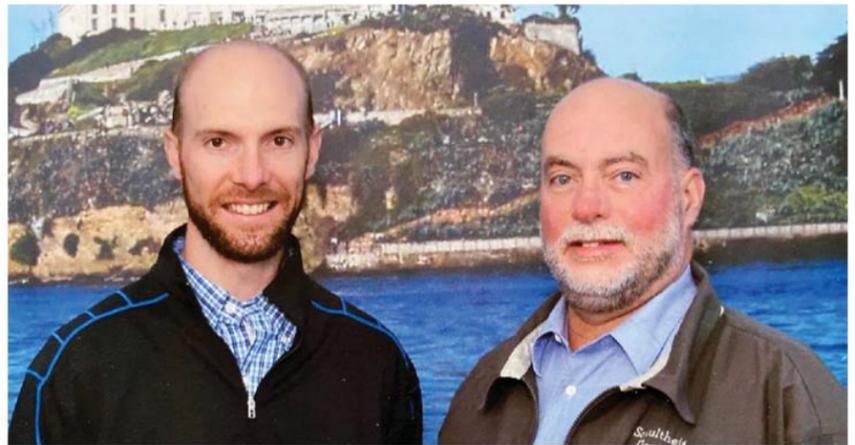




Photos courtesy of Annette & Angie Schultheis

Get it here! First Edition



We would like to welcome everyone to the inaugural edition of the Schultheis Electric Newsletter!

Offices located at:
304 Sanford Street, Latrobe, PA 15650 | 724-537-5157
950 South Logan Avenue, Tyrone, PA 16686 | 814-682-7953

We are excited to announce that we will be issuing this company newsletter every quarter throughout the year. Our goal is to let every employee know what is happening in the field and around the office including general announcements, bid results, upcoming projects, training opportunities, safety topics, technology updates, fleet upgrades and employee announcements.

We are looking for input and content from all employees that should be shared in our newsletter. Project photos, code encounters, helpful apps to download or any personal achievements that you would like to be shared should be sent into the office for the next edition. You can provide this information to your project managers or email Tim Schultheis II, Ken Mickinac, Randi Smail or Holly Keener. We are looking forward to hearing from you.

This year has dealt big challenges for everyone. We could not be prouder of how our employees adapted to these challenges in a safe manner while still exceeding our customers' expectations! As we roll into 2021, we look forward to continuing to grow together as a company. Every single employee plays a big role in Schultheis Electric's success.

We hope everyone has a happy and safe holiday and new year!
By Ken Mickinac

Two Added to TEGG Crew, Training Completed

Randi Smail

The first half of TEGG training took place at our main office during the week of Nov. 9-13. ABM's instructors Joe Demonte and Joe Scassera taught classes focused on thermal imaging and reflective properties of different material types, including the Stefan-Boltzmann Law of Radiation.

Congratulations to Austin Hollen and Ben Dorko for receiving their TEGG Thermal Infrared Level 1 Certificates! Austin and Ben will attend part II of technician training at the Eaton Experience Center in Cranberry Twp. PA in the near future. Currently the facility is closed due to COVID-19 restrictions.



Welcome back Ken Mickinac



Ken Mickinac recently rejoined Schultheis Electric as the Director of Projects. He will concentrate on project execution and refine processes for the contracts side of our business.

Read more on page 2



***Our company LinkedIn page is now live!** Search for "Schultheis Electric" and follow our page to see current projects and other updates from our company. LinkedIn is essentially "professional Facebook." You can connect with colleagues, contacts, and vendors to keep up to date on happenings within the industry.

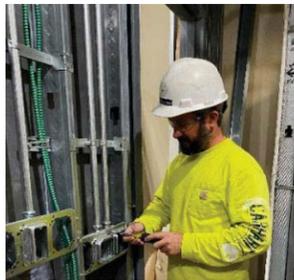
Celebrating 20 Years

By Randi Smail & Photos By Vanessa Ritenour

Randy Lawson will celebrate 20 years working for Schultheis Electric this January. He was assigned to our company during the 4th period of his apprenticeship. You're most likely to find him leading his crew on various projects for the Port Authority of Allegheny County. When he's off the clock, Randy enjoys spending time with family and racing motocross.



Notable Projects as Foreman: Tenaska PEMB Package, PAAC LED Lighting Upgrades, New Brighton Streetscape, PAAC Ancillary Contract.



From all of us, Thank You for your dedication and Congratulations on this milestone achievement! Here's to the next 20...

Milestone Work Anniversaries to Celebrate

Big thank you & congrats to:
Holly Keener
5 years on Jan. 4th
Tim Schultheis II
10 years on Jan. 10th since returning to the company

Welcome back Ken Mickinac Cont'd...

Ken will be working with the project managers on a day to day basis while building relationships with new and current customers. Ken originally started working for Schultheis Electric in 2002 while in high school. In 2008, he was hired full-time as an estimator. He served in this role until 2014 when he made a move to Sargent Electric in Pittsburgh, PA. During his time there, he became the Infrastructure Department Manager (2017) which concentrated on large transportation and airport projects. In 2018, he was promoted to Industrial/ Infrastructure Department Manager and managed project staff that would complete projects of all sizes, including projects in excess of \$30M located anywhere from Pittsburgh to California. Please join us in welcoming Ken back to the Schultheis team!

Schultheis Signs with HUB

Schultheis Electric recently contracted with a third-party safety service provider called **HUB International**. HUB provides mock-OSHA site inspections, documenting any violations or possible issues their inspector observes exactly as OSHA inspectors would. A report is provided to us listing good and bad safety moments. After an internal review, the PM and Foreman are given a copy of the report along with a corrective action sheet to complete showing how they corrected any potential hazards listed in the report. If issues involve tools, vehicles, or equipment, the appropriate shop employee is copied as well.

Do Not Fear these inspections. Our goal is to ensure our crews work safely so every employee returns home at the end of their shift.

HUB inspectors began visiting our jobsites in August 2020. Most recently was a planned visit to the PSU Willard Building Renovation project. This was a unique situation as the company insurance provider for Schultheis also attended this site visit. Dave Huff led the two inspectors through the construction site on a two-hour tour.

The Willard crew received stellar marks and the insurance auditor noted in his report: "[he] had no recommendations as a result of my survey." Quite the feat! Good job Dave, Steve and Willard Crew!

Randi Smail



Photo By Dave Huff

The Code Corner:

Demystifying De-Rated Conductors Tim Schultheis II

***Quarterly Code Culprit

Each quarter we will be choosing the worst code violation reported. The winner will be the recipient of a surprise \$20.00 gift card.

Number of CCC	% Adjustment
4-6 conductors	80%
7-9 conductors	70%
10-20 conductors	50%
21-30 conductors	45%
31-40 conductors	40%
41+ conductors	35%

Table 310.15(B)(3)(a): Adjustment factor for number of current carrying conductors (CCC): (see table on left column)

Quarterly Code Culprit



At a healthcare facility in WV, someone thought #10 would work in place of 400A fuses. TEGG Technician Bryan Quidetto uncovered and

brought to the immediate attention of the owner. This puts the building, its occupants and electricians at risk when people ignore codes and safety standards.

Based on the 2014 National Electrical (Currently enforced in PA)

This article is going to reference the proper way to de-rate conductors installed in raceway.

You can use standard conduit fill tables from Annex C in the Code book or use Ugly's Book reference. From this table, we will look at THHN/THWN which is the most common wire type used typically. We know that #12 wire is typically protected by a 20A overcurrent device (Breaker or fuse) and the table in Annex C indicates we can fit up to 16 #12 in a 3/4" EMT conduit and 26 in a 1" Conduit. For #10 we can fit 10 #10 in a 3/4" and 16 #10 in a 1". That is maximum we can physically fit to meet the maximum 40% fill rate. It does not take into account the ampacity of that wire.

First, we must find the maximum ampacity of the wire in questions. For #12 THHN it is 30 amps, for #10 THHN it is 40 Amps. Refer to table 310.15(B)(16). You can use the 90°C column for THHN/THUM when applying derating factors. Now we must apply the derating factors. Those factors include ambient temperature and number of current carrying conductors in the raceway. For this we need to reference Table 310.15(B)(2)(a) for temperature and table 310.15(B)(3)(a) for number of current carrying conductors. You should note that your neutral conductor, unless on a balanced three phase wye system, needs to be counted as a current carrying conductor.

In most commercial applications the ambient temperature in the building is not going to exceed 86°F and the temperature correction does not need to be taken into account, but know it is there for high ambient

temperature locations like industrial settings and uninsulated attics or on the roof.

So back to our conduit with 16 #12's in a 3/4". This must be protected by a maximum 15 amp breaker or fuse (30A Rated THHN x 50% from table on the left = 15 amps) or 10 #10's in a 3/4", this must be protected by a maximum 20 amp breaker and 16 #10's in a 1" must also be protected by a 20 amp breaker.

The maximum current carrying #12's THHN you can put in a 3/4" conduit and still protect from a 20A breaker is 9.

The maximum #10's THHN you can put in a 1" conduit and still protect from a 20A breaker is 16 because you are limited on the physical size of the wire, if the pipe was bigger, you could actually put 20 #10's in the pipe and still protect from a 20A breaker.

The ground wire doesn't count as a current carrying conductor. This does not apply for raceways less than 24" in length.

Hope this is helpful and if you have any code questions, please call me on my cell phone 412-601-4269 or email me at timjs@tsbinc.net.

*Also, if you see something in the code that you think needs changed, let me know, I will submit it. I am on the Correlating Committee and Code Making Panel #9 covering Transformers, Panelboards, Switchboards and all equipment over 1000V representing all installers and maintainers for NECA.

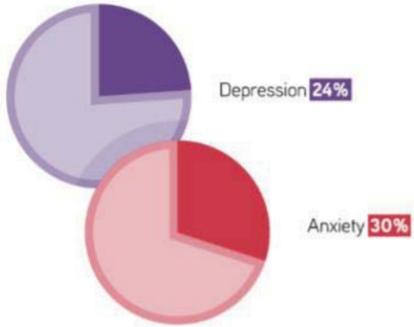
The Safety Corner:

Take a minute to review these tips for recognizing and limiting pandemic fatigue:

Randi Smail

Combating Pandemic Fatigue

An unintentional phenomenon is on the rise—pandemic fatigue. This collective fatigue occurs when people show low motivation or energy to comply with safety guidelines. Even more alarming is that others may be reaching a mental health breaking point.



One-third of Americans are showing signs of depression or anxiety.

Those rates were **higher** among younger adults (ages 18 to 29), women and people making less than \$25,000 a year.

Adults experiencing anxiety and depression are also **twice as likely** to delay medical care during the pandemic.

Common feelings of pandemic fatigue include:



Focus on what you can control, and try to get back to your pre-pandemic lifestyle. Fight back against pandemic fatigue with these tips:

TRY	AVOID
Shifting your mindset about guidelines	Consuming too much news
Exercising or practicing mindful activities	Overusing alcohol or other substances
Connecting with others	Comparing yourself to others

If you have concerns about your mental health or have been delaying medical treatment, please contact a doctor.

This infographic is for informational purposes only and should not be construed as medical advice. © 2022 WPP, Inc. All rights reserved.

Schultheis Electricians mask up on the McKeesport Area School District project



Photo by Jordan Hall
Pictured left to right:
Donnie Vargo, Austin Hollen,
Dave Almasy and Jordan Hall



DOs and DON'Ts of Face Masks

DOs

- Do - Use it to completely cover your nose and mouth
- Do - Read the directions provided to you on use of the mask
- Do - Put it on properly and adjust it as necessary throughout the day
- Do - Wash your hands and face after removing the mask before touching your face
- Do - Keep it clean
- Do - Keep it away from running machinery or equipment that could entangle the mask
- Do - Keep it on your person when you are not using it
- Do - Request a new one if it becomes damaged or in any way unsanitary

DON'Ts

- Don't - Let it obstruct your vision
- Don't - Wear it if it causes any difficulty in your ability to breathe
- Don't - Let it hang down around your neck
- Don't - Lay it on a surface where it may contaminate the surface or lay it on a surface that may already be contaminated
- Don't - Wear it where it may come in contact with running machinery or create a hazard while performing your work
- Don't - Take it home, dispose of it at the workplace
- Don't - Use it if it is damaged in any way

SEE.... COVID-19 Travel Restrictions in Schultheis General Announcements on Page 4

TOUGH TIMES don't last, TOUGH TEAMS DO!



Photo of 2019 Safety Day Training



APP OF THE QUARTER SEE PAGE 4!

Recent Bid Results

Tim Schultheis II & Randi Smail

Pittsburgh Sewer & Water Authority – Aspinwall Upgrades

- Schultheis Electric – \$146,000.00
- Bronder Technical Services – \$158,975.00
- Frankl Electric, Inc – \$161,455.00
- Lanco Electric Inc – \$197,200.00
- Allegheny City Electric (Non Union) – \$265,000.00

Allegheny County South Park Trail Improvement (REBID)

- Allegheny City Electric (Non Union) – \$738,750.00
- Schultheis Electric – \$925,220.00
- Hanlon Electric Company – \$936,000.00

Derry Township Municipal Authority: Keystone Area Sanitary Sewer Project

- Wagner Electric and Construction (Non Union) – \$83,867.00
- Schultheis Electric – \$99,000.00
- Westmoreland Electric (Non Union) – \$113,500.00

2021 I-99 Interchange Lighting Maintenance

- Bronder Technical Services – \$392,182.29
- Schultheis Electric – \$407,510.50
- Wyoming Electric & Signal (Non Union) – \$457,288.50

West View Borough Light Replacement

- Allegheny City (Non Union) – \$224,200.00
- A. Merante Inc (Non Union) – \$305,575.00
- Schultheis Electric – \$324,512.00
- Plavchak Construction (Non Union) – \$494,694.00

Borough of Ellwood City: Meadowridge Estates and Pinecrest Acres

- Schultheis Electric – \$676,700.00
- Kirby Electric – \$880,288.00
- Yates Electric – \$950.00



Up and Coming!

PennDOT District 11 – Fox Chapel Maintenance Facility – Fire Alarm Upgrades

SCI Albion Emergency PIDS & Security Upgrades

Unemployment Office Erie – Generator and HVAC Upgrades

PA Turnpike Greensburg Maintenance – 3MW Solar field & Gas Turbine Microgrid

Westinghouse Waltz Mill 25 kV Primary Breaker Replacement

Holidaysburg Veterans Home – 3 Year Preventive Maintenance & Testing Contract

TSB working hard...



Pictured above left to right: Lynn Moser, Don Paul, Pat Walker, Brian Seaman & Dalton Baumler. Photo courtesy of Mark Mikesic.

PA Turnpike Southern Beltway Maintenance Facility

Foreman: Mark Mikesic

Schultheis General Announcements

Randi Smail

hh2 and Paychex flex Reminders

Our company uses hh2 for tracking employee daily work hours. Foremen should enter their crew's time each day. Your time should be approved by the foreman and PM in hh2 no later than end of day Friday each week. If a job number is missing when you go to enter time, call Matt Nicholson at ext. 134.

All other hh2 issues, call Judy Miller. Employee paystubs are available through Paychex Flex. Both programs can be accessed through desktop login or a phone app. Instructions for setup of both programs are provided at time of hire. For any questions on either program, contact Judy Miller at ext. 127.



Status: All buildings will be under roof and interior fit outs will be underway as this is being released. A solid jump on underground and good planning by the project team has put this project in a good position heading into the home stretch. It should be finished for late spring early summer 2021.

PennDOT Greene Maintenance Facility

Foreman: Jim Shipley

Status: The project has been slow to start because of soil conditions and COVID delays. The building steel is finally delivered and the site is ready for us to start our underground that was previously delayed. This project will be fast and furious to the finish line because of the slow start.

PSU Willard Renovation

Foreman: Steve Umstead

Status: This project is finally starting to see the finish line. This has been one of the more difficult projects we have completed. PJ Dick is the general contractor and the job has been plagued with design changes and revisions that really slowed production for all trades.

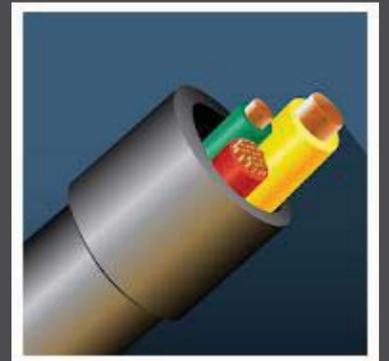


PSU Willard pictured above courtesy of Dave Huff

Southwire Conduit Fill Calc:

Tim Schultheis II

Free Download on Apple and Google Play



Verify conduit fill meets the NEC, calculate jam probability and save looking at the tables in the NEC or Ugly's Book.

PSU Eisenhower Auditorium

Foreman: Eric Irvin

The Tyrone crew has been hard at work on multiple contracts involving upgrades at the Penn State Eisenhower Auditorium.

Scope of Work includes: complete house light replacement along with new controls, misc. renovations with star dressing rooms, new lighting and controls in the basement corridor, and 4 new air handling unit replacement that serves the Auditorium.

Through a separate contract, they are responsible for the building's automated controls that serves the Auditorium and adjacent spaces.

Schultheis employees will have changed every light in this Auditorium when the project is complete.



Photo by Dave Huff

COVID-19 Travel Restrictions

The most recent travel guidelines released on 11/25/2020 by the PA Secretary of Health requires all travelers over age 11 entering Pennsylvania from locations outside the Commonwealth, including Pennsylvanians who are returning home from locations outside the Commonwealth, to produce evidence of a negative COVID-19 test or place themselves in travel quarantine for 14 days upon entering, unless they receive a negative test result during the 14-day travel quarantine period. If someone cannot get a test or chooses not to, they must quarantine for 14 days upon arrival in Pennsylvania.

This does **NOT** apply to:

Individuals traveling to and from the Commonwealth for the purposes of work.

Individuals who are returning to the Commonwealth after traveling outside the Commonwealth for less than 24 hours.

(Information taken from the PA Department of Health website / <https://www.health.pa.gov/topics/disease/coronavirus/Pages/Travelers.aspx>)

REMEMBER: You and your coworkers need to wear face masks or face shields while on site. If you need any supplies (gloves, masks, disinfecting spray/wipes, sanitizer) contact your PM or Sharon Long, ext. 129. Supplies are stocked and ready for distribution. If you stop by the shop and pick up supplies, write up which items you took and give the list to Sharon.



TECHNOLOGY & EQUIPMENT NEWS!

'Tech Talks' & Equipment

Bucket Truck #33 Retiring

A note to our CDL drivers: Truck #33 is being retired and replaced with an Altec AV55E-OC mounted on an International 4300 Utility Truck. This truck has the over-center, articulated boom, two-man bucket and will have a working height of 56.6 ft

The new #33 will be being painted and prepped with high standards and available after the new year. Pictures to follow...

Robotic Total Station

Leica Geosystems' new construction total station, the Leica iCON iCR70, facilitates the move from traditional analog measurement methods to modern digital layout techniques, which are a necessity within modern BIM processes and achieve the high productivity and accuracies demanded by the building construction industry. iCR70 can be used on both new construction jobs, existing buildings and site work.

The first round of training is scheduled for December 2020 and we look forward to deploying this technology on future jobs. "I think this will greatly assist underground crews trying to get ahead with underground conduits and wall stubs as well as traditional site layout for pads, site lighting and equipment" – Tim Schultheis II.



Tim Schultheis II

NEW ROBOTIC TOTAL STATION DEPLOYED: LEICA ICR70 WITH ICON SOFTWARE

Out with the Old, In with the New

Our estimating department upgraded their McCormick Estimating software from version 12.2 to version 14.2.



This upgrade will enable our estimators to work remotely and connect into the McCormick Estimating software via a VPN network connection once it is set up.

There are also several additional features to enhance the estimating process. Jim, Aaron, and Dane are very excited about this upgrade.

By Jim Clark

With these changing times we have been prompted to look for better solutions to streamlining our efforts and communications on the job. This has led us to upgrade and we wanted to share some of the pros of Office 365.



Work Anywhere

All you need is an internet connection. It's cloud-based, you can access your email, files and Office programs (Word, PowerPoint, Excel) from any location on any device.

Collaborate easily

Working in the field or the office as a team? Everyone who needs to add or edit a document (or spreadsheet, or presentation, etc) can work on the same version (and get real-time changes) rather than having multiple versions.

Always Have Access to the Latest Versions of Programs

We will have access to the latest versions of Office at no additional charge. No uninstall and reinstall on everyone's machines. In addition, access to upgrades included.

Mix and Match Plans

There are several different Office 365 business plans available with different programs and features. Not all of us need the exact same thing.

Subscription-Based Payment

Office is a subscription-based service, meaning you pay a low monthly fee (per user) rather than a large lump sum up front.

Security Features

Maybe you're wondering, the Cloud - is it safe? In reality, it isn't necessarily any different than an on-premise system. We will have security measures put in place. And Office 365 has a lot of built-in security features like: Encrypted email, Data Loss Prevention, Mobile Device Management, Advanced Threat Analytics (ATA).

Holly Keener



Happy Holidays Everyone!

What did one Christmas light bulb say to the other? Lester is out today and now, no one else at the Branch seems to be working...

A note to everyone who helped make this first issue of our newsletter possible... THANK YOU! With that said, we are happy to bring the company together and look forward to quarterly issues! Let's keep it rolling! Employee Ideas, Questions and Announcements are welcome! Feel free to email Tim Schultheis II, Ken Mickinac, Randi Smail or Holly Keener.

IS HE A FUTURE EMPLOYEE??



Congratulations to Brian Ridilla Jr. & his family on the birth of their son.

Photos By Brian Ridilla Sr. (Pap)



Pictured left to right: Brian Ridilla Jr., Brian Ridilla III, Brian Ridilla Sr.

Welcome...

Brian Joseph Ridilla III

Born

11-06-2020

Weighing

6lbs 11oz &

20.5" long