indicated above, ISTEA required the agency to address the possible extension of Standard No. 214's dynamic side impact requirements for passenger cars to LTVs with a GVWR of 8,500 pounds or less and an unloaded vehicle weight of 5,500 pounds or less. Having chosen the barrier currently specified for passenger cars, the agency believes that it is appropriate to limit the application of the rule to vehicles with a GVWR of 6,000 pounds or less. That barrier represents side crashes in which occupants of the heavier LTVs are relatively unlikely to suffer death or serious injury. Further, LTVs with GVWRs over 6,000 pounds should easily meet the dynamic requirements adopted today without any modification. NHTSA conducted several side impact tests of production LTVs. Analysis of these data show that the performance of the vehicles in producing TTI(d) values has an inverse relationship to the curb weight of the test vehicle. Vehicles with a curb weight of over 3,800 pounds produced TTI(d) values below 50 g's. Since curb weight of 4,000 pounds is approximately equivalent to a GVWR of about 6,000 pounds, NHTSA concluded that vehicles with a GVWR of more than 6,000 pounds would meet the TTI(d) performance requirement of 85 g's with a large margin of safety (i.e., at least 30 to 35 g's below the specified performance requirement). In the interest of reducing unnecessary regulatory burdens associated with certifying vehicles to the FMVSSs, NHTSA has not applied this rule to large (over 6,000 pounds GVWR) LTVs.

Vehicles manufactured in more than one stage; altered vehicles. Limiting the application of this rule to LTVs with a GVWR of 6,000 pounds or less excludes a substantial number of vehicles produced by businesses involved in manufacturing vehicles in more than one stage, and in converting, or altering, LTVs (e.g., van converters). Many of these are small businesses. Final-stage manufacturers typically install truck bodies and/or work-related equipment on chassis. Alterers modify the structure of new, completed vehicles. Under NHTSA's regulations, a final-stage manufacturer must certify that the completed vehicle conforms to all applicable safety standards, and alterers must certify that the altered vehicle continues to comply with all applicable safety standards.

The GVWR limit of 6,000 pounds or less is the same one that is used in Standard 216, "Roof Crush Resistance" (49 CFR section 571.216). Standard 216 prescribes static roof strength requirements for LTVs to increase the resistance of the roof to crush and intrusion. The standard originally applied to passenger cars, and was extended to LTVs in a 1991 final rule. In a comment on the rule, NTEA indicated that commercial LTVs produced from incomplete chassis generally have a GVWR above 6,000 pounds. Due to the agency's need to further examine the feasibility of applying the standard to LTVs with higher GVWRs, NHTSA limited the standard to LTVs with a GVWR of 6,000 pounds or less.

NHTSA is not aware that a significant number of vehicles produced by finalstage manufacturers and alterers have GVWRs below 6,000 pounds. No commenter provided information showing the existence or estimate of the population of multistage manufacturers or alterers of vehicles in that weight class. To the extent they exist, the means that these final-stage manufacturers and alterers will use in certifying compliance with the dynamic side impact requirements of Standard 214 will not differ significantly from the means they already use to certify compliance with other requirements, such as Standard 214's quasi-static side door strength requirements and Standard 208's automatic crash protection requirements. Those means are briefly described below.

First, a final-stage manufacturer could complete the vehicle within the limits set by the incomplete vehicle manufacturer for assuring continued compliance. This is the simplest course of action that a final-stage manufacturer can take to ensure that its completed vehicle performs safely. NHTSA's certification regulations require manufacturers of incomplete vehicles (chassis) used by final-stage manufacturers to provide information regarding the limitations on the center of gravity, weight, and other attributes that must be observed by a final-stage manufacturer in completing a vehicle if that manufacturer is to avoid affecting the vehicle's compliance with applicable safety standards. When the final-stage manufacturer observes the limits set by the incomplete vehicle manufacturer, it may certify the vehicle on that basis. An alterer could modify a certified vehicle in a way that does not affect the vehicle's compliance with FMVSS 214, such as by refraining from weakening the side structure of the vehicles.

Second, a final-stage manufacturer could choose not to remain within the incomplete vehicle manufacturer's limits for a chassis, or an alterer could affect a vehicle's compliance with the FMVSSs, if the final-stage manufacturer

or alterer took steps sufficient to enable it to certify, with due care, that the completed vehicle complied with applicable safety standards, including Standard 214. Final-stage manufacturers that build their own body structures are generally larger than most final-stage manufacturers, and have greater engineering and testing expertise. Also, final-stage manufacturers can band together to sponsor testing and/or engineering analysis. Similarly, an alterer could conduct or sponsor testing and/or engineering analyses showing that the vehicle, as altered, complies with Standard 214.

Issues relating to LTVs produced in more than one stage or altered were commented on by five parties involved in the multistage manufacture or conversion of LTVs. They included the National Truck Equipment Association (NTEA), the Recreation Vehicle Industry Association (RVIA), two seat suppliers to multistage manufacturers and alterers (Flexsteel Industries and Bornemann Products), and an alterer of completed LTVs (Starcraft Automotive Corporation.)

These commenters expressed reservations concerning the first approach discussed in the NPRM, i.e., that a final-stage manufacturer could stay within the limits set by the incomplete vehicle manufacturer, and that an alterer could alter the vehicle in conformity with the manufacturer's body builder's guide so as not to disturb the vehicle's compliance with Standard 214. NTEA, representing multistage manufacturers and distributors of workrelated trucks, truck bodies and equipment, said that, as a result of a dynamic side impact requirement for LTVs, incomplete vehicle manufacturers might restrict final-stage manufacturers from making any modification to the side door structure of their vehicles. The commenter believed such a restriction would preclude final-stage manufacturers from widening or lengthening doors, and would thus preclude them from producing vehicles that need large doors for accessibility purposes, such as ambulances, vehicles for handicapped persons, or specialty delivery vehicles.

NHTŠA has previously considered assertions that incomplete vehicle manufacturers would establish unreasonably stringent limitations on their vehicles. In the rules establishing dynamic testing requirements for manual safety belts in LTVs under Standard 208 (53 FR 50221; December 14, 1988) and extending Standard 204's steering column rearward displacement limitations to additional LTVs (54 FR 24344; June 7, 1989), NHTSA noted that