

STAA CONSIDERATIONS IN HIGHWAY DESIGN AND MAINTENANCE



ITS PA Luncheon
PennDOT D8
August 25, 2015

Design Manual Part 2: Highway Design

Chapter 2.19.A

A. Design Vehicles. Design vehicles represent selected motor vehicles with the weight, dimensions and operating characteristics used to establish highway design controls for accommodating vehicles of designated classes. Nineteen design vehicles are used in design that comprise four general classes, including passenger cars, buses, trucks and recreational vehicles. In the design of any highway facility, the largest design vehicle likely to use that facility with considerable frequency or a design vehicle with special characteristics appropriate to a particular intersection is used to determine the design of such critical features as radii at intersections and radii of turning roadways. The dimensions for the 19 design vehicles and their associated symbols are presented in the 2004 AASHTO Green Book, Chapter 2, Exhibit 2-1.

DESIGN VEHICLES



DESIGN VEHICLES



STAA HISTORY

Federal Surface Transportation Assistance Act of 1982 & CFR

- Addressed concerns about the surface transportation infrastructure, especially highways and bridges
- Made mandatory the previously permissive maximum weight limits of 80,000 lbs. gross, 20,000 lbs. single axle, and 34,000 lbs. tandem axle on the Interstate System
- Required States to allow trucks meeting STAA requirements to operate on what became known as the "National Network for Trucks"

STAA HISTORY (cont.)

NATIONAL NETWORK FOR TRUCKS

- 1984: Designated to include the Interstate System and other designated highways
- Required states to permit reasonable access between the National Network and terminals and facilities for food, fuel, repairs, and rest
- States can't deny access to terminals and facilities within one mile except for specific safety reasons



STAA EFFECT ON PA VEHICLE CODE

STAA Triggered changes to PA Law, 75 Pa CS *Vehicle Code* to allow

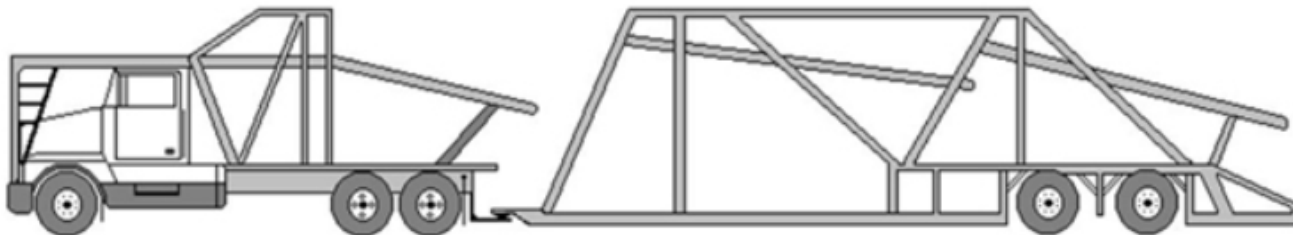
- Trucks other than combinations, 102" wide on all Highways
- Combinations with a single trailer max. 28.5' length on all Highways.
- 53' long 102" wide combinations w/max. kingpin distance of 41' and twin 102" wide 28.5' trailers on all Highways with marked Traffic Route signs and 10' lane width unless prohibited by signs



STAA EFFECT ON PA VEHICLE CODE

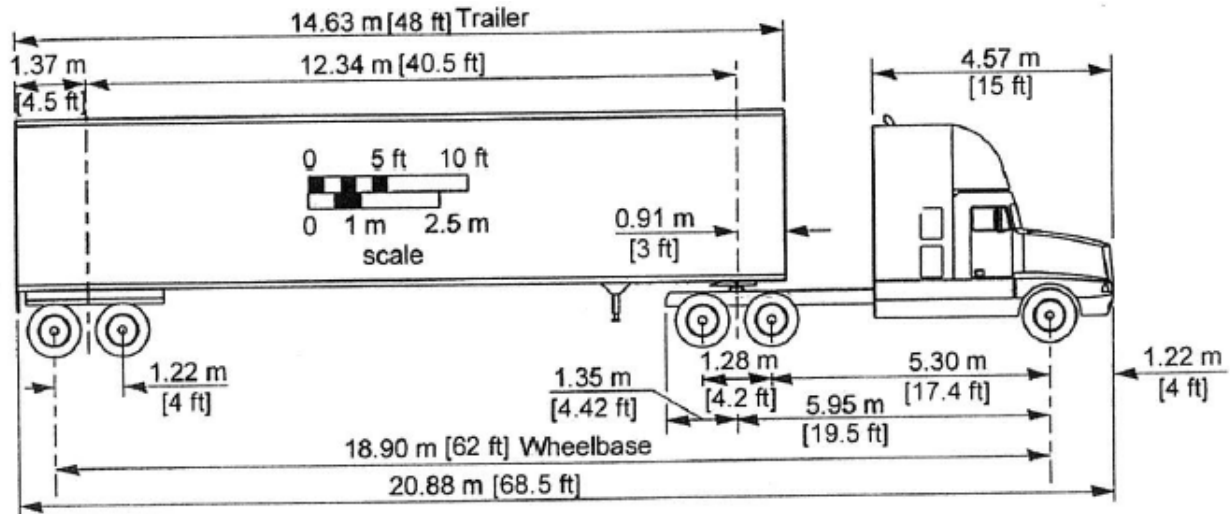
STAA Triggered other changes to PA Law, 75 Pa CS *Vehicle Code*:

- NASCAR exception...extended the kingpin distance from 41' to 46' for 53' trailers involved in connection with Motor Sports competition events
- Some other allowances for Maxi-Cubes, Saddle Mount Operations, Stinger Steered Automobile/Boat Transporter, Motor Homes, Household Goods Carriers



DESIGN VEHICLES

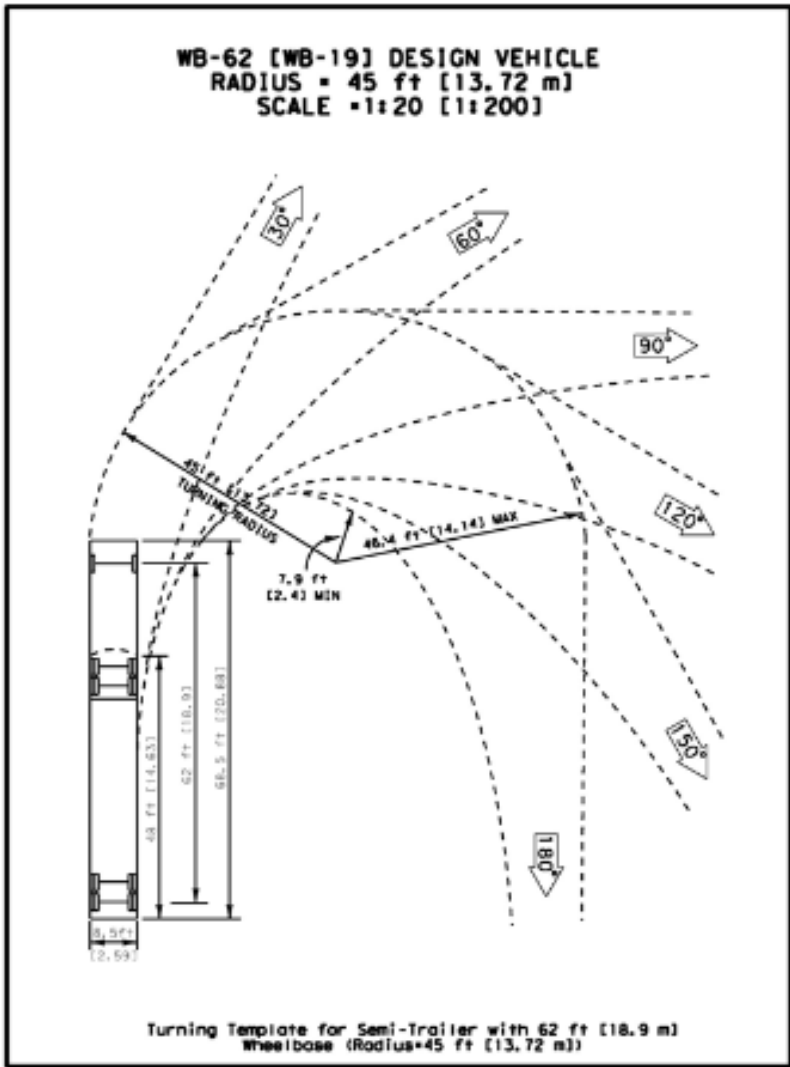
WB-62



WB-62*



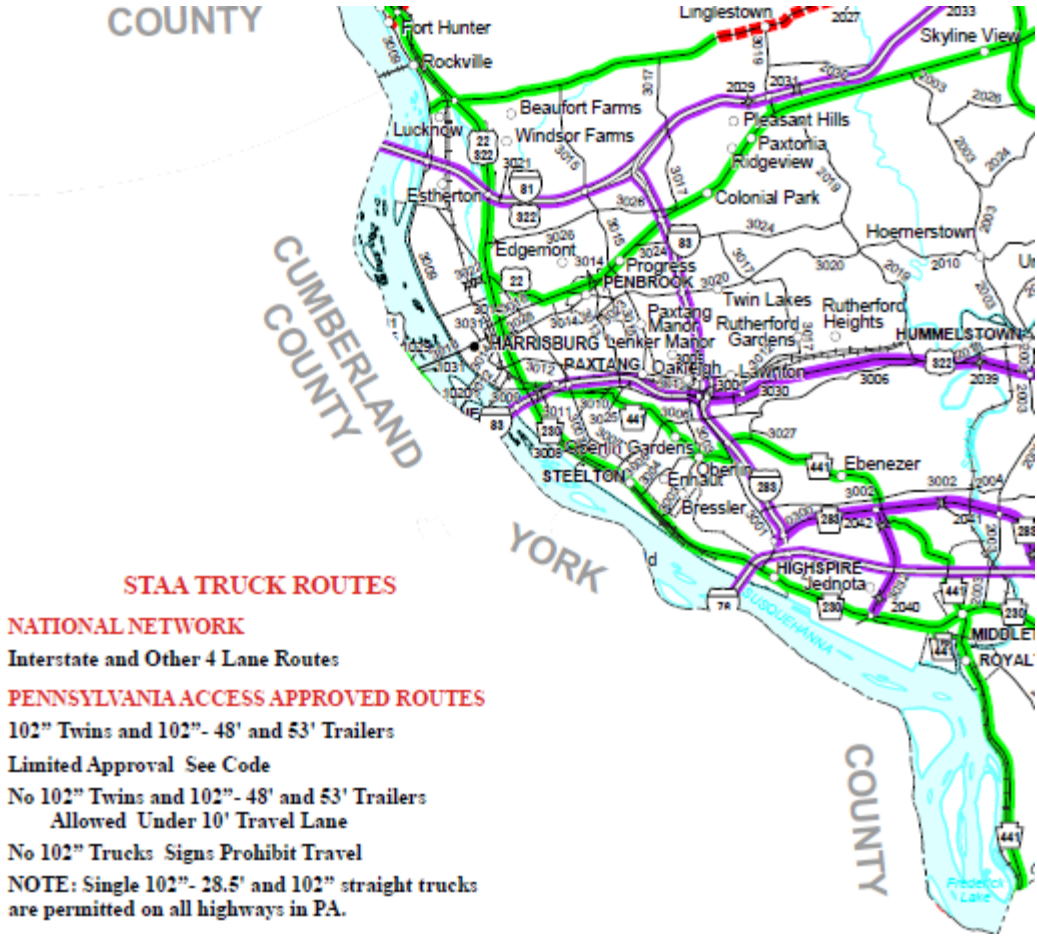
DESIGN VEHICLES



▶ FAIL



PUBLICATION 411



Prohibition Signs



▶ ACCESS ROUTES

From Traffic Routes and a terminal or facility for food, fuel, repair or rest having an entrance within one-half road mile of the nearest ramp or intersection, but only on highways having lanes at least ten feet wide.



ACCESS ROUTE CHANGES & ADDITIONS

- In Publication 411
 - Form M-4630 Application For Truck Access Route
 - Applicant information
 - Type of truck needing access
 - Geometry and Operations checked
 - 90-Day review, including municipal input



QUESTIONS?

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GO PA!!!

