



MANAGER OF TRACK GEOMETRY

FC: MC200
PB: 06

PC: 880
BU: 31
July 2002

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

Directs, manages, supervises, coordinates, schedules, and participates in all Track Geometry Vehicle activities and operations, including operator training, measurement operations, report generation, calibration, and performance evaluation; oversees computer, electrical, electronic, hydraulic, mechanical and pneumatic systems including troubleshooting, maintenance, upgrades, modifications, and replacements; coordinates assigned activities with other divisions, outside agencies and the general public; provides highly responsible staff assistance to the Chief Engineer, and performs related duties as assigned.

CLASS CHARACTERISTICS

Directs and supervises all track geometry vehicle activities including operator training, measurement operations report generation, calibration and performance evaluation, oversees computer, electrical, electronic, hydraulic, mechanical and pneumatic systems. Provides advice and expertise with regard to Track Geometry Vehicles. This class is distinguished from the Chief Engineer in that the latter is responsible for managing and directing a broad variety of maintenance and engineering activities for the District.

EXAMPLES OF DUTIES –*Duties may include, but are not limited to, the following:*

1. Plans, coordinates, schedules and implements all Track Geometry Vehicle activities, operations and tasks with those of other divisions and outside agencies and organizations, consistent with PUC mandated quarterly measuring operation schedules.
2. Plans, coordinates and schedules operator, track, and equipment resources for cyclic and singular measuring operations.
3. Monitors equipment performance and evaluates need for calibration and routine or corrective maintenance.
4. Coordinates, schedules and supervises troubleshooting, routine, preventive and corrective maintenance, upgrades, modifications, and replacements of electrical, hydraulic, mechanical and pneumatic systems with assigned District and contractor personnel.

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5. Plans, coordinates, schedules, and supervises computer and electronic system component calibration processes, system troubleshooting, maintenance, upgrade, modification, and replacement.
6. Coordinates the preparation of computer graphic and text based reports indicating the results of all required track geometry measuring operations; distributes reports in a timely manner to designated personnel; safeguards data tapes consistent with allocated facilities.
7. Directs, coordinates and reviews the work plan for assigned maintenance and repair services and activities; assigns work activities and projects; monitors work flow; reviews and evaluates work products, methods and procedures; meets with staff to identify and resolve problems.
8. Researches, prepares and maintains the trackway features database necessary to produce scripted measuring routes and run time annotated reports for existing track and new construction.
9. Participates in the development and implementation of goals, objectives, policies and priorities; recommends and implements resulting policies and procedures.
10. Identifies opportunities for improving service delivery methods and procedures; identifies resource needs; reviews with appropriate management staff; implements improvements.
11. Provides instruction and advice with regard to Track Geometry Vehicle operations including, computer, electric, electronic, mechanical, and measuring equipment; trains and evaluates readiness of Track Geometry Vehicle Operator trainees.
12. Creates machine code and macro level routines for diagnostic software; assists programmers in analyzing operational problems.
13. Selects, trains, motivates and evaluates technical personnel; provides or coordinates staff training; works with employees to correct deficiencies; implements discipline and termination procedures.
14. Provides staff assistance to the Chief Engineer; participates on a variety of committees; prepares and presents staff reports and other correspondence as appropriate and necessary.
15. Coordinates maintenance and repair activities with those of other divisions and outside agencies and organizations.
16. Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of computerized trackway measurements, machine vision, data acquisition and associated peripheral equipment.

QUALIFICATIONS

Knowledge of:

Operational characteristics, services and activities of a data acquisition system
Maintenance program.

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Principles and practices of maintenance and repair of data acquisition systems.

Principles, practices, materials and methods of computer and peripheral Equipment troubleshooting, repair and maintenance.

Operational characteristics of analog and digital electronics, electrical circuitry and electromechanical equipment operation.

Operational characteristics of real-time computers.

Methods and techniques of computer programming and systems analysis including machine code and assembly language.

Analytical geometry principles and practices as applied to railroad horizontal and Vertical curves, and geometric measurements.

Operational characteristics of electrical, hydraulic, mechanical and pneumatic circuits, controls and systems.

Occupational hazards and standard safety practice.

Principles of supervision, training and performance evaluation.

Principles of basic report writing.

Principles and procedures of record keeping.

Related Federal, State and local laws, codes and regulations.

Skill in:

Supervising and coordinating computer, electrical, electronic, and mechanical system and equipment maintenance and repair services.

Operating and supervising the operation of heavy rail-bound equipment and ensuring safe operating practices.

Supervising, directing and coordinating the work of lower level staff.

Selecting, supervising, training and evaluating staff.

Performing computer programming and analysis functions.

Analyzing computer, electrical, electronic, and mechanical system and equipment maintenance and operating problems, evaluating alternatives and recommending solutions.

Preparing, maintaining and reviewing yard records and reports.

Maintaining accurate records of work performed, materials and labor.

Interpreting and explaining applicable policies and procedures.

Preparing clear and concise reports.

Operating office equipment including computers and supporting word processing and spreadsheet applications.

Communicating clearly and concisely, both orally and in writing.

Establishing and maintaining effective working relationships with those contacted in the course of work.

MINIMUM QUALIFICATIONS

Education:

Possession of a high school diploma, GED or recognized equivalent

Experience:

Four (4) years of experience in the maintenance of electronic, computers and peripheral equipment which must have included at least one year of administrative and/or lead experience.

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Other Requirements:

Must possess a valid California driver's license and have a satisfactory driving record. Must be willing to work emergency overtime and during off hours to provide supervision to back shifts.

WORKING CONDITIONS

Environmental Conditions:

Office environment; field environment; exposure to electrical energy, moving objects, heavy equipment, and vehicles.

Physical Conditions:

Requires maintaining physical condition necessary for sitting for prolonged periods of time; operating motorized equipment.

EEOC Code:02