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A PROFESSIONAL CORPORATION

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UNION BANK BUILDING - 400 OCEANGATE, SUITE 700, LONG BEACH, CA 90802

September 30, 2011

HONORABLE MAYOR AND CITY COUNCIL
City of Long Beach
California

RE: October 4, 2011, Hearing No. 11-0780 (Continued from August 16, 2011)
An appeal from the discretionary decision of the Planning Commission decision to approve a Conditional Use Permit to establish a short-term trucking container parking lot on the Southern California Edison Right-of-Way located at 6947 Sportsman Drive (Application No. 1104-06) (District 9)

Applicant: Flying M Ranch, LLC
Appellant: Compton Hunting and Fishing Club ("CHFC")

Appellant, CHFC, submits the following brief in further support of its appeal:

CHFC has previously submitted in the proceedings before the Planning Commission a letter dated June 16, 2011, from Richard P. Wagner, and two letters dated June 5, 2011, and June 10, 2011, submitted by Eric Van Stralen, President of CHFC. Those items are attached collectively hereto as Exhibit 1 and are incorporated and deemed restated herein.

CHFC also previously submitted in its appeal on this matter a summary list of reasons for appeal containing a list of 12 reasons for appeal, which are incorporated and deemed restated herein. However, CHFC withdraws item 11 from the 12 reasons for appeal listed on the appeal form submitted by CHFC in this proceeding, regarding whether Sportsman Drive is a public or private roadway.

CHFC incorporates by reference the reasons for appeal, evidence, and argument that has been or will be submitted by the City of Compton in support of its separate appeal.

The Proposed Project

Southern California Edison ("SCE") owns a 13.5 acre parcel in Long Beach, California, located at the South end of Sportsman Drive ("Site"), which is part of its Hinson-Lighthipe Transmission right-of-way. The Applicant, Flying M Ranch, LLC, proposes to lease this Site from SCE to operate a short-term big-rig trailer parking facility.

The copy of the Mitigated Negative Declaration (“MND”) submitted by the Applicant contains the following description of the proposed project at page page B-3 thereof, in the Initial Study section, as follows:

“The Proposed Project would be for the temporary storage of the trailers predominantly from the Ports of Los Angeles and Long Beach, for distribution either to the ports or to nearby warehouses. The Flying M Ranch facility would operate 24 hours a day, seven days a week. Flying M Ranch LLC anticipates that approximately 5 trucks per hour would drop off or pick up trailers, creating 10 trips (5 in and 5 out of the site). This would be approximately 120 trailers a day, or 240 trips total. The site would have a parking capacity for 242 trailers and it is anticipated that the use rate would be 80 percent, resulting in an average of 194 trailers parked on-site at any one time. Trailer parking would not exceed 72 hours. The estimated average time that a trailer would be on site is 39 hours.”

The footprint of the proposed project is entirely within the City of Long Beach, but located on the border between the City of Long Beach and the City of Compton. The access gate for the proposed project is on the North side of the Site, located at the South terminus of Sportsman Drive on the border of Compton and Long Beach, and access to the proposed project is entirely upon the streets of Compton, being Sportsman Drive, Atlantic Avenue, and Alondra Boulevard, to and from the 710 Freeway.

Although the Site is accessible from Artesia Boulevard to the South in the City of Long Beach, the proposed use does not contemplate or address access from the South.

The MND indicates that the proposed use will include the existence of hazardous materials in the truck trailers hauled to, stored at, and hauled from the Site.

CHFC’s Use

Appellant, CHFC, is a private club with a facility that resembles a small park, and which is located on the West side of Sportsman Drive, and immediately adjacent to the proposed project Site, to the North. CHFC’s facility is on a 4-acre parcel, with a club house, covered picnic table area, paved 75+ space parking lot, and a large grass area. The club has over 200 members, and the facility is regularly used for club and other social events. Annually, CHFC hosts approximately 50 such events, such as parties, weddings, car shows, charity fundraisers, and the like, many of which are outdoors next to Sportsman Drive, some of which are open to the public, some of which are attended by 1500 or more persons, and most of which result in the 75-space parking lot at CHFC’s facility being filled to capacity, and even overflowing onto the shoulder of Sportsman Drive. All access to CHFC’s facility is over Sportsman Drive, and the traffic from the proposed use would be significantly detrimental to CHFC’s use and that of its members and guests.

Further, CHFC also employs a full-time caretaker who resides in a mobilehome located on CHFC’s facility, directly adjacent to the Site that is the subject of the proposed use.

There is no factual basis to support Finding Number 1.

Conditional uses are required to be compatible with the General Plan. Finding number 1 states in part that the project that is the subject of the proposed use is consistent with the General Plan. That is not true. The General Plan designates the property as “LUD No. 11 – Open Space and Park District.” Such land is defined as an essentially undeveloped or unconstructed type of use. Further, “All lands

designated LUD No. 11 are intended to remain in or be redeveloped in the future in (essentially) an open condition.” (City of Long Beach General Plan, Land Use Element at 73). The proposed use is to pave over approximately 10 of the 13.5 acres of the property in question. This is clearly not a use falling within the LUD No. 11 – Open Space and Park District use designation in the General Plan.

There is no factual basis to support Finding Number 2.

Finding number 2 states in part: “The proposed use will not be detrimental to the surrounding community including public health, safety, general welfare, environmental quality or quality of life.”

There is substantial evidence that the proposed use will be detrimental to the surrounding community for all of the reasons stated in reasons for appeal 1 through 5, and as is more specifically addressed in CHFC’s submissions before the Planning Commission, attached hereto as Exhibit 1. In summary, the proposed use will significantly and adversely affect CHFC’s use by interfering with the safe access to and from CHFC’s facility on Sportsman Drive by CHFC’s members and guests.

Further, the June 16 Planning Commission Staff Report states in part that businesses involved in the transfer of hazardous waste shall not be located within 2000 feet of any residential use, or any public assembly use. According to the CPUC’s MND, the proposed use contemplates the hauling of hazardous materials in the trucks that will be used on the facility of the proposed use. CHFC’s use involves both frequent public assembly uses (50+ events annually) and also a full time resident caretaker on CHFC’s property. These uses by CHFC are directly adjacent to the proposed use and Sportsman Drive, and thus fall well within the proscribed 2000 feet. Any findings that no such uses fall within the proscribed radius are wrong.

Further, the existing dimensions of Sportsman Drive simply cannot accommodate the proposed use. In addition to prior arguments submitted by CHFC on this point, attached hereto as Exhibit 2 is a letter by registered professional engineer, David Sorem, P.E., to the effect that the width of Sportsman Drive, and the tight turning radius of the multiple curves on Sportsman Drive, are not compatible with the proposed use for the reasons stated in the Sorem letter.

As such, there is a lack of substantial evidence in the record to support any findings required to issue the CUP.

The Proposed Used Cannot be Accessed from Sportsman Drive.

Sportsman Drive is not available as an access point to the proposed project. Attached hereto as Exhibit 3 is a photograph of the terminus of Sportsman Drive at the border between the City of Compton and the City of Long Beach, which shows three dead-end bollards, attached with cable, in place across Sportsman Drive at the proposed point of access to the proposed project. CHFC understands that the bollards were installed by the City of Compton in the first half of August of 2011. Therefore, to the extent the proposed use is conditioned upon access through Sportsman Drive, the proposed use cannot meet any such condition.

The Project contemplated by the Proposed Use Does Not Fit Within the Claimed Categorical Exemption.

Clearly CEQA applies to this discretionary matter before the City of Long Beach. Exhibit D of the June 16, 2011, Planning Commission Staff Report claims that the proposed project is exempt from CEQA per

State guidelines Section 15303 "New Construction or Conversion of Small Structures." This is not correct. The text of Section 15303 does not cover the kind of project here at issue here: the construction of a 13.5 acre truck parking lot and storage facility. The cited exemption does not apply to the proposed project, and CEQA therefore applies, and an environmental impact report is required. That there was not one is fatal. Further, the MND before the CPUC is not sufficient to take the place of the required EIR, as the City of Long Beach cannot "tier" off of the MND for the present CUP. Further, the purported mitigation in the MND and the conditions do nothing to actually mitigate the substantial negative affects the proposed project will have on CHFC's own use and on the surrounding Compton community, which were not actually considered in the MND.

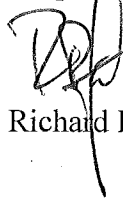
Reasonable Alternatives Have Inappropriately Not Been Considered.

Given that SCE owns all of the land from the Site South to Artesia Boulevard, the proposed use should have considered and addressed the use of Artesia Boulevard to access the Site for the proposed use. Such access would eliminate the substantial negatives associated with accessing the site through Sportsman Drive.

Further, Long Beach Municipal Code section 21.52.219(A) requires that a commercial parking lot such as the proposed use shall be permitted only if no other reasonable alternative use of the site exists during the time period covered by the permit. Utility rights of way are very commonly utilized as commercial nurseries, and such use is certainly a reasonable alternative use for the Site. Section 21.52.219(B) requires that a commercial parking lot such as the proposed use shall be permitted only if the use and design of the site shall not disrupt, impede or negatively affect traffic circulation. As mentioned, 240 trucks per day will necessarily disrupt, impede and negatively affect traffic circulation on Sportsman Drive. As such, approval of the proposed use is inconsistent with these parts of the Municipal Code.

Conclusion. For the foregoing reasons, and for the reasons stated in other written submissions by CHFC and the City of Compton both prior to and at the hearing on this matter, CHFC respectfully requests that its appeal be granted and the decision of the Planning Commission on CUP Application No. 1104-06 be reversed, and consequently the application of Flying M Ranch should be denied.

Respectfully submitted,



Richard P. Wagner

Exhibit 1

WAGNER PALMER
PROFESSIONAL CORPORATION

Richard P. Wagner

ATTORNEYS AT LAW

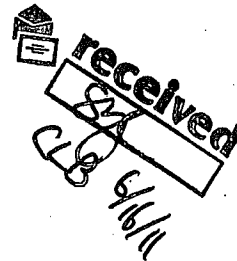
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UNION BANK BUILDING - 400 OCEANGATE, SUITE 700, LONG BEACH, CA 90802

June 16, 2011

Planning Commission
City of Long Beach, California
333 West Ocean Blvd., 5th Floor
Long Beach, CA 90802

RE: Application No. 1104-06
Applicant Flying M Ranch, LLC



Planning Commission Chair and Commissioners:

This office represents the Compton Hunting and Fishing Club ("CHFC"), located at 1625 Sportsman Drive, Compton, California, and this letter is written on their behalf. CHFC owns the real property North of and adjacent to the real property that is the subject of the above referenced Application No. 1104-06 ("Application") submitted by Flying M Ranch, LLC ("Applicant").

At a minimum, the consideration of the Application should be continued. There has not been sufficient notice to interested parties in this process to allow for any meaningful analysis and submission of information relevant to the consideration of this matter before the Planning Commission. Continuance of the consideration of the Application will allow for such interested parties to submit, and for the Planning Commission to receive, the relevant information that is necessary and required for the Planning Commission to properly address this matter.

We understand that the Applicant's project has been in process since at least February of 2008, which is when the Applicant's lessor, Southern California Edison ("Edison"), applied to the California Public Utilities Commission ("CPUC") for approval to lease to the Applicant the real property that is the subject of the Application. Notwithstanding that long timeline, the first actual notice CHFC received of the proposed project that is the subject of the Application was from the notices related to this Planning Commission meeting, by written notice postmarked June 1, 2011, and from a notice concurrently posted on the actual property itself. In addition, we understand that the City of Compton never received any notice of this project until our office contacted them recently to inquire. We understand that the City of Compton will be represented at the Planning Commission meeting on June 16.

This lack of earlier notice is significant because it has resulted in a falsely framed Application before this planning commission. The proposed project would result in an average of 240 semi-trucks per day, 24 hours a day, seven days a week, with all of the traffic impact occurring on Sportsman Drive in front of CHFC's facility, and through the streets of the City of Compton. CHFC certainly would have actively participated in this process earlier, including before the CPUC, but was deprived of that opportunity. Further, we are also confident that had the City of Compton received proper notice of the potential impacts of the proposed project, CHFC would have had the opportunity to address its concerns with the City of Compton as well.

We are still investigating the steps where required notices should have been given and were not, but at a minimum it is quite clear that the Applicant and/or Edison has failed to give proper notices to the City of Compton and members of the community such as CHFC, and further has also failed to provide accurate information to various government entities of the various impacts of the proposed project when required to do so, such as before this Planning Commission and the CPUC.

The Proposed Project

The footprint of the proposed project is entirely within the City of Long Beach, but located on the border between the City of Long Beach and the City of Compton. The access gate for the proposed project is located on the border of Compton and Long Beach, and access to the proposed project is entirely upon the streets of Compton, being Sportsman Drive, Atlantic Avenue, and Alondra Boulevard.

A copy of the Mitigated Negative Declaration ("MND") relating to the Application has been submitted along with this letter. Page B-3 thereof, in the Initial Study section, the proposed project is described as follows:

'The Proposed Project would be for the temporary storage of the trailers predominantly from the Ports of Los Angeles and Long Beach, for distribution either to the ports or to nearby warehouses. The Flying M Ranch facility would operate 24 hours a day, seven days a week. Flying M Ranch LLC anticipates that approximately 5 trucks per hour would drop off or pick up trailers, creating 10 trips (5 in and 5 out of the site). This would be approximately 120 trailers a day, or 240 trips total. The site would have a parking capacity for 242 trailers and it is anticipated that the use rate would be 80 percent, resulting in an average of 194 trailers parked on-site at any one time. Trailer parking would not exceed 72 hours. The estimated average time that a trailer would be on site is 39 hours.'

CHFC's Use

CHFC is a private club with a facility that resembles a small park. CHFC's facility is on a 4 acre parcel, with a club house, covered picnic table area, paved parking lot, and a large grass area. The club has over 200 members, and the facility is regularly used for club and other events, some of which are open to the public. Annually, CHFC hosts approximately 50 events, such as parties, weddings, car shows, and the like, which fill their parking lot to capacity, many of which are outdoors, and all of which will be significantly and negatively affected by the proposed use.

Impacts and Concerns

We are not aware that any proper analysis has been submitted as to whether Sportsman Drive is appropriate for the proposed use. It is not. First, we understand that Sportsman Drive is not designated for unlimited truck traffic. Second, Sportsman Drive is a short and narrow street, and has a double S-curve close to its intersection with Atlantic Avenue. Semi-trucks cannot both enter and exit on Sportsman Drive at the same time, and the proposed use will result in dangerously stacked truck traffic on Sportsman Drive and on South bound Atlantic Avenue. Further, the left turn from Sportsman Drive onto Atlantic Avenue, is not a signaled intersection, and with an ingress of 120 trucks and an egress of 120 trucks from the proposed use, the significant increase in the probability of accidents at this intersection is obvious.

We also believe that the existing street section on Sportsman Drive is at best 3" over native material and not sufficient for the proposed use. Sportsman Drive simply cannot handle the 240 trucks per day in the proposed use, not to mention that a large number of them will have fully loaded trailers in tow.

Further, we are not aware that any proper analysis has been submitted on the impact of the truck traffic to build the proposed project. We understand that, at a minimum, the project build will involve at least 2000 semi-truck loads.

Per Public Resources Code §21092.4, the lead agency (in this case, CPUC) must consult with transportation planning agencies and public agencies that have transportation facilities within their jurisdictions that could be affected by a proposed project. Here the CPUC never consulted with or otherwise notified the City of Compton, and thus the CPUC process related to the Application did not comply with the law and is flawed.

Subsection B.4.11.a of the MND (pg. B-40) discusses whether or not the proposed project complies with the applicable noise standards established in the local general plan or noise ordinance. However, the noise impacts to CHFC were not included in this evaluation. The grass field on the CHFC property, which is directly adjacent to Sportsman Drive, is used for parties, weddings, fundraisers, and other like events. According to the Federal Transit Authority's "Transit Noise and Vibration Impact Assessment" manual, Table 12-1, an operating diesel truck emits a noise level of approximately 88 dBA at a distance of 50 feet. As cited in the MND, the City of Compton noise ordinance considers noise levels "conditionally acceptable" if they are less than 70 dB CNEL. Thus, the noise impacts of the proposed project on the CHFC are clearly in violation of the applicable noise standards and should have been considered in the MND. In addition, the frequent truck traffic and associated noise created by this project will greatly reduce if not eliminate the ability of CHFC to continue using this area, which will result in a significant impact to CHFC and its members.

Subsection B.4.11.c of the MND (pg. B-41) states that a "permanent increase in ambient noise levels in the project vicinity would result from operation of the proposed project." The text then describes the project vicinity as follows: "the surrounding land uses for the project site are I-710 which borders the site to the west, and SR-91, which borders the site to the south. Thus, no significant impact would occur as a result of noise generated at the proposed project." This is not accurate. CHFC is directly adjacent to the project site and Sportsman Drive, and should be considered in the ambient noise impact analysis.

June 16, 2011

Page 4

Exhibit D of the June 16, 2011, Planning Commission Staff Report claims that the proposed project is exempt from CEQA per State guidelines Section 15303 "New Construction or Conversion of Small Structures." This is not correct. The text of Section 15303 does not include construction of a 13.5 acre truck parking lot or storage facility and thus the cited exemption does not apply to the proposed project.

The CPUC never addressed the feasibility of ingress and egress from Artesia Boulevard. Edison owns the real property from the proposed project site South to Artesia Boulevard. CHFC would submit that this access point should have been considered.

For each of the various events hosted by CHFC on its facility, most of which result in the CHFC 75-space parking lot being filled to capacity, the ingress and egress on Sportsman Drive will be significantly and negatively affected by the proposed use. The result will be similar to navigating the right two lanes of the Northbound 710 freeway out of Long Beach during rush hour. This is a significant impact and detriment to CHFC, its members, and guests.

Further, for virtually all of CHFC's uses, the proposed project will significantly and negatively impact CHFC's use of its own property, as detailed above, and as further detailed in the letter previously submitted by CHFC's President, Rick Van Stralen, the contents of which are incorporated herein by reference.

For the foregoing reasons, CHFC requests that the consideration of the Application be continued.

Very truly yours,

Richard P. Wagner

C: CHFC Board

Compton Hunting and Fishing Club
1625 Sportsman Drive
Compton, CA 90221

Est. 1946

June 5, 2011

Long Beach Development Services
Planning Bureau
333 W. Ocean Blvd. 5th Floor
Long Beach, CA 90802

Re: Conditional Use Permit – 6947 Sportsman Drive

Dear Ladies and Gentlemen;

I am writing in opposition to the granting of this conditional use permit on behalf of our organization. We own a large parcel of land along the only access to land in question. (There is no access to this land via the City of Long Beach – only via the small City of Compton street, Sportsman Drive.) Our organization has existed there for over 50 years. Sportsman Drive is an inadequate road to support the proposed usage.

Furthermore, the proposed tenant has displayed an obvious disregard for safety and demonstrated a distinct lack of care or concern for their neighbors, commonly blocking Atlantic Avenue by parking in the middle of said street while trucks are stacked up waiting to enter their current facility or along one and/or both sides of Atlantic Avenue at the junction of Sportsman Drive and Atlantic Avenue. This brings traffic to a halt or creates a dangerous situation as other vehicles try to weave their way around the idling big rigs and trailers. Atlantic Avenue makes a curve to the north at the point just past their current gate and it is virtually impossible to see around their big rigs, making passing them a dangerous exercise. Acting in such a manner along Sportsman Drive would effectively block us from accessing our property until they move their trucks and would deny us full use and enjoyment of our property. They have failed to address this type of problem at their current facility, and we have no faith or reason to believe that their behavior would be any different in the future or at the proposed location along Sportsman Drive. They act as though the public street is their private drive, blocking it at will.

Over-burdening Sportsman Drive will create maintenance and road hazard issues. The small size of Sportsman Drive will create a hazard for our 200+ members as they have to negotiate around or between numerous large diesel trucks loaded with containers. These trucks will most likely block access to our parking lot, which is our only vehicular access. This will be a particular problem if the proposed tenant does not provide space within the proposed leasehold boundaries for their trucks to park while awaiting loading or unloading, or for turnaround areas. Our property entrance is immediately adjacent to the gate to the Edison property.

The impact of a large number of additional heavy trucks and trailers upon the street itself cannot be stressed enough. Sportsman Drive is a small street, previously owned by our organization prior to the improvements of the river bed. While there is presently a trucking yard

along Sportsman Drive, it is primarily used to store empty tanker trailers and thus does not create the damage to the road that will be suffered by heavily loaded container trailers.

I would have liked to include more or better pictures of both Sportsman Drive and the current traffic problems created by their container trucks on Atlantic, but we were not given sufficient time to obtain them and still make the required delivery date for this written testimony.

Sincerely yours,

Eric Van Stralen
President, 2011
Compton Hunting and Fishing Club

Picture legend:

Picture #1: Looking north along Sportsman Drive towards Atlantic. Current container yard can be seen on the far side of Atlantic Ave.

Picture # 2: Proceeding south along Sportsman Drive towards proposed leasehold site – the opposite direction from the first picture. Note how narrow the road is, bounded by approximately 8 feet of gravel that is not part of the street. The dark line on the right past the shadows of the trees is the asphalt berm separating the road from the gravel.

Picture 3: A view of the gate to the property in question, along our parking lot. The road is bounded on each side for about 8 feet between our parking lot and the road, as well as gravel on the opposite side of Sportsman Drive, similar to that shown in picture #2..

Picture 4: A view of our clubhouse and grounds, looking west from Sportsman Drive.

**Compton Hunting and Fishing Club
1625 Sportsman Drive
Compton, CA 90221**

Est. 1946

June 10, 2011

Long Beach Development Services
Planning Bureau
333 W. Ocean Blvd. 5th Floor
Long Beach, CA 90802

Re: Conditional Use Permit Application No. 1104-06 – 6947 Sportsman Drive

Dear Ladies and Gentlemen;

I am writing with some concerns about the proposed conditional use permit.

Under "Findings" in the Staff Report, it states that the use will not be within 2,000 feet of any public assembly use. Our property at 1625 Sportsman Drive, immediately adjacent to the property which is the subject of this permit, is a Sportsman's Club which has existed there for over 50 years (hence the name "Sportsman Drive.") It is specifically used for assemblies, meetings, picnics, an annual Fish Fry (attracting over 1500 participants) and other events, including the Early Times Car Show. A high volume of truck traffic is not conducive to these activities and may create an unsafe environment. Again referring to the Staff Report, it states that "the use will not be detrimental to the surrounding community." We are part of that community and the closest neighbor to the subject property.

Another concern is that high volume semi-truck traffic will block access to our property or interfere with the safe usage of our property for these historic events as well as our regular meetings. The entrance to our parking lot is immediately adjacent to the entrance to the subject property off of Sportsman Drive so that any "stacking" of trucks awaiting entrance to the subject property would block access to our land.

While the "Conditions of Approval" cover many of these items, we would like to know what the enforcement procedure will be if the tenant fails to comply with the stated conditions or violates those conditions. Is a lawsuit our recourse or are there other procedures in place?

I regret that I will be unable to attend the hearing on June 16, but I anticipate that members of our organization will be in attendance.

Sincerely yours,

Eric Van Stralen
President, 2011
Compton Hunting and Fishing Club

Exhibit 2

Dave Sorem, P.E.
3182 Quail Run Road
Rossmoor, CA 90720

9/24/11

Richard P. Wagner
WAGNER PALMER, PC
Union Bank Building
400 Oceangate, Suite 700
Long Beach, CA 90802

Mr. Wagner:

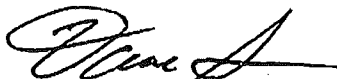
REF. Martin Engineering Services Sportsman Drive Width Report

Per your request I have investigated the letter from Martin Engineering Services with respect to Sportsman Drive supporting two way truck traffic and trailer access. The compound curves south of the intersection with Atlantic Ave. are the focus of the Martin Engineering Services Report. In their Report they attached a County of Los Angeles survey sheet, page 1477, which accurately shows the right of way, length of curves and general alignment of Sportsman Drive. I disagree with their statement that Sportsman Drive will support two way truck traffic.

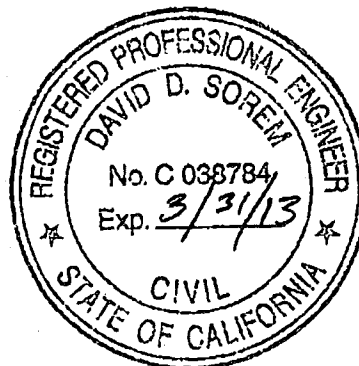
The existing paved section of roadway through these curves varies from 18' to 20' wide. A typical truck width is 8.5' and the swept width of a semi truck and trailer is approximately 25' for a radius of 70' on a 90 or 60 degree turn. The swept width is defined as the total width needed by a vehicle to traverse a curve and is the distance measured along the curve radius from the outer corner of the body to the inner rear corner of the body. The California legal length of a truck tractor and trailer is 65'. As stated above two way truck traffic is not possible with the limited paved roadway of 20' and the minimal radius's of 60' and 70'.

Attached is a copy of Table 203.2 Standards for Curve Radius from the Caltrans Highway Design. The minimum radius for a design speed of 20 mph is 130' which is 60' larger than any existing curve on Sportsman Drive. In addition to all of the technical information provided demonstrating that two way truck traffic is not possible, the physical damage to existing improvements clearly shows that trucks do have a difficult time negotiating those existing curves.

Sincerely,



Dave Sorem, P.E.



September 1, 2006

Every effort should be made to exceed minimum values, and such minimum radii should be used only when the cost or other adverse effects of realizing a higher standard are inconsistent with the benefits. As an aid to designers, Figure 202.2 displays the maximum comfortable speed for various curve radii and superelevation rates. Use of Figure 202.2, in lieu of the above standards must be documented as discussed in Index 82.2.

The recommended minimum radii for freeways are 5,000 feet in rural areas and 3,000 feet in urban areas.

If a glare screen or a median barrier is contemplated, either initially or ultimately, adjustments may be necessary to maintain the required sight distance on curves on divided highways. In such cases, a larger curve radius or a wider median may be required throughout the length of the curve. For design purposes, a planting screen is presumed to be 8 feet wide. See Chapter 7 of the Traffic Manual for glare screen criteria.

Table 203.2
Standards for Curve Radius

| Design Speed mph | Minimum Radius of Curve (ft) |
|---------------------|---------------------------------|
| 20 | 130 |
| 30 | 300 |
| 40 | 550 |
| 50 | 850 |
| 60 | 1,150 |
| 70 | 2,100 |
| 80 | 3,900 |

203.3 Alignment Consistency

Sudden reductions in alignment standards should be avoided. Where physical restrictions on curve radius cannot be overcome and it becomes necessary to introduce curvature of lower standard than the design speed for the project, the design speed between successive curves should change not

more than 10 miles per hour. Introduction of curves with lower design speeds should be avoided at the end of long tangents, steep downgrades, or at other locations where high approach speeds may be anticipated.

The horizontal and vertical alignments should be coordinated such that horizontal curves are not hidden behind crest vertical curves. Sharp horizontal curves should not follow long tangents because some drivers tend to develop higher speeds on the tangent and could over drive the curve.

- See "Combination of Horizontal and Vertical Alignment" in Chapter III of AASHTO, A Policy on Geometric Design of Highways and Streets, for further guidance on alignment consistency.

203.4 Curve Length and Central Angle

The minimum curve length for central angles less than 10 degrees should be 800 feet to avoid the appearance of a kink. For central angles smaller than 30 minutes, no curve is required. Above a 20,000 -foot radius, a parabolic curve may be used. In no event should sight distance or other safety considerations be sacrificed to meet the above requirements.

On 2-lane roads a curve should not exceed a length of one-half mile and should be no shorter than 500 feet.

203.5 Compound Curves

Compound curves should be avoided because drivers who have adjusted to the first curve could over drive the second curve if the second curve has a smaller radius than the first. Exceptions can occur in mountainous terrain or other situations where use of a simple curve would result in excessive cost. Where compound curve is necessary, the shorter radius should be at least two-thirds the longer radius when the shorter radius is 1,000 feet or less. On one-way roads, the larger radius should follow the smaller radius.

The total arc length of a compound curve should be not less than 500 feet.

Exhibit 3

