

# STANDARDS OF APPRENTICESHIP

**DEVELOPED BY**

**Northern Nevada Sheet Metal Workers JATC**

FOR THE OCCUPATION OF

**SHEET METAL WORKER**

O\*NET-SOC CODE: 47-2211.00

RAPIDS CODE: 0510HY

APPROVED BY:

State of Nevada  
THE NEVADA LABOR COMMISSIONER AND  
THE NEVADA STATE APPRENTICESHIP COUNCIL  
3340 W. Sahara Avenue  
Las Vegas, NV 89102

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## **FOREWORD**

These Northern Nevada Sheet Metal Workers JATC Apprenticeship Standards have as their objective the training of Sheet Metal Workers skilled in all phases of the industry. The JATC recognizes that in order to accomplish this, there must be well-developed on-the-job learning and supplemental related instruction.

This recognition has resulted in the development of these Apprenticeship Standards. They were developed in accordance with the basic standards recommended by the Office of Apprenticeship and the United States Department of Labor, as a basis from which JATC's can work to establish an apprenticeship training program that meets the particular needs of the area.

## DEFINITIONS

**APPRENTICE:** An individual meeting the qualifications for sheet metal worker described in the Standards of Apprenticeship who has signed an Apprenticeship Agreement with the Joint Apprenticeship Training Committee (JATC) providing for training and related instruction under the Standards, and who is registered with the Registration Agency as a sheet metal worker.

**APPRENTICE ELECTRONIC REGISTRATION (AER):** Is an electronic tool that allows for instantaneous transmission of apprentice data for more efficient registration of apprentices and provides Program Sponsors with a faster turnaround on their submissions and access to their apprenticeship program data.

**APPRENTICESHIP AGREEMENT:** The written agreement between the apprentice and the Joint Apprenticeship and Training Committee setting forth the responsibilities and obligations of all parties to the Agreement with respect to the Apprentice's employment and training under the Standards. Each Apprenticeship Agreement must be registered with the Registration Agency.

**ASSOCIATION:** Shall mean the Sheet Metal, and Air Conditioning Contractors' National Association, Inc. (SMACNA).

**CERTIFICATE OF COMPLETION:** The Certificate of Completion issued by the Registration Agency to those registered apprentices certified and documented as successfully completing the apprentice training requirements outlined in the Standards of Apprenticeship.

**CERTIFICATE OF TRAINING:** A Certificate of Training may be issued by the U.S. Department of Labor's, Office of Apprenticeship Administrator to those registered apprentices documented as successfully completing an approved defined career lattice component of the apprentice training requirements as outlined in the Work Processes Schedule of these Standards of Apprenticeship. *(if applicable)*

**COORDINATOR:** Means the person designated by the local JATC to perform the duties stated in the standards of apprenticeship.

**EMPLOYER:** Any signatory member of the Sheet Metal and Air Conditioning Contractor's National Associations, Inc., or any other contractors having an agreement with the Sheet Metal Workers' International Association.

**JOINT APPRENTICESHIP AND TRAINING COMMITTEE:** The Joint Apprenticeship and Training Committee (JATC) shall consist of equal number of representatives of labor and management appointed by the Union and by the contractor's association, and in whose name the Standards of Apprenticeship are registered.

**JOURNEYWORKER:** A recognized level of competency as recognized within the sheet metal industry for a sheet metal worker. Use of the term may also refer to a sheet metal worker, mentor, technician, specialist or other skilled worker.

or

An individual who has documented sufficient skills and knowledge of a trade, craft or occupation of sheet metal worker, either through formal apprenticeship or through practical on-the-job experience, and formal training. This individual is recognized by his/her employer as being fully qualified to perform the work of the trade, craft or occupation.

**O\*NET-SOC CODE:** The Occupational Information Network (O\*NET) codes and titles are based on the new Standard Occupational Classification (SOC) system mandated by the federal Office of Management and Budget for use in collecting statistical information on occupations. The O\*NET classification, which replaces the DOT, uses an 8-digit O\*NET-SOC code. Use of the SOC classification as a basis for the O\*NET codes ensures that O\*NET information can be readily linked to labor market information such as occupational employment and wage data at the national, State, and local levels.

**ON-THE-JOB TRAINING (OJT):** Tasks learned on-the-job in which the apprentice must become proficient before a completion certificate is awarded. The training must be through structured, supervised work experience.

**PROGRAM SPONSOR:** The local Joint Apprenticeship and Training Committee in whose name the Standards of Apprenticeship will be registered, and which will have the full responsibility for administration and operation of the apprenticeship program.

#### **REGISTERED APPRENTICESHIP PARTNERS INFORMATION DATA SYSTEM**

**(RAPIDS):** The Federal system which provides for the automated collection, retention, updating, retrieval and summarization of information related to apprentices and apprenticeship programs.

#### **REGISTRATION AGENCY:**

State Apprenticeship Council  
c/o THE NEVADA LABOR COMMISSIONER AND  
THE NEVADA STATE APPRENTICESHIP COUNCIL  
3340 W. Sahara Avenue  
Las Vegas, NV 89101  
Phone: 702-486-2738 Fax: 702-486-2660

**RELATED INSTRUCTION:** An organized and systematic form of instruction designed to provide the apprentice with knowledge of the theoretical and technical subjects related to his/her occupation.

**STANDARDS OF APPRENTICESHIP:** This entire document including all appendices and attachments hereto, and any future modifications or additions approved by the Registration Agency.

**SUPERVISOR OF APPRENTICE (S):** An individual designated by the program sponsor to supervise or have charge and direction of an apprentice.

**UNION:** Means any Local Union, affiliated with the Sheet Metal Workers' International Association.

**YOUTH BUILD U.S.A.:** Youth Build is a youth and community development program that simultaneously addresses core issues facing low-income communities: housing, education, employment, crime prevention, and leadership development. In Youth Build programs, low-income young people ages 16-24 work toward their HSE or high school diploma, learn job skills and serve their communities by building affordable housing, and transform their own lives and roles in society.

## **Section I. PROGRAM ADMINISTRATION**

- A. Structure of the Joint Apprenticeship and Training Committee (JATC)
  - 1. The JATC shall be composed of an equal number of members from the contractors' association and from the local union.
  - 2. Members of the JATC shall be selected by the groups they represent.
  - 3. Consultants-- such as those from the Office of Apprenticeship, U.S. Department of Labor, State Apprenticeship Agencies, and vocational schools -- may be requested to sit with the JATC in an advisory capacity.
- B. Administrative Procedures
  - 1. The JATC shall elect a Labor Co-Chairperson and a Management Co-Chairperson and shall determine the time and place of regular meetings.
  - 2. The Chairpersons shall have the power to vote on all questions affecting apprenticeship.
  - 3. The JATC may at any time establish such additional rules and regulations as they may deem to be required for the implementation and operation of its apprentice programs.
  - 4. Nothing contained in the Standards shall in any way abridge the full autonomy of the JATC to supervise and administer its program.
- C. Responsibilities:

All duly indentured apprentices shall be under the supervision and control of the JATC. The JATC shall formulate and make operative such rules and regulations as it may deem necessary, and which do not conflict with the specific terms of the local labor agreement, to govern eligibility, registration, education, transfer, wages, hours and working conditions of the apprentice and the operation of an adequate apprenticeship program to meet the needs and requirements of the trade. Furthermore, the JATC shall be vested with the authority to set up an apprenticeship program in conformity with the national guideline standards recommended by the International Training Institute (ITI) for the Sheet Metal Industry. The JATC shall regulate, supervise and control all matters relating to apprenticeship of the Sheet Metal Worker and be the sole agency within the jurisdiction of the sponsoring local groups governing apprenticeship matters. The JATC shall:

1. Employ an Apprenticeship Coordinator. Experience has proven the need for and the value of a full-time Apprenticeship Coordinator and will ensure that maximum benefits are derived from the training program.
2. Determine the need for new apprentices, with due regard to present and future needs of the trade.
3. Ensure that apprentices are underwritten Apprenticeship Agreements and register the local apprenticeship standards and Agreements with the appropriate Registration Agency.
4. Establish the minimum standards of education and experience required of apprentices.
5. The Apprenticeship Agreement executed between an apprentice and the JATC does not obligate the JATC to actually employ the apprentice; but it does obligate the JATC to see to it that the apprentice is properly trained and supervised by the employer. The Agreement also obligates the JATC to use its best influence to keep the apprentice continuously employed when work is available.
6. Determine the quality and quantity of experience on-the-job, which apprentices should have and to make every effort toward their obtaining it.
7. Hear and adjust all complaints of violation of Apprenticeship Agreements.
8. Arrange tests for determining the apprentice's progress in manipulative skills and technical knowledge.
9. Maintain a record of all apprentices, showing their education, experience, and progress in learning the trade.
10. Make a periodic report covering the work of the JATC to the local employers and the union. (Minutes shall be kept of each meeting of the JATC.)
11. Determine the physical fitness of qualified applicants to perform the work of the trade which may require a medical examination prior to their employment as apprentices and drug test.
12. Advise apprentices on the need for preventing accidents and give instruction with respect to safe construction.

13. Notify the appropriate registration agency of all terminations and cancellations with explanation of causes therefore and notice of completion of Apprenticeship Agreements.
14. Supervise all the provisions of the local standards and be responsible, in general, for the successful operation of the standards by performing the duties here listed by cooperating with public and private agencies which can be of assistance by obtaining publicity to develop public support of apprenticeship and by keeping in constant touch with all parties concerned; apprentices, employers and journeypersons.

## **Section II. EQUAL OPPORTUNITY PLEDGE - 29.5(b) (20)**

The recruitment, selection, employment, and training of apprentices during their apprenticeship, shall be without discrimination because of race, color, religion, national origin, sex, sexual orientation or disability. The sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under Title 29 of the Code of Federal Regulations, part 30, as amended, and all regulations (NRS and NAC 610) on equal opportunity of employment in the State of Nevada.

## **Section III. AFFIRMATIVE ACTION PLAN - 29.5(b)**

If the employer employs five or more apprentices, the local JATC will adopt an Affirmative Action Plan and Selection Procedures as required under Title 29, CFR part. 30. It will be attached as Appendix C.

## **Section IV. QUALIFICATIONS FOR APPRENTICESHIP - 29.5(b) (10)**

A. Applicants shall meet the following minimum qualifications:

1. Age: Shall be at least 18 years of age. An applicant who is sixteen (16) years of age and is participating in a school-to-work program or equivalent and who otherwise meets all qualifications may be rated, ranked and placed on the list of eligible applicants. Such an applicant must be eighteen (18) years of age prior to being accepted into the apprenticeship program.
2. Education: A high school diploma or high school equivalency is required. Applicants must provide an official transcript(s) for high school and post high school education and training. All equivalency records must be submitted if applicable. Applicants must submit a DD-214 to verify military training and/or experience if they are a veteran and wish to receive consideration for such training/experience.

3. Driver's License: Applicants must possess a current valid driver's license. A photocopy of the license shall be included with the application.

4. Physical: Shall be physically capable of performing the essential functions of the apprenticeship program without posing a direct threat to the health and safety of the individual or others. Qualified applicants may be subject to a physical examination or drug screening or both on acceptance into the program and prior to being employed. The cost of the examination and/or drug screening shall be the responsibility of the JATC or the Employer.

## **Section V. SELECTION OF APPRENTICES**

Selection into the apprenticeship program will be in accordance with the selection procedures made a part of these standards. (Appendix D)

## **Section VI. APPRENTICESHIP AGREEMENT -29.5(b) (11)**

After an applicant for apprenticeship has been selected, but before employment as an apprentice or enrollment in related instruction, the apprentice shall be covered by a written apprenticeship agreement (Appendix B) signed by the JATC and the apprentice and approved by and registered with the Registration Agency. Such an agreement shall contain a statement making the terms and conditions of these standards a part of the agreement as though expressly written therein. A copy of each Agreement shall be furnished to the apprentice, the JATC, the Registration Agency, the employer and the Union.

Prior to signing the Apprenticeship Agreement, each selected applicant shall be given an opportunity to read and review these Standards, the JATC's written rules and policies, the Apprenticeship Agreement and the sections of the Collective Bargaining Agreement (CBA) that pertain to apprenticeship.

The Registration Agency will be advised promptly of the execution of each Apprenticeship Agreement and will be given all the information required for registering the apprentice.

## **Section VII. RATIO OF APPRENTICES TO JOURNEYWORKERS- 29.5(b) (7)**

Consistent with proper supervision, training, safety, and continuity of employment throughout the apprenticeship, the ratio of apprentices to journeypersons is established by the current labor agreement, which allows no more than one apprentice for the first journeyperson at the job site and not more than one apprentice for every two additional journeypersons. This ratio should, however, provide the number of future craft workers necessary for the future needs of the industry. The coordinator shall endeavor to maintain a full ratio as determined by the collective bargaining agreement to ensure that an adequate number of sheet metal workers are being trained for market growth.

The ratio of apprentices to journeymen is established by the current labor agreement, which allows no more than one apprentice for the first journeyman at the job site and not more than one apprentice for every two additional journeymen.

## **Section VIII. TERM OF APPRENTICESHIP - 29.5(b) (2)**

The recommended term of the apprenticeship shall be 4 years\* with an OJT attainment of approximately 6,400 hours supplemented by the required hours of related technical instruction, as stated on the Trade Schedule (Appendix A). Full credit shall be given for the probationary period.

An apprentice, who, by exceptional aptitude or as a result of past education and/or practical experience, achieves the desired level of competency in a phase of the apprenticeship program in less than the time designated, may be advanced to the next phase, therefore accelerating the term of their apprenticeship.

\* A year is considered to be 1600 hours of OJT.

## **Section IX. PROBATIONARY PERIOD - 29.5(b) (8), 29.5(b) (19)**

All applicants selected for apprenticeship shall serve a probationary period of not less than the first twelve months (approximately 1600 hours) of on-the-job training.

During the probationary period either the apprentice or the JATC may terminate the Apprenticeship Agreement, without stated cause, by notifying the other party in writing. The records for each probationary apprentice shall be reviewed prior to the end of the probationary period. Records shall consist of periodic reports regarding progression made in both the on-the-job training and related instruction, and any disciplinary action taken during the probationary period.

Any probationary apprentice considered to be unsatisfactory after a review of the probationary period shall have his/her Apprenticeship Agreement canceled before the expiration of the probationary period, by means of written notice to the apprentice and to the registration agency.

Each probationary apprentice evaluated as satisfactory after a review of the probationary period shall be given full credit for the probationary period and continue in the program.

After the probationary period the apprenticeship agreement may be canceled at the request of the apprentice or may be suspended or canceled by the JATC for reasonable cause after documented due notice to the apprentice and a reasonable opportunity for corrective action. In such cases, the JATC will provide written notice to the apprentice and to the Registration Agency for the final action taken. Cancellation of

an apprenticeship agreement during the probationary period shall not have an adverse impact on the sponsor's completion rate.

## **Section X. HOURS OF WORK**

Apprentices shall generally work the same hours as JOURNEYWORKERS, except that no apprentice shall be allowed to work if it interferes with attendance in related instruction classes.

Apprentices who do not complete the required hours of on-the-job training during a given segment shall have the term of that segment extended until the required number of hours of training are accrued. If an apprentice is unable to complete the OJT hours in a six-month period for reasons outside of their control (market conditions, economy, weather, etc.), he/she shall be reviewed by the JATC accordingly. If the apprentice achieves the desired level of competency in that phase of apprenticeship, he/she may be advanced to the next phase, with the required hours of OJT being granted accordingly.

## **Section XI. APPRENTICE WAGE PROGRESSION - 29.5(b) (5)**

Apprentices shall be paid a progressively increasing schedule of wages during their apprenticeship based on the acquisition of increased skill and competence on the job and in related instruction. Before an apprentice is advanced to the next segment of training or to journeyworker status, the JATC shall evaluate all progress to determine whether advancement has been earned by satisfactory on-the-job training and in related instruction classes. In determining whether satisfactory progress has been made, the JATC shall be guided by work experience and related instruction records and reports.

The progressive wage schedule shall be an increasing percentage of the journeyworker wage rate as established in the Collective Bargaining Agreement. The percentages that will be applied to the applicable journeyworker rate are shown on the attached Trade Schedule (Appendix A). In no case will the starting wages of apprentices be less than that required by any minimum wage law which may be applicable.

## **Section XII. CREDIT FOR PREVIOUS EXPERIENCE - 29.5(b) (12)**

The JATC may grant credit towards the term of apprenticeship to new apprentices who demonstrate previous acquisition of skills or knowledge equivalent to that which would be received under these Standards of Apprenticeship. There are three (3) ways to accelerate the program; direct entry, previous experience, demonstration of acquired competencies (skills and knowledge) as verified by the sponsor, where the following requirements are met:

Apprentice applicants seeking credit for previous experience gained outside the supervision of the JATC must submit the request at the time of application and furnish

such records, affidavits, and other certifications to substantiate the claim. The request for credit will be evaluated and a determination made by the JATC while actual on-the-job and related instruction performance can be examined. The amount of credit to be awarded will be determined after reviewing the apprentice's previous work and training/education record and evaluation of the apprentice's performance and demonstrated skill and knowledge during the probationary period.

An apprentice granted credit shall be advanced to the wage rate designated for the period to which such credit accrues.

The granting of advanced standing will be uniformly applied to all apprentices.

### **Section XIII. WORK EXPERIENCE - 29.5(b) (3)**

During the apprenticeship, the apprentice shall receive such on-the-job training and related technical instruction in applicable phase or phases of the occupation necessary to develop the skill and proficiency of a skilled employable journeyworker. The on-the-job training shall be under the guidance of qualified journey workers.

The Work Process(s) for each occupation is covered in the attached Trade Schedule(s) (Appendix A).

### **Section XIV. RELATED INSTRUCTION - 29.5(b) (4)**

During each segment of training each apprentice is required to attend classes in subjects related to the job as outlined in Appendix A. The recommended term of apprenticeship will include no less than 240 hours of related technical instruction for each year of the apprenticeship. Grading procedures for related technical instruction will be included in the Rules, Regulations, and Policies of the JATC. Apprentices agree to take such subjects as the JATC deems advisable. These subjects will be determined by direct counseling with the student and must offer the student an in-depth knowledge of one or more aspects of the industry that provide the best opportunity for future continued employment. The JATC shall secure the instructional aids and equipment it deems necessary to provide quality instruction. In cities, towns or areas having no vocational school or other schools that can furnish related instruction, the apprentice shall be required to take a correspondent course in sheet metal that meets the approval of the JATC and Registration Agency. Apprentices will not be paid for hours spent attending related instruction classes.

The JATC shall inform each apprentice of the availability of college credit through the International Training institute's College Credit Program with the American Council on Education (ACE) and Ivy Tech State College, the George Meany Institute and Truckee Meadows Community College.

Any apprentice who is absent from related instruction classes, unless officially excused, shall satisfactorily complete all class work missed before being advanced to the next

period of training. In cases of failure of an apprentice to fulfill the obligations regarding classroom (or on-the-job) training without due cause, the JATC shall take appropriate disciplinary action and may terminate the Apprenticeship Agreement after due notice to the apprentice and opportunity for corrective action.

The JATC will pay the cost of training the apprentice. The apprentice is not liable for the cost of training, including, but not limited to, costs for classroom facilities, college credits, tuition or instructors. The apprentice is required to pay the cost of drafting kits, welding kits, and tools as required by the Collective Bargaining Agreement. The apprentice may also be required to pay a yearly book deposit.

The apprentice, upon acceptance in the program, must sign a Scholarship Loan Agreement. The agreement states that the apprentice is liable for the cost of training received should he/she become employed by or become a non-signatory contractor.

To the extent possible, related instruction shall be closely correlated with the practical experience and training received on the job. The JATC shall monitor and document the apprentice's progress in related instruction classes.

The JATC shall secure competent instructors whose knowledge, experience, and ability to teach will be carefully examined and monitored. This may be accomplished through such media as; classroom, occupational or industry courses, or electronic media, or other instruction as approved by the administering agency. All apprenticeship instructors shall meet the State Department of Education's requirements for vocational-technical instructors in the state of registration and/or be recognized as a subject matter expert, e.g., journeyworker. The JATC will require the instructors to attend the International Training Institute Training Programs for course work in teaching techniques and adult learning behaviors and learning styles.

#### **Section XV. SAFETY AND HEALTH TRAINING - 29.5(b) (9)**

All apprentices shall receive instruction in safe and healthful work practices both on-the-job and in related technical instruction that are in compliance with the Occupational Safety and Health Standards promulgated by the Secretary of Labor under Public Law 91-596, dated December 29, 1970, and subsequent amendments to the Public Law, or State Standards that have been found to be at least as effective as the Federal Standards.

They shall be taught that accident prevention is very largely a matter of education, vigilance, and cooperation and that they should strive at all times to conduct themselves in their work in such a manner as to ensure their own safety and that of their fellow workers.

#### **Section XVI. SUPERVISION OF APPRENTICES - 29.5(b) (14)**

The employer shall be responsible for the training of the apprentice on the job.

Apprentices shall be under the general supervision of the employer and under direct supervision by a Journeyworker either through direct observation or another form of readily available communication. The supervisor of the apprentice(s) designated by the employer shall, with the advice and assistance of the JATC, be responsible for the apprentice's work assignments' ensuring the apprentice is working under the supervision of a skilled journeyworker, evaluation of work performance, and completion and submittal of progress reports to the JATC.

**Section XVII. RECORDS AND EXAMINATIONS • 29.S(b) (6)**

Each apprentice shall be responsible for maintaining a record of his/her work experience/training on the job and in related technical instruction and for having this record verified by his/her supervisor at the end of each week. The apprentice shall authorize an effective release of their completed related instruction records from the local school authorities to the JATC. The record cards and all data pertaining to the apprenticeship will be the property of the JATC. This record will be included in each apprentice's record file maintained by the JATC.

Before each period of advancement, or at any other time when conditions warrant, the JATC shall evaluate the apprentice's record to determine whether he/she has made satisfactory progress. If an apprentice's related instruction or on-the-job progress is found to be unsatisfactory, the JATC may determine whether the apprentice will continue in a probationary status, or require the apprentice repeat a process or series of processes before advancing to the next wage classification. In such cases, the JATC will initiate a performance improvement plan with the apprentice.

Should it be found that the apprentice does not have the ability or desire to continue the training to become a Journeyworker, the JATC will, after the apprentice has been given adequate assistance and opportunity for corrective action, terminate the Apprenticeship Agreement.

Written records of progress evaluations and corrective and final actions shall be maintained by the JATC. The Registration Agency will be notified of all registrations, credit granted, suspensions for any reason, reinstatements, extensions, completions, and cancellations.

**Section XVIII. MAINTENANCE OF RECORDS • 29.S(b) (22)**

The JATC shall maintain for a period of five (5) years from the date of last action, all records relating to apprentice applications (whether selected or not), the employment and training of apprentices, and any other information relevant to the operation of the program. This includes, but is not limited to, records on the recruitment, application and selection of apprentices, and records on the apprentice's job assignments, promotions, demotions, layoffs, terminations, rate of pay, or other forms of compensation, hours of work and training, evaluations, and other relevant data. The records shall permit identification of minority and female (minority and non-minority) participants. The

records shall be made available on request to the Registration Agency.

**Section XIX. CERTIFICATE OF COMPLETION - 29.5(b) (15)**

Upon satisfactory completion of the requirements of the apprenticeship program as established in these Standards, the JATC shall so certify in writing to the Nevada State Apprenticeship Council and the United States Department of Labor-Office of Apprenticeship and request that a Certificate of Completion of Apprenticeship be awarded to the completing apprentice(s). Such requests shall be accompanied by the appropriate documentation for both the on-the-job training and the related instruction.

Certificate of Training - for any individual who successfully completes one or more of the ITI career paths identified in Appendix "A".

**Section XX. NOTICE TO REGISTRATION AGENCY - 29.5(b) (18)**

The Registration Agency shall be notified promptly of all new apprentices to be registered, credit granted, suspensions for any reason, reinstatements, extensions, completions, and cancellations.

**Section XXI. CANCELLATION AND DEREGISTRATION - 29.5(b) (17)**

These Apprenticeship Standards will, upon adoption by JATC, be submitted to the Registration Agency for approval. Such approval will be acquired before implementation of the program.

The JATC reserves the right to discontinue at any time the apprenticeship program set forth herein. The Registration Agency shall be notified promptly of any decision to cancel the program.

Deregistration of these Standards of Apprenticeship may be initiated by the Registration Agency for failure of the JATC to abide by the provisions herein. Such deregistration will be in accordance with the Registration Agency's regulations and procedures.

Within fifteen (15) days of cancellation of the apprenticeship program (whether voluntary or involuntary), the JATC will notify each apprentice of the cancellation and the effect of same. This notification will conform to the requirements of Title 29, CFR part 29.7.

**Section XXII. AMENDMENTS OR MODIFICATIONS - 29.5(b) (17)**

These Standards of Apprenticeship may be amended or modified at any time by a two-thirds vote by action of the JATC, subject to the approval by the sponsoring employer's association and Union. Such amendments or modifications adopted shall not alter any Apprenticeship Agreement in force at the time without the consent of all parties to the Agreement, and provided further that such amendment or modification shall be submitted to the Registration Agency for approval and registration prior to being placed

in effect. A copy of each amendment or modification adopted will be furnished to each apprentice to whom the amendment or modification applies.

**Section XXIII. ADJUSTING DIFFERENCES/COMPLAINT PROCEDURE**  
**29 CFR 29.S(b) (21), Title 29 CFR 29.30(11)**

The JATC shall have full authority to supervise the enforcement of these Apprenticeship Standards. Its decision **will** be final and binding on the employer, the union, and the apprentice, unless otherwise noted below. If an applicant or an apprentice believes an issue exists that adversely affects their participation in the apprenticeship program or violates the provisions of the Apprenticeship Agreement or Standards, relief may be sought through one or more of the following avenues, based on the nature of the issue:

**Title 29 CFR 29.S(b) (21)**

For issues regarding wages, hours, working conditions, and other issues covered by the Collective Bargaining Agreement, apprentices may seek resolution through the applicable Grievance and Arbitration in the Articles of the Collective Bargaining Agreement.

The JATC shall hear and consider all complaints of violations concerning the Apprenticeship Agreement and the registered Apprenticeship Standards, for which written notification is received within fifteen (15) days of violations. The JATC shall make such rulings as it deems necessary in each individual case and within thirty (30) days of receiving the written notification. Either party to the Apprenticeship Agreement may consult with the Registration Agency for an interpretation of any provision of the Standards over which differences occur. The name and address of the appropriate authority to receive, process and make disposition of complaints is:

State Apprenticeship Council  
c/o THE NEVADA LABOR COMMISSIONER AND  
THE NEVADA STATE APPRENTICESHIP Council  
3340 W. Sahara Avenue  
Las Vegas, NV 89102  
Phone: 702-486-2738 Fax: 702-486-2660

**Title 29 CFR 30.11**

Any apprentice or applicant for apprenticeship who believes that they have been discriminated against on the basis of race, color, religion, national origin, or sex, with regard to apprenticeship or that the equal opportunity standards with respect to his or her selection have not been followed in the operation of an apprenticeship program, may personally or through an authorized representative, file a complaint with the U. S. Department of Labor or, at the apprentice or

applicant's election, with the private review body established by the program sponsor (if applicable).

The complaint shall be in writing and shall be signed by the complainant. It must include the name, address, and telephone number of the person allegedly discriminated against, the program sponsor involved, and a brief description of the circumstances of the failure to apply equal opportunity standards.

The complaint must be filed not later than one hundred eighty (180) days from the date of the alleged discrimination or specified failure to follow the equal opportunity standards, and, in the case of complaints filed directly with the review body designated by the program sponsor to review such complaints, any referral of such complaint by the complainant to the U.S. Department of Labor must occur within the time limitation stated above or thirty (30) days from the final decision of such review body, whichever is later. The time may be extended by the U.S. Department of Labor for good cause shown.

Complaints of discrimination in the workplace may be filed and processed under Title 29, CFR part 30, and the procedures as set forth above.

The JATC will provide written notice of their complaint procedure to all applicants for apprenticeship and all apprentices.

#### **Section XXIV. COLLECTIVE BARGAINING AGREEMENTS**

No provisions in these Standards of Apprenticeship shall be construed as permitting violation of any applicable, State or Federal laws or regulations.

Nothing in these Standards of Apprenticeship shall be interpreted as being inconsistent with existing or subsequent Collective Bargaining Agreements establishing higher standards. In the event of a conflict, the higher standards, whether in the Apprenticeship Standards or the Collective Bargaining Agreement, shall prevail.

#### **Section XXV. TRANSFER OF TRAINING OBLIGATION 29.5(13)**

The JATC may transfer an apprentice from one employer to another to provide continuous employment and to assure the apprentice more complete on-the-job training experience in all aspects of the trade.

The transfer of an apprentice between program sponsors, whether at the will of the apprentice or the initiative of the program sponsor, shall occur without adverse impact on either the apprentice or the program sponsor, where the following requirements are met...

- (i) "At a minimum, the transferring apprentice will be provided a transcript of related training and OJT by the committee or program sponsor"
- (ii) "Transfer is made to a related occupation or within the same occupation and;"
- (iii) "A new apprenticeship agreement is executed where the transfer occurs between program sponsors"

If an employer is unable to fulfill its training obligation due to lack of work or failure to conform to the Standards of Apprenticeship, the JATC will move the affected apprentice(s) to other participating employers.

## **Section XXVI. RESPONSIBILITIES OF THE APPRENTICE**

Apprentices, having read the Standards formulated by the JATC and signed an Agreement with the said Committee, agree to all the terms and conditions contained therein and agree to abide by the Committee's rules and policies, including any amendments, serve such time, perform such manual training, and study such subjects as the Committee may deem necessary to become a skilled Sheet Metal Worker.

In signing the Apprenticeship Agreement, apprentices assume the following responsibilities and obligations under the apprenticeship program:

- A. Perform diligently and faithfully the work of the trade and other pertinent duties assigned by the JATC and the employer in accordance with the provisions of the Standards.
- B. Respect the property of the employer and abide by the working rules and regulations of the employer, union and the JATC.
- C. Attend and satisfactorily complete the required hours in the on-the-job training and in related technical instruction in subjects related to the trade as provided under these standards.
- D. Maintain and make available such records of work experience and training received on the job and in related instruction as may be required by the JATC.
- E. Develop and practice safe working habits and work in such a manner as to assure his/her personal safety and that of other workers.
- F. Work for the employer to who assigned to the completion of apprenticeship, unless reassigned to another employer or the Agreement is terminated by the JATC.
- G. Sign an Educational Loan Agreement with the JATC and the International Training Institute for all training received from the training center.

The apprentice will be provided with a copy of the written rules and policies and will sign an acknowledgment receipt of same. This procedure will be followed whenever revisions or modifications are made to the rules and policies.

**Section XXVII.                      CONSULTANTS**

Advice and assistance in the successful operation of this apprenticeship program will be available at any time, upon request by the JATC, from representatives of the Registration Agency.

## **Section XXVIII. OFFICIAL ADOPTION OF APPRENTICESHIP STANDARDS - SIGNATURES:**

The Northern Nevada Sheet Metal Workers JATC hereby adopts these Standards for Apprenticeship on this \_\_\_\_ Day of \_\_\_\_\_ 2025

Representing the Northern Nevada Sheet Metal Workers JATC:

\_\_\_\_\_  
Signature of JATC Co-Chairperson;

\_\_\_\_\_  
Signature of JATC Co-Chairperson;

\_\_\_\_\_  
Printed Name;

\_\_\_\_\_  
Printed Name;

## **Appendix A**

### **TRADE SCHEDULE FOR: SHEET METAL WORKER O\*NET-SOC 47-2211.00**

This trade schedule is attached to and a part of the Apprenticeship Standards for the above identified occupation.

#### **1. TERM OF APPRENTICESHIP**

The minimum term of the occupation shall be 4\* years with an OJT attainment of approximately 6,400 hours supplemented by the 240 required hours of related technical instruction.

\*A year is considered to be 1600 hours of OJT.

#### **2. RATIO OF APPRENTICES TO JOURNEYWORKERS**

The ratio of apprentices to journeypersons is established by the current labor agreement, which allows no more than one apprentice for the first journeyperson at the job site and not more than one apprentice for every two additional journeypersons. Changes may be made with any provisions of the collective bargaining agreement and approval of the Nevada State Apprenticeship Council.

#### **3. APPRENTICE WAGE SCHEDULE**

Apprentices shall be paid a progressively increasing schedule of wages based on a percentage of the current journeyperson base wage rate, **OR** as per the Collective Bargaining Agreement.

##### **4 Year Term Wage Schedule:**

1<sup>st</sup> 6 Months + 800 hours = 55%  
2<sup>nd</sup> 6 Months + 800 hours = 60%  
3<sup>rd</sup> 6 Months + 800 hours = 65%  
4<sup>th</sup> 6 Months+ 800 hours = 70%

5<sup>th</sup> 6 Months + 800 hours = 75%  
6<sup>th</sup> 6 Months + 800 hours = 80%  
7<sup>th</sup> 6 Months + 800 hours = 85%  
8<sup>th</sup> 6 Months + 800 hours = 90%

#### **4. SCHEDULE OF WORK EXPERIENCE ( See attached Trade Schedule)**

#### **5. SCHEDULE OF RELATED INSTRUCTION (See attached Course Outline)**

## SCHEDULE OF WORK EXPERIENCE Sheet Metal Worker

<b>Core sheet metal work</b>	<b>First half of Apprenticeship Approximate Maximum Hours</b> <b>3,200-3,600</b>
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**Career Paths:** Second half of apprenticeship Choose one or more of the following career paths, subject to approval by the JATC:

	<b>Approximate Maximum Hours</b>
Architectural Sheet metal work. ....	3,200
Residential HVAC \ Service work. ....	3,200
Commercial HVAC work..... (The nature of the work in this path could fulfill the "CORE" hours)	3,200
Industrial sheet metal \ Welding work (blow pipe, ..... Cyclones, bag houses, conveyor systems, etc.)	3,200
Testing and Balancing\ Commissioning\ Filtration. ....	3,200
Sign work.....	3,200
Commercial-Industrial Service work. ....	<b>3,360</b>
Detailing (Developing coordination drawings, Field Measuring, ..... Construction Documents, etc.) This path requires the apprentice to work a minimum of 3,200 hours in HVAC commercial work.	3,200
<b>TOTAL MINIMUM HOURS OF OJT</b>	<b>6,400</b>

## RELATED CLASSROOM INSTRUCTION

### Sheet Metal Worker

**Sheet Metal Curriculum(s)** **Approximate hours**  
**(Choose one or more of the following career paths)**

Sheet Metal Core .....	400
Architectural .....	400
Residential HVAC/Service .....	400
HVAC.....	400
Industrial Sheet Metal (Includes Welding Supplemental) .....	560
Testing and Balancing .....	300
Sign Work .....	400
Commercial-Industrial Service Work .....	400
Detailing .....	350

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**Supplemental Curriculum** **Approximate hours**

The supplemental curriculums are provided in addition to the Core and Career Paths. Select any of the following to enhance the apprentice's employability.

Project Management... ..	200
Foreperson.....	250
Welding.....	250
Blueprint Reading (Plans and Specifications .....	200

## **SCHEDULE OF RELATED INSTRUCTION FOR DIFFERENT CURRICULUMS**

### **Suggested Outline for Core Curriculum**

I.	Trade Overview	XXXVII.	Round Tee Layout
II.	Trade History	XXXVIII.	Round Elbow Layout
III.	Roles and Responsibilities	XXXIX.	Round Taper Layout
IV.	Getting Along at Work	XL.	Roof-Jack Layout
V.	Good Communication	XLI.	Offset Square-to-Round Layout
VI.	Respect	XLII.	Layout of Rectangular Transitions
VII.	Teamwork	XLIII.	Duct-Change Elbow Layout
VIII.	Ethics	XLIV.	Regular and Change-Ogee Offset
IX.	Conflict	XLV.	Round Y-Branch Layout
X.	Survival Skills	XLVI.	Gutters and Ventilators
XI.	Personal Finance	XLVII.	Safety: OSHA 10
XII.	Looking Ahead	XLVIII.	Introduction to OSHA
XIII.	Trade materials	XLIX.	Electrical Safety
XIV.	Properties of Metal	L.	Fall Protection
XV.	Architectural Principles	LI.	Tool Safety
XVI.	Alternative Materials	LII.	Scaffold Safety
XVII.	Hardware of the Craft	LIII.	Stairway and Ladder Safety
XVIII.	Fabrication	LIV.	Personal Protective Equipment (PPE)
XIX.	Sheet Metal Hand Tools	LV.	Materials Handling and Storage
XX.	Seams, Locks and Edges	LVI.	Fire Safety
XXI.	Shop Procedures	LVII.	Hazard Communications
XXII.	Shop Equipment	LVIII.	Safety
XXIII.	Drafting	LIX.	Job-Site Safety
XXIV.	Drafting Tools	LX.	Confined Spaces
XXV.	Lines and Lettering	LXI.	Blood borne Pathogens
XXVI.	Computers and CAD	LXII.	Forklift Safety
XXVII.	Orthographic Projection	LXIII.	Motor Vehicle Safety
XXVIII.	Pictorial Drawings and Sketches	LXIV.	HAZMAT
XXIX.	Plans and Specifications	LXV.	Ergonomics
XXX.	Layout	LXVI.	Welding Safety
XXXI.	Layout Construction	LXVII.	Field Installation
XXXII.	Layout Tools and Terms	LXVIII.	Organizing Tools and Equipment
XXXIII.	Principles of Layout	LXIX.	Materials Handling and Staging
XXXIV.	Parallel-Line Layout	LXX.	Field Installation by Specialty
XXXV.	Radial-Line Layout	LXXI.	Plans, Specifications
XXXVI.	Triangulation	LXXII.	Costing and Bidding

**TOTAL 400 HOURS**

## **Suggested Outline for Architectural Curriculum**

I. Introduction to ASM  
II. Overview Relationships  
III. Safety in ASM  
IV. Career Specialties  
V. Materials  
VI. Properties of Metals  
VII. Characteristics of Metals  
VIII. Gauging of Metals  
IX. Non-Metal Materials  
X. Moisture Control  
XI. Water Movement  
XII. Expansion and Contraction  
XIII. Problems  
XIV. Solutions  
XV. Sealants  
XVI. Functions, Types, and Uses  
XVII. Packaging and Application  
XVIII. Soldering  
XIX. Flashing  
XX. Flashing Overview  
XXI. Types and Installation  
XXII. Seams, Locks, and Edges  
XXIII. Lap and Butt Seams  
XXIV. Interlocking Seams  
XXV. Edges  
XXVI. Fastening and Joining  
XXVII. Fastening Types  
XXVIII. Compatibility  
XXIX. Tools and Equipment  
XXX. Hand Tools  
XXXI. Shop Equipment  
XXXII. Measurement  
XXXIII. Techniques  
XXXIV. Tools  
XXXV. Practical Applications  
XXXVI. Field Installation  
XXXVII. Installation Steps  
XXXVIII. Cleaning Metals

XXXIX. Materials Handling  
XL. Transporting  
XLI. Staging  
XLII. Wall Systems  
XLIII. Overview  
XLIV. Wall Panels  
XLV. Screens and Curtains  
XLVI. Shop Layout and Fabrication  
XLVII. ASM Shop  
XLVIII. Layout  
XLIX. Fabrications  
L. Supports and Substrates  
LI. Structure  
LII. Underlayment  
LIII. Roof Drainage Systems  
LIV. Design Factors  
LV. Downspouts  
LVI. Gutters  
LVII. Additional Parts  
LVIII. Miscellaneous Components  
LIX. Installation  
LX. Roof Systems  
LXI. Overview  
LXII. Metal Panels  
LXIII. Types of Metal Roofs  
LXIV. Roofing Accessories  
LXV. Louvers  
LXVI. Ventilators  
LXVII. Special ASM  
LXVIII. Typical Miscellaneous Work  
LXIX. Restoration and Repair  
LXX. Project Management  
LXXI. Plans and Specs  
LXXII. Scope of Work  
LXXIII. Costing  
LXXIV. Implementation

**TOTAL: 400 HOURS**

## **Suggested Outline for Residential/Service Curriculum**

I.	Role of the Tradesperson	XXVIII.	Design and Installation
II.	The Necessary Qualities	XXIX.	Types and Efficiencies of Duct Systems
III.	Qualities of Residential HVAC Installers	XXX.	Professionalism
IV.	New Construction Installers	XXXI.	Interacting with Clients
V.	Residential Safety	XXXII.	Productivity
VI.	OSHA and Safety Standards	XXXIII.	Working with other Trades
VII.	Safety Equipment	XXXIV.	Continuing Education
VIII.	Avoiding Injuries	XXXV.	Industry Knowledge
IX.	Fall Protection Railings	XXXVI.	Installing New Construction Materials
X.	Environmental Conditions	XXXVII.	General Installation Process
XI.	Electrical Hazards	XXXVIII.	Cutting Penetrations for Ductwork
XII.	Ladder Safety	XXXIX.	Installing Ductwork
XIII.	Lifting	XL.	Ductwork materials
XIV.	HVAC Systems Theory	XLI.	General Duct Installation Guidelines
XV.	HVAC System Breakdown	XLII.	Installing Sheet Metal Duct
XVI.	Goals and Components of an HVAC System	XLIII.	Installing Flexible Duct.
XVII.	An HVAC Systems Treatment of Air	XLIV.	Installing Dryer Vents
XVIII.	HVAC Components	XLV.	Installing Kitchen Vents
XIX.	Furnaces	XLVI.	Installing Bath Fans
XX.	Air Conditioning Units	XLVII.	Installing Combustion Flues and Vents
XXI.	Heat Pumps	XLVIII.	Installing Thermostat Wiring
XXII.	Air Filtering Systems	XLIX.	Installing Laundry Chute
XXIII.	Humidifiers and Dehumidifiers	L.	Installing a Manufactured Fireplace
XXIV.	Thermostats		
XXV.	Heat and Energy Recovery Ventilators		
XXVI.	Zone Controls		
XXVII.	High Velocity Systems		

**TOTAL: 400 HOURS**

## **Suggested outline for Heating, Ventilating and Air Conditioning (HVAC) Curriculum**

I. Introduction to HVAC	XXXIV. Installing Ductwork
II. The Job of the HVAC Technician	XXXV. Hoisting and Rigging
III. The HVAC Curriculum	XXXVI. Installing HVAC Systems
IV. Systems and Components	XXXVII. Retrofitting HVAC Systems
V. HVAC Systems	XXXVIII. Plans and Specifications
VI. Heating Systems	XXXIX. Lessons Learned
VII. Cooling Systems	XL. Contractual Obligations
VIII. Ventilation	XLI. Using Specifications
IX. Heating	XLII. Pick-off/Take-Off Lists
X. Heat Transfer	XLIII. Submittals
XI. British Thermal Units	XLIV. Case Studies
XII. Heat Sources and Systems	XLV. Load Calculation and Duct Design
XIII. Piping	XLVI. Unit Size and Duct
XIV. Installation and Startup	XLVII. Configuration Concepts
XV. Refrigeration	XLVIII. Load Calculation
XVI. Introduction to Cooling	XLIX. Duct Design
XVII. How Refrigerants Work	L. Basic TAB
XVIII. Components and Operation	LI. Introduction to TAB
XIX. Cycling on and Off	LII. Preparing for a TAB Job
XX. Heat Pumps	LIII. Instruments
XXI. Chillers	LIV. Duct Leakage Testing
XXII. Installation and Service	LV. Fluid Flow
XXIII. Chlorofluorocarbons and Startup	LVI. Fans
XXIV. Understanding Electricity	LVII. Centrifugal Pumps
XXV. Introduction to Electricity	LVIII. Commissioning
XXVI. Measuring and Testing	LIX. The Commissioning Process
XXVII. Understanding Automatic Control Systems	LX. Indoor Air Quality
XXVIII. Introduction to Automatic Control Systems	LXI. Energy Retrofitting
XXIX. Pneumatic Controls	LXII. Project Management
XXX. Digital Control Systems	LXIII. Manage the Work
XXXI. Field Installation	LXIV. Manage the People
XXXII. Field Measurements	LXV. Make a Profit
XXXIII. Penetration Layout	LXVI. Closing Out a Project
	LXVII. How to Become a Project Manager

**TOTAL: 400 HOURS**

# **Suggested Outline for Industrial Sheet Metal and Welding Curriculum**

I. Introduction to Industrial Sheet Metal Work	LI. Basic Layout
II. Scope of Work	LII. Fabrication Skills
III. Safety	LIII. Field Skills
IV. Situational Awareness	LIV. Job Sites
V. Job Site Safety	LV. Job Site Protocol
VI. HAZMAT	LVI. Field Installation
VII. Material Safety Data Sheets (MSDS)	LVII. Staging Areas
VIII. Confined Spaces	LVIII. Crew Size/Composition
IX. Helicopter Safety	LIX. Permits
X. Responsibility to the Industry	LX. Shutdowns
XI. Productivity	LXI. Scope of Work
XII. Opportunities: Salesmanship	LXII. Forms
XIII. Materials	LXIII. Scheduling
XIV. Types of Metal Materials	LXIV. Coordinating with Other Trades
XV. Types of Non-Metallic Materials	LXV. Field Measuring
XVI. Weldability	LXVI. Transit
XVII. Shapes	LXVII. Lasers
XVIII. Coatings	LXVIII. Total Station
XIX. Linings	LXIX. Lagging
XX. Tolerances	LXX. System Design Basics
XXI. Fasteners	LXXI. Hood and Duct Design
XXII. Welding	LXXII. Material Properties
XXIII. Welding Symbols	LXXIII. Cubic Feet per Minute (CFM)
XXIV. Code Awareness	LXXIV. Collection
XXV. Pipe Welding	LXXV. System Types
XXVI. Flanges	LXXVI. Conveyors
XXVII. Braze Welding	LXXVII. Separation
XXVIII. Grinding and Finishing Stainless Steel	LXXVIII. Filtration
XXIX. Tools and Abrasives	LXXIX. Seismic Bracing for Ventilation/Exhaust Systems
XXX. Procedures	LXXX. SMACNA Industrial Duct Standards
XXXI. Non-Destructive Testing (NDT)	LXXXI. Industrial Ventilation Manual
XXXII. Shop Skills	LXXXII. Hoisting and Rigging
XXXIII. Power Equipment Operation	LXXXIII. Licensing
XXXIV. Press Brakes	LXXXIV. Rigging Objectives
XXXV. Power Slip Rolls	LXXXV. Managing Risks
XXXVI. Shears	LXXXVI. Wire Rope
XXXVII. Rotary Machines	LXXXVII. Synthetic Rope
XXXVIII. Saws	LXXXVIII. Chains
XXXIX. Plasma Cutters	LXXXIX. Communication
XL. Ironworkers	XC. Overhead Crane
XLI. Rotary Punches	XCI. Jib Crane
XLII. Lathes	XCII. Helicopter
XLIII. CNC Machines	XCIII. Mobile Crane
XLIV. Manual Tools	XCIV. Boom Truck
XLV. Power Tools	XCV. Winches
XLVI. Using Tools Safely	XCVI. Chain Fall
XLVII. Layout Skills	XCVII. Come-a-Long
XLVIII. Parallel Line Development	XCVIII. Glossary of Terms and Definitions
XLIX. Radial Line Development	
L. Triangulation	

**TOTAL: 560 HOURS**

## **Suggested Outline for Testing, Adjusting and Balancing of Air and Hydronic Systems**

- I. A Future in Testing, Adjusting and balancing
- II. General Care of Instruments
- III. Basics of an HVAC System
- III. Airflow
- IV. Psychometrics
- V. Heat and Heat transfer
- VI. Fundamentals of Electricity
- VII. Electrical Measurements
- VIII. Motors and Starters
- IX. Rotational Speed Measurements
- X. Temperature Measurements
- XI. -Air pressure and Air Flow Measurements
- XII. Methods of Air Flow Measurements
- XIII. Duct Systems
- XIV. Automatic Controls
- XV. Fans
- XVI. Fan Laws and V-Belt Drives
- XVII. Preparation for Balancing and TAB Forms
- XVIII. Methods of Balancing: Proportional and Sequential
- XIX. Hydronic Systems
- XX. Hydronic Pressure
- XXI. And Flow Measurements
- XXII. Pumps and Pump Laws
- XXIII. Principles of the Cooling Tower
- XXIV. Hydronic Balancing: Flow Meter Method
- XXV. Hydronic Balancing: Thermal Method
- XXVI. TAB Related Disciplines

**TOTAL: 300 HOURS**

## **Suggested Outline for the Sign Industry Curriculum**

I. Basics	XXVII. Computer Programs
II. Starting Your Apprenticeship	XXVIII. Layout
III. Working with People	XXIX. Basic Layout on Metal
IV. Organizing Your Time	XXX. Parallel Line Layout
V. Measurement and Numbers	XXXI. Parallel Line Layout for Curved Surfaces
VI. Types of Signs	XXXII. Radial Line Layout
VII. Lighting	XXXIII. Triangulation
VIII. Safety	XXXIV. Triangulation for Square Tapers
IX. Field Safety	XXXV. Triangulation for Round Tapers
X. Electrical Safety	XXXVI. Letters
XI. Hazardous Materials	XXXVII. Channel Letters
XII. Emergency Procedures	XXXVIII. Reverse Channel Letters
XIII. Tools and Equipment	XXXIX. H Letters
XIV. Hand Tools	XL. Beveled Letters
XV. Shop Equipment	XLI. Prismatic Letters
XVI. Materials	XLII. Adler Letters
XVII. Types of Metals	XLIII. Soldering and Welding
XVIII. Plastics	XLIV. Soldering
XIX. Other Materials	XLV. Overview of Welding
XX. Fasteners	XLVI. Field Installation
XXI. Drafting	XLVII. Outside Equipment
XXII. Geometric Construction	XLVIII. Ladders and Scaffolds
XXIII. Pictorial Drawing	XLIX. Hoisting
XXIV. Reading Sign Drawings	L. Rigging
XXV. Computers	LI. Moving Signs and Other Heavy Loads
XXVI. Using Computers	LII. Installing Signs

**TOTAL: 400 HOURS**

## **Suggested Outline for Commercial-Industrial Service Work Curriculum**

- I. Tools, Instruments, Tubing and Torch Equipment
- II. Environmental Service Industry
- III. Hand Tools
- IV. Instruments and Gauges
- V. Refrigeration Tubing and Pipe
- VI. Tubing Fabrication Procedures
- VII. Oxy-Acetylene Torch Equipment
- VIII. Filler Alloys and Fluxes
- IX. Preparing Joint - Solder or Braze
- X. Introduction to Refrigeration Principles
- XI. Pressure and Pressure Measurements
- XII. Temperature and Characteristics of Heat
- XIII. Methods of Heat Transfer
- XIV. Heat Content
- XV. Heat Transfer Capacity
- XVI. Pressure/Temperature Relationships
- XVII. T-P Chart and Refrigerant Conditions
- XVIII. Components
- XIX. Low Side Terminology
- XX. High Side Terminology
- XXI. Refrigeration Cycle Operation
- XXII. Major Components-Performance Factors
- XXIII. Refrigeration Systems
- XXIV. Basic Air Conditioning
- XXV. Psychrometric Properties of Air
- XXVI. Comfort Conditions and Room Air Distribution
- XXVII. Filtration-Ventilating-Mixing
- XXVIII. AC Power and Power Factor
- XXIX. Single Phase Transformers
- XXX. Three Phase Transformers
- XXXI. Electrical Service Layouts
- XXXII. Low Voltage and Its Impact on Motors
- XXXIII. Voltage Imbalance and Phase Loss on Three Phase Systems
- XXXIV. Single Phase Induction Motors
- XXXV. Three Phase Induction Motors
- XXXVI. Special Motors
- XXXVII. Servicing Electric Motors
- XXXVIII. Motor Circuits (Protection)
- XXXIX. Line Duty Control Circuit
- XL. Pilot Duty Control Circuit
- XLI. Low Voltage Control Circuit
- XLII. Additional Control Circuit Components
- XLIII. Hermetic Compressor Motors and Start Relays
- XLIV. Hermetic Compressor Motor Protection
- XLV. Servicing Hermetic Motors
- XLVI. Hermetic Motor Burnouts
- XLVII. Diagnosing Compressor Circuit Problems
- XLVIII. Electrical Schematics and Diagrams
- XLIX. Trouble Shooting a System with Electrical Diagrams
- L. Introduction to Electronic Devices
- LI. Basic Electronic Devices
- LII. Circuits
- LIII. Basics of Air Flow and Duct Systems
- LIV. Air Moving Devices
- LV. Air Systems Measurement
- LVI. Refrigerant Circuit Component Removal or Replacement
- LVII. Opening Systems for Repairs
- LVIII. Recovering-Recycling-Reclaiming
- LIX. Diagnostics and Refrigeration Cycle Operation
- LX. System Working Relationships
- LXI. Condensing Units versus Piping Losses
- LXII. Measuring Refrigeration Cycle Vital Signs
- LXIII. Inspections and Measurements
- LXIV. Basic Analysis
- LXV. Component Analysis
- LXVI. System Analysis
- LXVII. Low Capacity Analysis
- LXVIII. Basic Concepts of Electricity
- LXIX. Ohms and Power Law
- LXX. Circuit Layouts
- LXXI. Circuit Faults
- LXXII. Electrical Meter
- LXXIII. Circuit Operating Characteristics
- LXXIV. Alternating Current Circuit Principles
- LXXV. Measuring AC Circuit Values
- LXXVI. Opposition to Current Flow in AC Circuits
- LXXVII. Capacitors and Capacitor Testing
- LXXVIII. Electronic Device Applications
- LXXIX. Electrical Safety for Service Work
- LXXX. Business and Shop Operations
- LXXXI. Service Trucks and Field Procedures
- LXXXII. Regulatory Environment
- LXXXIII. Business Practices
- LXXXIV. Introduction to HVAC Systems and Ventilation
- LXXXV. Air and Its Properties
- LXXXVI. Fans and Air Flow in Duct
- LXXXVII. Duct Systems
- LXXXVIII. Duct Design
- LXXXIX. Outlets and Other Buyout Items
- XC. Dampers
- XCI. Balancing the System
- XCII. Instruments and Air Cleaning
- XCIII. Basic Heating Elements
- XCIV. Hydronic Heating
- XCV. Oil Furnaces
- XCVI. Electric Heating
- XCVII. Alternative Heating Methods and Humidification
- XCVIII. Heat Loads for Heating
- XCIX. Air Conditioning Systems Concepts
- C. Central Air Conditioning Systems
- CI. Chilled Water System Concepts
- CII. Chilled Water Comfort Cooling Systems
- CIII. Systems Using Air Cooled Condensers

CIV. Systems Using Water Cooled Condensers  
CV. Compressor Protection Devices  
CVI. Compressor and Condensing Unit Capacities  
CVII. Refrigerant Line Components  
CVIII. Refrigerant Lines and Capacities  
CIX. Pressure Regulating and Flow Control Valves  
CX. Heat Loads for Cooling  
CXI. Heat Pump Operation  
CXII. Heat Pump Operating Cycles and Efficiency Ratings  
CXIII. Heat Pump Compressors, Motors, and Motor Control  
CXIV. Heat Pump Refrigerant Controls  
CXV. Heat Pump Reversing Valves  
CXVI. Heat Pump Condenser and Evaporator Coils  
CXVII. Heat Pump Defrost  
CXVIII. Heat Pump Heaters and Two Speed Units  
CXIX. Heat Pump Installation  
CXX. Heat Pump Electrical Controls  
CXXI. Heat Pump Startup and Servicing  
CXXII. Safety  
CXXIII. Commercial Systems Application  
CXXIV. Commercial Systems Evaporators  
CXXV. Evaporator Installation and Capacities  
CXXVI. Commercial Defrost Systems  
CXXVII. Additional Commercial System Components  
CXXVIII. Installing Commercial Systems  
CXXIX. Starting, Charging, and Testing Commercial Systems  
CXXX. Servicing Commercial Systems and Components

CXXXI. Leak Testing and Evacuating Commercial Systems  
CXXXII. Servicing Refrigerant Controls, Electric Motor Circuits, Hermetic Compressors, Condenser Controls and Refrigerant Lines  
CXXXIII. Commercial Systems Heat Loads  
CXXXIV. Constant Volume Air Conditioning System  
CXXXV. Constant Volume Variable Temperature Multi-Zone Units  
CXXXVI. Control Systems - Fundamentals  
CXXXVII. Pneumatic Control Systems  
CXXXVIII. Pneumatic Thermostats  
CXXXIX. Pneumatic Auxiliary Devices  
CXL. Pneumatic Damper and Valve Control  
CXLI. Pneumatic System Calibration/Trouble Shooting/Maintenance  
CXLII. Electric Control Systems  
CXLIII. Electronic Control Systems  
CXLIV. Computerized Building Management  
CXLV. Zone Control Systems  
CXLVI. Operation and Service of Zone Control  
CXLVII. Variable Air Volume System  
CXLVIII. VAV Terminal Control (DDC)  
CXLIX. Direct Digital Control Systems  
CL. DDC Install/Service/Diagnostics/Repair  
CLI. Energy Management  
CLII. Timers, Thermostats and Load Controllers  
CLIII. Energy Management - Economizers  
CLIV. Safety

**TOTAL: 400 HOURS**

## **Suggested Outline for Detailing Curriculum**

I. Introduction to Detailing  
II. For Detailing Students  
III. For JATC Training Coordinators  
IV. For Business Owners  
V. Computers  
VI. Inside the Computer  
VII. Microsoft Office Applications for the Detailer  
VIII. Organizing and Sharing Your Work  
IX. Computer Maintenance  
X. Security  
XI. Job Documents  
XII. Construction Management - The Big Picture  
XIII. Workflow and Job Documents  
XIV. Construction Coordination Software  
XV. Third Party Software  
XVI. HVAC System Design Resources  
XVII. Plans & Specifications  
XVIII. Project Correspondence  
XIX. The Writing Process  
XX. Effective Writing  
XXI. Preparing Project Correspondence  
XXII. Field Measurement  
XXIII. Introduction to Field Measurement

XXIV. How Field Measurement Works  
XXV. Field Measurement Tools  
XXVI. On the Job Site  
XXVII. Back at the Shop  
XXVIII. Take-Off Procedures  
XXIX. Introduction to Take-Offs  
XXX. The Take-Off Process  
XXXI. Introduction to AutoCAD  
XXXII. Understanding AutoCAD  
XXXIII. Plan Drawings  
XXXIV. Elevation Drawings  
XXXV. Mechanical Drawings  
XXXVI. Advanced AutoCAD  
XXXVII. Three Dimensional Drawings  
XXXVIII. Industry Standards  
XXXIX. Paper Space  
XL. Plotting  
XLI. Coordination  
XLII. The Coordination Meeting  
XLIII. Construction Coordination Software (CCS)  
XLIV. Advanced Detailing  
XLV. Introduction  
XLVI. Detailing Project Workflow  
XLVII. Review of Detailing  
XLVIII. Value Engineering  
XLIX. Employing Field Measurement  
L. Elementary School Project  
LI. Hospital Project

**TOTAL: 350 HOURS**

### **Suggested Outline for Project Management Curriculum**

- |                             |                                      |
|-----------------------------|--------------------------------------|
| I. The Project Manager      | VI. Quality Control and Productivity |
| II. Construction Documents  | VII. Tools, Equipment, and Materials |
| III. Controlling Costs      | VIII. Legal Considerations           |
| IV. Preparing for a Project | IX. Completing the Project           |
| V. Schedules and Meetings   | X. The Future                        |
| V. Paperwork                |                                      |

**TOTAL: 250 HOURS**

## **Suggested Outline for Foreperson Work Curriculum**

- I. Introduction to Foreperson Work
- II. Self-Evaluation
- III. Successful Foreperson Attributes
- IV. Managing and Leading Others
- V. Project Management Safety Culture
- VI. Human Relations
- VII. Professional Development

TOTAL: 250 HOURS

## **Suggested Outline for Welding Curriculum**

- I. Oxy-Fuel Gas Cutting
- II. Perform Safety Inspections (OFC)
- III. Making Minor External Repairs (OFC)
- IV. Set-Up for Oxy-Acetylene Cutting Operations
- V. Operating Oxy-Fuel Gas Cutting Equipment
- VI. Performing Straight Cutting Operations (OFC)
- VII. Performing Shape Cutting Operations (OFC)
- VIII. Performing Bevel Cutting Operations (OFC)
- IX. Performing Weld Removal Operations (OFC)
- X. Performing Pierce (Hole) Cutting Operations (OFC)
- XI. Shielded Metal Arc Welding (SMAW)
- XII. Perform Safety Inspections (SMAW)
- XIII. Make Minor External Repairs (SMAW)
- XIV. Set-Up SMAW Equipment
- XV. Operate SMAW Equipment
- XVI. Depositing Beads on Flat Plate (SMAW)
- XVII. Depositing Lap Beads on Flat Plate (SMAW)
- XVIII. Gas Metal Arc Welding (GMAW)
- XIX. Perform Safety Inspections (GMAW)
- XX. Make Minor External Repairs (GMAW)
- XXI. Set-Up for Gas Metal Arc Welding Operations
- XXII. Operate Gas Metal Arc Welding Equipment
- XXIII. Deposit Beads on Typical Sheet Metal Joints (GMAW)
- XXIV. Fillet Welds (GMAW)
- XXV. Single V-Groove Welds in the 2G, 3G, and 4G Positions (GMAW)
- XXVI. Groove Welds/Short Circuit Transfer (GMAW)
- XXVII. 1G (Flat) Groove Welds with Spray Transfer (GMAW)
- XXVIII. Plasma Arc Cutting (PAC)
- XXIX. Perform Safety Operations (PAC)
- XXX. Making Minor External Repairs (PAC)
- XXXI. Set-Up for Plasma Cutting Operations
- XXXII. Operate Plasma Arc Cutting Equipment
- XXXIII. Perform Straight Cutting Operations (PAC)
- XXXIV. Perform Shape and Pierce Cutting Operations (PAC)
- XXXV. Metallurgy
- XXXVI. Basic Electricity
- XXXVII. Flux Core Arc Welding (FCAW)
- XXXVIII. Perform Safety Inspections (FCAW)
- XXXIX. Make Minor External Repairs (FCAW)
- XL. Set-Up for Flux Core Operations
- XLI. Operate FCAW Equipment
- XLII. Deposit Beads on Flat Plate (FCAW)
- XLIII. Deposit Lap Beads on Flat Plate (FCAW)
- XLIV. Fillet Welds (FCAW)
- XLV. Groove Welds in 2G, 3G and 4G Positions (FCAW)
- XLVI. Gas Tungsten Arc Welding (GTAW)
- XLVII. Perform Safety Inspections (GTAW)
- XLVIII. Make Minor External Repairs (GTAW)
- XLIX. Basic GTAW Set-Up
- L. Operate GTAW Equipment
- LI. Deposit Beads on Flat Plate (GTAW)
- LII. Deposit Beads on Typical Sheet Metal Joints (GTAW)
- LIII. Carbon Arc Welding (CAW)
- LIV. Perform Safety Inspections (CAW)
- LV. Make Minor External Repairs (CAW)
- LVI. Set-Up CAW Equipment
- LVII. Operate CAW Equipment
- LVIII. Oxy-Acetylene Welding
- LIX. Perform Safety Inspections (OAW)
- LX. Make Minor External Repairs (OAW)
- LXI. Set-Up for Oxy-Acetylene Welding Operations
- LXII. Operate Oxy-Acetylene Welding Equipment
- LXIII. Gas Metal Arc Welding - Pulsed Spray Transfer (GMAW-P)
- LXIV. Perform Safety Inspections (GMAW-P)
- LXV. Set-Up GMAW-P Equipment
- LXVI. Operate GMAW-P Equipment
- LXVII. Gas Tungsten Arc Welding - Pulse (GTAW-P)
- LXVIII. Perform Safety Inspections (GTAW-P)
- LXIX. Set-Up GTAW-P Equipment
- LXX. Operate GTAW-P Equipment and Deposit Beads on Plate with and without Filler Metal

**TOTAL: 250 HOURS**

## **Suggested Outline for Blueprint (Plans Specifications)** **Curriculum**

I. Overview  
II. Construction Documents  
III. The Professionals Who Shape the Documents  
IV. Why Do Plans and Specifications Matter?  
V. Significance of Plans and Specifications  
VI. Types of Firms  
VII. Unique Factors  
VIII. How Are Plans and Specifications Used?  
IX. Plans  
X. Specifications  
XI. Organizing Plans  
XII. Where to Begin  
XIII. Title Sheets  
XIV. Title Blocks  
XV. Civil Drawings  
XVI. Architectural Drawings  
XVII. Structural Drawings  
XVIII. Mechanical Drawings  
XIX. Electrical Drawings  
XX. Industrial and Specialty Drawings  
XXI. Schedules  
XXII. Detail Drawings  
XXIII. The Big Picture Behind a Set of Plans and Specifications  
XXIV. Submitting a Bid  
XXV. The Construction Specifications Institute Master Format 2004  
XXVI. System of Organization  
XXVII. A Closer Look at Plans  
XXVIII. The Basics of Plans  
XXIX. The Procedures for Handling Plans  
XXX. Drawings from Three Different Points of View  
XXXI. Using Coordinates to Understand the Relationships Between Drawings  
XXXII. Coordinates  
XXXIII. Detail Drawings and Detail References  
XXXIV. Lines and Their Meanings  
XXXV. Types of Lines  
XXXVI. Scaled Drawings  
XXXVII. How to Use a Scale  
XXXVIII. A Closer Look at Specifications  
XXXIX. Why We Need Specifications  
XL. How Specifications Are Used  
XLI. Specifications and the Construction Process  
XLII. Using Specifications to Make a Bid  
XLIII. Coordination Meetings  
XLIV. Using Specifications in the Shop and the

Field  
XLV. Using Specifications After Initial Construction is Complete  
XLVI. Conflicts Between Plans and Specifications  
XLVII. The Organization of Specifications  
XLVIII. How to Find Information  
XLIX. Revisions of Plans and Specifications  
L. Addenda  
LI. Documents for Changing Plans and Specifications

**TOTAL: 200 HOURS**

## **Recommended Reference Books**

### **A. International Training Institute for the Sheet Metal and Air Conditioning Industry**

- 1) Sheet Metal CORE Curriculum
- 2) Sheet Metal HVAC Curriculum
- 3) Industrial Sheet Metal and Welding Curriculum
- 4) Sheet Metal Roofing Curriculum
- 5) Project Management
- 6) Electrical Theory
- 7) Sound and Vibration Technology
- 8) Equipment Start Up
- 9) Piping Systems
- 10) Psychometrics
- 11) Electric Motors and Starters
- 12) Indoor Air Quality
- 13) Pumps
- 14) Fans
- 15) Direct Digital Controls
- 16) Variable Air Volume Systems
- 17) Lock-Out Tag Out
- 18) Soldering Curriculum
- 19) Aerial Lift Safety
- 20) Powder Actuated Tool Safety
- 21) Physical Stress Management
- 22) Hoisting and Rigging
- 23) The Sheet Metal Craftsman
- 24) Safety Handbook
- 25) Servicing Environmental Systems, Books 1 through 4
- 26) Testing, Adjusting, and Balancing of Environmental Systems
- 27) Reading Plans and Specifications
- 28) Sheet Metal Welding Workbook I
- 29) Surveying Environmental Systems for Retrofit (Energy Auditing)
- 30) Residential Sheet Metal Workbooks 1 through 2
- 31) Modern Refrigeration & Air Conditioning
- 32) Sheet Metal Foreman's Training
- 33) Asbestos Abatement, Removal and Disposal (AARD) Student Workbook
- 34) Energy Management and Retrofit Environmental Systems
- 35) Sheet Metal Mathematical Textbook
- 36) Architectural Sheet Metal
- 37) Food Service
- 38) Hazardous Communication Textbook
- 39) Sign Industry Textbook with Workbook
- 40) Duct Leakage Manual
- 41) Together We Do It Better
- 42) CSI Master Format 2004

**B. Sheet Metal Worker's International Association**

- 1) Constitution and Ritual of the Sheet Metal Worker's International Association, Washington, DC
- 2) The affiliated Local Union Collective Bargaining Agreement (CBA)

**C. Sheet Metal and Air Conditioning Contractors' National Association, Inc.**

- 1) Accepted Industry Practice for Industrial Duct Construction
- 2) Architectural Sheet Metal Manual
- 3) Building Systems Analysis & Retrofit Manual
- 4) Ducted Electrical Heat Guide for Air Handling Systems
- 5) Energy Systems Analysis & Management Manual
- 6) Fibrous Glass Duct Construction Standards
- 7) Fire, Smoke & Radiation Damper Installation Guide for HVAC Systems
- 8) Guide for Steel Stack Construction
- 9) HVAC Air Duct Leakage Test Manual
- 10) HVAC Duct Construction Standards, Metal and Flexible
- 11) HVAC Duct Systems Inspection Guide
- 12) HVAC Systems Commissioning Manual
- 13) HVAC Systems-Duct Design
- 14) HVAC Systems-Applications
- 15) HVAC Systems-Testing, Adjusting, and Balancing
- 16) IAQ Guidelines for Occupied Building under Construction
- 17) Indoor Air Quality A System Approach
- 18) Managers' Guide for Welding
- 19) Rectangular Industrial Duct Construction Standard
- 20) Residential Comfort System Installation Standards Manual
- 21) Round Industrial Duct Construction Standard
- 22) Seismic Restraint Manual, Guidelines for Mechanical Systems
- 23) SMACNA Master Index of Technical Publication
- 24) Thermoplastic Duct (PVC) Construction Manual

## **Appendix B**

### **NEVADA STATE APPRENTICESHIP AGREEMENT**

## **Appendix C**

### **AFFIRMATIVE ACTION PLAN**

#### **ADOPTED BY**

**Northern Nevada Sheet Metal Workers JATC**

AS REQUIRED UNDER TITLE 29, CODE OF FEDERAL REGULATIONS, PART 30  
AMENDED MAY 12, 1978

DEVELOPED IN COOPERATION WITH THE  
OFFICE OF APPRENTICESHIP  
U. S. DEPARTMENT OF LABOR

APPROVED BY

REGISTRATION AGENCY

DATE APPROVED:

## **Section I. INTRODUCTION**

The JATC enters this Plan with good faith for the purpose of promoting equality of opportunity into its registered apprenticeship program. The local JATC seeks to increase the recruitment of qualified women and minorities for possible selection into the apprenticeship program in the event females and/or minorities are underutilized in the apprenticeship program. The JATC hereby adopts the following nondiscriminatory pledge and Affirmative Action Plan.

This Plan is a supplement to the Apprenticeship Standards. Any changes made by the JATC shall become part of this written Plan, once approved by the State Apprenticeship Council.

## **Section II. EQUAL OPPORTUNITY PLEDGE**

The JATC commits to the following Equal Opportunity Pledge:

"The recruitment, selection, employment, and training of apprentices during their apprenticeship, shall be without discrimination because of race, color, religion, national origin, or sex, sexual orientation or disability. The sponsor will take affirmative action to provide equal opportunity in apprenticeship and will operate the apprenticeship program as required under Title 29 of the Code of Federal Regulations, part 30, as amended, and all regulations on equal opportunity of employment in the State of Nevada."

## **Section III. UTILIZATION AND ANALYSIS, GOALS AND TIMETABLES**

In order to allow positive recruitment and full utilization of minorities and women in the apprenticeship program the JATC pledges to identify outreach efforts under Section IV which will be undertaken. The purpose of the analysis is to determine the minority and women's labor force in the JATC's labor market area. Once the labor force is determined, the JATC can determine if deficiencies exist in terms of underutilization of minorities and/or women in the occupations registered with the Registration Agency. (See attached form)

## **Section IV. OUTREACH AND POSITIVE RECRUITMENT**

The JATC's affirmative action plan includes the following outreach and positive recruitment efforts that would reasonably be expected to increase minority and women's participation in apprenticeship by expanding the opportunity of minorities and women to become eligible for apprenticeship selection.

A. An announcement of apprenticeship openings must be disseminated semi-annually for application to the following agencies/organizations:

- Registration Agency
- Women's Organizations/Centers
- Schools
- Employment Service Centers
- One Stop Centers
- Vocational Education Schools
- Veterans services (VA)
- Other Organizations/Centers (which can effectively reach minorities and women)
- Newspapers (which are circulated in the minority community and among women)
- Social Media and websites

The announcement shall include the nature of the apprenticeship, requirements for admission to apprenticeship, availability of apprenticeship opportunities, sources of apprenticeship applications, and the JATC's equal opportunity policy. Applications will be accepted Monday through Friday, between 8 am and 2 pm, or by appointment, excluding holidays.

- B. Participation in annual workshops conducted by employment service agencies for the purpose of familiarizing school, employment service and other appropriate personnel with the apprenticeship program and current opportunities.
- C. Cooperation with school boards and vocational educational systems to develop programs for preparing students to meet the standards and criteria required to qualify for entry into the apprenticeship program.
- D. Internal communication of the JATC's equal opportunity policy should be conducted in such a manner to foster understanding, acceptance, and support among the JATC's various officers, supervisors, employees, and members, and to encourage such persons to take the necessary action to aid in meeting its obligation under Title 29, CFR part 30.
- E. Engaging in programs such as outreach for the positive recruitment and preparation of potential applicants for apprenticeships; where appropriate and feasible, such programs shall provide for pre-testing experience and training. In initiating and conducting these programs, the JATC may be required. to work with other sponsors and appropriate community organizations. The JATC shall also initiate programs to prepare women and encourage women to enter traditionally male programs.
- F. Encouraging the establishment and utilization of programs of pre-apprenticeship, preparatory trade training, or others designed to afford related work experience or prepare candidates for apprenticeship. The JATC shall make appropriate provisions in its affirmative action plan

to assure that those who complete such programs are afforded full and equal opportunity for admission into the apprenticeship program.

- G. Utilizing journeypersons to assist in the implementation of affirmative action in the apprenticeship program.
- H. Granting advance standing or credit on the basis of previously acquired experience, training, skills, or aptitude for all applicants equally.
- I. Other appropriate action to ensure that the recruitment, selection, employment, and training of apprentices during their apprenticeship shall be without discrimination because of race, color, religion, national origin, or sex (e.g., general publication of apprenticeship opportunities and advantages in advertisements, industry reports, articles, etc., use of present minority and female apprentices and journeypersons as recruiters; career counseling; development of reasonable procedures to ensure employment opportunity, including reporting systems, on-site reviews, briefing sessions)

#### **Section V. ANNUAL REVIEW OF AFFIRMATIVE ACTION PLAN**

The JATC will make an annual review of its current Affirmative Action Plan and its overall effectiveness and institute any revisions or modifications warranted. The review shall analyze (independently and collectively) the affirmative action steps taken by the JATC for evaluating the positive impact, as well as the adverse impact in the areas of outreach and recruitment, selection, employment, and training. They will work diligently to identify the cause and affect those results from their affirmative action measures. The JATC will continually monitor these processes in order to identify the need for a new affirmative action effort and/or deletion of ineffective existing activities). All changes to the Affirmative Action Plan must be submitted to the Registration Agency for registration. The JATC will continually monitor the participation rates of minorities and women in the apprenticeship program in an effort to identify any type of underutilization. If underutilization exists, corrective action will be immediately implemented. The goals and timetables also will be reviewed annually and updated where necessary.

## **Section VI.OFFICIAL ADOPTION**

The Northern Nevada Sheet Metal Workers JATC hereby officially adopts this Affirmative Action Plan on this \_\_\_\_ day of \_\_\_\_\_ 2025

\_\_\_\_\_  
Signature of JATC Co-Chairperson;

\_\_\_\_\_  
Signature of JATC Co-Chairperson;

\_\_\_\_\_  
Printed Name;

\_\_\_\_\_  
Printed Name;

# Appendix D

## **QUALIFICATIONS AND SELECTION PROCEDURES**

### **ADOPTED BY**

### **Northern Nevada Sheet Metal Workers JATC**

DEVELOPED IN COOPERATION WITH THE  
OFFICE OF APPRENTICESHIP  
U. S. DEPARTMENT OF LABOR

### **APPROVED BY**

REGISTRATION AGENCY

---

DATE APPROVED \_\_\_\_\_

The certification of this selection procedure is not a determination that, when implemented, the selection procedure meets the requirements of the Uniform Guidelines on Employee Selection Procedures (41 CFR part 60-3) or 29 CFR part 30. Note that selection procedures may need to be modified to provide reasonable accommodation to qualified individuals with disabilities.

## **Section I. MINIMUM QUALIFICATIONS**

Applicants shall meet the following minimum qualifications:

### **A. Age**

Shall be at least 18 years of age.

An applicant who is sixteen (16) years of age and is participating in a school-to-work program, an apprenticeship readiness program (ARP), or equivalent and who otherwise meets all qualifications may be rated, ranked and placed on the list of eligible applicants. Such an applicant must be eighteen (18) years of age prior to being accepted into the apprenticeship program.

### **B. Education**

A high school diploma or high school equivalency is required. Applicants must provide an official transcript(s) for high school and post high school education and training. All equivalency records must be submitted if applicable.

Applicants must submit a DD-214 to verify military training and/or experience if they are a veteran and wish to receive consideration for such training/experience.

### **C. Driver's License**

Applicants must possess a current valid driver's license.

### **D. Physical**

Shall be physically capable of performing the essential functions of the apprenticeship program without posing a direct threat to the health and safety of the individual or others.

Qualified applicants may be subject to a physical examination or drug screening or both on acceptance into the program and prior to being employed. The cost of the examination and/or drug screening shall be the responsibility of the JATC or the Employer.

## **Section II. APPLICATION PROCEDURES**

A. Applicants shall be accepted throughout the year. All persons requesting an application shall have one made available upon signing the applicant log.

B. All applications shall be identical in form and requirements. The application form shall be numbered in sequence corresponding with the number appearing on the applicant log so that all applications can be accounted for.

Columns will be provided on the applicant log to show race/ethnic and sex identification and the progress by dates and final disposition of each application.

- C. Before completing the application, each applicant will be required to review the Apprenticeship Standards and will be provided with information about the program. If the applicant has any additional questions on the qualifications or needs additional information to complete the application, it will be provided by the JATC.
- D. Receipt of the properly completed application form, along with required supporting documents (proof of age - driver's license, birth certificate or other acceptable documentation; copy of driver's license, copy of high school diploma official transcripts, high school equivalency certificate or other acceptable documentation) will constitute the completed application.
- E. Completed applications will be checked for minimum qualifications. Applicants deficient in one or more qualifications or requirements or making false statements on their application will be notified in writing of their disqualification. The applicant will also be notified of the appeals right available to them. No further processing of the application will be taken.
- F. Applicants who meet the minimum qualifications and submitting the required documents will be notified where and when to appear for the math test.
- G. Applicants meeting the minimum qualifications and submitting the required documents will be notified where and when to appear for the interview upon completing the math test.

### **Section III. SELECTION PROCEDURES**

- A. Applicants meeting the minimum qualifications for application shall be required to complete an assessment. The JATC will schedule the assessment, and all applicants will be notified of the date, time, and place to appear. The assessment score shall be added to the applicant's score for ranking purposes.
- B. Upon completion of the assessment, applicants will be scheduled for the interview and evaluation session. All applicants who have completed the assessment must be notified of the date, time, and place to appear for the interview.
- C. The interviewer(s) will rate each applicant during the interview on each of the factors on the Applicant Rating Form taking into account the information on the application, required documents, if applicable, and the judgment derived

from the interview.

- D. After completing the interview and evaluation of the applicants, the individual rating scores of the interviewer(s) will be added together and averaged and then added to the math score to determine the applicant's final rating.
- E. Applicants will be placed on the appropriate ranking list according to their chosen career path and scores at the evaluation session, with the applicant having the highest score being at the top of that list, and all applicants then listed in descending order based on score.
- F. As openings for the registration of new apprentices occur, the highest ranked applicant will be notified of selection. It shall be the responsibility of the applicant to keep the JATC informed of their current mailing address and phone number(s).
- G. Selected applicants must respond to the notice of selection within forty-eight (48) hours of notice. If applicants cannot be reached by telephone, their names will be passed and a notice sent to their address by "Certified Mail-Return Receipt Requested," to determine if the applicants are still interested. If no response is received in fifteen (15) working days from the written notice, the applicants' name will be removed from the list. Only one certified notice will be mailed.
- H. Qualified applicants remaining on a preceding ranking list will automatically be carried forward on the new ranking list and slotted in wherever their rating score placed them for a period of two (2) years, unless the applicant has been removed from the list by their own written request or following failure to respond to an apprentice opening. Applicants, who were not placed during the two (2) year period, they were on the ranking list, will be required to reapply.
- I. During the two-year period, applicants who feel that their qualifications have improved since their original rating may submit documented evidence of such additional experience or training and request reevaluation and rating at the next regular processing cycle.

## **Section IV. DIRECT ENTRY**

Sponsors who wish to invoke the direct entry provision may do so without regard to the existing selection procedure or minimum qualifications used for entry into the apprenticeship program. Individuals selected into the apprenticeship program via direct entry shall only include those individuals described below who have received training or employment in an occupation directly or indirectly related to the occupation(s) registered in these Standards. The Sponsors will award Credit for Previous Experience in accordance with Section XI of these Standards and will pay the apprentice(s) at the wage rate commensurate with their skill attainment. The Credit for Previous Experience shall be awarded without regard to race, color, religion, national origin or sex. The methods for direct entry shall include the following:

- A. Youth who complete a Job Corps training program in any occupation covered in these Standards, who meet the minimum qualifications of the apprenticeship program, may be admitted directly into the program, or if no apprentice opening is available, the Job Corps graduate may be placed at the top of the current applicant ranking list and given first opportunity for placement. The Sponsor will evaluate the Job Corps training received for granting appropriate credit on the term of apprenticeship. Entry of Job Corps graduates will be done without regard to race, color, religion, national origin, or sex. ***(Note: This is a method of direct entry into the apprenticeship program.)***
- B. Youth who complete a Youth Build U.S.A. training program in any occupation covered in these Standards who meet the minimum qualifications of the apprenticeship program, may be admitted directly into the program, or if no apprentice opening is available, the Youth Build U.S.A. graduate may be placed at the top of the current applicant ranking list and given first opportunity for placement. The Sponsor will evaluate the Youth Build U.S.A. training received for granting appropriate credit on the term of apprenticeship. Entry of Youth Build U.S.A. graduates will be done without regard to race, color, religion, national origin, or sex. ***(Note: This is a method of direct entry into the apprenticeship program.)***

- C. Those who graduate from a Technical Training School in any occupation covered in these Standards that has been reviewed and approved by the Joint Apprenticeship and Training Committee who meet the minimum qualifications of the apprenticeship program, may be admitted directly into the program, or if no apprentice opening is available, the Technical Training School graduate may be placed at the top of the current applicant ranking list and given first opportunity for placement. The Sponsor will evaluate the Technical training received for granting appropriate credit on the term of apprenticeship. Entry of Technical School graduates will be done without regard to race, color, religion, national origin, or sex. ***(Note: This is a method of direct entry into the apprenticeship program.)***
- D. Military veterans who completed military technical training school and/or elect to participate in the Building and Construction Trades Helmets to Hardhats Program or a registered apprenticeship program or related craft while in the military in the occupations registered in the Sheet Metal Industry, may be given direct entry into the apprenticeship program. The JATC shall evaluate the military training received for granting appropriate credit on the term of apprenticeship and the appropriate wage rate. The JATC will determine what training requirements they need to meet to ensure they receive all necessary training for completion of the apprenticeship program. Entry of Military Veterans shall be done without regard to race, color, religion, national origin, or sex. ***(Note: This is a method of direct entry into the apprenticeship program.)***

- E. An employee of a non-signatory employer not qualifying as a journeyperson when the employer becomes signatory, will be evaluated by the JATC in accordance with the procedures for the granting of credit for previous experience, and indentured at the appropriate period of apprenticeship based on previous work experience and related training. Any employee not eligible for receipt of credit must make application in accordance with the normal application procedures. Entry into the program through this method shall be done without regard to race, color, religion, national origin, or sex. **(Note: This is a method of direct entry into the apprenticeship program.)**
- F. Any graduate of the SMART Heroes program for service men and women will receive direct entry and credit of one year towards their term of apprenticeship. And will act as a transfer of apprenticeship from one accepted registered apprenticeship program to another. All Records, transcripts and other pertinent data will be transferred from SMART Heroes program to JATC(Sponsor) accepting said SMART Heroes graduate. (Note: This is a method of direct entry into the apprenticeship program)
- G. Individuals who complete an apprenticeship readiness program (ARP) or preapprenticeship training program approved by the JATC in any related occupation covered in these Standards, may be admitted directly into the program. The JATC will evaluate the training received through the completed program for granting appropriate credit, if any, towards the term of apprenticeship. Entry of ARP and pre-apprenticeship graduates will be done without regard to race, color, religion, sex (including gender identity, sexual orientation, and pregnancy), national origin, age (40 or older), disability, genetic information, or any other class protected by federal, state, or local laws. (Note: This is a method of direct entry into the apprenticeship program).

- H. An individual who signs an authorization card during an organizing effort, wherein **Thirty percent (30%)** or more of the employees have signed authorization cards, whether or not the employer becomes signatory, and is an employee of the non-signatory employer and does not qualify as a journeyman, will be evaluated in accordance with the procedures for the granting of credit for previous experience and indentured by the JATC at the appropriate period of apprenticeship based on previous work experience and related training. Any employee not eligible for receipt of credit must make an application in accordance with the normal application procedures. Entry into the program through this method shall be done without regard to race, color, religion, national origin, or sex. **(Note: This is a method of direct entry into the apprenticeship program).** For such applicants to be considered they must:
1. be employed in the JATC's jurisdiction when the authorization card was signed.
  2. have been employed by the employer before the organizational effort commenced.
  3. have been offered the opportunity to sign authorization cards and be evaluated along with all other employees of the employer.
  4. and provide reliable documentation to the JATC to show they were an employee performing Sheet Metal work prior to signing the authorization card.
- I. An individual who is or who has worked for a signatory or non-signatory employer and who, of his/her own choosing, solicits membership as a journeyman and does not qualify as a journeyman, will be evaluated in accordance with the procedures for granting of credit for previous experience and indentured by the JATC at the appropriate period of apprenticeship based on previous work experience and related training. Any employee not eligible for receipt of credit must make application in accordance with the normal application procedures. Entry into the program through this method shall be done without regard to race, color, religion, national origin, or sex. **(Note: This is a method of direct entry into the apprenticeship program).**

J. Transfer of Apprenticeship. In order to transfer an apprenticeship agreement between two Local Sheet Metal JATC's registered apprenticeship programs, the following requirements must be met (**Note: This is a method of direct entry into the apprenticeship program**):

1. The apprentice must submit a written request for transfer, describing in detail the needs and reasons upon which the request is based.
2. The apprentice's sponsoring JATC must agree to the transfer.
3. The receiving JATC must agree to accept the transfer.
4. The two Sheet Metal Worker Unions must agree to the transfer.
5. The receiving JATC shall have complete access to all apprenticeship records pertaining to the transferring apprentice.
6. Upon being accepted by the receiving JATC, the apprentice's existing apprenticeship agreement shall be terminated.
7. Indenture proceedings shall be initiated with the receiving JATC and the appropriate Registration Agency. The Registration Agency will be provided with all documentation necessary and/or required to verify that the transfer is justifiable.
8. Apprentices accepted for transfer will be given full credit for on-the-job learning experience and related instruction successfully completed while indentured in a Sheet Metal Worker International Association apprenticeship program.
9. The transferring apprentice must:
  - a) Complete an application form, accurately responding to all questions.
  - b) Provide the receiving JATC official documentation pertaining to their participation in the apprenticeship program that they are transferring from.
    - (i) An official copy of all records established with the sponsoring JATC (including a copy of the application form and the apprenticeship agreement properly registered with the Registration Agency) and other information submitted shall be

provided to the receiving JATC. The receiving JATC will examine all documentation submitted before granting permission to transfer. All such records shall become part of the receiving JATC's permanent files.

- K. If there is a recognized shortage of skilled workers in a particular facet of the sheet metal industry, an individual with experience in the recognized area of shortage who meets the minimum qualifications of the apprenticeship program, may be admitted directly into the program. The Sponsor will evaluate the individual for granting appropriate credit on the term of apprenticeship. Entry of individuals into the program based on skilled worker shortages will be done without regard to race, color, religion, national origin, or sex. ***(Note: This is a method of direct entry into the apprenticeship program.)***

## **Section V. COMPLAINT PROCEDURE**

- A. Any apprentice or applicant for apprenticeship who believes that he or she has been discriminated against on the basis of race, color, religion, national origin, or sex, with regard to apprenticeship or that the equal opportunity standards with respect to his or her selection have not been followed in the operation of an apprenticeship program, may personally or through an authorized representative, file a complaint with the U. S. Department of Labor or, at the apprentice or applicant's election, with the private review body established by the local JATC (if applicable).
- B. The complaint shall be in writing and shall be signed by the complainant. It must include the name, address, and telephone number of the person allegedly discriminated against, the JATC involved, and a brief description of the circumstances of the failure to apply equal opportunity standards.
- C. The complaint must be filed not later than 180 days from the date of the alleged discrimination or specified failure to follow the equal opportunity standards, and, in the case of complaints filed directly with the review bodies designated by the JATC to review such complaints, any referral of such complaint by the complainant to the Department must occur within the time limitation stated above or 30 days from the final decision of such review body, whichever is later. The time may be extended by the Department for good cause shown.
- D. Complaints of sexual harassment in the workplace may be filed and processed under Title 29, CFR part 30, and the procedures as set forth above.
- E. The JATC will provide written notice of their complaint procedure to all applicants for apprenticeship and all apprentices.

## **Section VI. MAINTENANCE OF RECORDS**

The JATC will keep adequate records including a summary of the qualifications of each applicant, the basis for evaluation and for selection or rejection of each applicant, the records pertaining to interviews of applicants, the original application for each applicant, information relative to the operation of the apprenticeship program, including *but*, not limited to job assignment, promotion, demotion, layoff, or termination, rates of pay or other forms of compensation or conditions of work, hours including hours of work and, separately, hours of training provided, and any other records pertinent to a determination of compliance with these regulations, as may be required by the Department. The records pertaining to individual applicants, selected or rejected, shall be maintained in such manner as to permit the identification of minority and female (minority and non-minority) participants.

In addition to the above requirements, adequate records shall include a brief summary of each interview and the conclusions on each of the specific factors, e.g., motivation, ambition, and willingness to accept direction which are part of the total judgment. Records shall be maintained for 5 years and made available upon request to the Department of Labor or other authorized representatives (Nevada State Apprenticeship Council).

## **Section VII. OFFICIAL ADOPTION OF SELECTION PROCEDURES**

The Northern Nevada Sheet Metal Workers JATC hereby officially adopts these Selection Procedures on this \_\_\_\_\_ day of \_\_\_\_\_ 2025

\_\_\_\_\_  
Signature of JATC Co-Chairperson;

\_\_\_\_\_  
Signature of JATC Co-Chairperson;

\_\_\_\_\_  
Printed Name;

\_\_\_\_\_  
Printed Name;