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COMPREHENSIVE PLANNING SERVICES

**FINAL ENVIRONMENTAL IMPACT REPORT
FOR
THE MONTERRA RANCH SUBDIVISION**

SB826

EIR No. 84-007

Subdivision 815

**AP Nos. 103-071-16, 17;
259-011-35, 39, 40, 41, 42,
43, 44, 45, 46, 65;
416-101-01, 02, 03, 04;
a portion of 259-011-64
County Base Map 17
County Planning Area 02**

**Prepared for
Monterey County**

February 1986

SUMMARY OF IMPACTS AND MITIGATION MEASURES

This section presents a summary of the project's impacts on the environment and mitigation measures to prevent or lessen these impacts. Impacts and mitigation measures are consecutively numbered in the report, and a summary is presented here; see full report for detailed wording of impacts and mitigation measures.

BRIEF PROJECT DESCRIPTION

Hanover Monterra Investors II propose to develop their 2,831 acre property into 283 lots, and a recreational tennis and equestrian complex for residents and their guests; and, to dedicate 115 acres for an addition to Jack's Peak Park. The 283 single-family lots will consist of 10 ranch lots and 273 estate lots; the overall average density is one lot per 10 acres of land. An internal private loop road system is proposed with entry gates on Highway 68 at York Road and Ragsdale Drive (Ryan Ranch entrance).

GEOLOGY IMPACTS AND MITIGATION MEASURES

Impacts

1. Absent the completion of additional specific geotechnical studies identified in this EIR, and adherence to recommendations which come out of those studies, there is the potential for adverse geologic impacts in several areas of the subdivision. Areas subject to impacts, absent these studies, include the entire Berwick Canyon Fault and Landslide, lots located along the structural lineation in the central-southwestern portion of the site, and lots located in dip slope areas. Specific studies needed are listed below under Mitigation Measures. Specific lot numbers are described in the Geology section.
2. Future homes built on subdivision lots will be subject to strong seismic shaking in the event of an earthquake along the San Andreas Fault.
3. Landslide areas have not been studied in enough detail necessary to establish appropriate setback criteria.

Mitigation Measures

1. Additional geotechnical field work, including trenching, is required to determine the location of the Navy and Berwick Canyon Faults, and the

structural lineations located between the Navy and Chupines Faults. There is great potential for surface offset along the structural lineation. A 100 foot construction setback is initially recommended on either side of these features and this setback may need to be increased where the features are not precisely located or are concealed.

2. No structures or lakes should be constructed on the Berwick Canyon landslide area until further geotechnical studies are completed to determine the slide activity, the fault location and the potential problems with loading (building on) the slide mass.
3. A thorough aerial photo investigation and field review of possible slides in all areas proposed for development should be carried out to determine whether the slides are moving headward or laterally; and, to establish reasonable setbacks from specific slides. See Section 2.1.5 for specific lots involved.
4. A geotechnical study on dipslopes should be completed to determine safe dip angles with the Monterey Formation Bedrock; and, to recommend foundation and other techniques which will prevent future slope failure in areas where these angles are exceeded.

SOILS IMPACTS AND MITIGATION MEASURES

Impacts

4. The foundations of proposed structures could be subject to corrosion of unprotected steel and concrete.
5. Access roads to Lots 185-190, 146-184, 62-69, 57-60, connecting 118 and 119, cross 30% or greater slopes in potentially thin and erosive soils.
6. Topography could constrain development in several areas where lots contain less than 4000 square feet of land with slopes for building sites less than 30%. Lots 44, 45, 58, 59, 60, 75, 82, 85, 86, 275 and 276 are all in this category.

Mitigation Measures

5. On-site soil conditions at each building site should be evaluated by a soils engineer to determine foundation requirements. Geotechnical expertise may also be required in some cases; see geologic impacts above.
6. An erosion control plan should be prepared for the project. This plan should include all of the following:
 - all disturbed slopes should be revegetated with a mix of seeds best suited for the climate and soil conditions;
 - slopes should be covered with a straw mulch or jute netting after seeding; the straw mulch should be punched in; no hydromulch should be used;
 - no grading should occur between October 15 and April 15, unless conforming to Monterey County Code Section 16.12.090;
 - where possible, cuts should be revegetated with trees as well as seed, especially in areas where trees are removed to allow roads and driveways;
 - removed topsoil should be stockpiled on the site to be used for revegetation work;
 - all road work on slopes over 30% or in landslide or dipslope areas shall require geotechnical evaluations;
 - land should be graded and landscaped in increments of size that can be completed during a single construction season;
 - storm water should not be allowed to flow directly down unprotected slopes, devoid of vegetation;
 - catch basins should be used to retain sediment within the site area during the construction period;
 - the grading operations should be evaluated and inspected by a qualified soils engineer;

7. Building envelope locations should be required on lots which include slopes greater than 30%, or those adjacent to slide areas, dipslopes, faults or lineations deemed hazardous.
8. Relocate access roads which cross 30%+ slopes or require specific geologic, grading and erosion control plans to mitigate impacts.

HYDROLOGIC AND DRAINAGE IMPACTS AND MITIGATION MEASURES

Impacts

7. There will be an 11.4 per cent increase in runoff over pre-development levels. During construction, there is the potential for erosion of on-site soil and sedimentation in off-site, downstream drainage areas, including Laguna Grande and Roberts Lakes. Future runoff from urban activity areas (roads, driveways, homesites) will contribute to a variety of water quality problems. Contaminant matter includes sand, silt, organic matter, vehicular oils and fuels, heavy metal compounds, non-biodegradable fertilizers, pesticides and vegetative control chemicals. The planned Equestrian Center could have significant water quality impacts if not properly designed and maintained. Groundwater quality testing indicates that iron and manganese concentrations and salinity content exceed safe drinking water requirements.

Mitigation Measures

9. Retention basins should be designed to retain additional peak runoff due to development, while discharging no more than predevelopment 10-year design runoff. Retention basins should also be designed with overflow or bypass features to allow post-development 100-year storm flows. Each basin is designed to discharge predevelopment 10-year runoff at two feet of freeboard while storing additional runoff due to development. Each basin is designed to allow post-development 100-year storm overflows at one foot of freeboard. Pipelines, curbs and gutters and catchment structures will be designed for the 10-year storm, and culverts crossing under roadways in drainage channels will be designed for post-development 100-year storm.

10. Based on General Plan Policy 16.2.7, the Project Engineer will design and submit for approval to the County Planning Director after consulting with the Monterey County Flood Control and Water Conservation District, a complete drainage plan, including engineering studies and calculations, future runoff courses, and present and future volume of runoff and silt load. Wherever possible, drainage shall be directed to the seven proposed detention basins. As an addendum to the drainage plan, it shall be determined if these basins are adequate to handle the increased runoff created by the project. Maintenance or a pro-rated contribution toward maintenance of the detention ponds shall also be described in the drainage plan addendum.
12. The project applicant shall contribute the development drainage fee per acre to the County Treasury "Canyon Del Rey Creek Watershed Zone Primary Facilities Updating Fund" for off-site operation, maintenance and updating of primary facilities in this watershed, at the discretion of the MCFC and WCD. This contribution shall be made prior to filing of the Final Subdivision Map.
13. The applicant shall pay for all on-site and a pro-rata share of off-site maintenance and operation of storm drainage facilities and access roadways impacted by the project from the time of installation or filing of the Final Map until acceptance of the improvements for the subdivision by the Board of Supervisors, and/or until a Homeowner's Association or other agency, with legal authorization to collect fees sufficient to support the service, is formed to assume responsibility for the service. Mitigations provided in Section 2.3, Soils, requiring erosion control measures shall be implemented in construction and buildout in order to prevent erosion and siltation from increased runoff.
14. There should be a complete and careful County review of the entire grading plan for the proposed project, before project approval. If it is found that there would be extensive cuts and fills, especially on slopes exceeding 30%, thereby increasing potential for excessive erosion and siltation, then the project should be redesigned to eliminate such plans.

15. It should be a condition of project approval that a maintenance program agreement be established to ensure that all paved roads and parking areas be mechanically swept at least once a year in early September before the annual rainy season begins. The contaminant matter traps (French drains) should be appropriately maintained. The Monterey County Public Works Department should establish a procedure to ensure that maintenance of the facilities is carried out annually. The use of a Homeowner's Association requirement and some form of bonding for the first five years may be appropriate.
16. A water quality expert should check the water at least twice a year to ensure that maximum contaminant levels set by the California Department of Health are not exceeded. Water quality test results should be sent to Monterey County's Environmental Health Service for monitoring.
17. Although the Logan water studies indicate that there is an ample groundwater supply for the proposed project, water conservation practices should be considered and implemented whenever possible. Various techniques include: installation of water-conserving fixtures (faucets, toilets, showerheads); use of native low-water requiring plants for landscaping; discouragement/prohibition of exotic plantings; use of drip irrigation systems.
18. If a water mutual is formed, it must meet the standards of Title 22 of the California Administrative Code and the Residential Subdivision Water Supply Standards. It must also be approved by the Monterey Peninsula Water Management District, the State Public Utilities Commission, and the County Environmental Health Service.

VEGETATION/WILDLIFE IMPACTS AND MITIGATION MEASURES

Impacts

34. Development of lots 227 and 234 through 239 and the cul-de-sac road leading to them will displace and remove the rare plant species, Hickmans Onion, resulting in a 90 per cent reduction of this population and available habitat on-site. This would be a significant adverse impact.

9. Approximately 53.5 per cent of the Monterra Ranch Property would be directly affected to some degree by the proposed subdivision development. This effect ranges from direct removal of vegetation cover to indirect modification of the vegetation due to the introduction of invasive landscape, alteration of environmental factors controlling vegetation and habitat development (ie., prevention of fire strategies), and loss of habitat diversity due to monocultural practices or reduction in habitat size.
10. A total of 53.5 per cent or 1,563 acres of existing habitat on the Monterra Ranch may be subject to modification or indirect impacts resulting from this project. Nearly 72 per cent of oak tree habitat may be affected. However, half of that is found on the ranch lot parcels which should not directly disturb more than 10 per cent of the average 50 acre parcels. More significant direct losses of habitat are anticipated within those parcels designed as estate lots, and the recreation and equestrian complex. The higher density of structures and human use in these areas are likely to result in greater direct impact losses to the vegetation and associate wildlife.
12. The activities of fire prevention following the development of the Monterra Ranch property may have a significant long-term impact on vegetation. The accumulation of woody fuels may pose a severe fire hazard over time, and regeneration of existing vegetation conditions would take many years following a catastrophic wildfire.
13. Other indirect impacts to vegetation resulting from the introduction of residences to the landscape include the possible introduction to competitive, adventive landscape species such as eucalyptus, pampas grass, periwinkle, english ivy, etc. that can escape into the surrounding native habitat and displace native species. Increased summer irrigation of landscape vegetation could cause shifts in the vegetation composition or result in soil conditions unfavorable to mature trees that have adapted to a regime of winter wet/summer dry cycles characteristic of California's mediterranean climate. Saturation of oak root zones in the summer have resulted in increases in oak root fungus and decay. This has been shown to be a significant impact in oak woodland

landscapes in association with residential development.

16. The proposed development will reduce the available habitat for wildlife species found in several plant communities discussed elsewhere (LSA 1985). The habitat losses for small mammals and birds will, in turn, reduce the availability of prey for mammalian and avian predators. Losses of forage plant species will reduce deer numbers and their utilization of the area. The result will be a general reduction in wildlife utilization of the area of development.
17. Introduction of domestic cats and dogs could result in increased wildlife conflicts by predation and displacement of native prey species. Deer are very susceptible to attacks by domestic dogs in packs. Cats are effective predators of small game, in particular song birds.
18. Impenetrable fencing around estate and clustered housing tracts could effectively focus deer browsing and restrict migration to linear corridors. This could result in overgrazing impacts of the designated open space areas.

Mitigation Measures

The following mitigation measures are summarized from a more extensive list in Section 2.5.3.

34. Development proposed in the occurrence area of Hickman's onion on-site should be eliminated and a minimum buffer of 50 feet implemented to preserve the population. This would entail the loss or redesign of numerous parcels along the proposed Romera Vista Road in the northwestern end of the property. The furthest occurrence to the south could be protected by shifting of the Romera Vista Road to the east. Care should be taken to preserve the present vegetation and soil structure in the areas where these occurrences were found. No coralled livestock should be kept in these areas. Fencing of the occurrences may be appropriate to prevent accidental encroachment by off-road vehicles and construction equipment or their use as laydown areas.

19. Direct disturbance or removal of native vegetation cover should be restricted to those areas designated for development only (except as prescribed under Fire Control and Fuel Management).
20. Wherever possible, existing unpaved roads on the site should be used for access to the homesites. Construction access to and from homesites should be along the same routes that are proposed for residential access. Existing roads that will not be used as residential access routes should be abandoned. The final residential access routes should be completed before homesites construction activities begin. During construction phases, access roads should be frequently watered to minimize the generation of road dust.
21. The introduction of non-native plant species should be avoided. Native trees (preferably oaks), shrubs, and ground covers should be used for erosion control and landscaping within the designated development envelope surrounding each homesite, the proposed recreation areas, and along the access road system. A landscape plan should be developed incorporating the retention of native trees and vegetation around the building sites. Deed restrictions should be instituted to assure recourse if violated.
28. The following minimal guidelines should be included in the code, covenants and restrictions for the entire development. These guidelines would establish basic rules about impacts that may be implemented by one or a few homeowners but that would negatively impact the resources of the entire development.

For example, if no restrictions are established regarding free-roaming dogs, deer will avoid the general vicinity reducing the quality of the rural living environment for all homeowners.

The basic concerns to be addressed in such an agreement should include but not be limited to: leash and kennel requirements for dogs and bells fitted on cats; fencing designs that will not inhibit deer movements; maintenance of natural and diverse vegetation buffers in non-landscaped areas; minimal tree removal guidelines; fire control standards

should be established and enforced to protect vegetation; restrictions on human activity in designated open space areas; and guidelines on maintenance of domestic livestock.

29. A formal erosion control and revegetation program should be developed in consultation with U.S. Soil Conservation Service representatives and key County Planning Department staff. Detailed measures recommended for incorporation into an erosion control program are included in Section 2.5.3.
32. A controlled burning program should be considered for implementation on the property. Such a program would mimic the effects of natural fires and reduce fire hazard. Maritime chaparral is well adapted to conditions of recurrent fire (Griffin 1978), and coast live oak is extremely fire-resistant and has the ability to resprout from both trunk and branches following a fire (Plumb 1979). Controlled burning would reduce the probability of a catastrophic wild-fire and would be compatible with the ecological strategies of the predominant vegetation types on the property.
33. A program of fuel load reduction through direct vegetation removal should also be considered for implementation on the site, either separately or in tandem with a controlled burning program. A program of direct vegetation removal or thinning may be necessary to reduce critically high fuel loads prior to beginning a prescribed burning program. Dead brush may be piled and later consumed by the burn. The distribution of native vegetation patterns should be considered in designing and establishing fuel breaks.

VISUAL IMPACTS AND MITIGATION MEASURES

Impacts

20. There is the potential for a noticeable decrease in the rural character of the State Route 68 scenic corridor. From State Route 68, proposed essential uses could, depending upon specific design, be visible on Del Rey Ridge, on the ridge west of Work Canyon South, on slopes which face the road-way north of Tarpey Flats, and north-facing slopes between Work Canyon South and York Canyon.

21. There will be minor impacts on the visibility of the project from downtown Monterey, the Toyon residential area west of the site, Seaside, the Hidden Hills residential area, Laguna Seca residences and golf ranch, and homes southeast of the site at the end of Tierra Grande Drive. Views of the site from these areas are either quite distant or largely blocked by intervening topography and vegetation. Views of the project would be limited to lighting at night.

Mitigation Measures

36. Residential and other types of development in areas viewed from State Route 68 should be inconspicuous in order to maintain the natural rural character along this scenic corridor. Visually sensitive areas include Work Ranch Ridge, Del Rey Ridge and north-facing slopes and meadows along Canyon Del Rey. Strict architectural control of building plans for lots in these areas should be required.
37. A requirement for single-story houses, or the location of houses behind existing vegetation along Work Ranch Ridge, Del Rey Ridge, and slopes bordering State Route 68 should be considered.
38. Require building permits for Monterra lots to be evaluated utilizing specific design criteria; see Section 2.6.1.3 for criteria. These criteria are general in nature since overly prescriptive standards of design, given the current preliminary planning stage of the project plan, could be detrimental to the ultimate success of the project. Conformance with these criteria is necessary to provide a project integrated with the natural setting and the planning goals of the County of Monterey and to ensure that the scale of the project allows for development, but also relates to the preservation of the natural character of the State Route 68 corridor.

NOISE IMPACTS AND MITIGATION MEASURES

Impacts

22. Two ranch lots adjacent to Highway 68 on either side of the York Road entrance and 19 estate lots near Highway 68 on either side of the Ragsdale Drive (Ryan Ranch) entrance will be exposed to 55-60 dBA

Day/Night (Ldn) noise levels generated by aircraft operations and vehicular traffic along the highway.

22. All residential lots in the subdivision will experience annoyance from noise levels less than 55 Ldn caused by various aircraft operations such as engine runoff before takeoff, landings and takeoffs; by periodic Laguna Seca auto races and by testing of military ordnance at Fort Ord.
25. High noise levels will be generated on-site by various grading, and other heavy equipment during the construction phase of the project.

Mitigation Measures

67. Require an acoustical study to determine appropriate insulation and window specification requirements for new residential homes on lots adjacent to Highway 68 and on estate lots included in present or future airport noise contours outlined in Figures 2.14 and 2.15.
68. Require developer to disclose noise information in this EIR and the recommended acoustical study to prospective buyers so that they are aware of the short-term annoyance impacts of airport operations, the long-term impacts of airport and vehicular noise sources, and the potential mitigation measures available through appropriate building techniques.
65. Require construction equipment to be properly muffled and limit construction-related hauling and other construction activities to the hours between 7:00 A.M. and 7:00 P.M.

TRAFFIC IMPACTS AND MITIGATION MEASURES

Impacts

26. The project will generate 2,830 daily automobile trips with 178 inbound and 88 outbound trips during the evening peak hour. The additional trips represent a 15.7 per cent increase over existing traffic volumes on the existing two-lane Highway 68, and will have significant adverse impacts in that this highway is currently operating at Level of Service F--beyond its design capacity.

28. The proposed project will add two access points to the congested Highway 68, at Ragsdale Drive/Ryan Ranch and at York Road. The new Ragsdale Drive access point represents a significant adverse impact when compared to an alternative access point off Olmsted Road which is now equipped with a traffic light at Highway 68.

Mitigation Measures

69. The west entrance to the site should be relocated to Olmsted Road in order to: utilize the existing traffic signals there; utilize the future full interchange planned there; remove at least half the Monterra traffic from two miles of High 68 (between Olmsted and the western entrance); eliminate conflicting turning movements on Highway 68 by changing the proposed western entrance to an emergency exit only until an interchange is constructed there. The Monterra subdivision should also participate in funding the interchange improvements at Olmsted Road and Highway 68.
70. Based on the existing plus cumulative traffic need for widening and interchange improvements to Highway 68 and that the Monterra Ranch Subdivision will contribute to that need, the Monterra Ranch Subdivision should participate in funding the widening of Highway 68 to the adopted plan lines at a rate commensurate to the project traffic assignment.
71. An approach lane to Highway 68 on the east entrance should be provided to separate right and left turn traffic. In addition, a left turn pocket on Highway 68 with an adequate deceleration lane should be provided to facilitate access to the east entrance of and to the western entrance off of Olmsted Road.
72. The Monterra Ranch Subdivision should be required to dedicate right of way consistent with Adopted Plan lines for Route 68.
73. The private road designs and construction should be at standard horizontal and vertical standards unless these standards would cause excessive grading and/or environmental impacts. A determination of specific roadway segments to be exempted from normal county

standards, if any, should be made prior to recordation of the final subdivision map.

74. The Monterra subdivision access to Highway 68 will be facilitated by an internal collector loop road which connects east and west entrances. Traffic control should be on the side streets in order to preserve the internal collector's integrity.
75. The subdivision map should be conditioned to grant access rights to the school district and Lt Ng parcels to assure appropriate access to these parcels considering future highway improvements; and to assure secondary access routes for both Lt Ng and Monterra in the future.

AIR QUALITY IMPACTS AND MITIGATION MEASURES

30. The proposed projects will contribute to an incremental degradation of local and regional air quality.
31. The construction phase of the project will generate localized increases in particulate levels and pollutant emissions from construction vehicles.

Mitigation Measures

81. The developer should be required to distribute local transit, bicycle and carpooling information to prospective buyers during marketing of the homesites.
76. Dust control techniques, such as wetting down the soil during excavation and earthmoving operations, and suspending earthmoving activities or increasing sprinkling during periods of high wind (greater than 15 m.p.h.), should be employed during project construction.

WASTEWATER IMPACTS AND MITIGATION MEASURES

Impacts

32. The proposed project will generate 84,900 gallons of wastewater per day from the 283 residential homes.

Mitigation Measures

82. Strictly adhere to the sites indicated safe for the location of septic systems in the M. Jacobs and Associates Percolation Study for the Monterra Ranch project.
83. The Monterey County Health Department should review each specific septic system design and location prior to placement to ensure that the State of California Basin Plans and the By-laws of Monterey County Ordinance 1835 are met.
84. Systems shall not be built on slopes in excess of 30% or, if deemed necessary, should be specifically engineered for such sites; 100 percent expansion areas shall be provided.
85. The use of water conserving fixtures (low flush toilets, flow restrictors on faucet and shower heads) will also reduce the potential for septic system loading. Residents should also be given a brochure during the project marketing stage regarding the use of phosphate free detergents because the system's efficiency will be increased.

FIRE PROTECTION IMPACTS AND MITIGATION MEASURES

Impacts

33. There will be significant fire protection impacts without the provision of a Salinas Rural Fire Protection District station closer to the property than the present Station No. 3 which is 9-10 minutes away. The existing station is simply too far away to adequately provide structural fire protection to the proposed project.
34. There will be an increase in the potential for wildland fires by the introduction of people into this moderate-high fire hazard areas.

Mitigation Measures

86. The Monterra property should be annexed to the Salinas Rural Fire Protection District, and a fire station site should be provided in the Laguna Seca area. Annexation to CSA 39 and the provision of an interim fire station site on the Monterra property might be an acceptable alternative if the Salinas

Rural/Laguna Seca site preference is not attainable for some reason.

87. The developer should enter into an agreement with the Salinas Rural Fire Protection District to help purchase some additional structural and wildfire-fighting equipment.
89. Both the subdivision tentative map and the future improvement plans should be reviewed by the County Fire Warden and Salinas FPD Chief to assure that fire protection and prevention design features are included. These design features are listed in Section 2.9.3 of this report.
88. The developer, Planning Department and fire agency officials should discuss and agree on an appropriate resolution of the secondary access issue on cul-de-sacs longer than 1000 feet.

SCHOOL IMPACTS AND MITIGATION MEASURES

Impacts

36. The proposed project will generate 23 elementary school children, 17 junior high school age, and 17 high school age young adults. Since these additional students can be accommodated by existing school facilities in the Monterey Peninsula Unified School District, no school mitigation measures are necessary.

ARCHAEOLOGICAL IMPACTS AND MITIGATION MEASURES

Impacts

38. Development in the area of Estate Lots 12-26 could impact an isolated bedrock mortar discovered there as part of an archaeological reconnaissance. Discovery of this mortar indicates that there may be additional archaeological artifacts of importance that are undetectable to a surface reconnaissance due to the effects of vegetative cover and normal ranch operation over the years.

Mitigation Measures

91. Prior to and during the initial stages of grading, a registered archaeologist should be consulted to do on-site inspecting, examining the results of grading in those areas judged to have a greater potential of containing archaeological sites such as bedrock outcrops, springs, seeps and the lower ridges should be covered by a controlled intuitive reconnaissance.
92. A condition should be added to the subdivision permit to require a detailed archaeological investigation if development on Estate Lots 12-26 is proposed on or in the vicinity of the archaeological site.