

**REAR END MARKING DEVICES  
SUPPORTING JUSTIFICATION  
OMB No. 2130-0523**

Summary of Submission

- This submission is a request for a three-year extension without change of the previous approval granted by OMB on **September 23, 2013**, which now expires on **September 30, 2016**.
- FRA published the required 60-day Notice in the Federal Register on **May 3, 2016**. See 81 FR 26619. FRA received no comments in response to this Notice.
- The total number of burden **hours requested** for this information collection submission is **39 hours**.
- The total number of burden **previously approved** for this information collection was **39 hours**.
- Total number of responses **requested** for this information collection submission is **four (4)**.
- Total number of responses **previously approved** for this information collection submission was **four (4)**.
- Thus, there are no **program changes** or **adjustments** at this time.
- **\*\*The answer to question number 12 itemizes the hourly burden associated with each requirement of this rule (See pp. 6-9).**

**1. Circumstances that make collection of the information necessary.**

Background

On July 8, 1976, Congress enacted the Federal Railroad Safety Act of 1976. In addition to providing authorization for continued railroad safety appropriations, the statute included a provision that required the Secretary of Transportation to issue within 180 days such rules as may be necessary to require that the rear car of passenger, commuter and freight trains are equipped with highly visible markers. (See 49 U.S.C. 20132).

On January 11, 1977, FRA issued Part 221 (Rear End Marking Device - Passenger, Commuter and Freight Trains) of Title 49, Code of Federal Regulations, Transportation. Through the requirements of this part, FRA ensures that marking devices for the trailing

end of rear cars meet minimum requirements regarding visibility and display. The rule established the performance standards for "highly visible" marking devices in order to be approved by the Federal Railroad Administrator.

On December 8, 1977, an Appendix to Part 221 was added which sets forth the specific procedures by which railroads are to obtain approval of the marking devices to be used.

Information requested by this regulation is:

- (a) Initial Submission: (49 CFR 221, Appendix A, Subsection (a)).

Description of device.

Each railroad must furnish a detailed description of the type of device, including the manufacturer, lamp type, luminance description, size of lens, and any auxiliary optics needed.

**Certification.**

Each railroad shall furnish a certification that the device has been tested in accordance with current "Guidelines for Testing of FRA Rear End Marking Devices."

**Test records.**

Each railroad shall furnish detailed test records which include the testing organizations, description of tests, number of samples tested, and the test results. The results of the testing should demonstrate compliance with the performance standard.

- (b) Passive devices: (49 CFR 221, Appendix A, Subsection (b)).

**Description of device.**

Each railroad must furnish a detailed description of the type of device, the name of the manufacturer, and the external light source, including the intensity throughout its angle of coverage.

**Certification.**

Each railroad shall furnish a certification that the device has been tested in accordance with current "Guidelines for Testing of FRA Rear End Marking Devices."

### **Test Records.**

Each railroad shall furnish a detailed description of the proposed test procedure to be used to demonstrate marking device compliance, and the device described in the original submission has been tested in accordance with the procedures described therein.

Approval for devices which have been previously approved by the Federal Railroad Administration. (49 CFR 221, Appendix A, Subsection (c)).

### **Description of devices.**

Each railroad must furnish the marking devices designation as it appears in Appendix B.

### **Certification.**

Each railroad shall furnish a certification that the device installed shall consist of the same type and model of components as were used in the samples tested for original approval.

## **2. How, by whom, and for what purpose the information is to be used.**

The Federal Railroad Administration's Office of Safety personnel use this information to monitor railroad compliance with the safety requirements stipulated in 49 CFR Part 221. Specifically, FRA reviews the information to ensure that passenger, commuter, and freight trains are equipped with at least one rear-end marking device which has been approved by the Federal Railroad Administrator in accordance with the procedures included in Appendix A of this Part. Each submission for approval of a marking device must contain a detailed description of the device, including the type, luminance description, size of lens, manufacturer, and catalog number, lamp manufacturer, lamp type, model number, and auxiliary optics used. Also, each submission for approval must include a certification signed by the chief operating officer of the railroad that the device described in the submission has been tested in accordance with the current "Guidelines of Testing of FRA Rear End Marking Devices." Additionally, each submission must incorporate the results of tests performed under paragraph (i) of § 221.14 of this section demonstrating marking device performance in compliance with the standard prescribed in 49 CFR 221.15. Moreover, detailed test results must be maintained, including as a minimum the name and address of the testing organization, the name of the individual in charge of the tests, a narrative description of the test procedures, the number of samples tested, and, for each sample tested, the on-axis beam candela, the beam candela at the plus-minus 15 degree points in the horizontal plane, and the chromaticity coordinates. These records must be made available for inspection by FRA at a designated location

which is identified in the submission.

FRA reviews these test records to determine if a particular device satisfies the specified visibility criteria. Where it deems it necessary, FRA will independently test any procedures to verify that a rear-end marking device's performance in the operating environment accords with the test results submitted by the railroad. Where this is not the case, FRA reserves the right to withdraw approval.

For railroads electing to use rear-end marking devices which have been previously approved by FRA, agency safety staff review these applications to ensure that they include the marking device model and that this model is one approved in appendix B of this Part, and that they include a certification, signed by the chief operating officer of the railroad, that the marking devices installed in the operating environment consist of the same type and model of components used in the sample tested for the original approval.

In sum, the required submissions enable FRA enforcement personnel to effectively control the use of illegal, ineffective, or unapproved devices which do not provide sufficient "visibility" to maintain the necessary degree of safety in train operations.

**3. Extent of automated information collection.**

FRA strongly endorses and highly encourages the use of advanced information technology, wherever possible, to reduce burden. Railroads may keep detailed test records for marking devices consisting of lighted elements, non-lighted elements, or a combination of both electronically, if they are equipped to do so.

It should be noted that the burden hours for this information collection are already extremely minimal.

**4. Efforts to identify duplication.**

The information collection requirements to our knowledge are not duplicated anywhere.

Similar data are not available from any other source.

**5. Efforts to minimize the burden on small businesses.**

Most small railroads are specifically exempt from this regulation. Those that are not exempt (because they operate more than one train at any given time) can utilize a shortened approval procedure. Under this procedure, they are able to adopt a marking device which has already been approved for use on a large Class I railroad. This minimizes any additional expenses due to a separate testing procedure.

**6. Impact of less frequent collection of information.**

If this information were not collected or collected less frequently, railroad safety in the United States would be seriously hindered. Specifically, if rear-end marking devices were not approved by FRA before being used by railroads, they might not meet Federal standards for visibility, particularly at certain distances. This could result in rear-end passenger, commuter, and freight cars not being visible to other trains or to motorists at highway-rail crossings. Such a lack of visibility could, in turn, result in increased numbers of accidents/incidents where train crews, the traveling public, and motorists are seriously injured and possibly killed.

The frequency of submission of information is presently as minimal as possible – the railroad has to submit the required data only one time. If the railroad changes manufacturers or design, the new information has to be submitted to FRA.

**7. Special circumstances.**

Railroads are required to keep detailed test records of marking devices indefinitely or as long as the marking device approved by the FRA is being used by the railroad. These records are essential, and are used by FRA and State inspectors to ensure that the marking devices installed consist of the same type and model of components as were used in the sample testing and approved by FRA.

All other information collection requirements contained in this rule are in compliance with this section.

**8. Compliance with 5 CFR 1320.8.**

As required by the Paperwork Reduction Act of 1995, FRA published a notice in the Federal Register on **May 3, 2016**, soliciting comment on this particular information collection. See 81 FR 26619. FRA received no comments in response to this notice.

Background.

On November 17, 1976, a Notice of Proposed Rulemaking (NPRM) was published in the Federal Register (41 FR 50701) stating that the FRA was considering proposed regulations in response to the provisions of the 1976 Federal Railroad Safety Authorization Act concerning highly visible markers on the rear car of all passenger, commuter, and freight trains. Interested persons were invited to participate in this rulemaking proceeding by submitting written comments and appearing at a public hearing.

Comments were received from railroads, lighting manufacturers, rail labor groups, and

the general public. All comments were taken into consideration in the formulation of the final regulation. Significant comments received and any subsequent changes were placed in Docket No. RSRM-1, Notice 2.

Shortly after issuance of the final rule, FRA held a public meeting on January 25, 1977, to discuss with interested parties draft testing guidelines and approval procedures for verification of the performance of specific marking devices. As a result of this meeting and additional study, FRA remained convinced that the original theoretical basis upon which the performance standards were premised was both sound and reasonable. However, FRA did modify the regulation to allow the approval of any device which satisfied the prescribed specifications, if tested in accordance with the guidelines established in a new Appendix A to this regulation.

**9. Payments or gifts to respondents.**

There are no monetary payments or gifts made to respondents associated with the information collection requirements contained in this regulation.

**10. Assurance of confidentiality.**

The agency is required to make available documents and information collected in compliance with the regulation to those individuals making formal requests under the Freedom of Information Act. FRA does not actively solicit or encourage such requests.

Information collected is not of a confidential nature, and FRA pledges no confidentiality.

**11. Justification for any questions of a sensitive nature.**

These requirements have nothing to do with sensitive matters such as sexual behavior and attitudes, religious beliefs, and other matters commonly considered private.

**12. Estimate of burden hours for information collected.**

*Note: According to the latest agency data, there are approximately 728 railroads now operating in the United States.*

**§ 221.14 - Marking Devices, and Appendix A**

As prescribed in § 221.13, passenger, commuter, and freight trains must be equipped with at least one marking device, which has been approved by the Federal Railroad Administrator in accordance with the procedures included in Appendix A of this Part, and which has the following characteristics: (1) An intensity of not less than 100 candela nor more than 1,000 candela (or an effective intensity of not less than 100 candela nor more than 1,000 candela for flashing lights) as measured at the center of the beam width; (2) A

horizontal beam with a minimum arc width of fifteen (15) degrees each side of the vertical center line, and a vertical beam with a minimum arc width of five (5) degrees each side of the horizontal center line as defined in terms of the 50 candela intensity points; (3) A color defined by the red-orange-amber range; and (4) If a flashing light is used, a flash rate of not less than once every 1.3 seconds nor more than once every .7 seconds.

(b) Marking devices used on passenger and commuter trains in compliance with paragraph (a) of this section shall be lighted under the conditions prescribed in § 221.13 (b) and (c).

(c) When a locomotive is operated singly, or at the rear of a train, highly visible marking devices may be provided by the use of: (1) At least one marking device that complies with paragraph (a) of this section; or (2) At least one illuminated red or amber classification light on the rear of the locomotive, provided it complies with paragraph (a) of this section; or (3) The rear headlight of the locomotive illuminated on low beam.

As provided in § 221.15, of this Part, marking devices must be approved by the Administrator. Approval shall be issued in accordance with the following procedures:

(a) Each submission for approval of a marking device consisting of lighted elements only must contain the following information: (1) A detailed description of the device including the type, luminance description, size of lens, manufacturer and catalog number, lamp manufacturer, lamp type, and model number, and any auxiliary optics used; (2) A certification, signed by the chief operating officer of the railroad that (i) the device described in the submission has been tested in accordance with the current "Guidelines for Testing of FRA Rear End Marking Devices," copies of which may be obtained from the Office of Safety, Federal Railroad Administration, 1200 New Jersey Ave, S.E., Washington, D.C. 20590; (ii) the results of the tests performed under paragraph (i) of this subsection demonstrate marking device performance in compliance with the standard prescribed in 49 CFR 221.15; (iii) Detailed test records, including as a minimum the name and address of the testing organizations, the name of the individual in charge of the tests, a narrative description of the test procedures, the number of samples tested, and for each sample tested, the on-axis beam candela, the beam candela at the plus-minus 15 degree points in the horizontal plane, the beam candela at the plus-minus 5 degree points in the vertical plane, and the chromaticity coordinates, are maintained by the railroad and are available for inspection by the FRA at a designated location which is identified in the submission; (iv) Marking devices of this type installed in the operating environment shall consist of the same type and model of components as were used in the samples tested for purposes of this approval submission; (3) Unless otherwise qualified, acknowledgment of the receipt of the submission required by this section shall constitute approval of the device. The FRA reserves the right to review the test records maintained by the railroad, or to test independently any device submitted for approval under these procedures, and to withdraw the approval of such device at any time, after notice and opportunity for oral comment, if its performance in the operating environment fails to substantiate the test

results or to comply with 49 CFR 221.15.

(b)(1) Each submission for approval of a marking device consisting of non-lighted elements or a combination of lighted and non-lighted elements shall contain the following information: (i) A detailed description of the device including the type of material, the reflectance factor, the size of the device, and the manufacturer and catalogue number; (ii) A detailed description of the external light source including the intensity throughout its angle of coverage, and the manufacturer and catalogue number; (iii) A detailed description of the proposed test procedure to be used to demonstrate marking device compliance with the standard prescribed in 49 CFR 221.15, including any detailed mathematical data reflecting expected performance; (2) FRA will review the data submitted under subsection (1) of this section, and in those instances in which compliance with 49 CFR 221.15 appears possible from a theoretical analysis, the FRA will authorize and may take part in testing to demonstrate such compliance; (3) Where authorized testing has demonstrated compliance with 49 CFR 221.15, a railroad shall submit a certification, signed by the chief operating officer of the railroad, that (i) the device described in the original submission has been tested in accordance with the procedures described therein; (ii) the results of the test performed under paragraph (i) of this subsection demonstrate marking device performance in compliance with 49 CFR 221.15; (iii) detailed test records, including as a minimum the name and address of the testing organization, the name of the individual in charge of the tests, a narrative description of the test procedure, a description of the external light source used, the number of samples tested, and for each sample tested, the on-axis beam candela, the beam candela at the plus-minus 15 degree points in the horizontal plane, the beam candela at the plus-minus 15 degree point in the vertical plane, and the chromaticity coordinates, are maintained by the railroad and are available for inspection by the FRA at a designated location which is identified in the submission; (iv) marking devices of this type installed in the operating environment and the external light source used to illuminate them shall consist of the same type and model of components as were used in the samples tested for purposes of this approval submission; (4) Unless otherwise qualified, acknowledgment of the receipt of the submission required by this subsection shall constitute approval of the device. The FRA reserves the right to review the test records maintained by the railroad, or to test independently any device submitted for approval under these procedures, and to disapprove the use of such device at any time if its performance fails to comply with 49 CFR 221.15.

(c) Whenever a railroad elects to use a marking device which has been previously approved by the FRA, and is included in the current list in appendix B to this Part, the submission shall contain the following information: (1) The marking device model designation as it appears in appendix B; (2) A certification, signed by the chief operating officer of the railroad, that – (i) marking devices of this type installed in the operating environment shall consist of the same type and model of components as were used in the samples tested for the original approval.

(d) Each submission for approval of a marking device shall be filed triplicate with the



Office of Standards and Procedures, Office of Safety, Federal Railroad Administration, 1200 New Jersey Ave., S.E., Washington, D.C. 20590.

The burden is influenced by the number of new railroads (which do not fall under the exemption) that may come into being during the year. In addition, there may be a few railroads that seek approval of a different marking device to accommodate changes in their operations.

Based on past experience, FRA estimated that approximately two (2) railroads are expected to file a submission annually. These railroads will probably elect to use a marking device which has been previously approved by FRA, and is included in the current list of Appendix B to this Part. To obtain approval, procedures outlined in Appendix A and in the FRA Motive, Power, and Equipment Compliance Manual must be followed. It is estimated that it will take approximately 19 hours to gather the necessary information, and prepare the submission. Total annual burden for this requirement is 38 hours.

Respondent Universe:	728 railroads + 24 Manufacturers
Burden time per response:	19 hours
Frequency of Response:	On occasion
Annual number of Responses:	2 requests/submissions
Annual Burden:	38 hours

**Calculation:** 2 requests x 19 hrs. = 38 hours

#### Recordkeeping Burden

Additionally, it is estimated that it will take approximately 15 minutes per submission to file the original submission and FRA's approval letter. Total annual burden for recordkeeping is approximately one (1) hour (rounded off).

Respondent Universe:	728 railroads + 24 Manufacturers
Burden time per response:	15 minutes
Frequency of Response:	On occasion
Annual number of Responses:	2 request records
Annual Burden:	1 hour

**Calculation:** 2 request records x 15 min. = 1 hour

Total annual burden for this entire information collection is 39 hours (38 hours + 1 hour).

**13. Estimate of total annual costs to respondents.**

There are no continuous annual costs involved in carrier submissions in compliance with this regulation. The railroad needs only submit once for each marking device that it wishes approved. Once it is approved, no further submissions are required. Therefore, the only annual costs are for railroads that come into being during the year or railroads that wish to change devices or gain approval of a different device they now wish to use. Based on experience over the past three years, two railroads are expected to file a submission annually.

There is no additional cost to the railroads outside the burden costs mentioned above.

**14. Estimate of Cost to Federal Government.**

Approximately two (2) man-hours are spent processing the respondents' submissions. This excludes time spent during routine compliance and enforcement activities. Multiplying two (2) times the estimated \$78 per hour (\$56 per hour + 40 percent overhead) labor costs equals \$156 in annualized costs.

**15. Explanation of program changes and adjustments.**

As mentioned above in the submission summary at the beginning of this document, this is a request for an extension without change of the current approval for this collection of information. Thus, there are no program changes or adjustments at this time. The total burden remains 39 hours.

There is also no change in costs to respondents.

**16. Publication of results of data collection.**

There is no tabulation or publication of submissions. Primarily, the information is used by specialists of the Office of Safety and field personnel to enforce the regulation. Persons outside the Office of Safety may use the material for research and development purposes.

**17. Approval for not displaying the expiration date for OMB approval.**

Once OMB approval is received, FRA will publish the approval number for these information collection requirements in the Federal Register.

**18. Exception to certification statement.**

No exceptions are taken at this time.

### Meeting Department of Transportation (DOT) Strategic Goals

This information collection supports the main DOT strategic goal, namely transportation safety. Without this collection of information, rail safety throughout the U.S. might be seriously jeopardized. Specifically, the number of accidents/incidents and the severity of corresponding injuries might increase because rear-end marking devices did not meet Federal criteria for visibility and were not approved by FRA before being put into use on passenger, commuter, and freight cars. Such a lack of visibility could, in turn, result in a greater number of accidents/incidents where train crews, the traveling public, and motorists are seriously injured and possibly killed.

The collection of information promotes safety by providing FRA an opportunity to review and monitor all rear end-marking devices (new or modifications of previously approved devices) to ensure that they meet Federal standards for visibility. Each railroad must furnish a detailed description of the type of device, including the manufacturer, lamp type, luminance description, size of lens, and any auxiliary optics needed. Each railroad must also furnish a certification that the device has been tested in accordance with current "Guidelines for Testing of FRA Rear End Marking Devices."

The collection of information, notably the detailed test records, further enhances rail safety by providing a valuable resource that FRA and other investigating agencies can use in determining the cause(s) of accidents/incidents. These records provide valuable information such as the testing organizations, description of tests, number of samples tested, and the test results. FRA can check this information to see whether the rear-end marking device met Federal performance standards. By accurately determining the cause(s) of accidents/incidents, FRA and the railroad industry can take measures to reduce the likelihood of similar events occurring in the future.

In summary, this collection of information enhances railroad safety by providing an additional layer of protection through the agency's close monitoring and full awareness of the type of rear-end marking devices used on passenger, commuter, and freight trains. It furthers DOT's goal of promoting the public health and safety by working toward the elimination of transportation-related deaths, injuries, and property damage.

In this information collection, as in all its information collection activities, FRA seeks to do its utmost to fulfill DOT Strategic Goals and to be an integral part of One DOT.