

APPENDIX 3.14-B

**Impacts on Confined Animal Agriculture  
Technical Memorandum**

---



## Merced to Fresno HST Section – Impacts on Confined Animal Agriculture

**PREPARED FOR:** File  
**COPY TO:** Karin Lilienbecker/CH2M HILL  
**PREPARED BY:** Matthew Franck/CH2M HILL; Stephen Layton/CH2M HILL  
**DATE:** February 1, 2012

### Summary

This memo summarizes direct and indirect impacts on confined animal agricultural facilities as a result of the Merced to Fresno High-Speed Train (HST) Project. Within the project area, most confined animal facilities are dairies, but other types of facilities, such as feedlots and poultry farms, would be affected as well. All HST alignments and related improvements would result in the loss of confined animal facilities, ranging in severity from the possible loss of all operations to minor indirect effects. Table 3.14-B-1 summarizes the impacts by alternative according to three impact types:<sup>1</sup>

- Severe: Operations unlikely to continue.
- Moderate: Loss of facilities, but operations likely to continue.
- Negligible: No or very little direct or indirect impact.

**Table 3.14-B-1**  
Impacts by Alternative

Alternative/Option	Severe	Moderate	Negligible
UPRR/SR 99 Alternative with Ave 24 Wye, East Chowchilla Design Option	0	5	1
UPRR/SR 99 Alternative with Ave 24 Wye, West Chowchilla Design Option	0	6	2
UPRR/SR 99 Alternative with Ave 21 Wye	0	1	0
BNSF Alternative with Ave 24 Wye, Mission Ave Design Option Through Le Grand	1	2	3
BNSF Alternative with Ave 24 Wye, Mission Ave Design Option East of Le Grand	1	2	3
BNSF Alternative with Ave 24 Wye, Mariposa Way Design Option Through Le Grand	0	2	3

<sup>1</sup> The determination as to whether a facility is likely to continue operations, and the general severity of the impact in terms of lost economic value and need for site reconfiguration, will be made during negotiations for right-of-way acquisition following the selection of a preferred alternative.

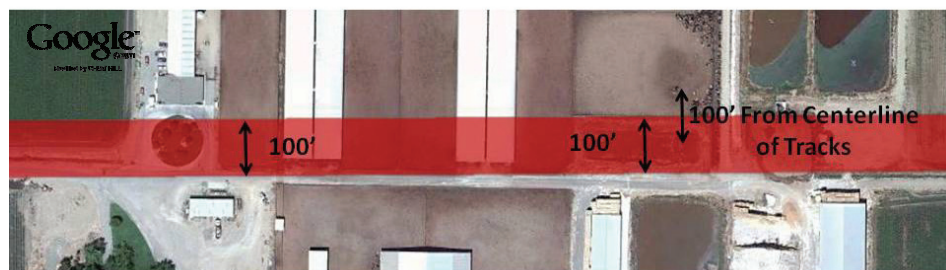
**Table 3.14-B-1**  
 Impacts by Alternative

<b>Alternative/Option</b>	<b>Severe</b>	<b>Moderate</b>	<b>Negligible</b>
BNSF Alternative with Ave 24 Wye, Mariposa Way Design Option East of Le Grand	0	2	3
BNSF Alternative with Ave 21 Wye, Mission Ave Design Option Through Le Grand	1	1	1
BNSF Alternative with Ave 21 Wye, Mission Ave Design Option East of Le Grand	1	1	1
BNSF Alternative with Ave 21 Wye, Mariposa Way Design Option Through Le Grand	0	1	1
BNSF Alternative with Ave 21 Wye, Mariposa Way Design Option East of Le Grand	0	1	1
Hybrid Alternative with Ave 21 Wye	0	1	0
Hybrid Alternative with Ave 24 Wye	0	4	4
Castle Commerce Center HMF	0	0	4
Fagundes HMF	1	1	0
HMF = heavy maintenance facility			

## Confined Animal Facilities with Severe Impacts

### *Double Creek Ranch – 1320 S. Arboleda Drive*

Double Creek Ranch is a dairy located at 1320 S Arboleda Drive near East Mission Avenue, along any of the BNSF alternatives using the Mission Ave design option. The aerial photos below show the entire dairy facility and a close-up view of the affected area. The at-grade alignment would bisect the dairy approximately in half, with the northern half of the dairy completely cut off from the southern half. Direct impacts on dairy facilities, however, would be moderate because the alignment follows an existing access road. Direct impacts would occur to portions of the holding pens, one of the wastewater lagoons, and other dairy facilities. As shown below, animal holding areas would be located less than 100 feet from the tracks, which means that indirect noise impacts would occur if the dairy remained in operation. During the right-of-way acquisition process, engineering solutions may be identified that make it possible for continued operation. For example, right-of-way agents could work with alignment engineers to provide acceptable private road and utility crossings under or over the alignment, and provide noise mitigation. However, this is a speculative outcome and at this time it is assumed that the severity of the impact precludes the ability for the dairy to continue operation.

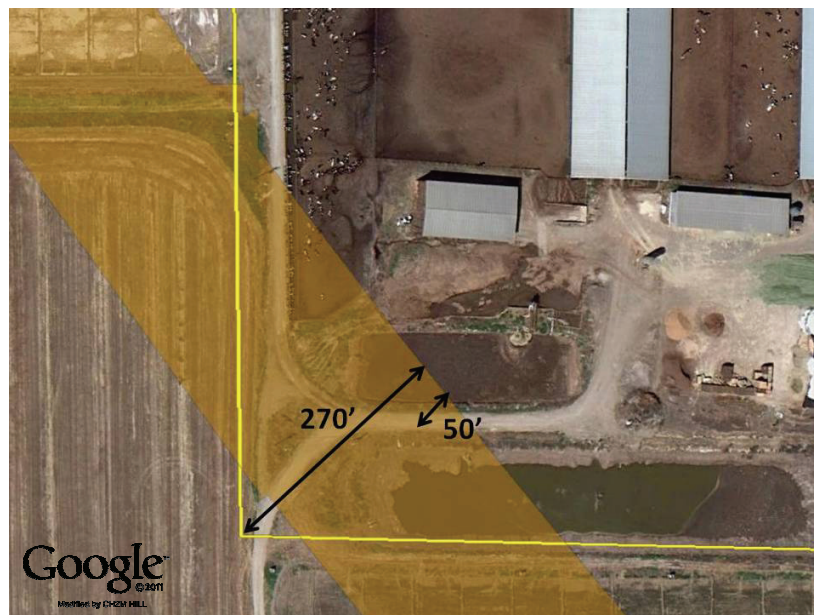
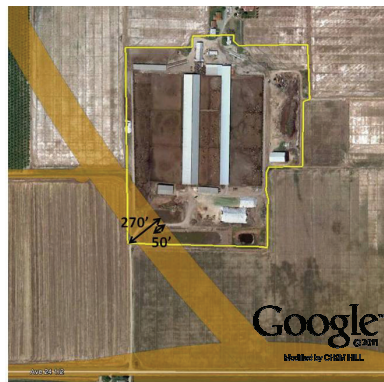


## Confined Animal Facilities with Moderate Impacts

### *Dominguez Ribiero Dairy – Avenue 25 and Road 13*

The Dominguez Ribiero Dairy, located near the southwest corner of Avenue 25 and Road 13, would experience moderate impacts from the HST alignment (UPRR/SR 99 Alternative with Ave 24 Wye and West Chowchilla design option, Hybrid Alternative with Ave 24 Wye).<sup>2</sup> The alignment would require acquisition of the southwest corner of the dairy, which contains portions of the holding pens and wastewater treatment lagoons. Reconfiguration of these facilities during the right-of-way process would allow the dairy to continue operation.

The HST track centerline would be approximately 50 feet from the remaining holding pens in this area, indicating that indirect noise impacts would occur. As described in the EIR/EIS, the threshold for noise impacts on dairy cattle is 100 dBA SNEL, which occurs approximately 100 feet from the tracks. Because of the close distance, these indirect impacts would be moderate.

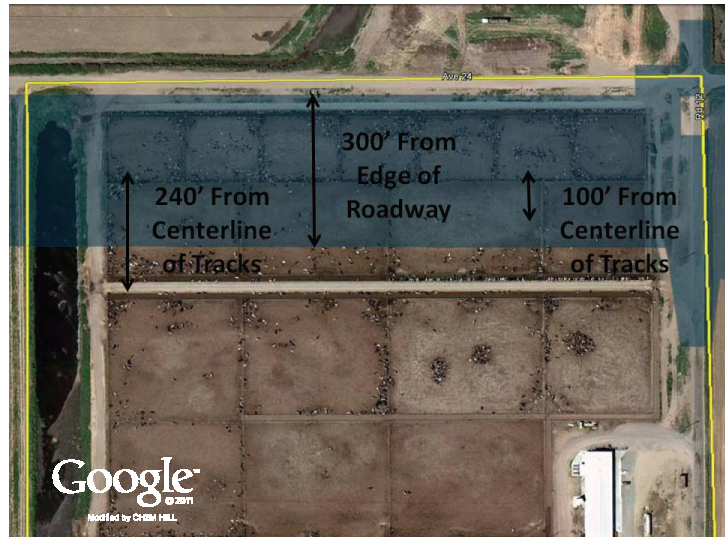


<sup>2</sup> In the EIR/EIS and earlier version of this memorandum, the Dominguez Ribiero dairy was bisected by a new road (relocated Avenue 25 alignment). Based on further review and in responses to comments, it was concluded that an alternate road realignment was feasible. The revised alignment substantially lessens the project impacts on this facility.

### **AJ Dairy – 23468 Road 12**

The AJ Dairy, located at 23468 Road 12 between Road 23½ and an unimproved segment of Avenue 24, abuts the Avenue 24 right-of-way to the north. All alternatives using the Ave 24 Wye would acquire the northern portion of this dairy, with an encroachment of up to 300 feet from Avenue 24. This would remove an entire series of holding pens, and a portion of the dairy's wastewater lagoon along the western side of the property. The impact is expected to be moderate because the acquisition would require only 10 percent of the overall dairy facility, and would cleanly sever this area near an existing access road. The HST track centerline would be approximately 240 feet from the remaining holding pens in this area, indicating limited potential for noise impacts. These indirect impacts would be negligible because of the distance.

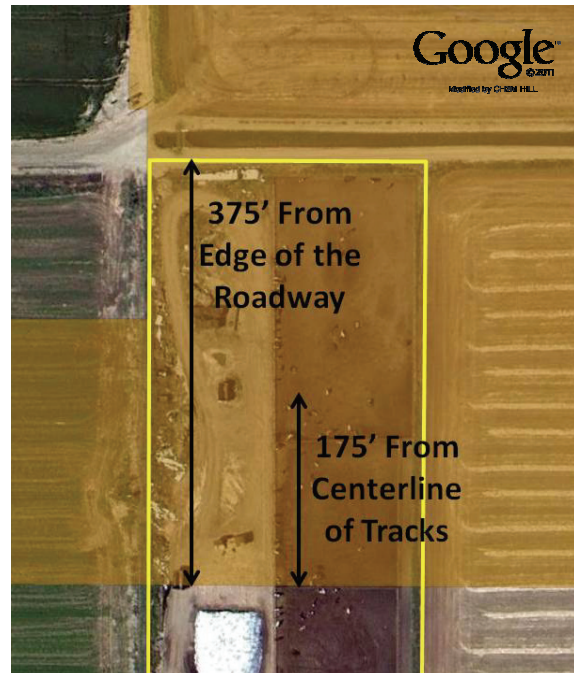
The acquisition requirement is due in part to the layout of the Fagundes HMF site. The dairy would be at the rear of the Fagundes HMF, but the facility would include a 250-space parking lot for train crews and Central Control employees, as well as emergency ingress/egress to Road 12. If the Fagundes HMF site is not selected as the preferred alternative (among the nine HMF sites under consideration), the extent of the encroachment would be reduced by approximately one-third (200 feet instead of 300 feet). Impacts, however, would be the same as described above.



***Tony Machado Dairy – Avenue 23½***

The Tony Machado Dairy, located on Avenue 23½ between Road 13 and Road 14, has a northern extension that abuts an unimproved portion of Avenue 24 and the Chowchilla Water District Eastman Canal. The alignment would require acquisition of approximately half of the northern portion of the dairy, approximately 375 feet into the property. This area is used for holding pens and storage. The loss of this area is not considered severe because there appears to be sufficient area surrounding the unaffected facilities to compensate for the loss of these holding pens. The HST track centerline would be approximately 175 feet from the remaining holding pens in this area, indicating some potential for indirect impacts. These indirect impacts, however, would be negligible because of the distance.

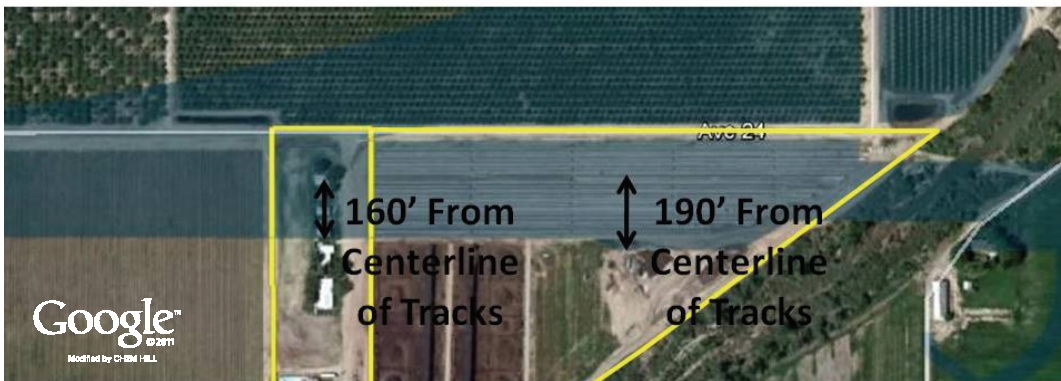
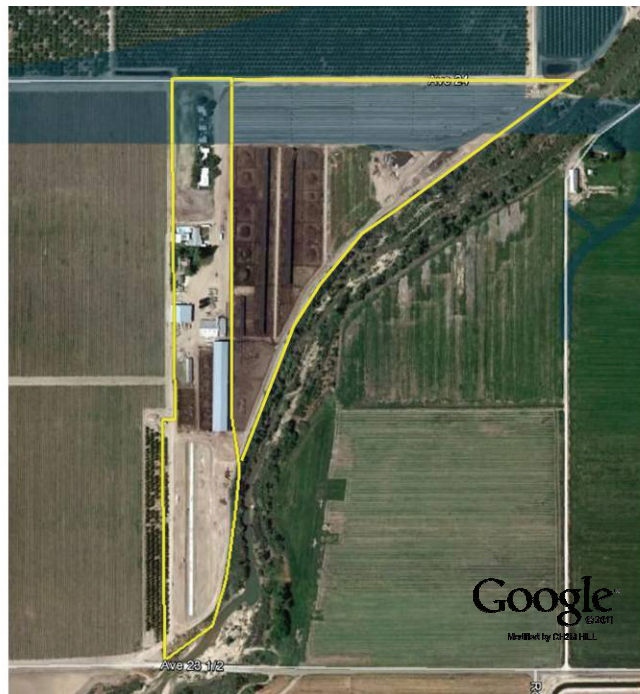
All of the northern portion of the dairy would be acquired for alternatives that use the West Chowchilla alignment – the UPRR/SR 99 Alternative with Ave 24 Wye, West Chowchilla design option, and the Hybrid Alternative Ave 24 Wye. Other alternatives using the Ave 24 Wye would not need to acquire the entire area, but the at-grade alignment would effectively sever the remaining portions of this area from each other. For this reason, all alternatives using the Ave 24 Wye are considered to affect this dairy equally.





**Valley Calf – 10654 Avenue 24**

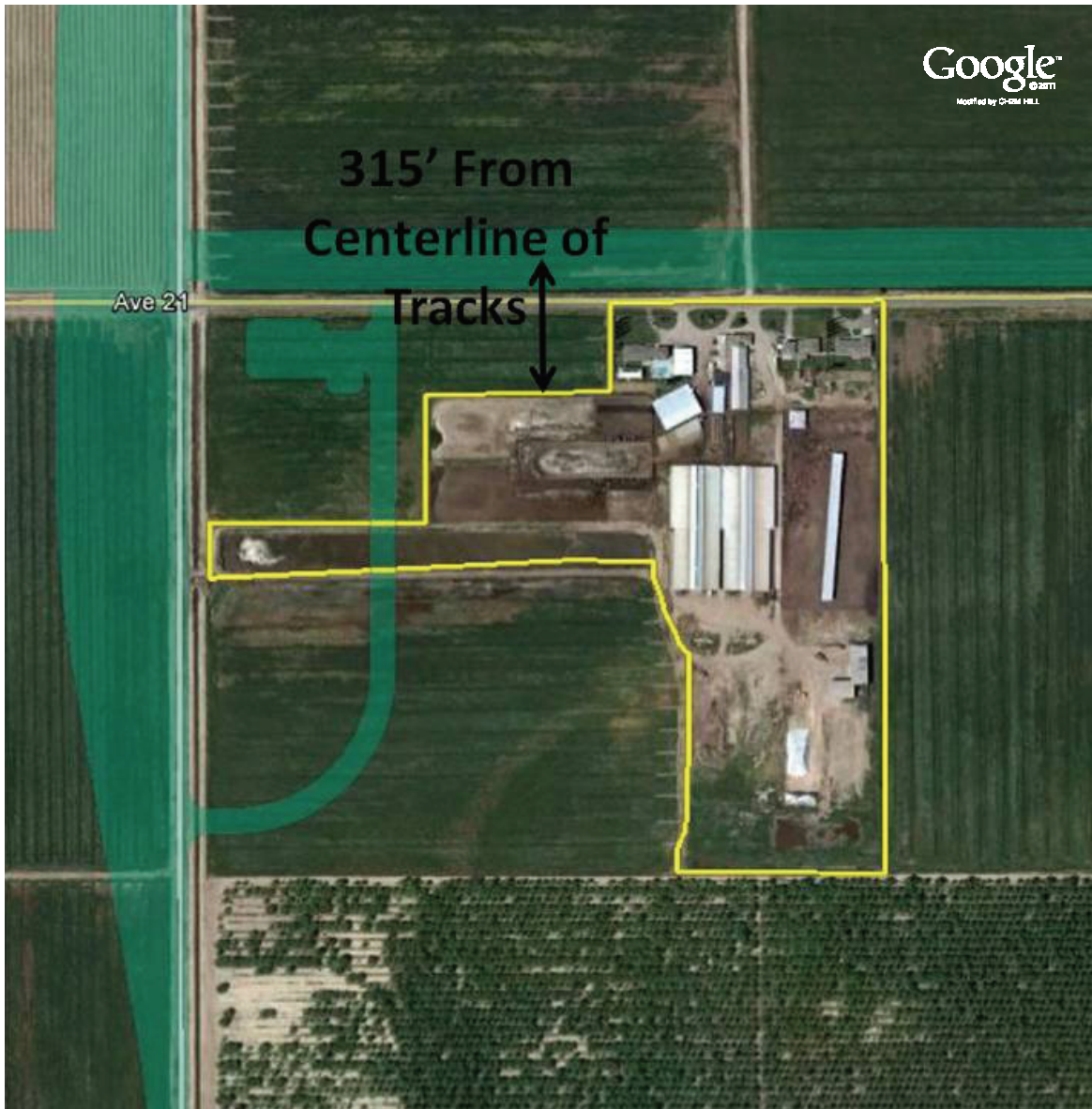
Valley Calf contains both feedlot and poultry operations.<sup>3</sup> The facility, located at 10654 Avenue 24, would be affected by all alternatives using the Ave 24 Wye. The alignment would require acquisition of the northern portion of the property, approximately 220 feet into the property from Avenue 24. This would require the acquisition of the entire poultry operation. No critical feedlot infrastructure (such as holding pens and wastewater lagoons) is located in this area, so the overall level of impact is expected to be moderate. The nearest holding pens would be approximately 175 feet from the HST track centerline, indicating negligible indirect (noise) impacts on feedlot operations.



<sup>3</sup> In the EIR/EIS and in the original version of this memorandum, the poultry operation was not shown. It appears to have been recently installed.

***The Bertao & Sons Dairy – 11270 Avenue 21***

The Bertao & Sons Dairy, located at 11270 Avenue 21, would be affected by all alternatives using the Ave 21 Wye. The alignment would not require property acquisition because it would be located approximately 80 feet to the north across Avenue 21. However, the project includes an overcrossing of the alignment at Road 11 and a paralleling substation in this area. The paralleling substation would not be located in an area used by dairy facilities. The new access road, however, would cross a portion of the dairy's wastewater lagoons. Impacts are expected to be moderate because lagoons could be constructed nearby, or the substation could be relocated. Indirect impacts (noise) from the Ave 21 alignment are expected to be negligible because the alignment would be approximately 315 feet away from the nearest dairy facilities.



## Confined Animal Facilities with Negligible Impacts

### *Dairy – 12467 Ave 24½*

The dairy located 12467 Ave 24½, between Road 12 and Road 13, would not be subject to impacts from any of the HST alignment options. However, the dairy would experience negligible impacts from the required road realignment and other road improvements required to maintain local circulation. The road realignments and improvements would affect a small portion of the existing property by widening the existing roadways around the property.



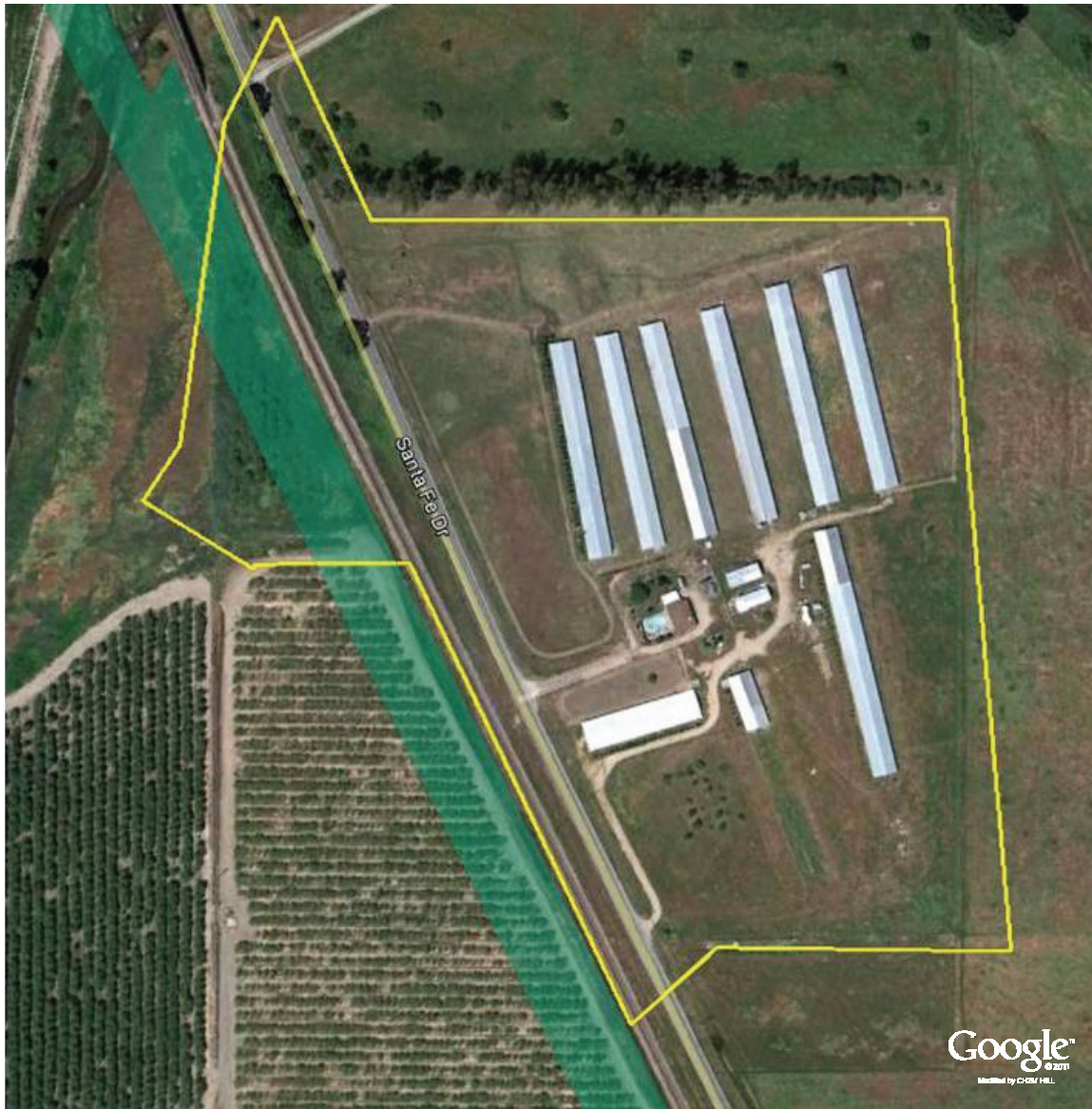
***Antonio Reis Dairy - Avenue 26***

The Antonio Reis dairy, located at the southwest corner of Avenue 26 and Road 12, would be partially affected by a new overcrossing. The new overcrossing would be required to maintain access along Avenue 26 for all alternatives using the Ave 24 Wye. The minor encroachment from road modifications, however, would not affect any of the dairy facilities. The alignment itself would be located approximately 1,500 feet east of the dairy, so impacts would be negligible.



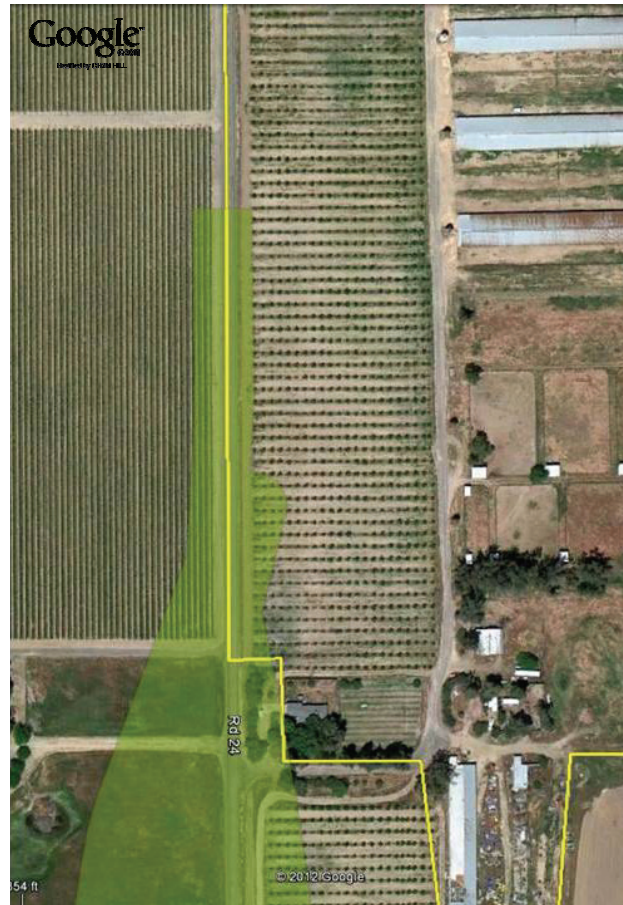
***Poultry Facility – 28419 Santa Fe Drive***

A confined animal facility is located at 28419 Santa Fe Drive. It appears to be a poultry facility, but it is not in operation at this time. All of the BNSF Alternative alignments would be located across the BNSF tracks and Santa Fe Drive, a distance of approximately 150 feet from the nearest facility. For this reason, impacts on this facility would be negligible.



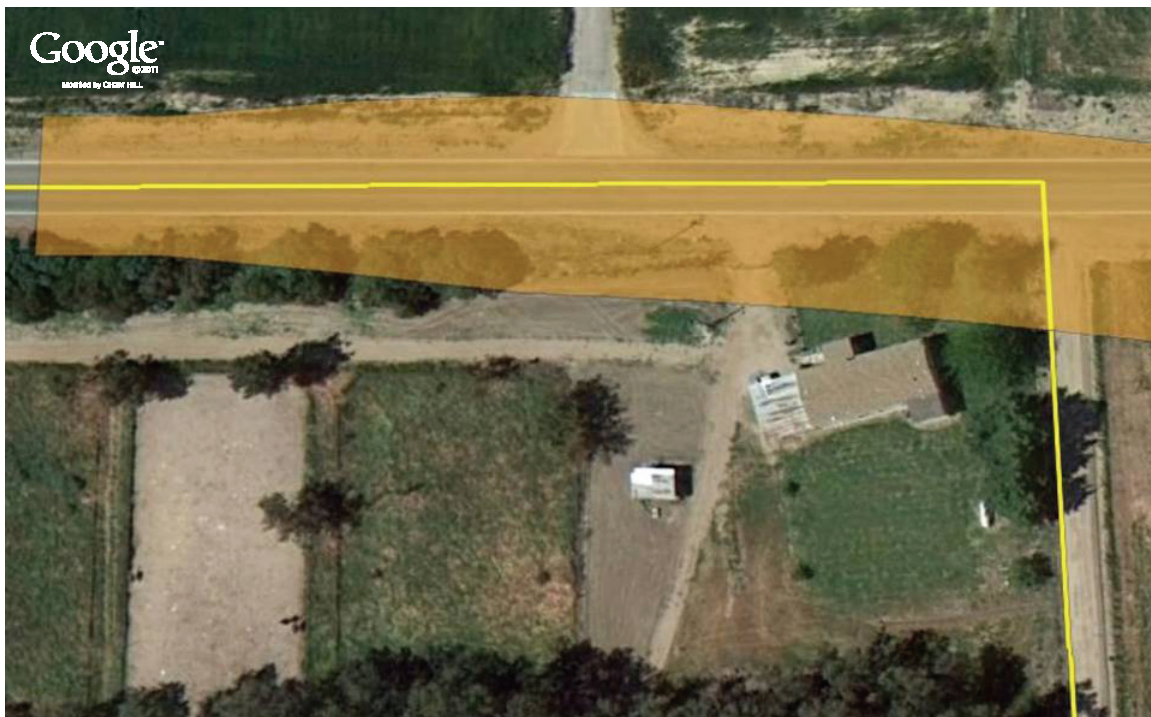
***Poultry Facility – 21111 Road 24***

The confined animal operation at 21111 Road 24 is located east of Road 24, west of the BNSF alignment, and north of Avenue 20½. This appears to be a poultry operation that would experience very minor impacts from a new overcrossing for Road 24 (required for BNSF and Hybrid alternatives using the Ave 24 Wye). Only a very small portion of the property (an orchard) in the southwest corner would be affected. This minor encroachment will not affect operations of the facility.



***Confined Animal Operation – 24877 Road 10***

The confined animal operation at 24877 Road 10 is located at the intersection of Ave 25 and Road 10 on the southeast corner. This confined animal operation is part of Ace High Adventures, which raises game birds for a hunting preserve in Helm, CA. This facility would experience negligible impacts from the realignment and new overcrossing for Avenue 24½ and the associated crossing of Ash Slough. Only the northeast corner of the property would be encroached, which would not affect operations.

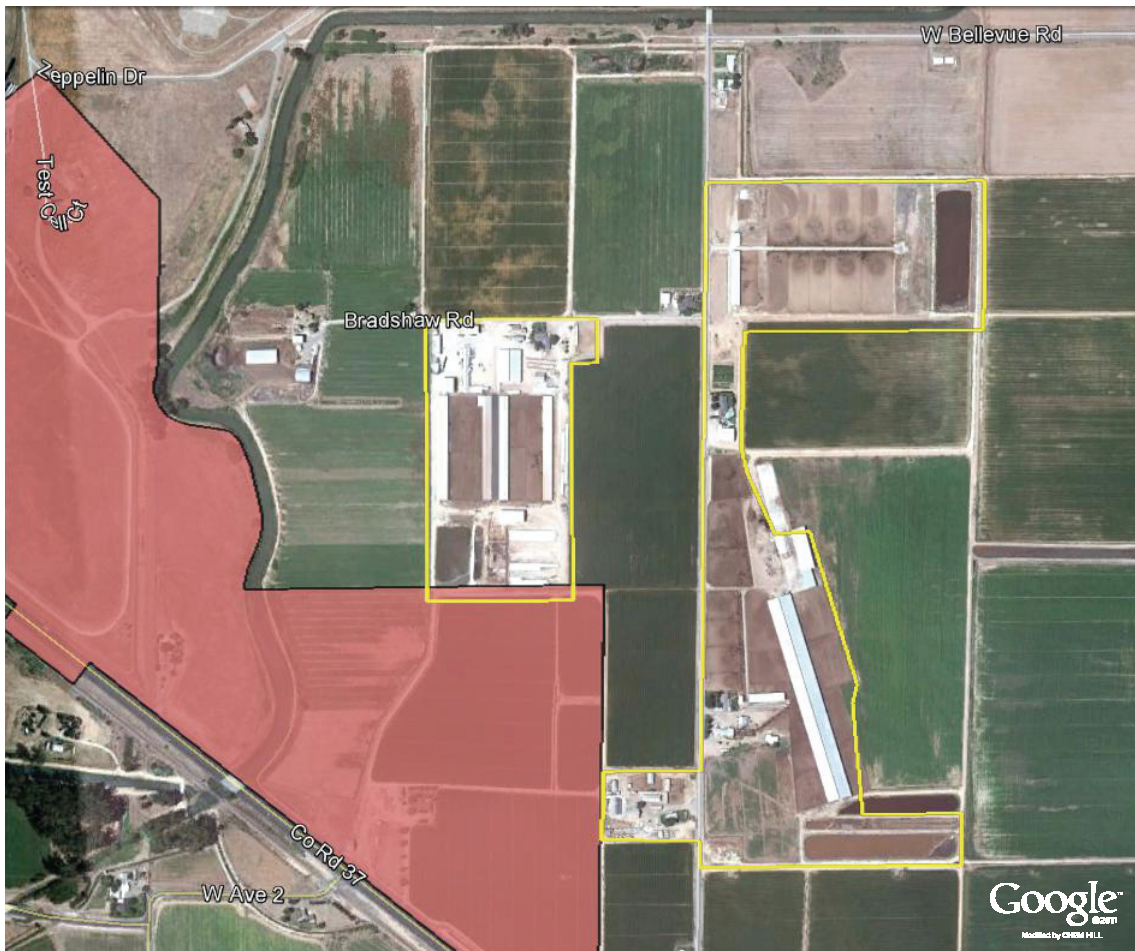


## Impacts from HMF Alternatives

### *Castle Commerce Center*

The Castle Commerce Center HMF site would not require the acquisition of dairy properties, but the site abuts or is very close to four dairies in the Fox Road area. This part of the Castle HMF site would be used for laydown and storage of right-of-way maintenance equipment and materials, and for employee parking (see the Final EIR/EIS, Section 2.2.9.2, for a schematic drawing of a typical HMF site plan). Based on this information, it is unlikely that these HMF uses would occur within 100 feet of the property lines. For this reason, indirect effects would be negligible. No dairies would be affected by the access track from the Merced station.

Even though the Castle Commerce Center HMF site is adjacent to four dairies, facilities would be located more than 100 feet away from the site, and therefore noise levels would not exceed the 100-dBA SEL threshold. The other HMF sites would not require removal of dairies or be located adjacent to any.

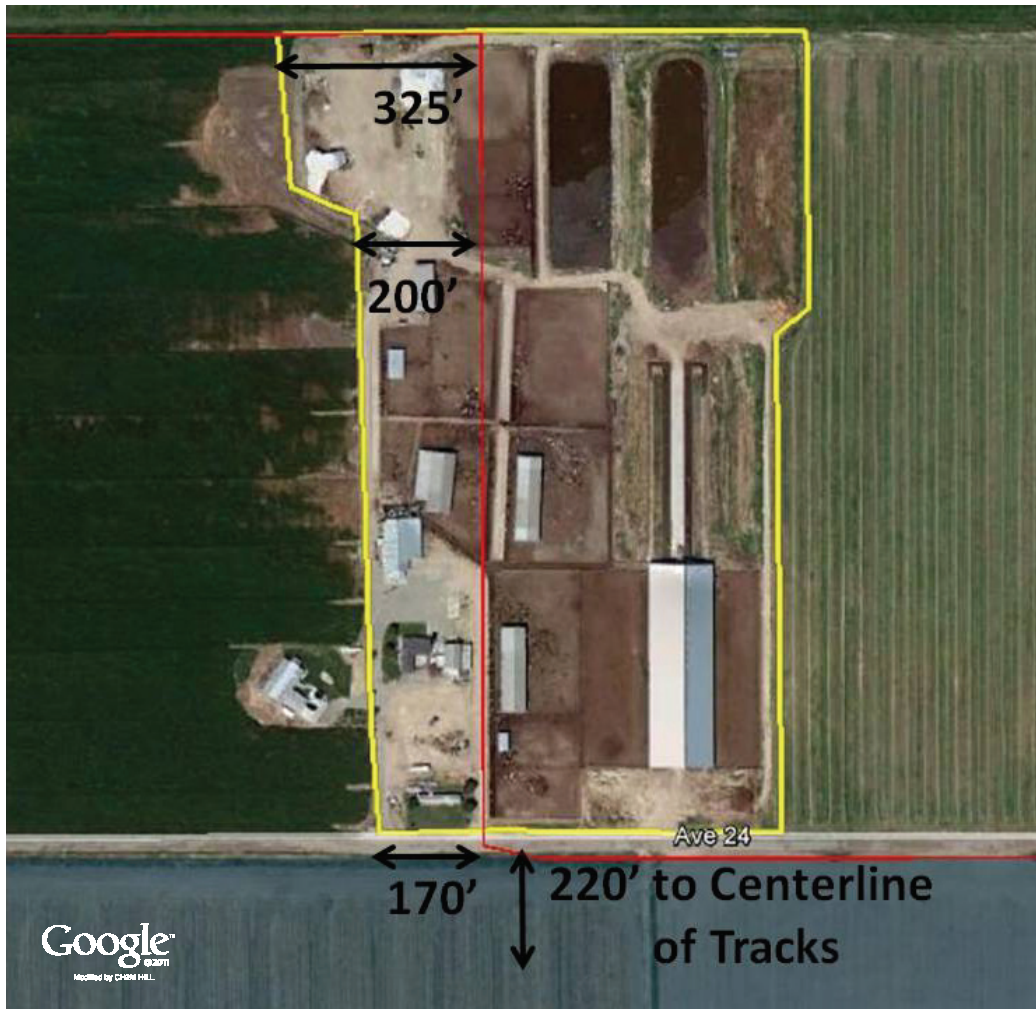




**Fagundes**

Selection of the Fagundes HMF Alternative as the preferred HMF site would affect the Victoria Farms Dairy located at 12003 Avenue 24. The Fagundes HMF would require the acquisition of approximately one-third of the dairy property, including major portions of its holding pens and related facilities. Based on preliminary layout options, this part of the Fagundes HMF site would be used as a rolling stock maintenance shop and for employee parking. It is unlikely that the severity of these impacts would allow the dairy to continue operation.

In the absence of the Fagundes HMF, this dairy may nevertheless experience indirect impacts from the alternatives using the Ave 24 Wye. However, because dairy would be located approximately 220 feet from the track centerline, these impacts would be negligible. The Fagundes HMF also would affect the AJ Dairy at 23468 Road 12, which is described above.



## Temporary Construction Noise Impacts on Confined Animal Agriculture

Construction of the project would generate noise from construction equipment and vehicles used for clearing, grading, and track installation. Noise levels from project construction are estimated to be 89 dBA equivalent sound level ( $L_{eq}$ ) at 50 feet for an 8-hour workday. Some construction activities, such as clearing and grading, would occur to the edge of the alignment. Noise generated during construction could temporarily disturb livestock and poultry near the HST alignment.

The Federal Railroad Administration has developed noise criteria for impacts of high-speed trains on farm animals. However, there are no construction-specific guidelines with regard to livestock. The general threshold for construction noise impacts on commercial land uses (such as dairies) is 85 dBA 8-hour  $L_{eq}$  (day or night). At a distance of 100 feet from the alignment, the 8-hour  $L_{eq}$  for project construction at the dairies would be 83 dBA. In most cases, livestock holding areas would be located more than 100 feet from the edge of the alignment where construction activities could occur. For these facilities, there would be no impact, as defined in the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA), from project construction noise on these facilities.

Three dairies along the Ave 24 Wye have livestock holding areas within 100 feet of the edge of the alignment, where livestock could experience construction noise levels in excess of 85 dBA 8-hour  $L_{eq}$ . Each of these dairies is discussed below.

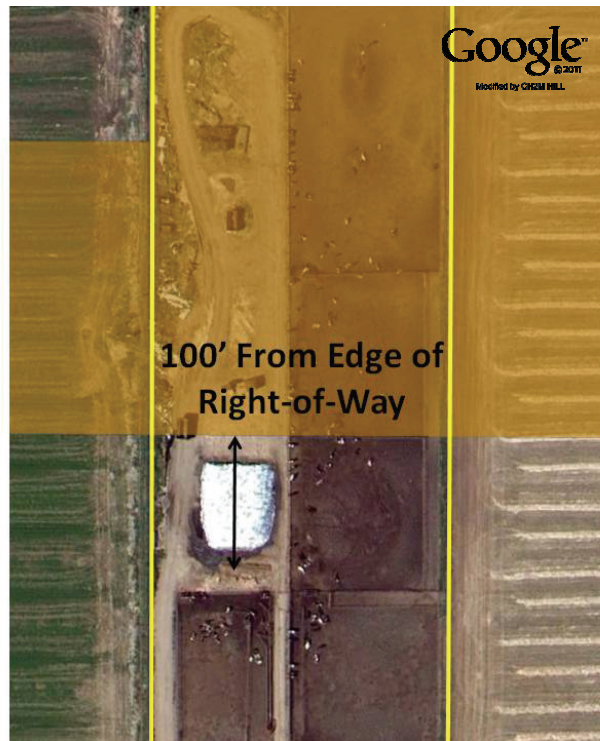
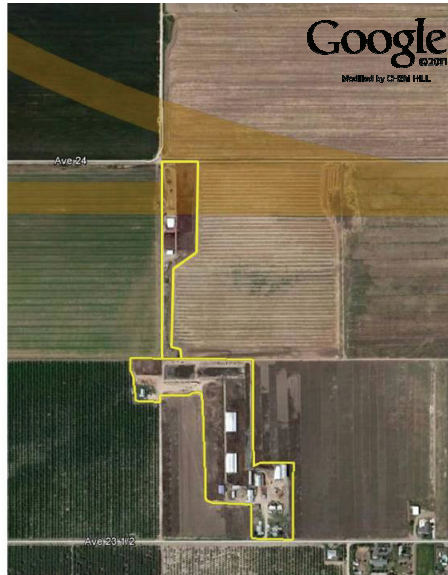
**AJ Dairy – 23468 Road 12**

Animal operations at the AJ Dairy would experience temporary impacts from construction activities. The HST alignment itself would remove an entire series of holding pens and essentially move dairy operations below the east-west access road between the holding pens. By moving operations south of this access road, the animals would be beyond the 100-foot threshold from the edge of the right-of-way. Thus construction noise would be negligible under NEPA and less than significant under CEQA.



***Tony Machado Dairy – Avenue 23½***

Animal operations at the Tony Machado Dairy would experience temporary impacts from construction activities. The northern portion of the property would be acquired to accommodate the HST alignment; below the area that would be acquired, the livestock would be able to move at least 100 feet away from the alignment as necessary. With regard to farmland conversion, the temporary noise impact would be negligible under NEPA and less than significant under CEQA. However, access would be reduced by construction noise.



**Valley Calf – 10654 Avenue 24**

The HST alignment itself would require acquisition of the northern portion of the property, which in turn would require acquisition of the entire poultry operation. The northernmost row of holding pens would be affected by temporary construction noise; the farmer could temporarily relocate these animals to a different part of the property during the short construction phase. With regard to farmland conversion, construction noise would be negligible under NEPA and less than significant under CEQA. However, access would be reduced by construction noise.

