*Description of Relief Sought:* To permit Mr. James A. Atkins and pilots employed by him to perform certain preventive maintenance functions listed in paragraph (c) of appendix A to part 43 on an aircraft operating under 14 CFR part 135 without holding a mechanic certificate.

*Docket No.:* 29615.

*Petitioner:* T-Bird Aviation, Inc.

*Section of the FAR Affected:* 14 CFR 135.299(a).

*Description of Relief Sought/ Disposition:* To permit T-Bird pilots to accomplish a line operational evaluation in a Level C or Level D flight simulator in lieu of a pilot-in-command line check in an aircraft.

**Dispositions of Petitions**

*Docket No.:* 25974.

*Petitioner:* Air Transport Association of America.

*Section of the FAR Affected:* 14 CFR 91.203.

*Description of Relief Sought/ Disposition:* To permit ATA-member airlines to operate certain U.S.-registered aircraft on a temporary basis following the incidental loss or mutilation of a Certificate of Airworthiness, aircraft registration certificate, or both.

*Grant, 07/30/99, Exemption No. 5318F.*

*Docket No.:* 26474.

*Petitioner:* Deere & Company.

*Section of the FAR Affected:* 14 CFR 21.197(a)(1).

*Description of Relief Sought/ Disposition:* To permit Deere to operate its Cessna Model CE–650 aircraft (registration Nos. N400JD, N600JD and N900JD, Serial Nos. 650–0035, 650–0236 and 650–0213, respectively) without obtaining a special flight permit when the flaps fail in the up position.

*Grant, 7/26/99, Exemption No. 6581C.*

*Docket No.:* 27230.

*Petitioner:* ERA Aviation, Inc.

*Section of the FAR Affected:* 14 CFR 135.143(c)(2).

*Description of Relief Sought/ Disposition:* To permit ERA Aviation to operate certain helicopters under the provisions of part 135 without a TSO–C112 (Mode S) transponder installed in each aircraft.

*Grant, 7/30/99, Exemption No. 5718C.*

*Docket No.:* 28552.

*Petitioner:* World Freefall Convention.

*Section of the FAR Affected:* 14 CFR 105.43(a).

*Description of Relief Sought/ Disposition:* To permit WWFC to allow nonstudent, foreign nationals to participate in WFFC-sponsored parachute jumping events held at WFFC's facilities without complying with the parachute equipment and packing requirements of § 105.43(a).

*Grant, 7/29/99, Exemption No. 6930.*

*Docket No.:* 29218.

*Petitioner:* Cessna Aircraft Company.

*Section of the FAR Affected:* 14 CFR 91.409(b).

*Description of Relief Sought/ Disposition:* To permit owners and operators of C–172R aircraft an exemption from 14 CFR § 91.409(b) to the extent necessary to use Cessna's PhaseCard IP in lieu of the 100-hour inspection required by that section.

*Grant, 6/11/99, Exemption No. 6901.*

*Docket No.:* 29386.

*Petitioner:* Mr. Archie D. Van Beek.

*Section of the FAR Affected:* 14 CFR 45.29(b)(1).

*Description of Relief Sought/ Disposition:* To permit Mr. Van Beek to operate his Maule M–5 (Registration No. 913VB, Serial No. 5001C) airplane displaying 3-inch-high nationality and registration markings instead of the 12-inch-high markings required by the regulations.

*Denial, 7/26/99, Exemption No. 6931.*

*Docket No.:* 29419.

*Petitioner:* Aviation Component Service Center General Electric Engine Services, Inc.

*Section of the FAR Affected:* 14 CFR 43.9(a)(4), 43.11(a)(3), appendix B to part 43, and 145.57(a).

*Description of Relief Sought/ Disposition:* To permit ACSC to use computer-generated electronic signatures in lieu of physical signatures to satisfy the requirements of FAA Form 8130–3, Airworthiness Approval Tag, when the form is used to satisfy approval for return-to-service signature requirements.

*Grant, 7/21/99, Exemption No. 6926.*

*Docket No.:* 29479.

*Petitioner:* Skydive U, Inc.

*Section of the FAR Affected:* 14 CFR 105.43(a).

*Description of Relief Sought/ Disposition:* To permit Skydive U to allow nonstudent foreign nationals to participate in Skydive U-sponsored parachute jumping events held at Skydive U's facilities without complying with the parachute equipment and packing requirements of § 105.43(a).

*Grant, 7/22/99, Exemption No. 6928.*

*Docket No.:* 29492.

*Petitioner:* Lynden Air Cargo.

*Section of the FAR Affected:* 14 CFR 121.344.

*Description of Relief Sought/ Disposition:* To permit Lynden Air Cargo to operate its four L382G Hercules aircraft (Registration Nos. N401LC, N402LC, N403LC, and N404LC; Serial Nos. 4606, 4698, 4590, and 4763, respectively) under part 121 without an approved DFDR.

*Grant, 7/15/99, Exemption No. 6921.*

[FR Doc. 99–21784 Filed 8–20–99; 8:45 am]

BILLING CODE 4910–13–M

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

### Research, Engineering and Development (R,E&D) Advisory Committee

Pursuant to section 10(A)(2) of the Federal Advisory Committee Act (Pub. L. 92–463; 5 U.S.C. App. 2), notice is hereby given of a meeting of the FAA Research, Engineering and Development (R,E&D) Advisory Committee on Tuesday, September 14, and Wednesday, September 15. The meeting will be held at the Holiday Inn Rosslyn Westpark Hotel, 1900 North Fort Myer Drive, Arlington, Virginia.

On Tuesday, September 14 the meeting will begin at 9:00 a.m. and end at 5:00 p.m.

On Wednesday, September 15 the meeting will begin at 8:30 a.m. and end at 12:00 noon.

The meeting agenda will include receiving guidance from the Committee for FAA's fiscal year 2002 research and development investments in the areas of air traffic services, airports, aircraft safety, security, human factors and environment and energy.

Attendance is open to the interested public but limited to space available. Persons wishing to attend the meeting or obtain information should contact Lee Olson at the Federal Aviation Administration, AAR–200, 800 Independence Avenue, SW, Washington, DC 20591 (202) 267–7358.

Members of the public may present a written statement to the Committee at any time.

Issued in Washington, DC on August 9, 1999.

**Hugh M. McLaurin,**

*Program Director, Research Division.*

[FR Doc. 99–21785 Filed 8–20–99; 8:45 am]

BILLING CODE 4910–13–M

## DEPARTMENT OF TRANSPORTATION

### Federal Railroad Administration

### Petitions for Waivers of Compliance; Petition for Exemption for Technological Improvements

In accordance with Title 49 Code of Federal Regulations (CFR) Sections 211.9 and 211.41, and 49 U.S.C. 20306, notice is hereby given that the Federal Railroad Administration (FRA) has received a request for waiver of compliance with certain requirements of

the Federal railroad safety regulations and a request for exemption of certain statutory provisions. The individual petition is described below, including the party seeking relief, the regulatory and statutory provisions involved, the nature of the relief being sought and the petitioner's arguments in favor of relief.

**New Jersey Transit Corporation; FRA Waiver Petition No. FRA–1999–6135**

New Jersey Transit Corporation (NJ Transit) seeks a permanent waiver of compliance from certain CFR parts of Title 49, specifically: part 221, Rear End Marking Device—Passenger, Commuter and Freight Trains; part 223, Safety Gazing Standards—Locomotives, Passenger Cars and Cabooses; part 229, Railroad Locomotive Safety Standards; part 231 Railroad Safety Appliance Standards; part 238, Passenger Equipment Safety Standards; and part 239, Passenger Train Emergency Preparedness.

NJ Transit seeks approval of shared use and waiver of certain FRA regulations involving light rail passenger operations on the planned Southern New Jersey Light Rail Transit (SNJLRT) system. SNJLRT is a regional light rail transit system that will link the cities of Camden, NJ and Trenton, NJ, and provide local service along with bus, transit, and intra and intercity rail transfer connections to an area previously without light rail service. The SNJLRT project will cover 34 miles using a combination of street running alignment and existing railroad right-of-way to assist in meeting Southern New Jersey's mobility and congestion needs.

A portion of the SNJLRT will run over the existing Consolidated Rail Corporation (Conrail) Bordentown Secondary track, between MP 1.07 (Camden) and MP 33.1 (Trenton). The purpose of the waiver is for SNJLRT operations over this ''Shared Trackage'' because of its connection with the general railroad system of transportation. Conrail and NJ Transit have agreed that transit operations will have exclusive use of the Shared Trackage during the passenger period.

In each section entitled ''justification,'' FRA merely sets out NJ Transit's justifications which are included in its petition. In doing so, NJ Transit references the proposed Joint Policy Statement on Shared Used of the General Railroad System issued by FRA and the Federal Transit Administration (FTA) (64 FR 28238; May 25, 1999) (''Policy Statement''). The proposed policy statement suggests that regulation of light rail service on the general rail system, under conditions of temporal separation from conventional rail movements, be handled through application of complementary strategies. FRA regulations would generally be employed to address hazards common to light rail and conventional operations for which consistent handling is necessary, while other hazards would be handled under FTA's program of State Safety Oversight (49 CFR Part 659). See proposed Policy Statement for details. Since FRA has not yet concluded its investigation of the planned SNJLRT system, the agency takes no position at this time on the merits of NJ Transit's stated justifications. As part of FRA's review of the petition, the Federal Transit Administration will appoint a non-voting liaison to FRA's Safety Board, and that person will participate in the board's consideration of NJ Transits's waiver petition.

**Part 221—Rear End Marking Device—Passenger, Commuter and Freight Trains**

Section 221.13(a) requires each train that occupies or operates on main line track be equipped with a display on the trailing end of the rear car of that train, and continuously illuminated or flashing a marking device as prescribed in that subpart. Section 221.14(a) requires that passenger, commuter and freight trains be equipped with at least one such compliant marking device, which has been approved by FRA in accordance with the procedures included in Appendix A of part 221, and which has specific intensity, beam arc width, color and flash rate characteristics. The requirements are intended to reduce the likelihood of rear-end collisions attributable to the inconspicuity of the rear-end of a leading train.

*Justification.* NJ Transit requests a waiver from this requirement because the SNJLRT vehicle will be equipped with marking devices such as headlights, brake, tail, turn signal, clearance and marker lights, and reflectors similar to those required for highway vehicles as contained in NJDOT regulations. The NJDOT regulations adopt and incorporate by reference the Federal Highway Administration's (''FHWA'') Federal Motor Carrier Safety Regulations found at 49 CFR part 393.

The external illumination consists of a set of front headlights, turn signals, tail and brake lights, reflectors, clearance, and marker lights at each end of the bi-directional SNJLRT vehicles. One headlight is mounted next to each brake light, with the headlights capable of being switched from low to high beam. Turn signal lights are visible from both the front and sides of the vehicle. The mounting height and candela value of the lights provided is consistent with FHWA requirements for commercial motor vehicles contained in 49 CFR part 393. The SNJLRT vehicle exterior lighting was designed to match state highway vehicle requirements instead of FRA regulations because the SNJLRT vehicles will operate in two different environments: in streets running mixed with motor vehicle traffic and in a conventional railroad corridor. FRA-compliant rail car marker devices might not provide sufficient information to motor vehicle drivers and, therefore might be inappropriate for the in-street portion of the SNJLRT system. The SNJLRT specifications on the other hand, will provide a higher level of safety for in-street operations.

NJ Transit believes that safety on the conventional railroad corridor will not be compromised by the use of the SNJLRT marking devices. The SNJLRT vehicle will have tail and brake light and clearance lights to define the end contour of the vehicle, substantially similar to the marking devices required by FRA regulations. Any variation in illumination levels between SNJLRT vehicles and Conrail trains is not material because of the temporal separation of the operations.

*Section 223.9(c)—Glazing Requirements*

Section 223.9(c) requires that passenger cars, including self-propelled passenger cars built or rebuilt after June 30, 1980, be equipped with FRA certified glazing in all windows. This requirement is intended to reduce the likelihood of injury to passengers and/or employees from breakage and shattering of windows (including windshields).

*Justification.* NJ Transit requests a waiver of this requirement for windows other than cab windshields because those windows will conform to the side impact requirements of ANSI Z26. 1, Table 1, item 1, ''American National Standard for Safety Glazing Materials for Glazing Motor Vehicles and Motor Vehicle Equipment Operating on Land Highways.'' This glazing is break-resistant in normal usage, but can be broken with a standard rescue tool, such as a pry bar (a pry bar will be located near side windows in each SNJLRT vehicle) in an emergency. Upon breaking, the glass ''crumbles'' into pebble-like pieces, posing no significant hazard to passengers, employees or rescue personnel. The use of such safety glass windows is standard throughout the rail transit industry for (among other applications) in-street light rail operations, where it has proved both durable and safe. In addition, the risk

associated with vandalism (such as by rocks thrown against the windows) is addressed from an operations standpoint in the System Safety Program Plan (SSPP).

*Section 223.9(d)—Emergency Exit Window Markings*

Section 223.9(d) requires that each emergency window be conspicuously and legibly marked with luminescent material on the inside of each car and that clear and legible operating instructions be posted at or near each such window. This section also requires that each window intended for access by emergency responders for extrication of passengers be marked with a retroreflective, unique and easily recognizable symbol or other clear marking and that clear and understandable window-access instructions be posted at each such window or at the end of each car. These requirements are intended to distinguish emergency windows from other windows and provide information on the operation of the emergency windows.

*Justification.* NJ Transit requests a waiver from these requirements because all side windows on the SNJLRT vehicles are suitable for use in the event of an emergency and therefore, it would make no sense and could prove to be a confusion hazard to mark any particular side windows as designated ''emergency windows.'' All side windows are made of safety glass and are fitted into the sidewalls by large, specialized rubber sections. All of these windows can be broken with standard rescue tools and can function as emergency windows if necessary. Pry bars, which can be used to break windows if necessary, will be located near side windows inside each SNJLRT vehicle. Instructions meeting FRA requirements and clearly indicating that the pry bar can be used to break any side window will be posted adjacent to each pry bar. Thus, identification of some windows as ''emergency windows'' and the posting of special operating instructions is not appropriate in this instance and is not necessary for safe emergency egress from the SNJLRT vehicle. Enforcing the marking requirements would not serve the intended safety purpose.

*Section 223.15(c)—Emergency Window Requirements*

Section 223.15(c) requires each passenger train car to be equipped with at least four emergency windows designed to permit rapid and easy removal during an emergency. This requirement is intended to enhance safety by providing emergency egress, in addition to egress through vehicle doorways.

*Justification.* NJ Transit requests a waiver of this requirement because the SNJLRT vehicles will not be manufactured with designated emergency windows. The vehicles, however, are designed to permit equivalent or superior emergency exit options. Each vehicle has 10 windows on each side, all of which are made of safety glass and are fitted into the sidewalls by large, specialized rubber sections. All of these windows are large (approximately 42 by 36 inches) when compared with conventional commuter rail cars, can be broken with standard rescue tools, and can function as emergency windows if necessary.

Furthermore, the SNJLRT vehicle doorways provide greater access/egress capability than is found on conventional commuter rail cars. Each vehicle has two sets of double doors on each side of the vehicle. The minimum clearance height of each doorway is 76 inches and the flow lane width of each doorway is at least 24 inches (48 inches in total for each set of double doors). The vehicle is designed such that the egress time of an AW2 load shall not exceed 120 seconds, calculating egress by assuring a flow rate of 2 seconds per passenger per flow lane. The doors are releaseable through an emergency release lever located on the inside of each doorway and for at least one doorway per side on the outside of the vehicle. This will enable a closed and interlocked door to be lock-released without power supply. Activation of the emergency release levers shall allow the door leaves to be manually operated. The interior door release levers shall be clearly marked and in a location accessible to all passengers, compliant with American with Disabilities Act (ADA) and FRA marking requirements. These release lever features will enable quick and easy opening of the doors by passengers, equivalent to FRA emergency exit window requirements.

The doorways are designed to provide the main means of emergency access/egress, and because the large windows can function as additional emergency access/egress points, there is very little risk of passengers becoming trapped or rescue personnel being unable to reach passengers. In addition, the SSPP will contain detailed emergency response plan requirements which will include passenger evacuation and crowd control planning.

*Section 229.125—Headlights and Auxiliary Lights*

Sections 229.125(a) and (d) require locomotives to have headlights of specified candela brightness, and auxiliary lights of specified brightness and placement on the vehicle. The purpose of these requirements is to reduce the risk of collisions attributable to inconspicuity of the train, particularly in low light level situations.

*Justification.* NJT requests a waiver from these requirements because the SNJLRT vehicles will have lights similar to those required by state law applicable to commercial motor vehicles. The SNJLRT vehicles will be equipped with two headlights on the leading cab of the train capable of illuminating a person 500 feet away. In addition, each vehicle will have an auxiliary light on the front of the car that will form a triangular pattern with the headlights to present a distinctive profile to motor vehicle drivers approaching grade crossings.

The use of lighting similar to motor vehicle lighting is desirable because the SNJLRT vehicle operates in two distinctly different environments. One portion is on mainline railroad track and the other is street-running mixing with highway traffic. NJ Transit believes that while the SNJLRT lighting arrangement will provide for sufficient light to provide safety along the railroad right-of-way, the FRA lighting requirements may not be appropriate for the street-running portions of the route. However, since the front of the vehicle will have headlights and auxiliary lighting to define the end contour of the vehicle, the conspicuity of the train will be assured in both the Shared Trackage and street-running portions of the route and any effect of variations in illumination levels will be minor.

*Section 231.14—Passenger Cars Without End Platforms*

Section 231.14 specifies the requisite location, number, dimensions, and manner of application of a variety of railroad car safety appliances (e.g., hand brakes, ladders, handholds, steps), directly implementing a number of statutory requirements found in 49 U.S.C. 20301–05.

The statutory provisions contains specific standards for automatic couplers, sill steps, hand brakes, and secure ladders and running boards. Where ladders are required, compliant handholds or grab irons for the roof of the vehicle at the top of each ladder are mandated. Compliant grab irons or handholds also are required for the ends and sides of the vehicles, in addition to standard height drawbars. In addition, the statute requires trains to be equipped with a sufficient number of vehicles with power or train brakes so that the engineer may control the train's speed without the use of a common

hand brake. At least 50 percent of the vehicles in the train must be equipped with power or train brakes, and the engineer must use the power or train brakes on those vehicles and all other vehicles equipped with such brakes that are associated with the equipped vehicles in the train.

Aside from the statutory-based requirements, the regulations provide additional and parallel specifications for hand brakes, sill steps, side handholds, end handholds, end handrails, side-door steps and uncoupling levers. More specifically, each passenger vehicle must be equipped with an efficient hand brake that operates in conjunction with the power brake on the train. The hand brake must be located so that it can be safely operated while the passenger vehicle is in motion. Passenger cars must have four sill steps and side-door steps, and prescribed tread length, dimensions, material, location and attachment devices for sill steps and side-door steps. In addition, there are requirements for the number, composite material, dimensions, location and other characteristics for side and end handholds and end handrails. Finally, this section requires the presence of uncoupling attachments that can be operated by a person standing on the ground. These very detailed regulations are intended to ensure that sufficient safety appliances are available and that they will function safely and securely as intended.

*Justification.* As noted above, some of the requirements in § 231.14 are required by statute and, therefore, are not subject to waiver under FRA's regulatory waiver provisions. FRA does, however, have the statutory authority to provide exemptions from these statutory requirements pursuant to 49 U.S.C. 20306. Consequently, NJ Transit requests exemption from and/or waiver of these requirements, as appropriate, because the SNJLRT vehicles will be equipped with their own array of safety devices, resulting in equivalent safety.

The SNJLRT vehicle has a number of features that provide an equivalent or superior level of safety as compared to a conventional hand brake. Each SNJLRT vehicle will be equipped with a parking brake located in each of the two control stands in each vehicle.

The brake is capable of holding the vehicle on a gradient of six percent at an AWl (60 tons) load. The SNJLRT vehicles will be operated by a one-person crew. The SNJLRT train will be either one or two vehicles. The train will be operated from the control stand in the lead cab, on trains consisting of two cars, and from the front of the single vehicle in the case of a one vehicle train. During normal operating conditions, the operator will make all service and parking brake applications. In the event of an emergency, the SNJLRT vehicle will have several features which would permit passengers to activate the braking system. First, an emergency release device located on each passenger door pillar causes an irrevocable application of the service brakes in the event of any application. Second, the four doors (two on each side of each vehicle) are interlocked with the propulsion system to ensure that the SNJLRT vehicle does not move while any doors are open, and the opening of the doors while the SNJLRT vehicle is in motion will cause an irrevocable application of the service brake. The braking characteristics of the SNJLRT vehicle will result in a shorter full service brake activation time and easier brake application than would be achieved by the presence of a traditional hand brake. Thus, the safety purpose of the hand brake requirement is achieved, but in a manner that provides an equivalent or superior level of safety.

Sill steps and side-door steps are not necessary for safety on the SNJLRT vehicle, because it is a low floor vehicle designed for level boarding. The door threshold is 22.4 inches above the top of the rail. This configuration of the doors renders sill steps and side-door steps unnecessary. Compliance with the sill step and side-door step requirements would not enhance the safety of the vehicle.

Handholds and handrails are typically intended for use by conductors and crew members performing service and yard duties. However, SNJLRT operations will not involve any service and yard duties from positions outside and adjacent to the vehicle or near vehicle doors. Yard moves will be controlled from the cab stand by the on-board operator and switches will be thrown remotely or through local controls initiated by the on-board operator. Therefore, since there is no need for personnel to mount or dismount the vehicle using external appliances of any kind, there is no need for handholds or handrails on SNJLRT vehicles. NJ Transit has reservations about installing external handholds and handrails because of the street-running characteristics of part of the SNJLRT service.

External handholds or handrails would give pedestrians the opportunity to grab onto something on the outside of the vehicle with the intention to get a ride. This is unsafe and the SNJLRT vehicle will be designed to minimize the opportunity for this practice. In sum, there is no practical need for handholds or handrails, and their presence might constitute a safety hazard in the street-running operating environment.

The SNJLRT vehicle will be equipped with a fully automatic electric coupler controlled from the operator's position in the cab and a mechanical coupler at each end. The coupler and associated draft gear system will have a centering device that retains the unconnected coupler head within its gathering range. The couplers are central buffer couplings with electrical and pneumatic coupling. The operator will initiate uncoupling from the cab stand and no external crew is required to assist in this operation. NJ Transit believes that performing all coupling/uncoupling from inside the vehicle will enhance safety. This elimination of the need for frequent coupling/uncoupling of vehicles, combined with the ability for such activity to take place without crew members in close proximity to the coupler mechanisms, eliminates the need for specially placed uncoupling levers and any hazard associated with manual coupling.

The SNJLRT vehicles will use dynamic brakes. The dynamic brakes will be supplemented by friction brakes and track brakes. NJ Transit will require regular inspections, testing, maintenance and operation of the brake equipment on the SNJLRT vehicle as required by Section 5 of the NJDOT SSPP. Specific operational procedures and inspection testing and maintenance intervals and protocols will be set forth in the SSPP. Therefore, the SNJLRT vehicle brake system will be equivalent to a standard air brake system and thus provide an equivalent level of safety.

NJ Transit is aware that it may obtain exemption from the statutory safety appliance requirements mentioned above only if application of such requirements would ''preclude the development or implementation of more efficient railroad transportation equipment or other transportation innovations.'' 49 U.S.C. 20306. The exemption for technological improvements was originally enacted to further the implementation of a specific type of freight car, but the legislative history shows that Congress intended the exemption to be used elsewhere so that ''other types of railroad equipment might similarly benefit.'' S. Rep. 96–614 at 8 (1980), reprinted in 1980 U.S.C.C.A.N. 1156, 1164.

FRA has recognized the potential public benefits of temporally separated transit use on segments of the general railroad system. Light rail transit systems ''promote more livable communities by serving those who live

and work in urban areas without adding congestion to the nation's overcrowded highways.'' Policy Statement at 28238. They ''take advantage of underutilized urban freight rail corridors to provide service that, in the absence of the existing right-of-way, would be prohibitively expensive.'' Id. There have been many technological advances in types of equipment used for passenger rail operations, such as the use of light rail transit vehicles that will be used for the SNJLRT System. Light rail transit equipment is energy-efficient for passenger rail operations because it is lighter than conventional passenger equipment. Light rail vehicles are able to quickly accelerate or decelerate, which makes them more suitable than other equipment types in systems with closely-configured stations.

With regard to the regulatory requirements of § 231.14, as discussed above, the SNJLRT vehicles will be equipped with safety appliances that are more appropriate for light rail transit vehicles, thus achieving an equivalent or superior level of safety in the SNJLRT operating environment.

*Section 238.113—Emergency Window Exits*

Section 238.113 requires passenger cars to have a minimum of four emergency exit windows, either in a staggered configuration or with one located at each end at each side of the car. Each window must have a minimum unobstructed opening with dimensions of 26 inches horizontally and 24 inches vertically. Each emergency exit window must be easily operable without requiring the use of a tool or other implement. This requirement is intended to provide for sufficient, easily accessible avenues of egress from passenger cars in the case of emergency.

*Justification.* NJ Transit requests a waiver of this requirement because the SNJLRT vehicles do not come equipped with emergency exit windows. The cars, however, are designed to permit sufficient equivalent egress so that passengers will not become trapped in the cars in the case of emergency.

*Section 238.115(b)—Emergency Lighting*

Section 238.115(b)(4) requires passenger cars to provide battery-powered emergency lighting with a 90-minute back-up power system capable of operating without a loss of more than 40% minimum illumination levels in all equipment orientations within 450 of the upright and vertical position, and capable of operating after the initial shock of a collision or derailment resulting from prescribed individually applied accelerations. The purpose of these requirements is to ensure that in an emergency situation, sufficient lighting will remain available to aid passengers, crew members, and rescue personnel to access and leave the train safely.

*Justification.* NJ Transit requests a waiver of these requirements because power for the emergency lighting is provided by a battery with sufficient capacity to sustain emergency loads, including the above lighting, and radio and public address systems, for a period of at least one hour. Additionally, the battery will have sufficient capacity to sustain power to door controls, propulsion and brake controls, coupler control and the horn and bell for a period of at least one hour. The battery is located in the central power unit, removed from the front of the vehicle where direct collisions may occur. The battery is designed for transit use which requires a rugged design capable of withstanding reasonable shock and vibration. The batteries mountings are designed to withstand not less than 5.0 g in the longitudinal direction, 2.0 g in the lateral direction and 3.0 g in the vertical direction.

The SNJLRT vehicles will operate in an urban/suburban region and the route is at-grade, with many points of easy access for emergency rescue units from adjacent streets. In most locations, emergency responders can reach the SNJLRT system within 15 minutes. Even on the most remote section of the system, a three-mile stretch along Duck Island, emergency responders could reach the system within sixty minutes. Additionally, the headway between SNJLRT vehicles is no more than thirty minutes and each vehicle has the capability of acting as a rescue car by coupling with a failed unit and moving it to the next stop for detrainment of passengers. The rescuing car can supply sufficient electrical power to the failed vehicle for the emergency lighting and other functions. In the event that the last scheduled vehicle of the day lost power, the previous vehicle would be returned to recover the failed vehicle.

*Section 238.203—Static End Strength*

Section 238.203 provides for the overall compressive strength of rail passenger cars, requiring them to have a minimum static end strength of 800,000 pounds on a line of draft at the ends of occupied volumes without permanent deformation of the car body structure. This section is intended to prevent sudden, brittle-type failure of the main structure of a passenger car, thereby providing protection of occupants in the case of a crash.

*Justification.* NJ Transit requests a waiver from this requirement because the SNJLRT vehicle will be designed to attain a sufficient level of safety in the SNJLRT operating environment. The strict temporal separation of the SNJLRT and Conrail services virtually eliminates the risk of a collision between a SNJLRT vehicle and a Conrail train, obviating the need for SNJLRT equipment to meet conventional railroad car structural standards. Instead, the SNJLRT vehicles are designed to withstand collisions with other light rail vehicles, motor vehicles and similar objects. Relevant aspects of these design standards are described below.

As noted above, the SNJLRT collision avoidance system is at the heart of the SNJLRT safety design. Marked by complementary elements such as operating rules and procedures, train control technology and the SNJLRT signal system, the collision avoidance system will significantly reduce the likelihood of collisions involving SNJLRT vehicles. All signals capable of displaying ''stop'' aspect will incorporate a trip-stop which will initiate a penalty brake application if a SNJLRT vehicle passes a ''stop'' signal aspect. Moreover, the SNJLRT vehicle's rapid deceleration design features will work to further reduce the prospect of collisions and to significantly reduce the closing speed, and accordingly, the seriousness of collisions that do occur.

Above and beyond the crash avoidance features of the SNJLRT System, the SNJLRT vehicles are designed to prevent sudden, brittle-type failure of the main structure of a passenger car. The vehicle design accommodates the actual progression of a failure induced by a sudden collision phenomenon; from the elastic limit, through the plastic limit, to a brittle failure. NJ Transit requires the SNJLRT vehicles to be manufactured to comply with the standards as summarized below:

1. The passenger compartment will be capable of sustaining, without any permanent deformation, at least 1.5 AWO longitudinal loads (approximately 171,000 pounds) applied uniformly at the ends of the passenger compartment, with a uniformly distributed AW4 vertical load (approximately 165,375 pounds).

2. With the vehicle uniformly loaded to AW4, the end sill structure will be capable of: sustaining loads up to the peak collapse load of the crush zone without permanent deformation; sustaining the reaction loads generated from the loads specified for collision posts, corner posts and anti-climbers without permanent deformation; and

distributing the collision loads incurred during scenarios specified for crashworthiness, such that the collapse of the energy absorption elements in the crush zones is the primary failure mode.

3. Vehicles will be capable of withstanding collisions with other SNJLRT vehicles, motor vehicles, or overtravel buffers without unnecessary risk of injury to passengers or excessive damage to SNJLRT cars and/or track equipment. In a collision, no passenger compartment shell will rupture or suffer any opening through which passengers' limbs may protrude; no compartments within the engine compartment will become dislodged and penetrate into the passenger compartment; high voltage devices and associated connecting cables will remain contained and will not create electrical shock hazards to personnel; and electrical and diesel systems will not create a fire hazard.

To achieve the objective of crashworthiness, a crash energy management approach was used as the basis of the SNJLRT vehicle structural design. Further, as it is expected that during peak hours that some passengers will stand, it was deemed important to minimize the deceleration of passengers in the event of a frontal collision. In a collision between a SNJLRT vehicle moving at speed V and a stationary SNJLRT vehicle (i) both consists on level tangent track and unbraked, (ii) couplers fully engaged, (iii) either SNJLRT vehicle either one or two vehicles (i.e. the normal consist for comprising cars normally used in revenue service), and (iv) any SNJLRT vehicle having a weight of AWO (114,600 pounds):

VELOCITY CRASH ENERGY MANAGEMENT

| | |
|---|---|
| V≤5 | No damage to any SNJLRT car or equipment, and the maximum longitudinal acceleration measured in any passenger compartment will not exceed l.0g. |
| 5<V≥15 | Damage confirmed to the expendable energy absorption devices and sacrificial structural members at the ends of the SNJLRT cars, which will be repairable. The primary structure enclosing the passenger compartment(s) will remain intact, with no permanent deformation of any of its members. The maximum longitudinal acceleration measured in any passenger compartment will not exceed 2g. |

In addition to the above, the SNJLRT cars have an aggressive emergency deceleration rate of an average of 4.5 mph/sec through all entry speeds. In an impending collision scenario this emergency brake rate capability has the potential to reduce speeds prior to impact.

*Section 238.205(a)—Anti-climbing Mechanism*

Section 238.205(a) requires locomotives (as defined in § 238.5) to have forward and rear end anti-climbing mechanisms capable of resisting an upward or downward vertical force of 200,000 pounds without failure. These requirements are intended to prevent override or telescoping of one passenger train unit into another in the event of high compressive forces-caused by a derailment or collision.

*Justification.* NJ Transit requests a waiver of this requirement because the SNJLRT vehicle will be designed so that: with only two ribs of the anticlimbing mechanism engaged, and a vertical load of + 40,000 pounds combined with a longitudinal compressive load of AWO applied at the carbody centerline, there will be no permanent deformation of the carbody structure. In addition, crush elements within the couplers are able to absorb a certain amount of energy in recoverable energy absorption elements. When this occurs, the coupler moves back until the anti-climbers of the colliding vehicles touch and the loads are taken by the carbodies directly. Anti-climbers are fitted to the front end of the cars to avoid telescoping.

While individual structural elements will not conform to the requirement of § 238.205(a), the assembled carbody uses ''crush zones'' and other techniques to protect passengers in the event of collisions. Specifically the SNJLRT vehicle is designed using advanced computer methods to incorporate modern energy absorbing and dissipation methods to dissipate energy and transfer loads and protect the passenger compartment. The anti-climbers and energy absorption mechanisms are designed to limit the potential for override and underride and prevent telescoping. The SNJLRT vehicle design will achieve the uniformity of end structure deformation essential to this objective. Moreover, because the strict temporal separation of the SNJLRT and Conrail services virtually eliminates the risk of SNJLRT vehicle/Conrail train collisions, there is no need for the SNJLRT vehicles to meet the more stringent requirements applicable to conventional railroad equipment.

*Section 238.207—Link Between Coupling Mechanism and Car Body*

Section 238.207 requires the link between the car coupling mechanism and the car body to be designed to resist a vertical downward thrust from the coupler shank of 100,000 pounds for any normal horizontal position of the coupler, without permanent deformation. The purpose of this requirement is to avoid a premature failure of the draft system so that the anticlimbing mechanism will have an opportunity to engage.

*Justification.* NJ Transit requests a waiver from this requirement because the SNJLRT vehicle has its own design features to accomplish the purpose of the requirement. As noted above, the strict temporal separation of the SNJLRT and Conrail services virtually eliminates the risk of a collision between a SNJLRT vehicle and a Conrail train, obviating the need for SNJLRT equipment to meet conventional railroad car structural standards. Instead, the SNJLRT vehicles are designed to withstand collisions with other light rail vehicles, motor vehicles and similar objects. Relevant aspects of these design standards are described below.

The SNJLRT vehicle will be designed so that the carbody structure supporting the coupler will sustain, without permanent deformation, a load that is equal to 110 percent of the coupler release load (if applicable) or failure load applied at the coupler brackets, with a uniformly distributed AW4 (165,375 pounds) vertical load. In addition, the method of attaching the coupler to the coupler anchor bracket(s) will allow the coupler to become fully released from the coupler anchor bracket(s) once the coupler has absorbed its maximum design energy. The coupler will be contained and prevented from coming in contact with the track or from protruding into the passenger compartment. The coupler and draft gear will withstand an operating consist with an AW3 (154,350 pounds) passenger load, pushing or pulling an unpowered consist with an AW3 passenger load, over all grades and curves on SNJLRT Line, without damage to the coupler.

The intent of the SNJLRT vehicle design is to prevent the coupler shank from contributing to potential damage during a frontal collision. The approach taken is to release the coupler from mechanical connection to the carbody once it has absorbed its maximum design energy. When this occurs the coupler assembly is separated from the coupler anchorage on the car structure. The coupler is retained to prevent it from coming into contact with the track or from protruding into the passenger compartment. This feature is provided to reduce the risk of derailment and penetration of the occupied space.

*Section 238.209—Forward-Facing End Structure of Locomotives*

Section 238.209 requires the skin of the forward-facing end of each locomotive to be: equivalent to a ½ inch steel plate with a 25,000 pounds per square inch yield strength; designed to inhibit the entry of fluids into the occupied cab area of the locomotive; and affixed to the collision posts or other main vertical structural members so as to add to the strength of the end structure. These requirements are intended to provide protection to persons in the occupied area of the locomotive cab.

*Justification.* NJ Transit requests a waiver of the requirements in this section because the SNJLRT vehicle will be designed to attain a sufficient level of safety in the SNJLRT operating environment. As noted above, the strict temporal separation of the SNJLRT and Conrail services virtually eliminates the risk of a collision between a SNJLRT vehicle and a Conrail train, obviating the need for SNJLRT equipment to meet conventional railroad car structural standards. Instead, the SNJLRT vehicles are designed to withstand collisions with other light rail vehicles, motor vehicles, and similar objects. Relevant aspects of these design standards are described below.

As noted above, the SNJLRT collision avoidance system is at the heart of the SNJLRT safety design. Marked by complementary elements such as operating rules and procedures, train control technology, and the SNJLRT signal system, the collision avoidance system will significantly reduce the likelihood of collisions involving SNJLRT vehicles. Moreover, the SNJLRT vehicle's rapid deceleration design features have the potential to mitigate the prospect of collisions and to significantly reduce the closing speed, and accordingly, the seriousness of collisions that may occur.

In addition, the SNJLRT system provides improved grade crossing protection for the operator, passenger and vehicle through the use of the crossing warning indicators which alert the operator to the gate function and status. These indicators are comprised of lunar white aspects, visible to the vehicle operator from at least a normal service braking distance from the crossing. A flashing indication shall be given at any time when the gates are operating and between fully down and up positions. When the gates are fully down the indication shall be steady. The operator can respond accordingly if a malfunction is observed.

With respect to the specific design of the forward-facing end structure, the SNJLRT vehicle is similar to a push-pull cab configuration. The operator's cab floor height is 44″ and the vehicle provides 171,000 pounds of buff strength.

*Section 238.211—Collision Posts*

Section 238.211 requires locomotives to have two full-height collision posts at each end where coupling and uncoupling are expected. Each collision post must have an ultimate longitudinal shear strength of not less than 500,000 pounds at a point even with the top of the underframe member to which it is attached and a longitudinal shear strength of not less than 200,000 pounds exerted at 30 inches above the joint of the post of the underframe. Alternatively, cars may be constructed with an end structure that can withstand the sum of forces that each collision post is required to withstand. This requirement is intended to provide for protection against crushing of occupied areas of passenger cars in the event of a collision or derailment.

*Justification.* NJ Transit requests a waiver of this requirement because the SNJLRT vehicle will have collision posts, or a structural equivalent, protecting at least the area between the underframe and the bottom of the windshield. NJ Transit believes the SNJLRT vehicle design will provide an adequate measure of safety. The strict temporal separation of the SNJLRT and Conrail services virtually eliminates the risk of a collision between a SNJLRT vehicle and a Contrail train, obviating the need for SNJLRT equipment to meet conventional railroad car structural standards. Instead, the SNJLRT vehicles are designed to withstand collisions with other light rail vehicles, motor vehicles and similar objects. Relevant aspects of these design standards are described below.

As noted above, the SNJLRT collision avoidance system is at the heart of the SNJLRT safety design. Marked by complementary elements such as operating rules and procedures, train control technology, and the SNJLRT signal system, the collision avoidance system will significantly reduce the likelihood of collisions involving SNJLRT vehicles. Moreover, the SNJLRT vehicle's rapid deceleration design features will work to further reduce the prospect of collisions and to significantly reduce the closing speed, and accordingly, the seriousness of collisions that do occur.

In order to preclude sudden catastrophic failure or telescoping of SNJLRT cars, all connections which attach collision posts, corner posts and structural shelf to each other and/or the underframe structure and roof structure, will be made in such a manner to develop the full strength of the load bearing members in shear. The ultimate shear strength of the collision posts will be not less than a compression load of AWO (114,660 lbs) applied at the top of the underframe, and at any angle up to ± 15° from the longitudinal axis. A compression load of 0.5 AWO (57,330 lbs) similarly applied 15 inches above the top of the underframe will cause no yielding of the collision posts. MI underfloor, roof mounted and engine compartment equipment weighing more than 200 pounds will be designed to withstand not less than 5.0 g in the longitudinal direction, 2.0 g in the lateral direction, and 3.0 g in the vertical direction. These loads applied separately will not result in stresses that exceed 90 percent of the yield or buckling strength of the material.

These design requirements provide for the same type of protection of the occupant space as the FRA collision posts requirements, but do so in a way consistent with the design of the SNJLRT vehicle. As noted elsewhere herein, the SNJLRT vehicle is designed using advanced computer methods to incorporate modern energy absorbing and dissipation methods as part of an overall protection system designed to dissipate energy and transfer loads from impacts to protect the passenger compartment. As part of this system, the SNJLRT collision posts provide protection for the occupied volume of the vehicle shell during a collision. Thus, the SNJLRT vehicle effectively isolates passengers and crew from the hazards of penetration.

NJ Transit also notes that a portion of the SNJLRT system alignment consists of street running. To operate safely in this environment the operator requires good visibility to monitor road and pedestrian traffic around the vehicle. Conventional collision post designs may result in visual obstructions for the operator. This improved visibility is

also beneficial when operating on the mainline railroad portion of the route.

*Section 238.213—Corner Posts*

Section 238.213 requires two full-height corner posts at the end of each vehicle capable of resisting, without failure, a load of 150,000 pounds at the point of attachment to the underframe and a load of 20,000 pounds at the point of attachment to the roof structure. Each corner post must be able to resist a horizontal load of 30,000 pounds applied 18 inches above the top of the floor without permanent deformation. These requirements serve to provide protection to occupant compartments from side-swipe type collisions.

*Justification.* NJ Transit requests a waiver of this requirement because the SNJLRT vehicle will be designed to attain a sufficient level of safety in the SNJLRT operating environment. As noted above, the strict temporal separation of the SNJLRT and Conrail services virtually eliminates the risk of a collision between a SNJLRT vehicle and a Contrail train, obviating the need for SNJLRT equipment to meet conventional railroad car structural standards. Instead, the SNJLRT vehicles are designed to withstand collisions with other light rail vehicles, motor vehicles, and similar objects. Relevant aspects of these design standards are described below.

As noted above, the SNJLRT collision avoidance system is at the heart of the SNJLRT safety design. Marked by complementary elements such as operating rules and procedures, train control technology and the SNJLRT signal system, the collision avoidance system will significantly reduce the likelihood of collisions involving SNJLRT vehicles. Moreover, the SNJLRT vehicle's rapid deceleration design features will work to further reduce the prospect of collisions and to significantly reduce the closing speed, and accordingly, the seriousness of collisions that do occur.

The SNJLRT vehicle corner posts will have an ultimate shear strength not less than a compression load of 0.5 AWO (57,330 lbs) applied at the top of the underframe; compression load of 0.3 AWO (3,500 lbs) applied 15 inches above the top of the underframe, or at the level of the structural shelf (whichever is higher), and which when applied in any direction, will cause no yielding of the corner posts. Also, any underfloor, roof mounted, and engine compartment equipment weighing more than 200 pounds will be designed to withstand not less than 5.0 g in the longitudinal direction, 2.0 g in the lateral direction, and 3.0 g in the vertical direction, and when these loads are applied separately they will not result in stresses that exceed 90 percent of the yield or buckling strength of the material.

Here too, while individual structural elements of the SNJLRT vehicle may not conform to the specific requirements, the assembled carbody uses ''crush zones'' and other energy absorption and dissipation techniques to protect passengers in the event of collisions. As part of this system, the corner posts extend from the underframe to the roof structure and may be combined with the collision posts and underframe to become part of the end structure. This design effectively isolates passengers and crew from the hazards of penetration, thereby providing protection for the occupied volume of the vehicle shell during a collision.

As noted above, a portion of the SNJLRT system alignment is in streets. To operate safely in this environment, the vehicle operator requires good visibility to monitor road and pedestrian traffic around the vehicle. Conventional corner post designs might result in visual obstructions for the operator. The superior visibility of the SNJLRT vehicle is also beneficial when operating on the railroad corridor portion of the route.

*Section 238.215—Rollover Strength*

Section 238.215 sets forth the structural requirements intended to prevent significant deformation of the occupant compartments of passenger cars, in the event the car rolls onto its side or roof. Under this section, a passenger car must be able to support twice the dead weight of the vehicle while the vehicle is resting on its roof or side.

*Justification.* NJ Transit requests a waiver of this requirement because the SNJLRT is designed such that the roof will have sufficient strength to support, without permanent deformation, concentrated loads of 250 pounds per person as applied by a person walking on the roof, with a maximum of three persons there at any given time. As noted above, the underfloor, roof mounted and engine compartment equipment weighing greater than 200 pounds will be designed to withstand not less than 5.0 g in the longitudinal direction, 2.0 g in the lateral direction, and 3.0 g in the vertical direction and, when these loads are applied separately, they will not result in stresses that exceed 90 percent of the yield or buckling strength of the material. With a compression load of 40,000 pounds applied to the side wall at the side sill, and distributed along 8 feet, and a compression load of 10,000 pounds applied to the side wall at the belt rail, there will be no yielding or buckling of the carbody structure.

The features specified above are designed to enhance crashworthiness and protect the occupied volume. The SNJLRT vehicle incorporates a lightweight low floor design, which lowers the center of gravity as well as the load conditions in rollover circumstances. The lower center of gravity makes the SNJLRT vehicle less prone to rollover than a standard commuter rail car. Moreover, in the unlikely event of a rollover, the lighter weight of the SNJLRT car means that the roof does not have to support as much weight as would a standard commuter rail car. In addition, the bulk of the equipment, including the propulsion system and powered truck, is located in the articulated center segment of the vehicle and poses no direct hazard to passengers in the event of a rollover.

In the unlikely event that a derailment leading to a rollover occurs, the SNJLRT vehicle specifications provide for structural protection of the occupant compartments and, in conjunction with the other safety design features of the vehicles, will provide an equivalent measure of safety.

*Section 238.217—Side Structure*

Section 238.217 sets strength requirements for side posts and corner braces. This section also requires that outside sheathing of mild, open-hearth steel, when used flat and without reinforcement in certain side frames, be no less than ⅛-inch nominal thickness. When sheathing used for truss construction serves no load-carrying function, the minimum thickness is 40 percent of ⅛-inch nominal thickness. These specifications are intended to provide for additional structural protection, so that a car will derail before it collapses into the occupant compartments.

*Justification.* NJ Transit requests a waiver of these requirements because the SNJLRT vehicle is designed so that with a compression load of 40,000 pounds applied to the side wall at the side sill, and distributed along 8 feet, and a compression load of 10,000 pounds applied to the side wall at the belt rail, there will be no yielding or buckling of the carbody structure. The approach used in designing the SNJLRT aluminum carbody vehicle involved minimizing weight while providing maximum protection for passengers, consistent with the service requirements. The floor level and design of the SNJLRT vehicle likely will prove superior to the typical low floor light rail vehicle in side impact collisions at

grade crossings. The low floor portion of the car is 22″ above top of rail, which is higher than a typical low floor vehicle. This affords better protection for the rail passenger should a highway vehicle strike it. The vehicle also has a well-lit interior and external indicator and marker lights, and will therefore be more conspicuous than a regular commuter or freight train.

Additionally, the relatively short train length [typically 102.5 feet (one car), with a maximum of 205 feet (two cars)] ensures that the vehicle will not obstruct a grade crossing for an extended time period. This, in conjunction with constant warning time crossing protection, will encourage observation of grade crossing warnings.

*Section 238.221—Glazing*

Section 238.221 reiterates the safety glazing standards of 49 CFR part 223 and establishes standards for glazing securement components. The new requirements for glazing securement are designed to ensure that the glazing frame be capable of holding the glazing in place against all forces which it is required to resist under part 223, and forces created by air pressure differences caused when two trains pass at their authorized maximum speeds in opposite directions at the minimum track separation for two adjacent tracks. Glazing forced from the window opening is a potential hazard. Proper securement of glazing assists in retaining persons within the vehicle in the event of a collision or derailment.

*Justification.* SNJLRT vehicles will meet the window securement requirements so no waiver is sought relative to that requirement. NJ Transit has already stated a basis for a waiver request for the remaining provisions as noted under part 223.

*Section 238.223—Fuel Tanks*

This section provides for the structural requirements applicable to external and internal fuel tanks. External fuel tanks must comply with Association of American Railroads (AAR) recommended practice 506, Performance Requirements for Diesel Electric Locomotive Fuel Tanks, or an industry standard providing at least equivalent safety. Internal fuel tanks must be positioned to reduce the likelihood of accidental penetration from roadway debris or collision. The vent system and spill protection systems must be designed to prevent them from becoming a path for fuel loss for any tank orientation due to a locomotive overturning. The bulkheads and skin must have a minimum steel plate ⅜ of an inch thick with a 25,000 pound yield strength, or be made with a material with an equivalent strength. These requirements are designed to keep the fuel tank from being punctured and from being a conduit for fuel spillage if a locomotive tips over.

*Justification.* NJ Transit requests a waiver of these requirements because the SNJLRT vehicle will have an internal fuel tank and filler pipes that will be protected from the passenger compartment by fire barrier material, and which will be properly insulated to prevent fire danger. The fuel tank will be constructed and located in a manner that will permit filling and draining from the outside of the vehicle only. Filler pipes will be equipped to complement filler hoses fitted with dry-break mechanical interlocks. The SNJLRT vehicle will be equipped with a safety cut-off device directly on the fuel line to the diesel engine which meets the requirements stated within the FRA locomotive safety standards, 49 CFR 229.93, Internal Combustion Equipment, Safety Cut-off Device. The fuel tanks, engine and propulsion equipment are located in the drive unit positioned in the center of the articulated vehicle. The main fuel tank is located above the floor, and two additional fuel tanks are located within the side frame under the floor. The fuel tank was designed in accordance with UC Standard 627, and will comply with the requirements of FHWA motor carrier safety standards for fuel systems, 49 CFR 393.67. Refueling is done without pressure and there are level sensors to protect against overspilling.

The fuel tank design ensures that the passenger compartment is isolated from the fuel tanks and engine. The central placement of the drive unit provides significant protection for fuel storage and piping system. The fuel tanks are located above the floor line or between the side frame rails. The drive unit structure protects fuel storage and piping.

During a derailment the carbody structure is more likely to come into contact with the rails than the fuel tanks. Therefore it is unnecessary to supply the heavy bulkhead ends required by the AAR recommended practice 506. In addition, as part of the final design process, the SNJLRT Contractor will complete a full safety review of the fuel tanks and systems to demonstrate that the design is safe and meets appropriate sections of FHWA motor carrier fuel tank standards set forth at 49 CFR part 393. This design meets FRA safety objectives, but in a manner more appropriate to the SNJLRT vehicle and its operation.

*Section 238.233—Interior Fittings and Surfaces*

Section 238.233 requires each seat in a passenger car to be securely fastened to the carbody so as to withstand individually applied acceleration of 4g acting in the vertical and in the lateral direction on the deadweight of the seat (or seats if a tandem unit). Seat attachments must have an ultimate strength capable of resisting a longitudinal inertial force of 8g acting on the mass of the seat plus the impact force of the mass of an unrestrained 95th percentile male occupant striking the seat from behind when the floor to which the seat is attached decelerates with a triangular crash pulse having a peak of 8g and a duration of 250 milliseconds. This section also requires overhead racks to provide longitudinal and lateral restraint for stowed articles and be attached to the car body with sufficient strength to resist loads due to a longitudinal force of 8g, a vertical force of 4g and a lateral force of 4g. Other interior fittings must meet the same strength requirements. In addition, to the extent possible, all interior fittings in the passenger car are to be recessed or flush-mounted, and sharp edges and corners in the locomotive cab or passenger car will be either avoided or padded. Floor mounted seats provided for a crew member assigned to occupy the cab of a locomotive must be capable of withstanding the same load limits as required for overhead storage racks, with the mass being that of the seat and a 95th-percentile male crew member. These requirements are designed to reduce the likelihood and severity of injury to train occupants caused by the dislodging of seats or other interior items, or by occupants striking interior items in the event of an accident.

*Justification.* NJ Transit requests a waiver of these requirements because the seats and interior fittings of the vehicle have been designed for the SNJLRT operating environment. The vehicle is designed such that the passenger seat will consist of a cantilevered supporting structure, shell and cushion inserts for the seat and back. The vehicle seats are cantilevered from the side of the car, which permits placement of luggage beneath the seats. Aspects of this regulation are more appropriate to an intercity vehicle where luggage accompanies most passengers. This vehicle is used in local service where luggage is typically limited to small carry-on items such as purses, attache cases, etc. There is adequate space beneath the cantilevered seats to permit stowage of larger pieces

of luggage, which limits the use of the overhead racks.

The vehicle interior will provide recess or flush-mounted fittings, and readily accessible stanchions and grab rails for passenger safety and comfort. Stanchions and grab rails will be sized and located to provide optimum arrangement for all passengers. They will be of a color distinguishable by the partially sighted. Windscreens will be provided adjacent to each doorway, with at least the upper half transparent, and will incorporate a stanchion extending from the windscreen to the SNJLRT car ceiling. This vehicle also provides more floor space for passenger circulation than an intercity or commuter rail car due to its service characteristics.

It is also important to note that the proposed seat attachment strength requirements are a function of the proposed 800,000 pound compression strength requirement. Because the SNJLRT vehicles, however, have different compression strength values, it is not necessary for the SNJLRT car to meet the proposed 8g/4g force resistance requirements. In the SNJLRT vehicles, the provision of crashworthiness features will prevent acceleration in the passenger compartment from reaching such levels. Rather, the limit for collisions up to 15 mph is 2g. Moreover, the high emergency brake rate will mean that most collisions will be at a lower speed than would be the case with conventional commuter rail cars.

*Section 238.235—Doors*

Section 238.235 provides that each passenger must have a minimum of two exterior side doors, with each door providing a minimum clear opening of 30 inches horizontally and 74 inches vertically. This section also provides for the availability of override devices enabling the opening of doors without power from both the inside and outside of the cars without the use of a tool or other implements.

*Justification.* NJ Transit requests a waiver of these requirements because the SNJLRT vehicle is designed with an emergency release lever on the inside of each doorway and for at least one doorway per side on the outside of the vehicle. This will enable a closed and interlocked door to be lock-released without power supply. Activation of the emergency release levers will allow the door levers to be manually moved. The interior emergency door release levers will be clearly marked and will be in a location accessible to all passengers, consistent with ADA requirements.

The SNJLRT vehicle will have doorways on both sides to permit egress time of an AW2 load in less than 120 seconds. The passenger doorways are two-panel sliding plug type and flush with carbody in the closed position. They are opened and closed pneumatically and provide direct access from the platform to the car interior. There is no vestibule with secondary door access through a partition to the passenger compartment. The clear opening is 52.38 inches. The car has two doors per side in the low floor area. This door configuration permits evacuation of an AW2 (67 Tons—180 Passengers) car from either side in 100 seconds. Also, with regard to access, all windows can be safely shattered to provide additional access/egress locations.

*Section 238.237—Automated Monitoring*

Section 238.237 requires that controlling locomotives have working alerters. The alerter timing must be set by the operating railroad taking into consideration maximum train speed and signal system capabilities. Under this section, the working alerter must initiate a penalty brake application if the train operator does not respond to the alerter. If the alerter fails en route a second qualified person will be stationed in the cab or the operator will be in constant communication with a second crew member until the train reaches the next terminal. These requirements are intended to prevent a train collision or derailment due to the inattention or incapacity of the train operator, that would result in loss of control of the train.

*Justification.* NJ Transit requests a waiver from these requirements because the SNJLRT vehicle is equipped with its own controller and audible alerter features to provide an equivalent level of safety. If a vehicle operator fails to respond to an alerter approximately every 30 seconds, the vehicle goes into an immediate penalty brake application. A keyed control switch will be provided, which is interlocked such that only the master controller at the front end of the lead SNJLRT car of a consist is operable. The braking demand of the master controller and braking handle always has priority over the motoring demand. The drive control unit controls and supervises the protective functions of the propulsion converter.

In addition to the master controller, redundant safety systems are provided. For example, the vehicle is also controlled by enforce-stop devices which initiate a brake application if the vehicle fails to respond to signal commands. Also, an emergency stop push-button will be provided such that, when pushed, it will activate the emergency brakes. It will be possible to activate the emergency stop push-button from any console in a consist. Finally, the SNJLRT service route involves frequent station stops in signaled territory under control of a dispatcher.

*Section 238.301—Inspection, Testing and Maintenance*

Subpart D of part 238, §§ 238.301 through 238.319, contains requirements pertaining to the inspection, testing, and maintenance of the passenger equipment and systems required for Tier 1 passenger equipment. These requirements are designed to ensure that passenger rail operations are conducted only on vehicles whose components and systems are in good working order, thereby reducing both the chances of an equipment-related accident and the severity of damage or injury in the case of an accident.

NJ Transit anticipates being in compliance with the requirements of subpart D. However, NJ Transit requests a waiver of any requirements that correlate to the subpart B or C standards from which NJ Transit has sought waivers to depart. SNJLRT equipment will be subject to a detailed program of inspection, testing and maintenance, as required by the NJDOT SSPS and the SNJLRT SSPP. Specifically, § 5.1.5. of the NJDOT SSPS requires the SSPP to provide for periodic and as needed maintenance, inspection, and testing of equipment and facilities, as well as training and certification of employees in safety-sensitive positions. The SNJLRT SSPP will address these issues in detail, setting forth specific inspection maintenance and testing schedules and protocols for all major equipment, components, and systems.

**Part 239—FRA Requirement and Purpose**

Part 239 contains standards for the preparation, adoption, and implementation of emergency preparedness plans by railroads connected with the operation of passenger trains. It is intended that by providing sufficient emergency egress capability and information to passengers and by having emergency preparedness plans calling for coordination with local emergency response officials, the risk of death or injury to passengers, employees and others in the case of accidents or other incidents, will be lessened. This rule was adopted as a result of several serious crashes involving commuter trains.

*Justification.* NJ Transit requests a waiver of this requirement because the SNJLRT system will be operated in accordance with the emergency

preparedness specifications of the SNJLRT SSPP, under the oversight of the NJDOT's State Safety Oversight Program. The SSPP sets forth procedures and requirements dealing with emergency situations tailored to the SNJLRT system, but which also draw on the experience of emergency preparedness standards from other rail transit systems whose operations and equipment more closely resemble the SNJLRT system than FRA-regulated commuter rail systems. Section 5.1.4.1 of the NJDOT SSPS requires NJ Transit to adopt an emergency response plan and procedures which must include a means to communicate and coordinate with external emergency response agencies, and provide for emergency simulations and drills, and training. Section 9 of the SSPS, Security, requires the SSPP to contain Emergency Operating Procedures to deal with a variety of emergency situations, including accidents, natural disasters, and sabotage or other criminal activities. The SNJLRT SSPP will contain a detailed emergency response plan which will provide for contingency planning for passenger evacuation and crowd control coordination and training and simulation drilling with outside emergency response providers. The emergency response plan will also specify required emergency equipment.

In addition to emergency response planning required by §§ 5 and 9 of the SSPS, the SSPS requires NJ Transit to engage in a process by which hazards occurring in operations, maintenance, and engineering are identified and categorized according to severity and likelihood. Resolutions to reduce hazards to the lowest level practicable must then be considered. See SSPS, § 7, Exhibit C. This process will help the SNJLRT contractor to develop the emergency response plan, including the design, in advance, of processes for handling exceptions to established procedures where situations require them. A hazard resolution matrix will be included in the SSPP.

In addition, the Safety Committee will address emergency preparedness issues and provide coordination between NJ Transit, the SNJLRT Contractor, Conrail and local emergency response agencies. The NJDOT, as part of its oversight activities, will be responsible for investigation of accidents and other emergency situations.

These emergency preparedness standards will provide a level of safety equivalent to the FRA requirements in a manner more appropriate to the SNJLRT operating environment.

Interested parties are invited to participate in this proceeding by submitting written views, data, or comments. FRA does not anticipate scheduling a public hearing in connection with either the request for a waiver of certain regulatory provisions or the request for an exemption of certain statutory provisions. If any interested party desires an opportunity for oral comment, he or she should notify FRA, in writing, before the end of the comment period and specify the basis for his or her request.

All communications concerning these proceedings should identify the appropriate docket number (e.g., Waiver Petition Docket Number FRA 1999–5987) and must be submitted to the DOT Docket Management Facility, Room PL–401 (Plaza level) 400 Seventh Street, S.W., Washington, D.C. 20590. Communications received within 45 days of the date of this notice will be considered by FRA before final action is taken. Comments received after that date will be considered as far as practicable. All written communications concerning this proceeding are available for examination during regular business hours (9:00 a.m.–5:00 p.m.) at the above facility. All documents in the public docket are also available for inspection and copying on the Internet at the docket facility's Web site at http://dms.dot.gov.

Issued in Washington, D.C. on August 10, 1999.

**Michael Logue,**

*Deputy Associate Administrator for Safety Compliance and Program Implementation.*

[FR Doc. 99–21777 Filed 8–20–99; 8:45 am]

BILLING CODE 4910–06–P

## DEPARTMENT OF TRANSPORTATION

## Research and Special Programs Administration

## Office of Hazardous Materials Safety; Notice of Applications for Exemptions

**AGENCY:** Research and Special Programs Administration, DOT.

**ACTION:** List of applicants for exemptions.

**SUMMARY:** In accordance with the procedures governing the application for, and the processing of, exemptions from the Department of Transportation's Hazardous Materials Regulations (49 CFR Part 107, Subpart B), notice is hereby given that the Office of Hazardous Materials Safety has received the applications described herein. Each mode of transportation for which a particular exemption is requested is indicated by a number in the ''Nature of Application'' portion of the table below as follows: 1—Motor vehicle, 2—Rail freight, 3—Cargo vessel, 4—Cargo aircraft only, 5—Passenger-carrying aircraft.

**DATES:** Comments must be received on or before September 22, 1999.

**ADDRESS COMMENTS TO:** Records Center, Research and Special Programs Administration, U.S. Department of Transportation, Washington, DC 20590.

Comments should refer to the application number and be submitted in triplicate. If confirmation of receipt of comments is desired, include a self-addressed stamped postcard showing the exemption application number.

**FOR FURTHER INFORMATION CONTACT:** Copies of the applications (See Docket Number) are available for inspection at the New Docket Management Facility, PL–401, at the U.S. Department of Transportation, Nassif Building, 400 7th Street, SW, Washington, DC 20590 or at http://dms.dot.gov.

This notice of receipt of applications for new exemptions is published in accordance with Part 107 of the Federal hazardous materials transportation law (49 U.S.C. 5117(b); 49 CFR 1.53(b)).

Issued in Washington, DC, on August 17, 1999.

**J. Suzanne Hedgepeth,**

*Director, Office of Hazardous Materials Exemptions and Approvals.*