

# **Standards of Apprenticeship**

**Developed By**

**The**

**INTERNATIONAL UNION OF PAINTERS**

**AND ALLIED TRADES,**

**DISTRICT COUNCIL #15**

**GLAZIERS UNION LOCAL #2001**

**FINISHING TRADES INSTITUTE**

**Of**

**NEVADA GLAZIERS**

**JOINT APPRENTICESHIP AND TRAINING COMMITTEE**

**And the**

**Independent Signatory Contractors**

**Of**

**Glaziers Union Local #2001**

**For the Occupation of**

**Master Glazier**

**D.O.T. #865.381-010**

**Developed in Cooperation with the U.S. Department Of Labor,**

**Office of Apprenticeship, and approved by the**

**Nevada State Apprenticeship Council**

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## **FOREWORD**

These International Union of Painters and Allied Trades Finishing Trades Institute Apprenticeship Standards have as their objective, the training of all occupations listed in these Standards 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 combined with related instruction.

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

## **DEFINITIONS**

**Apprentice:** Any individual meeting the qualifications described in the Standards of Apprenticeship who has signed an Apprenticeship Agreement with the JATC for training and related instruction under these Standards, and who is registered with the Nevada State Apprenticeship Council.

**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 (JATC), which sets forth the responsibilities and obligations of all parties with respect to the Apprentice's employment and training. Each Apprenticeship Agreement must be filed with the Nevada State Apprenticeship Council.

**Certificate of Completion of Apprenticeship:** The Certificate of Completion of Apprenticeship issued by the Nevada State Apprenticeship Council to those registered apprentices certified and documented as successfully completing the apprentice training requirements outlined in these Standards of Apprenticeship.

**Collective Bargaining Agreement (CBA):** The negotiated agreement between the Union and signatory Employers that sets forth the terms and conditions of employment.

**Consultants:** The JATC may request interested agencies or organizations to designate a representative to serve as a consultant. Consultants may be asked to participate without vote in conferences on special problems affecting the agencies or organizations they represent.

**Coordinator of Training:** An individual designated by the JATC to oversee the day to day operations of the apprenticeship and training program, as well as, but not limited to the program's training records, apprentice and program compliance.

**Cooperating Agencies:** US Department of Labor, Nevada State Apprenticeship Council, Public Schools, Vocational Institutes, and College of Southern Nevada

**Director of Training:** An individual who will work as the liaison to the IUPAT FTI and the Joint Apprenticeship Committee. The Director will inform the committee of changes and recommendations of the IUPAT FTI to be implemented into programs with JATC recommendations.

**Electronic Media:** Media that utilize electronics or electromechanical energy for the end user (audience) to access the content; and includes, but is not limited to, electronic storage media, transmission media, the Internet, extranet, lease lines, dial-up lines,

private networks, and the physical movement of removable/transportable electronic media and/or interactive distance learning.

**Employer:** Means any person or organization employing an apprentice whether or not such person or organization is a party to an Apprenticeship Agreement with the apprentice.

**Employer Group:** Any number of employers who are considered as approved training agents under these Apprenticeship Standards through a negotiated labor agreement, jointly or individually.

**Finishing Trades Institute of Nevada Glaziers JATC:** May also be known in this document as The FTI of Nevada Glaziers JATC and/or JATC

**Hybrid Occupation:** The hybrid approach measures the individual apprentice's skill acquisition through a combination of specified minimum number of hours of on-the-job learning and the successful demonstration of competency as described in a work process schedule.

**Interim Credential:** Means a credential issued by Registration Agency, upon request of the appropriate sponsor, as certification of competency attainment by an apprentice.

**Joint Apprenticeship and Training Committee (JATC):** Those persons designated by the sponsor to act as an agent for the sponsor in the administration of the program. The Committee comprised of an equal number of representatives appointed by the IUPAT District Council #15, Local #2001, a known entity of the International Union of Painters and Allied Trades and the signatory Contractors of the Glaziers Local 2001 in whose name these Standards of Apprenticeship will be registered. May also be referred to in this document as The FTI of Nevada Glaziers JATC and/or JATC.

**Journeyworker:** A worker who has attained a level of skill, abilities and competencies recognized within an industry as having mastered the skills and competencies required for the occupation. (Use of the term may also refer to a mentor, technician, specialist or other skilled worker who has documented sufficient skills and knowledge of an occupation, either through formal apprenticeship or through practical on-the-job experience and formal training.)

**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 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 Learning (OJL):** Tasks learned on-the-job in which the apprentice must become proficient before a completion certificate is awarded. The learning must be through structured, supervised work experience.

**Performance Improvement Plan:** A document created by the JATC, with input from the apprentice, to identify the corrective actions necessary for an apprentice to demonstrate satisfactory progress in his or her apprenticeship training program.

**Probationary Period:** A defined period of time during which the apprenticeship agreement may be terminated by either party of the agreement upon written notice to the Nevada State Apprenticeship Council.

**Program Sponsor:** The FTI of Nevada Glaziers JATC in whose name the local 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 Apprenticeship programs.

**Registration Agency:** The Nevada State Apprenticeship Council (N.S.A.C.) recognized by the U.S. Department of Labor, Apprenticeship Training, Employer and Labor Services.

**Related Instruction:** An organized and systematic form of instruction designed to provide the apprentice with the knowledge of the theoretical and technical subjects related to the apprentice's occupation. Such instruction may be given in a classroom, through occupational or industrial courses, or by correspondence courses of equivalent value, electronic media, or other forms of self-study approved by the Nevada State Apprenticeship Council.

**Standards Of Apprenticeship:** This entire document including all appendices and attachments hereto, and any future modifications or additions approved by the Nevada State Apprenticeship Council.

**Supervisor of Apprentice(s):** An individual designated by the program sponsor to supervise or have charge and direction of an apprentice. May also be known in this document as the Apprenticeship Coordinator.

**Transfer:** A shift of apprenticeship agreement from one program to another or from one employer within a program to another employer within that same program, where there is agreement between the apprentice and the affected apprenticeship committee or program sponsor.

**Union:** The FTI of Nevada Glaziers JATC and/or DC 15 Local Union #2001 and The International Union of Painters and Allied Trades. May also be referred to as 'Labor'.

**Work Processes:** Tasks in which the apprentice must demonstrate proficiency before a completion certificate is granted.

## **I. PROGRAM ADMINISTRATION**

### **Structure of the Joint Apprenticeship and Training Committee**

The International Union of Painters and Allied Trades (IUPAT) Finishing Trades Institute (FTI) of Nevada Glaziers Joint Apprenticeship and Training Committee (JATC), in whose name these Standards of Apprenticeship are registered, shall be composed of an equal number of representatives appointed by management and the union. The JATC shall be comprised of three (3) representatives and one (1) alternate appointed by management and three (3) representatives and one (1) alternate appointed by the union. A Quorum shall consist of no less than one (1) representative of the employers and one (1) representative of the union.

Technical assistance - such as that from the U.S. Department of Labor, Office of Apprenticeship, State Apprenticeship Agencies, and vocational schools – may be requested to advise the JATC.

### **Geographic Area**

These Standards of Apprenticeship shall apply to the following geographical area: The counties of Clark, Lincoln, Nye, and Esmeralda, State of Nevada, Kingman, Arizona, Bullhead City, Needles, Ely, St. George and Cedar City, Utah and such cities and other locales as defined by their charter.

### **Administrative Procedures:**

- A. The JATC will elect a Chairperson and a Co-Chairperson, and will determine the time and place of regular meetings which will take place every month.
- B. The Chairperson and Co-Chairperson will have the power to vote on all questions affecting apprenticeship.
- C. The Chairperson and Co-Chairperson should rotate among members of the JATC.

### **Responsibilities of the Joint Apprenticeship and Training Committee:**

- A. Establishing and registering Standards of Apprenticeship with the Registration Agency, and ensure adherence thereto
- B. Coordinate development of Standards of Apprenticeship with IUPAT/FTI and follow IUPAT/FTI prescribed procedures for approval and recognition of Standards of Apprenticeship prior to submittal to the Registration Agency.
- C. Establishing and maintaining rules and requirements governing the policies, administration, supervision, and training of apprentices. The rules and requirements

- shall be in conformity with the collective bargaining agreement and with these Apprenticeship Standards. A copy of the standards, rules and requirements, and any changes to them, shall be provided to the Registration Agency and the apprentice.
- D. Determining the need for new apprentices, including when apprenticeship openings will be available and selecting apprentices in accordance with the Selection Procedures attached hereto and made a part of the Apprenticeship Standards.
  - E. Initiating and signing Apprenticeship Agreements for apprentices and forwarding them to the Registration Agency for approval and registration. In addition, The FTI of Nevada Glaziers JATC will notify the Registration Agency, IUPAT/FTI, and other appropriate parties of the cancellation, suspension, extension, reinstatement, or completion of apprentices.
  - F. Arranging for apprentices to get the required on-the-job learning (OJL) and the Related Technical Instruction (RTI) that will provide them with the diversity of training delineated in the attached Work Process Schedule and Related Instruction Outline.
  - G. Monitoring and evaluating apprentice's progress, including the review of apprentice's records to insure apprentices are fulfilling their responsibilities under the program. The FTI of Nevada Glaziers JATC will review, approve and document all apprentice actions including hours, content, and progress of training on-the-job and in related instruction; wage progressions; disciplinary actions; evaluations; corrective action plans; successful completions; cancellations; and any other performance or attendance-related issues.
  - H. Hearing and adjusting complaints regarding Apprenticeship Agreement violations.
  - I. Certifying the apprentice has completed both the required OJL and RTI, and submitting such certification to the Registration Agency and the IUPAT/FTI with the request for issuance of the Certificate of Completion of Apprenticeship.
  - J. Annually review the Affirmative Action Plan, good faith efforts, and Selection Procedures. Updating the Affirmative Action Plan and goals/timetables, and modifying the Affirmative Action Plan and Selection Procedures as a result of the review, when appropriate. Such review will include an analysis of the JATC's success in meeting its goals, and the good faith effort made, and the impact each element of the Affirmative Action Plan and Selection Procedure had on meeting its goal.
  - K. Maintaining all records relating to the recruitment, selection, employment and training of apprentices for a minimum of five years from the last date of action.
  - L. Administering and operating a continuing education program for Journeyworkers
  - M. Ensuring that all funds for the operation of the apprenticeship and training programs are held in a jointly administered Trust Fund established by the local Collective Bargaining Agreement and operated as set forth in the Declaration of Trust and in accordance with applicable law.
  - N. Providing the apprentices with a copy of written rules and policies and the apprentice will sign an acknowledgement receipt of same. This procedure will be followed whenever revisions or modifications are made to the rules and policies.



**II. EQUAL OPPORTUNITY PLEDGE**

The recruitment, selection, employment, and training of apprentices during their apprenticeship, shall be written without discrimination because of race, color, religion, national origin, disability, sex, age, or sexual orientation. 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, and the Nevada state plan.

**III. AFFIRMATIVE ACTION PLAN**

If the sponsor registers five or more apprentices, the JATC will adopt an Affirmative Action Plan and Selection Procedures as required under Title 29 CFR Part 30 and the Nevada EEO Plan. It will be attached as Appendix C.

**IV. QUALIFICATIONS FOR APPRENTICESHIP**

Applicants shall meet the following minimum qualifications:

**A. Age**

All applicants must be at least eighteen (18) years of age. Applicants are required to submit reliable proof of age (e.g., a driver's license, birth certificate or other acceptable documentation).

**B. Education**

All applicants shall possess sufficient educational knowledge to satisfactorily complete the on-the-job training and related technical instruction. Applicants must provide proof that a high school diploma or GED has been awarded at the time of application.

**C. Physical**

All applicants shall be physically capable of performing the essential functions of the Glazing Trade without posing a direct threat to the health and safety of themselves or any other individuals, with reasonable accommodations.

**D. Citizen**

All applicants must be a Legal Citizen of the USA or Legal Alien authorized to work in the USA by the U.S. Citizenship and Immigration Services (USCIS). Proof must be shown at the time of application.

### **E. Transportation**

All applicants must have adequate transportation to attend OJL and RTI classes.

### **F. Ability**

All applicants must satisfy the Committee that they have the ability and aptitude to master the rudiments of the trade based on oral interview, written documentation submitted by the applicant, and evaluation rankings.

### **G. Military Experience**

All 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 and/or VA benefits.

### **H. Additional Requirements for Master Glazier Apprentice**

All applicants for the Master Glazier Apprenticeship shall have successfully passed the FTI of Nevada Architectural Glaziers Joint Apprenticeship and Training Committee's Architectural Apprentice Program.

Applicants may also apply for the program provided they have documented evidence of 2 years minimum commercial glazing experience that is verifiable through paycheck stubs, W2's or verifiable letters of recommendation.

In addition all applicants must successfully pass the Architectural Competency examination with a minimum score of 70%. These requirements are in addition to all other requirements for acceptance.

In the event of acceptance, placement will be the sole decision of the Board of Trustees and their decision will be final.

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

## **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).

## VI. APPRENTICESHIP AGREEMENT

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 FTI of Nevada Glaziers JATC and the apprentice, and approved by and registered with the Registration Agency. Such 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 Apprenticeship Agreement will be furnished to the apprentice, the JATC, the Registration Agency, the employer and the Union, if appropriate.

An additional copy of the Apprenticeship Agreement will be provided to the Veterans State Approving Agency for those veteran apprentices desiring access to any benefits to which they may be entitled.

Prior to signing the Apprenticeship Agreement, each selected applicant will be given an opportunity to read and view the 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 notified within ten (10) days of the execution of each Apprenticeship Agreement and will be given all of the information required for registering the apprentice

## VII. RATIO OF APPRENTICES TO JOURNEYWORKERS

A numeric ratio of apprentices to journeyworkers consistent with proper supervision, training, safety, and continuity of employment and applicable provisions in collective bargaining agreements, except where such ratios are expressly prohibited by the collective bargaining agreements. The ratio of apprentices to glazier journeyworkers will be one (1) apprentice to three (3) glazier journeyworkers or a fraction thereof.\*

*\*Fraction thereof is defined as "The employer may place one apprentice on the jobsite for one, two or three glazier journey workers; two apprentices for four, five or six journey workers; three apprentices for seven, eight and nine journey workers, and follow this procedure thereafter." The ratio of apprentices to journeymen employed in any occupation on a job site must not be greater than the ratio approved for the employer as to the entire work force pursuant to program registered with the council. (NAC 610.438)*

## **VIII. TERM OF APPRENTICESHIP**

The term of the apprenticeship shall be a period of reasonably continuous employment, including the probationary period, as prescribed in the OJL schedule found within Appendix A of these Standards. The Master Glazier Apprenticeship shall be a combination of 4000 hours of OJL and a minimum of 288 hours of RI. In the event the apprentice is required to work overtime, he/she shall receive credit on his term of apprenticeship for only the actual hours worked.

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 with the formal approval of the JATC. The determination of such advancement is outlined in the competencies for Master Glazier. It is the responsibility of the FTI of Nevada Glaziers JATC to confirm that all competencies have been satisfactorily met, within the guidelines of these standards.

## **IX. PROBATIONARY PERIOD**

Each applicant selected for apprenticeship shall serve a probationary period of no less than the first ninety (90) calendar days from the commencement of OJL.

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 by the JATC prior to the end of the probationary period. Records may consist of periodic reports regarding progression made in both the OJL and RI and any disciplinary action taken during the probationary period. Any probationary apprentice evaluated as satisfactory after such review shall be given full credit for the probationary period and continue in the program.

Prior to the end of the probationary period, the JATC must act on each probationary apprentice to end the probation, extend the probation, or cancel the apprenticeship agreement. All interested parties shall be notified of such action.

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 of the final action taken.

**X. HOURS OF WORK**

Apprentices will generally work the same hours as journeyworkers except that no apprentice will be allowed to work overtime or out of town if it interferes with attendance in related instruction classes.

Apprentices who do not complete the required hours of OJL during a given segment will have the term of that segment extended until the required number of hours of training are accrued.

**XI. APPRENTICE WAGE PROGRESSION**

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

The progress wage schedule shall be an increasing percentage of the journey worker wage rate as established in the collective bargaining agreement, but never less than the federal minimum wage for the beginning apprentice. The percentages that will be applied to the applicable journey worker rate are shown on the attached Apprenticeship Agreement (Appendix B) and Wage Schedule (Appendix A).

## **XII. CREDIT FOR PREVIOUS EXPERIENCE**

The FTI of Nevada Glaziers 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.

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 such materials as may be required to document their previous employment, training, and experience. Such applicants will be required to demonstrate their hands-on proficiencies as well as be subject to a formal written and/or electronic assessment(s) to substantiate the claim. The FTI of Nevada Glaziers JATC will utilize standardized assessment instruments provided by the IUPAT/FTI to determine the knowledge, skills, and competencies of apprentice applicants seeking credit for previous experience.

Applicants requesting such credit who are selected into the apprenticeship program shall start at the beginning wage rate. The request for credit will be evaluated and a determination made by the JATC during the probationary period when actual on-the-job and related instruction performance can be examined. Prior to completion of the probationary period, the amount of credit to be awarded will be determined after review of 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 level to which such credit accrues. The granting of advanced standing will be uniformly applied to all apprentices. The Registration Agency will be advised of any credit granted and the wage rate to which the apprentice is advanced.

Applicants who successfully complete the application process for apprenticeship and have successfully completed the Glazier Job Corps Program or are entering through recognized preparatory programs (including Helmets to Hardhats Program, and other Veteran Programs) shall be evaluated in terms of their prior experience through hands-on assessments as well as be subject to a formal written and/or electronic assessment(s). They will then be placed within the program at the point that corresponds with their proven experience.

### **XIII. WORK EXPERIENCE**

During the apprenticeship the apprentice shall receive such OJL and RI in all phases of the chosen occupation necessary to develop the skill and proficiency of a skilled journeyworker. The OJL shall be under the direction and guidance of the supervisor's of the apprentice.

### **XIV. RELATED INSTRUCTION**

During each segment of training, apprentices are required to attend classes in subjects related to their chosen occupation as outlined in Appendix A. A minimum of 144 hours of RI is required annually during the term of apprenticeship. Apprentices agree to take such courses as the JATC deems advisable. The JATC will secure the instructional aids and equipment it deems necessary to provide quality instruction. Apprentices will not be paid for hours spent attending RI classes unless approved for payment by the FTI of Nevada Glaziers JATC.

If applicable, the JATC will inform each apprentice of the availability of college credit through the College of Southern Nevada.

Any apprentice who is absent from related instruction classes, unless officially excused, will satisfactorily complete all course work missed before being advanced to the next period of training. In cases of failure of an apprentice to fulfill the obligations regarding related instruction (or OJL) without due cause, the JATC will take appropriate disciplinary action and may terminate the Apprenticeship Agreement after due notice to the apprentice and opportunity for corrective action.

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

### **INSTRUCTOR QUALIFICATION**

The JATC will secure competent instructors whose knowledge, experience, and ability to teach will be carefully examined and monitored.

- A. Instructors shall be journeyworkers or equivalent subject matter experts who possess advanced levels of knowledge about the crafts and/or topics for all subjects to be taught.
- B. Instructors shall have been trained in teaching techniques and adult learning styles, as evidenced by at least one of the following:
  - 1. Instructors shall have successfully completed IUPAT/FTI training in teaching techniques and adult learning styles;
  - 2. Instructors shall have successfully completed course(s) equivalent to the IUPAT/FTI programs cited in paragraph (1) above provided by an accredited institution; or National Labor College; or Marshall Community and Technical College; or
  - 3. An instructor who has not completed either the IUPAT/FTI training cited in paragraph (1) above or equivalent training cited in paragraph (2) above shall be allowed a period not to exceed 18 consecutive months from the effective date of these standards or the beginning of his or her duties to instruct apprentices, whichever is later, to meet these requirements.
- C. Instructors shall remain current in their industry knowledge and adult education knowledge referenced in A and B of this section. Industry recognized certification programs may satisfy this requirement.

**XV. SAFETY AND HEALTH TRAINING - Title 29 CFR 29.5(b)(9)**

All applicants 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, as amended, by Public Law 101-552, Section 3101, November 5, 1990 as amended, by Public Law 105-198, July 16, 1998 as amended, by Public Law 105-241 September 29, 1998 or State Standards that have been found to be at least as effective as the Federal Standards.

Apprentices will 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 to ensure their own safety and that of their fellow workers.



## **XVI. SUPERVISION OF APPRENTICES**

The JATC will be responsible for the training of the apprentice on the job. Apprentices will be under the general supervision of the JATC and under the direct supervision of the journeyworker to whom they are assigned. The supervisor of apprentice(s) designated by the employer will be responsible for the apprentice's work assignments, and will ensure the apprentice is working under the supervision of a skilled journeyworker, evaluation of performance, and completion and submittal of progress reports to the JATC. No apprentice will be allowed to work without direct journeyworker supervision.

## **XVII. RECORDS AND EXAMINATIONS**

Each apprentice shall be responsible for maintaining a record of his/her work experience/training on the job (OJL) and in related technical instruction (RI) and for having this record verified by his/her supervisor at the end of each week. The apprentice will authorize an effective release of their completed related instruction records from the local school authorities to the JATC. The record cards and all data, written records of progress evaluations, corrective and final actions pertaining to the apprenticeship, will be maintained by and 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 to determine whether he/she has made satisfactory progress. If the 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 to 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 of the chosen trade, the FTI of Nevada Glaziers JATC will, after the apprentice has been given adequate assistance and opportunity for corrective action, terminate the Apprenticeship Agreement.

## **XVIII. MAINTENANCE OF RECORDS**

The FTI of Nevada Glaziers JATC, in whose name these Standards of Apprenticeship are registered, shall maintain for a period of five (5) years from the date of last action, whether

it be Disciplinary, Suspension, Cancellation or Completion, 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, rates of pay and other forms of compensation, hours of work and training, evaluations, and other relevant data.

The records will permit the identification of minority and female (minority and non-minority) participants. These records will be made available upon request to the Nevada State Apprenticeship Council.

**XIX. CERTIFICATE OF COMPLETION OF APPRENTICESHIP**

Upon satisfactory completion of the requirements of the apprenticeship program as established in these Standards, the FTI of Nevada Glaziers JATC shall so certify in writing to the Nevada State Apprenticeship Council and the Department of Labor Office of Apprenticeship requesting 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 as may be requires by the Registration Agency.

**XX. NOTICE TO REGISTRATION AGENCY**

The Nevada State Apprenticeship Council will be notified within ten (10) days of all new apprentices to be registered, credit granted, suspensions for any reason, reinstatements, extensions, modifications, completions, cancellations, and terminations of Apprenticeship Agreements and causes.

**XXI. CANCELLATION AND DEREGISTRATION**

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

The FTI of Nevada Glaziers JATC reserves the right to discontinue at any time the apprenticeship program set forth herein. The Nevada State Apprenticeship Council and the IUPAT/FTI shall be notified promptly in writing of any decision to cancel the program.

Deregistration of these Standards of Apprenticeship may be initiated by the Nevada State Apprenticeship Council for failure of the FTI of Nevada Glaziers JATC to abide by the provisions herein. Such deregistration will be in accordance with the Nevada State Apprenticeship Council regulations and procedures.

Within fifteen days of cancellation of the apprenticeship program (whether voluntary or involuntary), the FTI of Nevada Glaziers JATC will notify the IUPAT/FTI and each apprentice of the cancellation and the effect of same. This notification will conform to the requirements of **Title 29 CFR Part 29.8 and NAC 610.365.**

## **XXII. AMENDMENTS OR MODIFICATIONS**

These Standards of Apprenticeship may be amended at any time by the FTI of Nevada Glaziers JATC provided that no amendment or modification adopted shall alter any Apprenticeship Agreement in force at the time without the consent of all parties. Such amendment shall be submitted to the Registration Agency for approval and registration prior to being placed in effect. Such submission shall include an explanation of the reason for the amendment, be it regulatory, programmatic, or other. A copy of each amendment or modification adopted will be furnished to each apprentice to whom the amendment or modification applies.

## **XXIII. ADJUSTING DIFFERENCES/COMPLAINT PROCEDURE**

The FTI of Nevada Glaziers JATC shall have full authority to supervise the enforcement of these Apprenticeship Standards. Its decision will be final and binding on the employer, the Local Union, and the apprentice, unless otherwise noted below.

If an applicant or an apprentice believes an issue exists that adversely affects his/her 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:

- A. For issues regarding wages, hours, working conditions, and other issues covered by the collective bargaining agreement (CBA), apprentices may seek resolution through the applicable Grievance and Arbitration procedures contained in the Articles of the CBA.
- B. The FTI of Nevada Glaziers JATC shall hear and resolve 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:

Glaziers Apprenticeship Coordinator

Local Union #2001

1701 Whitney Mesa #106

Henderson, NV 89014

If the apprentice believes the JATC did not resolve the issue to his/her satisfaction, the apprentice may appeal to the Registration Agency

- C. Any apprentice or applicant for apprenticeship who believes he or she has been discriminated against on the basis of race, color, religion, national origin, disability, sex or sexual orientation 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 the apprenticeship program, may personally or through an authorized representative contact the Federal Equal Employment Opportunity Commission (EEOC), or the Nevada State Apprenticeship Council at Nevada Dept of Labor State Apprenticeship Council 555 E Washington Ave. Suite 4100 Las Vegas, NV 89101.

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 the equal opportunity standards.

The complaint must be filed no 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 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 Registration Agency must occur within the time limitation stated above or thirty (3) days from the final decision of such review body, whichever is later. The time may be extended by the Registration Agency for good cause shown.

Complaints of discrimination in the apprenticeship program 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 its complaint procedure to all applicants for apprenticeship and all apprentices.

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

Nothing in this part or in any apprenticeship agreement will operate to invalidate:

- A. Any apprenticeship provision in any collective bargaining agreement between employers and employees establishing higher apprenticeship standards; or
- B. Any special provision for veterans, minority persons, or women in the standards, apprentice qualifications or operation of the program, or in the apprenticeship agreement, which is not otherwise prohibited by law, Executive Order, or authorized regulation.

#### **XXV. TRANSFER OF AN APPRENTICE AND TRAINING OBLIGATION**

The transfer of an apprentice between apprenticeship programs and within an apprenticeship program must be based on agreement between the apprentice and the affected apprenticeship committee or program sponsors, and must comply with the following requirements:

- A. The transferring apprentice must be provided a transcript of related instruction and on-the-job learning by the committee or program sponsor;
- B. Transfer must be to the same occupation; and
- C. A new apprenticeship agreement must be executed when the transfer occurs between the program sponsors.

In the event the Sponsor is unable to fulfill its obligation under the Apprenticeship Agreement due to lack of work or failure to conform to these standards, the Sponsor will make every effort to refer the apprentice with his/her consent to another employer, Registration Agency, or One Stop for placement into another registered apprenticeship program. This will provide the apprentice an opportunity for continuous employment and completion of his/her apprenticeship program. The apprentice must receive credit for the training already satisfactorily completed.

In the event an employer is unable to fulfill his/her obligation under the Apprenticeship Agreement, the apprentice may be transferred to another same-occupation Approved Training Agent operating within this same program. Such transfers are subject to the consent of the apprentice and of the JATC. The JATC has the authority to transfer any apprentice from one employer to another to insure that all OJL processes and competencies in all aspects of the chosen trade are adequately covered as listed in the attached Occupational Schedules (Appendix A).

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

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

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

- A. Keep the Director of Training/Apprenticeship Coordinator and/or training office, as designated by the JATC, informed of his/her current contact information, including but not limited to, address, phone number(s), and name changes.
- B. Perform diligently and faithfully the work of the occupation and such other duties as may be assigned by the employer and the JATC in accordance with the provisions of these Standards
- C. Respect the property of the employer and not waste, damage, or injure such property
- D. Abide by all working rules and regulations of the employer, the Union, and the JATC, including but not limited to drug and alcohol policies.
- E. Attend and satisfactorily complete the required hours in OJL and in related instruction in subjects related to the occupation, as provided under these Standards.
- F. 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 Sponsor.
- G. Develop and practice safe working habits and work in such a manner as to assure his/her personal safety and that of other workers.
- H. Work safely at all times and comply with all company and legislative requirements.
- I. Maintain a professional, credible, ethical, and moral manner at all times.

- J. Work for the employer to whom the apprentice is assigned for the completion of apprenticeship, unless reassigned to another employer or the Apprenticeship Agreement is terminated by the JATC.

## **XXVII. TECHNICAL ASSISTANCE**

Technical assistance, such as that from the U.S. Department of Labor, Office of Apprenticeship, State Apprenticeship Agencies, and vocational schools, may be requested to advise the JATC.

The JATC is encouraged to invite representatives from industry, education, business, private and/or public agencies to provide consultation and advice for the successful operation of their training program.

Advice and assistance in the successful operation and implementation of these apprenticeship standards will be available at any time, upon request, from: the FTI trustees and staff; the IUPAT; and the Finishing Contractors Association.

**XXVIII. OFFICIAL ADOPTION OF APPRENTICESHIP STANDARDS**

The International Union of Painters and Allied Trades District Council 15 Glaziers Local #2001 and the Signatory Contractors of Local #2001 known as the FTI of Nevada Glaziers JATC hereby adopts these Standards of Apprenticeship on this 28 day of January 2014



Signature of Management

Terry S. Marshall

Printed Name



Signature of Management

Robert Campbell

Printed Name



Signature of Management

Bruce Smith

Printed Name



Signature of Labor

Jack Mallory

Printed Name



Signature of Labor

John Smith

Printed Name



Signature of Labor

William A. Swanson

Printed Name



**APPENDIX A**

**WORK PROCESS SCHEDULE AND RELATED  
INSTRUCTION OUTLINE**

**ADOPTED BY**

**THE FINISHING TRADES INSTITUTE OF NEVADA  
GLAZIERS JOINT APPRENTICESHIP AND TRAINING COMMITTEE**

***INTERNATIONAL UNION OF PAINTERS  
AND ALLIED TRADES  
FINISHING TRADES INSTITUTE***

**DEVELOPED IN COOPERATION WITH THE  
U.S. DEPARTMENT OF LABOR  
OFFICE OF APPRENTICESHIP  
AND APPROVED BY THE  
NEVADA STATE APPRENTICESHIP COUNCIL**

**APPROVED BY: \_\_\_\_\_**

**DATE APPROVED: \_\_\_\_\_**

WORK PROCESS  
SCHEDULE  
RELATED INSTRUCTION  
OUTLINE  
Glazier

O\*NET-SOC CODE: 47-2121.00 RAPIDS CODE:  
0221HY

### **Glazier Apprenticeship Program**

The Glazier Apprenticeship Program is co-sponsored by the IUPAT/FTI to meet the ever-changing needs of the industry and the affiliates it serves. The apprenticeship program ensures that apprentices will learn the theoretical knowledge and the practical skills necessary to be a successful Glazier. During this program of study, apprentices will successfully complete the IUPAT/FTI core curriculum and integrate it into the Glazier occupation specific training. Apprentices successfully completing this program apply their skills and abilities as a Glazier.

### **Training/Skill Set**

Skills needed to become a Glazier include manual dexterity, eye-hand coordination, physical fitness, and a good sense of balance. The ability to solve arithmetic problems quickly and accurately also is required. A good work history or military service is viewed favorably by employers.

The Glazier's curriculum and training will provide the skills, knowledge, and abilities needed to meet the needs of the industry and to ensure that each worker is equipped to use the technology, materials, and applicable methods of glazing as well as adhering to all quality and safety standards on the job. Glaziers use hand tools such as glasscutters, suction cups, and glazing knives, as well as power tools such as saws, drills, cutters, and grinders. An increasing number of Glaziers use computers in the shop or at the job site to improve their layout work and reduce the amount of glass that is wasted.

Due to improvements in the thermo capacity of modern glass, as well as increased demand for more natural light, the industry has seen an increase in the use of larger and heavier glass panels. The increased trend toward using factory glazed units means that the Glazier must increase his/her knowledge and abilities to use hoisting and rigging equipment.

Also, due to an increase in environmental concerns, there is a tendency for new structures to meet Leadership in Energy and Environmental Design (LEED) guidelines. The Glazier needs to have knowledge of high performance glazing products, solar trends, and building envelope integrity.

Glaziers learn through OJL and by working as an apprentice alongside an experienced journeyworker. This is accomplished through a combination of related instruction as delineated in these Standards.

### **IUPAT/FTI Core Curriculum Program of Study**

The Core Curriculum program of the IUPAT/Finishing Trades Institute is designed to provide a foundation on which apprentices in multiple crafts will be exposed to a uniform body of theoretical knowledge and practical skills needed to be a successful crafts person in the finishing trades.

While participating in the core curriculum program of study, apprentices will be exposed to On-the-Job Learning (OJL) and Related Instruction (RI) in the following disciplines:

- 1.0 Introduction to the Union and Construction Trades
- 2.0 Health and Safety in the Construction Trades
- 3.0 Leadership and Professional Development

Apprentices will be assessed on their acquisition of knowledge, skills and abilities in the core curriculum through hands-on and written tests as well as On-the-Job Learning (OJL) performance measures.

Additionally, the apprentices will integrate their Core knowledge, skills and abilities into the pursuit of specific occupational training throughout the term of their apprenticeship. This program specific training is designed to build the technical and professional skills needed by the apprentice to successfully perform his/her occupation.

The occupations represented in the Finishing Trades Apprenticeship Program are:

- 7.0 Glazier

### **IUPAT/FTI Glazier Course Competencies**

The Program level curriculum builds upon the foundation of the core curriculum skills, knowledge, and abilities. At the program level, occupation-specific standardized curriculum is designed by an ad-hoc committee comprised of the FTI Curriculum Department, IUPAT/FTI subject matter experts, employers, manufacturers, and associations.

Apprentices will be assessed on their acquisition of knowledge, skills and abilities in the core curriculum through hands-on and written tests as well as the OJL performance measures.

Additionally, the apprentices will integrate their core knowledge, skills and abilities into the pursuit of specific craft training throughout the term of their apprenticeship. This program specific training is designed to build the technical and professional skills needed by the apprentice to successfully perform his/her trade profession.

### **Core Curriculum Program Competencies**

Apprentices successfully completing an apprenticeship program will be proficient in the following competencies identified in the Core Curriculum:

#### **1.0 Introduction to the Union and Finishing Trades**

- Analyze the IUPAT's role in the labor movement from 1887 to the Present.
- Identify the organizational responsibilities of the IUPAT to its members.
- Demonstrate the individual's responsibilities as an IUPAT member.
- Recognize the structure of the IUPAT at the International, District Council, and Local Union levels.
- Display good character and ethical behavior in all matters personal and professional.
- Demonstrate effective skills and knowledge using computers and related technology and applications.
- Utilize trade-related tools and equipment.
- Interpret drawings related to the finishing trades.
- Apply trade math calculations on the job.
- Demonstrate sustainable/green building design awareness on all construction sites and in all trade practices.

#### **2.0 Health and Safety**

- Recognize and apply the fundamentals of worker and jobsite safety (OSHA) on the construction site.
- Perform the proper application of First Aid, CPR, and AED on the job.

- Display healthy ergonomic practices in the workplace and on the construction site.
- Demonstrate awareness and lead-safe work practices on the jobsite.

### **3.0 Leadership and Professional Development**

- Clearly and appropriately express ideas and other information through good oral, listening and writing skills to all levels of personnel.
- Demonstrate creativity, integrity and other influential qualities and characteristics necessary to successfully lead as a foreman, project manager or jobsite supervisor.
- Execute planning and organizational skills necessary to successfully complete a job on time and on budget.
- Recognize and apply emerging technologies in the occupation in order to elevate the industry.

## Suggested Program of Study for the Core Curriculum Competencies

The IUPAT/FTI Program of Study for the Core Competencies OJL and Related Instruction is outlined below. Under this hybrid approach an apprentice must participate in the indicated minimum number of hours of OJL for each category of the program.

<b>CATEGORY #</b>	<b>CATEGORY NAME</b>	<b>OJL HOURS</b>	<b>RI HOURS</b>
1.1	History of IUPAT		4
1.2	Survival of the Fittest	16	2
1.3	Green Building Awareness		4
1.4	Sexual Harassment		2
1.5	Math for the Construction Trades		12
1.6	Basic Computing		4
1.7	Architectural Drawings/Blueprint Reading		16
2.1	Introduction to Health and Safety	16	10
2.2	First Aid/CPR/AED		8
2.3	Ergonomics		4
2.4	Respiratory Protection		4
2.5	Lead Abatement Awareness for the Lead Worker		8
2.6	Hand and Power Tool Safety Awareness		6
3.1	Communication Skills		4
3.2	Foreman Training		2
3.3	Project Management		4
3.4	Supervisor Training Program (STP)		2
		32	96

## Core Curriculum Course Competencies

This table identifies the Core curriculum course competencies which the apprentices will successfully complete during their apprenticeship.

### Module 1.0 – Introduction to the Union and Construction Trades

<b>INTRODUCTION TO THE UNION AND CONSTRUCTION TRADES</b>	
<b>HISTORY OF IUPAT (LABOR HISTORY)</b>	
<b>1.0</b>	
<b>1.1</b>	<b>Related Instruction (RI) – 4 hours</b>
<b>On-the-Job Learning (OJL)</b>	
<ul style="list-style-type: none"> <li>This is a classroom-based module, there is no OJL assessment.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the historical reasons for unionization.</li> <li>Describe the strengths and weaknesses of the labor movement in the U.S.</li> <li>Describe the union structure and its activities.</li> <li>Explain how unions promote the trade and serve its members</li> <li>Understand the union's impact on economic issues, corporation, productivity, and distribution of wealth.</li> <li>Identify and explain the most significant labor laws of the 1900s.</li> <li>Analyze the impact the labor movement has had on social and political reform.</li> <li>Evaluate the IUPAT's role in the labor movement from 1887 to the Present.</li> </ul>
<b>1.2</b>	<b>SURVIVAL OF THE FITTEST (SOF)</b>
	<b>Related Instruction (RI) – 2 hours</b>
<b>On-the-Job Learning (OJL) – 16 hours</b>	
<ul style="list-style-type: none"> <li>Demonstrate the characteristics of a craft professional.</li> <li>Participate in union-related activities.</li> </ul>	<ul style="list-style-type: none"> <li>Investigate the current state of the union's market share.</li> <li>Discuss the personal rewards and consequences associated with the union's market share.</li> <li>Describe successful strategies for unions to regain a market share in the construction industry.</li> <li>Identify and describe what the union provides on an ongoing basis to its members and affiliates.</li> <li>Identify the roles and responsibilities of the end users, contractors, union, and rank and file.</li> <li>Articulate the value that the union provides its members and affiliates.</li> <li>Describe the impact the IUPAT's Top Workplace Performance (TWP) program has on shaping attitudes and performance.</li> <li>Discuss the generational changes in rank and file attitudes and behaviors.</li> </ul>
<b>1.3</b>	<b>GREEN BUILDING AWARENESS</b>
	<b>Related Instruction (RI) – 4 hours</b>
<b>On-the-Job Learning (OJL)</b>	
<ul style="list-style-type: none"> <li>This is a classroom-based module, there is no OJL assessment.</li> </ul>	<ul style="list-style-type: none"> <li>Describe sustainability and the social, environmental, and economic impact.</li> <li>Identify the benefits of sustainability.</li> <li>Explain the purpose of sustainability in commercial and residential buildings.</li> <li>Identify professional 'green' organizations.</li> <li>Identify elements of sustainability.</li> <li>Explain the importance of green practices.</li> </ul>

	<ul style="list-style-type: none"> <li>Define green bid specifications.</li> <li>Identify and interpret a green specification in a project manual.</li> <li>Source and cost out green products.</li> <li>Create a bid incorporating green products and practices.</li> <li>Describe the elements involved with sustainable sites.</li> <li>Describe water efficiency practices.</li> <li>Determine energy and atmospheric requirements.</li> <li>Identify and describe effective materials and resources.</li> <li>Discuss indoor environmental quality standards.</li> <li>Discuss the 'green' innovation and design process.</li> <li>Identify and discuss the LEED-NC Process.</li> </ul>	
<b>1.4</b>	<b>SEXUAL HARASSMENT</b>	
	<b>Related Instruction (RI) – 2 hours</b>	
	<p><b>On-the-Job Learning (OJL)</b></p> <ul style="list-style-type: none"> <li>This is a classroom-based module, there is no OJL assessment.</li> </ul>	<ul style="list-style-type: none"> <li>Define sexual harassment.</li> <li>Identify the law sexual harassment violates.</li> <li>Identify characteristics of quid pro quo sexual harassment.</li> <li>Identify characteristics of hostile environment sexual harassment.</li> <li>Cite factors that contribute to the determination of whether behavior is sexual harassment.</li> <li>Explain legal and other consequences of sexual harassment.</li> <li>Identify effects of sexual harassment.</li> <li>Identify costs associated with sexual harassment.</li> <li>Discuss employer liability in harassment cases.</li> <li>Identify United States' Supreme Court Landmark Cases.</li> </ul>
<b>1.5</b>	<b>MATH FOR CONSTRUCTION TRADES</b>	
	<b>Related Instruction (RI) – 12 hours</b>	
	<p><b>On-the-Job Learning (OJL)</b></p> <ul style="list-style-type: none"> <li>This is a classroom-based module, there is no OJL assessment.</li> </ul>	<ul style="list-style-type: none"> <li>Add, subtract, multiply, and divide whole numbers, with and without a calculator.</li> <li>Use a standard ruler, a metric ruler, and a measuring tape to measure.</li> <li>Add, subtract, multiply, and divide fractions.</li> <li>Add, subtract, multiply, and divide decimals, with and without a calculator.</li> <li>Convert decimals to percentages and percentages to decimals.</li> <li>Convert fractions to decimals and decimals to fractions.</li> <li>Explain what the metric system is and how it is important in the construction trade.</li> <li>Recognize and use metric units of length, weight, volume, and temperature.</li> <li>Recognize some of the basic shapes used in the construction industry and apply basic geometry to measure them.</li> </ul>
<b>1.6</b>	<b>BASIC COMPUTING</b>	
	<b>Related Instruction (RI) – 4 hours</b>	
	<p><b>On-the-Job Learning (OJL)</b></p>	

	<ul style="list-style-type: none"> <li>This is a classroom-based module, there is no OJL assessment.</li> </ul>	<ul style="list-style-type: none"> <li>Describe the components of a computer system.</li> <li>Define microcomputer hardware in terms of its functions: input, output, processing, and storage.</li> <li>Describe how peripheral devices are connected to a microcomputer.</li> <li>Identify types of software and their functions and describe the difference between system software and application software.</li> <li>Navigate and use the Windows XP environment to open and use applications, manage documents, and identify and maintain resources.</li> <li>Access and navigate the World Wide Web to find information.</li> <li>Create, format, and edit documents using Microsoft® Word.</li> <li>Create, revise, and enhance business presentations using Microsoft® PowerPoint.</li> <li>Create, revise, and enhance spreadsheets using Microsoft® Excel.</li> </ul>
1.7		<p style="text-align: center;"><b>ARCHITECTURAL DRAWINGS/BLUEPRINT READING</b></p> <p style="text-align: center;"><b>Related Instruction (RI) – 16 hours</b></p>
	<p><b>On-the-Job Learning (OJL)</b></p> <ul style="list-style-type: none"> <li>Locate trade information using blueprints</li> <li>Answer basic construction questions related to the layout and installation of materials at the jobsite.</li> </ul>	<ul style="list-style-type: none"> <li>Define blueprint and blueprint reading.</li> <li>Define plans and specifications.</li> <li>Describe how plans and specifications are prepared.</li> <li>Describe the purpose and importance of a set of plans.</li> <li>Identify and define various parts of a set of plans.</li> <li>Identify the various views of a drawing that are included in a set of plans and their relationship to each other.</li> <li>Identify and define material symbols, abbreviations, and lines used in drawings.</li> <li>Define the meaning of scale.</li> <li>Use fractional rule to calculate measurements.</li> <li>Explain how an architect's scale is used to measure lines.</li> <li>Use the architect's scale to determine the actual length of a scaled line.</li> <li>Recognize, locate, and determine missing dimensions.</li> <li>Describe proper handling procedures for plans and drawings.</li> </ul>



## Module 2.0 – Health and Safety

HEALTH AND SAFETY	
2.0	INTRODUCTION TO HEALTH AND SAFETY
2.1	Related Instruction (RI) – 10 hours
<p><b>On-the-Job Learning (OJL) – 16 hours</b></p> <ul style="list-style-type: none"> <li>Inspect PPE to determine if it is safe to use (PPE should include safety goggles, hard hat, gloves, safety harness, and safety shoes).</li> <li>Properly don and doff PPE (safety goggles, hard hat, and personal fall protection).</li> <li>Demonstrate safe lifting procedures.</li> <li>Set up an extension ladder properly.</li> <li>Demonstrate three-point contact on a ladder.</li> </ul>	<ul style="list-style-type: none"> <li>Explain the idea of a safety culture and its importance in the construction crafts.</li> <li>Identify causes of accidents and the impact of accident costs.</li> <li>Explain the role of OSHA in job-site safety.</li> <li>Locate OSHA Standards references applicable to specific hazardous conditions and practices.</li> <li>Recognize the aspects of 1926 Subpart C (General Safety and Health Provisions).</li> <li>State the purpose of the OSHA Act and list the functions of OSHA.</li> <li>List the OSHA inspection priorities and describe the inspection process.</li> <li>Describe the rights and responsibilities of employers and employees under the OSHA Act.</li> <li>Recognize hazard recognition and risk assessment techniques.</li> <li>Explain fall protection, ladder, stair, and scaffold procedures and requirements.</li> <li>Identify struck-by hazards and demonstrate safe working procedures and requirements.</li> <li>Identify caught-in-between hazards and demonstrate safe working procedures and requirements.</li> <li>Define safe work procedures to use around electrical hazards.</li> <li>Demonstrate the use and care of appropriate personal protective equipment (PPE).</li> <li>Explain the importance of hazard communications (Haz Com) and Material Safety Data Sheets (MSDSs).</li> <li>Identify other construction hazards on your job site, including hazardous material exposures, environmental elements, welding and cutting hazards, confined spaces, and fires.</li> </ul>
2.2	FIRST AID/CPR/AED
	<p><b>On-the-Job Learning (OJL)</b></p> <ul style="list-style-type: none"> <li>This is a classroom-based module, there is no OJL assessment.</li> </ul>
	<p><b>Related Instruction (RI) – 8 hours</b></p> <ul style="list-style-type: none"> <li>Demonstrate how to minimize the risk of disease transmission when giving care.</li> <li>Demonstrate how to check an unconscious person for life-threatening and non-life threatening conditions.</li> <li>Demonstrate how to give cardiopulmonary resuscitation (CPR) to a person.</li> </ul>

2.3		<ul style="list-style-type: none"> <li>• Demonstrate how to care for a person who is not breathing and/or choking.</li> <li>• Describe when and how to use an AED.</li> </ul>
<b>ERGONOMICS</b>		
<b>On-the-Job Learning (OJL)</b>		
	<ul style="list-style-type: none"> <li>• This is a classroom-based module, there is no OJL assessment.</li> </ul>	<p><b>Related Instruction (RI) – 4 hours</b></p> <ul style="list-style-type: none"> <li>• Describe ergonomics and its importance in the workplace.</li> <li>• Describe the benefits of implementing an ergonomic program.</li> <li>• Identify and describe ergonomic related injuries and related musculoskeletal disorders that can occur in an office setting.</li> <li>• Identify and describe ergonomic related injuries and related musculoskeletal disorders that can occur in a construction workplace.</li> <li>• Recognize and describe risk factors that can cause musculoskeletal disorders or related injuries.</li> <li>• Describe healthy ergonomics in an office setting.</li> <li>• Describe healthy ergonomics in a construction workplace.</li> <li>• Demonstrate proper stretching techniques.</li> <li>• Identify employee and employer rights and responsibilities.</li> </ul>
<b>RESPIRATORY PROTECTION</b>		
<b>2.4</b>		
<b>On-the-Job Learning (OJL)</b>		
	<ul style="list-style-type: none"> <li>• This is a classroom-based module, there is no OJL assessment.</li> </ul>	<p><b>Related Instruction (RI) – 4 hours</b></p> <ul style="list-style-type: none"> <li>• Describe how the respiratory system works.</li> <li>• Identify the different types of respirators and their purposes.</li> <li>• Demonstrate the proper fit, inspection, cleaning, disinfection, and storage of respirators.</li> <li>• Summarize how the human respiratory system works.</li> <li>• Identify respiratory hazards and describe how they affect the respiratory system.</li> <li>• Identify work activities that can create airborne hazards.</li> <li>• Demonstrate how to perform proper negative and positive fit-checks.</li> <li>• Demonstrate proper inspection of respirators.</li> <li>• Demonstrate safe cleaning, disinfection, and storage procedures for respirators.</li> </ul>
<b>2.5</b>		
<b>LEAD ABATEMENT AWARENESS (WORKER)</b>		
<b>On-the-Job Learning (OJL)</b>		
	<ul style="list-style-type: none"> <li>• This is a classroom-based module, there is no OJL assessment.</li> </ul>	<p><b>Related Instruction (RI) – 8 hours</b></p> <ul style="list-style-type: none"> <li>• Explain his/her roles and responsibilities as a Lead Abatement worker.</li> <li>• Recall and describe basics facts in the history of lead and lead abatement.</li> <li>• Identify and describe the health effects of lead exposure and protection against lead exposure and poisoning.</li> <li>• Describe and demonstrate safe work practices when working with or around lead.</li> </ul>

		<ul style="list-style-type: none"> <li>• Describe general work safety and health hazards.</li> <li>• Identify and describe the federal, state and local regulations for lead workers.</li> <li>• Explain and demonstrate the pre-abatement set-up and containment procedures for residential buildings.</li> <li>• Recognize and describe residential lead-based paint hazards and control factors.</li> <li>• Describe and explain interior dust abatement procedures, clean-up and final clearance inspections.</li> <li>• Describe and explain the procedures for soil and exterior dust abatement with waste disposal.</li> <li>• Explain and demonstrate the pre-abatement set-up and containment procedures for industrial buildings.</li> <li>• Recognize and describe industrial lead-based paint hazards and control factors.</li> <li>• Describe and demonstrate lead safe work practices in compliance with the EPA Renovation, Repair, and Painting (RRP) Rule, and HUD's Lead Safe Housing Rule.</li> </ul>
<b>2.6</b>		<b>HAND &amp; POWER TOOL SAFETY AWARENESS</b>
	<p><b>On-the-Job Learning (OJL)</b></p> <ul style="list-style-type: none"> <li>• This is a classroom-based module, there is no OJL assessment.</li> </ul>	<p style="text-align: center;"><b>Related Instruction (RI) – 6 hours</b></p> <ul style="list-style-type: none"> <li>• Recognize and identify some of the basic hand tools and their proper uses in the construction trade.</li> <li>• Visually inspect hand tools to determine if they are safe to use.</li> <li>• Safely use hand tools.</li> <li>• Identify power tools commonly used in the construction trades.</li> <li>• Demonstrate and describe all general safety rules for power tools and follow them.</li> <li>• Explain the importance of using guards during the operation of power tools.</li> <li>• Explain the importance of using a properly rated extension cord.</li> <li>• Demonstrate and describe how to properly <i>ground</i> a power tool.</li> <li>• Explain how to maintain power tools properly.</li> </ul>

### Module 3.0 – Leadership and Professional Development

LEADERSHIP AND PROFESSIONAL DEVELOPMENT	
COMMUNICATION SKILLS	
<b>3.0</b>	
<b>3.1</b>	
	<b>On-the-Job Learning (OJL)</b>
	<ul style="list-style-type: none"> <li>This is a classroom-based module, there is no OJL assessment.</li> </ul>
	<b>Related Instruction (RI) – 4 hours</b>
	<ul style="list-style-type: none"> <li>Interpret information and instructions presented in both verbal and written form.</li> <li>Communicate effectively in on-the-job situations using verbal and written skills.</li> <li>Communicate effectively on the job using electronic communication devices.</li> </ul>
<b>3.2</b>	
	<b>FOREMAN TRAINING</b>
	<b>On-the-Job Learning (OJL)</b>
	<ul style="list-style-type: none"> <li>This is a classroom-based module, there is no OJL assessment.</li> </ul>
	<b>Related Instruction (R – 2 hours)</b>
	<ul style="list-style-type: none"> <li>Describe the role of the foreman.</li> <li>State the key role of the foreman in maintaining safety rules and regulations.</li> <li>Describe how to establish and maintain good relationships with co-workers, supervisors and other trades.</li> <li>Describe productive motivational techniques.</li> <li>Explain the importance of properly performing personnel functions in accordance with the union agreement and company policies.</li> <li>Explain the importance of developing and using effective communications skills.</li> <li>Describe the proper planning and organizational skills needed to successfully complete a job.</li> <li>Describe the “leadership” qualities needed to be an effective foreman.</li> </ul>
<b>3.3</b>	
	<b>PROJECT MANAGEMENT</b>
	<b>On-the-Job Learning (OJL)</b>
	<ul style="list-style-type: none"> <li>This is a classroom-based module, there is no OJL assessment.</li> </ul>
	<b>Related Instruction (RI) – 4 hours</b>
	<ul style="list-style-type: none"> <li>Achieve predicted and desired results in the execution of projects through implementation of consistent methodologies.</li> <li>Advance the skill level and knowledge of IUPAT Project Managers.</li> <li>Emphasize the depth and breadth of roles and responsibilities that a Project Manager may be relied upon to manage, to contribute to, or to perform.</li> </ul>
<b>3.4</b>	
	<b>SUPERVISOR TRAINING PROGRAM (STP)</b>
	<b>On-the-Job Learning (OJL)</b>
	<ul style="list-style-type: none"> <li>This is a classroom-based module, there is no OJL assessment.</li> </ul>
	<b>Related Instruction (RI) – 2 hours</b>
	<ul style="list-style-type: none"> <li>Define the role of the supervisor.</li> <li>Define the scope and importance of verbal communication.</li> <li>Refine written communication skills.</li> <li>Describe various job site personnel issues.</li> <li>Identify the supervisor’s role in safety.</li> <li>Manage and estimate the cost of tools and materials.</li> <li>Describe the importance of leadership in effective supervision.</li> </ul>

## Program Level Competencies

With reference to each of the respective areas of the Glazing trade, apprentices successfully completing this program will be able to:

### Glazier

- Explore trade options as they pertain to the glazing industry.
- Examine principles of glass.
- Identify trade-related materials and applications.
- Utilize trade-related tools and equipment.
- Interpret drawings related to the glazing trade.
- Apply trade math calculations.
- Apply building controls and layout techniques.
- Demonstrate the proper fabrication, assembly, and installation methods of the glazing industry.
- Apply the standards of quality control and quality assurance in the glazing industry.
- Apply green technology as appropriate in the glazing trade.

### Suggested Program of Study for the Glazier Curriculum

The IUPAT/FTI Program of Study for the Glazier OJL and RTI is outlined below. Under this hybrid approach, an apprentice must participate in the indicated minimum number of hours of OJL for each category of the program.

CATEGORY #	CATEGORY NAME	OJL <sup>1</sup> HOURS	RTI <sup>2</sup> HOURS
1.1-3.4	Core Curriculum	32	96
7.1	Health and Safety for the Glazing Trade	200-400	100
7.2	Introduction to the Glazing Trade	400-640	40
7.3	Sealants	80-120	40
7.4	Architectural Drawings	200-400	40
7.5	Glazing Systems, Installation and Layout	800-1200	120
7.6	Replacement Work, Retro-Fit and Weatherization	200-400	20
7.7	Skylights and Sloped Glazing	200-400	20
7.8	Energy Glazing Systems	200-400	20
7.9	Welding Applications	200-400	80
		8000	576

<sup>1</sup> Refers to a minimum of OJL hours that an apprentice must participate in during the specific apprenticeship program. An apprentice can take hands-on assessments in order to be awarded credit for these hours as determined by the JATC.

<sup>2</sup> Refers to the minimum number of RTI hours that an apprentice must participate in. The minimum requirement for each year of the program is 144 hours of RTI.

The above chart and totals include all OJL and RTI for both the Architectural Glazier Program and the Master Glazier Program. Each of the respective Programs includes minimum requirements of 4000 hours of OJL and 288 hours of RTI.

## WORK PROCESS SCHEDULE

### RELATED INSTRUCTION OUTLINE

**O\*NET-SOC CODE: 47-2121.00 RAPIDS CODE: 0221HY**

This table identifies the course competencies that the Glazier apprentice will successfully complete.

#### **Module 7.0 – Glazier**

<b>HEALTH AND SAFETY AWARENESS FOR THE GLAZIER</b>	
<b>7.1</b>	<b>RELATED INSTRUCTION (RI) – 100 hours</b>
<p><b>ON-THE-JOB LEARNING (OJL) – 200 - 400 hours</b></p> <ul style="list-style-type: none"> <li>• Don (put on), doff (remove), inspect, and maintain the proper PPE that should be worn during glazing including, but not limited to:                             <ul style="list-style-type: none"> <li>• Head</li> <li>• Face</li> <li>• Eyes</li> <li>• Ears</li> <li>• Hands</li> <li>• Body</li> <li>• Feet</li> <li>• Respiratory</li> </ul> </li> <li>• Perform a job analysis for safe working conditions, including:                             <ul style="list-style-type: none"> <li>• Attend pre-job safety meetings.</li> <li>• Adhere to site specific safety rules and federal regulations.</li> <li>• Observe Vessel Entry/Confined Space regulations.</li> <li>• Read and interpret MSDS.</li> <li>• Establish and maintain a safe working perimeter.</li> </ul> </li> <li>• Maintain clean work areas (housekeeping).</li> <li>• Demonstrate proper and safe handling of materials and glass.</li> <li>• Identify the locations of First Aid and Fire Equipment.</li> <li>• Demonstrate basic safety awareness practices.</li> <li>• Demonstrate the process by which to erect and dismantle a scaffolding system.</li> <li>• Don and doff a personal fall arrest body harness and lanyard system.</li> <li>• Recognize dangerous situations that pertain to damaged</li> </ul>	<ul style="list-style-type: none"> <li>• Recognize the important areas of OSHA in general terms.</li> <li>• Describe the role of employer, supplier, and worker in the education of safety for workers.</li> <li>• Identify site and job specific hazards and policies of OSHA 29CFR1926 and 29CFR1910 regulations, including:                             <ul style="list-style-type: none"> <li>• Swing Stage Safety</li> <li>• Scaffold Erector and Dismantler</li> <li>• Shop Safety</li> <li>• Crane Safety and Hand Signals</li> <li>• Rigging and Hoisting</li> </ul> </li> <li>• Identify the Safety Regulations as they apply to safe work practices in the glazing trade with emphasis on the importance of :                             <ul style="list-style-type: none"> <li>• Identifying safety hazards (unsafe conditions)</li> <li>• Handling of materials, including hazardous materials</li> <li>• Maintenance and safe operation of tools</li> <li>• Selecting and using PPE</li> </ul> </li> <li>• Explain the use of Material Safety Data Sheets (MSDS) for following precautions when using chemicals in the glazing trade.</li> <li>• Describe the precautions that must be followed when using sealants and other chemicals.</li> <li>• Describe the process for handling, cleaning, and storing anodized or painted aluminum finishes.</li> <li>• Recognize and explain the set-up and dismantling of a scaffolding system.</li> <li>• Recognize welder safety and working conditions and apply acceptable safety preventive measures.</li> <li>• Outline emergency procedures and how to obtain assistance for injured workers.</li> </ul>

	<p>equipment or unsafe work practices and follow proper protocol for reporting and correcting the situation.</p>	
<b>7.2</b>	<p style="text-align: center;"><b>INTRODUCTION TO THE GLAZING TRADE</b></p> <p><b>ON-THE-JOB LEARNING (OJL) – 400 - 640 hours</b></p> <ul style="list-style-type: none"> <li>• Demonstrate the characteristics of a professional Glazier, including: <ul style="list-style-type: none"> <li>• Exhibit suitable appearance and personal hygiene.</li> <li>• Exhibit proper attitude and behavior on job sites including private residences and other occupied buildings.</li> <li>• Deal with difficult customers in a professional and courteous manner.</li> <li>• Interpret written and verbal instructions.</li> <li>• Recognize the importance of cooperation and interaction with related occupations on a job site.</li> </ul> </li> <li>• Demonstrate the use of glazing hand tools, including but not limited to: <ul style="list-style-type: none"> <li>• General Tools (rules, straight edges, protractor, dividers)</li> <li>• Squares</li> <li>• Levels and Transits</li> <li>• Glass/Plastic Cutters</li> <li>• Screwdrivers</li> <li>• Specialty/Drill Bits and Fasteners</li> <li>• Caulking Guns</li> <li>• Knives (utility, putty, hackout) and Chisels</li> <li>• Glass Pliers</li> <li>• Metal Cutters</li> <li>• Hacksaws</li> <li>• Glass Holders</li> <li>• Hammers and Mallets</li> <li>• Pry Bars</li> <li>• Rivet Guns</li> <li>• Tap and die</li> <li>• Wrenches</li> </ul> </li> </ul>	<p><b>RELATED INSTRUCTION (RI) – 40 hours</b></p> <ul style="list-style-type: none"> <li>• Identify and explain basic terminology used in glazing.</li> <li>• Identify the historical events of the modern glazing trade.</li> <li>• Describe working conditions in the glazing trade.</li> <li>• Identify the career options and advancement opportunities in the glazing trade.</li> <li>• Describe at least three purposes for including windows in a building's design.</li> <li>• Identify the appropriate PPE needed when handling glass.</li> <li>• Identify hand tools used in the glazing trade.</li> <li>• Describe custody, care, and maintenance, of tools and equipment.</li> <li>• Identify symbols used in the glazing trade.</li> <li>• Describe the types of glass used in building construction and where they are used.</li> <li>• Describe the importance of load placement when moving and storing materials on a construction site.</li> <li>• Describe the proper technique (ergonomics) for lifting and transporting glazing materials.</li> <li>• Recognize the processes used on anodized or painted finishes.</li> <li>• Describe the purpose of the extrusion process on various types of materials (glass, aluminum, plastic, etc.).</li> <li>• Identify good welding applications on various joint designs and glazing finishes.</li> <li>• Describe the hazards associated with broken glass and its disposal.</li> <li>• Discuss the importance of quality workmanship when glazing aquariums, shower doors or tub enclosures.</li> <li>• Describe the tools, materials and safety precautions when creating art glass projects.</li> <li>• Discuss the importance of ensuring proper ventilation and using safety equipment when working with hazardous chemicals and materials in art glass projects.</li> </ul>

	<ul style="list-style-type: none"> <li>• Demonstrate the proper use of glass handling tools, materials and machinery.</li> <li>• Select the proper tools to safely and correctly open a case of glass.</li> <li>• Demonstrate the techniques used to remove, lift, carry, transport, roll and place a lite of glass on a vertical or horizontal plane.</li> <li>• Demonstrate the process for disposing of broken glass.</li> <li>• Demonstrate the process for cleaning anodized or painted aluminum.</li> <li>• Demonstrate auto glass replacement and repair procedures.</li> <li>• Demonstrate the proper use of tools, materials and safety equipment during an art glass project.</li> </ul>	
<b>7.3</b>	<b>SEALANTS</b>	
	<p><b>ON-THE-JOB LEARNING (OJL) – 80 - 120 hours</b></p> <ul style="list-style-type: none"> <li>• Demonstrate the techniques used to achieve good joint design.</li> <li>• Point out the qualities of good joint design and a properly prepared surface for sealant application.</li> <li>• Demonstrate methods for applying sealant on various structural glazing systems.</li> <li>• Demonstrate methods for sealing expansion joints.</li> <li>• Demonstrate knowledge of compatibility and application of membranes.</li> </ul>	<p><b>RELATED INSTRUCTION (RI) – 40 hours</b></p> <ul style="list-style-type: none"> <li>• Use sealant terminology in sealant selection during course discussions and experiences.</li> <li>• Describe sealant forms, classifications and properties.</li> <li>• Describe the factors of good joint design including the basic principles of joint width and depth.</li> <li>• Distinguish between techniques for substrate preparations used with a variety of commonly used construction surfaces.</li> <li>• Describe the components, methods and applications of structural glazing systems.</li> <li>• Describe manufacturer's specifications for primers, solvents, and sealants used in structural glazing applications.</li> <li>• Describe compatibility and application of various membranes.</li> </ul>
<b>7.4</b>	<b>ARCHITECTURAL DRAWINGS</b>	
	<p><b>ON-THE-JOB LEARNING (OJL) – 200 to 400 hours</b></p> <ul style="list-style-type: none"> <li>• Interpret and apply architectural drawings and their associated components on the job, including: <ul style="list-style-type: none"> <li>• Blueprints</li> <li>• Scale rulers</li> <li>• Symbols and terminology</li> <li>• Shop drawings</li> <li>• Materials lists</li> <li>• Cutting schedules</li> <li>• Perimeter sheets</li> <li>• Optimization schedules</li> </ul> </li> </ul>	<p><b>RELATED INSTRUCTION (RI) – 40 hours</b></p> <ul style="list-style-type: none"> <li>• Describe the parts, purpose and importance of using the following on a glazing job: <ul style="list-style-type: none"> <li>• Blueprints</li> <li>• Shop drawings</li> <li>• Specifications and schedules</li> <li>• Finish schedules</li> <li>• Contract specifications</li> <li>• Change notices</li> <li>• Site Instructions</li> <li>• Request for Information</li> </ul> </li> </ul>



	<ul style="list-style-type: none"> <li>• Details</li> <li>• Contract specifications</li> <li>• Demonstrate the ability to make freehand sketches in a quick and efficient manner without using a compass, straight edge, or protractor.</li> <li>• Demonstrate how to make the following sketches: <ul style="list-style-type: none"> <li>• Oblique drawings of straight and curved objects</li> <li>• Basic isometric and perspective sketches</li> <li>• A section of a storefront installation</li> <li>• A complex storefront with returns</li> </ul> </li> <li>• Read a shop drawing and relate the information on it to an actual structure.</li> <li>• Read cross section diagrams of architectural metal extrusions to identify the following: <ul style="list-style-type: none"> <li>• Headers</li> <li>• Sills, bulkheads, and sill flashing</li> <li>• Jamb</li> <li>• Mullions</li> <li>• Door jambs</li> <li>• Intermediate horizontals</li> <li>• Corner metal</li> </ul> </li> <li>• Make a list of materials based on the shop drawing.</li> </ul>	<ul style="list-style-type: none"> <li>• Request for Quotation</li> <li>• Read and interpret the details of blueprints, shop drawings, and perimeter sheets for the glazing trade.</li> <li>• Describe the differences between an oblique drawing, an isometric drawing, and a perspective drawing.</li> <li>• Identify the various views of a drawing that are included in a set of plans and their relationship to each other.</li> <li>• Identify and define material symbols, abbreviations, and lines used in drawings.</li> <li>• Identify type and swing of doors.</li> <li>• Identify a variety of windows (single, double hung, awning, casement, sliding)</li> <li>• Define the meaning of scale.</li> <li>• Use fractional rule to calculate measurements.</li> <li>• Explain how an architect's scale is used to measure lines.</li> <li>• Use the architect's scale to determine the actual length of a scaled line.</li> <li>• Recognize, locate, and determine missing dimensions.</li> <li>• Describe proper handling procedures for plans and drawings.</li> <li>• Identify associated materials on a set of plans such as vinyl gaskets, shims, backer rod, anchors, caulking, and setting blocks.</li> <li>• Explain the difference between in-shop fabrication and on-site fabrication.</li> <li>• Determine final measurements, taking into consideration materials used, thermal expansion, and the required coverage of the glass.</li> <li>• Explain the purpose of cutting and materials lists and how they are created based on shop drawings and sketches.</li> </ul>
<b>7.5</b>	<b>GLAZING SYSTEMS INSTALLATION AND LAYOUT</b>	<b>RELATED INSTRUCTION (RI) – 120 hours</b>
	<p><b>ON-THE-JOB LEARNING (OJL) – 800 - 1200 hours</b></p> <p>Glass Cutting:</p> <ul style="list-style-type: none"> <li>• Demonstrate the basic principles and procedures for cutting glass.</li> <li>• Measure, mark, and score glass to specified dimensions using a glass cutter.</li> <li>• Demonstrate basic fabrication techniques including: edging, removing scratches, drilling and cut outs.</li> </ul> <p>Mirrors:</p> <ul style="list-style-type: none"> <li>• Measure the wall and transfer measurements onto a mirror.</li> <li>• Cut and perform edgework to various levels on glass and</li> </ul>	<p>Glass Cutting:</p> <ul style="list-style-type: none"> <li>• Identify the principles and procedures for cutting glass and plastics.</li> <li>• Identify the various tools, materials and machinery for cutting glass.</li> <li>• Describe various principles and techniques for cutting glass on the job site.</li> </ul> <p>Mirrors:</p> <ul style="list-style-type: none"> <li>• Describe various glass fabrication techniques, tools, and machinery.</li> <li>• Describe the principles and procedures for light metal fabrications and installation.</li> <li>• Explain the importance and use of mirrors in the marketplace.</li> </ul>

<p>mirrors using upright wet belt sanders and hand held belt sanders.</p> <ul style="list-style-type: none"> <li>• Drill small and large holes using the proper drill for each.</li> <li>• Demonstrate the following glass and mirror cutouts: corner, wall outlet, peninsula notch, island circle and outside circle.</li> <li>• Recognize problems and apply solutions to imperfect wall surfaces to be used for mirror mounting.</li> <li>• Demonstrate the layout, fabrication, and installation procedures for mirror mounting.</li> <li>• Properly store and handle mirrors.</li> </ul> <p>Shower Doors and Tub Enclosures:</p> <ul style="list-style-type: none"> <li>• Demonstrate the use of hardware for shower and tub enclosures.</li> <li>• Measure and layout a shower and tub enclosure.</li> <li>• Demonstrate fabrication and installation techniques for shower and tub enclosures.</li> </ul> <p>Doors and Locks:</p> <ul style="list-style-type: none"> <li>• Perform a reliability test on installed panic hardware.</li> <li>• Demonstrate the construction and installation of aluminum doors and other entrances.</li> </ul> <p>Handrail Systems:</p> <ul style="list-style-type: none"> <li>• Fabricate and install a handrail system using various anchoring and securing methods.</li> </ul> <p>Break Metal:</p> <ul style="list-style-type: none"> <li>• Accurately measure the corners and radius walls prior to cutting the metal to insure proper fitting during installation.</li> <li>• Determine layout and positioning of break metal prior to cutting.</li> <li>• Demonstrate accurate fabrication of break metal on the job.</li> </ul> <p>Glazing Systems (General):</p> <ul style="list-style-type: none"> <li>• Demonstrate the ability to locate the manufacturer's installation manuals for any glazing system.</li> <li>• Demonstrate the ability to work with a team to fabricate and install glazing systems.</li> <li>• Demonstrate safe work practices and selection and use of PPE on all glazing systems.</li> <li>• Select and safely use the appropriate tools to install all glazing systems.</li> <li>• Demonstrate the proper techniques for welding various</li> </ul>	<ul style="list-style-type: none"> <li>• Describe and choose the best method for installing mirrors for each job.</li> <li>• Identify and describe the use of hardware used for mirror mounting.</li> <li>• Identify different types of drills used for creating holes in glass and mirror.</li> </ul> <p>Shower and Tub Enclosures:</p> <ul style="list-style-type: none"> <li>• Describe the basic types of shower and tub enclosures.</li> </ul> <p>Doors and Locks:</p> <ul style="list-style-type: none"> <li>• Identify various types of locks and their components.</li> <li>• Recognize the terminology used with the function and installation of locks and bolts.</li> <li>• Name the basic types of panic hardware; its purpose, terminology and general installation procedures.</li> <li>• Discuss the requirements for door installation and construction and the effects of the environment on aluminum entrances.</li> <li>• Discuss the effects of positive and negative air pressure and stack effect on entrances.</li> <li>• Discuss the different types of automatic doors and the hardware associated.</li> <li>• Describe measures that can be taken to prevent the effects of temperature extremes on aluminum entrances.</li> <li>• Describe door size, construction and allowable clearances.</li> <li>• Explain the importance of following hardware guidelines on proper door installation, adjustment methods and glazing techniques.</li> </ul> <p>Handrail Systems:</p> <ul style="list-style-type: none"> <li>• Describe the different components of various types of handrail systems.</li> <li>• Describe handrail system fabrication and its anchoring and securing methods.</li> <li>• List the safety codes that relate to the installation of handrail systems.</li> <li>• Define "tolerance" as it relates to general glazing systems layout and measurements.</li> </ul> <p>Break Metal:</p> <ul style="list-style-type: none"> <li>• Describe the importance of measuring corners and radius walls when installing break metal.</li> </ul> <p>Glazing Systems:</p> <ul style="list-style-type: none"> <li>• Describe the different design qualities of Curtain wall, Unitized, Pressure Wall, Ribbon Windows, Pre-Glazed systems.</li> <li>• Describe the layout procedures for each of the glazing systems.</li> </ul>
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<p>glazing systems.</p> <p>Curtain wall System:</p> <ul style="list-style-type: none"> <li>• Measure and layout precise Curtain wall control lines and reference points.</li> <li>• Demonstrate the proper calculation of "tolerances" for building dimensions.</li> <li>• Conduct a field inspection prior to Curtain wall layout.</li> <li>• Demonstrate the assembly and installation of Curtain wall, including corner seals, glazing the wall and applying Curtain wall trim.</li> </ul> <p>Ribbon Window and Pre-Glazed Systems:</p> <ul style="list-style-type: none"> <li>• Calculate glass sizes for framed openings using elevation drawings and details.</li> <li>• Demonstrate the assembly and installation of Ribbon Window systems.</li> <li>• Demonstrate the procedures for glazing the Ribbon Window system.</li> </ul> <p>Unitized System:</p> <ul style="list-style-type: none"> <li>• Measure and layout materials needed for the installation of unitized systems.</li> <li>• Demonstrate the installation procedures to properly install manufacturer's unitized system materials.</li> <li>• Select and safely use the appropriate tools to install all glazing systems.</li> </ul> <p>Pressure Wall:</p> <ul style="list-style-type: none"> <li>• Demonstrate Pressure Wall fabrication techniques.</li> <li>• Demonstrate the Pressure Wall erection process for single span and multi-span buildings.</li> <li>• Apply the steps to prepare the Pressure Wall openings for glazing.</li> <li>• Install glass, pressure plates, and covers on a Pressure Wall job.</li> <li>• Perform the procedures for internal sealants, zone damming, and water diversion.</li> </ul> <p>Storefront Layout and Installation:</p> <ul style="list-style-type: none"> <li>• Measure a rough opening.</li> <li>• Fabricate and assemble a Storefront frame that uses shear block joinery.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe the fabrication techniques for each of the glazing systems.</li> <li>• Describe the installation procedures for each of the glazing systems.</li> <li>• List and describe the different types of tests used to determine the correct installation of glazing systems.</li> <li>• Describe proper handling procedures and window material storage of each glazing system.</li> <li>• Compare and contrast the differences between modular, single and multiple ribbon window system units.</li> <li>• Identify the problems that are caused by inaccurate measurements of ribbon window systems.</li> <li>• Read and interpret manufacturer's directions and architectural drawings showing placement of Ribbon Window units.</li> <li>• Discuss the benefits of using pre-glazed systems.</li> <li>• Recognize Pressure Wall terminology and components.</li> <li>• Identify the steps for preparing the Pressure Wall openings for glazing.</li> </ul> <p>Storefront:</p> <ul style="list-style-type: none"> <li>• Describe the procedures associated with internal sealants, zone damming, and water diversion.</li> <li>• Describe components and materials of a Storefront including headers, sills, vinyl gaskets, shims, backer rods, anchors, sealants and setting blocks.</li> <li>• Explain the critical importance of proper sealant selection and application in Storefront installations.</li> <li>• Explain the importance of accurate field measurements.</li> </ul> <p>Spandrel Glass and Architectural Panels:</p> <ul style="list-style-type: none"> <li>• Identify the uses of Spandrel Glass and Architectural Panels.</li> <li>• Describe the components of Architectural Panel systems including layout, fabrication, and installation.</li> <li>• Describe the components of Louver Systems including layout and installation.</li> <li>• Describe the different types, colors, finishes and patterns of Spandrel Glass and Architectural Panel systems.</li> <li>• Describe thermal stress and its causes.</li> <li>• Describe Architectural Panel fabrication.</li> </ul>
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	<ul style="list-style-type: none"> <li>• Install Storefront metal and glass for new installations.</li> <li>• Fabricate and assemble a canned Storefront system.</li> <li>• Install, level, and plumb a given Storefront frame.</li> <li>• Drill holes in masonry with a hammer drill or pistol drill for a given masonry anchor.</li> <li>• Shim and anchor a given Storefront frame.</li> </ul> <p>Spandrel Glass and Architectural Panels:</p> <ul style="list-style-type: none"> <li>• Demonstrate the proper fabrication of an Architectural Panel.</li> <li>• Demonstrate the installation of Spandrel Glass, Architectural Panels, and Louver Systems.</li> </ul>	
<b>7.6</b>	<b>REPLACEMENT, RETRO-FIT, AND WEATHERIZATION</b>	
	<p style="text-align: center;"><b>ON-THE-JOB LEARNING (OJL) – 200 - 400 hours</b></p> <ul style="list-style-type: none"> <li>• Demonstrate the safe removal and disposal of broken glass.</li> <li>• Demonstrate the techniques for re-glazing various window systems.</li> </ul>	<p style="text-align: center;"><b>RELATED INSTRUCTION (RI) – 20 hours</b></p> <ul style="list-style-type: none"> <li>• Identify and use the proper safety equipment and procedures.</li> <li>• Identify and describe the various types of replacement and retro-fit windows.</li> </ul>
<b>7.7</b>	<b>SKYLIGHTS AND SLOPED GLAZING</b>	
	<p style="text-align: center;"><b>ON-THE-JOB LEARNING (OJL) – 200 - 400 hours</b></p> <ul style="list-style-type: none"> <li>• Demonstrate self-flashing curb and curb mount skylight mountings.</li> <li>• Demonstrate the use and installation of various kinds of fall protection.</li> <li>• Demonstrate safe handling practices for skylights.</li> <li>• Compare the dimensions and tolerances of the skylight support structure with dimensions on skylight shop drawings.</li> <li>• Demonstrate the assembly of skylight components.</li> <li>• Demonstrate the use of various glazing and skylight hand tools.</li> <li>• Troubleshoot and repair problems with tools, materials, layout, leaks and other installation inefficiencies.</li> <li>• Demonstrate caulking and anchoring techniques.</li> </ul>	<p style="text-align: center;"><b>RELATED INSTRUCTION (RI) – 20 hours</b></p> <ul style="list-style-type: none"> <li>• Describe the use and purpose of skylights in both residential and commercial architecture.</li> <li>• Identify the types of loads to which skylights may be exposed and explain the importance of adhering to the design of a sky lighting system.</li> <li>• Discuss the various types of glass and their strength and response to impact, thermal stress and movement, breakage and water or moisture.</li> <li>• Discuss fall protection, including anchor points, hardware options, safety nets, load, and scaffolds.</li> <li>• Describe safe practices for handling skylights and materials including scissor and boom lifts.</li> <li>• Describe safe installation methods including how to avoid walking on the glass.</li> <li>• Describe the use of shop drawings for identifying components and materials for installation.</li> <li>• Describe the assembly procedures and considerations for a given skylight.</li> <li>• Identify skylight hand tools and materials.</li> </ul>
<b>7.8</b>	<b>ENERGY GLAZING SYSTEMS (EGS)</b>	

	<b>ON-THE-JOB LEARNING (OJL) – 200 - 400 hours</b>	<b>RELATED INSTRUCTION (RI) – 20 hours</b>
<ul style="list-style-type: none"> <li>• Demonstrate the proper fabrication of various EGS.</li> <li>• Demonstrate the proper installation of various EGS.</li> <li>• Demonstrate safe work practices and appropriate PPE when working with EGS.</li> <li>• Demonstrate proper material handling and installation with particular emphasis on the pigtail.</li> </ul>		<ul style="list-style-type: none"> <li>• Explain how EGS gather, store, and re-produce energy.</li> <li>• Explain how EGS benefit property owners in regard to sustainability and the green initiative.</li> <li>• List and identify parts and components of various EGS.</li> <li>• Identify various EGS manufacturers' specifications for fabrication and installation.</li> <li>• Define and discuss a pigtail and its care and handling.</li> <li>• Describe how to handle and store photovoltaic (PV) panels.</li> </ul>
<b>7.9</b>	<b>WELDING APPLICATIONS</b>	
	<b>ON-THE-JOB LEARNING (OJL) – 200 - 400 hours</b>	<b>RELATED INSTRUCTION (RI) – 80 hours</b>
	<ul style="list-style-type: none"> <li>• Operate the shielded metal arc welding process in all positions to AWS D1.1 acceptance criteria (stick).</li> <li>• Demonstrate how to manipulate the electrode to produce certain weld characteristics.</li> <li>• Operate the oxy fuel cutting process.</li> <li>• Operate the plasma arc cutting process</li> <li>• Tack up weldments.</li> <li>• Weld single and multipass fillet welds in all positions using the Shielded Metal Arc Welding process.</li> <li>• Weld Groove welds in the flat, horizontal, vertical and overhead positions using the shielded metal arc welding process to given specifications.</li> <li>• Use Shielded Metal Arc Welding to produce stringer beads and weave beads in the flat and vertical positions.</li> <li>• Repair faulty fillet weld areas containing undercut, overlap, uneven fillet weld legs and undersized fillet welds.</li> <li>• Produce stringer beads and weave beads in the flat and vertical positions.</li> <li>• Demonstrate oxygen fuel cutting techniques to sever metals.</li> </ul>	<ul style="list-style-type: none"> <li>• Define welding and list common welding processes.</li> <li>• Identify industries and applications where welding processes are performed.</li> <li>• Recognize welder safety and working conditions and apply acceptable safety preventative measures.</li> <li>• List personal protective equipment and identify attire that is sufficient in coverage and materials known to minimize skin burns caused by sparks, spatter, or radiation.</li> <li>• Identify welding types, joint design, and positions used in welded construction.</li> <li>• Interpret common welding symbols as established by the American Welding Society.</li> <li>• Identify arc welding procedures, equipment, and materials with safety.</li> <li>• Define basic terminology associated with the welding trade.</li> </ul>



STATE OF NEVADA  
 NEVADA STATE APPRENTICESHIP COUNCIL  
 555 EAST WASHINGTON AVENUE, 4100  
 LAS VEGAS NV 89101  
 (702) 486-2650

APPRENTICESHIP OJT AND RELATED TRAINING INSTRUCTION (RTI)  
 INFORMATION CHECK LIST

APPRENTICESHIP TITLE: Nevada Glaziers JATC Master Glazier  
 CURRICULUM TITLE: Master Glazier  
 DOT NUMBER: 865.381-010  
 OJT HOURS: 4000

144 Total Hours of Related Instruction Per Year

Type of Related Instruction:

- Correspondence  Outside Contract Instruction  
 Regular College Course  Other (Please explain in summary comments)  
 Course Taught by Trade Instruction

Subjects to be Taught During Program:

- |                               |           |
|-------------------------------|-----------|
| 1. <u>Please see attached</u> | 6. _____  |
| 2. _____                      | 7. _____  |
| 3. _____                      | 8. _____  |
| 4. _____                      | 9. _____  |
| 5. _____                      | 10. _____ |

SOURCE(S) OF TRAINING MATERIAL (Title and Publisher):

IUPAT FTI  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Instruction Location:

- Apprenticeship Training Center  College Campus  
 Worksite After Hours  Home  
 Other (Please explain in summary comments)

Please Designate Length of Related Instruction Program 2 Years  
 (Example: 3 Yrs., 4 Yrs.)

Submitted by: Jason W. Lamberth Apprenticeship and Training Coordinator



# APPENDIX B

## Apprenticeship Agreement



STATE OF NEVADA  
 NEVADA STATE APPRENTICESHIP COUNCIL  
 555 EAST WASHINGTON AVENUE # 4100  
 LAS VEGAS NV 89101

### APPRENTICESHIP AGREEMENT FOR OFFICE USE ONLY I.D. NO. \_\_\_\_\_

This agreement entered into this \_\_\_\_\_ day of \_\_\_\_\_, 2012, between,

Apprentice Name (PLEASE PRINT) \_\_\_\_\_

**Glazier Local 2001 JATC**  
 Program Sponsor Name  
**1701 Whitney Mesa Dr. Ste. 106 Henderson, NV 89014**  
 Program Address City, State, Zip

Address \_\_\_\_\_ City, State, Zip \_\_\_\_\_

Apprentice Signature \_\_\_\_\_

Officer's Name (PLEASE PRINT) \_\_\_\_\_

Parent or Guardian if Apprentice is a Minor \_\_\_\_\_

Officer's Signature \_\_\_\_\_

D. O B \_\_\_\_\_ Soc. Sec. \_\_\_\_\_

Program No **NV003090052**

**VETERAN STATUS:** Yes  NO  **ETHNIC DERIVATION:** Black (Not Hispanic)  American Indian or Alaskan Native  Asian or Pacific Islander  Hispanic  White (non Hispanic)  **SEX:** Male  Female  **EDUCATION:** High School Diploma  8<sup>th</sup> grade or less  None  GED  9<sup>th</sup> to 12<sup>th</sup> grad

**CREDIT FOR PREVIOUS EXPERIENCE:** Hours \_\_\_\_\_ Dates Previously In Program N/A **CREDIT FOR RELATED INSTRUCTION:** Hours 0

**IF CREDIT IS OVER 50% CREDIT PLEASE INFORMATION BELOW:**

Transfer (State) \_\_\_\_\_ Other Employment: N/A

Trade Glazier Term (Hrs) \_\_\_\_\_ Probation Period 90 days

Related Instruction Hours per year 144 Hours per day 8 Hours per week to be worked by apprentice 40

**APPRENTICE WAGES:** The apprentice schedule of pay shall be listed for each advancement period (The apprentice rate is by percentage of the journeyman=s rate unless otherwise indicated.)

Period	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>	9 <sup>th</sup>	10 <sup>th</sup>
	60% Arch	70%	80%	90%	100% Arch	60% Mast	70%	80%	90%	100% Mast

Terms (hours)	Percent									

Major Work Process: See Standards on file

Special Provisions: None

**Please attach a list of any provide any special provisions as approved by the Council.**

Either party may terminate the Agreement by submitting written notification of termination to the approving agency; but, if such notifications are submitted after completion of the probationary period, the reason for termination shall be given. Due notice thereof must be given to the APPRENTICE, as well as an opportunity to be heard and reasonable opportunity for corrective action. The provisions on this form are acknowledged as a binding part of this agreement by the signators; and

The terms of the Nevada State Apprenticeship statutes, regulations and standards are incorporated as a binding part of this Agreement and are acknowledged by the signators and

That the APPRENTICE shall not be discriminated against with respect to hire, advancement, compensation or other terms, conditions or privileges of employment because of race, color, religion creed, national origin or ancestry, sex, age, or occupationally irrelevant physical requirements.

IN WITNESS WHEREOF, the parties hereto have set their hands on the dates indicated above:

Registered by the Nevada State Apprenticeship Council on \_\_\_\_\_ Secretary - Director of Apprenticeship \_\_\_\_\_

\*Warning: this agreement does not constitute a certification under NRS 610 or Title 29, CFR, Part 5 for the employment on the apprentice on Federal or State financed projects. Current certification must be obtained from the Nevada State Apprenticeship Council or Bureau of Apprenticeship & Training.



**APPENDIX C**

**AFFIRMATIVE ACTION PLAN**

**ADOPTED BY**

**THE FINISHING TRADES INSTITUTE OF NEVADA  
GLAZIERS JOINT APPRENTICESHIP AND TRAINING COMMITTEE**

***INTERNATIONAL UNION OF PAINTERS  
AND ALLIED TRADES  
FINISHING TRADES INSTITUTE***

**AS REQUIRED UNDER TITLE 29, CODE OF FEDERAL REGULATIONS, PART 30**

**AMENDED MAY12, 1978**

**DEVELOPED IN COOPERATION WITH THE  
U.S. DEPARTMENT OF LABOR  
OFFICE OF APPRENTICESHIP  
AND THE  
NEVADA STATE APPRENTICESHIP COUNCIL**

**APPROVED BY:** \_\_\_\_\_

**DATE APPROVED:** \_\_\_\_\_

## **Section I – Introduction**

The FTI of Nevada Glazier JATC enters this plan with good faith for the purpose of promoting equality of opportunity into its registered apprenticeship program. The 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 AAP is a supplement to the Apprenticeship Standards. Any Changes made by the JATC shall become part of this written AAP, once approved by the Office of Apprenticeship, U. S. Department of Labor and the Nevada State Apprenticeship Council.

## **Section II – Equal Opportunity Pledge**

The FTI of Nevada Glazier 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, disability, sex or sexual orientation. 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 and the Nevada EEO Plan.”

## **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, 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 Affirmative Action Plan Workforce Analysis Worksheet) If underutilization exists, the JATC will develop goals and a timetable to the best of their ability to increase the selection of minority and/or women applicants into the apprenticeship program.

#### **Section IV – Outreach and Positive Recruitment**

The JATC pledges to engage in various outreach and positive recruitment activities by employing the following approach:

When the program is accepting applications, application information will be disseminated 30 days in advance of the application acceptance date. The information will include the place of application, the minimum qualifications, the documentation required and the equal opportunity policy of the local JATC.

The JATC's AAP 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. Once those efforts have been selected, the JATC will set forth the specific steps they intend to take under each identified effort. The JATC will identify a significant number of activities in order to enable it to meet its obligation under Title 29, CFR part 30.4©. At a minimum, the application information should be disseminated to the following organizations via an announcement of specific apprenticeship openings that must be disseminated thirty (30) days in advance of the earliest date for application at each interval to the following agencies/organizations:

- Registration Agency
- Minority Organizations
- Women's Organizations/Centers
- Job Corps Centers
- Local Schools
- Employment Service Centers
- One Stop Centers
- Vocational Education Schools
- Veterans Organizations
- Native American Organizations/Tribes
- Media/Virtual Organization (Facebook, Carerrbuilder.com, etc.)
- Newspapers (which are circulated in the minority community or are directed at women)

The JATC will also undertake the following positive recruitment activities:

- 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.

- Cooperation with local 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.
- Internal communication of the JATC's equal opportunity policy should be conducted in such a manner to foster understanding, acceptance, and support among the sponsor's various officers, supervisors, employees, and members and to encourage such persons to take the necessary action to aid the JATC in meeting its obligation under Title 29, CFR Part 30 and the Nevada State plan for Equal Opportunity.
- Engagement 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 will also initiate programs to prepare women and encourage women to enter traditionally male programs.
- Use same craft journeyworkers to assist in the implementation of affirmative action in the apprenticeship program.
- Grant advance standing or credit on the basis of previously acquired experience, training skills, or aptitude for all applicants equally.
- Other appropriate action to ensure that the recruitment, selection, employment, and training of apprentices during their apprenticeship shall be without discrimination because of age, disability, sexual orientation, 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 journey workers 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 effect that result 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 activity(ies). 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.

## **FTI of Nevada Glaziers Local #2001 JATC**

### **Affirmative Action Plan**

FTI of Nevada Glaziers Local 2001 JATC will take the following actions in regards to the proposed action plan:

- A. Provide notice in community newspapers including the Review Journal and targeted publications. Notice will also be provided to employment centers, schools, women's organizations and centers, and minority centers and organizations.
- B. Take advantage of training offered in affirmative action through Federal Government and State of Nevada.
- C. Participate in Career Days and Counselors Information Events with local schools.
- D. Conduct recruitment training for staff and internal organizational personnel.
- E. Participate in programs such as Helmets to Hardhats and Build Nevada that offer pre-application assistance to applicants.
- F. Work with Job Corps pre-apprentice training programs
- G. Offer credit for previous training or on-the-job experience to all applicants on a uniform basis.
- H. Inform all participants of the possible opportunities available to assist in the implementation of affirmative action.

All items to be on going throughout the year and to be reviewed on a regular basis to determine their success.

**SECTION VI – OFFICIAL ADOPTION**

The foregoing Affirmative Action Plan is hereby officially adopted by the International Union of Painters and Allied Trades District Council 15 Glaziers Local Union #2001, and the Signatory Contractors of Glaziers Local Union #2001 known as The FTI of Nevada Glaziers JATC in this document on this 28 th Day of January 2014.



Signature of Management

Terry D. Mayfield

Printed Name



Signature of Management

Robert Campbell

Printed Name



Signature of Management

Thomas Henderson

Printed Name



Signature of Labor

Jack J. Mulroy

Printed Name



Signature of Labor

John Smith

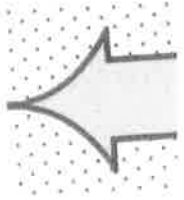
Printed Name



Signature of Labor

William A. Swanson

Printed Name



## AFFIRMATIVE ACTION PLAN WORKFORCE ANALYSIS WORKSHEET

### A. SPONSOR INFORMATION

Program Number:	NV003090052		
Name of Sponsor:	Nevada Glaziers JATC Master Glazier		
Address:	1701 Whitney Mesa Dr. #106		
City/State/Zip Code:	Henderson, NV 89014		
Contact Person:	Jason Lamberth		
Phone Number: (702)438-2611		FAX Number: (702)438-4452	
E-Mail Address:	jlamberth.dc15@msn.com		

### B. OCCUPATIONAL INFORMATION

Occupational Title: *	Glazier		
RAPIDS Code: 0221		O*NET/SOC Code: 47-2121.00	
Type of selection method used: Las Vegas MSA			
Labor Market Area description: Southern Nevada			

### C. LABOR MARKET AREA & OCCUPATIONAL PARTICIPATION DATA

<b>C.1 Total Labor Force in Labor Market Area *</b>			
Number of Women:	330,667		44% of labor force
Number of Minorities:	304,320		40.6% of labor force
<b>C.2 Working Age Population in Labor Market Area *</b>			
Number of Women:	330,667		44% of labor force
Number of Minorities:	304,320		40.6% of labor force
<b>C.3 Apprentice Participation in Craft/Occupation in National Apprenticeship System **</b>			
Number of Women:	2		2.1% of apprentices
Number of Minorities:	39		42.3% of apprentices
<b>C.4 The General Availability of Minorities and Women with the Present or Potential Capacity for Apprenticeship in Program Sponsor's Labor Market Area. ***</b>			
Number of Women:	44%		
Number of Minorities:	40.6%		

Resources for obtaining labor market information.

\* [http://www.census.gov/hhes/www/eeoindex/page\\_c.html](http://www.census.gov/hhes/www/eeoindex/page_c.html)

\*\* RAPIDS Data available from Registration Agency.

\*\*\* Program Sponsors may use any reasonable method for determining the general availability of minorities and women with the present or potential capacity for apprenticeship, including relying on the data recorded in Section C.1 for "Total Labor Force", C.2 for "Working Age Population", and C.3 "Apprentice Participation in Particular Craft/Occupation" to propose the entries for "The General Availability of Minorities and Women."

### D. SPONSOR'S WORKFORCE DATA

D.1 Total Number of Journey/Craft Workers Employed:		
Number of Women:		% of work force
Number of Minorities:		% of work force
D.2 Total Percentage of Apprentices or of Applicant Pool (depending on selection method used)		
Numerical percentage of Women apprentices or women in applicant pool:	0	0%
Numerical percentage of Minority apprentices or minorities in applicant pool:	17	39.5%

**E. ADDITIONAL RESOURCE DATA FOR CONSIDERATION IN ESTABLISHING GOALS**

Industry Source Data	Minority rate of participation	Female rate of participation
E.1 Registered Apprenticeship Partners Information Data System (RAPIDS): *	39-42.3%	2-2.1%
E.2 EEOC Occupational Employment Data: **	80-18%	15-3.4%

\* Data available from Registration Agency

\*\* <http://www.eeoc.gov/stats/jobpat/jobpat.html>

**F. DETERMINATION OF UTILIZATION**

Analysis	Yes	No
Minority Underutilization:		
Female Underutilization:		

**G. SPONSOR'S GOALS:**

The program sponsor proposes and agrees to make a good faith effort to attain the goal of selecting 40.6 % minorities and 5.4 % women during the next EEO Review cycle. These goals will not be used to discriminate against any qualified applicant on the basis or race, color, religion, national origin or sex.

The number of new apprentices to be hired during the next year (or selection period) is estimated to be:

**H. REGISTRATION AGENCY APPROVAL:**

**Sponsor**

**Registration Agency**

\_\_\_\_\_  
Sponsor's Signature

\_\_\_\_\_  
Registration Agency Signature

\_\_\_\_\_  
Typed Name

\_\_\_\_\_  
Typed Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date Signed

\_\_\_\_\_  
Date Signed



**APPENDIX D**

**QUALIFICATIONS AND SELECTION  
PROCEDURES**

**ADOPTED BY**

**THE FINISHING TRADES INSTITUTE OF NEVADA  
GLAZIERS JOINT APPRENTICESHIP AND TRAINING COMMITTEE**

***INTERNATIONAL UNION OF PAINTERS  
AND ALLIED TRADES  
FINISHING TRADES INSTITUTE***

**DEVELOPED IN COOPERATION WITH THE  
U.S. DEPARTMENT OF LABOR  
OFFICE OF APPRENTICESHIP  
AND THE  
NEVADA STATE APPRENTICESHIP COUNCIL**

**APPROVED BY: \_\_\_\_\_**

**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 Title 29 CFR Part 30

## **SECTION I – MINIMUM QUALIFICATIONS**

Apprentice applications will be accepted on the basis that applications have met and shown documented proof of all required minimum qualifications at the time of application.

Applicants shall meet the following minimum qualifications:

### **A. Age**

All applicants must be at least eighteen (18) years of age. Applicants are required to submit reliable proof of age (e.g., a driver's license, birth certificate or other acceptable documentation).

### **B. Education**

All applicants shall possess sufficient educational knowledge to satisfactorily complete the on-the-job training and related technical instruction. Applicants must provide proof that a high school diploma or GED has been awarded at the time of application.

### **C. Physical**

All applicants shall be physically capable of performing the essential functions of the Glazing Trade without posing a direct threat to the health and safety of themselves or any other individuals, with reasonable accommodations.

### **D. Citizen**

All applicants must be a Legal Citizen of the USA or Legal Alien authorized to work in the USA by the U.S. Citizenship and Immigration Services (USCIS). Proof must be shown at the time of application.

### **E. Transportation**

All applicants must have adequate transportation to attend OJL and RTI classes.

### **F. Ability**

All applicants must satisfy the Committee that they have the ability and aptitude to master the rudiments of the trade based on oral interview, written documentation submitted by the applicant, and evaluation rankings.

### **G. Military Experience**

All 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 and/or VA benefits.

#### **H. Additional Requirements for Master Glazier Apprentice**

All applicants for the Master Glazier Apprenticeship shall have successfully passed the FTI of Nevada Architectural Glaziers Joint Apprenticeship and Training Committee's Architectural Apprentice Program.

Applicants may also apply for the program provided they have documented evidence of 2 years minimum commercial glazing experience that is verifiable through paycheck stubs, W2's or verifiable letters of recommendation.

In addition all applicants must successfully pass the Architectural Competency examination with a minimum score of 70%. These requirements are in addition to all other requirements for acceptance.

In the event of acceptance, placement will be the sole decision of the Board of Trustees and their decision will be final.

### **SECTION II – APPLICATION PROCEDURES**

- A. Applications will be made available to anyone who is interested at specific periods of time throughout the year as deemed necessary by the JATC. Announcements will be made 30 days prior to the opening of the application period.
- B. The fact that applications and apprenticeship opportunities are available shall be made known as specified in the Affirmative Action Plan.
- C. All applications will be identical in form and requirement. The application form shall be numbered in sequence corresponding with the number appearing on the applicant log in order to account for all applications. Applications will be tracked to show race/ethnicity and sex identification and the progress by dates and final disposition of each application.
- D. Before completing the full application process, each applicant will be required to review the Apprenticeship Standards and be given a copy of the complaint procedure. 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.
- E. 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 high school diploma, GED certificate or other acceptable documentation) will constitute a completed application.
- F. Completed applications will be reviewed to insure that all of the minimum qualifications have been met. 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 right

to appeal his/her disqualification. Once the application has been disqualified, no further processing will be conducted.

- G. Applicants meeting all of the minimum qualifications and submitting the required supporting documents will be eligible to participate in the math evaluation.
- H. Only those candidates scoring 70% or higher on the math evaluation will be scheduled for interviews.
- I. Should the number of applicants scoring over 70% on the math evaluation significantly exceed the number of projected openings, the JATC reserves the right to raise or lower the eligible math evaluation score as deemed necessary.
- J. Should the JATC find they have enough applications to meet the future labor needs for the Counties, Cities, and Municipalities governed by these standards, the JATC retains the authority to stop accepting applications at any time.
- K. Application procedures which utilize electronic processes to accomplish any or all of the relevant steps A. through H. above shall be deemed consistent with these procedures, provided such procedures meet all the requirements that apply to non-electronic procedures (e.g. maintenance of records).

### **SECTION III – INTERVIEW PROCEDURES**

- A. The JATC will schedule the interview and evaluation session. All applicants who have met the basic qualifications and have submitted the required documents and scored accordingly on the math evaluation will be notified of the date, time, and place to appear.
- B. The Interview Committee will have in its possession for review with regard to each applicant: application form, education verification and proof of age.
- C. After a brief introduction, the committee will ask questions of the applicant with the purpose of finding out as much as possible about the individual and about the capacity to participate in the apprenticeship program.
- D. Questions for the interview and for purposes of evaluation will be on topics related to job performance such as: work experience, school record, mechanical ability, motivation, and vocational training.
- E. Evaluation should be based on a standard of industry needs and not by a comparison with other applicants.
- F. The same questions should be asked of each applicant.
- G. The interviewer(s) will rate each applicant during the interview on each of the factors on the applicant rating form.

#### **SECTION IV – SELECTION FROM THE COMMITTEE**

- A. The number of new apprentices to be accepted will be determined before starting interviews. The number will be based on the needs of the industry areas governed by these standards.
- B. Selection of individuals from the list of interviewed applicants will not be made until all interview sessions are complete and all applicants have been evaluated.
- 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 and required documents, if applicable. The interviewer will record the questions asked and the general nature of the applicant's answers. The interviewer will then prepare a written summary of his/her judgment of the applicant derived from the interview. After completing the interview and evaluation of the applicants, the individual rating scores of the interviewer(s) will be added together and averaged to determine the applicant's final rating.
- D. Applicants will be placed on a "Ranking List of Eligible Applicants" according to their scores at the evaluation session, with the applicant having the highest score being at the top of the list, and all applicants then listed in descending order based on score.
- E. As openings for the registration of new apprentices occur, the highest ranked applicant will be notified of selection by telephone. It will be the responsibility of the applicant to keep the JATC informed of their current mailing address and telephone number.
- F. 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 notice sent to their address "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.
- G. Qualified applicants remaining on a preceding 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 that were on the ranking list will be required to reapply.
- H. During the two (2) 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.

- I. Any applicant who feels that he/she was wrongfully denied entry to the apprenticeship program may appeal the decision using the applicant appeals procedure described below in Section VIII.

#### **SECTION V – DIRECT ENTRY FOR JOB CORPS GRADUATES AND APPLICANTS FROM RECOGNIZED PREPARATORY PROGRAMS**

The JATC encourages preparatory/pre-apprenticeship craft training to facilitate entry into apprenticeship. 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 JATC 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.)***

Consequently, applicants who successfully complete the application process for apprenticeship and are entering through a recognized preparatory program (such as the Helmets to Hardhats Program) shall be evaluated, in terms of their prior experience, through hands on proficiencies as well as be subject to a written General Knowledge questionnaire. They will then be placed within the program at the point that corresponds with their proven experience. Entry of applicants from Helmets to Hardhats and other recognized preparatory programs shall be done without regard to race, color, religion, national origin, or sex.

An employee of a non-signatory employer not qualifying as a journeyworker when the employer becomes signatory shall be evaluated by the JATC using consistent, standard, nondiscriminatory means and indentured at the appropriate period of apprenticeship based on the skill and knowledge of the applicant.

An individual who signs an authorization card during an organizing effort wherein fifty percent (50%) plus one of the employees have signed the authorization cards, whether or not the employer becomes signatory, and is an employee of the non-signatory employer and does not qualify as a journeyworker, shall be evaluated by the JATC using consistent, standard, nondiscriminatory means, and indentured at the appropriate period of apprenticeship based on previous work experience and related training.

#### **SECTION VI – COMPLAINT PROCEDURE**

A. Any apprentice or applicant for apprenticeship who believes that he/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/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 Registration Agency or, at the apprentice or applicant's election, with the private review body established by the JATC (if applicable).

B. The complaint will be in writing and will 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 Registration Agency 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 Registration Agency for good cause shown.

D. Complaints of discrimination in the apprenticeship program may be filed and processed under Title 29, CFR part 30, the Nevada State Plan for EEO, 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 VII – 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 the regulations at Title 29, CFR part 30, as may be required by the U.S. Department of Labor. The records pertaining to individual applicants, selected or rejected, will be maintained in such manner as to permit the identification of minority and women (minority and non-minority) participants.

The JATC must retain a statement of its AAP for the prompt achievement of full and equal opportunity in apprenticeship, including all data and analysis made pursuant to the requirements of Title 29, CFR part 30.4. The JATC also must maintain evidence that its qualification standards have been validated in accordance with the requirements set forth in Title 29, CFR part 30.5(b).

In addition to the above requirements, adequate records will 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 will be maintained

for five (5) years from the date of last action and made available upon request to the U.S. Department of Labor or other authorized representative.

### **SECTION VIII – APPRENTICE APPLICANT APPEALS PROCEDURE**

An appeals committee will be established composed of one member appointed by labor and one member appointed by management. Each organization shall appoint its own representative on the appeals committee in any matter that they choose, as long as that individual is not serving on the apprenticeship committee. The authority of the appeals committee shall be limited to rendering a decision on cases involving unjust treatment of applicants for the apprenticeship program. The process for appeal includes the following:

- A. An appeal must be submitted in writing to the local JATC within fifteen (15) days of the date of receipt of notification of rejection to the apprenticeship program.
- B. The local JATC shall submit the appeal and the materials regarding the disposition of the applicant to the appeals committee.
- C. The Appeals Committee will consider the written evidence and a hearing will be granted.
- D. A final decision shall be rendered within thirty (30) days of the hearing and all parties concerned shall be notified in writing by the Appeals Committee.
- E. Decisions of the Appeals Committee shall be final and binding upon both the JATC and the applicant.
- F. A copy of the appeal and the disposition will be kept on file for a period of at least five (5) years.




**SECTION IX – OFFICIAL ADOPTION OF SELECTION PROCEDURES**

The foregoing Selection Procedures are hereby officially adopted by the International Union of Painters and Allied Trades District Council 15 Glaziers Local Union #2001, and the Signatory Contractors of Glaziers Local Union #2001 known as The FTI of Nevada Glaziers JATC in this document on this 28 th Day of January 2014.

  
\_\_\_\_\_  
Signature of Management


Terry N. Mayfield  
Printed Name

  
\_\_\_\_\_  
Signature of Management

Robert Campbell  
Printed Name

  
\_\_\_\_\_  
Signature of Management


Thomas Sandstein  
Printed Name

  
\_\_\_\_\_  
Signature of Labor

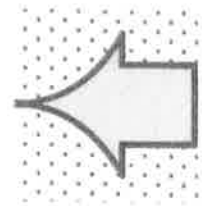
Jack J. Malloy  
Printed Name

  
\_\_\_\_\_  
Signature of Labor

John Smith  
Printed Name

  
\_\_\_\_\_  
Signature of Labor

William A. Swanson  
Printed Name



HERE