

# CTPAC-SC Proposal

**Subject:** CTPAC Annual Workgroup Proposal

**Date:** October 27, 2003

**Policy:** Annuals, working group # 7

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## **I. Objectives**

The objective is to maintain our current annual permits and to expand the program to meet Industries needs while relieving pressure from the permit program.

## **II. Existing Documentation**

## **III. Change to TPM**

## **IV. Background**

Annual permits have been in use for over twenty-five years. During this period the program has been continuously improved and expanded with no reduction to our excellent safety history. From 12' wide, legal weight permits to Purple weight statewide annuals, the program has been incrementally expanded as Industry has proven it can operate with the new annuals safely. Currently industry operates with 23 annual permits that have each been developed to address specific requirements. Industry is asking for a continued commitment to move forward on new annuals and continue this history.

Caltrans has no way of knowing how many trips are being made, or where those trips are made. As a result, Caltrans is unable to efficiently and effectively manage its capital investments. In addition, Caltrans cannot effectively analyze permit load-related problems (pavement fatigue, bridge damage, bridge collapse, etc). See the Santa Rosa Creek incident summary below for an example of how Caltrans' data is insufficient.

Caltrans regularly restricts lane widths to less than 12' wide during construction. Annual permits are valid up to 12' wide. So there is a risk that a 12' wide load will travel through say a 10' wide restriction. The driver may stop, causing a huge traffic delay while CHP tries to turn the vehicle around or back it out. Or the driver may proceed through the restriction, possibly colliding with k-rail, contractor's vehicles, workers, or oncoming traffic.

Specifically, Industry is proposing the following new permits and changes to policy:

### **1. STAA Annual**

The STAA Annual would allow a five-axle combination up to 75' long and up to 45' Kingpin with trailers up to 48'0" long. In May 2003, Industry was informed that the STAA annual was approved. Fiscal problems with printing the maps were cited for the delay in releasing the permits. The work group proposes that Caltrans solve this problem by centralizing their printing needs at the two regional offices. Caltrans could contract with private copier companies to provide equipment to print the maps "in house". Rather than printing large volumes of the various maps, the maps would be printed on an as needed

basis. This would save the state money by not having large volumes of maps that have become out-dated and inadequate. It would allow Caltrans to rapidly adopt new maps as highway conditions and requirements change. Private copier companies can provide "turn key" equipment leases that are cheaper annually than one large production run on one map.

## 2. 14'6" High Annual

A 14'6" height annual has been requested by Industry for a number of years. There are only 23 bridges in the state with mainline clearance less than 14'9". No, there are 460 UC and 160 OC with a vertical clearance between 14'-0" to 14'-6"..

The 14'6" annual is not a new concept. During Bob Martin's tenure as permit chief the annual and maps were ready to issue. Again, the reason that the annual was shelved was a lack of funds to print maps. Industry would at least like to see a 14'6" annual with 100 miles radius. This would then be opened to statewide use similar to the process by which we developed the green and purple permits.

There were 40944 single trip permits (5% of total stars and paper non-variance) issued for loads and/vehicles between 14'-0" and 14'-6" (inclusive) high, less than or equal to 65' long and less than or equal to 12' wide. If you include two vehicle combinations greater than 65' long the number is 140117 (18% of total stars and paper non-variance). If you include 7 axles the number is 155186 (20% of total stars and paper non-variance). If you include 9 axles the number is 175559 (22% of total Stars and paper non-variance).

## 3. 7, 8, and 9 Axle Annuals

These annuals would further reduce pressure on the permit system. Industry proposes that these permits allow 12' wide, 14'6" tall, and up to purple weight. This annual would be especially helpful for the crane industry. Personnel would be freed from issuing multiple single trip permits for the same machine over local routing. This would allow more people to focus on safety and productivity.

The total number of single trip permits for straight and bonus green and Purple 7 and 9 axles 12' or less in width (legal height) were as follows:

SG 7: 1857  
SP7: 7597  
SG9: 2277  
SP9: 6612  
BG7: 381  
BG9: 3730  
BP7: 5642  
BP9: 5623

Total: 33719 (4% of total stars and paper non-variance single trip)

- Granting annual permits for 7- and 9-axle extra-legal vehicles will cause permit ratings to drop for some structures due to requirements in bridge specifications. The factor of safety provided for in the bridge specification for permit load evaluation is quite small. It is based upon the assumption that larger permit vehicles are issued as single trip permits, i.e. the permits are

relatively controlled, enforced and infrequent. Bridge specifications require that a higher factor of safety be used if these permits are issued as annual permits because, as noted, they have less control. The consequence of using a higher safety factor is 1) it will be necessary to reevaluate many existing bridges and 2) the permit ratings will drop for a significant number of these bridges. This will substantially increase Structures' workload and adversely impact the movement of permit vehicles.

#### 4. Short Term Restriction List and data base Management

Industry proposes that the distribution of the short-term restriction list be formalized. This information is critical to the safe usage of annual permits. Industry proposes that the list be distributed by Friday AM so that we can insure distribution to our drivers for the next workweek. Continued improvements in the timely posting of restrictions to the database are critical. There have been recent examples of restrictions being posted with no prior notice.

### V. Current Practice

### VI. Proposed Changes

### VII. Benefits and Justification

1. Annual permits allow Industry to quickly and efficiently meet our customer's needs. Operational requirements develop rapidly in the construction industry. Annual permits are vital to industries efforts to operate safely and legally in this environment.
2. Annual permits free industry personnel to concentrate on productivity and safety issues.
3. Annual permits free Caltrans personnel and equipment from a large volume of permits. This allows more effort to be directed to issues such as over height loads, variance loads, and database management.
4. Annual permits are the most cost-effective form of permitting. There is more revenue per hour spent by permit writers than any other type of permit.

#### **Santa Rosa Creek Incident**

The following is a chronology of events leading up to the collapse of a temporary bridge across Santa Rosa Creek on Route 246:

- The bridge was rated as a "PPPPP" bridge until March, 1995, when it was downgraded to a "OOOOO" bridge.
- The new bridge rating was not entered into the Transportation Permits Route Clearing Database, so "PPPPP" loads continued to be routed across the bridge.
- The bridge was demolished as part of a construction project to replace the downgraded bridge.
- A temporary bridge was erected on October 8, 1999, with a rating of "PPXXX", which means that 9-, 11-, and 13-axle loads were limited to legal weight.

- The bridge collapsed on October 21 shortly after a “bonus purple” 9-axle load crossed the bridge.

Immediately after the bridge collapsed, the media, Caltrans’ management, and the Legislature wanted to know how many permit loads had been authorized to cross this bridge. Several people worked overtime on a weekend, manually scanning every permit written between October 3 and October 21 to determine how many permit loads crossed the bridge. It was determined that nine permit loads had crossed the bridge, two of which exceeded the bridge rating. But Caltrans has no way of knowing how many permit loads crossed the bridge under Annual or Repetitive permits. Therefore, it is impossible to know if permit loads contributed to the bridge collapse.

- Almost 2 years ago a bridge over Route 246 collapsed. It is believed that the reason was the passage of a permit load greater than the capacity of the bridge. Legislative hearings for the bridge collapse were held. Questions about annual permits and their monitoring and tracking came up. It was obvious Caltrans did not have sufficient controls over annual permits. Those lacks of controls still exist despite the fact that many improvement measures have been taken.

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