



## **MATERIALS AND RESEARCH ENGINEERING ASSOCIATE (SPECIALIST)**

### **Open Non-Promotional**

**Exam Code: 7TR14**

**Department:** Caltrans  
**Bulletin Release Date:** February 15, 2017  
**Final Filing Date:** March 3, 2017  
**Salary:** \$5,185.00 to \$6,490.00

#### **INTRODUCTION**

Caltrans is pleased to announce the posting of the **Materials and Research Engineering Associate (Specialist)** examination. Employment from this examination may be offered in all Caltrans Districts and Sacramento County.

Testing locations may not be located in all areas. Candidates may be asked to travel to the nearest testing facility at their own expense.

#### **EQUAL EMPLOYMENT OPPORTUNITY**

Caltrans is an equal opportunity employer to all, regardless of age, ancestry, color, disability (mental and physical), exercising the right to family care and medical leave, gender, gender expression, gender identity, genetic information, marital status, medical condition, military or veteran status, national origin, political affiliation, race, religious creed, sex (includes pregnancy, childbirth, breastfeeding and related medical conditions), and sexual orientation.

#### **DRUG FREE STATEMENT**

It is an objective of the State of California to achieve a drug-free work place. All applicants will be expected to behave in accordance with this objective, as the use of illegal drugs is inconsistent with the law of the State, the rules governing civil service, and the special trust placed in public servants.

## WHO SHOULD APPLY?

Candidates who meet the minimum qualifications as stated on this announcement may apply for this examination.

## FILING INSTRUCTIONS

Applications (STD 678) must be received or postmarked no later than the final filing date. FAXED OR E-MAILED APPLICATIONS WILL NOT BE ACCEPTED. THE EXAMINATION TITLE MUST BE INDICATED ON THE APPLICATION.

### **\*FILE BY MAIL:**

**Caltrans  
Examination Services (MS 86)  
P.O. Box 168036  
Sacramento, CA 95816-8036**

### **\*FILE IN PERSON:**

**Caltrans  
Examination Services (MS 86)  
1727 30<sup>th</sup> Street, 1<sup>st</sup> Floor  
Sacramento, CA 95816**

**\*Candidates are responsible for obtaining proof of mailing or submission of their application to Examination Services.**

## SPECIAL TESTING ARRANGEMENTS

If you have a disability and wish to participate in one of our testing services, programs, or activities and require a specific accommodation, please mark the appropriate box for Question #2 on the Examination Application form STD678. You will be contacted to make specific arrangements.

## POSITION STATEMENT

Under general direction of a registered engineer, to perform difficult and complex materials testing work; to make field inspections and investigations; and to do other related work.

## ELIGIBLE LIST INFORMATION

An Open, Non-promotional statewide eligible list will be established for Caltrans in all Caltrans Districts and Sacramento County. The list will be abolished 24 months after it is established unless the needs of the service and conditions of the list warrant a change in this period.

## REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION

All applicants must meet the education and/or experience requirements for this examination by the written test date. Your signature on the application indicates that you read, understand and possess the minimum qualifications required, and that the information provided is true and complete to the best of your knowledge.

All applications must include: "to" and "from" dates (month/day/year), time base, civil service or private sector titles, the duties performed, and an original signature. Applications received without this information will be rejected.

**NOTE:** Qualifying experience may be combined on a proportionate basis if the requirements stated below include more than one pattern and are distinguished as "Either I," "or II," "or III," etc. For example, candidates who possess qualifying experience amounting to 50% of the required time of Pattern I, and additional experience amounting to 50% of the required time of Pattern II, may be admitted to an examination as meeting 100% of the overall experience requirements.

Click on the link below to review the California State Personnel Board class specification which contain the requirements for admittance to the exam:

<http://calhr.ca.gov/state-hr-professionals/pages/3381.aspx>

## MINIMUM QUALIFICATIONS

### Either I

Three years' experience in the California state service as a Transportation Engineering Technician, Range B.

### Or II

Four years of materials and research engineering work in the field of laboratory, comparable in level to the Transportation Engineering Technician, Range B, in the California state service.

## EXAMINATION INFORMATION

The written test is scheduled for **May 4, 2017**.

This examination will consist of a Written Test weighted 100%. In order to obtain a position on the eligible list, a minimum score of 70% must be attained.

**NOTE:** If conditions warrant, this examination may utilize an evaluation of each candidate's experience and education compared to a standard developed from the class specification. For this reason, it is especially important that each candidate take special care in accurately and completely filling out his or her application. List all experience relevant to the "Minimum Qualifications" shown on this announcement.

Supplementary information will be accepted, but read the “Minimum Qualifications” carefully to see what kind of information will be useful to the staff doing the evaluation.

## **KNOWLEDGE AND ABILITIES**

### **Knowledge of:**

1. Methods, materials, tools and equipment used in inspecting and testing a wide variety of construction and other materials
2. Physical properties and uses of engineering construction and other materials
3. Fabrication of construction and other materials
4. Contract specification, American Society for Testing and Materials (ASTM) International Specifications, American Association of State Highway and Transportation Officials (AASHTO), Local and National Codes, American Welding Society (AWS), California Test Methods, Caltrans Standard Specifications and Standard Plans, Caltrans Construction Manual, Caltrans Laboratory Safety Manual, soil mechanics, and other industry specifications and test measures
5. Methods of portioning and handling Portland cement concrete and bituminous surfacing material and the handling of asphaltic oils and emulsions
6. Caltrans safety practices, policies, and procedures
7. Cal/OSHA safety regulations

### **Ability to:**

1. Communicate effectively at a level required for successful job performance
2. Test, inspect, and determine the quality and suitability of engineering construction and other materials
3. Analyze situations accurately and take effective action
4. Prepare reports
5. Perform some computer application including, but not limited to, spreadsheets and development of forms for use in the Quality Assurance program
6. Perform basic math in formula calculations at a level required for successful job performance
7. Write clear and comprehensive reports of inspection
8. Maintain concise accurate records
9. Interpret a wide variety of codes and specifications used to assess the quality of commercial materials
10. Determine reasons for variances between acceptance test results and independent assurance test results
11. Soil mechanics and American Society for Testing and Materials (ASTM) State Method procedures
12. Analyze and evaluate test results
13. Analyze testing equipment to ensure it is functioning within accepted tolerances

## ADDITIONAL DESIRABLE QUALIFICATIONS

Education equivalent to completion of the 12<sup>th</sup> grade.

## VETERANS' PREFERENCE

Veterans' Preference will be applied to those competitors who are successful in this examination and who qualify for, and have requested, Veterans' Preference through the California Department of Human Resources. Veterans who have achieved permanent civil service status are not eligible to receive Veterans' Preference.

## CAREER CREDITS

Career Credits will be added to the final score of competitors who are successful in this examination.

## CONTACT INFORMATION

For more information regarding this examination, please contact the examination analyst at (916) 227-7397.

## GENERAL INFORMATION

**For an examination with a written feature**, it is the candidate's responsibility to contact **the testing department** three days prior to the written test date if he/she has not received his/her notice to appear.

**Examination Locations:** When a written test is part of the examination, it will be given in such places in California as the number of candidates and conditions warrant. However, locations of interviews or performance evaluations may be limited or extended as conditions warrant.

**Applications are available** at <https://jobs.ca.gov/pdf/std678.pdf>, California Department of Human Resources (CalHR) offices, and local offices of the Employment Development Department.

**If you meet the requirements** stated on this bulletin, you may take this examination, which is competitive. Possession of the entrance requirement does not assure a place on the eligible list. Your performance in the examination will be compared with the performance of the others who take this test, and all candidates who pass will be ranked according to their scores.

**Caltrans** reserves the right to revise the examination plan to better meet the needs of the service, if the circumstances under which this examination was planned change. Such revision will be in accordance with civil service laws and rules and all competitors will be notified.

**Candidates needing special testing arrangements** due to a disability must mark the appropriate box on the application and/or contact the testing department.

**General Qualifications:** Candidates must possess essential personal qualifications including integrity, initiative, dependability, good judgment, and the ability to work cooperatively with others; and a state of health consistent with the ability to perform the assigned duties of the class. A medical examination may be required. In open examinations, investigation may be made of employment records and personal history and fingerprinting may be required.

**Eligible Lists:** Eligible lists established by competitive examination, regardless of date, must be used in the following order: 1) sub-divisional promotional, 2) departmental promotional, 3) multi-departmental promotional, 4) service-wide promotional, 5) departmental open, 6) open. When there are two lists of the same kind, the older must be used first. Eligible lists will expire in one to four years unless otherwise stated on the bulletin.

**Veterans' Preference:** Pursuant to Assembly Bill 372, Veterans' Preference will be awarded as follows, starting January 1, 2014:

1. Any veteran, widow or widower of a veteran, or spouse of a 100 percent disabled veteran, who achieves a passing score in an open examination, shall be ranked in the top rank of the resulting eligibility list.
2. Any veteran who has been dishonorably discharged or released is not eligible for Veterans' Preference.
3. Veterans' Preference is not granted once a person achieves permanent civil service status (Permanent State civil service status means the status of an employee who is lawfully retained in his/her position after completion of the applicable probationary period. This includes permanent intermittent, part-time, and full-time appointments. In addition, individuals who at any time achieved permanent State civil service status and subsequently resigned or were dismissed from State civil service are not eligible to receive Veterans' Preference).

Veteran status is verified by the California Department of Human Resources (CalHR). Directions to apply for Veterans' Preference are on the Veterans' Preference Application (CalHR Form 1093) which is available at <https://jobs.ca.gov/Public/Jobs/Veterans.aspx>, CalHR, and the Department of Veterans Affairs.

**Career Credits:** In Open, Non-promotional examinations, Career Credits are granted to: 1) State employees with permanent civil service status, 2) full-time employees of the state who are exempt from State civil service pursuant to the provisions of Section 4 of Article VII of the California Constitution, and who meet all qualification requirement specified by the Board and have 12 consecutive months of service in an

exempt position, and 3) individuals who have served one full year in, or are graduates of, the California Conservation Corps (eligibility shall expire 24 months after graduation from the California Conservation Corps). Three points are added to the final test score of those candidates who meet the above criteria, and who are successful in the examination. Such examinations cannot be for managerial positions described in Government Code Section 3513. Competitors not currently employed in State civil service who have mandatory reinstatement rights may also be eligible for career credits, but they must explain their service status in the appropriate section of the application Form 100-678. (Section 4 of Article VII of the California Constitution is posted at the State Personnel Board, 801 Capitol Mall and Sacramento).

**TTY** is Telecommunications Device for the Deaf and is reachable only from phones equipped with a TTY Device.

*For individuals with disabilities, this document may be available upon request in alternate formats. To obtain an alternate format, please call or write to Caltrans, Office of Examinations and Recruitment Services, P.O. Box 168036, MS 86, Sacramento, CA 95816. Voice (916) 227-7858 California Relay Service: Voice 1-800-735-2922 or TTY 1-800-734-2929.*