

# ELECTRICAL SAFETY INSPECTOR ADVISORY COMMITTEE REQUEST FOR RECOMMENDATIONS

DATE: SEPTEMBER 15, 2023

TIME: 10:00 AM

LOCATION: NO MEETING THIS MONTH

#### **Personnel Certification Applications**

P-1 Jones, Craig - ESI

Certification ID:

**Current Certifications: None** 

Staff Notes:

ESIAC Recommendations: Committee Recommendation:

P-2 Scarpucci, Dennis - ESI, RBI

Certification ID: 9195

Current Certifications: None

Staff Notes: OCILB contractor - recommend approval.

ESIAC Recommendations: Committee Recommendation:

P-3 Smith, Aaron - ESI

Certification ID: 9185

Current Certifications: None Staff Notes: Unusual experience ESIAC Recommendations: Committee Recommendation:

#### **Continuing Education Applications for Review**

ER-1 Electric Vehicle Charger Installation and NEC Requirements (Ohio Certificate Renewal)

All certifications (4 hours)

Staff Notes:

ESIAC Recommendation:
Committee Recommendation:

#### **Old Business**

**New Business** 

#### **File Attachments for Item:**

P-1 Jones, Craig - ESI

Certification ID:

**Current Certifications: None** 

Staff Notes:

ESIAC Recommendations:

Committee Recommendation:

Board of B	uildir	ng Standards Ap	plication for I	nterim Cer	tification, Building Depa	rtment Personnel
Jon	· <i>c</i> s		Cra:	ď		
Last Name			First No	me		BBS Certification ID
SECTION 1: C	HECK	INTERIM CERTIFICATI	on(s) Bein	G REQU	ESTED	A.
Building ( Building F Examiner		Master Plans Examiner Plumbing Plans Examiner Plumbing Inspector	Building Inspecto Mechan Plans Ex Mechan Inspecto	r icat aminer ical	Electrical Safety Inspector Electrical Plans Examiner Non-Residential Industrial Unit	Fire Protection Inspector Fire Protection Plans Examiner
SECTION 2: L Mark "T" If Tra	LIST <b>A</b> lainee)	NY OHIO LICENSE, C	ERTIFICATE	, or <b>R</b> ec	SISTRATION HELD	
Description				Се	rtificate Number	Date Received
Architectural I	Registr	ation				
P.E. Registra	tion					
Res No	n-Res					
		Building Official Certific	cation			
		Plans Examiner Certifi	cation			
		Building Inspector Cert	tification			
		Mechanical Inspector Certification				
Building Plans	s Exam	niner Certification				
Mechanical P	lans E	xaminer Certification				
Fire Protectio	n Plans	s Examiner Certification	1			
Electrical Plan	ns Exa	miner Certification				
Plumbing Plans Examiner Certification						
Fire Protection Inspector Certification						
Electrical Safety Inspector Certification						
Plumbing Insp	pector	Certification				
Fire Safety In	specto	r Certification				
Fire Protection	n Syste	em Designer Certification	on			
Medical Gas I	Piping	Inspector Certification				

Jones Craig	
Last Name First Name	BBS Certification ID
SECTION 3: EMPLOYMENT/EDUCATION	
Formal Education	Date Graduated
Zone Trace High School	1983
Ohio State Ag Tech Insitule	2 years 1983-85
Related Vocational or Technical Training	Years' Experience
I.B. E.W. Local # 88 Chill:cothe Apprenticesh	p 4 years 1985-89
U.S. Military construction experience (MOS or other designation):	Years' Experience
Place of Employment:	Years' Employed
Pickoway Ross CTE	14 years
Facilities Manager	

Board of Building Standards Application for Interim Certification, Building Department Personnel

#### SECTION 4: APPLICANTS REQUESTING MEDICAL GAS INSPECTOR CERTIFICATION

Attach proof of certification by an ASSE recognized third-party certifier in accordance with ASSE standard 6020.

# SECTION 5: OBC BUILDING INSPECTION EXPERIENCE PERFORMED FOR A BBS CERTIFIED BUILDING DEPARTMENT

BBS Certified Building Department	BBS Certified Position/Title	Duties	Date of Service, Length of Time (MM/DD/YY)
		-x100-x	

Application for Interim Certification, Building Department Personnel

Jones	Craig	
Last Name	First Name	BBS Certification ID

# SECTION 6: ELECTRICAL SAFETY INSPECTOR (ESI) - SPECIFIC EXPERIENCE QUALIFICATIONS Applicants for Electrical Safety Inspector Only Must Complete This Item

Section 3783 of the Ohio Revised Code specifies that an applicant for a Certificate of Competency as an Electrical Safety Inspector must meet on of the following to qualify to take required examination. Please check the qualification that applies:

- Have been a journeyman electrician or equivalent for four years, two of which were as an electrician foreman, and have had two years' experience as a building department electrical inspector trainee;
- 2. Have been a journeyman electrician or equivalent for four years and have had three years' experience as a building department electrical inspector trainee;
- 3. 

  Have had for four years' experience as a building department electrical inspector trainee;
- 4. X Have been a journeyman electrician or equivalent for six years;
- 5. Am a graduate electrical engineer and registered in the State of Ohio. Registration number:
- 6. Applicant authorizes all testing organizations including ICC to provide test results to the BBS.

#### SECTION 7: EXPERIENCE (DO NOT SUBSTITUTE WITH OTHER RESUMES).

Refer to Experience Requirements Listed in O.A.C. 4101:7-3-01 and O.R.C. 3783

Below, list the specific projects you worked on, and the specific work you performed, your typical duties for each project, and dates of this work. You **must** demonstrate that you have the required number of months (years) of actual, practical experience for the certification requested (see matrix).

Provide letters from certified inspectors, employers, or contractors verifying your experience. Submit copies of any certificates, diplomas, or licenses. Remove all personal information.

SECTION 7 CONT.: EXPERIENCE

List Each Construction Project AND Specific Type of Work Performed	Name of Employer, Contact, Address, Telephone Number	Project Time: From_ To _ (MM/YY)
Example: Children's Hospital, Toledo Structural steel work on addition  PPG - Circleville Ohio - Run conduit using explosion proof fiftings and materials Supply power and install heat trace on pipes and tanks	1	July 2013-May 2014 (10 months)  July 85 - July 86
Total Experience on This Page (In Months):		12

Application for Interim Certification, Building Department Personnel

Jones

Last Name

Eraig First Name

BBS Certification ID

List Each Construction Project AND	Name of Employer, Contact, Address,	Project Time: From_ To _
Specific Type of Work Performed	Telephone Number	(MM/YY)
Ross County Correctional Institution	1st Hondorson Electric Cincinnati Ohio	July 86 - July 87
- Run coude it for	No longer in business	
individual cells and main rooms	Los Becker Electric	
In receptacies and	/ uncinhor	
lightima, Also ran	No longer in business	
conduit & pull wire and hook up 1001		
tower 1.9		
- Help install Power Panels for distribution		
Mead Paper	Midwest Electric Chillicothe Ohio	July 87-July 88
Chillieothe Ohio	No longer in businoss	
-install cable tray	700 10 3	
wire pulls to feed		
new switch bear		
that supplied power to paper machines.		
to paper macris		
	Total Experience on This Page (in Months):	24

Application for Interim Certification, Building Department Personnel

Towes Craig

Last Name First Name BBS Certification ID

List Each Construction Project AND Specific Type of Work Performed	Name of Employer, Contact, Address, Telephone Number	Project Time: From_ To _ (MM/YY)
Honda Plant  East Liberity  - 1st phase on project,  worked on grounding  and welded brackets  for conduit runs  - Set Power Panels  - Pulled wire	? ?	July 88 - Sept. 88
Pillsbury Wellston Ohio Several Projects - pizza roll line install - Frezzer work - pancake line install - several new green giant veg. lines installed - substation work - Lighting & controls - Several Plant work and repair	Midwest Electric Chillicothe Ohio No longer in buriness General Forman Brad Baker 220-837-9806	Sept. 88 - Jan 04
	Total Experience on This Page (In Months):	186

Application for Interim Certification, Building Department Personnel

Jones

Last Name

First Name

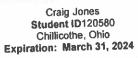
BBS Certification ID

List Each Construction Project AND Specific Type of Work Performed	Name of Employer, Contact, Address, Telephone Number	Project Time: From_ To(MM/YY)
New Page Paper Chillicothe Ohio - Maintenance Sapervisor - Allen Bradley PLC work - Paper Machine maintenance	New Page Paper Moved to Wisconsin Plant Manager John Hayes Lives in Chillicothe	Jan 04 - Aug. 09
Pickoway Ross CTC Chill:cothe Oh:0  - General maintenance electrician  - Facilities Manager (3 campuses)  - Several Remodel Projects  - electric work, painting, flooring, etc.	Pickaway Ross CTC Superintendent Jonatan Davis 740-642-1340	Aug 09 - prosont
I hold a class A  Sever operator Cert.	Total Experience on This Page (in Months):	224

	Craic	
Last Name	First Name	BBS Certification ID
SECTION 8: PERSONAL HISTOR		
lave you ever been convicte	ed of any felony, or any crime involving more	al turpitude?
		☐ Yes 💢 No
f you answered "Yes" please		□ Vee Œ N
•	armed services? (If No, skip question 3)	☐ Yes Ø No
	under honorable conditions?	☐ Yes ☐ No
f you answered "No" please	explain below:	
•		
		· · · · · · · · · · · · · · · · · · ·
authorize the investigation of all stated as the same to be same t	cation or for immediate termination of certification at any parties from all land the contained herein and release all parties from all land the contained herein and release all parties from all land to the contained herein and release all parties from all land to the contained herein and release all parties from all land the contained herein and release all parties from all land the contained herein and release all parties from all land the contained herein and release all parties from all land the contained herein and release all parties from all land the contained herein and release all parties from all land the contained herein and release all parties from all land the contained herein and release all parties from all land the contained herein and the conta	iability for any damage that a violation of section
Signature	of Applicant.	
Subscribed and duly sworn b		
subbolibou una dany bivoin k	efore me according to law, by the above na	med applicant this
lay 16 of August	efore me according to law, by the above na	med applicant this
day 6 of August i	efore me according to law, by the above na	med applicant this, County of
day 6 of August i	nefore me according to law, by the above name the year 20 23 at 1/33 pm	, County of
day 6 of August i	nefore me according to law, by the above name the year 20 23 at 1/33 pm	, County of
day 6 of August i	nefore me according to law, by the above name the year 20 23 at 1/33 pm	, County of
day 6 of August i	nefore me according to law, by the above name the year 20 23 at 1 3 3 pm	, County of
day 6 of August i	nefore me according to law, by the above name the year 20 23 at 1/33 pm	, County of







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#### **OPERATOR CERTIFICATION**

Craig A Jones

WWA-1116517-13

Certification Number

Director

ST TO B

May 20,2013

Issue Date

December 31,2023

Expiration Date

has met the requirements of the law, is duly certified and is entitled to operate water or wastewater facilities in the State of Ohio until the expiration date.

#### File Attachments for Item:

P-2 Scarpucci, Dennis - ESI, RBI

Certification ID: 9195

**Current Certifications: None** 

Staff Notes: OCILB contractor - recommend approval.

ESIAC Recommendations:

Committee Recommendation:

<b>Board of</b>	Buildin	ng Standards App	plication for Ir	nterim Cer	tification, Building Depar	tment Personnel
Scarp	ucc'		Dennis			
Lost Name			First No	me		BBS Certification ID
Compan de	CHECK I	INTERIM CERTIFICATI	ON/S) REIN	e Reou	ESTEN	
	Official	Master Plans	Building		Electrical Safety	Fire Protection
		Examiner	Inspecto		Inspector	Inspector
Building  Examine		Plumbing Plans Examiner	Mechan Plans Ex		Etectrical Plans Examiner	Fire Protection Plans Examiner
Examino		Plumbing Inspector	Mechan Inspecto	ical	Non-Residential Industrial Unit Inspector	
SECTION 2 Mark "T" If		NY OHIO LICENSE, C	ERTIFICATE		,	
Descriptio	п			Ce	rtificate Number	Date Received
Architectur	el Registr	ration- Electrica) Con	tractor	EL	36816	4/29/2004
P.E. Regist	tration					
Res	Non-Res					
		Building Official Certifi	cation			
		Plans Examiner Certifi	cation			
		Building Inspector Cer	tification	l		
		Mechanical Inspector Certification				
Building Pl	ans Exan	niner Certification				
Mechanica	l Plans E	xaminer Certification				
Fire Protec	tion Plan	s Examiner Certification	n			
Electrical F	Plans Exa	miner Certification	-			
Plumbing F	Plans Exa	aminer Certification				
Fire Protec	tion Insp	ector Certification		1		
Electrical S	Safety Ins	pector Certification				
		Certification				
Fire Safety	Inspecto	r Certification				
		em Designer Certificati	ion			

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Medical Gas Piping Inspector Certification

Scarpucci	Dennis	
Last Name	First Name	BBS Certification ID
SECTION 3: EMPLOYMENT/EDUCATION		
Formal Education		Date Graduated
Eastlake North High Sch	001	1987
Lake land Community Coll	ege	
Related Vocational or Technical Training		Years' Experience
Great Lakes Technical In:	stitute	1992
U.S. Military construction experience (MOS	or other designation):	Years' Experience

Application for Interim Certification, Building Department Personnel

Place of Employment:	Years' Employed
APT Electric LLC	4
Paerless Electric Co. Inc.	24

#### SECTION 4: APPLICANTS REQUESTING MEDICAL GAS INSPECTOR CERTIFICATION

Attach proof of certification by an ASSE recognized third-party certifier in accordance with ASSE standard 6020.

SECTION 5: OBC BUILDING INSPECTION EXPERIENCE PERFORMED FOR A BBS CERTIFIED BUILDING DEPARTMENT

BBS Certified Building Department	BBS Certified Position/Title	Duties	Date of Service, Length of Time (MM/DD/YY)

**Board of Building Standards** 

<b>Board</b>	of	<b>Building</b>	<b>Standards</b>	A
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Application for Interim Certification, Building Department Personnel

Scarpucci	Dennis	
Last Name	First Name	BBS Certification ID

SECTION 6: ELECTRICAL SAFETY INSPECTOR (ESI) - SPECIFIC EXPERIENCE QUALIFICATIONS Applicants for Electrical Safety Inspector Only Must Complete This Item

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- 2. Have been a journeyman electrician or equivalent for four years and have had three years' experience as a building department electrical inspector trainee;
- 3. Have had for four years' experience as a building department electrical inspector trainee;
- 4. Thave been a journeyman electrician or equivalent for six years;
- 5. Am a graduate electrical engineer and registered in the State of Ohio. Registration number: \_\_\_\_\_\_
- 6. Applicant authorizes all testing organizations including ICC to provide test results to the BBS.

#### SECTION 7: EXPERIENCE (DO NOT SUBSTITUTE WITH OTHER RESUMES).

Refer to Experience Requirements Listed in O.A.C. 4101:7-3-01 and O.R.C. 3783

Below, list the specific projects you worked on, and the specific work you performed, your typical duties for each project, and dates of this work. You must demonstrate that you have the required number of months (years) of actual, practical experience for the certification requested (see matrix).

Provide letters from certified inspectors, employers, or contractors verifying your experience. Submit copies of any certificates, diplomas, or licenses. Remove all personal information.

List Each Construction Project AND Specific Type of Work Performed	Name of Employer, Contact, Address, Telephone Number	Project Time: From_ To _ (MM/YY)
Example: Children's Hospital, Toledo Structural steel work on addition	Homer Steel and Trade 125 Anytown Street My City, OH, 45454 (419)555-1212	July 2013-May 2014 (10 months)
Electrical Lead Tech for multiple electrical projects in residential, Commercial, and Light Industrial. New Work Residential Construction Remodel Regidential work New Commercial projects Service Commercial projects Service industrial projects	Peerless Electric (0. INC. 7325 Production Oc. Mentor, OH: 44060 (440) 290 7001	June 1997 - June 2017 June 2020 - mar 2021
Total Experience on This Page (In Months):		314

Application for Interim Certification, Building Department Personnel

Scarpucei

Last Name

Dennis First Name

**BBS Certification ID** 

List Each Construction Project AND Specific Type of Work Performed	Name of Employer, Contact, Address, Telephone Number	Project Time: From_To_ (MM/YY)
Commercial Electrical Lead  Residential Electrical head  Commercial Projects include:  Ace Hardware ! Shoker Hts.  Window Nation: Lubrens ville  Clean Express Cur wushes:  Eastlake, Palme, maple Hts  Residential Projects:  Larry Block Builders  New Residential Construction	APT Electric, LLC 27799 Emery Rd. Warrensville Hts, OH. 44128 (216) 538-0495	901 2018 - 100 2019 mar 2021 - Present
Electrical Contractor License Residential wiring for MJ Builders Inc. Lake, heaving, Portage Countys Fork Bros, Pro Remodelling Smartereation z Commercial Projects Little Ceasur's Pizza, Akron Fire House Suss, Avon west 25 m Apris Cleveland Service work mernt, mentor	DAS Electrical Consulting 1436 Bellinew St. Wideliffe, OH: 44092 (440)655-3556	Apr. 2004 - Present
	Total Experience on This Page (In Months):	398

	<b>Board of Building Standards</b>	Application for Interim Certification, Building De	partment Personnel
	Scarpucci	Dennis	
	Last Name	First Name	BBS Certification ID
1.	SECTION 8: PERSONAL HISTORY Have you ever been convicted of	any felony, or any crime involving more	al turpitude? □ Yes⊠ No
	If you answered "Yes" please exp	olain below:	
2.	Have you served in the U.S. arm	ed services? (If No, skip question 3)	☐ Yes 🗷 No
	If YES, were you discharged und		☐ Yes ☐ No
	If you answered "No" please expl		
	may be grounds for not granting certification I authorize the investigation of all statemen may result from furnishing the same to Ohio	oplication is true and complete, and I understand that no for for immediate termination of certification at any parts contained herein and release all parties from all to Board of Building Standards Falsification is de and is punishable as a misdameano applicant:	iability for any damage that a violation of section
	day 13 rd of Asgust in the	re me according to law, by the above not be year 20 13 at will a sphory of the property of the	amed applicant this, County of
	MELISSA A TRANTER Notary Public - State of Ohi My Commission Expires October 05, 2024	io	

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Mike DeWine Shery! Maxfield

SCARPUCCI JR, DENNIS A

Licensing Board O.C.J.L.B.



This is <u>YOUR</u> license. Plan Approvals obtained with <u>YOUR</u> license and posting of <u>YOUR</u> license indicates that <u>YOU</u> and <u>YOUR</u> liability insurance are assuming all responsibility for any projects performed under this license.



<b>Board of Building</b>	Standards Application	on for Interir	n Certification, Build	ling Department Personnel
Scarpucci	Denn	is		
Last Name	First Name			BBS Certification ID
SECTION 1: CHECK INTE	RIM CERTIFICATION(S) BEIN	IG REQUE	STED	
Res. Building Official	Res. Plans Examiner		Res. Building I	nspector
	Res. Industrial Unit Ins	pector	Res. Mechanic	al Inspector
SECTION 2: LIST ANY OHI (Mark "T" If Trainee)	O LICENSE, CERTIFICATE, OR			
Description		Ce	ertificate Number	Date Received
Architectural Registration	Electrical Contractor	EL:	36816	4/29/2004
P.E. Registration				
Res Non-Res				
☐ ☐ Buildi	ng Official Certification			
☐ ☐ Plans	Examiner Certification			
☐ ☐ Buildi	ng Inspector Certification			
☐ ☐ Mech	anical Inspector Certification			
Building Plans Examiner Co	ertification			
Mechanical Plans Examine	r Certification			
Fire Protection Plans Exam	iner Certification			
Electrical Plans Examiner Certification				
Plumbing Plans Examiner (	Certification			
Fire Protection Inspector C	ertification			
Electrical Safety Inspector	Certification			
Plumbing Inspector Certific	ation			
Fire Safety Inspector Certif	ication			
Fire Protection System Des	signer Certification			
Medical Gas Piping Inspec	tor Certification			
Section 3: Employment	VEducation			
a. Formal Education				Date Graduated
Eastlake North H	54 School			1987
Lakeland Community	College			
b. Related Vocational or Technical Training			Years' Experience	
Great Lakes Techni	Cal Institute			1992
c. U.S. Military constructio	n experience (MOS or other design	nation):		Years' Experience
d. Place of Emptoyment;				Years' Employed
ART Flacker IIC				4 VOLTA

Application for Interim Certification, Building Department Personnel

Scorpucci	Dennis	
Last Name	First Name	BBS Certification ID

# SECTION 4: OBC/RCO BUILDING INSPECTION EXPERIENCE PERFORMED FOR A BBS CERTIFIED BUILDING DEPARTMENT

BBS Certified Building Department	BBS Certified Position/Title	Duties	Date of Service, Length of Time (MM/DD/YY)

#### SECTION 5: EXPERIENCE (DO NOT SUBSTITUTE WITH OTHER RESUMES).

Refer to Experience Requirements Listed in O.A.C. 4101:7-3-01 and O.R.C. 3783

Below, list the specific projects you worked on, and the specific work you performed, your typical duties for each project, and dates of this work. You **must** demonstrate that you have the required number of months (years) of actual, practical experience for the certification requested (see matrix).

Provide letters from certified inspectors, employers, or contractors verifying your experience. Submit copies of any certificates, diplomas, or licenses. Remove all personal information.

List Each Construction Project AND Specific Type of Work Performed	Name of Employer, Contact, Address, Telephone Number	Project Time: From_ To _ (MM/YY)
Example:	Homer Steel and Trade	July 2013-May 2014
Children's Hospital, Toledo	125 Anytown Street	(10 months)
Structural steel work on addition  Electrical Lead tech for  Multiple electrical projects  in residential & Commercial  Projects include residential  momes (new construction &  remodel's), the Commercial  and Light industrial Jobs.	My City, OH, 45454 (419)555-1212  Peerless Electric Co. Inc. 7325 Production dr. Mentor, OH 44060 (440) 290 7601	June 1992-2021 June 2017 June 2020 - 2003 mar 2021
Commercial Lead Electrician Residential Lead Electrician Projects included: Ale Hardware, Sheleer HTS Window Mation, Warrenswille Clean Express Car Washes Parma, maple HTS, Eastlete	APT Electric, LLC 27799 Emery Rd. Warrens wille 1445, 04.44128 (216) 538-0495	Oct. 2018-Dec 2019 mar 2021 - Present
Total Experience on This Page (in Months)	;	346

Application for Interim Certification, Building Department Personnel

Scorpucci	
Last Name	

Dennis

BBS Certification ID

**SECTION 5 CONT.: EXPERIENCE** 

List Each Construction Project AND Specific Type of Work Performed	Name of Employer, Contact, Address, Telephone Number	Project Time: From_To_ (MM/YY)
Electrical Contractors License Projects:	DAS Electrical Consulting, LLC 1436 Bellovew St. W.ckliffe, OH. 44092	April 2004 - Pregen
Residential Homes for MJ Builders, Inc.		
George County Portage County Lake County		
Residential Homes for Foxx Bros		
Commercial Projects; Little Censurs 8,22A		
AKron, OH		
Firehouse Subs		
Avon, Ohio		
west 25th Apartments	w.	
cleveland is M.		
	Total Experience on This Page (In Months):	224

Board of Building Standards Application for Interim Certification, Building Department Person		
Scurpucci	Dennis	
Last Name	First Name	BBS Certification ID
SECTION 6: PERSONAL HISTORY  1. Have you ever been convicted of any 2. If you appropriate "You" please explain	•	turpitude? ☐ Yes 🏻 No
<ol> <li>If you answered "Yes" please explain</li> <li>Have you served in the U.S. armed s</li> </ol>		☐ Yes 🄀 No
If YES, were you discharged under he if you answered "No" please explain	onorable conditions?	Yes No
SECTION 7: CERTIFICATION		
I certify the information contained in this applicat may be grounds for not granting certification or for authorize the investigation of all statements contained in the form furnishing the same to Ohio Board of the Ohio Revised Code and is punishable.	immediate termination of certification at any ned herein and release all parties from all li Building Standards Falsification is a vi ple as a misdemeanor of the first de	point in the future, if granted is ability for any damage that may olation of section 2921.13
Signature o	f Applicant:nlll	
Subscribed and duly sworn before me ac of August in the year 20,23 at U	cording to law, by the above named	applicant this day <u>23</u> rd
MELISSA A TRANTER Notary Public of Ohio My Commission xpires October 05, 2024	×	

#### **File Attachments for Item:**

P-3 Smith, Aaron - ESI

Certification ID: 9185

**Current Certifications: None** 

Staff Notes: Unusual experience

**ESIAC** Recommendations:

Committee Recommendation:

Smith	<u> </u>	<u> </u>	CITON		1
<b>La</b> st Name	st Name Firs				BBS Certification I
SECTION '	1: CHECK	INTERIM CERTIFICATI	ON(S) BEING RE	EQUESTED	
	ing Official	Master Plans Examiner	Building Inspector	Electrical Safety	Fire Protection
Build Examir	ing Plans ner	Plumbing Plans Examiner	Mechanical Plans Examin	Electrical Plans Examiner	Fire Protection Plans Examiner
		Plumbing Inspector	Mechanical Inspector	Non-Residential Industrial Unit Inspector	
ECTION Mark "T" Descript	If Trainee)	NY OHIO LICENSE, C	ERTIFICATE, OR	REGISTRATION HELD  Certificate Number	Date Received
	ural Regist	ration		Gertificate Humber	Date Neceived
P.E. Reg		. Callott			
Res	Non-Res				
		Building Official Certific	cation		
		Plans Examiner Certific	cation		
		<b>Building Inspector Cert</b>	tification		
		Mechanical Inspector Certification			
Building I	Plans Exan	niner Certification			
Mechanio	cal Plans E	xaminer Certification			2.000
Fire Prot	ection Plan	s Examiner Certification	1		
Electrical	l Plans Exa	miner Certification			
Plumbing	Plans Exa	aminer Certification	1		
Fire Prot	ection Insp	ector Certification			
Electrical	Safety Ins	pector Certification		85 p 140 x 120 m	
Plumbing	Inspector	Certification			
Fire Safe	ety Inspecto	or Certification			
Fire Prote	ection Syst	em Designer Certification	on		

Board of Building Standards Application for Interim Certification, Building Department Personnel

Medical Gas Piping Inspector Certification

Partament City tra	(OHIU) Engineering	Department / y	rais
1	,	S INSPECTOR CERTIFICATION	DN
t <b>tach proof</b> of certific SSE standard 6020.	cation by an ASSE recog	nized third-party certifier	in accordance with
ECTION 5: OBC BUILDII EPARTMENT BBS Certified Building	NG INSPECTION EXPERIENC	E PERFORMED FOR A BBS	Ш
Department Department	Position/Title	Duties	Date of Service, Length of Time (MM/DD/YY)

4/1/2019

5/ (c) 40.000 4/ Form # 102

Application for Interim Certification, Building Department Personnel

**BBS Certification ID** 

24

**Date Graduated** 

Years' Experience

Years' Experience

Years' Employed

2-2000

(Jaron

First Name

School

**Board of Building Standards** 

**SECTION 3: EMPLOYMENT/EDUCATION** 

Portsmouth High School

Related Vocational or Technical Training

Building maintanance

Scioto County Joint Vocational

Ohio Board of Building Standards

U.S. Military construction experience (MOS or other designation):

5mith

Formal Education

Scinto County 50

Place of Employment:

Last Name

	Board of Building Standards	Application for Interin	n Certification, Buildi	ng Department Personnel	
	South Last Name	First Name		DBS Costiliantia	10
				BBS Certification	טו
	SECTION 6: ELECTRICAL SAFETY INS	SPECTOR (ESI) - SE	PECIFIC EXPERIEN	CE QUALIFICATIONS	
	Applicants for Electrical Safety Ins Section 3783 of the Ohio Revis	spector <u>Only</u> Must ed Code specific	Complete This is	tem	of
	Competency as an Electrical Safe	ty Inspector must	meet on of the fo	ollowing to qualify to tal	ke
	required examination. Please che	eck the qualification	n that applies:		
1.	☐ Have been a journeyman elect electrician foreman, and have had	rician or equivaler d two vears' expe	it for four years, ience as a buildi	two of which were as a ing department electric	an าลไ
	inspector trainee;	a tito youro oxpo.	Torroo do d band	ing dopartmont cicothe	-CII
2.	☐ Have been a journeyman electre experience as a building department.	ician or equivalen ent electrical inspe	t for four years a ector trainee;	nd have had three year	's'
3.	☐ Have had for four years' experi	ence as a building	department elec	ctrical inspector trainee	);
4.	☐ Have been a journeyman electronic Hav	rician or equivalen	t for six years;		
5.	☐ Am a graduate electrical Registration number:	engineer and	registered in	the State of Ohi	0.
3.	☐ Applicant authorizes all testing	organizations inc	cluding ICC to pr	rovide test results to the	1e
	BBS.				

#### SECTION 7: EXPERIENCE (DO NOT SUBSTITUTE WITH OTHER RESUMES).

Refer to Experience Requirements Listed in O.A.C. 4101:7-3-01 and O.R.C. 3783

Below, list the specific projects you worked on, and the specific work you performed, your typical duties for each project, and dates of this work. You **must** demonstrate that you have the required number of months (years) of actual, practical experience for the certification requested (see matrix).

Provide letters from certified inspectors, employers, or contractors verifying your experience. Submit copies of any certificates, diplomas, or licenses. Remove all personal information.

SECTION 7 CONT.: EXPERIENCE

List Each Construction Project AND Specific Type of Work Performed	Name of Employer, Contact, Address, Telephone Number	Project Time: From_ To _ (MM/YY)		
Example:	Homer Steel and Trade	July 2013-May 2014		
Children's Hospital, Toledo	125 Anytown Street	(10 months)		
Structural steel work on addition	My City, OH, 45454 (419)555-1212			

Total Experience on This Page (In Months):	

Application for Interim Certification, Building Department Personnel

Smith Last Name Loron

First Name

**BBS** Certification ID

lity of Portsmort Traffit notall new overHead Street ighting on US 52	PORTSMOUTH CITY SERVICE DEPERTANT SS MARY AND STREET PORTS MOUTH, OHIS 8740-35	10-2019
1		
in stall various Traffic in Tersections For City of Portsmouth	Portsmouth City Service Repartment 55 mary Ann Portsmouth Oct. 0	06-8018-01-2023
install 200 Mmp Expect	POISTS MUNH, COHIO	07/21-07/27
in Stall 100 Amp SARVICE	55 MORY ANN STREET PORTS MUNTH	09/21-09-21
over Sea all Traffic devices	PORTSMONTH OFFICE	08-18-42023
		118 II s
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	TALAMILIA ROTELIFE  Notice y entire State of Oren "Commit Expires "Commit 25, 2022	Montanda transition and transition a
	Total Experience on This Page (In Months):	

<b>Board of Building Stand</b>	ards Application for Interim Certification, Building De	epartment Personnel
Smith	Acron	
Last Name	First Name	BBS Certification IE
SECTION 8: PERSONAL HIST		
lave you ever been convid	cted of any felony, or any crime involving more	al turpitude?
f.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		☐ Yes ☑ No
you answered "Yes" plea	sse explain below: S. armed services? (If No, skip question 3)	
	ed under honorable conditions?	☐ Yes ☐ No
f you answered "No" pleas		☐ Yes ☐ No
nay be grounds for not granting cer authorize the investigation of all s nay result from furnishing the same 1921.13 of the Ohio Revise	in this application is true and complete, and I understand that rtification or for immediate termination of certification at any p statements contained herein and release all parties from all I to Ohio Board of Building Standards. Falsification is ed Code and is punishable as a misdemeanor	oint in the future, if granted liability for any damage the a violation of sectio
Signatu	re of Applicant: forest Los	
Subscribed and duly sworr	n before me according to law, by the above na	amed applicant this
lay 9th of August	in the year 20 <u>23</u> at <u>Portsmouth</u>	, County of
	Notary Public: Diana Kallish	/
DIANA RATLIFF Notary Public State of Ohio My Comm. Expires		

#### File Attachments for Item:

ER-1 Electric Vehicle Charger Installation and NEC Requirements (Ohio Certificate Renewal)

All certifications (4 hours)

Staff Notes:

ESIAC Recommendation:

Committee Recommendation:



Mike DeWine, Governor

Jon Husted, Lt. Governor

#### **Application for Continuing Education Course Approval**

Provider information:
Name: Harold L. Plant
Organization: Ohio Certificate Renewal
Address: P.O. Box 211102, Columbus, Ohio 43221
E-mail: mayda@ohiocertificate.com and Hal@ohiocertificate.com Telephone: 614-451-9003
Website: Ohiocertificate.com
Conference Sponsor (if applicable) Conference Email:
Check here if Course Renewal:Prior course number (i.e. BBS2018-429)
Renewals will only be granted for identical content and certifications, within the current code cycle.
Attach a copy of prior course approval letter for confirmation. No further information is required.
New Course Information:
Course title: Electric Vehicle (EV) Charger Installation and NEC Requirements
Course instructor: J.D. White
Course description: Learners will gain an understanding of EVSE systems, the current technology in an evolving industry,
terminology, levels/types, NEC compliance, permissible locations, and system commissioning.
The class will also cover storage considerations and calculations.
Instructional hours per session: 4 Number of Sessions: TBD
Course Date(s) and Location: 09/22/2023 webinar, online and in-person TBD
Course Date(o) and 200ationing
Special Content:
Code Administration: Conference Course:
Existing Buildings: Conference Name:
Electrical Instruction: Conference location:
Plumbing Instruction:
ridinbing instruction
Course to be offered online?
Course Website: ohiocertificate.com
Detail online course participation confirmation method (i.e. test, quizlets, participant activity confirmation):
login and/or audio/visual confirmation, quizlets
Course applicable for the following certifications
Residential Certifications Only: Commercial Certifications:
Administrative Course, All Certifications:
Application materials included:
Course Outline or Course Learning Objectives
✓ Presentation Materials/Slides (not required for roundtable courses)
Assessment Materials (for online courses)
Presenter Bio

Please submit application and materials in .pdf format to: michael.lane@com.ohio.gov or BBS@com.ohio.gov

#### **Ohio Certificate Renewal**

(614) 451-9003 OhioCertificate.com P.O. Box 211102 Columbus, Ohio 43221-1102



#### **EV Charger Installations**

#### Course Outline

- 1. Why Discuss Electric Vehicles Supply Equipment "EV Chargers"
- 2. EVSE is New & Changing Every EV Model Year
- 3. Industry & NEC Definitions Terminologies
- 4. Charging station fundamentals
- 5. Level 1: Single Phase 120 VAC 15-20 amps
- 6. Level 2: Single Phase 208/240 VAC 30-80 amps
- 7. Level 3: Three Phase 208/240/480 VAC 125 amps
- 8. Level 4: DC Ultra-Fast Chargers
- 9. Brand & Model specific installations
- 10. Load Calculations for adding EVSE
- 11. Installing Single EVSE Unit
- 12. Installing Multiple EVSE Units Integration
- 13. NEC Mandatory Requirements
- 14. NEC Permissive Requirements
- 15. NEC EVSE Electrical Calculations
- 16. NEC EVSE Ventilation Calculations
- 17. Commissioning electric storage devices

#### **Presentation Objectives**

- 1. Learn the importance installing EVSE and Opportunities
- Learn the necessity of staying current with EVSE Technologies
- 3. Learn the definitions used for EVSE Equipment
- 4. Learn the different levels and types of EVSE
- 5. Learn the NEC requirements regarding:
  - a. Manufactures Installation Requirements
  - b. Load Calculations
  - c. Air Exchange Calculations
  - d. OCPD for EVSE
  - e. Grounding requirements for EVSE
- 6. Allowable Locations of EVSE Installations
- 7. Learn the methods and importance of EVSE System Commissioning

## EVSE Electric Vehicle Supply Equipment



1

## Why Discuss EV Chargers?

- Electric Vehicles are gaining Popularity
- Customers Need Chargers Connected
  - · New Business Stream



2

## Electric Vehicles are Old Technology

- Developed Late 1800's
- Same area of Steam and Single Piston Engines
- · Used lead-acid batteries
- · Had Very limited range



3

## Gas Powered Vehicles Won Out

- Cars soon required roads.
- · With roads came
  - · Speed: Refueling and Driving
  - · Oil excavation
  - · Service stations
- · Electric infrastructure lagged
  - EV suffered from poor Development



## Gas Powered: EPA & Emissions

Gasoline use created unintended consequences.

Many cities developed air-quality issues.

The Environmental Protection Agency (EPA) was created in 1970.

The Clean Air Act was passed.

Onboard diagnostics 2 (OBD2) became law and standard on all vehicles in 1996.

Not all dirty air is from vehicles, but they produce a fair share



5

## **EVSE** is New & Changing

- · Every Model Year brings new levels and Methods of Connectivity
- · Improved Battery Technology
- · Drive Train Technology
- · New Manufactures

6

### **Industry & NEC Definitions**

- EVSE Electric Vehicle Supply Equipment
- BEV Battery Electric Vehicle
- Hybrid Vehicle uses Gas to power Engine and Electric Motors
- PHEV Plug-in Hybrid Electric Vehicle
  - Larger Batteries than standard Hybrid
  - · Greater Battery only milage
- Fuel Cell Electric Hydrogen converted to electric
  - Power generated is used to power motor, and charge Batteries

7

#### **Charger Fundamentals**

- Level 1 and Level 2 Capable EV convert Alternating Current, into Direct Current Onboard the Vehicle
- The Actual Charger is built into the EV
  - · Converts AC to DC, Monitors Battery Charge Levels & Temp.
- The Wall Unit is only an Interface Controls Amps to EV to prevent Branch Circuit for overloads. Nonetheless is called a Charger
- · Multiple Levels of Charging Rate by the External Wall unit

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## **Battery Fundamentals**

- 40KWH is Average EV Battery Size
  - 40,000 Watts in one hour
- · Watt Hours are extended by Connected Load
  - 20KW for 2 Hours
  - · 10KW for 4 Hours
  - 5KW for 8 Hours
- 75KWH and 100KWH is an Option for Some EV
  - · Powering a Home is a possibility per above Loads

9

## Level 1 Charging ~ On the Cheap

- · Single Phase, Several EV include one these with the EV
- 120V
- 15-20 Amp Circuit and Outlet
- Circuits Draw 12 16 Amps
- · Slowest Charging Rate
- · Again, Vehicle converts the AC into DC within the Vehicle

10

## Level 1 Charging

- Output charging power of 1.3 2.4 KW
- That output is 3.11 miles per charging hour
- An 8-hour charge will produce 30 40 Miles of Travel
- 40-50 Hours to charge a BEV (Battery Electric Vehicle)
- 5-6 Hours to charge a PHEV (Plug-in Hybrid Electric Vehicle)

11

## Level 2 Charging ~ Real Minimum

- Single Phase 208Volt or 240Volt
- Often Apartments and Condos are 1Ph derived from 3Ph Power
- 13-80Amp Connected Load
- Circuits are 20A 100A Rated (80/125 OCPD Rule)
- Output Charging Rate is Adjustable, and Fixable by Installer
- The Vehicle converts the AC into DC within the Vehicle
- Except Golf Carts Level 2 Charging should be a Minimum

### Level 2 Charging

- Output charging power of 3KW (12.5 Amp) 19.2KW (80Amp)
- That output is 12-13 miles per charging hour
  - This is 6-9 times the miles per charging hour
- 40,000 Watt Hours
- 3KW Charging
   7KW Charging
   11KW Charging
   19.2KW Charging
   19.2KW Charging
   19.2KW Charging
   13.3 Hours Full Charge
   3.6 Hours Full Charge
   2.1 Hours Full Charge

13

## Level 2 Charging

- Output charging power of 3KW (12.5 Amp) 19.2KW (80Amp)
- · Not all EV can charge at 19.2 KW
- · Most EV are 11KW charging or less
  - · Battery Heat Dissipation is key to charging rate
- BEV Range of 10 75 Miles per Charging Hours
- · A 6 Hour charge at 7KW will Full Charge
- · Range of Full Charge is 150 Miles to 526 Miles

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# Level 3 Charging ~ DC Chargers

- Three Phase 208/240/480 VAC Input 167/144/72A for 60KW
- Charging Rate of 60KW, 180KW, or 360KW Units
- Most can Charge 2 Level 3 Charging Capable EV Simultaneously
- Output is 200 360A and Depending on 300-1000 VDC
- Units can weigh in as much as 500 Lbs
- Cost are 150-200 times the cost of Level 2 Chargers

15

#### Level 3 Charging

- Three Phase 208/240/480 VAC Input
- Charging Rate is 125A DC Output
- Most equipped to charge Level 2 capable or Level 3 capable EV
- Level 2 Capable EV Passes DC directly to Battery
- More Common to Commercial Business Locations
- Some Business Provide Charging as a Curtesy
- Commercial Charging Stations Typically Measured and Costed

## Mythical ~ Arguably Level 4

- DC <u>Ultra-Fast</u> Chargers
- · Some clump this into Higher Power Level 3,
  - Some call it Level 4, or even Level 3+, Can be Confusing
- Like Level 3 the External Charger converts AC into DC
- · Exclusively Commercial and 3Ph Input Power
- · Uses a Heavier Cable for Connection to Vehicle
- · Charging times of 30 Minutes or Less

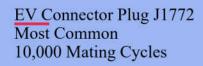
17

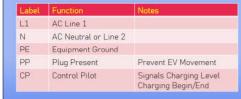
## Charger Brand and Model Specific

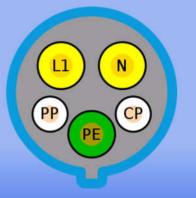
- Manufactures instructions must be followed.
- Not all Charger Manufactures have the same requirements
- Nor the Same Installation Directions
- · Multiple Different Brands



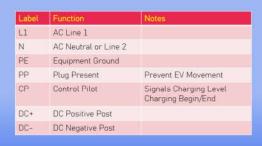
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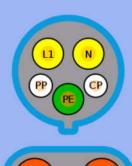


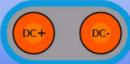




#### EV Connector Plug CCS Required for DC Charging Added Row for DC







## **NEC 625 EVSE Definitions**

An apparatus designed to control and organize the output cable to the electric vehicle or to the primary pad.

#### Charger Power Converter.

The device used to convert energy from the power grid to a high-frequency output for wireless power transfer.

A device that, when electrically coupled (conductive or inductive) to an electric vehicle inlet, establishes an electrical connection to the electric vehicle for the purpose of power transfer and information exchange.

Electric Vehicle Power Export Equipment (EVPE).

The equipment, including the outlet on the vehicle, that is used to provide electrical power at voltages greater than or equal to 30 Vac or 60 Vdc to loads external to the vehicle, using the vehicle as the source of supply.

Electric Vehicle Supply Equipment (EVSE).

The conductors, including the ungrounded, grounded, and equipment grounding conductors, and the electric vehicle connectors, attachment plugs, personnel protection system, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.

## **NEC 625 EVSE Definitions**

#### Fastened in Place.

Mounting means of equipment in which the fastening means are specifically designed to permit periodic removal, without the use of a tool, for relocation, interchangeability, maintenance, or repair.

#### Fixed in Place.

Mounting means of an EVSE attached to a wall or surface with fasteners that require a tool to be removed.

An assembly consisting of a length of flexible EV cable and an electric vehicle connector (supplying power to the electric vehicle).

#### Output Cable to the Primary Pad.

A multi-conductor, shielded cable assembly consisting of conductors to carry the high-frequency energy and any status signals between the charger power converter and the primary pad.

A system of personnel protection devices and constructional features that when used together provide protection against electric shock of personnel.

### **NEC 625 EVSE Definitions**

#### Portable (as applied to EVSE).

A device intended for indoor or outdoor use that can be carried from charging location to charging location and is designed to be transported in the vehicle when not in use

#### Power-Supply Cord.

An assembly consisting of an attachment plug and length of flexible cord that connects equipment to a receptacle. Primary Pad.

A device external to the EV that transfers power via the contactless coupling as part of a wireless power transfer system. Wireless Power Transfer (WPT).

The transfer of electrical energy from a power source to an electrical load via electric and magnetic fields or waves by a contactless inductive means between a primary and a secondary device.

#### Wireless Power Transfer Equipment (WPTE).

Equipment consisting of a charger power converter and a primary pad. The two devices are either separate units or contained within one enclosure.

## NEC 625.17 Cords and Cables

#### (A)Power Supply Cord

- 1. Hard Service Type
- 2. Proper Ampacity for Load Being Served
- 3. Length to prevent cord from being draped on floor:
  - 12" if Portable Equipment
  - II. 6' if Stationary Equipment



# NEC 625.17 Cords and Cables

- B. Output Cable for EV
  - 1. Type of EV Cable, which has communications built in
  - 2. An Integral Part of the Supply Equipment
- C. Length of Supply Cable

25' by default, unless a cable management system used

25

## NEC 625.22 Personal Protection

- Equipment required to have built in protection
- Prevents power greater than 60VDC available while unplugged
- This is part of the attachment cord CP Terminal

26

## NEC 625 Part 3 Installation

- 625.40 Individual Circuit Require Regardless size of charger
- 625.41 OCPD must be sized not less than 125% of Maximum Load
- 625.42 Load shall be considered as a Continuous Load for sizing of Branch Circuit, Feeder, and Service. Unless a Load Management system is used to prevent overloading a feeder or service

2

## NEC 625.42 Adjustability

- · Where Load is Adjustable, Access is required to be Restricted
- Cover Door with Special Tool Required for Access
- 2. Physical Locking Device Accessible only to Qualified Persons
- Software with a Password protection to limit adjustment to Qualified Persons.

## NEC 625.43 Disconnecting Means

- · More then 60A or More than 150V to ground
- · Disconnecting means Required to be Readily Accessible
- · Shall be Lockable in the Open (Off) Position

20

## NEC 625.44 Equipment Connection

- A. Portable Equipment
  - 1. 125V 15 or 20A Grounding Non-Locking
  - 2. 250V 15 or 20A Grounding Non-Locking
  - 3. 250V 1Ph or 3Ph 30 or 50A Grounding Non-Locking
  - 60VDC 15 or 20A Grounding Non-Locking

30

# NEC 625.44 Equipment Connection

- B. Fastened in Place Equipment
  - 1. 125 or 250V 15 up to 50A Grounding Non-Locking
  - 2. 250V 3Ph up to 50A Grounding Non-Locking
  - 3. 60VDC 15 or 20A Grounding Non-Locking
- C. Fixed Equipment

All Other shall be Permanently Wired

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## NEC 625.46 Loss of Primary Power

- Means shall be provided to prevent back feeding from EV to Building with loss of utility power.
- 625.48 Provides an exception to this Default Rule.

## NEC 625.47 Multiple Feeds

- If equipment is setup to accept more than one feed this is allowed.
  - The reason equipment must be setup to allow this is to ensure one feed does not back feed into another source.

22

# NEC 625.48 Interactive Systems

- If the EVSE incorporates a power export function that is part of the interactive system, this can be used as a standby system.
- · When used, article 702 shall apply

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## NEC 625.50 Location

- · EV Connector shall be stored
  - · Not less than 18" AFF for indoor location
  - · Not less than 24" Above Grade Level for outdoor location

3

## NEC 625.50 Ventilation

A. Ventilation Not Required

IF EV is listed for charging indoors without Ventilation Required Ventilation is allowed but not Required..

B. Ventilation Required

If EV is listed for charging indoors with Proper Ventilation Required Active Supply and Exhaust

Tables Must be consulted for proper Values

## NEC 625.52(B)(1)(B) SAE Tables

· Minimum Ventilation in Cubic Feet per Minute for Each EV

Branch				Branch-C	ircuit Supp	ly Voltag	ge	
Circuit			Single Phase			3 Phase		
	DC				208 V or		480 V or	600 V or
	≥ 50V	120 V	208 V	240 V or 120/240 V	208Y/120 V	240 V	480Y/277 V	600Y/347 V
15	15.4	37	64	74	_	-	-	-
20	20.4	49	85	99	148	171	342	427
30	30.8	74	128	148	222	256	512	641
40	41.3	99	171	197	296	342	683	854
50	51.3	123	214	246	370	427	854	1066
60	61.7	148	256	296	444	512	1025	1281
100	102.5	246	427	493	740	854	1708	2135

NEC 625.52(3) Engineered System

 A person qualified in Building Ventilation Engineering is allowed to provided an engineered valuation based on using the established formulas found under the tables with preset values.

38

# NEC 625.52(4) Circuit Interlock

- Mechanical Ventilation is required to be interlocked with the EVSE Equipment to ensure it is operation during the entire time of charging.
- I believe it is the intent of this requirement to ensure positive ventilation is operational if Chargers are used, and Chargers are interlocked to ensure the Ventilation is energized. I do not see a requirement for sail switched to prove Ventilation, but may not be a bad idea.

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# NEC 625.54 GFCI

- · Note this is not a requirement for GFPE, but rather GFCI
- As if 210.8 is not clear enough
- This clarifies all Receptacles for EVSE shall have GFCI Protection of Personnel
- I believe EVSE Directly Wired would be exempt of this requirement.

## NEC 625.60 EVPE

- This requirement is placed on the EV manufacture and not the installer of EVSE
- Note, all ICE BEV, HEV, PHEV have been including 120V limited wattage outlets in vehicles for the past couple years.

41

## NEC 625 Part 4 Wireless Charging

- WPTE ~ Wireless Power Transfer Equipment
- 625.101 Grounding
- Primary pad base shall be grounded unless listed WPTE is double insulated.

42

## NEC 625.102 WPTE Installation

A. Charger Power Converter if Built into Pad Shall comply with 625.102(C) Otherwise shall be listed as 3R enclosure

B. General if power converter not built into Pad shall be installed:
 18" AFF if indoors, or 24" AFG if outdoors
 Mounting can be Pedestal, Wall, Pole, Building, Structure, or a
 Raised Concrete Pad.

43

## NEC 625.102(C) Primary Pad

- These pad are inductive like that of the primary of a transformer, with the secondary of the transformer mounted to the underside of the EV. (Also like a rechargeable toothbrush)
- Embedded to be flush as a way to prevent damage.

# **Assessment Materials**

#### Quiz questions for EV (Electric Vehicle Supply Equipment) Chargers

#### **Ohio Certificate Renewal**

1. What	t is the average size of an EV battery in kilowatt-hours (kWh)?
	a. 10 kWh
	b. 20 kWh
	c. 40 kWh (Correct Answer)
	d. 60 kWh
2. Whic	ch level of charging provides the slowest charging rate?
	a. Level 1 (Correct Answer)
	b. Level 2
	c. Level 3
	d. Level 4
3. How	long does it take to fully charge a Battery Electric Vehicle (BEV) using Level 1 charging?
	a. 5-6 hours
	b. 8 hours
	c. 30-40 minutes
	d. 40-50 hours (Correct Answer)
4. Wha	t is the primary advantage of Level 2 charging over Level 1 charging?
	a. Faster charging rate (Correct Answer)
	b. Lower cost
	c. Greater portability
	d. None of the above

- 5. What type of charging equipment is used for Level 3 charging?
  - a. Single-phase 240V
  - b. 120 V
  - c. Three Phase 208/240/480 VAC Input (Correct Answer)
  - d. Wireless chargers
- 6. What is the purpose of the Control Pilot (CP) in EV connectors?
  - a. To prevent EV movement
  - b. To signal the charging level (Correct Answer)
  - c. To activate the air conditioning
  - d. None of the above
- 7. What is the minimum height requirement for the storage of EV connectors in outdoor locations, according to NEC?
  - a. 6 inches above grade
  - b. 12 inches above grade
  - c. 18 inches above grade
  - d. 24 inches above grade (Correct Answer)

# JD White

6048 Astor Avenue Columbus, OH 43232 614-546-7884 jd.white2000@gmail.com

**Objective:** 

To provide timely and informative teaching relative to Electrical Theory, Electrical Practices, and NEC Updates. All teaching is primarily geared for licensed contractors, architects, engineers, electrical inspectors, and electrician apprentices. Electrical Design and Drafting of small to moderate sized projects, using AutoCAD.

Work and Teaching Experience:

06/2007 - Present

Columbus State Community College

Title: Skilled Trades Apprenticeship Supervisor

Supervisor: Doug House, 614-287-2576

01/2006 - Present

Voltaire Electric Company, Inc. – Columbus, OH

Electrical System Design and Drafting

Title: Consultant 614-546-7884

06/2007 - Present

Columbus State Community College Title: Adjunct Faculty Teaching:

Electrical Courses, National Electric Code, Employability,

Construction Overview, Construction Estimating,

Manual Drafting, and AutoCAD

Supervisor: Doug House, 614-287-2576

09/1999 - Present

Electrician Apprenticeship Instructor Title: Year 1 – Year 4 Lead Instructor

OCILB Instructor, as needed

IEC Central Ohio 614-473-1050

10/2001 - Present

OCILB Instructor, 1-2 seminars per year

Ohio Contractor Training 614-203-1531

12/2008 - Present

OCILB Instructor, 4 seminars per year

Rebecca Warren Training 614-402-6551

# JD White

6048 Astor Avenue Columbus, OH 43232 614-546-7884 jd.white2000@gmail.com

11/2017 – Present OCILB Instructor, 2-6 seminars per year HalfMoon Education Services

715-835-5900

10/2005 - 08/2006

MG Abbott Electric Company - Columbus, OH

Title: Commercial Electrician, Estimator, and ITS Coordinator Supervisor: Joe Abbott-President, 614-837-3614

07/1995 - 08/2005

Just Dandy Electric Systems, Inc. – Columbus, OH Title: Owner, Electrician, Estimator, Project Designer...

08/1989 - 07/1995

Safeway Electric Company, Inc. - Columbus, OH

Title: Commercial Electrician, Commercial Division Manager Supervisor: Andy Untch, 614-443-7672

10/1987 - 08/1989

Mansfield Wesleyan Church - Mansfield, OH

Title: Senior Pastor

Supervisor: Rev. Clyde Hanks-District Supervisor

09/1982 - 07/1987

Delphos Wesleyan Church - Delphos, OH

Title: Senior Pastor

Supervisor: Walter Jefferies-District Supervisor

07/1976 - 09/1982

MG Abbott Electric Company - Columbus, OH

Title: Electrician, Field Supervisor Supervisor: Gene Abbott-Owner

07/1972 - 06/1974

US Navy - Quonset Point-RI

Title: ADJ (Aviation Machinist Mate Jet)

Supervisor: Various

## JD White

6048 Astor Avenue Columbus, OH 43232 614-546-7884 jd.white2000@gmail.com

Licensure: Electrical

11/1990

Cities of: Columbus, Elyria, Springfield, Youngstown, Toledo,

Dayton, and others

07/1992

Electrical State of Ohio

02/1996

State of Ohio #EL 14058

Fire Alarm Installer

02/2003

State of Ohio #54.25.3708

**Education:** 06/2005 – 05/2015

Columbus State Community College – Columbus, OH

ATS Electrical System Architecture Designer

09/1982 - 05/1987

Indiana Wesleyan University – Marion, IN Christian Ministries & Biblical Literature

06/1981 - 05/1982

Columbus Technical Institute - Columbus, OH

**General Education Studies** 

06/1973

GED Central High School, Columbus, OH

07/1972 - 08/1973

Naval Aviation Technical Training Center Aviation A School Jet Engines – Memphis, TN Naval Aviation Technical Training Center Aviation B School Helicopters – Quonset Pt, RI

Rating: Aviation Machinist Mate Jet

**References:** Joe Abbott - Previous Employer: 614-837-3614

Barb Tipton – Present Employer: 614-473-1050 Dr. Andy Rezin – Previous Supervisor: 614-551-8378 Doug House – Present Supervisor: 614-287-2576 **Other References Available Upon Request** 

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