

SUPPORTING JUSTIFICATION
Reflectorization of Rail Freight Rolling Stock
OMB No. 2130-0566; RIN 2130-AB41

Summary of Submission

- This is a revision to the above last approved information collection submission cleared by OMB on **October 14, 2011**, which expires on **October 31, 2014**.
- FRA published the required 60-day **Federal Register** Notice on April 21, 2014. See 79 FR 22178. FRA received no comments in response to this Notice.
- Total number of burden **hours requested** for this submission is **8,769 hours**.
- The total number of burden **hours previously approved** was **18,044 hours**.
- Total number of **responses requested** for this submission is **134,416**.
- The total number of **responses previously approved** was **278,237**.
- **Adjustments decreased** the total burden **9,275 hours** from the last approved submission.
- There are no **program changes** as the current rule remains unchanged.
- ****The answer to question number 12 itemizes the hourly burden associated with each requirement of this rule (See pp. 10-19).**

1. Circumstances that make collection of the information necessary.

Background

During the decade that ran from 1992-2001, a train and a highway vehicle collided at one of this country's 262,000 public and private highway-rail grade crossings approximately 4,000 times each year. Over that 10 year period, approximately 23 percent of all highway-rail grade crossing accidents involved motor vehicles running into trains occupying crossings ("RIT" accidents). Many of these RIT accidents occurred during nighttime conditions (dawn, dusk, darkness), and involved a highway vehicle striking a train after the first two units of the consist. This suggests that a contributing factor to many RIT accidents is the difficulty motorists have in seeing a train consist at a crossing in time to stop their vehicles before reaching the crossing, particularly during periods of limited visibility, such as dawn, dusk, darkness, or during adverse weather conditions.

The physical characteristics of trains, in combination with the characteristics of grade crossings (e.g., grade crossing configuration, type of warning devices at a crossing, rural background environment with low level ambient light, or visually complex urban background environment, etc.), and the inherent limitations of human eyesight often make it difficult for motorists to detect a train's presence on highway-rail grade crossings, particularly during periods of limited visibility. Freight trains lack conspicuity (i.e., visibility) in their different environmental settings. For example, trains are typically painted a dark color and are covered with dirt and grime, which are inherent in the railroad environment. With the exception of locomotives, trains are usually unlighted, and are not equipped with reflective devices. Similarly, a large percentage of crossings are not lighted. Consequently, much of the light from a motor vehicle's headlights is absorbed by the freight cars, instead of being reflected back toward the motorist. The large size of freight cars, which are out of scale relative to a motorist's expectations, also make them difficult to detect. For instance, even if a motorist is looking for a train, if the locomotive has already passed, it is difficult to detect freight cars because the cars often encompass the motorist's entire field of view and have the tendency to "blend" into the background environment, especially at night. In addition, because most drivers involved in grade crossing accidents are familiar with the crossings and with roadway features at the crossings, the drivers become habituated (or pre-conditioned) to the crossings. In other words, based on previous driving experiences and conditioning, a driver may not expect a train to be occupying a crossing, and without a clear auditory signal (because the locomotive has already cleared the crossing) or visual stimuli alerting the driver to a train traveling through the crossing, the driver may fail to perceive the train in time to stop. This condition is further exacerbated when a train is stopped on a crossing.

There is currently no requirement for lighting or reflective markings on freight rolling stock. However, in recognition that the transportation of goods is not restricted to daytime hours and pristine weather conditions, reflectorization has become an indispensable tool for enhancing visibility in virtually all other modes of transportation, including air, highway, maritime, and pedestrian travel. For example, airplanes and motor vehicles are equipped with retroreflective material at key locations on the exterior surfaces to increase their conspicuity. Mircoprismatic corner cube retroreflectors, which have the ability to direct light rays back to the light source, are typically used on roadway signs that warn of construction or other hazardous conditions. Federal regulations require retroreflective materials on the sides and rear of large trucks to increase their conspicuity and to aid motorists in judging their proximity to these vehicles. Even regulations addressing bicycle safety have specific requirements on the use of reflective materials. Lifesaving marine equipment, such as life vests and rafts, require reflectorization; and to enhance the conspicuity of pedestrians, especially at night, retroreflective material has been incorporated into clothing and similar items.

The everyday use of reflectors indicates their acceptance to delineate potential hazards and obstructions to a vehicle's path of travel. Research specific to the railroad industry has demonstrated that reflective materials can increase the conspicuity of freight cars,

thereby enhancing motorists' ability to detect the presence of trains in highway-rail grade crossings. Reflective material on rail equipment increases visibility inexpensively, and does not require a power source to produce light but returns light from another source (i.e., an approaching automobile's headlights). This greater visibility can help drivers avoid some accidents and reduce the severity of other accidents that are unavoidable.

Research relating to the conspicuity of rail cars is not a new concept. Research dating back to the early 1950s has noted the potential viability of rail car conspicuity materials such as luminous sources (lights on rail cars), self-luminous sources (phosphorescent), and reflective sources. In the mid 1950's, researchers concluded that reflective material along the side sill of boxcars increased the visibility of the cars and aided in the perception of the cars' motion. The same study also found that the amount and distribution of reflectorized material proportionally affected the level of visibility and accuracy of perception of rail cars' motion. In other words, by using material with high coefficients of reflectivity (i.e., high levels of reflected light) against a high contrast background (e.g., dark and dirty rail cars), the amount of illumination was increased, and the motorists' ability to discriminate the movement of the rail cars across their line of vision was enhanced. By the early 1970's, researchers – concentrating on the conspicuity of trains at night – had generally concluded that although luminous and reflective sources both proved effective in enhancing the visibility of trains, reflectors provided conspicuity at a greater distance and field of vision than the other sources which were studied. Although the general consensus of historical research was that reflective materials could increase the conspicuity of objects to which they were attached, previous generations of reflective materials did not reflect enough light to be effective in the railroad environment and lacked the durability to survive the harsh railroad operating environment.

FRA first evaluated the use of reflective material on rail rolling stock in the early 1980s, and supported a study (completed in 1982) on the potential use of reflectorization to reduce nighttime accidents at highway-rail intersections. The study concluded that, although the use of reflective material enhanced the visibility of trains, the reflective material was not durable enough to withstand the harsh railroad environment. It was decided that rulemaking action was not warranted at that time.

Since 1982, however, improvements in the brightness, durability, and adhesive properties of reflective materials have been achieved. Specifically, a new material – microprismatic retroreflective material – is now available. Because of the technological advances in reflective materials and the creation of microprismatic retroreflective material, FRA renewed its research efforts in the early 1990's. FRA funded renewed research through the John A. Volpe National Transportation Systems Center (“Volpe”) in Cambridge, Massachusetts, to re-examine the issue of using reflective material to enhance railcar conspicuity. In July 1999, FRA announced the results of its renewed research efforts with the release of the report *Safety of Highway-Railroad Grade Crossings: Freight Car Reflectorization* (“1999 Volpe Report”). The 1999 Volpe Report provided significant information, including cost estimates and data on the performance of equipped rail car

fleets in an actual service environment. Similar to earlier research, the 1999 Volpe Report concluded that reflective materials enhanced motorists' ability to detect the presence of a train in a highway-rail grade crossing and could therefore prevent collisions involving highway vehicles. The 1999 Volpe Report concluded that the durability and adhesive properties of the new microprismatic retroreflective material could provide adequate luminance intensity levels, which can be sustained for up to 10 years with minimum maintenance.

Building upon the research detailed in the 1999 Volpe Report, FRA subsequently investigated whether motorists, under simulated conditions, would likely confuse reflectorized trains with other roadway hazards, particularly trucks which were already required by federal regulations to be equipped with retroreflective material. In July 2001, FRA released the results of this research in the report *Safety of Highway-Railroad Grade Crossings: Recognition of Rail Car Retroreflective Patterns for Improving Nighttime Conspicuity* ("2001 Volpe Report"). The 2001 Volpe Report concluded that motorists had difficulty discriminating unreflectorized rail cars in grade crossings, but motorists could discriminate between reflectorized freight cars and truck trailers for each of the four reflective patterns tested. In addition, the report concluded that vertically oriented patterns, as opposed to outline or horizontally oriented patterns, were preferable because they were less likely to be confused with the horizontally oriented truck reflectorization patterns.

Meanwhile, in 1994, Congress passed the Federal Railroad Safety Authorization Act of 1994, Public Law 103-440 ("Act"). The Act added § 20148 to Title 49 of the United States Code. Section 20148 required FRA to conduct a review of the Department of Transportation's rules with respect to visibility of railroad cars, and mandated that, if the review established that enhanced railroad visibility would likely improve safety in a cost-effective manner, the Secretary of Transportation initiate a rulemaking proceeding to prescribe regulations requiring enhanced visibility standards for railroad cars. Section 20148 specifically directed the Secretary to examine the use of reflectors. (See 49 U.S.C. 20148(b)(3)). Accordingly, FRA, as the Federal agency responsible for ensuring that America's railroads are safe for the traveling public – and in direct response to a Congressional mandate – is issuing this final rule to require use of reflective material on the sides of rail freight cars and locomotives to enhance the visibility of trains in order to reduce the number of accidents at highway-rail grade crossings where train visibility is a contributing factor.

Although some railroads have already begun to voluntarily reflectorize their freight rolling stock to enhance safety, FRA presently has no way to track this practice. Thus, FRA has no means to determine the type of reflectorized material being used by railroads/rolling stock owners or how widespread reflectorization of freight rolling stock is among American railroads/rolling stock owners. At this time, FRA has no way to determine the exact number and identity of freight cars that are actually being reflectorized. The collection of information is necessary so that FRA can assure

adherence to a uniform standard concerning reflectorized materials and their placement on U.S. freight rolling stock. It is necessary so that it can monitor this process and ensure that all freight cars and locomotives covered by this Part are reflectorized in a systematic manner over a prescribed time frame.

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

The information is used by FRA to ensure that freight rolling stock owners follow an established schedule for placing retroreflective material on the sides of freight rolling stock (freight cars and locomotives) in order to enhance the visibility of trains. In particular, FRA reviews the required Reflectorization Implementation Compliance Reports to ensure that those freight rolling stock owners/railroads electing not to follow the prescribed schedule in § 224.107(a)(2)(i) designate by number all the cars of their fleet which are subject to this Part. Additionally, FRA reviews these plans to verify that freight rolling stock owners certify that these cars and locomotives are equipped with retroreflective sheeting in accordance with the schedules set forth in § 224.107(a)(2)(ii) (Table 3) and § 224.107(b)(2)(ii) (Table 4). Following the conclusion of the initial 24 month period or any 12-month period thereafter, freight rolling stock owners not meeting the stipulated percentage requirements will be considered in violation of this Part, and will have to report the failure to the Associate Administrator within 60 days of the close of the period. Careful review of Reflectorization Implementation Compliance Reports enables FRA to monitor and, where necessary, to enforce railroad compliance with the requirements of this Part.

FRA reviews waiver petitions from railroads and car owners to make a determination whether it is appropriate, safe, and consistent with the public interest to grant an exception to any of the requirements of this Part. Moreover, FRA reviews petitions for special approval of alternative standards to ensure that appropriate data and analysis are provided by railroads/freight rolling stock owners regarding a proposed alternative standard, and to verify that any proposed alternative standard actually provides at least an equivalent level of safety and meets the requirements of this Part.

In sum, the information collected allows FRA to closely monitor railroads/freight rolling stock owners efforts over the required ten year period to fully reflectorize their fleets, and facilitates, where necessary, agency enforcement of railroad/freight rolling stock owner compliance with the requirements of this Part. Full implementation of freight rolling stock fleet reflectorization will result in much greater visibility of rail cars to motorists, and will help to reduce the number of accidents/incidents at highway-rail grade crossings nationwide in which poor visibility of rail cars acts as a main or contributing factor.

3. Extent of automated information collection.

FRA highly encourages and strongly endorses the use of advanced information technology, wherever possible, to reduce burden on respondents. In keeping with the

requirements of the Paperwork Reduction Act (PRA) and the Government Paperwork Elimination Act (GPEA), FRA has provided respondents with the option for electronic submission of required information. Specifically, under § 224.109(a), railroad freight rolling stock owners must be notified by the inspecting railroad or contractor whenever freight cars undergoing single car air brake test inspections have more than 20 percent of the amount of retroreflective sheeting (required under § 224.105) located on either side of the car that is damaged, obscured, or missing. The inspecting railroad or contractor has the option to retain the required record (copy) of each such notification either in writing or electronically.

Under § 224.109(b), locomotives undergoing the annual inspection required under 49 CFR 229.27 must have the retroreflective sheeting visually inspected for presence and condition. Locomotives that have more than 20 percent of the amount of retroreflective sheeting required under § 224.105 that is damaged, obscured, or missing must have that damaged, obscured, or missing sheeting repaired or replaced. If conditions at the time of inspection are such that adequate repairs can not be applied, or if sufficient material is not available, such application can be completed at the next forward location where conditions permit, provided a record is maintained. This record may be maintained either in the locomotive cab or in a secure and accessible electronic database that is available to FRA upon request. Additionally, under § 224.15, after a notice is published in the Federal Register concerning a freight rolling stock owner/railroad petition for special approval of an alternative standard to this Part, respondents – the general public and the railroad community at large – may submit their comments to the agency on such petitions either in electronic or written form.

Finally, FRA welcomes respondents submitting the required Reflectorization Implementation Compliance Report (Form FRA F 6180.113) – stipulated under § 224.107 – electronically, if they so choose. Respondents can submit this information electronically via the Internet (most likely for small railroads without a large number of cars to reflectorize), or electronically via magnetic files (most likely for larger railroads with a great number of cars to reflectorize). If a need emerges for it, FRA would be willing to provide free software relating to the Reflectorization Implementation Compliance Report (Form) so that respondents could submit the requested information electronically. Moreover, the Reflectorization Implementation Compliance Report (Form) is now on FRA's Website for easy downloading by railroads/rolling stock owners who have only minimal advanced information technology capabilities.

According to FRA's Part 224 (Reflectorization) program specialist, approximately 99 percent of responses are now submitted electronically to FRA.

4. Efforts to identify duplication.

Because this information collection is entirely associated with this rulemaking, the collection of information is unique. The information collection requirements – to FRA’s knowledge – are not duplicated anywhere.

Similar data are not available from any other source at this time.

As railroads/freight rolling stock owners reflectorize their freight cars as they undergo the single car air brake test, FRA hopes to work with the Association of American Railroads (AAR) and its UMLER (Uniform Machine Language Equipment Register) file, which keeps track of railroad freight car numbers, to reduce or possibly eliminate any burden associated with the requirement to complete the Reflectorization Implementation Compliance Report (Form FRA F 6180.113) under § 224.107.

5. Efforts to minimize the burden on small businesses.

The requirements of this Part do not apply to freight railroads that operate only on track inside an installation that is not part of the general railroad system of transportation, rapid transit operations within an urban area that are not connected to the general system of transportation, or locomotives or passenger cars used exclusively in passenger service. Thus, the requirements of this Part do not apply to tourist, excursion, or historic railroads (which are invariably small businesses).

Additionally, FRA has established a flexible implementation schedule. For example, each railroad that has fewer than 400,000 annual employee work hours and does not share locomotive power with a railroad with more than 400,000 annual employee work hours may bring its locomotive fleet into compliance according to the following schedule: Fifty (50) percent of the railroad’s locomotives must be retrofitted pursuant to § 224.106(b) within five years of the effective date of this Part and 100 percent must be retrofitted pursuant to § 224.106(b) within 10 years of the effective date of this Part. If a railroad with fewer than 400,000 annual employee work hours shares locomotive power with a railroad with more than 400,000 or more annual employee work hours, the smaller railroad must comply with the requirements of subparts (b)(2) and (b)(3) of § 224.107.

6. Impact of less frequent collection of information.

If this information is not conducted or is conducted less frequently, FRA’s national rail safety program will be considerably hampered. Specifically, without the proposed collection of information, FRA has no means to monitor and, where necessary, enforce railroads/car owners compliance with the reflectorization of their freight cars and locomotive fleets over the prescribed time periods (10 years and five years, respectively, after the effective date of this rule). Thus, without this collection of information, there is no way of assuring that railroads/car owners will actually reflectorize their covered

freight cars and locomotives. The consequence of such a failure, or even delayed implementation, is likely to be a greater number of collisions between motorists and train cars at highway-rail grade crossings, particularly collisions where cars run into trains (“RIT” accidents) at night time or during other times of limited visibility, in which lack of conspicuity or visibility played a decisive or contributing role in the causation of the accident/incident. Such an increase in RIT accidents/incidents is likely to result in greater numbers of injuries and fatalities both to motorists and train crew members, as well as greater property damage.

Statistical data indicate that collisions between trains and motor vehicles often result in fatal or very serious injuries to the occupants of the motor vehicle involved, and the vehicle may be completely destroyed. Moreover, collisions between trains and motor vehicles may result in damage to the rail equipment and often cause significant delays and disruptions to rail operations along that segment of track. Such collisions then have a variety of human and economic consequences. On the human side, families suffer greatly – in many cases are completely shattered – when a loved one is seriously injured or killed in this type of collision. On the economic side, in addition to the losses sustained when there are fatalities (valued by DOT at \$6.0 million for each life) and to the losses resulting from damage to property, there are additional costs. A coalition of railroads, labor organizations, and FRA estimates that collisions that cause train delays incur a cost of approximately \$250 per hour for freight trains. This estimate does not include the ripple effect of delays incurred by other trains, including passenger trains, awaiting use of track where the service has been interrupted, nor does it include loss of productivity due to injured/killed train crew members or loss of revenue to railroads in cases where goods that would have been transported by train are instead moved by truck because of extended delays. Doubtless, these costs are significant.

In sum, this collection of information is another tool that enhances FRA’s ability to promote and augment national rail safety, save lives, and reduce property damage by monitoring and enforcing, where necessary, the full reflectorization of freight cars and locomotive fleets by railroads and other car owners. Installation of reflective tape (reflectorization) increases the conspicuity/visibility of freight cars so that motorists can more readily identify them and better judge their speed and distance. This greater visibility will help prevent some accidents at highway-rail grade crossings, and will help to mitigate others by reducing the severity of those accidents which are unavoidable. The collection of information then aids both FRA’s main mission and DOT’s number one Strategic Goal, i.e., safe transportation of people and goods, and the reduction of the number of injuries and fatalities and corresponding property damage which ensue from transportation related accidents/incidents.

7. **Special circumstances.**

All information collection requirements 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 April 21, 2014, soliciting public comment on this particular information collection. 79 FR 22178. FRA received no comments in response to this 60-day Federal Register Notice.

Background

FRA published a Notice of Proposed Rulemaking (NPRM) in the Federal Register on November 6, 2003 (see 68 FR 62942), to solicit public and rail industry comment on the proposed regulation and the information collection requirements associated with it. In response to the NPRM, FRA received approximately 40 comments. These included comments from members of the railroad industry, trade organizations, local governments, reflective material manufacturing and supply companies, a manufacturer of photo luminescent material, and members of the public. Among those organizations responding were the following: the Association of American Railroads (AAR), the Railway Supply Institute (RSI), the North American Freight Car Association (NAFCA), Canadian National Railway Company (CN), 3 M Company (3M), Avery Dennison, TTX Company (TTX), the American Petroleum Institute (API), Selecto-Flash, Inc., Canadian Pacific Railway Company (CP), Railway Technology Consulting Associates, the American Association of Private Railroad Car Owners, Inc., the American Trucking Association (ATA), Truckload Carriers Association, Availvs Corporation, and the National Association of County Engineers. Moreover, in addition to requesting written comments, FRA held a public hearing on the NPRM in Washington, D.C., on January 27, 2004. Besides several of the just referenced companies, a number of additional organizations provided oral comments, including the American Railway Car Institute and the Wheeler Decal Corporation.

FRA did receive a couple of comments concerning agency paperwork requirements. One of these comments came from the AAR. In its remarks, AAR stated the following: [FRA should] delete the SCABT program for the installation of reflectorized material. Instead, all owners of freight cars would be required to install reflectorized material on their fleets under the schedule FRA proposed for Fleet Reflectorization Implementation Plans. However, instead of Fleet Reflectorization Plans, AAR proposes that freight car owners submit annual reports showing compliance with the FRA-mandated schedule. Reports showing compliance would seem more useful to FRA than plans of what is supposed to take place.

In a similar vein, FRA also received a comment from NAFCA. NAFCA observed: “Car owners should not be required under any circumstances to identify by car mark and number the specific cars that will be reflectorized in a given year.”

After carefully reviewing these comments, FRA decided that they made a great deal of sense. Accordingly, it has changed the name of the form to the Reflectorization Implementation Compliance Report (from the Fleet Reflectorization Implementation

Plan), and now requires this form to be completed after (rather than before) the railroad/freight rolling stock owner has reflectorized freight cars as a means of demonstrating compliance.

9. Payments or gifts to respondents.

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

10. Assurance of confidentiality.

No assurances of confidentiality were made by the Federal Railroad Administration (FRA). Information collected is not of a private nature.

11. Justification for any questions of a sensitive nature.

There are no questions or information of a sensitive nature, or data that would normally be considered private matters contained in this collection of information.

12. Estimate of burden hours for information collected.

Based on the latest FRA data, respondent universe is estimated at 716 railroads/freight rolling stock car owners. The number of United States retro-reflective manufacturers is estimated at two (2). Both make retro-reflective material that complies with FRA's regulation. According to the Association of American Railroads (AAR) publication Railroad Facts (2013), the number of freight cars in the United States is 1,316,185, while the number of locomotives is 24,707.

§ 224.7 Waivers

Any person subject to a requirement of this Part may petition the Administrator for a waiver of compliance with such a requirement. The filing of such a petition does not affect that person's responsibility for compliance with that requirement while the petition is being considered. Each petition for waiver under this section must be filed in the manner and contain the information required by Part 211 of this chapter.

FRA estimates that approximately 20 waiver petitions will be filed by railroads/car owners each year under the above requirement. It is estimated that it will take approximately one (1) hour to complete each waiver petition and send it to FRA. Total annual burden for this requirement is 20 hours.

Respondent Universe:	716 Railroads/Freight Rolling Stock Owners
Burden time per response:	1 hour

Frequency of Response:	On occasion
Annual number of Responses:	20 waiver petitions
Annual Burden:	20 hours

Calculation: 20 waiver petitions x 1 hr. = 20 hours

§ 224.15 Special Approval Procedures

(A.) General. The following procedures govern consideration and action upon requests for special approval of alternative standards under § 224.103(e):

(B.) Petitions. Each petition for special approval of an alternative standard must contain the following: (i) The name, title, address, and telephone number of the primary person to be contacted with regard to the petition; (ii) The alternative proposed, in detail, to be substituted for the particular requirements of this Part; and (iii) Appropriate data and analysis establishing that the alternative will provide at least an equivalent level of safety and meet the requirements of § 224.103(e).

Each petition for special approval of an alternative standard must be submitted to the Docket Clerk, Office of Chief Counsel, Federal Railroad Administration, RCC-10, Mail Stop-10, 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

FRA estimates that approximately 12 petitions for special approval of an alternative standard will be filed each year under the above requirement. It is estimated that it will take approximately 40 hours to complete each petition for special approval. Total annual burden for this requirement is 480 hours.

Respondent Universe:	2 Manufacturers
Burden time per response:	40 hours
Frequency of Response:	On occasion
Annual number of Responses:	12 petitions for special approval
Annual Burden:	480 hours

Calculation: 12 petitions for special approval x 40 hrs. = 480 hours

(C.) Public comment. FRA will provide a period of not less than 30 days from the date of publication of the notice in the Federal Register during which any person may comment on the petition.

Each comment must set forth specifically the basis upon which it is made, and contain a concise statement of the interest of the commenter in the proceeding. Each comment must be submitted to the U.S. Department of Transportation, Docket Operations (M-30), West Building, Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE, Washington, D.C. 20590, and must contain the assigned docket number which appears in

the Federal Register for that proceeding. The form of such submission may be in written or electronic form consistent with the standards and requirements established by the Federal Docket Management System and posted on its Web site at <http://www.regulations.gov>.

FRA estimates that it will receive approximately three (3) comments under the above requirement. It is estimated that it will take approximately one (1) hour for the manufacturers/other parties to complete the comment and forward it to FRA. Total annual burden for this requirement is three (3) hours.

Respondent Universe:	2 Manufacturers/Railroads/General Public
Burden time per response:	1 hour
Frequency of Response:	On occasion
Annual number of Responses:	3 petition comments
Annual Burden:	3 hours

Calculation: 3 petition comments x 1 hr. = 3 hours

(D.) In the event FRA determines that it requires additional information to appropriately consider the petition, FRA will conduct a hearing on the petition in accordance with the procedures provided in § 211.25 of this chapter.

FRA does not believe that it will not need any additional information to consider any submitted petitions and thus will not need to conduct a hearing on any of these petition under the above requirement. Consequently, there is no burden associated with this provision.

Total annual burden for this entire requirement is 483 hours (480 + 3).

§ 224.101 General Requirements

All rail freight rolling stock subject to this Part must be equipped with retroreflective sheeting that conforms to the requirements of this Part. Notwithstanding any other provision of this Chapter, the application, inspection, and maintenance of that sheeting must be conducted in accordance with this Subpart or in accordance with an alternative standard providing at least an equivalent level of safety after special approval of FRA under § 224.15.

The burden for this requirement is covered under that of § 224.15 above. Consequently, there is no additional burden associated with this requirement.

§ 224.103 Characteristics of Retroreflective Sheeting

(A.) Certification. The characters "FRA-224", constituting the manufacturer's certification that the retroreflective sheeting conforms to the requirements of paragraphs (a) through (c) of this section, must appear at least once on the exposed surface of each piece of sheeting in the final application. The characters must be a minimum of three millimeters high, and must be permanently stamped, etched, molded, or printed within the product, and each certification must be spaced no more than four inches apart.

Although the two (2) United States manufacturers of FRA compliant retroreflective material will make millions of sheets of retroreflective sheeting to be placed on the estimated 1.36 million freight cars presently in service, there is zero (0) burden involved because it takes the manufacturers the same amount of time to make the sheeting with or without the characters stipulated above. Consequently, there is no burden associated with this requirement. (Note: There would be no burden involved for new cars built each year needing retroreflective sheeting for the same reason. Additionally, there is no cost involved regarding the above requirement because the cost for stamping /etching/ molding /printing is included as part of the manufacturing process.

(B.) Alternative Standards. Upon petition by a freight rolling stock owner or railroad under § 224.15, the Associate Administrator may approve an alternative technology as providing equivalent safety. Any such petition must provide data and analysis sufficient to establish that the technology will result in conspicuity and durability at least equal to sheeting described in paragraphs (a) through (c) (of this section) applied in accordance with this Part and will present a recognizable visual target that is suitably consistent with freight rolling stock equipped with retroreflective sheeting meeting the technical requirements of this Part to provide the intended warning to motorists.

The burden for this requirement is included under that of § 224.15 above. Consequently, there is no additional burden associated with this requirement.

§ 224.107 Implementation Schedule

(a) Railroad Freight Cars

(I) Existing cars without retroreflective sheeting.

If, as of October 28, 2005, a car subject to this Part is not equipped on each side with at least one square foot of retroreflective sheeting specified in paragraphs (a)(3) of this section, retroreflective sheeting conforming to this Part must be applied to the car at the earliest of the following two occasions occurring after November 28, 2005, or in accordance with paragraph (a)(2)(ii) of this section: (A) When the car is repainted or

rebuilt; or (B) Within nine months (270 calendar days) after the car first undergoes a single car air brake test as prescribed by 49 CFR 232.305.

A freight rolling stock owner may elect not to follow the schedule in paragraph (a)(2)(i) of this section if, not later than January 26, 2006, the freight rolling stock owner submits to FRA a completed Reflectorization Implementation Compliance Report certifying that the cars in the owner's fleet subject to this part will be equipped with retroreflective sheeting as required by this part in accordance with the schedule specified in Table 3 of this section. Thereafter, (A) the designated fleet must be equipped with retroreflective sheeting according to the schedule specified in Table 3 of this section.

FRA estimates that approximately 100 Reflectorization Implementation Compliance Reports (forms) will be submitted to the agency under the above requirement. It is estimated that it will take approximately 15 minutes to complete each report/form. Total one-time burden for this requirement is 25 hours.

Respondent Universe:	716 Railroads/Freight Rolling Stock Owners
Burden time per response:	15 minutes
Frequency of Response:	One-time
Annual number of Responses:	100 reports/forms
Annual Burden:	25 hours

Calculation: 100 reports/forms x 15 min. = 25 hours

(B.) No later than January 28, 2008, the freight rolling stock owner must submit to FRA an updated Reflectorization Implementation Compliance Report showing which cars of the fleet subject to this Part were equipped with retroreflective sheeting as required by this Part during the initial 24-month implementation period. Thereafter, updated Reflectorization Implementation Compliance Reports must be submitted annually, no later than December 31 of each year for the duration of the 10-year implementation period.

FRA estimates that approximately 100 updated Reflectorization Implementation Compliance Reports will be submitted to the agency each year under the above requirement. It is estimated that it will take approximately 20 hours to complete each plan. Total annual burden for this requirement is 2,000 hours.

Respondent Universe:	716 Railroads/Freight Rolling Stock Owners
Burden time per response:	20 hours
Frequency of Response:	On occasion
Annual number of Responses:	100 reports/forms
Annual Burden:	2,000 hours

Calculation: 100 reports/forms x 20 hrs. = 2,000 hours

(C.) If, following the conclusion of the initial 24-month period or any 12-month period thereafter, the percentage requirements of this section have not been met – (1) the freight rolling stock owner shall be considered in violation of this Part; (2) the freight rolling stock owner must, within 60 days after the close of the period, report the failure to the Associate Administrator; (3) the requirements of paragraph (a)(2)(i) shall apply to all railroad freight cars subject to this part in the freight rolling stock owner’s fleet; and (4) the fleet owner shall take such additional actions as may be necessary to achieve future compliance.

(D.) Cars to be retired must be included in the fleet total until they are retired.

FRA estimates that approximately five (5) freight rolling stock owners will be required to report their failure to the Associate Administrator under the above requirement. It is estimated that it will take approximately two (2) hours for each freight rolling stock owner/railroad to complete the required report and send it to FRA. Total annual burden for this requirement is 10 hours.

Respondent Universe:	716 Railroads/Freight Rolling Stock Owners
Burden time per response:	2 hours
Frequency of Response:	On occasion
Annual number of Responses:	5 failure reports
Annual Burden:	10 hours

Calculation: 5 failure reports x 2 hrs. = 10 hours

(II.) Existing Cars with Retroreflective Sheeting.

(A.) If, as of October 28, 2005, a car is equipped on each side with at least one square foot of retroreflective sheeting, uniformly distributed over the length of each side, that car shall be considered in compliance with this part through November 28, 2015, provided the sheeting is not unqualified retroreflective sheeting, and provided the freight rolling stock owner files a completed Reflectorization Implementation Compliance Report with FRA no later than January 26, 2006, identifying the cars already so equipped.

FRA estimates that approximately 86 Reflectorization Implementation Compliance Reports (forms) will be filed by freight rolling stock owners/railroads under the above requirement. It is estimated that it will take approximately 20 hours for each freight rolling stock owner/railroad to complete the required report/form and send it FRA. Total one-time burden for this requirement is 1,720 hours.

Respondent Universe:	716 Railroads/Freight Rolling Stock Owners
Burden time per response:	20 hours
Frequency of Response:	One-time
Annual number of Responses:	86 reports/forms
Annual Burden:	1,720 hours

Calculation: 86 reports/forms x 20 hrs. = 1,720 hours

(b.) Locomotives

(1.) New Locomotives

Retroreflective sheeting conforming to this part must be applied to all locomotive constructed after January 26, 2006, before they are placed in service.

(2.) Existing Locomotives without Retroreflective Sheeting.

(A) If as of October 28, 2005, a locomotive subject to this part is not equipped with the minimum amount of retroreflective sheeting specified in paragraph (b)(3) of this section, retroreflective sheeting conforming to this part must be applied to the locomotive not later than nine months after the first biennial inspection performed pursuant to 49 CFR 229.29 occurring after November 28, 2005.

(ii) A freight rolling stock owner may elect not to follow the schedule in paragraph (b)(2)(i) of this section if, not later than January 26, 2006, the freight rolling stock owner submits to FRA a Reflectorization Implementation Compliance Report certifying that the locomotives in the owner's fleet subject to this part will be equipped with retroreflective sheeting as required by this part in accordance with the schedule specified in Table 4 of this section. Thereafter, (A) the designated locomotive fleet must be equipped with retroreflective sheeting according to the requirements of this paragraph (b)(2)(ii).

Railroads have already fulfilled the above requirement. Consequently, there is no additional burden associated with this requirement.

(B.) No later than January 28, 2008, the freight rolling stock owner must submit to FRA an updated Reflectorization Implementation Compliance Report showing which locomotives of the fleet subject to this part were equipped with retroreflective sheeting as required by this part during the initial 24 month implementation period. Updated Reflectorization Implementation Compliance Reports must be submitted annually, no later than December 31 of each year, for the duration of the five-year implementation period.

Railroads have already fulfilled the above requirement. Consequently, there is no additional burden associated with this requirement.

(C.) If, following the conclusion of the initial 24-month period or any 12-month period thereafter, the percentage requirements of this section have not been met (1) the freight rolling stock owner shall be considered in violation of this part; (2) the freight rolling stock owner must, within 60 days after the close of the period, report the failure to the Associate Administrator; (3) the requirements of paragraph (b)(2)(i) shall apply to all locomotives subject to this part in the freight rolling stock owner's fleet; and (4) the fleet owner shall take such additional actions as may be necessary to achieve future compliance. Locomotives to be retired must be included in the fleet total until they are retired.

Railroads have already fulfilled the above requirement. Consequently, there is no additional burden associated with this requirement.

(II.) Existing Locomotives with Retroreflective Sheeting.

(A.) If, as of October 28, 2005, a locomotive is equipped on each side with at least one square foot of retroreflective sheeting, that locomotive shall be considered in compliance with this part through November 28, 2015, provided the existing material is not unqualified retroreflective sheeting, and provided the freight rolling stock owner files a Reflectorization Implementation Compliance Report with FRA no later than January 26, 2006, identifying the cars already so equipped.

Railroads have already fulfilled the above requirement. Consequently, there is no additional burden associated with this requirement.

(B.) If, as of October 28, 2005, a locomotive is equipped with unqualified retroreflective sheeting, the locomotive will be considered in compliance with this part through November 28, 2015, provided the locomotive is equipped with a minimum of three (3) square feet of retroreflective material on each side and provided the freight rolling stock owner files a Reflectorization Implementation Compliance Report with FRA no later than January 26, 2006, identifying the locomotives already so equipped.

The burden for this requirement is included under that of § 224.107(a)(II)(A) above. Consequently, there is no additional burden associated with this requirement.

Total annual burden for this entire requirement is 3,755 hours (25 + 2,000 + 10 + 1,720).

§ 224.109 Inspection, Repair, and Replacement

(a.) Railroad Freight Cars. Retroreflective sheeting on railroad freight cars subject to this part must be visually inspected for presence and condition whenever a car undergoes a

single car air brake test required under 49 CFR 232.305. If at the time of inspection less than 80 percent of the amount of sheeting required under § 224.105 (§ 224.107 in the case of freight cars subject to § 224.107(a)(3)) on either side of a car is present, not damaged, and not obscured, the inspecting railroad or contractor must promptly notify the person responsible for the reporting mark, as indicated in the Universal Machine Language Register (UMLER), of the damaged, obscured, or missing sheeting (unless the inspecting railroad or contractor is the person responsible for the reporting mark). The inspecting railroad or contractor must retain a written or electronic copy of each such notification made for at least two years from the date of the notice, and must make these records available for inspection and copying by the FRA upon request. Any person notified of a defect under this section shall have nine months (270 calendar days) from the date of notification to repair or replace the damaged, obscured, or missing sheeting. Where the inspecting railroad or contractor is the person responsible for the reporting mark, the person shall have nine months (270 calendar days) from the date of the inspection to repair or replace the damaged, obscured, or missing sheeting.

As noted previously, there are 1,316,185 freight cars in service in the United States according to the 2013 Association of American Railroads (AAR) publication, Railroad Facts (p. 51). At the time of inspection, FRA estimates that approximately 10 percent of these cars will have damaged, obscured, or missing sheeting and thus freight rolling stock owners will have to be notified. Consequently, FRA estimates that freight rolling stock owners will receive approximately 131,619 notifications annually under the above requirement. It is estimated that it will take approximately two (2) minutes to complete each notification. Total annual burden for this requirement is 4,387 hours. *(Note: The main reason for the decrease in the number of notices (from the previous 272,600 to 131,619 below is that – starting in 2015 – all cars must be equipped with reflectorization. The industry will be re-equipping cars with defective sheeting at a slower pace. Also, AAR, on its members’ behalf, will be requesting a waiver of the 10 year renewal limit as stipulated in the rule based on condition rather than age. Thus, FRA’s Office of Safety believes that safety notifications will drop drastically.)*

Respondent Universe:	AAR + 300 Independent Car Shops
Burden time per response:	2 minutes
Frequency of Response:	On occasion
Annual number of Responses:	131,619 notifications
Annual Burden:	4,387 hours

Calculation: 131,619 notifications x 2 min. = 4,387 hours

(b.) Locomotives. Retroreflective sheeting must be visually inspected for presence and condition when the locomotive receives the annual inspection required under 49 CFR 229.27 of this chapter. If at the time of inspection less than 80 percent of the amount of sheeting required under § 224.105 (§ 224.107 in the case of locomotives subject to

§ 224.107(b)(3)) on either side of a locomotive is present, not damaged, and not obscured, the damaged, obscured or missing sheeting must be repaired or replaced within nine months (270 calendar days) from the date of inspection, provided a record of the defect is maintained in the locomotive cab or in a secure and accessible electronic database to which FRA is provided access upon request.

As noted previously, there are approximately 24,707 locomotives currently in service in the United States according to the 2013 AAR publication, Railroad Facts. FRA estimates that approximately 10 percent of the fleet (2,471 locomotives) might/will have less than 80 percent retroreflective material on them, and a record of restriction would be written and placed in the cab of the locomotive or in a secure and accessible electronic database. It is estimated that it will take approximately three (3) minutes to complete each record of restriction. Total annual burden for this requirement is 124 hours.

Respondent Universe:	716 Railroads/Freight Rolling Stock Owners
Burden time per response:	3 minutes
Frequency of Response:	On occasion
Annual number of Responses:	2,471 records of restriction
Annual Burden:	124 hours

Calculation: 2,471 records x 3 min. = 124 hours

Total annual burden for this entire requirement is 4,511 hours (4,387 + 124).

Total annual burden for this entire information collection requirement is 8,769 hours.

13. Estimate of total annual costs to respondents.

There really is no additional cost to respondents relating to this collection of information since respondents, who already have the use of advanced information technology, may and do submit their Reflectorization Implementation Compliance Reports (Forms) and failure reports electronically. Regarding the required Reflectorization Implementation Compliance Reports (forms), respondents may and do submit them to FRA either via the Internet or via optical media (CD-ROM).

14. Estimate of Cost to Federal Government.

COST TO FEDERAL GOVERNMENT

There will be additional costs to the Federal Government relating to this collection of information. The estimated costs involve the review by appropriate FRA staff of documents submitted by respondents. Costs are as follows: GS-13-5 FRA employee = \$85.75 p/hr.; GS-14-5 FRA employee = \$101.33 p/hr.; and GS-15-5 FRA employee =

\$119.19 p/hr. [Note: 2014 Federal wage rates are burdened with overhead costs of 75 percent.]

(1) Annual Review of 20 General Petitions For Waivers under § 224.7. FRA estimates that an Office of Safety Staff Specialist spends approximately 15 minutes per petition, or a total of five (5) hours annually perusing these petitions. For an experienced staffer at the GS-14-5 level, the cost comes to **\$507.**

(2) Annual Review of 12 Special Approval Procedure Petitions (for alternative standards) under § 224.15. FRA estimates that an Office of Safety Staff Technical Specialist spends approximately 10 hours per petition, or a total of 120 hours annually thoroughly reviewing and evaluating these petitions. For an experienced staffer at the GS-14-5 level, the cost comes to \$12,160. Additionally, FRA estimates that an Office of Safety engineer also spends approximately 10 hours per petition, or a total of 120 hours annually thoroughly perusing and evaluating these petitions. For an experienced engineer at GS-14-5 level, the cost comes to \$12,160. Finally, FRA estimates that an agency attorney spends approximately 15 minutes per petition, or a total of three (3) hours annually examining special approval procedures petitions to ensure that they comply with legal requirements and agency regulations. For an experienced attorney at the GS-14-5 level, the cost comes to \$304. Total cost then for reviewing these petitions is **\$24,624.**

(3) Annual Review of 372 Reflectorization Implementation Compliance Reports (Forms) under § 224.107(a)(2)(i)(ii). FRA estimates that an Office of Safety Program Specialist spends approximately two (2) hours reviewing each form, or a total of 372 hours annually. For an experienced program specialist at the GS-13-5 level, the cost comes to \$31,899. Also, FRA estimates an Office of Safety Official spends approximately one (1) hour reviewing each Reflectorization Implementation Compliance Report/Form, or a total of 186 hours annually. For an experienced Safety Official at the GS-15-5 level, the cost comes to \$22,169. Finally, FRA estimates that an agency attorney spends approximately 15 minutes per report/form, or a total of 47 hours annually examining these forms to confirm that they comply with the agency regulation. For an experienced attorney at the GS-14-5 level, the cost comes to \$4,763. Total cost then for reviewing these reports/plans/forms is **\$58,831.**

(4) Annual Review of 6 failure reports under § 224.107. FRA estimates that an Office of Safety Program Specialist spends approximately 15 minutes scrutinizing each failure report, or a total of two (2) hours annually. For an experienced program specialist at the GS-13-5 level, the cost comes to \$172. Also, FRA estimates an Office of Safety Official will spend approximately 15 minutes reviewing each failure report, or a total of two (2) hours annually. For an experienced Safety Official at the GS-15-5 level, the cost amounts to \$238. Total cost then for reviewing these reports is **\$410.**

The total cost to the Federal Government is **\$84,372.**

15. Explanation of program changes and adjustments.

The total burden for this information collection has decreased by 9,275 hours from the last approved submission. The decrease is due solely to **adjustments** in agency estimates, which are completely delineated in the table below:

TABLE FOR ADJUSTMENTS

Part 224 Section	Responses & Avg. Time (Previous Submission)	Responses & Avg. Time (This Submission)	Burden Hours (Previous Submission)	Burden Hours (This Submission)	Difference (plus/minus)
224.7 – Waivers	15 waivers 1 hour	20 waivers 1 hour	15 hours	20 hours	+ 5 hours + 5 responses
224.107 – Existing Cars without Retroreflective Sheeting: Implementation Compliance Reports (Forms)	200 reports/forms 15 minutes	100 reports/ forms 15 minutes	50 hours	25 hours	-- 25 hours --100 responses
-- Annually Updated Reflectorization Implementation Compliance Reports (Forms)	200 reports/forms 20 hours	100 reports/ forms 20 hours	4,000 hours	2,000 hours	-- 2,000 hours --100 responses
- Existing Cars w/ Retroreflective Sheeting: Implementation Compliance Reports	172 reports/forms 20 hours	86 reports/forms 20 hours	3,440 hours	1,720 hours	--1,720 hours -- 86 responses
- New Locomotive without Retroreflective Sheeting: Implementation Compliance Reports	35 reports/forms 15 minutes	0 reports/forms 0 minutes	9 hours	0 hours	-- 9 hours --35 responses
- Updated Reflectorization Compliance Reports by 1/28/08	35 reports/forms 3 hours	0 reports/forms 0 minutes	105 hours	0 hours	-- 105 hours -- 35 responses
- Failure Reports	1 report 2 hours	0 reports 0 minutes	2 hours	0 hours	-- 2 hours -- 1 response

-- Existing Locomotives with Retroreflective Sheeting: Implementation Compliance Reports by 1/26/06	150 reports/forms 4 hours	0 reports/forms 0 minutes	600 hours	0 hours	-- 600 hours -- 150 responses
224.109 – Notification to Rolling Stock Owners of Damaged, Obscured, or Missing Retroreflective Sheeting after Inspection	272,600 notices 2 minutes	131,619 notices 2 minutes	9,090 hours	4,387 hours	-- 4,703 hours -- 140,981 resp.
-- Locomotives Record of Restriction for Damaged, Damaged, Obscured, or Missing Retroreflective Sheeting after Inspection	4,809 records 3 minutes	2,471 records 3 minutes	240 hours	124 hours	--116 hours -- 2,338 resp.

Adjustments above decreased the burden amount by 9,275 hours, and decreased the number of responses by 143,821.

The current inventory shows a burden total of 18,044 hours, while the present submission exhibits a burden total of 8,769 hours. Hence, there is a burden decrease of 9,275 hours.

As noted in the previous submission, there are no estimated additional costs to respondents. This has not changed.

16. Publication of results of data collection.

There are no plans for publication of this submission.

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 pertaining to the certification statement identified in

item 19, “Certification For Paperwork Submissions,” of OMB Form OMB 83-I.

Department of Transportation (DOT) Strategic Goals

This information collection supports the main DOT strategic goal, namely transportation safety. Rail safety is likely to be made considerably safer through this rule and associated information collection. Specifically, the collection of information allows FRA to monitor and, where necessary, enforce railroad/car owners’ compliance with the full reflectorization of their freight cars and locomotives which fall under this rule. Reflectorization of freight cars provides greater conspicuity or visibility to motorists, particularly at night time, and therefore serves to reduce the number of collisions at highway-rail grade crossings. Run-into-train (RIT) accidents affect communities throughout the nation.

Statistical data indicate that collisions between trains and motor vehicles often result in fatal or very serious injuries to the occupants of the motor vehicle involved, and the vehicle may be completely destroyed. Moreover, collisions between trains and motor vehicles often result in damage to the rail equipment and significant delays and disruptions to rail operations along that segment of track. Such collisions then have a variety of human and economic consequences. On the human side, families suffer greatly – in many cases are completely shattered – when a loved one is seriously injured or killed in this type of collision. On the economic side, in addition to the losses sustained when there are fatalities (valued by DOT at \$5.8 million for each life) and to the losses resulting from damage to property, there are additional costs. A coalition of railroads, labor organizations, and FRA estimates that such collisions, in general, cause an average of a two-hour train delay at \$250 per hour for freight trains. This estimate does not include the ripple effect of delays incurred by other trains, including passenger trains, awaiting use of track where the service has been interrupted, nor does it include loss of productivity due to injured/killed train crew members or loss of revenue to railroads in cases where goods that would have been transported by train are instead moved by truck because of extended delays.

The collection of information furthers DOT’s goal of reducing the number of injuries, fatalities, and property damage that results from transportation related accidents by providing another useful instrument that FRA can use to monitor and indeed increase national rail safety. Ensuring that railroads and other freight rolling stock owners fully reflectorize their freight cars and locomotives achieves greater visibility so that motorists can more easily identify them and better judge their speed and distance. This greater visibility aids in preventing some accidents at highway-rail grade crossings, and helps mitigate others by reducing the severity of those accidents which are unavoidable.

In summary, this collection of information contributes to both FRA’s mission and DOT’s number one Strategic Goal, namely safe transportation of people and goods throughout the United States and the reduction of the number of injuries and fatalities and associated

property damage which ensue from transportation-related accidents/incidents. 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.