Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
Geology, Soils, and Seismicity					
5.1-1 Landsliding Landslides are located in the proposed lots and building envelopes. Site development could affect the stability of landslides adversely if all potential landslides are not repaired, eliminated, improved or avoided. In addition, if not properly repaired, eliminated, or improved in accordance with Town policy, landslides could reactivate and threaten adjacent properties and Paradise Drive. Repair, elimination, improvement or avoidance of landsliding would be feasible from a geotechnical standpoint.	In order to reduce the significance of the project's landsliding impacts, the applicant shall implement following mitigation measures or mitigation options: • Detailed engineering geologic and geotechnical investigation shall be performed on a lot-by-lot basis before development of roadways and utilities and within proposed building envelopes of each individual lot. • Based on the detailed, design-level geotechnical investigations, one comprehensive design-level grading plan shall be prepared covering a landslide repair program on all lots, and the repair program shall be implemented by the applicant. • All landslides shall be eliminated, repaired, improved or avoided in accordance with Town policy prior as part of the subdivision improvement phase of the project.	Project Applicant	Detailed investigation and plan prepared prior to approval of Subdivision Improvement drawings. Actual work to be completed prior to Notice of Completion for Subdivision Improvements.	Town Engineer and Town Geotechnical Consultant.	
5.1-2 Grading Due to Town policy that requires the repair, elimination, improvement, or avoidance of landslides on lots which could affect building envelopes, off-site properties, and public roadways, site slides would be mitigated through a combination of drainage, other improvements, and localized grading, including a cut-and-fill operation. Based on the information provided with the July 2005 plans, the estimated amount of excavation required for full site development (applicant and lot-owner implemented development) would be	In order to reduce the impacts of grading to a less-than-significant level, the applicant, individual lot owners, and their respective geotechnical consultants shall implement acceptable methods of grading and also, where possible, shall minimize the extent of grading. Typical performance criteria shall include: • Unsuitable materials (such as landslides, colluvium, and artificial fill) located in or adjacent to areas of proposed grading shall be removed and recompacted during landslide repair, grading operations for road	Project applicant and individual lot owners	During grading operations and before occupancy	Town Engineer and independent geologist (applicant funded)	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
about 9,890 cubic yards of cut and 8,360 cubic yards of fill (1,530 cubic yards total export volume).	construction, or development of individual private lots under the observation of and testing by a registered engineer. • The geotechnical consultant shall observe and direct grading operations, evaluate the effects of bedding orientation and / or soil shear strength on the gross stability of existing and proposed slopes in the development area, and make site-specific determinations. • Natural and cut slopes shall be examined during grading to confirm their potential for long-term stability. If the geotechnical consultant determines that the exposed earth materials are weaker than expected, this condition shall be mitigated by recompaction as an earth buttress or stability fill or by the selected use of retaining walls or other acceptable methods. • Cut and fill slopes shall be planted with ground cover in order to prevent erosion, raveling, or development of rills, sloughs, and other failures which could reduce the effectiveness of stabilization methods. This is because roots of newly planted vegetation would enhance the stability of graded slopes by holding materials in place. • All grading shall be performed in accordance with the Uniform Building Code (UBC) and local agency requirements. • All fills shall be compacted to a minimum of 90 percent relative compaction in loose lifts of six inches				

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	and placed at or near optimum moisture content. Before receiving fills, excavated area shall be stripped of unsuitable materials (such as loose surficial soils, organic materials, and deleterious debris). All unsuitable materials shall be removed from the site. • In order to minimize the extent of grading, the use of retaining structures, mechanically stabilized embankments, and / or other similar suitable repairs also shall be implemented where possible and deemed appropriate by the project geotechnical engineer. • Geotechnical exploration shall be performed before grading in areas which have not be thoroughly investigated in order to determine the depths and limits of removal and recompaction.				
5.1-4 Slope Stability Cuts of ten feet or greater on slopes with 2 : 1 grades (horizontal to vertical) could erode or fail locally until they reach equilibrium.	The applicant or individual lot owners and their respective geotechnical consultants shall implement the following measures in order to mitigate the impacts of low shear strength of some bedrock materials and resulting erosion and failure of some slopes more than ten feet high cut at grades of 2 : 1: • Cut slopes shall be examined during construction to determine whether they would be stable in the long term. If the geotechnical consultant determines that the exposed bedrock materials are weaker than expected, this condition shall be mitigated by decreasing the proposed slope angle or by selectively	Project applicant & individual lot owners	During construction and before occupancy	Town Engineer for subdivision improvement phase; Building Official for individual home construction phase	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	using retaining walls. • Depending on the remolded shear strength of compacted fill materials used on the site, some of the proposed fill slopes shall be reinforced with mechanically stabilized embankments (MSEs) (such as geogrid-reinforced earth retaining walls). This would allow for steeper slopes with enhanced long-term stability. • Drainage facilities shall be designed to include terrace drains every 30 feet of vertical height on all slopes with grades steeper than 5 : 1. The terrace drains shall have a minimum flowline gradient of six percent to make them self-cleaning (a minimal tenet of the Uniform Building Code). They also shall be fitted with downdrains every 150 linear feet of terrace length to allow for quick drainage.				
5.1-5 Expansive Soils Development (structures, roads, utilities) located on expansive soils could be damaged by differential movement caused by cyclic shrinking and swelling.	In order to reduce impacts of the site's expansive soils on development to a less-than-significant level, the applicant, individual lot owners, and their respective geotechnical consultants shall implement the following measures: • Plasticity index or expansion index testing shall be performed after grading to determine the specific shrink-swell potential for development. Sites as deemed appropriate by the respective geotechnical engineer(s). • Site-specific mitigation shall be identified which accounts for conditions present at proposed	Project applicant (roads and utilities) and individual lot owners (lot development)	During construction and before occupancy	Town Engineer and/or Town Building Official	

Impact	***Mitigation***	***Implemented By***	***When Implemented***	***Monitored By***	***Verified By / Date***
	development sites. Typical measures to treat expansive soils shall include the following (or their equivalent): ▫ Pre-saturate fill soils and place wet fill soils (above optimum moisture content) to expand the soil, thereby reducing potential damage to concrete by allowing room for future shrink / swell movement of the soils. ▫ Place a non-expansive imported soil in the upper part of building pads. ▫ Bury expansive soils deep in fills. ▫ Treat soil with lime. ▫ Mix expansive soils with less expansive soils. ▫ Design foundation-footing systems to incorporate measured variations of soil swell with effective confinement (dead weight). • Residential development on individual lots shall be designed to account for each site's expansive soils. Measures typically incorporated in building design shall include the following (or their equivalent): ▫ Strengthen foundations (beam). ▫ Use suspended wood floors, drilled pier and grade-beam foundations, floating slabs, or pre-stressed (post-tensioned) slabs on-grade. ▫ Treat with chemicals. ▫ Combine two or more of those techniques.				
5.1-6 Groundwater Site groundwater may trigger debris flows in unstable colluvial deposits.	In order to reduce impacts of the site's groundwater on development to a less-than-significant level, the applicant, individual lot owners, and their respective	Project applicant and individual lot owners	Subdivision Improvement Phase; Individual home construction phase.	Town Engineer; Building Official.	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	geotechnical consultants shall implement accepted methods of surface and subsurface drainage to direct and control groundwater, including: • Drainage facilities shall be designed to conform with agency and code standards. This shall include terrace drains every 30 feet of vertical height on all slopes with grades steeper than 5 : 1. The terrace drains shall have a minimum flow line gradient of six percent to make them self cleaning (a minimal tenant of the Uniform Building Code). They also shall be fitted with downdrains every 150 linear feet of terrace to allow for quick drainage. • In order to intercept subsurface water or seepage, as subsurface drainage system shall be provided along the bottom areas of proposed compacted fill (such as canyon fills or buttresses). During grading, the engineering geologist and / or geotechnical engineer shall evaluate the necessity of placing additional drains. All subdrain systems shall be observed and approved by the engineering geologist and or geotechnical engineer before covering with compacted fill. • Positive surface gradients shall be provided adjacent to structures and at the tops and toes of slopes to direct runoff away from foundations, slabs, retaining walls, and slopes to suitable discharge facilities. Site surface drainage shall be constructed in accordance with the recommendations of the project's civil engineer.				

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
5.1-7 Seismicity Strong seismic shaking is expected to occur on the site some time during the effective "life" of development.	Any future site development shall comply with all applicable seismic design provisions of the most currently accepted Uniform Building Code (UBC) in effect at the time the applicant or individual lot owner applies for a building permit from the Town. In addition to the routine requirements expected of any development in the Town, the applicant and individual lot owners shall take the recommendations of the Structural Engineers Association of Northern California (SEAONC) into account when designing and implementing site development.	Project applicant and individual lot owners	Prior to approval of Subdivision Improvement drawings; Prior to issuance of building permits for individual homes.	Town Engineer for Subdivision Improvement Phase; Town Building Official or designee for individual homes.	
5.1-8 Artificial Fill Areas New construction on existing artificial fill, if present, could settle unevenly and be damaged or could stimulate or accelerate erosion.	In order to mitigate this potential impact, the applicant and individual lot owners shall implement the following measures in their respective projects: • Before preparing site-specific designs and receiving building permits, conduct field investigations to determine the presence and limits of such materials in the vicinity of parts of the site proposed for development. • After receiving grading or site alteration permits from the Town, remove and recompact artificial fill located in or adjacent to areas of proposed grading under the observation and testing of a registered geotechnical engineer.	Project applicant (roads and utilities) and individual lot owners (lot development)	Subdivision Improvement Phase for roads and utilities; building permit phase for individual home construction	Town Engineer for subdivision improvement phase; building official for building permit phase	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
5.1-9 Maintenance of Geotechnical and Hydrologic Mitigation Measures Maintenance of private roadways, public utilities, and public and private drainage facilities would involve long-term monitoring and maintenance after site development to ensure the effectiveness and success of mitigation for the project.	In order to insure the effectiveness of long-term maintenance in mitigating the project's impacts, the applicant shall prepare CC&Rs and formulate a maintenance plan for the project. Maintenance responsibilities shall be incorporated into the CC&Rs and administered by a common facilities maintenance agreement. Draft CC&Rs shall be submitted to the Town for review and approval prior to recordation of parcel map. Without such methods, mitigation may not sustain reductions in the magnitude of impact to less-than-significant levels.	Project applicant and individual lot owners	Incorporate into Common Facilities Maintenance Agreement and CC&Rs prior to recordation of the parcel map	Community Development Director	

Impact	***Mitigation***	***Implemented By***	***When Implemented***	***Monitored By***	***Verified By / Date***
Hydrology, Drainage, and Water Quality					
5.2-2 On-Site Peak Flow Rates and Attendant Downstream Flooding Project implementation would result in increases in the 100-year peak discharge from Watershed Ay. While these increases are minor to moderate, the applicant's engineer has not performed the hydraulic analysis necessary to determine whether the existing roadway culverts under Paradise Drive have adequate capacities to accommodate the increased flows without flooding. If these culverts do not have sufficient capacity to pass the post-project 100-year design discharge, on-site, roadway, or downstream flooding could be significant during a severe rainstorm. This would be especially true if the culverts were subject to partial blockage by incoming watershed debris. This would constitute a potentially significant impact.	In order to reduce both the impact of project development on culvert capacities and flooding along Paradise Drive and on downstream drainageways to less-than-significant levels, the applicant shall implement the following measures: • If any of the eight Paradise Drive culverts specified in Exhibit 5.2-2 are of insufficient capacity to convey the site's 100-year peak flows without roadway flooding, they shall be replaced. The appropriate culvert sizes shall be determined by an engineering hydraulic analysis using peak flow rates cited in Exhibit 5.2-3, as verified by the applicant's engineer. Replacement culverts, where required, shall be upsized to accommodate some debris passage during the design 100-year rainstorm. Current engineering practice recommends sizing culverts at twice the clear water capacity which would handle the design flow. Where individual culvert overflow is accepted as part of the drainage design, field surveys ("level surveys") shall be undertaken to ensure that the overflow would reach the prescribed downslope culvert inlet. If survey information indicates instead that the overflow would proceed across Paradise Drive and onto an adjoining property, the drainage design shall be revised to rectify the situation. Alternatively, other drainage features (such as paved gutters and additional tie-in drain inlets) shall be installed to prevent	Project applicant (grading and drainage, including landslide repairs) and individual lot owners (ongoing maintenance)	Before approval of Subdivision Improvement Drawings (grading and drainage plans) and before issuance of building permits (implementation of repairs)	Marin County Department of Public Works and Town Engineer (plans and implementation), and individual lot owners (long-term monitoring)	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	uncontrolled overflow onto adjacent properties. • Properly engineered energy Dissipators shall be installed at culvert outlets affected by project-induced increases in peak flow rates • Debris racks shall be installed at the entrances to any new or presently unprotected culvert inlets along Paradise Drive. (The racks shall not be flush with the culvert barrel so that debris can be trapped without obstructing the barrel.) • The applicant shall ensure that all above-ground drainageway reaches of Drainageway 1 (both on-and off-site) are sufficient to convey the increased flows from the expanded Watershed A contributing area without channel incision or other forms of channel instability. If any of these channel reaches prove inadequate to handle the projected Watershed A flows without channel downcutting (i.e. incision) or other forms of channel adjustment (e.g. widening of the channel cross-section), or if channel flow velocities exceed 4.0 feet per second during the 2-yr. peak flow, the applicant shall implement channel stabilization measures to protect against significant channel erosion. The stabilization program shall include a fluvial geomorphic and hydraulic engineering assessment of the channel to determine the proper elements of a stabilized channel for the particular geologic and hydrologic				

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	conditions in the project area. Immediate junctures with upstream culvert segments will be especially critical due to the heightened scour potential downstream of these hydraulic structures. • The applicant shall ensure that all engineered drainage structures (e.g. culverts, storm drains, old wood stave channels) downstream of Paradise Drive are adequate to convey the increased flows from Watersheds A, B and C without exceeding their design capacities and/or resulting in nuisance flooding of downstream properties. If any such structures prove inadequate to handle the projected flows under the established Town drainage design criteria, the applicant shall upgrade the undersized structures to meet the Town criteria.				

Impact	***Mitigation***	***Implemented By***	***When Implemented***	***Monitored By***	***Verified By / Date***
5.2-4 Impacts on Drainageways and Groundwater-Supported Habitat Grading and slope dewatering measures outlined in the 2004 project plans have been limited to downslope areas of the site and, with the exceptions of the lower reaches of Drainageways 1 and 2, outside of principal site drainageways. Three debris barriers are proposed to mitigate potentially unstable colluvial swales associated with Drainageways 3, 4, and 6. The barriers would not significantly affect either the character or the floodwater conveyance function of these drainageways. The two seeps in Watersheds A and B, and the spring in Watershed C are sufficiently far removed from the excavation/grading and dewatering areas and thus would not be affected by the proposed landslide and colluvium repairs. While the repair plan has minimized the extent of impacts to drainageways and groundwater-supported habitats, the landslide repairs in the vicinity of Lot 2 would eliminate segments of Drainageways 1 and 2. This includes 0.05 acre of jurisdictional waters. These project encroachments would constitute a significant impact to on- and off-site drainageways and groundwater-supported habitats.	In order to compensate for the loss of jurisdictional Waters of the U.S. and to reduce the disturbance of Drainageways 1 and 2, the applicant shall implement the following mitigation measures: • Habitat shall be replaced as described in Mitigation Measure 5.3-5 (see ***5.3 Vegetation and Wildlife***). • The reconstructed portions of Drainageways 1 and 2 shall be designed to approximate the existing channel form. Thus, the segments of these reaches upslope of the flat-bottomed portion of the debris catchment area shall be reconstructed using channel hydraulic and geomorphic parameter values (i.e. at the channel's bankfull discharge) that are consistent with the post-remediation channel gradient, bed and bank sediments and flow regime. Since some of the pre-construction overhead tree canopy would be lost as a result of the landslide stabilization work, these restored channel reaches ~~could~~ shall be re-vegetated with appropriate riparian vegetation and trees.	Project applicant	During installation of the Subdivision Improvements	Community Development Director, Town Engineer, RWQCB, and CDFG	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
5.2-5 Erosion and Sedimentation Construction of impervious surfaces (coverage by homes, roadways, and driveways) in the site's watersheds would increase peak flow rates in on-site drainageways and increase the risk of incision (i.e. downcutting) and instability in receiving drainageways downslope of Paradise Drive. In addition, grading of lots and roadways, installation of utilities, and the repair of unstable landslide and colluvial deposits would disturb parts of the site and expose bared soil surfaces to the erosive forces of rainfall and runoff. This could result in downstream sedimentation and obstruction of hydraulic structures (culverts and catch basins). These constitute potentially significant erosion and sedimentation impacts.	In order to mitigate the project's impacts on erosion and downstream sedimentation, the applicant and individual lot owners shall implement the following measures in addition to the PDP's proposed erosion control features: • A State National Pollutant Discharge Elimination System General Permit (NPDES General Permit) for Discharges of Stormwater Associated with Construction Activity shall be obtained and its provisions shall be implemented. Because lots would be developed according to individual owners' schedules, the applicant shall submit a single NPDES Permit application covering all planned development on the site, regardless of the ultimate timing of construction. Under the guidance of a single set of permit conditions, appropriate erosion control and water quality mitigation measures would be applied to each development phase. • A Notice of Intent shall be filed with the State Water Resources Control Board, Division of Water Quality. The filing shall describe erosion control and stormwater treatment measures to be implemented during and following both applicant and / or lot owner construction and provide a schedule for monitoring performance. These measures are referred to as Best Management Practices (BMPs) for the control of point and non-point source pollutants in stormwater and constitute	Project applicant and individual lot owners	Prior to approval of Subdivision Improvement drawings for applicant phase; prior to issuance of building permits for individual home phase.	Town Engineer (SWPPP, plans, and post-construction), RWQCB (SWPPP), and individual lot owners (maintenance along roadway)	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	a project's Stormwater Pollution Prevention Plan (SWPPP). BMPs for control of pollutant sources during construction and for on-site treatment of project stormwater are described in the *California Storm Water Best Management Practice Handbook for Construction Activity* • In-channel straw bale dike design shall be adjusted to accommodate a spillway overflow section to reduce the risk of bale failures. If a notch is cut into the straw bale, the overflow section shall be additionally reinforced. Alternatively, the straw bales could be replaced with rock weirs which facilitate converging flow and do not increase the risk of lateral bank erosion. • Mitigation Measure 5.2-2 shall be implemented (downstream drainageway stabilization along principal Drainageway 6).				

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
Vegetation and Wildlife					
5.3-1 Permanent Loss of Habitat for Special-Status Plants Project implementation could affect habitat for special-status plants through incidental uses of the serpentine bunchgrass habitat by individual lot owners (indirect impact).	To reduce impacts to serpentine bunchgrass habitat to a less-than-significant level, the applicant shall prepare and implement a site avoidance, protection, and enhancement plan for the serpentine bunchgrass, which addresses the following: • Any subsequent redesign of the Precise Development Plan (PDP) shall establish a minimum 100-foot buffer on Lot 4 to set the residential use areas back from the protected habitat upslope on those lots.* • ~~To discourage human intrusion into the bunchgrass habitat that would be preserved on-site through establishment of the conservation easement, the applicant shall place fencing at the downhill limits of the bunchgrass area (the woodland-grassland interface). In addition, signs shall be posted along the fence line and along any established recreational trails in the grassland areas, indicating the sensitive nature of the habitat. The applicant shall prepare and distribute a brochure to future site residents as part of a public education program describing the presence and value of the sensitive serpentine bunchgrass community on site.~~	Project applicant and Town's consulting biologist	Plans and brochure to be prepared and approved by the Town prior to approval of the Parcel Map; implementation during Subdivision Improvement phase	Community Development Director (with consulting biologist)	

* A buffer of 100 feet would be feasible on the three lots which contain serpentine bunchgrass habitat based on the current residential use area limits.

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	Educational text shall be included in the project CC&Rs to inform and alert future homeowners of the sensitive biological habitats on the site. • The applicant shall develop a habitat enhancement plan to restore the value of the existing bunchgrass habitat. This plan shall include the removal of invasive exotic species and their replacement with special-status species. This plan shall be combined with the site restoration plan required in Mitigation Measure 5.3-2(b). (If Mitigation Measure 5.3-2(b) is not required because sensitive plants are avoided during utility trenching, the provisions outlined in that measure shall be applied to the habitat enhancement plan).				
5.3-2 Temporary Loss of Habitat for Special-Status Plants Installation of new waterlines could temporarily affect habitat for special-status plants in the serpentine areas due to trenching and grading associated with construction of these facilities (direct impact).	In order to reduce temporary impacts from installing proposed waterlines to a less-than-significant impact, the applicant shall implement either Mitigation Measure 5.3-2(a) or Mitigation Measure 5.3-2(b).	Project applicant	Prior to approval of subdivision improvement drawings (selection of either (a) or (b))	Community Development Director	
	(a) To reduce impacts to the Marin dwarf flax and Tiburon paint brush the applicant shall establish the location of the trenching and grading operations in such a way as to completely avoid impacting these two species or at the very least minimize the actual loss of these species. If the waterlines can be installed with no direct loss of these two species, than no additional mitigation would be required.	Project applicant	Prior to approval of Subdivision Improvement Drawings	Community Development Director	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	In order to implement this mitigation measure the applicant shall: • Conduct a pre-construction survey to map the location of these two species within the easement. • Submit a detailed grading and trenching plan to the Town demonstrating that installation of the waterlines would avoid impacts to the two relevant species. • Erect construction fencing to ensure that the project would not inadvertently damage plants inadvertently that were expected to be avoided. • Provide for a qualified on-site monitor to be present during construction related activities which may either disturb serpentine bunchgrass habitat or come in close proximity to this sensitive habitat.				
	(b) To reduce impacts to the Marin dwarf flax and Tiburon paint brush the applicant shall prepare and implement a site restoration plan for the temporary impacts. The applicant shall: • Prepare and implement a Site Restoration Plan to replace the serpentine bunchgrass habitat which may contain individuals of the Marin dwarf flax and Tiburon Indian paintbrush where temporary impacts would occur. A qualified botanist shall identify all avoidance areas and establish buffer zones of sufficient size around these areas to eliminate potential disturbance to the dwarf flax	Project applicant	Prior to approval of Subdivision Improvement Drawings	Community Development Director	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	and paint brush during construction. The size of the buffer zone(s) shall account for such factors as slope, type, and proximity of construction activities. At a minimum, the Site Restoration Plan shall define the following: ▫ Location of on-site areas (and suitable buffer) to restore lost plant populations. It is assumed that the topsoil can be stock piled and replaced once the trenching operation is complete. These areas shall be prepared and, based on appropriate propagation techniques, restored to the reclaimed areas. Once established, these areas would become part of the larger open space area and set aside in perpetuity by establishing a conservation easement ▫ Propagation techniques (such as seed collecting, greenhouse efforts to grow plants, etc.) to be employed in the restoration effort. ▫ The timetable to implement the restoration plan, including pilot-phase studies if necessary. ▫ Remedial measures to be performed in the event that initial restoration measures are not successful in meeting the performance criteria. The performance criteria would need to ensure that there would be a minimum of a 1 : 1 replacement of the size of the population and area affected (replaced : lost).				

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	▫ Site maintenance activities to follow restoration activities, including weed control, irrigation, and control of herbivory wildlife. ▫ Identification of a suitable land trust organization (approved by the CDFG and USFWS) to take over management of these areas once established by the applicant or its agent. ▫ Provision of a suitable bond or endowment to adequately fund long-term management of the dwarf flax and Tiburon Indian paintbrush set-aside areas. This mitigation strategy for specialized plants (such as Marin dwarf flax and Tiburon Indian paintbrush) is often unsuccessful, but in this case it is expected to reduce impacts to less-than-significant level given the relatively small size of the potential impact (0.04 acre), the fact that it would be a temporary impact, and relatively few plants are expected to be impacted by waterline installation.				

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
5.3-4 Loss of Mixed Coast Live Oak-Bay Woodland Project implementation (development of structures, construction of roadways, trenching for the new waterlines and landslide repair) could affect an estimated 2.5 acres of mixed coast live oak-bay woodland by removing an estimated 272 trees (direct impact) and fragmenting and isolating habitat from adjacent or nearby large woodland patches (indirect impact).	***(a)*** A replacement ratio of 3:1 (replaced : lost) would be required to adequately compensate for the lost habitat value which would result from the removal of 168 trees on 2.33 acres. Due to the limited area for tree planting on the site, it is not possible to accommodate the necessary tree replacement on-site, and woodland restoration efforts would need to occur off-site. At present, the Tiburon peninsula has only limited locations for off-site tree planting. Mitigation Measure 5.3-4(c) is designed to create additional suitable locations for off-site tree mitigation.				
	(b) The applicant shall revise the *Tiburon Glen Estates- Tree Impact Assessment and Tree Replacement Mitigation Plan* and *On-Site Tree Mitigation Plan* to address the recommendations discussed above. These include: • All trees should be planted 15 feet on center or greater, a planting density that better reflects the biology of the woodland habitat: The overall number of trees proposed for replacement planting should be revised to reflect this change. • The total replacement tree credit should be recalculated in the *On-Site Tree Mitigation Plan* to reflect the reevaluation of the trees proposed within development and the debris basin. Due to their limited habitat value, trees planted within the proposed	Project applicant and individual lot owners	Before issuance of grading permits	Community Development Director, Director of Public Works, and Town Building Official (with consulting restoration ecologist)	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	development or between the proposed development and Paradise Drive shall only partially count towards the mitigation requirement at a rate of one-half credit for each tree. Additionally, the 15 replacement trees proposed within the debris basin should be removed from the *On-Site Tree Mitigation Plan*. With the 86 trees proposed within the developed portion given one-half credit (43 credits) and the 15 trees proposed within the debris basin removed from the plan, the total credits allotted for replacement trees proposed in the Plan equals 315, a 1.9:1 replacement ratio. This reduction in replacement tree credits requires that a total of 189 trees be planted off-site. • Revised the *Tiburon Glen Estates – Tree Impact Assessment and Tree Replacement Mitigation Plan* to reflect the three-lot project. • Develop success criteria and a monitoring schedule for the five-year monitoring period based on the following: The success of the Tree Mitigation and Enhancement Plan shall be monitored by a qualified restoration ecologist for a period not less than five years after initial implementation. Elements such as plant survival, percent cover, tree height and basal area, plant vigor / health, and natural recruitment / reproduction shall be evaluated during the annual monitoring of the replanted sites. The following criteria for				

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	monitoring the replanted trees shall be employed: ▫ *Plant Survival* All trees installed shall have a 100 percent survival performance criterion during Year 1 of monitoring and an 80 percent survival performance criterion during Years 2 through 5 of monitoring period. All dead trees shall be replaced if survival falls below this performance criterion. The monitoring period shall start anew following replanting at any time, if survival falls below 80 percent. Survival results following the cessation of irrigation during the three-year establishment period would indicate whether plants' roots are sufficiently developed to support the plants under natural conditions. ▫ *Percent Tree Cover* Percent cover would be used as an indicator of successful establishment of habitat. The final percent cover goal by Year 5 of monitoring is 15 percent tree cover of the area planted. ▫ *Tree Height and Basal Area* The height of the replacement trees along with their basal area shall be measured during the annual monitoring. The area at the base of a tree provides a good measure of woodland biomass and tree diameter growth. By the end of the five year monitoring period, the trees should be at a predetermined				

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	height and have a predetermined basal area. ▫ *Plant Vigor / Health* The overall plant vigor and health of the installed trees shall be monitored. Taken into consideration in the qualitative observation of vigor and health would be the factors of plant color, bud development, new growth, herbivory, drought stress, fungal/insect infestation, and physical damage. If a plant's foliage is abnormally sparse, then the health/vigor rating shall be lowered accordingly, even if the foliage present is healthy. Overall health and vigor shall be rated according to the following scale: ▫ High -- 1-3 --67-100 percent healthy foliage ▫ Medium -- 4-6 -- 34-66 percent healthy foliage ▫ Low -- 7-9 -- 0-33 percent healthy foliage. ▫ Dead -- 10 ▫ *Natural Reproduction / Recruitment* Natural reproduction/recruitment of woody plant species within the mitigation areas shall be monitored. Additional trees which had not previously been planted shall be counted and considered to be natural reproduction and recruitment. Any other native or non-native woody plants that become established shall also be counted and reported by species.				

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	Implementation of Mitigation Measure 5.3-4(b) would assure that the proposed on-site tree replacement would be successful and would compensate in part for the 168 trees proposed for removal and lost woodland habitat. A total of 373 replacement trees are proposed on-site. However, 15 of these trees are not proposed to be planted in an appropriate location and 86 trees will be given one-half credit. Therefore, a total of 315 replacement tree planting credits are accounted for in the *On-Site Tree Mitigation Plan*, equating to a 1.9:1 replacement ratio. In order to reduce the project's impact to oak-bay woodlands to a less-than-significant level (i.e. a replacement ratio of 3:1), an additional 189 trees would need to be planted off-site. As noted in the Draft EIRs (2002 and 2003) prepared for the Tiburon Glen development, suitable off-site locations for tree planting on the Tiburon Peninsula that would provide for a 3:1 tree replacement ratio are unknown. However, implementation of Mitigation Measure 5.3-4(c) below, combined with the on-site tree mitigation outlined above, could provide a greater level of mitigation to off-set project impacts to on-site woodlands.				
	(c) There is a limited quantity of Town-owned open space that would be suitable for planting mitigation woodland. If so directed by the Town of Tiburon, the applicant shall either 1) develop and	Project applicant and individual lot owners	Before issuance of grading permits	Community Development Director, Director of Public Works, and Town	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	physically implement a Broom Eradication and Habitat Restoration Program acceptable to the Town of Tiburon; or 2) provide sufficient funding to the Town of Tiburon for a Broom Eradication and Habitat Restoration Program to be developed and implemented by the Town. Broom removal and woodland habitat restoration would provide the dual benefit of reducing areas of invasive broom, and thus preventing future expansion of the plant, and replacing areas of little habitat value with areas of considerably more valuable woodland habitat. Performance standards for development of a program to address impacts resulting from the Tiburon Glen project are as follows: • The Broom Eradication and Habitat Restoration Program shall be designed and administered by a qualified restoration ecologist under contract with the Town of Tiburon. • Off-site habitat restoration areas shall be located within the Town of Tiburon and shall not be subject to future development (i.e. these areas shall be Town-owned open space areas). • Habitat restoration shall entail removal of invasive plant species and replacement with appropriate native stock. The priority shall be for restoration of woodland habitat. • Depending on the percent cover of broom on the candidate site and the number of trees and/or shrubs to be			Building Official (with consulting restoration ecologist)	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	planted once broom has been removed, a habitat restoration credit of 0.25 to 0.5 shall be applied to the applicant's tree mitigation requirement. • A Mitigation and Monitoring Plan (MMP) shall be prepared indicating the techniques to remove the broom, providing for evidence that broom removal efforts will continue on the site for subsequent years, and providing evidence that once the trees become established re-invasion by broom is unlikely.				
5.3-5 Disturbance to Jurisdictional Waters Project development would result in the loss of seasonal wetlands, primarily on Lots 1 and 2. In addition the applicant will need to obtain permits and certification from the Corps, RWQCB, and CDFG.	A wetland restoration plan shall be prepared to reduce effects on wetland resources by minimizing significant impacts to the extent feasible and compensating for any remaining significant impacts: • The following features or their equivalent shall be included in the plan: ▫ Replacement of lost wetland habitat acreage at a ratio sufficient to retain functions and values. A 2 : 1 replacement ratio (replacement : lost) would be expected to off-set wetland resource impacts adequately (0.14 acre). ▫ Compensation involving on- or off-site restoration, enhancement, and / or creation of seasonal wetlands and / or seasonal drainage channels elsewhere on- or off-site. Preference shall be to identify appropriate on-site locations for replacement habitat and / or to enlarge other existing on-	Project applicant	Before "acceptance for filing" of the Parcel Map application	Community Development Director, The Corps of Engineers, CDFG, and RWQCB	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	site wetlands to create seasonal wetlands. ▫ Establishment of undeveloped buffers on both sides of seasonal wetlands or seasonal drainage channels. A minimum buffer of 50 feet would be required around the seasonal wetlands and seasonal drainage channels. • A Clean Water Act permit shall be obtained by providing the verified wetland delineation, plan-view drawings and cross-sections of proposed work, conceptual mitigation plan, implementation framework, and Section 404b(1) alternatives analysis. The Wetland Restoration plan shall be prepared according to Corps' guidelines and include: ▫ A course of action for reducing the level of impacts to wetlands through restoration, enhancement, or creation of other wetlands either on (or in some cases off) the project site. ▫ A monitoring component for ensuring that the success of the Wetland Restoration plan can be determined over time and that remedial measures can be employed if performance objectives listed in the plan are not being met. • A Streambed Alteration Agreement shall be entered into which itemizes any mitigation measures designed to protect the biotic values associated with the seasonal creeks to be obtained by				

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	providing project plans and the wetland delineation showing all seasonal creeks within the project area. • Section 401 Water Quality Certification shall be obtained by providing the verified wetland delineation, project plans, a copy of the Clean Water Act Permit, a copy of the Streambed Alteration Agreement, the notice of certification of the EIR, and an application fee as required.				
5.3-8 Disturbance to Active Raptor Nests from Construction Activities During Project Implementation Construction activities could result in incidental impacts on birds of prey protected by State and Federal statutes if breeding or nesting on the site during project implementation.	The applicant and each individual lot owner shall implement the following measures before beginning their respective construction activities to reduce impact to nesting raptors. • Within 30 days of beginning construction during the raptor-nesting season (February to August), a survey shall be conducted by a qualified biologist of construction areas and their immediate vicinity for active raptor nests. Surveys shall be conducted according to a protocol developed in consultation with the CDFG. • Any active nests discovered during the pre-construction survey shall be marked on a map and a construction-free setback or buffer shall be established around each active nest by means of fencing or stakes with conspicuous flagging. Typical buffers vary from 200 to 250 ft., but buffers smaller and larger are sometimes acceptable or necessary to ensure that the project does not disturb an active	Project applicant (pre-construction surveys before start-up and site preparation) and Individual lot owners (pre-construction surveys if activities occur February - August)	Prior to issuance of the grading permit for the Subdivision Improvements for applicant; prior to issuance of a building permit for each home	Community Development Director, Town Engineer, and Building Official	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	raptor nest. Therefore, the actual size of the buffer will be determined by the qualified biologist who will consider among other things the species, topography, and type of project activity. No construction activities shall be permitted within the buffer area until the conclusion of the nesting season.				
5.3-9 Introduction of Invasive Exotics Non-native plants used at any location on the site in landscaping of lots or roadways could "escape" and become established elsewhere on on- or off-site open space.	The applicant shall prepare CC&Rs (as indicated in Mitigation Measure 5.1-9) which list and prohibit the planting of all the exotic plants known to readily naturalize in habitats similar to those found on the project site. A qualified botanist or horticulturist shall prepare the list. Species such as black locust, blue gum, various brooms, periwinkle, pampas grass and other species known to be invasive and difficult to eradicate shall be placed on this list and not planted on the project site. Additionally, no ornamental or non-native planting shall be permitted in the conservation easements on the individual lots.	Project applicant (CC&Rs and roadway landscaping plans) Individual lot owners (landscaping plans)	Before "acceptance for filing" of parcel map application (CC&R's); and before issuance of grading and / or building permits for individual lots (landscaping plans). Verification for implementation prior to Certificate of Occupancy.	Community Development Director or designee	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
Transportation and Circulation					
5.5-1 Existing-plus-Project Impacts on Study Intersections Project traffic would increase traffic volumes at study intersections along Trestle Glen Boulevard, Tiburon Boulevard, and Paradise Drive.	No mitigation would be required other than payment of Town mitigation fees (project's pro-rated share of roadway improvements shown in the *Town Plan*).	Individual lot owners	Prior to issuance of building permit	Community Development Director	
5.5-2 Cumulative-plus-Project Impacts on Study Intersections Cumulative-plus-project conditions would increase traffic volumes at study intersections along Trestle Glen Boulevard, Tiburon Boulevard, and Paradise Drive. The project would contribute to cumulative traffic which would cause the Trestle Glen / Tiburon Boulevard intersection to operate at an unacceptable level of service during the weekday AM peak hour.	The applicant shall pay the project's prorated share of roadway improvements shown in the *Town Plan* (traffic mitigation fee). No additional mitigation would be required.	Individual lot owners	Prior to issuance of building permit	Community Development Director	
5.5-5 Project Impact on Pedestrian, Bicycle, and Vehicular Safety on Paradise Drive Project site residents would be expected to contribute slightly to the number of pedestrians and bicyclists using Paradise Drive, a roadway considered unsafe for these uses. The project also would add traffic to this unsafe existing roadway condition. While not significant alone, this additional increment of traffic would exacerbate already constrained conditions.	Although pedestrian and bicycle use of Paradise Drive is considered by the EIR analysts to be unsafe, large numbers of pedestrians and bicyclists use Paradise Drive. Therefore, the applicant shall provide a wider-than-normal shoulder at the project entry that could safely be used by pedestrians and bicyclists as a turn-out and refuge area from motorized vehicles. ~~designated (signed) pedestrian / bicycle rest stop at the site access intersection with Paradise Drive. Runners and bicyclists could be provided a designated place to park bicycles and rest, well removed from the Paradise Drive vehicle travelway. Such improvements would not constitute major changes to the~~	Project applicant	Installation required during Subdivision Improvement phase	Marin County Public Works Department and Town of Tiburon Community Development Director	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	~~roadway yet would promote safety for users of the roadway.~~ Additionally, the applicant shall participate in future funding and /or implementing Paradise Drive improvements determined as an outgrowth of the Marin County *Paradise Drive Visioning Plan.*				
5.5-6 Construction Traffic Impacts Project implementation would add significant numbers of construction trips to Paradise Drive, raising concerns about safety, pavement damage on affected roads, and disruptions to the flow of peak hour traffic.	The applicant shall be responsible for preparing a construction traffic control plan and roadway pavement mitigation plan to be carried out during both applicant- and lot owner-implemented development. The plan shall include the following elements: • Approval by the Town of Tiburon after consultation with Marin County of construction truck haul routes and operating hours. • Inclusion of provisions in construction contracts of contractors and subcontractors to prohibit parking of construction vehicles anywhere other than on-site or within the Paradise Drive ROW at Roadway A-B. Construction-related parking and staging of construction vehicle and equipment shall not obstruct the travel way in residential streets. • Repair of any deteriorated pavement along Paradise Drive identified in cooperation with the Town of Tiburon and Marin County based on a "before and after" evaluation program which shall determine if project-generated truck traffic caused any additional pavement deterioration. The	Project applicant (initially) and individual lot owners (relevant provisions)	Prior to issuance of a grading permit for the Subdivision Improvement phase; issuance of building permits for each house	Marin County and Town Community Development Director; Building Official for individual homes	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	before/after road condition evaluation shall include video taping or other physical documentation of pavement condition prior to construction as deem appropriate by the Town. • Approval by Marin County of a sequence for installing utilities within the Paradise Drive right-of-way to minimize road closures.				

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
Air Quality					
5.6-1 Generation of Dust or Asbestos Construction activities, including grading of site soils containing serpentine, would generate dust and possibly release asbestos fibers into the air.	In order to reduce dust and asbestos emissions to less-than-significant levels, respectively, the following measures shall be required as conditions of permit approval by the Town:				
	(a) As a condition of Town approval of any site alteration or grading permit, the applicant and the future owners of individual residential lots shall incorporate the following dust control measures in the contracts of any contractors or subcontractors whose activities would disturb the ground: • Prevent visible dust clouds from extending beyond construction sites. • Water all active construction areas at least twice daily and more often during windy periods. Keep active areas adjacent to residences damp at all times. • Cover all haul trucks or maintain two feet of freeboard. • Pave, apply water three times daily, or apply non-toxic soil stabilizers on all unpaved roads, parking, and staging areas. • Sweep daily (with water sweepers) all paved access roads, parking areas, staging areas, and nearby streets where soil material deposits are visible. • Hydroseed or apply non-toxic soil stabilizers to inactive construction areas	Project applicant and individual lot owners	Before issuance of grading permit for Subdivision Improvements; prior to issuance of building permit for each homes	Town Engineer; Town Building Official	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	(previously disturbed areas which are inactive for more than ten days). • Enclose, cover, water twice daily, or apply non-toxic soil binders to all exposed stockpiles. • Limit traffic speeds on unpaved parts of the site to 15 miles per hour (mph). • Install wheel washers on all exiting trucks. • Replant vegetation in disturbed areas as quickly as possible. • Suspend any grading or excavation activities during strong winds (in excess of 20 mph) which cause dust plumes visible to nearby sensitive (residential) land uses and which cannot be controlled by watering.				
	(b) This mitigation measure shall apply as a condition of town approval of any site alteration or grading permit to construction which would disturb serpentine. Before applicant- or lot owner-implemented construction at any location on the site, the presence of serpentine shall be identified. For any construction site encompassing surface or subsurface serpentine material, the applicant or lot owner shall prepare and incorporate in the contracts of any contractors or subcontractors whose work would disturb the ground a Site Safety Plan for construction activities involving asbestos-bearing serpentine rock. The plan shall apply to initial development and any future maintenance of the lot. The Site Safety Plan shall address California Occupational Safety and	Project applicant and individual lot owners	Before issuance of grading permit for Subdivision Improvements; prior to issuance of building permit for each home	Town Engineer; Town Building Official	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	Administration requirements and the regulations of the *Asbestos Airborne Toxic Control Measure for Construction, Grading, Quarrying and Surface Mining Operations* (Asbestos ATCM for Construction and Quarrying), Section 93015, Title 17, of the California Code of Regulations.				
	(c) The applicant shall designate (or fund Town designation of) a Disturbance Coordinator for the duration of applicant-implemented construction and also shall require individual lot owners to designate (or fund Town designation of) a Disturbance Coordinator for the duration of lot owner construction. The Disturbance Coordinator shall: • Provide all residents adjacent to construction sites with a schedule of construction activities. • Conspicuously post his or her name and phone number at the construction site. • Respond to all complaints regarding dust at residential areas. • Have the authority to suspend construction activities if measures to prevent visible dust clouds from impacting residential locations are not being properly implemented or are unsuccessful. The individual designated as Disturbance Coordinator to monitor construction period air quality can be the same person(s) responsible for construction period noise mitigation (Mitigation Measure 5.7-1).	Project applicant and individual lot owners	Before issuance of grading permit for Subdivision Improvements; prior to issuance of building permit for each house	Community Development Director and Town Building Official (and Disturbance Coordinator)	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
Noise					
5.7-1 Construction Noise Project implementation would generate substantial periodic noise levels in the vicinity of the site. This temporary impact would be considered significant but mitigable.	The applicant and individual lot owners shall mitigate their construction noise impacts by implementing the measures set forth in the Town of Tiburon's construction hours limitations set forth in Chapter 13 (Building Regulations) of the Municipal Code. In addition, the following measures shall be implemented: • *Construction equipment mufflers and maintenance* All internal combustion engine driven construction equipment shall be properly muffled (equipped with stock manufacturers' supplied mufflers or equivalent which are in good condition). • *Idling prohibitions* Unnecessary idling of internal combustion engines shall be prohibited. • *Quiet equipment selection* "Quiet" construction equipment (particularly air-compressors, standby engines, etc.) whenever possible. • *Noise disturbance coordinator* Designate a "noise disturbance coordinator" who shall be responsible for responding to any complaints about construction noise. The disturbance coordinator shall determine the cause of the noise complaint (such as starting too early, bad muffler, etc.) and institute reasonable measures warranted to correct the problem. The telephone number and name of the disturbance	Project applicant and individual lot owners	Before issuance of grading and / or building permits	Town Engineer, Noise Disturbance Coordinator; Town Building Official	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	coordinator shall be posted conspicuously at each construction site.				

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
Public Services and Utilities					
5.8-2 Wildland-Building Fire Exposure Development adjacent to open space would be subject to risks associated with wildland fires, particularly in severe weather conditions of drought, excessive heat, and strong winds. In addition, construction workers would be particularly vulnerable to accidental wildfire before water delivery, communications systems, and roadways are fully developed on the site.	In order to minimize wildland-building fire exposure impacts, the applicant would be required to employ the following measures during applicant-implemented construction. In order to ensure the effectiveness of long-term maintenance in mitigating the project's impacts, the applicant shall formulate a maintenance plan and a common facilities maintenance agreement for administration of the plan. Individual lot owners would be required to implement the following measures, which are enforced by the following ordinances and should be included in CC&Rs prepared by the applicant and attached to each lot: • The applicant shall implement the provisions of Section 901.3 of the California Fire Code. • In accordance with minimum building standards of the Town of Tiburon and Tiburon Fire Protection District (TFPD), all developers of individual lots or lot clusters shall install: ▫ Approved spark arresters in all chimneys, consistent with TFPD Ordinance 121. ▫ A fire-resistant roof system with a minimum Class "A" rating on all residential and accessory buildings, consistent with the Town of Tiburon Building Code. ▫ Automatic fire sprinkler systems and approved smoke detectors, consistent	Project applicant and individual lot owners	Before "acceptance for filing" of the parcel map application; prior to issuance of building permit for each home	Community Development Director, Town Engineer, TFPD, and Building Official	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	with the current TFPD Ordinance. • The common facilities maintenance agreement shall include maintenance of a minimum ten-foot wide fire break adjacent to all roads on the site. • The applicant shall prepare a Vegetation Modification Plan for each lot in consultation with and approval by the TFPD using the TFPD *Hazard Matrix*. In accordance with the *Fuel Modification Matrix*, lot owners shall reduce flammable vegetation and debris within their respective fuel modification zones. The Vegetation Modification Plans and guidelines of these matrices for each lot also shall be incorporated in the subdivision's CC&Rs. • Landscaping plans for residential lots shall be designed in accordance with TFPD guidelines for reduction of fuel load within a unit's defensible space. For example, the applicant and individual lot owners shall design screen plantings with the least amount of vegetation and lowest density sufficient to mitigate visual effects. Areas with trees planted as screens shall not include smaller vegetation which can spread a ground fire into the tree canopy. Planting of trees and vegetation with a high fire risk (such as Manzanita) shall be prohibited within the defensible space of buildings. • The applicant and individual lot owners shall require their contractors to				

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	implement fire prevention measures during construction. Prevention measures shall include, but are not limited to, the following: ▫ Clear brush and other potential fire fuel around construction areas. ▫ Maintain and clearly mark on-site fire response equipment (such as fire extinguishers, fire retardant blankets, shovels, buckets, etc.) at each construction area. ▫ Ensure that all construction workers are trained in the use of on-site fire response equipment and workplace safety measures. ▫ Locate and clearly identify a cellular phone or other communication device on-site at all times during construction.				

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
5.8-3 Emergency Access Site roadways could be inconsistent with Tiburon Fire Protection District emergency access standards regarding turnaround space for emergency vehicles.	In order to mitigate roadway impacts, the applicant would be required to revise the PDP to reflect the roadway standards of the TFPD related to turnaround space by incorporating the following measures: • Design site roadways and driveways consistent with Article 10 of the Uniform Fire Code and Tiburon Fire Protection District Emergency Access Standards. • Design all roadways to include adequate room for a fire vehicle to turn-around.	Project applicant	Before issuance of grading and / or building permits	Town Building Official and TFPD	
5.8-4 Cumulative Fire Service Impacts Project implementation would not result in significant cumulative fire service demands.	If so directed by the TFPD, the applicant shall pay development impact fees assessed by the District.	Project applicant	Prior to issuance of a building permit	Community Development Director and TFPD	
5.8-8 Water Service Impacts Development of the project would not require new water facilities, however, the MMWD would require the applicant to contribute to the funding for future storage improvements.	The applicant would be required to pay storage charges assessed by the MMWD.	Project applicant	Prior to issuance of a building permit	Community Development Director & MMWD	
5.8-12 Increased Project and Cumulative Sewage Conveyance Demand The existing conveyance system to the Paradise Cove treatment plant is expected to be adequate to accommodate flows generated by the project. However, the four-inch Paradise Drive lines proposed by the project could be incompatible with future facilities improvements.	In order to determine appropriate line size to accommodate cumulative development, the applicant shall consult with Sanitary District #5 and incorporate their recommendations in the final utility plan.	Project applicant	Prior to issuance of grading permit for the Subdivision Improvement Phase.	SD #5, and Town Community Development Director	

MITIGATION MONITORING AND REPORTING PLAN continued

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
Cultural Resources					
5.9-1 Potential Subsurface Resources While no discernible impacts to archaeological resources are anticipated or human remains expected to be present on the site, the possibility cannot be precluded that prehistoric cultural deposits and features are present below the ground surface and could be damaged during land alteration activities.	In order to minimize the potential for significant impacts on cultural resources, the applicant initially and lot owners subsequently shall incorporate the following measures in the contracts of their respective contractors and subcontractors to implement: • In the event that archaeological artifacts or cultural soil deposits are encountered during future grading, excavating, or other land alterations, all work in the immediate vicinity of the find shall be stopped until the discovery area can be evaluated by an archaeologist. Depending on the extent and cultural composition of the discovered materials, it may be advisable to have subsequent excavation monitored by an archaeologist who would be ready to record, recover, and / or protect significant cultural materials from further damage. • In the event that human skeletal remains are discovered anywhere on the site, work in the vicinity of the discovery shall be discontinued and the County Coroner shall be contacted. If skeletal remains are found to be prehistoric Native American (not modern), the Coroner within 24 hours shall call the Native American Heritage Commission in Sacramento who will identify the person(s) it believes to be the "Most Likely Descendant" of the	Project applicant and individual lot owners	Before issuance of grading and / or building permits	Community Development Director & Building Official	

Impact	*Mitigation*	*Implemented By*	*When Implemented*	*Monitored By*	*Verified By / Date*
	decreased Native American. The Most Likely Descendant would be responsible for recommending the disposition and treatment of the remains. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.				