



Power-up February's News



MASTERS ELECTRICAL SERVICES LTD. 4239 W. IH-10 :: SEGUIN, TEXAS 78155

TOGETHER EVERYONE ACHIEVES MORE!

Welcome to the second edition of our monthly newsletter – provided to keep the communication flowing and all employees up to date on the latest information affecting MASTERS ELECTRICAL SERVICES, LTD and it's valued employees.

We expect 2015 to be an exciting and busy year for our company with lots of new opportunities for both Masters Electrical Services, LTD and our employees alike. Please review the Project List below to see some of the new jobs that are already underway or will be in the near future. One of the more noticeable changes to be implemented soon will be a program to help us ensure we are being as safe as possible while driving our vehicles and operating our equipment. There will be more details coming in March.

Gary and Annette would like to begin 2015 by thanking all of our employees for a great 2014 and remind you they appreciate the dedication and daily work commitment it takes from each and every employee to be a part of a successful and profitable company.

Remember, together we can make it our best year yet!

Company Slogan

“No matter what industry you’re in nothing happens till the power goes on.”

Our Core Value!

Motivation
Attitude
Safety
Teamwork
Excellence
Relationship
Service

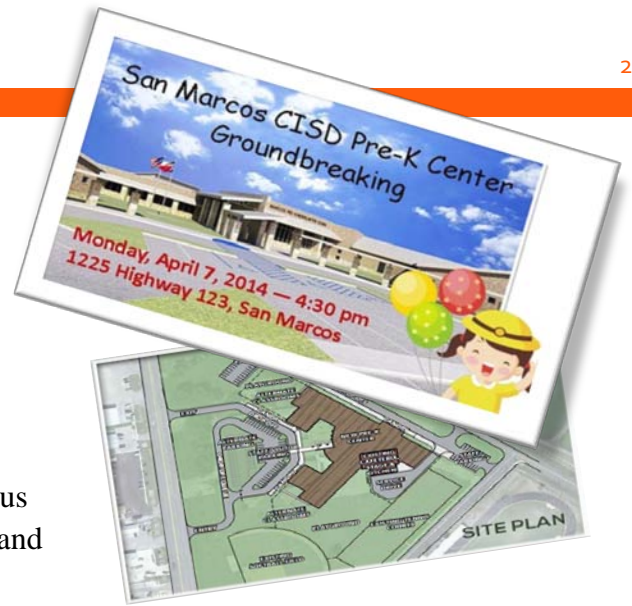
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Project Spotlight

San Marcos Pre-K Remodel

We like to say that every project at Masters is very important to us and we found the San Marcos Pre-K project particularly interesting and unique. Working with us as the general contractor is Joeris General Construction LTD. and the original bid documents were created by Architect Huckabee & Associates. What we find fascinating is that Huckabee & Associates had originally wanted to build this building as a template for future pre-k projects. Protecting small children and providing them with a safe environment to learn and grow is all considered when developing these projects. Some of the highlights of the San Marcos Pre-K are noted below.



This new pre-kindergarten center is located on the old Bowie campus. The main building has been demolished and will be replaced with a new 600 student facility. An existing building which housed the cafeteria was in good condition and will be renovated and re-purposed for the new pre-kindergarten facility. Some minor adjustments to the interior to include lighting, plugs, flooring and new appliances will be included. The new facility, however, will include twenty-seven new classrooms, special education classrooms, computer labs, a music room, an activity room, and a library. The administration and staff offices will be located adjacent to a secured entry vestibule. The classrooms will be split into

three wings. Each wing is positioned so that teachers and staff will have easy visibility throughout. The walls of the new facility will be constructed of an Insulated Concrete Form (ICF) system. This technique is new to construction in this part of the country. This type wall system allows for both a quick construction schedule and is energy efficient. The project did incur some delay due to weather restrictions and holiday scheduling during the months of December and early January.

We would like to thank Jason Davis for his professionalism and the dedication of all Masters Team Members that have and will continue to work on this project. Please realize the time spent on this project and take pride in your part of it! We also want to thank Joeris General Contractors (Court Camos), and their team members, for giving Masters Electrical Services LTD. the opportunity to work on this project.



Project List

New Jobs

• RIVERCENTER WESTSIDE	849 E. COMMERCE - SA, TX. 78205	PERRY WINCHESTER
• NAVARRO ISD ALT #4	6450 N. HWY 123 - SEGUIN, TX 78155	CODY SMITH
• POTEET ISD - PIC/PUMP HOUSE/BALLFIELD,	838 SCHOOL DR - POTEET, TX.	RUBEN GUERRA
• POTEET ISD GYM/FIELD HOUSE	1020 FM 1470 LEMING DR - POTEET, TX. 78065	RUBEN GUERRA
• POTEET ISD CAFETERIA	1021 FM 1470 LEMING DR - POTEET, TX. 78065	RUBEN GUERRA
• ANAQUA SPRINGS PH 2	9 RUE PARKER - BOERNE, TX 78006	RUBEN RODRIGUEZ
• BROADWAY BANK 3 rd FL	1021 fm 1470 LEMING DR.-PROTEET, TX	MIGUEL VELOZ
• SAISD TRANSPORTATION FACILITY	SAN ANTONIO, TX	
• LEAKEY ISD	429 U.S. 83 LEAKEY, TX 78873	

Current Jobs

• SARAH KING ELEMENTARY	1001 CERVALO STREET, SAN ANTONIO, TX 78207	SCOTT BARKER
• ARNOLD ELEMENTARY	467 FREILING DR - SA, TX 78213	SHAWN SHAW
• POTEET ELEM SCHOOL	1100 SCHOOL DRIVE, POTEET TX. 78065	RUBEN GUERRA
• RIVERCENTER MALL RENOV PH 1 & 2,	849 E. COMMERCE – SA, TX. 78205	PERRY WINCHESTER
• SAN MARCOS PRE-K	1225 HWY 123 - SAN MARCOS, TX	JASON DAVIS
• TRINITY BAPTIST CHURCH REMODEL	319 E. MULBERRY - SAN ANTONIO, TX 78212	PAUL BEST
• HOSS ARMS	5990 FM 725 - NEW BRAUNFELS, TX 78130	SPENCER DWYER
• MCAULIFFE MIDDLE SCHOOL RENOV,	9390 SW LOOP 410 SA, TX	PAUL BEST
• GUADALUPE COUNTY AGRI-LIFE BLDG,	210 E. LIVE OAK - SEGUIN, TX. 78155	CODY SMITH
• COLDWELL BANKER	1677 State Hwy 46 Boerne, TX 78006	BRIAN BROOKS
• IDEA-WALZEM PREP SCHOOL	6445 Walzem Road - San Antonio, TX 78239	LONNIE HARPER

Completed Jobs

• GATES MINERAL	2969 NACOGDOCHES ROAD - SA TX 78217	ROBERTO FRAIRE SR.
• FENWICK ELEMENTARY	1930 WAVERLY AVENUE - SA, TX 78228	LONNIE HARPER
• LYTLE ES ADDITIONS & RENOV	11550 LAREDO - LYTLE, TX 78052	JOHNIE RIDDLE
• ST. GEORGE EPISCOPAL CHURCH	6900 WEST AVENUE - SA, TX 78213	RUBEN RODRIGUEZ
• GVEC OPR BLDG - SERVICE CNTR,	2703 HWY 183 / 1015 E. BROADWAY - CUERO, TX 77954	RAFAEL SILVESTRE
• LYTLE FIELD HOUSE & AG BARN	18975 FM ROAD 2790 - LYTLE, TX 78052	JOHNIE RIDDLE
• ENTERPRISE INDUSTRIAL PARK PH 1 B-1,	17745 LOOKOUT RD - SCHERTZ, TX 78154	BRIAN BROOKS
• WHALEY MEDICAL OFFICES	250 W. SUNSET RD - SA, TX. 78209	ROBERTO FRAIRE JR.
• WALGREENS # 12716 SA CULEBRA,	12020 CULEBRA RD - SA, TX 78253	JUAN GODINA

Completed Jobs (cont.)

• WALGREENS # 15993 EAGLE PASS,	NEC ALICE DR @ MAIN ST (US HWY 277) - EAGLE PASS	ROBERTO FRAIRE SR.
• WALGREENS #15672 AUSTIN	1920 E. RIVERSIDE DRIVE - AUSTIN, TX 78741	PERRY WINCHESTER
• SALADO INTER SCHOOL RENOV	3602 SOUTH W.W.WHITE - SA TX 78222	JAIME PAWELEK
• BROADWAY BANK 1ST FLOOR REMODEL ,	1177 NE LOOP 410 - SAN ANTONIO, TX 78216	SHAWN SHAW
• HEMISPHERE FINE FURNISHINGS #0808	17815 LA CANTERA - SA, TX 78257	CODY SMITH
• METRO METHODIST CATH LAB #2	1310 McCullough Ave – SA, TX. 78212	RUBEN RODRIGUEZ

Thank you to our foremen in the field and every employee who has helped to complete these jobs. Masters Electric appreciates your hard work! 😊😊

Safety News

Car Accident Tips



What to do if you're in an Accident

- Car accidents can be very stressful, read the tips below to learn what you should do if you're involved in a car accident.

Stay calm

- Keeping a normal demeanor helps you stay in control of the situation

Make sure you and your passengers are okay.

- Move as far off of the roadway as possible, but stay at the scene of the accident. Warn oncoming traffic by activating your hazard warning lights and/or setting flares

Call the police.

- Call 911 or the appropriate emergency number to report the accident

Contact your insurance company and report the claim.

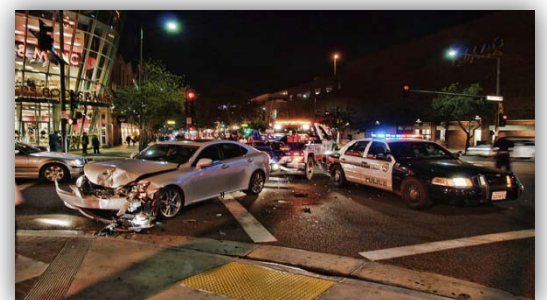
- The sooner your insurance company knows about the accident, the sooner they can start working to resolve your claim.

Do not admit fault.

- Do not discuss the car accident with anyone other than the police and your claims representative.

Exchange vital information with the other driver involved in the car accident.

- Write down the name, address, phone number and license numbers for all drivers and witnesses, particularly those who were not riding in a vehicle involved in the accident. Ask for the insurance companies and policy numbers for drivers involved in the car accident.



EC&M NEWS

The Case of the Improperly Terminated Motor

For most electrical professionals working in an industrial or manufacturing setting, motor replacement is considered routine maintenance work. This case, which involved a 25-hp, 460V 3-phase motor that had been in service for several years but needed to be replaced due to failed bearings, appeared to be no different than other motors the in-house electrical staff had worked on in this particular industrial facility. But after replacing the motor, the pump still wasn't operating properly — it continued to trip repeatedly on over current upon startup. As a result, in-house maintenance mechanics were called in to troubleshoot the situation and get to the root of the problem. Note: At this facility, certain employees perform electrical work and others handle mechanical work (installing and aligning motors, piping, welding, etc.)

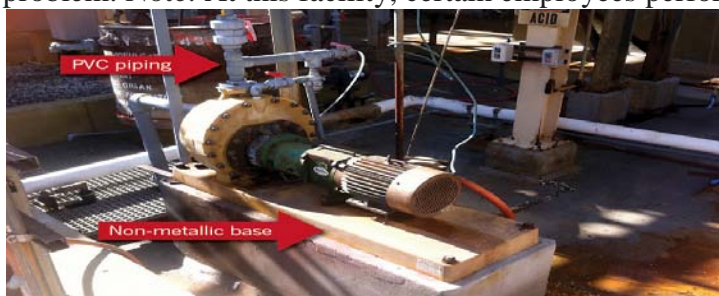


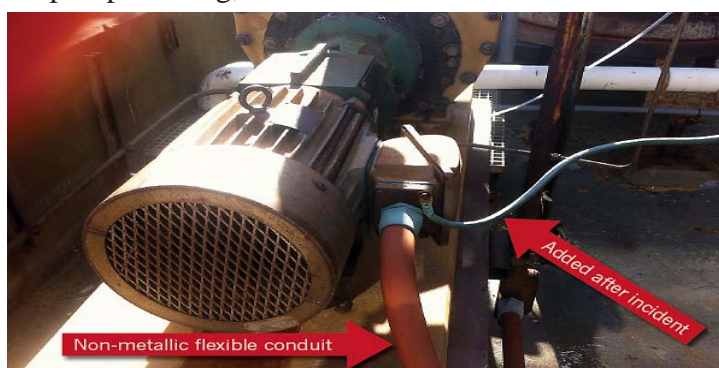
Photo 1. The pump/motor assembly mounted on a non-metallic base and connected to the process through non-metallic piping operated in a hydrochloric acid service environment.

The scene

One electrician simply isolated and disconnected the failed motor from the electrical supply so that the maintenance mechanics could remove it, install a replacement motor, and correctly align it to the pump. Another electrician reconnected it. Both men were in-house electricians with several years of experience that took their work very seriously, were considered competent, and always maintained a clear focus on safety. Because the pump was operating in hydrochloric acid service, the pump and motor base, the piping, and all surrounding support were made from non-metallic materials to prevent corrosion. The site, of course, required grounding conductors to all motors, the ground conductor was run with the phase conductors, and was connected to the grounding connection in the motor terminal box, as required by company specifications and applicable codes and standards. At the time, the site did not require additional external equipment grounding conductor, which would have been run external to the conduit/tray/channel that contained the phase supply conductors and grounding conductors, for motors below 200 hp. The motor frame had no external connection to ground either through a separate conductor, piping, or the motor frame. *Note:* Company policy now requires an additional external grounding conductor to be connected to the motor frame in cases where the motor/pump base is made of non-metallic materials.

The accident

While troubleshooting the small acid pump, the maintenance mechanic started the motor while leaving his hand on the pump housing, which was connected to the motor frame. Immediately suffering a serious electric shock, the



victim received current flow from one hand through his upper body to his feet or legs (it was not clear which). Although he reported experiencing severe pain and discomfort from the shock, the victim exhibited no external signs of injury. However, he was still taken to an on-site medical facility, where he was evaluated and kept for the rest of the shift for observation. Fortunately, no injury or subsequent complications resulted from this

accident. In retrospect, it was determined that the level of current was likely limited because the victim was wearing rubber boots (not for shock protection but for protection from injury due to the chemical burn risk in the area).

Photo 2. The conduit, containing the phase and grounding conductors, was non-metallic as well. Note: The additional, external grounding conductor shown was added after the incident.

Following the incident, many questions remained. At the top of everyone's mind was what had caused an electrician with more than 20 years of experience — considered a responsible, proficient, and “qualified person” — to obviously make an incorrect motor connection?

Investigation and analysis

The author, who served as the Instrument & Electrical (I&E) superintendent in the maintenance department was called in to investigate from a reliability angle as well as a safety standpoint. He was not only the leader of electrical safety initiatives at the facility (responsible for establishing electrical safety policies and procedures), but he also oversaw the development and implementation of such requirements in safety policies and procedures. The initial investigation uncovered several facts. The motor feeder had three color-coded phase conductors: black, red and blue, and one green insulated equipment grounding conductor. A grounding lug was provided inside the motor terminal box. The motor had been connected incorrectly with the blue conductor connected to the grounding lug and the green conductor connected to one of the motor leads. This, combined with the fact that the unit was basically insulated from ground, caused the motor to single phase. Why didn't someone notice this problem prior to the accident? Similar symptoms would have been present if the pump had been plugged or had restricted flow — and since the motor had just been changed — the staff felt like the problem was with the pump. Although the installation had been in service for some time and the feeder conductor colors had faded somewhat, they were still clearly identifiable. During the follow-up investigation, an interesting development was uncovered. After being called to the accident site for additional clarification on what had happened that day, the electrician that reconnected the motor stated that the motor connections were correct — with the green colored conductor connected to the grounding lug. This shed light on the underlying problem, given the fact that the blue conductor was connected to the grounding lug. After this was pointed out to him, the victim admitted he was color blind and had difficulty identifying phase conductors by color alone. Instead, he relied on numbers, letters, or some other identification method (coworkers) for clarification.

Lessons learned

In corrosive environments, it's next to impossible to find materials that are resistant to deterioration; therefore, non-metallic materials are typically used. Due to this fact, an additional external grounding conductor should be provided. After the accident, electrical specifications were reviewed to be sure all similar existing and future installations included an external grounding conductor in addition to the one connected to the motor frame inside the motor terminal box. Adjustments were made and communicated to other plant sites within the company. Special emphasis meetings were also held with electrical and mechanical craftsmen to ensure the technical aspects of the incident were well understood. Lockout/tag out procedures includes verification of proper voltage and current on all phase conductors once the motor is put back in service. The details of this incident, and proper procedures when non-conductive materials are used, are included in the company's electrical safety training. The facility now also requires a color identification test as part of physical exams both for new hires and for routine, periodic exams of existing employees. Although this incident wasn't complicated and no legal action was taken, it did have a serious potential for injury or death. This case demonstrates how important it is for a company to create an environment in which employees feel comfortable discussing personal issues that pertain to their ability to do their jobs efficiently and safely. Similarly, those in management positions who evaluate qualifications and assign jobs also have the same responsibility for proper consideration of such issues.

Employee Spotlight!

By Jacklyn Villanueva

EMPLOYEE OF THE MONTH



A little bit about our employee:

Spencer Dwyer has been employed by Masters Electrical Services, LTD since September of 2008 and is currently a foreman in the field. He recently completed the four year program at IEC School in San Antonio and received his Journeyman license while helping to supervise jobs since the summer of 2014. Away from work he enjoys hunting, playing seasonal volleyball, and spending time with his 4 year old female dog Kona. Spencer is a great asset and well respected member of our team at Masters Electrical Services, LTD and we enjoy having him!

Hot Topics

From Human Resources

- The deadline for submitting your direct deposit information will be March 1st. If you have any questions please notify Missy or Alyssa at the office.
- Also, we are currently accepting applications for the position of
 - Journeyman Electrician,
 - Lead man/Service Technician,
 - Labor/ Helper from San Antonio area.
 - Journeyman must have control background experience and several years experience in the field.
- Example of experience and knowledge we are looking for:

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- | | |
|--|-------------------------------|
| • <i>Electrical Systems & Controls</i> | • <i>Electrical Code</i> |
| • <i>Installations & Maintenance</i> | • <i>Safety & QA</i> |
| • <i>Electromechanical Repairs</i> | • <i>Wiring Diagrams</i> |
| • <i>Blueprints & Schematics</i> | • <i>Troubleshooting</i> |
| • <i>Generators & Transformers</i> | • <i>Testing Instruments</i> |
| • <i>Switches & Circuit Breakers</i> | • <i>Motors & Conduit</i> |
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FEBRUARY

BIRTHDAYS

- Paul Best 3rd
- Matthew Donley 3rd
- Clint Mergele 5th
- Roman Davila 6th
- Morgan Hallmark 16th
- Jimmy Chessher 22^{ed}
- Allen Slates 28th

