

2013 LOUISIANA CHILD RESTRAINT OBSERVATION SURVEY RESULTS

-FINAL REPORT-

LHSC Project No. 2012-20-08 FFY 13



Prepared for:

LOUISIANA HIGHWAY SAFETY COMMISSION

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INTRODUCTION

Preusser Research Group, Inc. (PRG), under contract with the Louisiana Highway Safety Commission (LHSC), conducted an observational survey to determine child restraint use rates across the State of Louisiana. LHSC sponsored this survey to determine compliance with the state's Child Passenger Safety Law.

The 2013 Child Restraint Survey in Louisiana followed a design prepared by Dr. Helmut Schneider. Dr. Schneider is the Ourso Family Distinguished Professor of Information Systems and Chairman of Information Systems and Decision Sciences at Louisiana State University, Baton Rouge, Louisiana. The Schneider design provided for data to be collected at specified locations throughout eight regions comprising the State of Louisiana.

The 2013 survey was the 27th child restraint usage survey (statewide survey) conducted in Louisiana. This was the first time Preusser Research Group was responsible for the observational data collection. The findings from the 2013 survey are presented in this report.

descriptive information was included on each map to facilitate future replication of observation data collection at the site.

Scheduling

Observations took place on the same days of week and times of days as in previous survey efforts, in so far as possible. The 2011 survey schedule guided the 2013 surveyors on when and where to collect data. PRG also discussed details of scheduling with the previous contractor, *Applied Technology*, and that led to the development of a final observation schedule as well as the observational protocol.

Data Collection Protocol and Procedures

Each observation period lasted one hour (60 minutes). Observers wore reflective safety vests at all times during data collection activities. Each observer also carried a letter of identification displaying that the Louisiana Highway Safety Commission commissioned the survey. The letter indicated the purpose of the survey and provided details about the survey dates and times.

Observers determined a child occupant's approximate age, placement in the vehicle (including seat position), and correct use of a safety restraint device. Observers were provided an explanation of the current child passenger safety law (Table 1) to be knowledgeable under what conditions children are to be restrained in Louisiana.

Observers first determined the approximate age group of the child occupant and circled the corresponding age group on the data form (Appendix B). If the child was properly restrained according to the compliance guidelines, "Yes" was circled in the "Restrained" column on the data collection form. If a child appeared unrestrained or improperly restrained, observers recorded "No" in the "Restrained" column on the form. If a partial determination was made, the observation was recorded as "Undetermined."

Multiple children were often observed in a vehicle. When that was the case, restraint use for the youngest child was recorded first, then information for any additional child occupants was recorded as time/visibility allowed.

Table 1: Louisiana Child Restraint Requirements

<u>Age Group</u>	<u>Ages</u>	<u>Weight</u>	<u>Facing</u>	<u>Restraint Device</u>
Infant	< 1 year old	< 20 pounds	rear-facing	infant seat
1-3	1, 2, 3	20-39 pounds	forward-facing	child safety seat (with internal harness)
4 & 5	4, 5	40-59 pounds	(not specified)	belt positioning booster seat (backless or high-backed)
6-12	6, 7, 8, 9, 10, 11, 12	60 or more pounds	(not specified)	child booster seat or safety belt

Child Occupant Seatbelt (R.S. 32:295) - Children under the age of 6 years or less than 60 lbs. must be in a child restraint system or booster seat that is age and size appropriate, in accordance with manufacturers recommendations. Children 6 to 12 years of age must be restrained by a lap belt, shoulder harness, or an age / size appropriate child safety or booster seat.

FINDINGS

PRG observers collected the survey data between May 1st and May 25th, 2013. Ultimately, the survey included data on 3,014 children under the age of 13. Table 2 displays the number of children observed by age and by region across all 69 observation sites.

TABLE 2. NUMBER OF OBSERVATIONS MADE AND SITES WORKED BY REGION (2013)

Regions	Number of Sites	Total Observations	Age Unk.	Age <1	Age 1-3	Age 4-5	Age 6-12
1. New Orleans vicinity	15	636	0	47	131	154	304
2. Baton Rouge vicinity	10	526	2	36	91	106	291
3. Houma/Thibodaux vicinity	7	265	2	32	48	53	130
4. Lafayette vicinity	10	320	0	28	63	80	149
5. Lake Charles vicinity	5	241	0	13	52	64	112
6. Alexandria vicinity	7	152	0	5	36	28	83
7. Shreveport vicinity	9	601	3	59	129	134	276
8. Monroe vicinity	6	273	0	26	67	61	119
Total	69	3,014	7	246	617	680	1,464

Usage by Age Category

Slightly more than three-quarters (78.0%) of all children included in the survey were restrained (Table 3). The sample error for this estimate was one percentage point.

Survey data indicated that nearly every child less than one year old was riding in a child safety seat (98.9%). Usage was uniformly high in seven of eight Louisiana regions (>97%) and somewhat lower in the Monroe Region (91.9%).

The survey data indicated that 86.9% of children ages one through three were restrained. Usage among this age group varied across the regions of the State. Child restraint usage ranged from a low of 69.5% in the Lake Charles Region to a high of 97.7% in the New Orleans Region.

Four and five year olds included in this survey were restrained least often (71.2%) compared to both younger and older children (statewide). Survey results by region indicated vast differences between the regions. Survey data indicated the highest observed usage for four

and five year olds in the New Orleans Region (83.4%) and lowest observed usage in the Monroe Region (37.5%).

The survey found that the restraint usage rate for children under age six was on average 83.0% in Louisiana with a standard error of 0.9%. Survey data also indicated that 75.1% of children ages six through twelve were using a seat belt with a standard error of 1.5%.

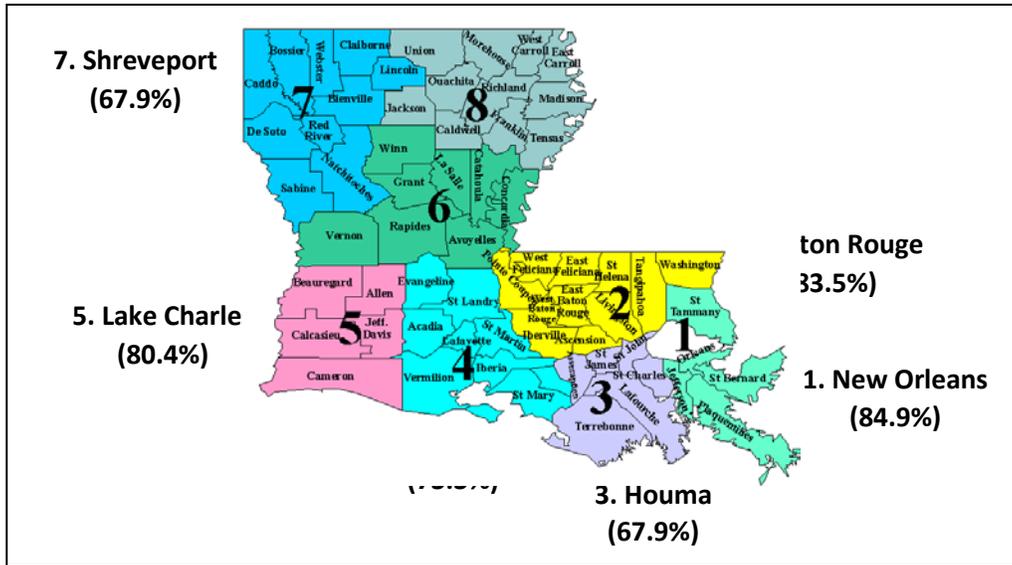
TABLE 3: CHILD RESTRAINT USAGE ESTIMATES (PERCENT RESTRAINED) AND ASSOCIATED SAMPLE ERROR BY REGION AND AGE CATEGORY (2013) — WEIGHTED DATA.

Regions	Age < 1	Age 1 to 3	Age 4 & 5	Age 6-12	Age <6	Age <13	Error Age <6	Error Age <13
1. New Orleans	99.0%	97.7%	83.4%	80.7%	92.3%	84.9%	1.8%	2.5%
2. Baton Rouge	100.0%	92.1%	78.0%	80.8%	88.1%	83.5%	1.9%	1.6%
3. Houma/Thibodaux	100.0%	92.8%	67.3%	59.0%	83.9%	67.9%	2.4%	3.7%
4. Lafayette	100.0%	76.9%	63.8%	71.8%	75.9%	73.3%	3.0%	2.5%
5. Lake Charles	100.0%	69.5%	77.7%	81.3%	78.9%	80.4%	3.5%	2.8%
6. Alexandria	100.0%	83.6%	78.3%	78.7%	84.8%	81.0%	3.2%	2.6%
7. Shreveport	97.2%	81.5%	57.0%	63.9%	74.9%	67.9%	3.0%	2.6%
8. Monroe	91.9%	75.7%	37.5%	73.4%	63.8%	69.9%	3.5%	2.9%
Statewide	98.9%	86.9%	71.2%	75.1%	83.0%	78.0%	0.9%	1.0%
Error	0.2%	1.3%	1.9%	1.5%	0.9%	1.0%		

Usage by Region

Figure 2 displays that child restraint usage was highest in the New Orleans Region (84.9%) followed by the Baton Rouge Region (83.5%), Alexandria Region (81.0%) and then the Lake Charles Region (80.4%). In comparison, the child restraint usage rate was quite lower in Lafayette Region (73.3%) and much lower in the Monroe, Shreveport, and Houma/Thibodaux Regions (69.9%, 67.9% and 67.9%, respectively).

FIGURE 2: CHILD RESTRAINT USAGE (AGE < 13) PER LOUISIANA REGIONS



Usage by Louisiana State Police Troop Area

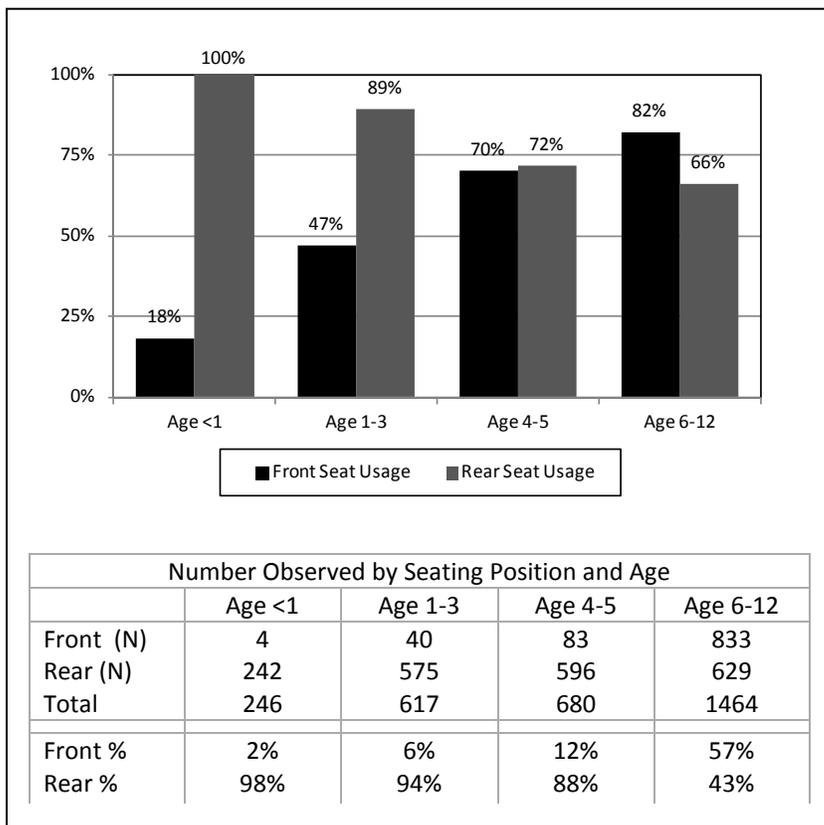
Child restraint usage varied by Louisiana State Police Troop Area (Table 4). Children under six years of age used restraints most often in the areas covered by Troops B (92.9%) and L (89.9%) and noticeably less in Troop F (63.8%). Troop L also had the highest restraint use (88.8%) among the older children ages six through twelve, while Troops G (63.9%) and C (65.5%) had noticeably lower usage.

TABLE 4: CHILD RESTRAINT USAGE ESTIMATES (PERCENT RESTRAINED) AND ASSOCIATED SAMPLE ERROR BY TROOP AND AGE CATEGORY (2013) — WEIGHTED DATA.

Troop Region	Age < 1	Age 1 to 3	Age 4 & 5	Age 6-12	Age <6	Age <13	Error Age <6	Error Age <13
A (Baton Rouge)	100.0%	92.2%	73.9%	78.0%	86.5%	81.2%	1.8%	2.5%
B (New Orleans)	100.0%	98.3%	84.0%	76.9%	92.9%	82.8%	1.9%	1.6%
C (Houma)	100.0%	91.7%	70.2%	65.5%	84.6%	72.4%	2.4%	3.7%
D (Lake Charles)	100.0%	69.5%	77.7%	81.3%	78.9%	80.4%	3.0%	2.5%
E (Alexandria)	100.0%	83.6%	78.3%	78.7%	84.8%	81.0%	3.5%	2.8%
F (Monroe)	91.9%	75.7%	37.5%	73.4%	63.8%	69.9%	3.2%	2.6%
G (Shreveport)	97.2%	81.5%	57.0%	63.9%	74.9%	67.9%	3.0%	2.6%
I (Lafayette)	100.0%	76.9%	63.8%	71.8%	75.9%	73.3%	3.5%	2.9%
L (Hammond)	96.2%	93.5%	83.2%	88.8%	89.8%	89.2%	3.5%	2.9%
Error	0.2%	1.3%	1.9%	1.5%	0.9%	1.0%		

Front versus Back Seat Usage

The 2013 survey results by seating position show that child restraint use for infants and toddlers in front seating positions was very low, 18.2% and 47.0%, respectively (Figure 3). However, it should be noted that there were only four infants and forty toddlers observed in the front seating position. While this is only about 2% of all infants and 6% of all toddlers observed, these cases show that there is a small minority of drivers who have small children in the front seat positions not using a restraint device.



Trends in Child Restraint Usage

PRG observers recorded data for 3,014 children in the 2013 survey (Table 4). This is substantially higher than the 1,697 observations made at the same 69 sites during the 2011 survey. Keep in mind, 2013 was the first year Preusser Research Group conducted the survey and some differences likely occurred in exactly how the survey was conducted.¹ Comparisons from year to year will be more reliable in future replications.

Comparing the 2013 survey with the most recent previous survey (2011) found child safety restraint use for children (less than thirteen years of age) at 8.4 percentage points lower than what was measured in 2011. The estimate for children ages five and younger was 10.4 percentage points lower than the estimate in 2011. Also, child restraint usage among four and

¹ It appears that for some of the observation locations, more directions of traffic were observed in 2013 compared with previous surveys. PRG observers created site maps for all 69 observation sites used in the 2013 survey. The maps identify specific features of each site and where the observer stood and what lanes of traffic were observed. These maps will help ensure reliable replication in future survey efforts.

five year old children was 17 percentage points lower from 2011 estimates. Compared to 2011, the 2013 estimates for restraint use were lower for all eight regions of the State. The restraint use declined for children ages five and younger and the declines ranged from a low of -0.8 percentage points for the New Orleans Region up to -31.4 percentage points in the Monroe Region. The decline in restraint usage rate from 2011 to 2013 for children ages five and younger was statistically significant in all regions except in the New Orleans and Houma Regions.

The restraint usage rate for children ages six through twelve was 75.1% in 2013 compared to 82.3% in 2011, a decline of 7.2 percentage points. The decline in restraint usage was strongest among children age four and five, namely 17 percentage points.

CONCLUSIONS

Preusser Research Group carried out the 2013 child restraint survey. It was the first time PRG was tasked to conduct the survey. As such, any differences comparing 2013 with prior surveys should be taken with caution.

The results of the 2013 survey indicate that infants travelling in Louisiana are nearly always riding in a child restraint (98.9%). Restraint use is somewhat lower for children ages one through three (86.9%). Four and five year olds were observed least often in a restraint (71.2%). Older children, ages 6 through 12, were using a seat belt 83.0% of the time.

Children are more likely to ride in the front seat as they grow older, and front seat restraint use was higher among older age children. The reverse was true in the rear seat, where younger children were more likely using a restraint in the rear seat. There is still room for improvement in child restraint use in both the front and rear seating positions and this is especially true among children ages four and older.

APPENDIX A. CHILD RESTRAINT SURVEY OBSERVATION SITES

CHILD RESTRAINT OBSERVATION SITES

REGION 1- New Orleans	Address	Description	Day of Week	Time
	300 W Esplanade Ave. Kenner LA	Wal-Mart Supercenter	Th	3:50 - 4:50
	2104 Williams Blvd. Kenner LA	Winn-Dixie Marketplace	Th	2:35 - 3:35
	Veterans Memorial Blvd. Metairie LA	Lakeside Mall--Main Entrance Side	W	3:00 - 4:00
	4500 Veterans Memorial Blvd. Metairie LA	Target	W	5:30 - 6:30
	5901 Airline Highway Metairie LA	Winn-Dixie Marketplace	Tues	5:00 - 6:00
	Veterans Memorial Blvd. Metairie LA	Toys R Us	W	4:10 - 5:10
	5110 Jefferson Highway Harahan LA	Wal-Mart Supercenter	Tues	3:30 - 4:30
	1901 Tchoupitoulas St. New Orleans LA	Wal-Mart Supercenter	Sun	5:00 - 6:00
	5400 Tchoupitoulas St. New Orleans LA	Winn-Dixie Marketplace--Riverside Market	Th	1:00 - 2:00
	Highway 23 Belle Chasse LA	McDonalds	Sun	2:00 - 3:00
	150 Northshore Blvd. Slidell LA	North Shore Square	Mon	1:00 - 2:00
	2985 Gause Blvd. Slidell LA	Winn-Dixie Marketplace	Mon	6:15 - 7:15
	167 Northshore Blvd. Slidell LA	Wal-Mart Supercenter	Mon	2:10 - 3:10
	109 Northpark Blvd. Covington LA	Causeway Place Shopping Center	Mon	3:45 - 4:45
	3414 Highway 190 Mandeville LA	Bed Bath & Beyond	Mon	4:50 - 5:50
REGION 2- Baton Rouge				
	2410 Tanger Blvd. Gonzales LA	Tanger Outlet Center	Sat	10:00 - 11:00
	308 N Airline Highway Gonzales LA	Wal-Mart Supercenter	Sat	11:15 - 12:15
	9401 Cortana Pl. Baton Rouge LA	Mall At Cortana -- Shopping	Sat	12:40 - 1:40
	6401 Bluebonnet Blvd. Baton Rouge LA	Mall of Louisiana -- Shopping	Sat	3:00 - 4:00
	10606 North Mall Drive Baton Rouge LA	Wal-Mart Supercenter	Sat	5:15 - 6:15
	2001 Millerville Road Baton Rouge LA	Target	Sat	6:30 - 7:30
	904 South Range Road Denham Springs LA	Wal-Mart Supercenter	Fri	5:20 - 6:20
	2000 SW Railroad Ave. Ste. 103 Hammond LA	Hammond Square Shopping Mall	Fri	2:30 - 3:30
	2799 West Thomas St. Hammond LA	Wal-Mart Supercenter	Fri	3:40 - 4:40
	3255 LA 1 South Port Allen LA	Wal-Mart Store	Sun	10:20 - 11:20

**REGION 3-
Houma**

401 N Canal Blvd. Thibodaux LA	Wal-Mart Supercenter	Sat	12:20 -1:20
Highway 308 Thibodaux LA	Rouse's -- Grocery	Sat	11:15 - 12:15
13001 Highway 90 Boutte LA	Wal-Mart Supercenter	Sat	4:00 - 5:00
1803 Louisiana 3125 Gramercy LA	Winn-Dixie	Sat	2:15 - 3:15
5953 W. Park Ave. Houma LA	Southland Mall Shopping Center	Sun	11:40 - 12:40
MLK Drive Houma LA	Wal-Mart Supercenter	Sun	10:30 - 11:30
933 Grand Caillou Road Houma LA	Wal-Mart Supercenter	Sat	9:45 - 10:45

**REGION 4-
Lafayette**

729 Oddfellows Rd. Crowley LA	Wal-Mart Supercenter	Th	2:30 - 3:30
1205 E. Admiral Doyle New Iberia LA	Wal-Mart Supercenter	Fri	3:50 - 4:50
E. Admiral Doyle New Iberia LA	Big K-Mart	Fri	1:45 - 2:45
5725 Johnston St. Lafayette LA	Acadiana Mall	Th	3:45 - 4:45
3142 Ambassador Caffery Lafayette LA	Wal-Mart Supercenter	Wed	6:10 - 7:10
2240 Ambassador Caffery Lafayette LA	Winn-Dixie Marketplace	Wed	4:50 - 5:50
4313 Ambassador Caffery Lafayette LA	Super Target	Th	5:00 - 6:00
1629 Creswell Ln. Opelousas LA	Wal-Mart Supercenter	Sat	12:40 - 1:40
1400 Rees St. Breaux Bridge LA	Wal-Mart Supercenter	Wed	3:30 - 4:30
3005 Charity St. Abbeville LA	Wal-Mart Supercenter	Fri	12:30 - 1:30

**REGION 5-
Lake Charles**

1125 North Pine Deridder LA	Wal-Mart Supercenter	Fri	4:30 - 5:30
4060 Ryan St. South Lake Charles LA	Albertsons	Sat	10:00 - 11:00
3415 Highway 14 Lake Charles LA	Wal-Mart Supercenter	Sat	1:45 - 2:45
496 W. Prein Lake Rd. Lake Charles LA	Prien Lake Mall	Sat	11:15 - 12:15
303 Interstate Dr. Jennings LA	Wal-Mart Supercenter	Sat	3:40 - 4:40

**REGION 6-
Alexandria**

7162 Highway 1 Marksville LA	Wal-Mart Supercenter	Mon	3:00 - 4:00
805 Highway 167 Dry Prong LA	Sonshine Foods	Sun	3:30 - 4:30

3437 Masonic Drive Alexandria LA	Alexandria Mall--J.C. Penney	Sun	1:30 - 2:30
2671 S. MacArthur Dr. Alexandria LA	Old Navy	Sun	10:00 -11:00
2050 North Mall Blvd. Alexandria LA	Wal-Mart Supercenter	Sun	12:25 - 1:25
2265 S. MacArthur Drive Alexandria LA	Albertson's	Sun	11:15 - 12:15
220 South 5th St. Leesville LA	Wal-Mart Supercenter	Fri	3:00 -4:00

**REGION 7 -
Shreveport**

2536 Airline Highway Bossier City LA	Wal-Mart Supercenter	Tues	3:15 - 4:15
2950 E. Texas St. Bossier City LA	Pierre Bossier Mall	Fri	4:35 - 5:35
390 Plaza Loop Bossier City LA	Louisiana Boardwalk (weekend only)	Sat	12:00 - 1:00
1645 Bert Kouns Ind. Loop Shreveport LA	Wal-Mart Supercenter	Fri	3:00 - 4:00
8400 Millicent Way Shreveport LA	Cinemark Tinseltown	Sat	1:30 - 2:30
1133 St. Vincent St. Shreveport LA	Mall St. Vincent	Fri	4:15 - 5:15
7110 Youree Dr. Shreveport LA	Shreveport Super Target	Fri	5:30 - 6:30
1024 Cut Off Rd. Coushatta LA	Rivertown Market/Dollar General	Tues	3:05 - 4:05
1379 Homer Road Minden LA	Wal-Mart Supercenter	Tues	1:30 - 2:30

**REGION 8-
Monroe**

184 Old Winnfield Rd. Jonesboro LA	Wal-Mart Supercenter	Mon	3:00 -4:00
2030 East Madison Bastrop LA	Wal-Mart Store	Wed	3:00 - 4:00
1025 Glenwood Dr. West Monroe LA	Wal-Mart	Thurs	3:00 - 4:00
4103 Pecanland Mall Dr. Monroe LA	Monroe Target	Wed	4:45 - 5:45
4700 Milhaven Rd. Monroe LA	Pecanland Mall	Thurs	4:30 - 5:30
1350 Pecanland Plaza Monroe LA	Toys R Us	Thurs	5:40 - 6:40

APPENDIX B. CHILD RESTRAINT SURVEY DATA COLLECTION FORM

CHILD RESTRAINT OBSERVATION DATA COLLECTION FORM

CHILD RESTRAINT OBSERVATION FORM

LOCATION: _____ Cluster #: _____ Site #: _____

DATE: _____ DAY: SU M T W TH F SA

START TIME: _____ AM PM END TIME: _____ AM PM

OBSERVER: _____

	APPROXIMATE AGE				RESTRAINED			SEAT POSITION	
	<1	1-3	4-5	6-12	Y	N	U	F	R
1	<1	1-3	4-5	6-12	Y	N	U	F	R
2	<1	1-3	4-5	6-12	Y	N	U	F	R
3	<1	1-3	4-5	6-12	Y	N	U	F	R
4	<1	1-3	4-5	6-12	Y	N	U	F	R
5	<1	1-3	4-5	6-12	Y	N	U	F	R
6	<1	1-3	4-5	6-12	Y	N	U	F	R
7	<1	1-3	4-5	6-12	Y	N	U	F	R
8	<1	1-3	4-5	6-12	Y	N	U	F	R
9	<1	1-3	4-5	6-12	Y	N	U	F	R
10	<1	1-3	4-5	6-12	Y	N	U	F	R
11	<1	1-3	4-5	6-12	Y	N	U	F	R
12	<1	1-3	4-5	6-12	Y	N	U	F	R
13	<1	1-3	4-5	6-12	Y	N	U	F	R
14	<1	1-3	4-5	6-12	Y	N	U	F	R
15	<1	1-3	4-5	6-12	Y	N	U	F	R
16	<1	1-3	4-5	6-12	Y	N	U	F	R
17	<1	1-3	4-5	6-12	Y	N	U	F	R
18	<1	1-3	4-5	6-12	Y	N	U	F	R
19	<1	1-3	4-5	6-12	Y	N	U	F	R
20	<1	1-3	4-5	6-12	Y	N	U	F	R

	APPROXIMATE AGE				RESTRAINED			SEAT POSITION	
	<1	1-3	4-5	6-12	Y	N	U	F	R
21	<1	1-3	4-5	6-12	Y	N	U	F	R
22	<1	1-3	4-5	6-12	Y	N	U	F	R
23	<1	1-3	4-5	6-12	Y	N	U	F	R
24	<1	1-3	4-5	6-12	Y	N	U	F	R
25	<1	1-3	4-5	6-12	Y	N	U	F	R
26	<1	1-3	4-5	6-12	Y	N	U	F	R
27	<1	1-3	4-5	6-12	Y	N	U	F	R
28	<1	1-3	4-5	6-12	Y	N	U	F	R
29	<1	1-3	4-5	6-12	Y	N	U	F	R
30	<1	1-3	4-5	6-12	Y	N	U	F	R
31	<1	1-3	4-5	6-12	Y	N	U	F	R
32	<1	1-3	4-5	6-12	Y	N	U	F	R
33	<1	1-3	4-5	6-12	Y	N	U	F	R
34	<1	1-3	4-5	6-12	Y	N	U	F	R
35	<1	1-3	4-5	6-12	Y	N	U	F	R
36	<1	1-3	4-5	6-12	Y	N	U	F	R
37	<1	1-3	4-5	6-12	Y	N	U	F	R
38	<1	1-3	4-5	6-12	Y	N	U	F	R
39	<1	1-3	4-5	6-12	Y	N	U	F	R
40	<1	1-3	4-5	6-12	Y	N	U	F	R

Page _____ of _____

CHILD RESTRAINT OBSERVATION FORM (back)

Cluster #: _____ Site #: _____

Location: _____
(Street) (Cross Street or other landmark)

Notes: _____

Diagram:

