

access ramps; cul-de-sacs; traffic circles; or service drives.

(b) *Sampling selection requirements.* The set of road segments selected for observation sites shall be chosen based on probability sampling, except that—

(1) The specific observation site locations on the sampled road segments may be deterministically selected;

(2) An alternate observation site may be used to replace an observation site selected based on probability sampling if it is located in the same county or county-equivalent, and has the same roadway classification (e.g., local road segment, collector road segment) when using the protocol of substitution and rescheduling of observation sites pursuant to paragraph (c) of this section.

(c) *Requirements for substitution and rescheduling of observation sites.* The survey design shall include at a minimum the following protocols:

(1) *Protocol when observation site is temporarily unavailable for data collection.* (i) Observers shall return to the observation site at another time provided that it is on the same day of the week and at same time of the day or select an alternate observation site, as described in paragraph (b)(2) of this section, provided the data are collected on the same day and at approximately the same time as the originally-scheduled observation site.

(ii) The original observation site must be used for future data collections.

(2) *Protocol when observation site is permanently unavailable for data collection.* (i) Except as provided in paragraph (c)(2)(ii), another observation site shall be selected in accordance with paragraph (b) of this section.

(ii) If it is not feasible to select another observation site based on probability sampling for the current data collection, an alternate observation site, as described in paragraph (b)(2) of this section, may be selected, provided the data is collected on the same day and at approximately the same time as the originally-scheduled observation site.

(iii) For future data collections, another observation site must be selected based on probability sampling in accordance with paragraph (b) of this section.

(d) *Precision requirement.* The estimated seat belt use rate must have a standard error of no more than 2.5 percentage points.

#### § 1340.6 Assignment of observation times.

(a) *Daylight hours.* All daylight hours between 7 a.m. and 6 p.m. for all days of the week shall be eligible for inclusion in the sample.

(b) *Random assignment.* Except as provided in paragraph (c) of this section, the day-of the week and time-of-the-day shall be randomly assigned to observation sites.

(c) *Grouping of observation sites in close geographic proximity.* Observations sites in close geographic proximity may be grouped to reduce data collection burdens if:

(1) The first assignment of an observation site within the group is randomly selected; and

(2) The assignment of other observations sites within the group is made in a manner that promotes administrative efficiency and timely completion of the survey.

#### § 1340.7 Observation procedures.

(a) *Data collection dates.* All survey data shall be collected through direct observation completely within the calendar year for which the Statewide seat belt use rate will be reported. Except as provided in §1340.5(c), the survey shall be conducted in accordance to the schedule determined in §1340.6.

(b) *Roadway and direction(s) of observation—*(1) *Intersections.* If an observation site is located at an intersection of road segments, the data shall be collected from the sampled road segment, not the intersecting road segment(s).

(2) *Roads with two-way traffic.* If an observation site is located on a road with traffic traveling in two directions, one or both directions of traffic may be observed, provided that—

(i) If only one direction of traffic is observed, that direction shall be chosen randomly;

(ii) If both directions of traffic are observed at the same time, States shall assign at least one person to observe each direction of traffic.

(c) *Vehicle coverage.* Data shall be collected by direct observation from all

## § 1340.8

passenger motor vehicles, including but not limited to passenger motor vehicles used for commercial purposes, passenger motor vehicles exempt from the State's seat belt use law and passenger motor vehicles bearing out-of-State license plates.

(d) *Occupant coverage.* Data shall be collected by direct observation of all drivers and right front passengers, including right front passengers in booster seats, but excluding right front passengers in child safety seats. Observers shall record a person as—

(1) Belted if the shoulder belt is in front of the person's shoulder;

(2) Unbelted if the shoulder belt is not in front of the person's shoulder;

(3) Unknown if it cannot reasonably be determined whether the driver or right front passenger is belted.

(e) *Survey data.* At a minimum, the seat belt use data to be collected by direct observation shall include—

(1) Seat belt status of driver;

(2) Presence of right front passenger; and

(3) Seat belt status of right front passenger, if present.

(f) *Data collection environment.* When collecting seat belt survey data—

(1) Observers shall not wear law enforcement uniforms;

(2) Police vehicles and persons in law enforcement uniforms shall not be positioned at observation sites;

(3) Communications by signage or any other means that a seat belt survey is being or will be conducted shall not be present in the vicinity of the observation site.

## § 1340.8 Quality control.

(a) *Quality control monitors.* Monitors shall conduct random, unannounced visits to no less than five percent of the observation sites for the purpose of quality control. The same individual shall not serve as both the observer and quality control monitor at the same observation site at the same time.

(b) *Training.* Observers and quality control monitors involved in seat belt use surveys shall have received training in data collection procedures within the past twelve months. Observers and quality control monitors shall be trained in the observation procedures

## 23 CFR Ch. III (4–1–14 Edition)

of §1340.7 and in the substitution and rescheduling requirements of §1340.5(c).

(c) *Statistical review.* Survey results shall be reviewed and approved by a survey statistician, *i.e.*, a person with knowledge of the design of probability-based multi-stage samples, statistical estimators from such designs, and variance estimation of such estimators.

## § 1340.9 Computation of estimates.

(a) *Data used.* Except as otherwise provided in this section, all data collected pursuant to §1340.7(e) shall be used, without exclusion, in the computation of the Statewide seat belt use rate, standard error, and nonresponse rate.

(b) *Data editing.* Known values of data contributing to the Statewide seat belt use rate shall not be altered in any manner.

(c) *Imputation.* Unknown values of variables shall not be imputed unless NHTSA has approved the State's imputation procedure prior to data analysis.

(d) *Sampling weights.* The estimation formula shall weight observed data by the sampling weights as required by the sample design and any subsequent adjustments.

(e) *Sampling weight adjustments for observation sites with no usable data.* States shall include a procedure to adjust the sampling weights for observation sites with no usable data, including observation sites where no data were collected and observation sites where data were discovered to be falsified.

(f) *Nonresponse rate.* (1) Subject to paragraph (f)(2) of this section, the nonresponse rate for the entire survey shall not exceed 10 percent for the ratio of the total number of recorded unknown values of belt use to the total number of drivers and passengers observed.

(2) The State shall include a procedure for collecting additional observations in the same calendar year of the survey to reduce the nonresponse rate to no more than 10 percent if the nonresponse rate in paragraph (f)(1) of this section exceeds 10 percent.

(g) *Variance estimation.* (1) Subject to paragraph (g)(2) of this section, the estimated standard error, using the variance estimation method in the survey