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Via U.S. Mail and Email

November 23, 2022

Nevada State Apprenticeship Council
Department of Business & Industry
Office of the Labor Commissioner
Attn: Eileen Woltz, Chief Assistant
3300 W. Sahara Ave., Ste. 225
Las Vegas, NV 89102
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Re: Amended and Supplemental Objections of Electrical Joint Apprenticeship and Training Committee of Southern Nevada ("Electrical JATC") to Proposed Revision of Program Standards, Occupation, etc., Qualifications and Selection Procedures (Solar Photovoltaic Installer Occupation – "Solar Standards") submitted by the Southern Nevada Laborers Training Trust ("Laborers JATC") – Agenda Item No. 10 – Public Meeting Date: Tuesday, November 29, 2022 (9:00 a.m.)

To the Nevada State Apprenticeship Council ("Council"):

I. Summary of Prior Proceedings

The Electrical JATC is the sponsor of an electrician apprenticeship program ("Electrical Program"), including the definitive qualifications for photovoltaic solar installer apprentices. The Electrical Program was originally approved by the Council in 1947 and has subsequently been improved, amended and re-approved over 75 years by this Council to include the current national Electrical Program Standards accepted by this Council. The Electrical JATC's Program is in many ways "parallel" and similar to the Solar Standards proposed by Laborers JATC. The Electrical JATC submitted its original Objections to the Council on August 26, 2022, together with a Response to Possible Similar Program Notice on October 4, 2022.

The Electrical JATC and its Sponsors, IBEW Local 357 ("Local 357") and the Southern Nevada Chapter of the National Electrical Contractors Association ("NECA"), are among the original founders, keepers, custodians and preeminent trainers in the Electrical Industry in Nevada, fully qualified to accurately and competently assess the Proposed Solar Standards of the Laborers JATC.

Below please find the Electrical JATC's Amended and Supplemental Objections to the Proposed Solar Standards submitted by the Laborers JATC (Solar Photovoltaic Installer Occupation). The Proposed Laborers JATC Solar Standards, initially presented (and continued) on August 30, 2022, are

currently listed as Agenda Item No. 10 for the Council's Public Meeting scheduled on Tuesday, November 29, 2022 at 9:00 a.m. ("Meeting"). The Electrical JATC and its representatives will appear in Opposition to the Laborers JATC Solar Standards and request the Council's permission to be heard and Denial of the Laborers JATC Proposal.

II. Statement of Facts

On August 15, 2022, Madison Burnett, Electrical JATC Training Director and Member of the Council, was served electronically with the Agenda for the August 30, 2022 Council Meeting, containing, among other Agenda matters, the Laborers JATC Solar Standards:

> 8. REVISION OF PROGRAM STANDARDS, OCCUPATION, APPRENTICESHIP AGREEMENT, AFFIRMATIVE ACTION PLAN, QUALIFICATIONS AND SELECTION PROCEDURES (*Information/Discussion; For Possible Action*)
> Discussion and possible action on the program sponsor's revisions to its previously approved standards with the following proposed occupations.
> Sponsor: Southern Nevada Laborers Training Trust – NV001950001
> Occupation: Solar Installer – 472231.00

The Council records reflect its prior approval on August 26, 2020 of the Electrical JATC Wireman Apprenticeship and Training Standards ("Electrical JATC Standards"), establishing an apprenticeship program, including approved solar work processes under the preexisting title of "Electrician" (O*NET-SOC Code: 47-2111.00, RAPIDS CODE: 0159). The Electrical JATC Standards were also registered and approved by the Electrical Training Alliance, a national joint training program between the National Electrical Contractors Association and the International Brotherhood of Electrical Workers.

The Electrical JATC Standards have continually defined the acceptable Nevada community standard for parallel and similar occupations, since the Electrical JATC Program's initial Standards approval in 1947. The Electrical JATC Standards constitute the time-tested and historical quality control guidelines for Electrician-related apprenticeship programs in Nevada. The Laborers JATC Solar Standards, as proposed, clearly fall short of multiple community and Electrical Industry requirements and should be denied by the Council to protect the Public.

The Solar Standards of a competent program should contain standards similar and parallel to the Electrical JATC Standards, previously approved by the Council. The Laborers JATC Standards are deficient and flawed, which would likely violate the requirements of the Nevada Apprenticeship Act (Chapter 610 of NRS – "Act", and its related Regulations under NAC Chapter 610 – "Regulations"), for the following substantive and procedural reasons:

III. Objections to Laborers JATC Standards and Applicable Governing Law

1. Incomplete Work Processes, Training Curriculum and Inadequate Training Standards. The Laborers JATC Solar Standards include the establishment of a "Solar Installer" occupation title with an O*NET-SOC Code of 47-2231.00. The O*NET program is a source of occupational information throughout the nation and provides a database of standardized and occupation-specific descriptors. A search of O*NET SOC Codes reveals that the description of Electricians (O*NET-SOC Code 47-2111.00) includes "Solar Photovoltaic Installers" (O*NET-SOC Code 47-2231.00) as a Supplemental

Related Occupation. However, there is no Solar Photovoltaic Installer reference under the Supplemental Related Occupation list for "Construction Laborers" (O*NET-SOC Code 47-2061.00). Accordingly, the Laborers JATC Standards require a class description and occupation that would be new to the Construction Laborer occupation previously registered by the Council as a Nevada Apprenticeship Program. Essentially, the Proposed Solar Standards "cut and paste" the pre-existing qualifications for a Construction Laborer, without recognizing the dangerous nature and instrumentality of electrical power and the competent Curriculum and Training Processes required to make the work safe and professional.

The Schedule of Work Experience attached to the Laborers JATC Standards does not conform to the List of Core and Supplemental Tasks provided through O*NET Online for Solar Photovoltaic Installers, which includes the following:

a. Install photovoltaic (PV) systems in accordance with codes and standards, using drawings, schematics, and instructions.

b. Assemble solar modules, panels, or support structures, as specified.

c. Apply weather sealing to array, building, or support mechanisms.

d. Determine appropriate sizes, ratings, and locations for all system overcurrent devices, disconnect devices, grounding equipment, and surge suppression equipment.

e. Install module array interconnect wiring, implementing measures to disable arrays during installation.

f. Identify methods for laying out, orienting, and mounting modules or arrays to ensure efficient installation, electrical configuration, or system maintenance.

g. Identify electrical, environmental, and safety hazards associated with photovoltaic (PV) installations.

h. Examine designs to determine current requirements for all parts of the photovoltaic (PV) system electrical circuit.

i. Check electrical installation for proper wiring, polarity, grounding, or integrity of terminations.

j. Test operating voltages to ensure operation within acceptable limits for power conditioning equipment, such as inverters and controllers.

k. Identify and resolve any deficiencies in photovoltaic (PV) system installation or materials.

l. Program, adjust, or configure inverters and controls for desired set points and operating modes.

m. Identify installation locations with proper orientation, area, solar access, or structural integrity for photovoltaic (PV) arrays.

n. Visually inspect and test photovoltaic (PV) modules or systems.

o. Install required labels on solar system components and hardware.

p. Determine photovoltaic (PV) system designs or configurations based on factors such as customer needs, expectations, and site conditions.

q. Determine materials, equipment, and installation sequences necessary to maximize installation efficiency.

r. Determine connection interfaces for additional subpanels or for connecting photovoltaic (PV) systems with utility services or other power generation sources.

s. Perform routine photovoltaic (PV) system maintenance on modules, arrays, batteries, power conditioning equipment, safety systems, structural systems, weather sealing, or balance of system equipment.

t. Install active solar systems, including solar collectors, concentrators, pumps, or fans.

u. Activate photovoltaic (PV) systems to verify system functionality and conformity to performance expectations.

v. Demonstrate system functionality and performance, including start-up, shut-down, normal operation, and emergency or bypass operations.

w. Measure and analyze system performance and operating parameters to assess operating condition of systems or equipment.

x. Compile or maintain records of system operation, performance, and maintenance.

y. Diagram layouts and locations for photovoltaic (PV) arrays and equipment, including existing building or site features.

z. Select mechanical designs, installation equipment, or installation plans that conform to environmental, architectural, structural, site, and code requirements ("PV Duties").

The PV Duties of Solar Installers require significant arithmetic skills to properly calculate photovoltaic and electrical loads. None of the descriptive training references in the PV Duties are included in the Laborers JATC Solar Standards. Therefore, the Proposed Laborers JATC Solar Standards and curriculum do not provide the competency based training tasks or proficiencies necessary for a Solar Installer. Laborers are not Electricians and are not qualified to train, supervise, provide or ensure competent PV Duties.

The Act, at NRS 610.144(3)(d), requires that the Proposed Laborers JATC Solar Standards contain provisions for "organized, related and supplemental instruction in technical subjects related to the trade with a minimum of 144 hours for each year of apprenticeship, given in a classroom or...courses of equivalent value or other forms of study approved by the Council." The Proposed Laborers JATC Solar Standards reference (and are confined to) Construction Craft Laborer Areas of Concentration under Appendix B, without detail or specification of competency-based instruction required for a Solar Installer.

For example, in the Proposed Laborers JATC Appendix B (the 300 hour Schedule of Core Work Stills and Related Instruction) **does not contain any Electrical Industry classes or training. None.** The Laborers JATC Related Instruction Schedule does list all of the common Construction Laborer instructional subjects (assemble components, hardware layout, post setting, fence installation, hoisting, rigging, skid steer, identification and maintenance of jobsite tools and equipment, concrete, trenching, excavation, grade checking, clearing, site security, forklift, air tools, aerial lift, landscaping, cutting, burning, drilling, silica, scaffold, demolition, fire watch, traffic control, asbestos, remediation, lead abatement, retaining wall, irrigation, blue print reading, confined space, fall protection, hazard communication, flagger, construction math, disaster site, metric measurement, respiratory protection, site preparation, jobsite safety, environmental and utilities hazards, hand power tools, job equipment operation, job materials, hand signals and fence building), **but no Electrical Industry education or competency training**. Denial of the Proposed Laborers JATC Solar Standards is required by an utter lack of competent training and curriculum.

Historically, the Council has required professional review and approval of curriculum and training procedures. The Laborers JATC Solar Standards contain no comprehensive description of the obvious competency training and Classroom Instruction required by the Act. The Nevada Department

of Education, through a designated curriculum professional, would confirm that the Laborers JATC Solar Standards fail to satisfy, or even approach, the appropriate Electrical Industry standards for curriculum and training of Apprentice. Without training and curriculum approval, the Laborers JATC Solar Standards must be rejected

2. No Qualified Instructors or Supervising Journeymen; Deficient 5910 Form. The Laborers JATC Solar Standards state that "competent" Instructors will be secured and tasked with teaching the Apprentices. However, the 5910 Form and the Laborers JATC Solar Standards do not provide names, qualifications or required electrical competencies of its Instructors. The Construction Laborers are not qualified to competently teach the work processes, related classroom subject and safety elements of the Electrical Industry. The lack of any qualified Electrical Journeymen and Instructors is not only a chilling indication of the lack of competent training capacity, but is magnified by the extremely dangerous (Electrical Industry) occupation at issue. Without clear proof of competent and experienced supervising Electrician Journeymen on-the-job and qualified classroom electrical Instructors, educated in this dangerous Industry, the Council would be authorizing a training environment without appropriate protection and precaution for Solar Installer Apprentices and others.

Electrical and circuit components, when misunderstood or handled inappropriately, would surely cause extensive and serious injury, and even death. The 2020 Nevada occupational injury and illness statistics list total cases at 1,176,340. Construction occupations totaled 69,790 injuries and illnesses. Construction laborers cases totaled 16,590. Electricians cases totaled 7,270. Electrical and electronic equipment mechanics, installers and repairers cases totaled 4,690. Telecommunications injuries, other than line installers, totaled 3.400. Miscellaneous electrical and electronic equipment mechanics, installers and repairers injuries and illnesses totaled 1,110. Telecommunications line installers and repairers cases totaled 2,890. Electrical, electronics and electromechanical assemblers cases totaled 880.

The Act, at NRS 610.110(2)(d)(2), requires the State Apprenticeship Director to assess the adequacy of "the protection of the public interest as related to the subject fields." The Act, at NRS 610.120(2), requires "related and supplemental instruction for apprentices, coordination of instruction with job experiences, and...selection and training of teachers...for that instruction [which is]...the responsibility of the local joint apprenticeship committees." The Act, at NRS 610.144(1)(e)(9) and (14), requires that the Laborers JATC Solar Standards include "Provisions for adequate and safe equipment and facilities for training and supervision and for the training of apprentices in safety on the job and in related instruction" and "assurance of qualified training personnel and adequate supervision on the job." The total lack of qualified and experienced Electrical Industry Journeymen and Instructors, both on and off the job, mandate the Council's Denial of the Laborers JATC Solar Standards[1].

3. Inadequate Safety Ratio. The Act, at NRS 610.144(1)(e)(7), requires a "numeric ratio of apprentices to journeymen consistent with proper supervision, training, safety..." The Council is charged with the "working conditions for apprentices" under NRS 610.140(a). The Regulations, at NAC 610.438(1)(a) (Ratio of Apprentices to Journeymen), requires all "construction industry" programs of apprenticeship to use a jobsite ratio of "not more than one apprentice for the first journeyman at the jobsite and not more than one apprentice for every three additional journeymen." The Regulations, at NAC 610.438(3), authorize the Council to "increase or decrease the ratio set forth in subsection 1 or 2

[1] Guy Snow (Electrical JATC Assistant Training Director) and Matthew Apfel (Electrical JATC Assistant Training Director) are available and intend to comment and discuss competent Electrical Industry training at the Council's Meeting, including issues of Electrical instruction, curriculum, safety and the Electrical JATC Standards.

on its own initiative or at the request of a sponsor if the Council determines that a different ratio is consistent with the proper supervision, training, safety and continuity of employment of an apprentice, and, if applicable, with any provisions of a collective bargaining agreement."

Attachment 1-C of the Laborers JATC Solar Standards defines the ratio of apprentices to journeyworkers to be "One (1) Apprentice for the first journeyworker at the job site and not more than one (1) for every two (2) additional journeyworkers thereafter." The Proposed Laborers JATC Solar Standards do not conform to the Regulation nor the prevailing ratio for the Electrical Industry. See Attachment 1-C, Part 2, Ratio. The Electrical Industry ration standard is competently outlined in the Act and the Electrical JATC Standards approved by the Council. Should a participating employer under the Proposed Laborers JATC Solar Standards employ a work force with a non-conforming jobsite ratio, the employer would clearly violate the prevailing Electrical JATC Standards, the Act and its Regulations. Unless rejected by the Council, the Laborers JATC Solar Standards would unreasonably expose apprentices to unsafe on-the-job training.

The Electrical JATC Standards reflect decades of Electrical Industry safety training review, which were adopted nationally and by the Council to better ensure the safe training of apprentices performing electrical work. The prevailing ratio addresses the extreme danger of the occupation. The Laborers JATC Solar Standards offer no evidence that the decrease or different ratio is consistent with proper supervision, training, safety and continuity of employment of an apprentice. Without a jobsite specific ratio that conforms to the Act and Regulations, and without evidence that the Laborers JATC Solar Standards "workforce ratio" will ensure proper supervision, training and safety, the Proposed Laborers JATC Standards must be rejected and denied.

4. Inexpensive Labor. It is apparent from the Proposed Laborers JATC Solar Standards that the Laborers JATC is attempting to obtain Council approval to circumvent the Electrical JATC training program already in place and to create an inexpensive (unqualified) labor force to raid historically electrical jobs. The Council should not be party to this unlawful and improper circumvention.

IV. Aggrieved Party

The Electrical JATC and its Sponsors, Local 357 and NECA, respectfully request that the Council designate the Electrical JATC is a "party of record" in a "contested" administrative "case". NAC 610.355 established the Electrical JATC's right to submit comments to the Council. In 2007, the Council adopted temporary rules adding the following two (2) subsections to NAC 610.355 (showing its intent regarding the "Standing" of interested, aggrieved programs):

> 3. **Any registered sponsor who elects to comment may request in its written comments that it be allowed to become a party of record to the application for the proposed program of apprenticeship**. If the registered program demonstrates to the Council that it has a **direct and substantial interest** in the **application** for the program of apprenticeship, the **Council shall make** the **registered sponsor a party of record** to the application and shall **provide written notice** to the registered sponsor and the applicant of such action. Once the Council has made a registered sponsor a party of record, the registered sponsor shall receive notice of any matter on the application, including any final action taken on the application by the Council.

4. The **registered sponsor, as a party of record, may appeal** the **Council's final action** on the application to the Labor Commissioner. If the registered [sponsor] does not appeal the Council's final action to the Labor Commissioner, but the applicant for the proposed program does, the registered sponsor shall be given notice of the appeal and shall have a right to participate, as a party of record in the appeal so taken. (emphasis added)

The Electrical JATC, its Sponsors (a Council approved apprenticeship training organization for Electricians and Photovoltaic System Installers) and its participating Employers will be directly and substantially injured by approval of the substandard Proposed Laborers JATC Solar Standards. Council approval would reduce and handcuff the quality of workers and apprentices training (on-the-job and in the classroom) and the statutory safety requirements needed to produce and maintain safe and qualified Photovoltaic System Installation workers on Nevada projects.

The State of Nevada has clearly emphasized this need. Nevada OSHA adopted an Occupational Safety and Health Administration Plan, Standards and Regulations for Photovoltaic System Installation workers and employers. The State has even mandated examination to "test a person's knowledge... consistent with the guidelines, standards and training suggested by the Interstate Renewable Energy Council, the North American Board of Certified Energy Practitioners... to improve the quality of services provided by photovoltaic installers." See NAC 618.459 and Nevada State Plan Occupational Safety and Health Administration, State Plan Standards and Regulations (Photovoltaic System Installation). Tellingly, the Electrical JATC teaches OSHA standards in its Photovoltaic System Installation curriculum, including the NFPA 70E Standards. The Proposed Laborers JATC Solar Standards do not.

The Electrical JATC, its Sponsors, apprentices-in-training, journeymen, the Electrical Industry in Southern Nevada and the Council approved Electrical JATC Standards would be prejudiced, diminished and injured in the event of approval of the Proposed Laborers JATC Solar Standards. As an objecting party and a "parallel program", the Electrical JATC requests that the Council classify the Electrical JATC and its Sponsors as a potentially "aggrieved parties" with "Standing" before the Council, Labor Commissioner, Nevada State and Federal Courts, to allow continued policing and opposition to the non-conforming Proposed Laborers JATC Solar Standards.

V. Conclusions

Based upon the foregoing Objections and Governing Law, the Proposed Laborers JATC Solar Standards must be rejected as deficient and denied by the Council. In addition, the Electrical JATC and its Sponsors should be recognized as "aggrieved parties" in the event that the Proposed Laborers JATC Solar Standards are approved.

Respectfully submitted,

Christensen James & Martin, Chtd.

By: _____
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cc: Electrical JATC