

Memorandum

*Serious drought.
Help Save Water!*

To: TAMERA LEIGHTON, Executive Director
Del Norte Local Transportation Commission

Date: October 30, 2014

File: 01-DN-197 PM M3.2/4.0, 4.0/4.5
01-DN-199 PM 6.24/12.90,
20.3/20.7, 22.7/23.0, 23.9/24.2,
25.5/25.75, 26.3/26.5
STAA Access

Bryan Thomas
From: BRYAN THOMAS
Assistant Traffic Safety Engineer
District 1 Traffic Safety Office

Subject: REQUEST FOR 10-YEAR COLLISION ANALYSIS

The District 1 Traffic Safety Office provides this collision analysis for the most recently available (in TASAS database) 10-year time period between 10/1/2002 and 9/30/2012. The segments reviewed correspond with the following State of California Department of Transportation regional and operational improvement highway widening and realignment projects, with exception of the segment from Hiouchi to Gasquet:

- State Route 197 in Del Norte County, from postmile (PM) M3.2/4.0 ("Ruby 2")
- State Route 197 in Del Norte County, from PM 4.0/4.5 ("Ruby 1")
- U.S. Route 199 in Del Norte County, from PM 6.24/12.90 (Segment between Hiouchi & Gasquet)
- U.S. Route 199 in Del Norte County, from PM 20.3/20.7 ("Patrick Creek")
- U.S. Route 199 in Del Norte County, from PM 22.7/23.0 ("Washington Narrows")
- U.S. Route 199 in Del Norte County, from PM 23.9/24.2 ("Patrick Creek")
- U.S. Route 199 in Del Norte County, from PM 25.5/25.75 ("Patrick Creek")
- U.S. Route 199 in Del Norte County, from PM 26.3/26.5 ("Washington Narrows")

The attached documents titled *Truck Networks on California State Highways* and *"Truck Map Legend Truck Lengths & Routes"* designate State Routes 197 and 199 as "CA Legal Advisory Routes" and give overall dimensions for CA Legal and STAA trucks.

From Caltrans' computer modeling analysis of existing highways, Ruby 1, Ruby 2, Patrick Creek, and Washington Narrows project limits contain roadway geometrics that could result in single STAA trucks and other long wheelbase vehicles (this includes CA Legal vehicles) off-tracking across the double yellow lines and entering into the oncoming traffic lane. These projects are regional and operational improvements rather than safety projects. Construction of these projects will reduce off-tracking of trucks and other long wheelbase vehicles across the double yellow lines on Route 197 and Route 199; therefore, these projects are expected to decrease the frequency of collisions involving long wheelbase vehicles within these projects limits. Additionally, lane widening, shoulder widening, and High Friction Surface Treatment (HFST) are all proven safety countermeasures which are expected to reduce the frequency of collisions involving all types of vehicles.

DN-197 PM M3.2/4.0 ("Ruby 2" Project Limits)

This 0.445 mile rural segment is located on gently rolling curvilinear terrain. This segment experienced 14 total reported collisions (9 NB, 3 SB, 1 EB, 1 WB, 9 injury, 5 "Property Damage Only" (PDO), 2 multi-vehicle, 10 "wet road surface", 4 "dark"). From TASAS Table B (adjusted for a spot location), this highway segment has an actual *total* collision rate which is 2.9 times greater than the statewide average for similar highway facilities. The actual *fatal+injury* collision rate is 4.0 times greater than the statewide average for similar highway facilities. The actual *fatal* collision rate is less than the statewide average for similar highway facilities (see Table 1).

Table 1 - Collision Data Summary for DN-197 PM M3.2/4.0 Table B Dates: 10/1/2002-9/30/2012					
Actual Accident Rates (MV+)			Average Accident Rates (MV+)		
Fatal	F + I	Total	Fatal	F + I	Total
0.000	1.23	1.92	0.015	0.31	0.66

The principal "Primary Collision Factor" (PCF) was coded as "speeding" (7 of 14), followed by "influence of alcohol" (2 of 14), "improper turn" (2 of 14), "other violations" (2 of 14), and "other than driver (1 of 14). The primary "Type of Collision" resulted in "hit object" (11 of 14), followed by "head-on" (2 of 14). There were no reported collisions in this segment with any "Truck/Tractor w/ Trailer", "Truck/Tractor w/2 Trailers", "Truck/Tractor w/3 Trailers", or "Truck/Tractor w/1 Tank Trailer".

DN-197 PM 4.0/4.5 ("Ruby 1" Project Limits)

This 0.500 mile rural segment is located on gently rolling curvilinear terrain. This segment experienced 6 total reported collisions (3 NB, 3 SB, 6 PDO, 1 multi-vehicle, 2 "wet road surface", 2 "dark"). From TASAS Table B, this highway segment has an actual *total* collision rate which is 1.3 times greater than the statewide average for similar highway facilities. The actual *fatal+injury* and *fatal* collision rates are both less than the statewide average for similar highway facilities (see Table 2).

Table 2 - Collision Data Summary for DN-197 PM 4.0/4.5 Table B Dates: 10/1/2002-9/30/2012					
Actual Accident Rates (MVM)			Average Accident Rates (MVM)		
Fatal	F + I	Total	Fatal	F + I	Total
0.000	0.00	1.67	0.029	0.62	1.32

The principal PCF was coded as "speeding" (4 of 6), followed by "improper turn" (2 of 6). The primary TOC resulted in "hit object" (3 of 6), followed by "overturn" (1 of 6), "broadside" (1 of 6), and "sideswipe" (1 of 6). There was 1 reported PDO collision in this segment with a "Truck/Tractor w/Trailer"; this collision is attributed to the driver of the "Truck/Tractor w/Trailer". There were no reported collisions in this segment with any "Truck/Tractor w/2 Trailers", "Truck/Tractor w/3 Trailers", or "Truck/Tractor w/1 Tank Trailer".

DN-199 PM 6.24/12.90 (Segment Between Hiouchi & Gasquet)

This 6.660 mile rural segment is located on gently rolling curvilinear terrain. This segment experienced 286 total reported collisions (142 NB, 143 SB, 1 WB, 5 fatal, 133 injury, 148 PDO, 53 multi-vehicle, 189 “wet road surface”, 5 “snowy/icy” road surface, 88 “dark”). From TASAS Table B, this highway segment has an actual *total* collision rate which is 2.1 times greater than the statewide average for similar highway facilities. The actual *fatal+injury* collision rate is 2.0 times greater than the statewide average for similar highway facilities. The actual *fatal* collision rate is 1.7 times greater than the statewide average for similar highway facilities (see Table 3).

Table 3 - Collision Data Summary for DN-199 PM 6.24/12.90					
Table B Dates: 10/1/2002-9/30/2012					
Actual Accident Rates (MVM)			Average Accident Rates (MVM)		
Fatal	F + I	Total	Fatal	F + I	Total
0.055	1.53	3.17	0.033	0.76	1.51

The principal PCF in was coded as “speeding” (145 of 286), followed by “improper turn” (69 of 286), and “other violations” (28 of 286). The primary TOC resulted in “hit object” (199 of 286), followed by “overtake” (23 of 286). There were 15 reported collisions in this segment with a “Truck/Tractor w/Trailer” (7 PDO, 7 Injury, 1 Fatal, 8 of 15 collisions are attributed to the driver of the “Truck/Tractor w Trailer”). Of the 8 collisions attributed to the driver of the “Truck/Tractor w Trailer”, 5 were Injury collisions and 3 were PDO collisions. There was 1 reported Injury collision in this segment with a “Truck/Tractor w/2 Trailers”; this collision is attributed to the driver of the “Truck/Tractor w/2 Trailers”. There were no reported collisions in this segment with any “Truck/Tractor w/3 Trailers”. There was 1 reported PDO collision in this segment with a “Truck/Tractor w/1 Tank Trailer”; this collision is not attributed to the driver of the “Truck/Tractor w/1 Tank Trailer”. The following projects have either recently been completed or are planned to be constructed within this segment; these projects are all expected to reduce the frequency of collisions involving all types of vehicles within this segment:

- DN-199 PM 7.44/7.51 NB – Metal Beam Guardrail (MBGR) installation is planned beginning in 2017
- DN-199 PM 7.55/7.75 – A recently written Traffic Investigation Report (signed on 10/13/2014) plans to initiate a project to install HFST along the full width of the roadway
- DN-199 PM 7.59/7.92 NB – Install MBGR – MBGR installation is planned beginning in 2017
- DN-199 PM 8.0/8.5 – Curve improvement is planned beginning in 2017
- DN-199 PM 8.23/8.32 - HFST was installed along the full width of the roadway on 11/22/2013.

- DN-199 PM 9.6/9.9 – A recently written Traffic Investigation Report (signed on 9/23/2014) plans to initiate a project to install HFST along the full width of the roadway
- DN-199 PM 10.23/10.41 NB – MBGR installation is planned beginning in 2017
- DN-199 PM 10.52/10.97 NB – MBGR installation is planned beginning in 2017
- DN-199 PM 11.34/11.44 – A recently written Traffic Investigation Report (signed on 9/23/2014) plans to initiate a project to install HFST along the full width of the roadway
- DN-199 PM 11.50/11.83 NB – MBGR installation is planned beginning in 2017

DN-199 PM 20.3/20.7 (“Patrick Creek” Project Limits - Segment 1 of 3)

This 0.400 mile rural segment is located on gently rolling curvilinear terrain. This segment experienced 20 total reported collisions (13 NB, 7 SB, 1 fatal, 10 injury, 9 PDO, 3 multi-vehicle, 11 “wet road surface”, 2 “snowy/icy road surface”, 10 “dark”). From TASAS Table B (adjusted for a spot location), this highway segment has an actual *total* collision rate which is 2.4 times greater than the statewide average for similar highway facilities. The actual *fatal+injury* collision rate is 2.6 times greater than the statewide average for similar highway facilities. The actual *fatal* collision rate is 5.4 times greater than the statewide average for similar highway facilities (see Table 4).

Table 4 - Collision Data Summary for DN-199 PM 20.3/20.7					
Table B Dates: 10/1/2002-9/30/2012					
Actual Accident Rates (MV+)			Average Accident Rates (MV+)		
Fatal	F + I	Total	Fatal	F + I	Total
0.091	1.00	1.83	0.017	0.39	0.77

The principal PCF was coded as “speeding” (13 of 20), followed by “improper turn” (3 of 20), and “other than driver (2 of 20). The primary TOC resulted in “hit object” (14 of 20), followed by “overturn” (4 of 20). There were 4 reported collisions in this segment with a “Truck/Tractor w/Trailer” (1 PDO, 3 Injury, 3 of 4 collisions are attributed to the driver of the “Truck/Tractor w Trailer”). There were no reported collisions in this segment with any “Truck/Tractor w/2 Trailers”, “Truck/Tractor w/3 Trailers”, or “Truck/Tractor w/1 Tank Trailer”.

DN-199 PM 22.7/23.0 (“Washington Narrows” Project Limits – Segment 1 of 2)

This 0.300 mile rural segment is located on curvilinear terrain, on an approximate 2% grade (uphill NB, downhill SB). This segment experienced 7 total reported collisions (4 NB, 3 SB, 7 PDO, 1 multi-vehicle, 2 “wet road surface”, 3 “dark”). From TASAS Table B (adjusted for a spot location), this highway segment has actual *total*, *fatal+injury*, and *fatal* collision rates which are all less than the statewide average for similar highway facilities (see Table 5).

Table 5 - Collision Data Summary for DN-199 PM 22.7/23.0					
Table B Dates: 10/1/2002-9/30/2012					
Actual Accident Rates (MV+)			Average Accident Rates (MV+)		
Fatal	F + I	Total	Fatal	F + I	Total
0.000	0.00	0.64	0.017	0.39	0.77

The principal PCF was coded as “other than driver” (3 of 7), followed by “other violations” (2 of 7). The primary TOC resulted in “hit object” (4 of 7), followed by “other” (2 of 7). There were 2 reported PDO collisions in this segment with a “Truck/Tractor w/Trailer”; both of these collisions are attributed to the driver of the “Truck/Tractor w/Trailer”. There were no reported collisions in this segment with any “Truck/Tractor w/2 Trailers”, “Truck/Tractor w/3 Trailers”, or “Truck/Tractor w/1 Tank Trailer”.

DN-199 PM 23.9/24.2 (“Patrick Creek” Project Limits – Segment 2 of 3)

This 0.300 mile rural segment is located on gently rolling curvilinear terrain. This segment experienced 14 total reported collisions (7 NB, 7 SB, 1 fatal, 9 injury, 4 PDO, 6 multi-vehicle, 3 “wet road surface”, 1 “snowy/icy road surface”, 2 “dark”). From TASAS Table B (adjusted for a spot location), this highway segment has an actual *total* collision rate which is 1.7 times greater than the statewide average for similar highway facilities. The actual *fatal+injury* collision rate is 2.4 times greater than the statewide average for similar highway facilities. The actual *fatal* collision rate is 5.4 times greater than the statewide average for similar highway facilities (see Table 6).

Table 6 - Collision Data Summary for DN-199 PM 23.9/24.2					
Table B Dates: 10/1/2002-9/30/2012					
Actual Accident Rates (MV+)			Average Accident Rates (MV+)		
Fatal	F + I	Total	Fatal	F + I	Total
0.091	0.91	1.28	0.017	0.39	0.77

The principal PCF was coded as “speeding” (5 of 14), followed by “improper turn” (4 of 14), and “other violations” (4 of 14). The TOC resulted in “hit object” in 4 of 14 collisions, “sideswipe” in 4 of 14 collisions, and “overturn” in 3 of 14 collisions. There were 4 reported collisions in this segment with a “Truck/Tractor w/Trailer” (2 PDO, 2 Injury, 3 of 4 collisions are attributed to the driver of the “Truck/Tractor w Trailer”). There was 1 reported PDO collision in this segment with a “Truck/Tractor w/2 Trailers”; this collision is not attributed to the driver of the “Truck/Tractor w/2 Trailers”. There were no reported collisions in this segment with any “Truck/Tractor w/3 Trailers”, or “Truck/Tractor w/1 Tank Trailer”.

DN-199 PM 25.5/25.75 (“Patrick Creek” Project Limits – Segment 3 of 3)

This 0.250 mile rural segment is located on curvilinear terrain, on an approximate 4% grade (uphill NB, downhill SB). This segment experienced 15 total reported collisions (2 NB, 13 SB, 1 fatal, 5 injury, 9 PDO, 1 multi-vehicle, 12 “wet road surface”, 4 “dark”). From TASAS Table B (adjusted for a spot location), this highway segment has an actual

total collision rate which is 1.8 times greater than the statewide average for similar highway facilities. The actual *fatal+injury* collision rate is 1.4 times greater than the statewide average for similar highway facilities. The actual *fatal* collision rate is 5.4 times greater than the statewide average for similar highway facilities (see Table 7).

Table 7 - Collision Data Summary for DN-199 PM 25.5/25.75					
Table B Dates: 10/1/2002-9/30/2012					
Actual Accident Rates (MV+)			Average Accident Rates (MV+)		
Fatal	F + I	Total	Fatal	F + I	Total
0.091	0.55	1.37	0.017	0.39	0.77

The principal PCF was coded as “speeding” (8 of 15), followed by “improper turn” (4 of 15), and “other than driver (2 of 15). The primary TOC resulted in “hit object” (10 of 15), followed by “head-on” (2 of 15), and “overtake” (2 of 15). There were 2 reported PDO collisions in this segment with a “Truck/Tractor w/Trailer”; 1 of these 2 collisions is attributed to the driver of the “Truck/Tractor w/Trailer”. There were no reported collisions in this segment with any “Truck/Tractor w/2 Trailers”, “Truck/Tractor w/3 Trailers”, or “Truck/Tractor w/1 Tank Trailer”.

DN-199 PM 26.3/26.5 (“Washington Narrows” Project Limits – Segment 2 of 2)

This 0.200 mile rural segment is located on curvilinear terrain, on an approximate 4% grade (uphill SB, downhill NB). This segment experienced 9 total reported collisions (5 NB, 4 SB, 4 injury, 5 PDO, 2 multi-vehicle, 2 “wet road surface”, 1 “dark”). From TASAS Table B (adjusted for a spot location), this highway segment has an actual *total* collision rate which is 1.1 times greater than the statewide average for similar highway facilities. The actual *fatal+injury* and *fatal* collision rates are both less than the statewide average for similar highway facilities (see Table 8).

Table 8 - Collision Data Summary for DN-199 PM 26.3/26.5					
Table B Dates: 10/1/2002-9/30/2012					
Actual Accident Rates (MV+)			Average Accident Rates (MV+)		
Fatal	F + I	Total	Fatal	F + I	Total
0.000	0.37	0.82	0.017	0.39	0.77

The PCF was coded as “speeding” in 3 of 9 collisions and “other violations” in 3 of 9 collisions, followed by “improper turn” (2 of 9) and “other than driver” (1 of 9). The primary TOC resulted in “hit object” (7 of 9), followed by “rear-end” (2 of 9). There was 1 reported PDO collision in this segment with a “Truck/Tractor w/Trailer”; this collision is not attributed to the driver of the “Truck/Tractor w/Trailer”. There were no reported collisions in this segment with any “Truck/Tractor w/2 Trailers”, “Truck/Tractor w/3 Trailers”, or “Truck/Tractor w/1 Tank Trailer”.

If you have any questions please contact me at (707) 445-5343.

TAMERA LEIGHTON

October 30, 2014

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cc: 1 – MK BRADY
2 – DA MORGAN
3 – CL DAVIS
4 – BJ THOMAS
5 – FILE
BT:bt

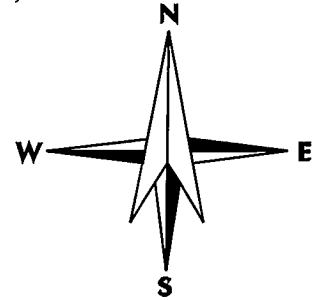
TRUCK NETWORKS on California State Highways

DISTRICT 1

Map 1 of 12








Not to scale

Last revised June 23, 2011



LEGEND

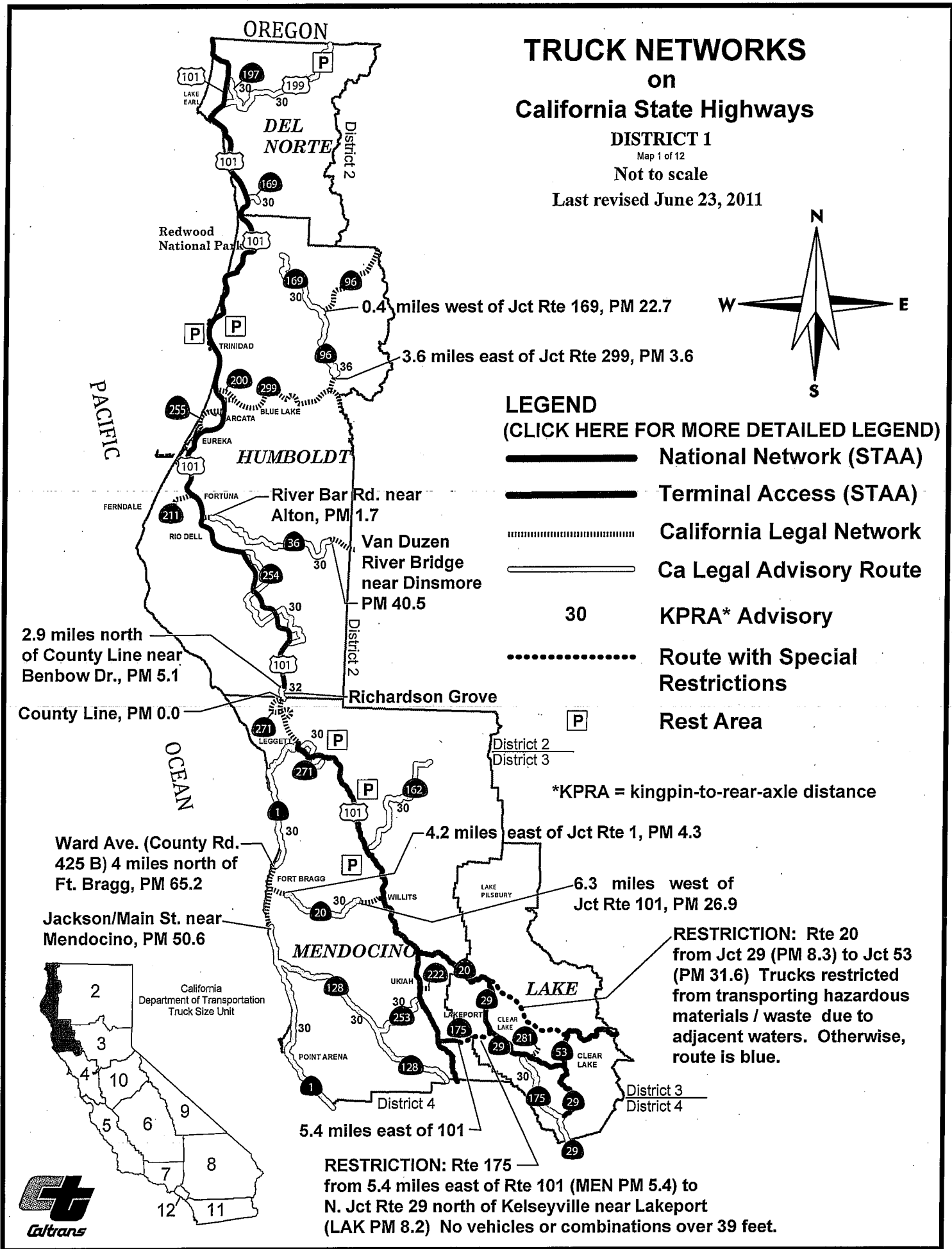
(CLICK HERE FOR MORE DETAILED LEGEND)

-  National Network (STAA)
-  Terminal Access (STAA)
-  California Legal Network
-  Ca Legal Advisory Route
-  KPRA* Advisory
-  Route with Special Restrictions
-  Rest Area

*KPRA = kingpin-to-rear-axle distance

RESTRICTION: Rte 20 from Jct 29 (PM 8.3) to Jct 53 (PM 31.6) Trucks restricted from transporting hazardous materials / waste due to adjacent waters. Otherwise, route is blue.

RESTRICTION: Rte 175 from 5.4 miles east of Rte 101 (MEN PM 5.4) to N. Jct Rte 29 north of Kelseyville near Lakeport (LAK PM 8.2) No vehicles or combinations over 39 feet.



2.9 miles north of County Line near Benbow Dr., PM 5.1

County Line, PM 0.0

Ward Ave. (County Rd. 425 B) 4 miles north of Ft. Bragg, PM 65.2

Jackson/Main St. near Mendocino, PM 50.6

River Bar Rd. near Alton, PM 1.7

Van Duzen River Bridge near Dinsmore PM 40.5

Richardson Grove

4.2 miles east of Jct Rte 1, PM 4.3

6.3 miles west of Jct Rte 101, PM 26.9

5.4 miles east of 101

District 3
District 4

California Department of Transportation Truck Size Unit



TRUCK MAP LEGEND

TRUCK LENGTHS & ROUTES



STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

[Click here for the Truck Network Map](#)

..... CALIFORNIA LEGAL ROUTES California Legal trucks (black trucks) can travel on STAA routes (green and blue routes), CA Legal routes (black routes), and Advisory routes (yellow routes). CA Legal trucks have access to the entire State highway system except where prohibited (some red routes).



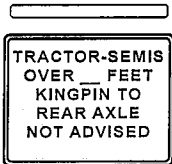
California Legal Truck Tractor - Semitrailer

Semitrailer length : no limit
 KPRA* : 40 feet maximum for two or more axles,
 38 feet maximum for single-axle trailers
 Overall length : 65 feet maximum *(KPRA = kingpin-to-rear-axle)



California Legal Truck Tractor - Semitrailer - Trailer (Doubles)

Option A
 Trailer length : 28 feet 6 inches maximum (each trailer)
 Overall length : 75 feet maximum
 Option B
 Trailer length : one trailer 28 feet 6 inches maximum
 other trailer may be longer than 28 feet 6 inches
 Overall length : 65 feet maximum



CA LEGAL ADVISORY ROUTES - CA Legal trucks only; however, **travel not advised** if KPRA length is over posted value. KPRA advisories range from 30 to 38 feet.

———— STAA ROUTES The STAA Network allows the "interstate" STAA trucks which are the green trucks shown below. The STAA Network consists of the National Network (green routes, primarily interstates) and Terminal Access routes (blue, primarily State routes). ("STAA" = federal Surface Transportation Assistance Act of 1982.)

(Click here for the [Truck Network Map](#).)



Interstate "STAA" Truck Tractor - Semitrailer

Semitrailer length : 48 feet maximum
 KPRA* : no limit
 Overall length : no limit *(KPRA = kingpin-to-rear-axle)



Semitrailer length : over 48 feet up to 53 feet maximum
 KPRA : 40 feet maximum for two or more axles,
 38 feet maximum for single-axle trailers
 Overall length : no limit



Interstate "STAA" Truck Tractor - Semitrailer - Trailer (Doubles)

Trailer length : 28 feet 6 inches maximum (each trailer)
 Overall length : no limit



Terminal Access - Interstate "STAA" trucks may travel on State highways that exhibit this sign.



Service Access - Interstate "STAA" trucks may travel up to one road mile from the off ramp to obtain services (food, fuel, lodging, repairs), provided the route displays this sign.

..... SPECIAL RESTRICTIONS - Route restricted for vehicle length or weight, cargo type, or number of axles. Click here for the list of [Special Route Restrictions](#).