAL NOTES & LEGEND				

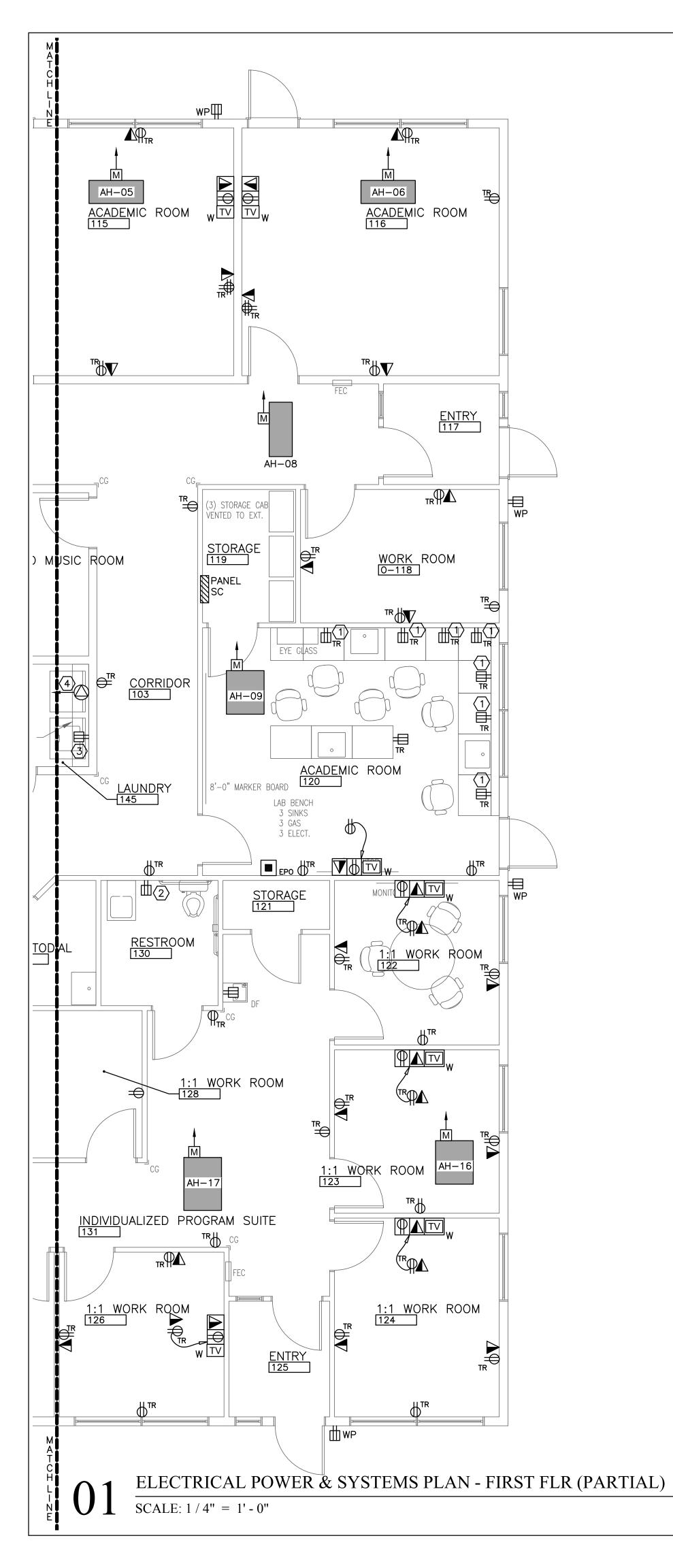
DATE:	

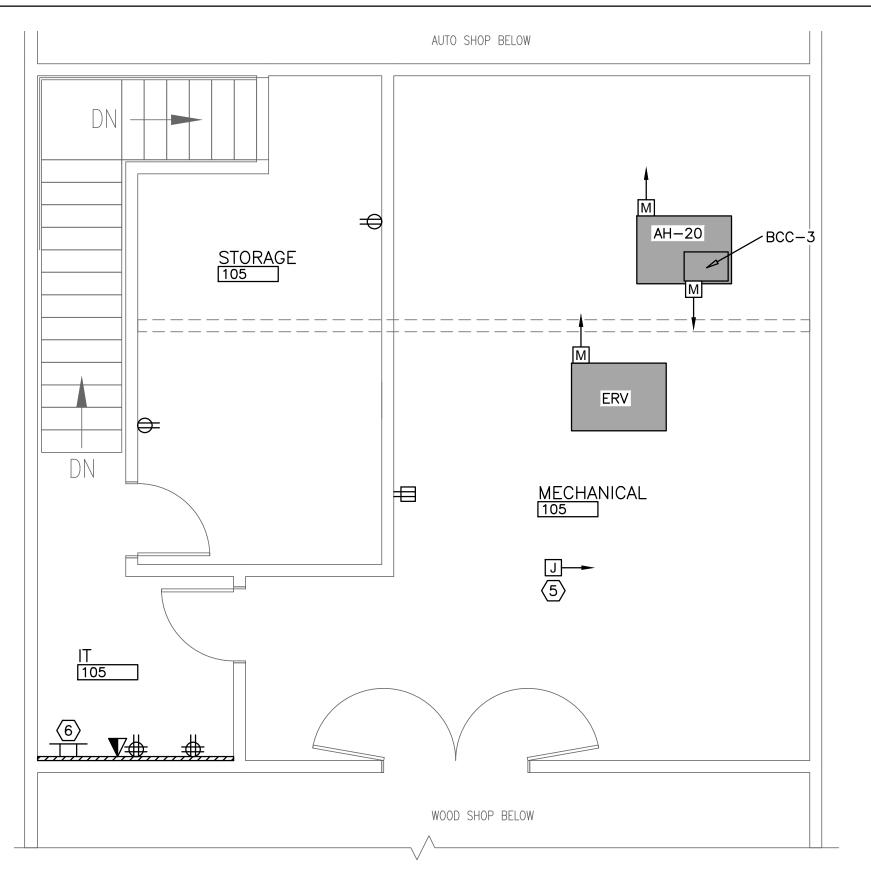
19 JUNE 2020

SHEET NUMBER:

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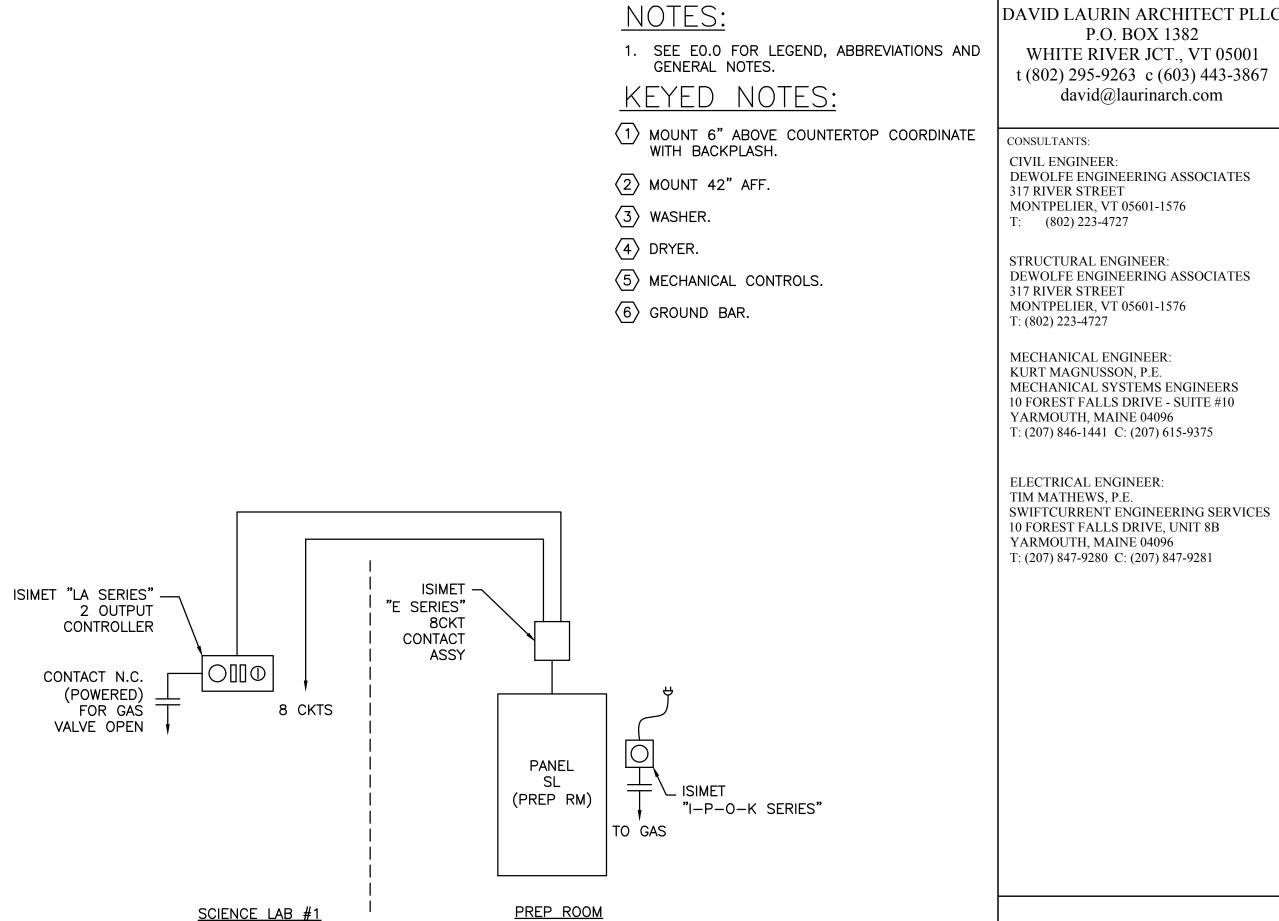






02

ELECTRICAL POWER & SYSTEMS PLAN - SECOND FLR SCALE: 1 / 4" = 1' - 0"



<u>SCIENCE\_LAB\_#1</u>

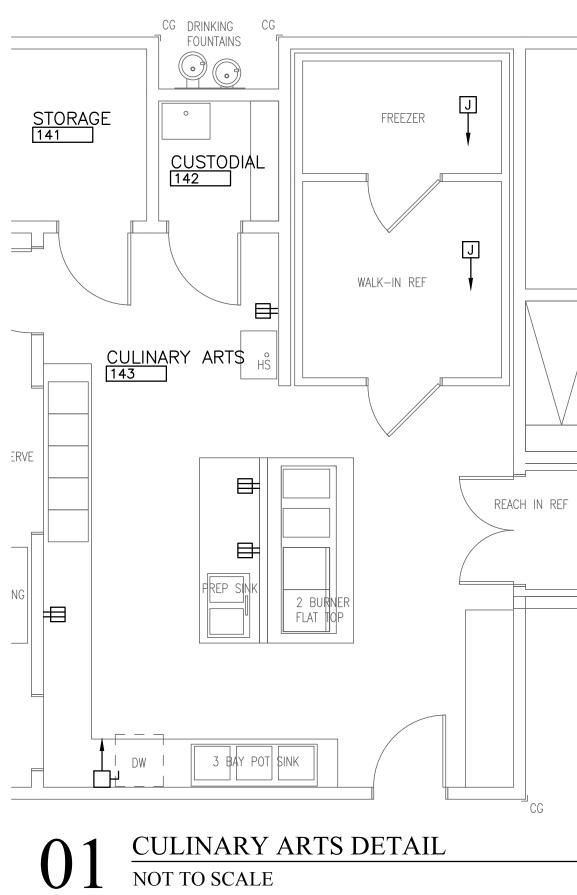


# $03 \; \frac{\text{SCIENCE LAB - EMERGENCY SYSTEM SHUTOFF}}{\text{NOT TO SCALE}}$

KEY PLAN:		(
		NO
REVISION	DATE	COMMENTS
PROJECT:		
	UNIFIED	
	UNIFIED	
SCHOO SPAUL	E DISTRIC	<u>CT</u> ICATIONAL
SCHOO SPAUL	L DISTRIC DING EDU NATIVES	CT
SCHOO SPAUL ALTER 91 ALLEN BARRE, V	DING EDU DING EDU NATIVES STREET T 05641	<u>CT</u> ICATIONAL FACILITIES
SCHOO SPAULI ALTER 91 ALLEN BARRE, V ISSUED: IS	L DISTRIC DING EDU NATIVES STREET T 05641 SSUED FOI	<u>CT</u> I <u>CATIONAL</u> FACILITIES R REVIEW
SCHOO SPAULI ALTER 91 ALLEN BARRE, V ISSUED: IS	DING EDU DING EDU NATIVES STREET T 05641 SUED FOI FOR CON	<u>CT</u> I <u>CATIONAL</u> FACILITIES R REVIEW
SCHOO SPAUL ALTER 91 ALLEN BARRE, V ISSUED: IS NOT DRAWING T ELECTI	DING EDU DING EDU NATIVES STREET T 05641 SUED FOI SUED FOI FOR CON	CT ICATIONAL FACILITIES R REVIEW ISTRUCTION WER &
SCHOO SPAUL ALTER 91 ALLEN BARRE, V ISSUED: IS NOT DRAWING T ELECTI SYSTEN	DING EDU DING EDU NATIVES STREET T 05641 SUED FOI SUED FOI FOR CON	CT ICATIONAL FACILITIES R REVIEW ISTRUCTION WER & FIRST FLR
SCHOO SPAUL ALTER 91 ALLEN BARRE, V ISSUED: IS NOT DRAWING T ELECTI SYSTEN	DING EDU NATIVES STREET T 05641 SUED FOI FOR CON TITLE: RICAL POY MS PLAN -	CT ICATIONAL FACILITIES R REVIEW ISTRUCTION WER & FIRST FLR
SCHOO SPAUL ALTER 91 ALLEN BARRE, V ISSUED: IS NOT DRAWING T ELECTI SYSTEN	DING EDU NATIVES NATIVES STREET T 05641 SUED FOI FOR CON TITLE: RICAL PO MS PLAN - AL & SECC	CT ICATIONAL FACILITIES R REVIEW ISTRUCTION WER & FIRST FLR OND FLR
SCHOO SPAUL ALTER 91 ALLEN BARRE, V ISSUED: IS NOT DRAWING T ELECTI SYSTEN PARTIA	DING EDU NATIVES STREET T 05641 SUED FOI FOR CON TITLE: RICAL PO MS PLAN - AL & SECC 19 JUN	CT ICATIONAL FACILITIES R REVIEW ISTRUCTION WER & FIRST FLR OND FLR

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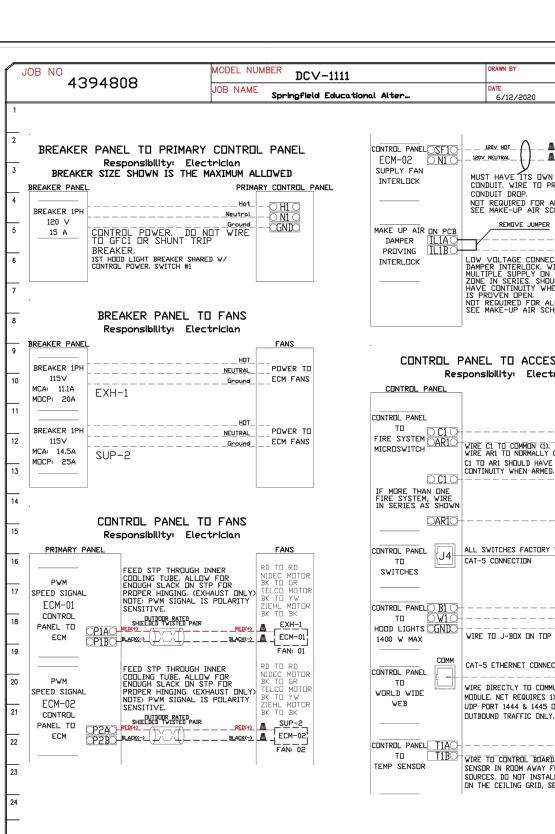
		KVA LOA	D	#	AMPS	ш	AMPS	#		KVA LOA	D		
DIRECTORY	A	В	С	CKT	BKR	PHASE	BKR	CKT	A	В	С		DIRECTORY
SPARE	*			1	20	A	20	2	*			SPARE	
SPARE		*		3	20	В	20	4		*		SPARE	
SPARE			*	5	20	с	20	6			*	SPARE	
SPARE	*			7	20	A	20	8	*			SPARE	
SPARE		*		9	20	В	20	10		*		SPARE	
SPARE			*	11	20	с	20	12			*	SPARE	
SPARE	*			13	20	A	20	14	*			SPARE	
SPARE		*		15	20	В	20	16		*		SPARE	
SPARE			*	17	20	С	20	18			*	SPARE	
SPARE	*			19	20	А	20	20	*			SPARE	
SPARE		*		21	20	В	20	22		*		SPARE	
SPARE			*	23	20	С	20	24			*	SPARE	
SPARE	*			25	20	А	20	26	*			SPARE	
SPARE		*		27	20	В	20	28		*		SPARE	
SPARE			*	29	20	с	20	30			*	SPARE	
SPARE	*			31	20	Α	20	32	*			SPARE	
SPARE		*		33	20	В	20	34		*		SPARE	
SPARE			*	35	20	с	20	36			*	SPARE	
SPARE	*			37	20	A	20	38	*			SPARE	
SPARE		*		39	20	В	20	40		*		SPARE	
SPARE			*	41	20	с	20	42			*	SPARE	
SPARE	*			43	20	A	20	44	*			SPARE	
SPARE		*		45	20	В	20	46		*		SPARE	
SPARE			*	47	20	с	20	48			*	SPARE	
SUBTOTAL	###	###	###						###	###	###		SUBTOTAL
VOLTAGE: 120/208V PHAS	SE: 3		POLE	S: 4		TOTAL	. KVA A-	-PHASE	#i	##			
MAIN LUGS ONLY			BUS AMI	PS: 200	A	TOTAL	KVA B-	-PHASE	#1	##	Р	ANEL	K1
MOUNTING: *******						TOTAL	KVA C-	-PHASE	#;	##	- 0		
SHORT CIRCUIT RATING: *KAIC							тот	AL KVA	#1	##	LU	CATION	KITCHEN
NOTES:													

 $04 \quad \frac{\text{KITCHEN PANEL SCHEDULE}}{\text{NOT TO SCALE}}$ 



01

	KITCHEN EQUIPMENT											
TAG	EQUIPMENT	AMP	KW	HP	VOLTS	PH	DIRECT	PLUG	NEMA	AFF (INCHES)	WIRING	NOTES
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												
11												
12												
13												
14												
15												
16												
17												
18												
19												
20												
21												
22												



04

KITCHEN HOOD WIRING DETAIL NOT TO SCALE

# NOTES:

SEE E0.0 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

# KEYED NOTES:

- (1) MOUNT 6" ABOVE COUNTERTOP COORDINATE WITH BACKPLASH.
- $\langle 2 \rangle$  mount 42" aff.
- $\langle 3 \rangle$  WASHER.
- $\langle 4 \rangle$  DRYER.
- $\langle 5 \rangle$  mechanical controls.
- $\langle 6 \rangle$  ground bar.

# $02 \; \frac{\text{KITCHEN EQUIPMENT SCHEDULE}}{\text{NOT TO SCALE}}$

CHEMATIC TYPE INSTALL	DESCRI Demond	PTION OF OPERATION	li Xhaust Fan, 1 Supply Fan, Exhaust on In	Fine, Liphte aut
WG NO	sensor shipp	ed loose for field installation.Veri	Exhaust Fan, 1 Supply Fan, Exhaust on in R DUTY 3 PHASE MOTOR REQUIRED FOR USE ' fy distance between VFD and Motor; addi	WITH VFD. Room tional cost could
ECP #1-1	distance exc	ceeds 50 feet.		
RED	SUP-2	CONTROL PANEL T2AC	2	
	N1 O	TE <u>T2BC</u> DUCT SENSER	FACTORY WIRED TEMPERATURE	HOOD 1 RISER 1
ETAL √IDED			SENSER, MEONTED IN EXHAUST DOCT	
UNITS.		CONTROL PANEL T3AC	}	
MATIC.		PSP SENSOR	VIRE TO CONTROL BOARD. SENSOR MOUNTED IN SUPPLY PLENUM.	HOOD 1 PSP TEMP
	ZONE 1			
	<u>D30</u> D70		THE FOLLOWING CONNECTIONS MAY OR MAY NOT BE	
IN FOR TERN E DO IE SAME IF MU	INAL NAMES NOT APPLY A BY DTHERS		REQUIRED BASED ON JOBSITE SPECIFICATIONS	
DAMPER		CONTROL PANEL		
UNITS.		SIGNAL FOR ONIC	ST TERMINAL IS ENERGIZED	
IATIC.		SHUNT TRIP	IN FIRE CONDITION.	
			NEUTRAL_TO_CONTACTOR_COIL	
ORY ITEM	2	SIGNAL FOR ONIC	KS TERMINAL IS DE-ENERGIZED	
cian		CONTACTOR COIL	IN FIRE CONDITION.	
	<b>IPONENT</b>			
MICRO	SWITCH 1	CONTROL PANELOC2C		·
1:C		SYSTEM DRY CONTACT	ARE USED TO DISABLE EQUIPMENT	
			SPARE CONTACTS WILL MAKE CP EU ARE USED TO DISABLE EQUIPMENT OR PROVIDE SIGNALS. (NOT FOR BUILDING FIRE ALARM WHICH MUST BE WIRED DIRECTLY TO THE ANSUL ALARM INITIATING SWITCH LOCATED IN ANSUL AUTOMAND	
ISED (2). MS-			ALARM INITIATING SWITCH LOCATED	
1:C	2:NC		СПИМПИ	
MS-		CONTROL PANELOSFC1 DRY CONTACT OSFO1		·
		UN/UFF WITH SUPPLY FAN	COMMON	
		GROUP 1	SPARE CONTACTS WILL MAKE COMMON TO NORMALLY OPEN WHEN SUPPLY FAN IS ON,	
ED			WHEN SUPPLY FAN IS EN.	
		DCV SPEED VI+C	]	_+ _ TO BMS
		0-10∨ DUTPUT VD-C DN PCB	VIRE TO ECPM03 TERMINALS.	
BLACK		(TOTAL)	SEE ECPM03 DWNERS MANUAL.	BMS SWITCH
WHITE	<u> </u>			
מסח		TO <u>III</u> C EXTERNAL	SIGNAL SWITCH THRDUGH BMS WILL ACTIVATE ZDNE1 FANS AND	
	TER	SWITCH	LIGHTS	
N 				
ATION CP 2)		L		
FOR				
	IDM TEMP			
SENSOR MANUAL.				

## DAVID LAURIN ARCHITECT PLLC P.O. BOX 1382

WHITE RIVER JCT., VT 05001 t (802) 295-9263 c (603) 443-3867 david@laurinarch.com

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KEY PLAN:

\_ NORTH

REVISION	DATE	COMMENTS
SCHOO SPAULI ALTER 91 ALLEN BARRE, V ISSUED: IS	NATIVES STREET T 05641	
DRAWING T		TCHEN PLAN ES



PROPANE GENERATOR xxKW/xxKVA 208Y/120V

100A,3P

MOUNTING: ******					TOTAL	KVA C	-PHASE	#1	<b>#</b> #		
SHORT CIRCUIT RATING: *KAIC					TOTAL KVA			###		LOCATION	GENERAL
NOTES:											
	KVA	LOAD	#	AMPS	щ	AMPS	#	KVA	LOAD		
DIRECTORY	A	В	СКТ	BKR	PHASE	BKR	CKT	A	В		DIRECTORY
SPARE	*		1	20	A	20	2	*		SPARE	
SPARE		*	3	20	В	20	4		*	SPARE	
SPARE	*		5	20	A	20	6	*		SPARE	
SPARE		*	7	20	В	20	8		*	SPARE	
SPARE	*		9	20	A	20	10	*		SPARE	
SPARE		*	11	20	В	20	12		*	SPARE	
SPARE	*		13	20	A	20	14	*		SPARE	
SPARE		*	15	20	В	20	16		*	SPARE	
SPARE	*		17	20	A	20	18	*		SPARE	
SUBTOTAL	###	###						###	###	SUI	BTOTAL
VOLTAGE: 120Y/240V PHASE: 1	<u> </u>	POL	ES: 3		TOTAL	KVA A	-PHASE	#1	L ##		
MAIN BREAKER: 60A		BUS	AMPS: 6	50A	TOTAL	KVA B	-PHASE	#1	<b>##</b>	PANEL	SL
MOUNTING: ******											
SHORT CIRCUIT RATING: *KAIC						TOTAL KVA ###			LOCATION	SCIENCE LAB	

		KVA LOA		t #	BKR AMPS	PHASE	BKR AMPS	ст #		KVA LOA		-		
DIRECTORY	A	В	С	CKT		E -		CKT	A	В	С		DIRECTORY	
SPARE	*			1	20	A	20	2	*			SPARE		
SPARE		*		3	20	В	20	4		*		SPARE		
SPARE			*	5	20	С	20	6			*	SPARE		
SPARE	*			7	20	A	20	8	*			SPARE		
SPARE		*		9	20	В	20	10		*		SPARE		
SPARE			*	11	20	С	20	12			*	SPARE		
SPARE	*			13	20	A	20	14	*			SPARE		
SPARE		*		15	20	В	20	16		*		SPARE		
SPARE			*	17	20	С	20	18			*	SPARE		
SPARE	*			19	20	A	20	20	*			SPARE		
SPARE		*		21	20	В	20	22		*		SPARE		
SPARE			*	23	20	С	20	24			*	SPARE		
SPARE	*			25	20	A	20	26	*			SPARE		
SPARE		*		27	20	В	20	28		*		SPARE		
SPARE			*	29	20	С	20	30			*	SPARE		
SPARE	*			31	20	A	20	32	*			SPARE		
SPARE		*		33	20	В	20	34		*		SPARE		
SPARE			*	35	20	С	20	36			*	SPARE		
SPARE	*			37	20	A	20	38	*			SPARE		
SPARE		*		39	20	В	20	40		*		SPARE		
SPARE			*	41	20	С	20	42			*	SPARE		
SPARE	*			43	20	A	20	44	*			SPARE		
SPARE		*		45	20	В	20	46		*		SPARE		
SPARE			*	47	20	С	20	48			*	SPARE		
SPARE	*			49	20	A	20	50	*			SPARE		
SPARE		*		51	20	В	20	52		*		SPARE		
SPARE			*	53	20	С	20	54			*	SPARE		
SPARE	*			55	20	A	20	56	*			SPARE		
SPARE		*		57	20	В	20	58		*		SPARE		
SPARE			*	59	20	С	20	60			*	SPARE		
SPARE	*			61	20	A	20	62	*			SPARE		
SPARE		*		63	20	В	20	64		*		SPARE		
SPARE			*	65	20	с	20	66			*	SPARE		
SPARE	*			67	20	A	20	68	*			SPARE		
SPARE		*		69	20	В	20	70		*		SPARE		
SPARE			*	71	20	С	20	72			*	SPARE		
SUBTOTAL	###	###	###						###	###	###		SUBTOTAL	
/OLTAGE: 120/208V F	PHASE: 3		POLE	S: 4		TOTAI	KVA A	-PHASE	#1	##		PANEL	P1	
IAIN LUGS ONLY			BUS AMI	PS: 200	A	TOTAL	. KVA B	-PHASE	#1	¥#		, W VLL		
10UNTING: *******						TOTAL	KVA C	-PHASE	#1	¥#	LOCATION GENERAL			
SHORT CIRCUIT RATING: *KAI	c						TOT	TAL KVA	#1	##	LOCATION GENERAL			

		KVA LOA	۰D	#	AMPS	SE SE	AMPS	#		KVA LOA	ND			
DIRECTORY	A	в	с	CKT	BKR	PHASE	BKR	CKT	A	В	с		DIRECTORY	
SPARE	*			1	20	Α	20	2	*			SPARE		
SPARE		*		3	20	В	20	4		*		SPARE		
SPARE			*	5	20	с	20	6			*	SPARE		
SPARE	*			7	20	A	20	8	*			SPARE		
SPARE		*		9	20	В	20	10		*		SPARE		
SPARE			*	11	20	с	20	12			*	SPARE		
SPARE	*			13	20	A	20	14	*			SPARE		
SPARE		*		15	20	В	20	16		*		SPARE		
SPARE			*	17	20	с	20	18			*	SPARE		
SPARE	*			19	20	A	20	20	*			SPARE		
SPARE		*		21	20	В	20	22		*		SPARE		
SPARE			*	23	20	с	20	24			*	SPARE		
SPARE	*			25	20	A	20	26	*			SPARE		
SPARE		*		27	20	В	20	28		*		SPARE		
SPARE			*	29	20	С	20	30			*	SPARE		
SUBTOTAL	###	###	###						###	###	###		SUBTOTAL	
VOLTAGE: 120/208V	PHASE: 3	1	POLE	:S: 4		TOTA	L KVA A	-PHASE	#	##		I		
MAIN LUGS ONLY			BUS AMI	PS: 200	A	TOTAL	KVA B	-PHASE	#	##	1 <sup>F</sup>	PANEL	EP	
MOUNTING: *******						TOTAL	KVA C	-PHASE	#	##				
SHORT CIRCUIT RATING: *K	AIC						TOT	TOTAL KVA ### LOCATION KITCHEN					KITCHEN	
NOTES:						1			1		I			

		KVA LOA	D	#	AMPS	SE	AMPS	#		KVA LOA	D		
DIRECTORY	A	В	с	CKT	BKR	PHASE	BKR	СКТ	A	в	с		DIRECTORY
SPARE	*			1	20	А	20	2	*			SPARE	
SPARE		*		3	20	В	20	4		*		SPARE	
SPARE			*	5	20	с	20	6			*	SPARE	
SPARE	*			7	20	A	20	8	*			SPARE	
SPARE		*		9	20	В	20	10		*		SPARE	
SPARE			*	11	20	с	20	12			*	SPARE	
SPARE	*			13	20	A	20	14	*			SPARE	
SPARE		*		15	20	В	20	16		*		SPARE	
SPARE			*	17	20	с	20	18			*	SPARE	
SPARE	*			19	20	A	20	20	*			SPARE	
SPARE		*		21	20	В	20	22		*		SPARE	
SPARE			*	23	20	с	20	24			*	SPARE	
SPARE	*			25	20	Α	20	26	*			SPARE	
SPARE		*		27	20	В	20	28		*		SPARE	
SPARE			*	29	20	с	20	30			*	SPARE	
SUBTOTAL	###	###	###						###	###	###		SUBTOTAL
VOLTAGE: 120/208V	PHASE: 3		POLE	:S: 4		TOTAL	KVA A	-PHASE	#i	##	_		
MAIN BREAKER: 60A			BUS	AMPS: 6	50A	TOTAL	. KVA B	-PHASE	#i	##	F	ANEL	WS
MOUNTING: *******						TOTAL	. KVA C	-PHASE	#i	##		0471011	WOODOLIOS
SHORT CIRCUIT RATING: *KAI	IC						тот	AL KVA	LOCATION WOOD			WOODSHOP	
NOTES:													

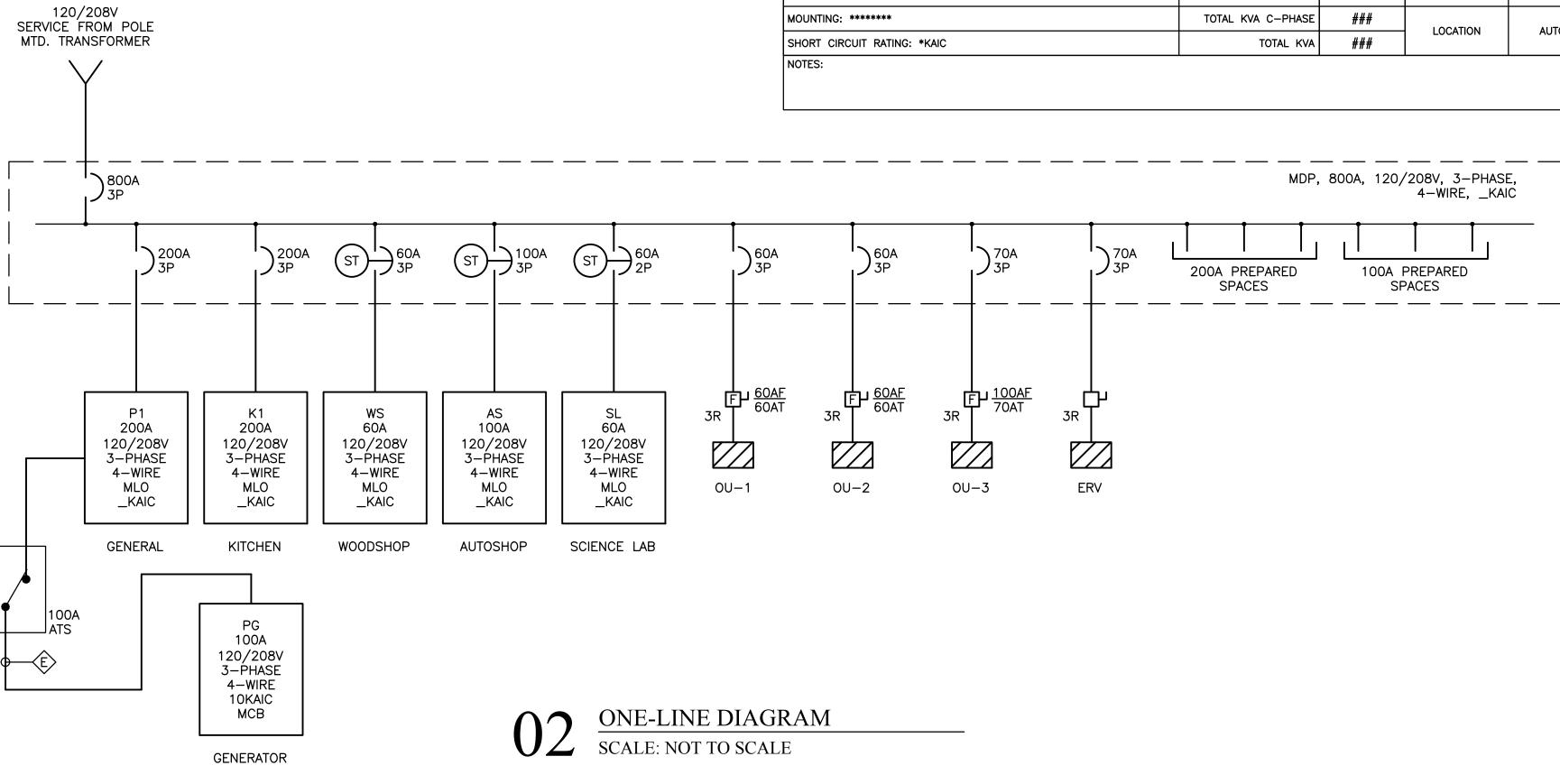
# 01 PANEL SCHEDULES SCALE: NOT TO SCALE

NOTES:

1. SEE E0.0 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

KEYED NOTES: (1) \*\*\*

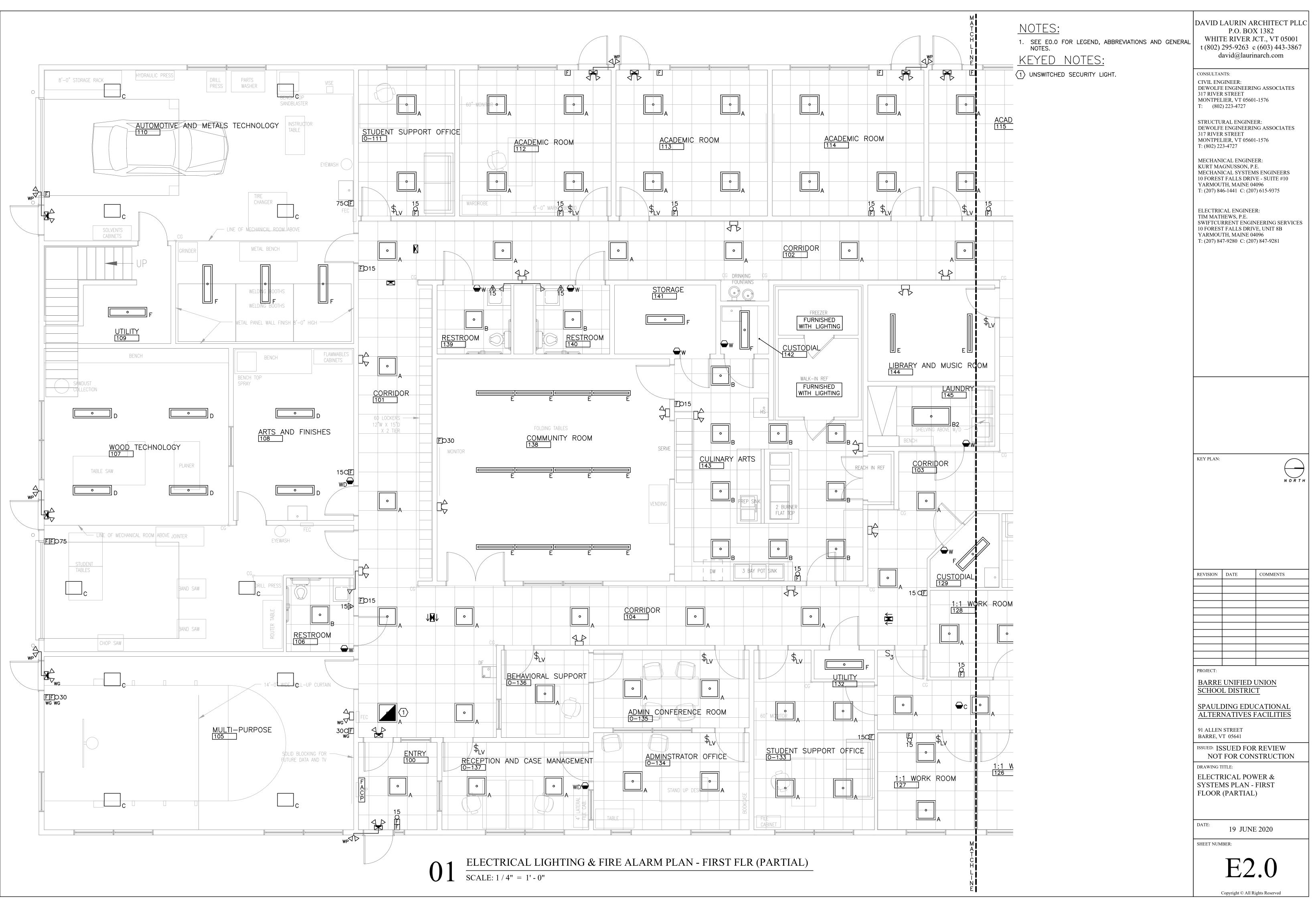
		KVA LOA	D	#	AMPS	 	AMPS	#		KVA LOA	D		
DIRECTORY	A	В	с	CK1	BKR	PHASE	BKR	CKT	A	в	с		DIRECTORY
SPARE	*			1	20	A	20	2	*			SPARE	
SPARE		*		3	20	В	20	4		*		SPARE	
SPARE			*	5	20	с	20	6			*	SPARE	
SPARE	*			7	20	A	20	8	*			SPARE	
SPARE		*		9	20	В	20	10		*		SPARE	
SPARE			*	11	20	с	20	12			*	SPARE	
SPARE	*			13	20	A	20	14	*			SPARE	
SPARE		*		15	20	В	20	16		*		SPARE	
SPARE			*	17	20	с	20	18			*	SPARE	
SPARE	*			19	20	A	20	20	*			SPARE	
SPARE		*		21	20	В	20	22		*		SPARE	
SPARE			*	23	20	с	20	24			*	SPARE	
SPARE	*			25	20	A	20	26	*			SPARE	
SPARE		*		27	20	В	20	28		*		SPARE	
SPARE			*	29	20	с	20	30			*	SPARE	
SUBTOTAL	###	###	###						###	###	###		SUBTOTAL
VOLTAGE: 120/208V P	HASE: 3		POLE	:S: 4		TOTA	_ KVA A	-PHASE	#1	¥#		···· <b>-</b> ·	
MAIN BREAKER: 100A			BUS	AMPS:	100A	TOTAL	KVA B	-PHASE	#1	##	<sup>F</sup>	PANEL	AS
MOUNTING: *******						ΤΟΤΑΙ	KVA C	-PHASE	#1	##			
SHORT CIRCUIT RATING: *KAI	2						TO	FAL KVA	LOCATION			CATION	AUTOSHOP

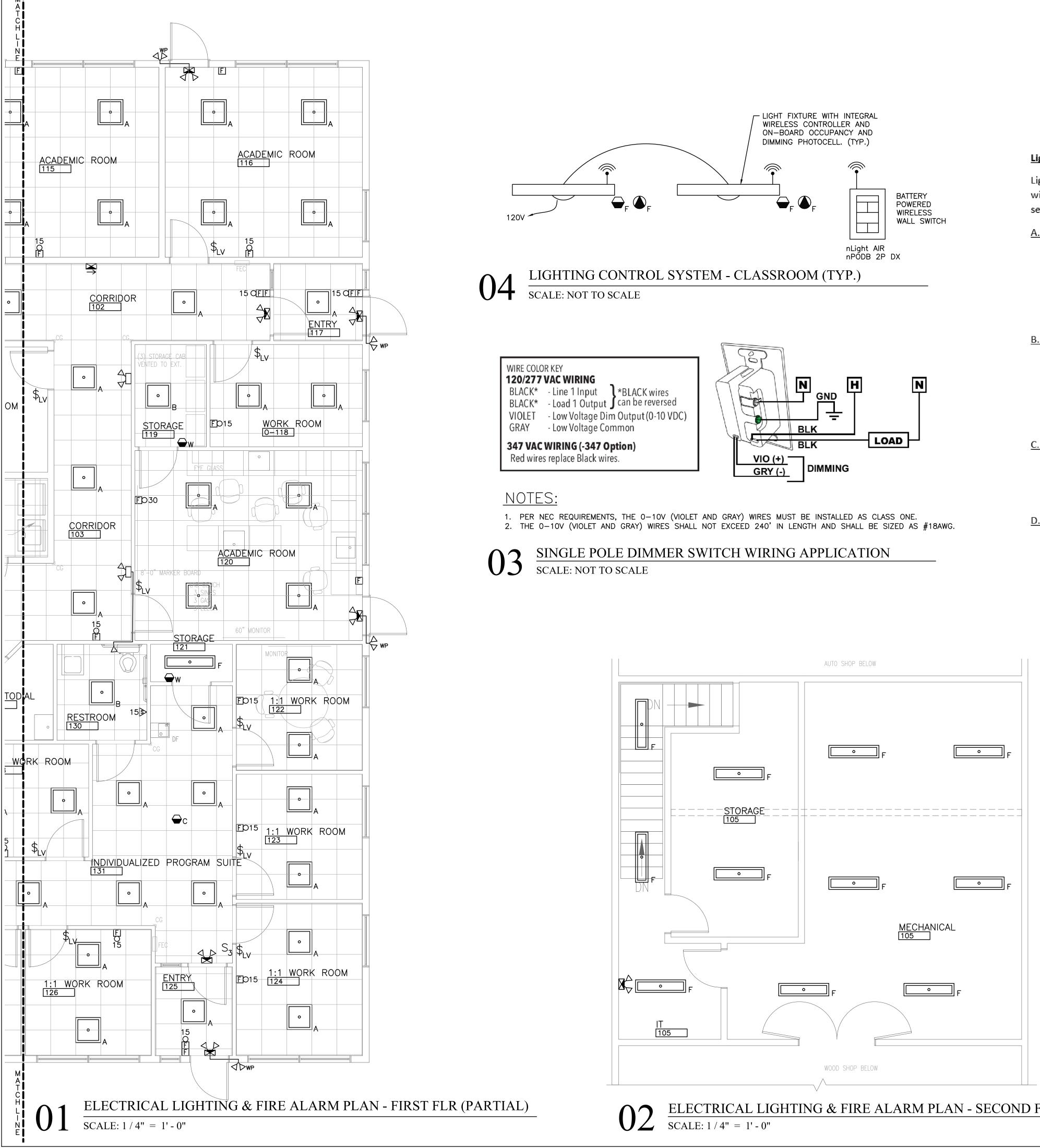


DAVID LAURIN ARCHITECT PLLC P.O. BOX 1382 WHITE RIVER JCT., VT 05001 t (802) 295-9263 c (603) 443-3867 david@laurinarch.com CONSULTANTS: CIVIL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727 STRUCTURAL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727 MECHANICAL ENGINEER: KURT MAGNUSSON, P.E. MECHANICAL SYSTEMS ENGINEERS 10 FOREST FALLS DRIVE - SUITE #10 YARMOUTH, MAINE 04096 T: (207) 846-1441 C: (207) 615-9375 ELECTRICAL ENGINEER: TIM MATHEWS, P.E. SWIFTCURRENT ENGINEERING SERVICES 10 FOREST FALLS DRIVE, UNIT 8B YARMOUTH, MAINE 04096 T: (207) 847-9280 C: (207) 847-9281 KEY PLAN: \_\_\_\_ NORTH REVISION DATE COMMENTS PROJECT: BARRE UNIFIED UNION SCHOOL DISTRICT SPAULDING EDUCATIONAL **ALTERNATIVES FACILITIES** 91 ALLEN STREET BARRE, VT 05641 ISSUED: ISSUED FOR REVIEW NOT FOR CONSTRUCTION DRAWING TITLE: ELECTRICAL PANEL SCHEDULES & ONE-LINE DIAGRAM DATE: 19 JUNE 2020 SHEET NUMBER:

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E1.3





# Lighting Control Narrative:

Lighting fixtures in Classrooms, Offices, Gym, Cafeteria, Corridors and fixtures in other rooms shown with integral sensors shall be programmable via wireless device (iPhone or Tablet). Preferred settings/scene designations to be determined, however must meet the following:

A. Classrooms:

- On by switch, off by switch/occupancy sensor

- the rest of the class.

# B. Corridors:

- when occupancy sensed.

C. Offices

- (where applicable).

# D. Auto Repair, Woodshop, Kitchen

situation.



ELECTRICAL LIGHTING & FIRE ALARM PLAN - SECOND FLR SCALE: 1 / 4" = 1' - 0"

NOTES: 1. SEE E0.0 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES. **KEYED NOTES:** (1) \*\*\*

• Lights shall daylight harvest based on ambient light entering the space from the windows. Row at the front whiteboard/smartboard shall be separately dimmable from the fixtures over

Option to dim all rows of lights at the same level.

• Master switches at entries as shown, to be locked out during normal school hours (time clock). Light fixtures forced on during normal hours, dimmed to 50% when no occupancy and on full

 Master switches enabled during non-school hours for on/off operation by switch. Fixtures will also turn on by occupancy sensor, and off either by switch or non occupancy.

 On by dimmable wall switch, off by switch/occupancy sensor Lights shall daylight harvest based on ambient light entering the space from the windows

On by switch, off by switch. As inadvertent automatic operation could cause a dangerous

LIGHTING CONTROL NARRATIVE

DAVID LAURIN ARCHITECT PLLC P.O. BOX 1382 WHITE RIVER JCT., VT 05001 t (802) 295-9263 c (603) 443-3867 david@laurinarch.com

CONSULTANTS: CIVIL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727

STRUCTURAL ENGINEER: DEWOLFE ENGINEERING ASSOCIATES 317 RIVER STREET MONTPELIER, VT 05601-1576 T: (802) 223-4727

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KEY PLAN:

NORTH

COMMENTS

PROJECT:

REVISION DATE

BARRE UNIFIED UNION SCHOOL DISTRICT

SPAULDING EDUCATIONAL ALTERNATIVES FACILITIES

91 ALLEN STREET BARRE, VT 05641

ISSUED: ISSUED FOR REVIEW NOT FOR CONSTRUCTION

DRAWING TITLE: ELECTRICAL LIGHTING &

FIRE ALARM PLAN - FIRST FLR PARTIAL & SECOND FLR

DATE:

19 JUNE 2020

SHEET NUMBER:

E2.

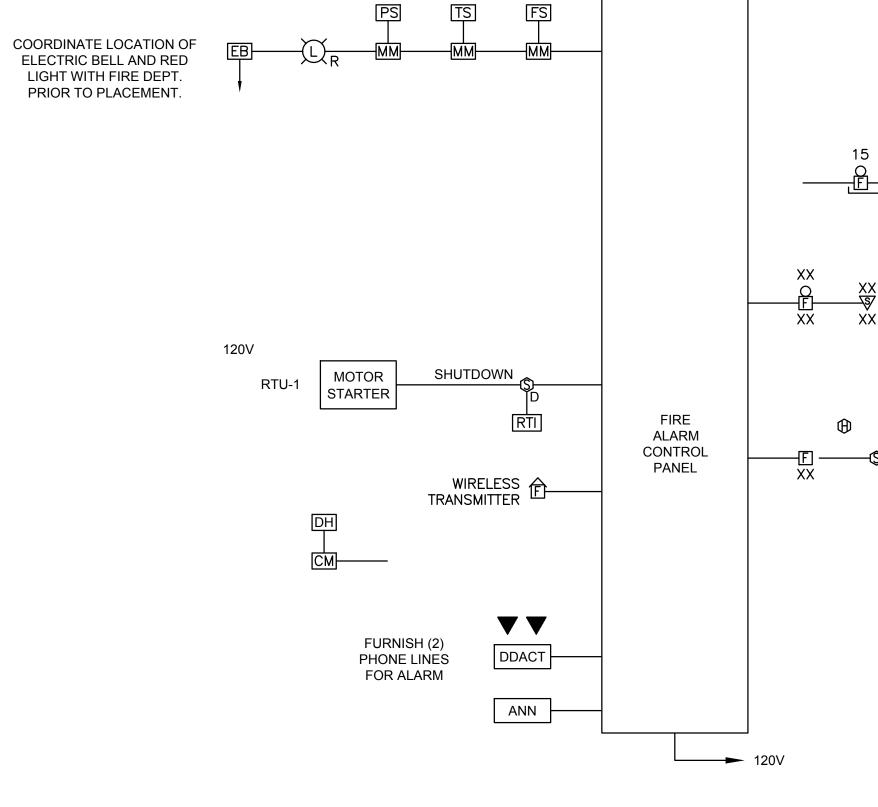
# 01

LIGHTING SCHEDULE SCALE: NOT TO SCALE

TYPE	DESCRIPTION	MANFACTURER	LAMPS	MOUNTING	NOTES
A	2' X 2' LOW PROFILE HIGH EFFICIENCY LED CENTER BASKET FIXTURE WITH INBOARD WIRELESS DT OCCUPANCY SENSOR & DIMMING PHOTOCELL. 120V	LITHONIA LIGHTING	31W LED 3500K 4063 LUMENS	CEILING GRID	MODEL #: 2BLT2-40LHE-ADPT-120V-EZ1-LP- 835-NLTAIR-RES7PDT
В	2' X 2' BACKLIT LED TROFFER 120V	COLUMBIA LIGHTING	30W LED 3500K 3583 LUMENS	CEILING GRID	MODEL #: CBT22-LS35
B2	2' X 4' BACKLIT LED TROFFER 120V	COLUMBIA LIGHTING	39W LED 3500K 4890 LUMENS	CEILING GRID	MODEL #: CBT24-LS35
С	24" LED HIGH BAY FIXTURE	LITHONIA LIGHTING	137W LED 4000K 17762 LUMENS	CEILING HUNG 19'-6"	MODEL #: IBE-L24-18000LM-ATC-MD-MVOLT- GZ-10-40K-80CRI-DWH
D	4' LED SURFACE MOUNT VOLUMETRIC FIXTURE 120V	LITHONIA LIGHTING	35W LED 3500K 3979 LUMENS	CEILING SURFACE	MODEL #: STL4-40L-GZ10-LP840
E	4' X 2" WIDE DIRECT/INDIRECT LED PENDANT WITH SEPARATE D/I DRIVERS. 120V	FINELITE	37W LED 3500K 3596 LUMENS	CEILING HUNG 12'AFF	MODEL #: HP2-P-ID-8-B-B-835-F-F-120- DC-FC10-FA50
F	4' LED STRIP LIGHT WITH ACRYLIC DROP LENS DIFFUSER 120V	LITHONIA LIGHTING	41W LED 3500K 5456 LUMENS	CEILING SURFACE	MODEL #: ZLAD-L48-SMR-5000LM- FST-MVOLT-35K-80CRI-WH
F2	2' LED STRIP LIGHT WITH ACRYLIC DROP LENS DIFFUSER 120V	LITHONIA LIGHTING	22W LED 3500K 2742 LUMENS	CEILING SURFACE	MODEL #: ZLAD-L24-SMR-2500LM- FST-MVOLT-35K-80CRI-WH
*	*** 120V	***	***	***	MODEL #:
S <sub>LV</sub>	LOW VOLTAGE LIGHTING SWITCH	nLIGHT	N/A	WALL SURFACE	MODEL #: PODB-2P-DX SEE WIRING DIAGRAM THIS SHEET
Ç	CEILING MOUNTED DUAL TECHNOLOGY UTRASONIC AND PASSIVE INFRARED OCCUPANCY SENSOR 120V	HUBBELL	N/A	CEILING SURFACE	MODEL #: OMNIDT2000 FURNISH RELAYS/POWER PACKS AS REQUIRED FOR A COMPLETE AND OPERABLE INSTALLATION
₩	WALL MOUNT PASSIVE INFRARED OCCUPANCY SENSOR 120V	HUBBELL	N/A	WALL	MODEL #: LHIRS11
	EMERGENCY BATTERY UNIT	DUAL-LITE	2W LED	WALL SURFACE	MODEL #: EV4D-02L
WP	WEATHER PROOF REMOTE HEAD. WHITE FINISH. 120V	DUAL-LITE	(2) 1W LED	WALL SURFACE	MODEL #: EVO-D-W
	LED EXIT SIGN EMERGENCY BATTERY UNIT COMBINATION WITH REMOTE CAPACITY 120V	DUAL-LITE	(2) 1W LED	CEILING SURFACE	MODEL #: EVCU-R-W-D4
	LED EXIT SIGN EMERGENCY BATTERY UNIT	DUAL-LITE	2W LED	CEILING SURFACE	MODEL #: EVEU-R-W
	1		1	1	<u> </u>

<u>LIGHTING SCHEDULE</u>

# BT24-LS35 3000LM-ATC-MD-MVOLT-<-80CRI-DWH TL4-40L-GZ10-LP840 8-B-B-835-F-F-120-450 LAD-L48-SMR-5000LM-ST-MVOLT-35K-80CRI-WH LAD-L24-SMR-2500LM-ST-MVOLT-35K-80CRI-WH ODB-2P-DX DIAGRAM THIS SHEET MNIDT2000 ELAYS/POWER PACKS AS FOR A COMPLETE AND INSTALLATION HIRS11 EV4D-02L EVO-D-W VCU-R-W-D4 EVEU-R-W



FURNISH ALL SPRINKLER SYSTEM SWITCHES AS REQUIRED BY

SPRINKLER SYSTEM DESIGNER

02 FIRE ALARM RISER DIAGRAM SCALE: NOT TO SCALE

NOTES:

1. SEE E0.0 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.

KEYED NOTES:

(1) \*\*\*

DAVID LAURIN ARCHITECT PLLC P.O. BOX 1382 WHITE RIVER JCT., VT 05001

t (802) 295-9263 c (603) 443-3867 david@laurinarch.com

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KEY PLAN:

( - - )NORTH

COMMENTS

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REVISION DATE

PROJECT:

BARRE UNIFIED UNION SCHOOL DISTRICT

SPAULDING EDUCATIONAL **ALTERNATIVES FACILITIES** 

91 ALLEN STREET BARRE, VT 05641

ISSUED: ISSUED FOR REVIEW NOT FOR CONSTRUCTION

DRAWING TITLE: ELECTRICAL LIGHTING SCHEDULE & FIRE ALARM **RISER DIAGRAM** 

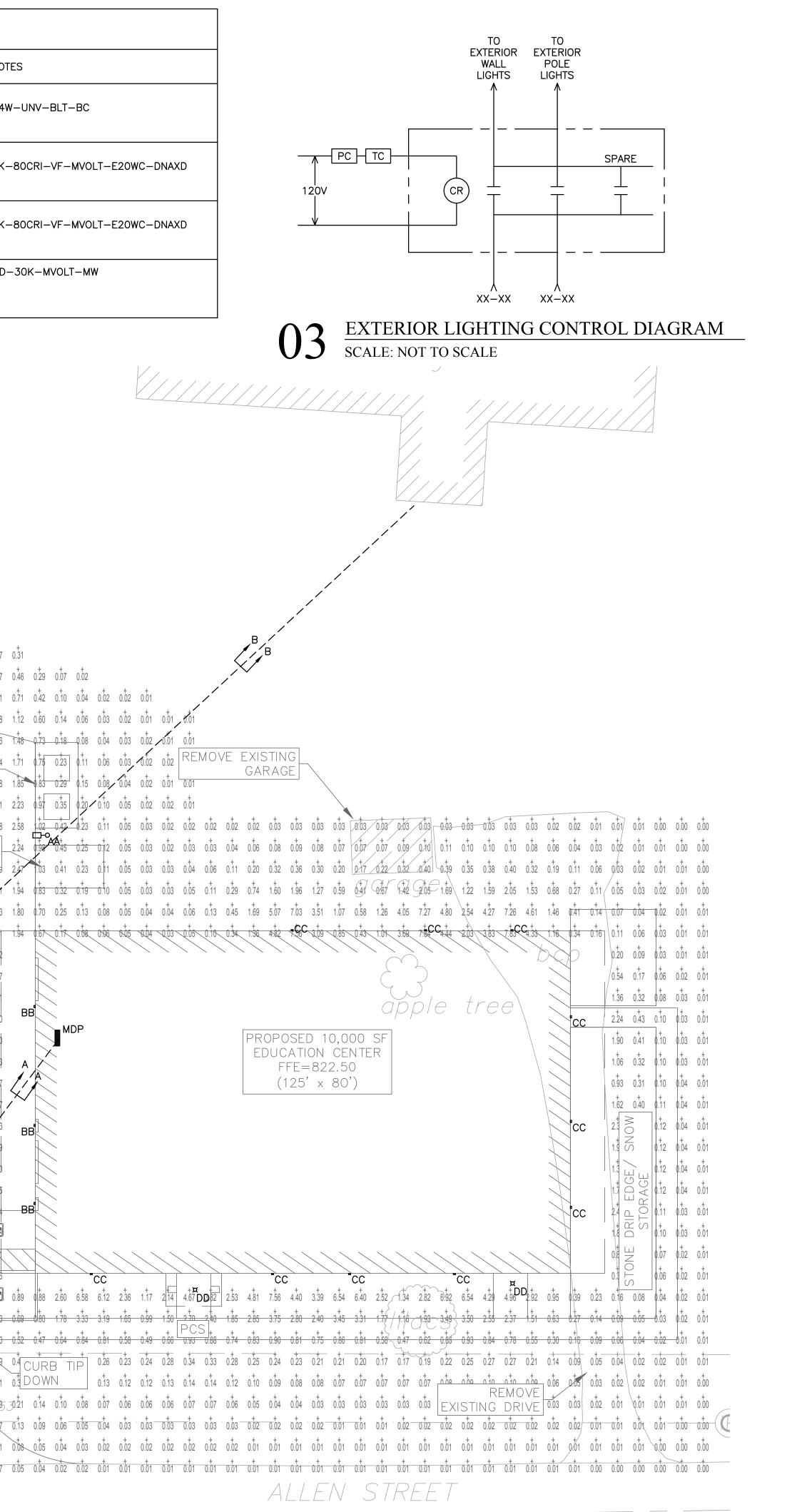
DATE:

19 JUNE 2020

SHEET NUMBER:

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	BEACON         ESW LED         20'         MODEL 4: Web-30L6-37/-4W           120V         LINNA         15W LED         NULL         WODEL 4: Web-30L6-37/-4W           120V         LINNA         15W LED         NULL         WODEL 4: Web-30L6-37/-4W           200         LINNA         15W LED         NULL         WODEL 4: WEB-30L6-37/-4W           200         LINNA         15W LED         NULL         WODEL 4: WEB-20L6-7/-23/-           200         LINNA         10W LED         NULL         WODEL 4: W/F-CED           200         LINNA         13W LED         MODEL 4: W/F-CED         SCALE           200         EXTERIOR LIGHTING SCHEDULE         MODEL 4: W/F-CED         INCOME           120V         EXTERIOR LIGHTING SCHEDULE         INCOME         INCOME           120V         SCALE NOT TO SCALE         INCOME         INCOME           120V         EXTERIOR LIGHTING SCHEDULE         INCOME         INCOME           120V         SCALE NOT TO SCALE         INCOME         IN			<u>LIGHTIN</u>	<u>g schedi</u>	JLE	
	IECACON         200         VESTING         200         VESTIGE         VESTIG	TYPE	DESCRIPTION	MANFACTURER	LAMPS	MOUNTING	NOT
	TH         Image: I	AA	FINISH. TYPE 4 WIDE DISTRIBUTION.		3000K		
	1200     1000 LD	BB	FORWARD THROW LED WALL PACK WITH -20°C BATTERY BACKUP. NATURAL ALUMINUM FINISH. FULL CUTOFF.		3000K	SURFACE	
		сс	WIDE THROW LED WALL PACK WITH -20°C BATTERY BACKUP. NATURAL ALUMINUM		3000K	WALL SURFACE	
		DD	WAFER TYPE RECESSED LED DOWNLIGHT.		13W LED 3000K	UNDER	MODEL #: WF6-LED-
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$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	0.47 $1.66$ $1.59$ $1.43$ $1.24$ $1.04$ $0.86$ $0.82$ $1.28$ $1.81$ $1.76$ $1.64$ $1.51$ $1.30$ $1.20$ $1$ $1$ $2$ HC $1.51$ $1.32$ $1.61$ $2.81$ $1.17$ $1.66$ $1.53$ $1.34$ $1.18$ $1.01$ $0.86$ $0.67$ $0.82$ $1.45$ $2.22$ $1.84$ $1.68$ $1.48$ $1.35$ $1$ SPACES $1.14$ $1.20$ $1.26$ $1.14$ $1.20$ $1.26$ $1.17$ $1.66$ $1.53$ $1.34$ $1.18$ $1.01$ $0.86$ $0.67$ $0.82$ $1.45$ $2.22$ $1.84$ $1.68$ $1.48$ $1.35$ $1$ SPACES $1.14$ $1.20$ $1.26$ $1.14$ $1.20$ $1.26$ $1.14$ $1.20$ $1.26$ $1.17$ $1.67$ $1.61$ $0.99$ $0.19$ $0.99$ $0.89$ $0.79$ $0.70$ $0.60$ $0.56$ $97_{AA}$ $1.58$ $1.57$ $1.42$ $1.28$ $1.17$ $1.07$ $1.01$ $0.99$ $0.19$ $0.79$ $0.70$ $0.60$ $0.56$ $97_{AA}$ $1.58$ $2.25$ $1.99$ $1.54$ $1.35$ $1.16$ $1.01$ $0.9$ $0.95$ $0.773$ $0.18$ $0.79$ $0.70$ $0.60$ $0.56$ $97_{AA}$ $1.58$ $2.25$ $1.99$ $1.54$ $1.35$ $1.16$ $1.01$ $0.9$ $0.95$ $0.773$ $0.19$ $0.18$ $0.74$ $0.65$ $0.58$ $0.53$ $0.48$ $0.70$ $1.37$ $1.66$ $1.61$ $1.47$ $1.23$ $0.97$ $0.77$ $0.60$ $0.56$ $0.54$ $0.74$ $0.55$ $0.58$ $0.53$ $0.57$ $0.57$ $1.01$ $1.52$ $1.45$ $1.19$ $0.93$ $0.73$ $0.59$ $0.79$ $0.70$ $0.60$ $0.56$ $0.74$ $0.55$ $0.57$ $0.57$ $1.01$ $1.52$ $1.45$ $1.19$ $0.93$ $0.73$ $0.59$ $0.79$ $0.79$ $0.70$ $0.60$ $0.37$ $0.35$ $0.57$ $1.01$ $1.52$ $1.45$ $1.19$ $0.93$ $0.73$ $0.59$ $0.79$ $0.79$ $0.70$ $0.60$ $0.37$ $0.35$ $0.57$ $1.01$ $1.52$ $1.45$ $1.19$ $0.93$ $0.73$ $0.59$ $0.79$ $0.79$ $0.74$ $0.65$ $0.58$ $0.53$ $0.57$ $0.57$ $1.01$ $1.52$ $1.45$ $1.19$ $0.93$ $0.73$ $0.59$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$ $0.79$						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.00 0.00 0.00	0.00 0.01 0.01 0.01 0.01 0.02 0.05 0.11 0.22 0.47 1.66	1.96 1.59 1.43 1.24 1.04 0.86 0.	* 1.28 1.81 1.76 1.64	1.51 1.30 1.20 1	2 HC 32 1.61 2.8
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	0.00 0.00 0.00	0,00 0.01 0.01 0.01 0.01 0.02 0.02 0.04 0.07 0.23 0.93	1.52 1.42 1.19 0.99 0.89 0.79 0.	70 0.60 0.56 977AA 1.63	2.25 1.69 1.54 1.3	5 1.16 1.01 0.91 0.85 0.73
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$						
	0.07 0.18 0.24 0.27 0.33 0.35 0.32 0.29 0.24 0.18 0.14 0.11 0.09 0.08 0.08 0.10 0.25 0.38 0.31 0.23 0.17 0.04 0.10 0.14 0.16 0.17 0.20 0.21 0.20 0.18 0.15 0.11 0.08 0.06 0.05 0.05 0.05 0.07 0.17 0.22 0.19 0.15 0.11	0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.01 0.01 0.01 0.02 0.03 0.12 0.40	0.53 0.67 0.71 0.59 0.54 0.50 0.5	41 0.33 0.29 0.24 9.22	0.23 0.44 0.93 1.0	8 0.90 0.81 0.72 0.56 0.41
	0.04 0.10 0.14 0.16 0.17 0.20 0.21 0.20 0.18 0.15 0.11 0.08 0.05 0.05 0.05 0.07 0.17 0.22 0.19 0.15 0.11	0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.01 0.01 0.01	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	$^{+}_{24}$ $\xrightarrow{-+}_{0.18}$ $\xrightarrow{+}_{0.14}$ $\stackrel{+}{0.11}$ $\stackrel{+}_{0.09}$	Ø.08 0.08 0.10 0.2	5 0.38 0.38 0.31 0.23 0.17
0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.0	<u>ተዘበረ በዘዜ በዘዜ በዝዛ በግበ በግግ በግግ በግግ በግግ በግግ በግግ በግግ በግቡ ለስራ ለስራ ለስያ ለስያ ለስያ ለስደ ለስሶ ለፈለ ለስለ ለስላ ለስላ ለ</u>	0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00 0.00 0.01 0.01	0.14 0.16 0.17 0.20 0.21 0.20 0.	18 0.15 0.11 0.08 0.06	0.05 0.05 0.05 0.0	7 0.17 0.22 0.19 0.15 0.11



ELECTRICAL SITE PLAN SCALE: 1/16" = 1' - 0"

