

**CALIFORNIA COASTAL COMMISSION**

SOUTH CENTRAL COAST AREA  
89 SOUTH CALIFORNIA ST., SUITE 200  
VENTURA, CA 93001  
(805) 585-1800

Filed: 9/3/03  
49th Day: 9/15/03  
180th Day: 3/1/04  
Staff: T. Duffey  
Staff Report: 12/18/03  
Hearing Date: 1/14-16/04  
Commission Action:



## RECORD PACKET COPY

### STAFF REPORT: REGULAR CALENDAR

**APPLICATION NO.:** 4-02-216  
**APPLICANT:** Matt Haines  
**AGENT:** Mehrdad Sahafi, Malibu Design Associates  
**PROJECT LOCATION:** 2918 Sequit Drive, Malibu (Los Angeles County)

**PROJECT DESCRIPTION:** Construction of a new 1,699 sq. ft. two story single family house with 443 sq. ft. attached two car garage, driveway, septic tank and seepage pit, retaining walls, 208 cubic yards of cut and 310 cubic yards of fill.

<b>Lot area:</b>	7868 sq. ft.
<b>Building coverage:</b>	1699 sq. ft.
<b>Pavement coverage:</b>	850 sq. ft.
<b>Landscape coverage:</b>	2000 sq. ft.

**LOCAL APPROVALS RECEIVED:** County of Los Angeles Department of Regional Planning, Approval in Concept, July 23, 2002; County of Los Angeles Fire Department, Preliminary Fuel Modification Plan Approval, December 18, 2002; County of Los Angeles Fire Department, Fire Prevention Engineering Approval, August 27, 2003; County of Los Angeles Environmental Health Services, Preliminary Septic System Approval, June 3, 2003.

**SUBSTANTIVE FILE DOCUMENTS:** Certified Malibu/Santa Monica Mountains Land Use Plan; "Soils and Engineering Geologic Investigation," Geosystems, Inc., February 8, 1990; "Updated Soils and Engineering Geologic Report," Geosystems, Inc., May 29, 2002; "Percolation Testing and Limited Geologic Evaluation of Groundwater Levels," Southwest Geotechnical, Inc., June 3, 2000; Coastal Development Permit 5-91-616 (Landsman).

#### SUMMARY OF STAFF RECOMMENDATION

Staff recommends **approval** of the proposed project with **Eight (8) Special Conditions** relating to (1) geologic recommendations, (2) landscaping and erosion control, (3) wildfire waiver, (4) drainage and polluted runoff control, (5) structural appearance, (6) future development, (7) deed restriction, and (8) cumulative impact mitigation. The proposed project is located within the El Nido Small Lot Subdivision, an area where the Commission has consistently applied the Slope Intensity Formula to establish a maximum gross structural area (GSA) for projects, based on the area and slope of the building site. As conditioned, the proposed project will be consistent with the applicable policies of the Coastal Act.

## **STAFF RECOMMENDATION:**

The staff recommends that the Commission adopt the following resolution:

### **I. Approval with Conditions**

#### **I. STAFF RECOMMENDATION**

**MOTION:**     *I move that the Commission approve Coastal Development Permit No 4-02-216 pursuant to the staff recommendation.*

#### **STAFF RECOMMENDATION OF APPROVAL:**

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

#### **RESOLUTION TO APPROVE THE PERMIT:**

The Commission hereby approves the Coastal Development Permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

### **II. Standard Conditions**

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

### III. Special Conditions

#### 1. Plans Conforming to Geological Recommendations

All recommendations contained in the Soils and Engineering Geologic Investigation dated February 8, 1990 and the Updated Soils and Engineering Geologic Report dated May 29, 2002 prepared by Geosystems, Inc. and the Percolation Testing and Limited Geologic Evaluation of Groundwater Levels dated June 3, 2000 prepared by Southwest Geotechnical, Inc. shall be incorporated into all final design and construction, including recommendations concerning grading, drainage, corrosive soils, retaining walls, sewage disposal, site preparation, floor slabs, pavement, and temporary excavation slopes. Final plans (as revised pursuant to Special Condition No. 8 below) must be reviewed and approved by the project's consulting geotechnical engineer and geologist. **Prior to issuance of the coastal development permit,** the applicant shall submit, for review and approval by the Executive Director, two sets of plans with evidence of the consultant's review and approval of all project plans.

The final plans approved by the consultant shall be in substantial conformance with the plans approved by the Commission relative to construction, grading, sewage disposal and drainage. Any substantial changes in the proposed development approved by the Commission that may be required by the consultant shall require an amendment to the permit or new Coastal Development Permit.

#### 2. Landscaping and Erosion Control Plans

**Prior to the issuance of the coastal development permit,** the applicant shall submit two sets of landscaping and erosion control plans, prepared by a licensed landscape architect or qualified resource specialist, for review and approval by the Executive Director. The landscaping and erosion control plans shall be reviewed and approved by the geotechnical engineering and geologic consultant to ensure that the plans are in conformance with the consultant's recommendations. The plans shall identify the species, extent, and location of all plant materials and shall incorporate the following criteria:

##### A) Landscaping Plan

- 1) All graded and disturbed areas on the subject site shall be planted and maintained for erosion control purposes within thirty (30) days of completion of the proposed development. To minimize the need for irrigation and to screen and soften the visual impact of development, landscaping shall consist of primarily native/drought resistant plants as listed by the California Native Plant Society, Santa Monica Mountains Chapter, in their document entitled *Recommended List of Plants for Landscaping in the Santa Monica Mountains*, dated February 5, 1996, and shall be compatible with the character of the surrounding native

environment. Invasive, non-indigenous plant species that tend to supplant native species shall not be used. The plan shall specify the erosion control measures to be implemented and the materials necessary to accomplish short-term stabilization, as needed on the site.

- 2) All cut and fill slopes shall be stabilized with planting at the completion of final grading. Planting should be of native plant species indigenous to the Santa Monica Mountains, compatible with the surrounding environment, using accepted planting procedures, and consistent with fire safety requirements. Such planting shall be adequate to provide ninety (90) percent coverage within two (2) years, and this requirement shall apply to all disturbed and graded soils.
- 3) Plantings shall be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with applicable landscape requirements.
- 4) The Permittee shall undertake development in accordance with the final approved plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plan shall occur without a Coastal Commission - approved amendment to the Coastal Development Permit, unless the Executive Director determines that no amendment is required.
- 5) Vegetation within 50 feet of the proposed house may be removed to mineral earth, vegetation within a 200-foot radius of the main structure may be selectively thinned in order to reduce fire hazard. However, such thinning shall only occur in accordance with an approved long-term fuel modification plan submitted pursuant to this special condition. The fuel modification plan shall include details regarding the types, sizes and location of plant materials to be removed, and how often thinning is to occur. In addition, the applicant shall submit evidence that the fuel modification plan has been reviewed and approved by the Forestry Department of Los Angeles County. Irrigated lawn, turf and ground cover planted within the fifty foot radius of the proposed house shall be selected from the most drought tolerant species or subspecies, or varieties suited to the Mediterranean climate of the Santa Monica Mountains.

## **B) Interim Erosion Control Plan**

- 1) The plan shall delineate the areas to be disturbed by grading or construction activities and shall include any temporary access roads, staging areas, and stockpile areas. The natural areas on the sites shall be clearly delineated on the project site with fencing or survey flags.
- 2) The plan shall specify that should grading take place during the rainy season (November 1 – March 31) the applicant shall install or construct temporary sediment basins (including debris basins, desilting basins or silt traps), temporary drains and swales, sand bag barriers, silt fencing, stabilize any stockpiled fill with geofabric covers or other appropriate cover, install geotextiles or mats on all cut or fill slopes and close and stabilize open trenches as soon as possible. These erosion control measures shall be required on the project site prior to or concurrent with the initial grading operations and maintained through out the development process to minimize erosion and sediment from runoff waters during construction. All sediment should be retained on-site unless removed to an appropriate approved dumping location either outside the coastal zone or to a site within the coastal zone permitted to receive fill.

- 3) The plan shall also include temporary erosion control measures should grading or site preparation cease for a period of more than thirty (30) days, including but not limited to: stabilization of all stockpiled fill, access roads, disturbed soils, and cut and fill slopes with geotextiles and/or mats, sand bag barriers, silt fencing; temporary drains and swales and sediment basins. The plans shall also specify that all disturbed areas shall be seeded with native grass species and include the technical specifications for seeding the disturbed areas. These temporary erosion control measures shall be monitored and maintained until grading or construction operations resume.

### **C) Monitoring**

Five (5) years from the date of completion of the proposed development, the applicant shall submit for the review and approval of the Executive Director a landscape monitoring report, prepared by a licensed Landscape Architect or qualified Resource Specialist, that assesses the on-site landscaping and certifies whether it is in conformance with the landscape plan approved pursuant to this special condition. The monitoring report shall include photographic documentation of plant species and plant coverage.

If the landscape monitoring report indicates the landscaping is not in conformance with or has failed to meet the performance standards specified in the landscaping plan approved pursuant to this permit, the applicant, or successors in interest, shall submit a revised or supplemental landscape plan for the review and approval of the Executive Director. The supplemental landscaping plan must be prepared by a licensed landscape architect or qualified resource specialist and shall specify measures to remediate those portions of the original plan that have failed or are not in conformance with the original approved plan. The permittee shall implement the remedial measures specified in the approved supplemental landscape plan.

### **3. Wildfire Waiver of Liability**

***Prior to the issuance of the coastal development permit***, the applicant shall submit a signed document which shall indemnify and hold harmless the California Coastal Commission, its officers, agents, and employees against any and all claims, demands, damages, costs, and expenses of liability arising out of the acquisition, design, construction, operation, maintenance, existence, or failure of the permitted project in an area where an extraordinary potential for damage or destruction from wildfire exists as an inherent risk to life and property.

### **4. Drainage and Polluted Runoff Control Plan**

***Prior to the issuance of the coastal development permit***, the applicant shall submit for the review and approval of the Executive Director, two sets of final drainage and runoff control plans, including supporting calculations. The plan shall be prepared by a licensed engineer and shall incorporate structural and non-structural Best Management Practices (BMPs) designed to control the volume, velocity, and pollutant load of stormwater leaving the developed site. The plan shall be reviewed and approved by the consulting engineering geologist to ensure the plan is in conformance with geologist's recommendations. In addition to the specifications above, the plan shall be in substantial conformance with the following requirements:

- (a) Selected BMPs (or suites of BMPs) shall be designed to treat, infiltrate or filter the amount of stormwater runoff produced by all storms up to and including the 85<sup>th</sup>

percentile, 24-hour runoff event for volume-based BMPs, and/or the 85th percentile, 1-hour runoff event, with an appropriate safety factor (i.e., 2 or greater), for flow-based BMPs.

- (b) Runoff shall be conveyed off site in a non-erosive manner.
- (c) Energy dissipating measures shall be installed at the terminus of outflow drains.
- (d) The plan shall include provisions for maintaining the drainage system, including structural BMPs, in a functional condition throughout the life of the approved development. Such maintenance shall include the following: (1) BMPs shall be inspected, cleaned and repaired when necessary prior to the onset of the storm season, no later than September 30<sup>th</sup> each year and (2) should any of the project's surface or subsurface drainage/filtration structures or other BMPs fail or result in increased erosion, the applicant/landowner or successor-in-interest shall be responsible for any necessary repairs to the drainage/filtration system or BMPs and restoration of the eroded area. Should repairs or restoration become necessary, prior to the commencement of such repair or restoration work, the applicant shall submit a repair and restoration plan to the Executive Director to determine if amendment(s) or new Coastal Development Permit(s) are required to authorize such work.

## **5. Structural Appearance**

Prior to the issuance of the coastal development permit, the applicant shall submit for the review and approval of the Executive Director, a color palette and material specifications for the outer surface of all structures authorized by the approval of coastal development permit 4-02-216. The palette samples shall be presented in a format not to exceed 8½" x 11" x ½" in size. The palette shall include the colors proposed for the roof, trim, exterior surfaces, driveways, retaining walls, or other structures authorized by this permit. Acceptable colors shall be limited to colors compatible with the surrounding environment (earth tones) including shades of green, brown and gray with no white or light shades and no bright tones. All windows shall be comprised of non-glare glass.

The approved structures shall be colored with only the colors and window materials authorized pursuant to this special condition. Alternative colors or materials for future repainting or resurfacing or new windows may only be applied to the structures authorized by coastal development permit 4-02-216 if such changes are specifically authorized by the Executive Director as complying with this special condition.

## **6. Future Development Restriction**

This permit is only for the development described in Coastal Development Permit 4-02-216. Pursuant to Title 14 California Code of Regulations section 13250(b)(6), the exemptions otherwise provided in Public Resources Code section 30610(a) shall not apply to the development governed by Coastal Development Permit 4-02-216. Accordingly, any future structures, future improvements, or change of use to the permitted structures authorized by this permit, including but not limited to, any grading, clearing or other disturbance of vegetation and fencing, other than as provided for in the approved fuel modification/landscape plan prepared pursuant to Special Condition No. 2 shall require an amendment to Coastal Development

Permit 4-02-216 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

#### **7. Deed Restriction**

*Prior to issuance of the coastal development permit*, the applicant shall submit to the Executive Director for review and approval documentation demonstrating that the applicant has executed and recorded a deed restriction, in a form and content acceptable to the Executive Director: (1) indicating that, pursuant to this permit, the California Coastal Commission has authorized development on the subject property, subject to terms and conditions that restrict the use and enjoyment of that property (hereinafter referred to as the "Standard and Special Conditions"); and (2) imposing all Standard and Special Conditions of this permit as covenants, conditions and restrictions on the use and enjoyment of the Property. The deed restriction shall include a legal description of the applicant's entire parcel or parcels. The deed restriction shall also indicate that, in the event of an extinguishment or termination of the deed restriction for any reason, the terms and conditions of this permit shall continue to restrict the use and enjoyment of the subject property so long as either this permit or the development it authorizes, or any part, modification, or amendment thereof, remains in existence on or with respect to the subject property.

#### **8. Cumulative Impact Mitigation**

*Prior to issuance of the coastal development permit*, the applicant shall submit, for the review and approval of the Executive Director, evidence that all potential for future development has been permanently extinguished on any combination of lots within the El Nido small lot subdivision, within the same watershed, or other lots designated for this purpose, to comply with the requirements of the slope intensity formula in accordance with Policy 271(b)(2) of the previously certified 1986 Malibu/Santa Monica Mountains Land Use Plan provided such lots are legally combined with other developed or developable building sites within the same small lot subdivision or watershed, or have been designated for this purpose. The maximum allowable gross structural area of 1,475 sq. ft. may be increased by 500 sq. ft. by extinguishing development rights on a lot contiguous to the building site or by 300 sq. ft. for each lot which is not contiguous but which is in the same small lot subdivision or watershed, or designated for this purpose.

### **IV. Findings and Declarations**

The Commission hereby finds and declares:

#### **A. Project Description and Background**

The applicant proposes the construction of a 1,699 sq. ft. two story single family house with 443 sq. ft. attached two car garage, driveway, septic tank and seepage pit, retaining walls, 208 cubic yards of cut and 310 cubic yards of fill on one parcel in the El Nido Small Lot Subdivision (Exhibits 1-14). Many of the parcels surrounding the subject site in the El Nido small lot subdivision are developed with single family residences. The proposed project site is located on Sequit Drive off of Corral Canyon Road. Solstice Canyon Park is located to the south of the proposed project site, and the proposed project would be visible from Solstice Canyon Park.

Due to the level of disturbance this area is not considered to be an environmentally sensitive habitat area (ESHA). However, the area surrounding this subdivision is considered to be ESHA as it contains undisturbed contiguous chaparral habitat. In addition, the proposed project is located across Sequit Drive from a blue line stream. The residence would be approximately 50 feet from the stream, and the driveway would be approximately 30 feet from the stream. Sequit Drive is approximately 12-15 feet wide, and the road drops off between five and ten feet to the stream, which has a dense vegetation cover.

## **B. Hazards and Geologic Stability**

The proposed development is located in the Malibu/Santa Monica Mountains area, an area that is generally considered to be subject to an unusually high amount of natural hazards. Geologic hazards common to the Santa Monica Mountains area include landslides, erosion, and flooding. In addition, fire is an inherent threat to the indigenous chaparral community of the coastal mountains. Wildfires often denude hillsides in the Santa Monica Mountains of all existing vegetation, thereby contributing to an increased potential for erosion and landslides on property.

Section 30253 of the Coastal Act states, in pertinent part, that new development shall:

- (1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.***
- (2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.***

## **Geology**

The applicant has submitted the Soils and Engineering Geologic Investigation dated February 8, 1990 and the Updated Soils and Engineering Geologic Report dated May 29, 2002 prepared by Geosystems, Inc. and the Percolation Testing and Limited Geologic Evaluation of Groundwater Levels dated June 3, 2000 prepared by Southwest Geotechnical, Inc., which evaluate the geologic stability of the subject site in relation to the proposed development. Based on their evaluation of the site's geology and the proposed development the consultants have found that the project site is suitable for the proposed project. The Updated Soils and Engineering Geologic Report dated May 29, 2002 prepared by Geosystems, Inc. concludes:

***It is the finding of this firm that the proposed building and/or grading will be safe and that the site will not be affected by any hazard from landslide, settlement or slippage and the completed work will not adversely affect adjacent property in compliance with County code, provided our recommendations are followed.***

The engineering geologic and geotechnical consultants conclude that the proposed development is feasible and will be free from geologic hazard provided their recommendations are incorporated into the proposed development. The Geologic/Geotechnical Reports contain several recommendations to be incorporated into project construction, design, and drainage to ensure the stability and geologic safety of the proposed project site and adjacent property. To ensure that the recommendations of the consultant have been incorporated into all proposed



development the Commission, as specified in **Special Condition No. 1**, requires the applicant to submit project plans certified by the consulting geologist and geotechnical engineer as conforming to all structural and site stability recommendations for the proposed project. Final plans approved by the consultant shall be in substantial conformance with the plans approved by the Commission. Any substantial changes to the proposed development, as approved by the Commission, which may be recommended by the consultant shall require an amendment to the permit or a new coastal development permit.

The Commission finds that controlling and diverting run-off in a non-erosive manner from the proposed structures, impervious surfaces, and building pad will minimize erosion and add to the geologic stability of the project site. To ensure that adequate drainage and erosion control are included in the proposed development the Commission requires the applicant to submit drainage and interim erosion control plans certified by the consultants, as specified in **Special Conditions Nos. 2 and 4**. Special Condition No. 4 requires the applicant to maintain a functional drainage system at the subject site to insure that run-off from the project site is diverted in a non-erosive manner to minimize erosion at the site for the life of the proposed development. Should the drainage system of the project site fail at any time, the applicant will be responsible for any repairs or restoration of eroded areas as consistent with the terms of Special Condition No. 4.

The Commission also finds that landscaping of graded and disturbed areas on the subject site will serve stabilize disturbed soils, reduce erosion and thus enhance and maintain the geologic stability of the site. Therefore, **Special Condition No. 2** requires the applicant to submit and implement landscaping plans that utilize and maintain native and noninvasive plant species compatible with the surrounding area in order to revegetate all graded or disturbed areas.

Invasive and non-native plant species are generally characterized as having a shallow root structure in comparison with their high surface/foliage weight. The Commission notes that non-native and invasive plant species with high surface/foliage weight and shallow root structures do not serve to stabilize slopes and that such vegetation results in potential adverse effects to the stability of the project site. Native species, alternatively, tend to have a deeper root structure than non-native and invasive species, and once established aid in preventing erosion. Therefore, the Commission finds that in order to ensure site stability, all slopes and disturbed and graded areas of the site shall be landscaped with appropriate native plant species, as specified in **Special Condition No. 2**.

In addition, to ensure excess excavated material is moved off site so as not to contribute to unnecessary landform alteration and to minimize erosion and sedimentation from stockpiled excavated soil, the Commission finds it necessary to require the applicant to dispose of the material at an appropriate disposal site or to a site that has been approved to accept fill material, as specified in **Special Condition No. 3**.

The Commission finds that the proposed project, as conditioned, will minimize potential geologic hazards of the project site and adjacent properties.

### Wild Fire

The proposed project is located in the Santa Monica Mountains, an area subject to an extraordinary potential for damage or destruction from wild fire. Typical vegetation in the Santa Monica Mountains consists mostly of coastal sage scrub and chaparral. Many plant species

common to these communities produce and store terpenes, which are highly flammable substances (Mooney in Barbour, Terrestrial Vegetation of California, 1988). Chaparral and sage scrub communities have evolved in concert with, and continue to produce the potential for, frequent wild fires. The typical warm, dry summer conditions of the Mediterranean climate combine with the natural characteristics of the native vegetation to pose a risk of wild fire damage to development that cannot be completely avoided or mitigated.

Due to the fact that the proposed project is located in an area subject to an extraordinary potential for damage or destruction from wild fire, the Commission can only approve the project if the applicant assumes the liability from these associated risks. Through **Special Condition No. 3**, the wildfire waiver of liability, the applicant acknowledges the nature of the fire hazard which exists on the site and which may affect the safety of the proposed development. Moreover, through acceptance of **Special Condition No. 3**, the applicant also agrees to indemnify the Commission, its officers, agents and employees against any and all expenses or liability arising out of the acquisition, design, construction, operation, maintenance, existence, or failure of the permitted project.

For the reasons set forth above, the Commission finds that, as conditioned, the proposed project is consistent with Section 30253 of the Coastal Act.

### **C. Water Quality**

The Commission recognizes that new development in the Santa Monica Mountains has the potential to adversely impact coastal water quality through the removal of native vegetation, increase of impervious surfaces, increase of runoff, erosion, and sedimentation, and introduction of pollutants such as petroleum, cleaning products, pesticides, and other pollutant sources, as well as effluent from septic systems.

Section 30231 of the Coastal Act states:

***The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, minimizing alteration of natural streams.***

As described in detail in the previous sections, the applicant proposes to construct a 1,699 sq. ft. two story single family house with 443 sq. ft. attached two car garage, driveway, septic tank and seepage pit, retaining walls, 208 cubic yards of cut and 310 cubic yards of fill.

The proposed development will result in an increase in impervious surface at the subject site, which in turn decreases the infiltrative function and capacity of existing permeable land on site. Reduction in permeable space therefore leads to an increase in the volume and velocity of stormwater runoff that can be expected to leave the site. Further, pollutants commonly found in runoff associated with residential use include petroleum hydrocarbons including oil and grease from vehicles; heavy metals; synthetic organic chemicals including paint and household cleaners; soap and dirt from washing vehicles; dirt and vegetation from yard maintenance; litter;

fertilizers, herbicides, and pesticides; and bacteria and pathogens from animal waste. The discharge of these pollutants to coastal waters can cause cumulative impacts such as: eutrophication and anoxic conditions resulting in fish kills and diseases and the alteration of aquatic habitat, including adverse changes to species composition and size; excess nutrients causing algae blooms and sedimentation increasing turbidity which both reduce the penetration of sunlight needed by aquatic vegetation which provide food and cover for aquatic species; disruptions to the reproductive cycle of aquatic species; and acute and sublethal toxicity in marine organisms leading to adverse changes in reproduction and feeding behavior. These impacts reduce the biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes and reduce optimum populations of marine organisms and have adverse impacts on human health.

Therefore, in order to find the proposed project consistent with the water and marine resource policies of the Coastal Act, the Commission finds it necessary to require the incorporation of Best Management Practices designed to control the volume, velocity and pollutant load of stormwater leaving the developed sites. Critical to the successful function of post-construction structural BMPs in removing pollutants in stormwater to the Maximum Extent Practicable (MEP), is the application of appropriate design standards for sizing BMPs. The majority of runoff is generated from small storms because most storms are small. Additionally, storm water runoff typically conveys a disproportionate amount of pollutants in the initial period that runoff is generated during a storm event. Designing BMPs to accommodate (infiltrate, filter or treat) the runoff from the more frequent storms, rather than for the largest infrequent storms, results in improved BMP performance at lower cost.

For design purposes, with case-by-case considerations, post-construction structural BMPs (or suites of BMPs) should be designed to treat, infiltrate or filter the amount of stormwater runoff produced by all storms up to and including the 85th percentile, 24-hour storm event for volume-based BMPs, and/or the 85th percentile, 1-hour storm event, with an appropriate safety factor (i.e., 2 or greater), for flow-based BMPs. The American Society of Civil Engineers (ASCE) and the Water Environment Federation (WEF) have recommended a numerical BMP design standard for storm water that is derived from a mathematical equation to maximize treatment of runoff volume for water quality based on rainfall/runoff statistics and which is economically sound.<sup>1</sup> The maximized treatment volume is cut-off at the point of diminishing returns for rainfall/runoff frequency. On the basis of this formula and rainfall/runoff statistics; the point of diminishing returns for treatment control is the 85th percentile storm event. Therefore, the Commission requires the selected post-construction structural BMPs be sized based on design criteria specified in **Special Condition No. 4**, and finds this will ensure the proposed development will be designed to minimize adverse impacts to coastal resources, in a manner consistent with the water and marine policies of the Coastal Act.

Furthermore, interim erosion control measures implemented during construction and post construction landscaping will serve to minimize the potential for adverse impacts to water quality resulting from drainage runoff during construction and in the post-development stage. Therefore, the Commission finds that **Special Condition No. 2** is necessary to ensure the proposed development will not adversely impact water quality or coastal resources.

---

<sup>1</sup> *Urban Runoff Quality Management, WEF Manual of Practice No. 23, ASCE manual and Report on Engineering Practice No. 87.* WEF, Alexandria, VA; ASCE, Reston, VA. 259 pp (1998); Urbonas, Guo, and Tucker, "Optimization of Stormwater Quality Capture Volume," in *Urban Stormwater Quality Enhancement - Source Control, Retrofitting, and Combined Sewere Technology, Proceedings of an Engineering Foundation Conference*, Harry C. Tomo, ed. October 1989. New York: ASCE, pp. 94-110.

The proposed development is located across Sequit Drive from a blue line stream. These types of streams and drainages, in conjunction with primary waterways, provide important habitat for sensitive plant and animal species. Section 30231 of the Coastal Act provides that the quality of coastal waters and streams shall be maintained and restored whenever feasible through means such as: controlling runoff, preventing interference with surface water flows and alteration of natural streams, and by maintaining natural vegetation buffer areas. In past permit actions the Commission has found that new development adjacent to coastal streams and natural drainages results in potential adverse impacts to riparian habitat and marine resources from increased erosion, contaminated storm runoff, introduction of non-native and invasive plant species, disturbance of wildlife, and loss of riparian plant and animal habitat.

The Commission has typically required a 100-foot setback, or buffer, from streams of this type. In this case, the development will only be set back about 50 feet from the stream corridor. This project represents a special circumstance in that it is located on a small, constrained lot, and cannot be located further back on the property due to steep slopes and other constraints. The Commission has determined that the impacts of the proposed residence being located within the 100-foot buffer are minimal and can be reduced through the measures discussed below.

Potential adverse effects of the proposed development on riparian habitat may be minimized through the implementation of a drainage and polluted runoff control plan, which will ensure that erosion is minimized and polluted run-off from the site is controlled and filtered before it reaches natural drainage courses within the watershed. Therefore, the Commission requires **Special Condition No. 4**, the Drainage and Polluted Run-off Control Plan, which requires the applicant to incorporate appropriate drainage devices and Best Management Practices (BMPs) to ensure that run-off from the proposed development is conveyed off-site in a non-erosive manner and is treated/filtered to reduce pollutant load before it reaches coastal waterways, including the adjacent stream.

Construction of the road and excavation of soils during construction of the residence will result in the potential for erosion and possible sedimentation into the stream. Therefore, the Commission finds that the applicant shall submit a landscaping and erosion control plan to address these concerns, as required in **Special Condition No. 2**.

To reduce the risks of wildfire, the County of Los Angeles Fire Department requires fuel modification to be performed on all properties to be developed with combustible structures in the Santa Monica Mountains, as required in **Special Condition No. 2**. In addition, the Fire Department requires brush clearance in a 200-foot radius from all combustible structures. Construction of the proposed project would therefore result in a brush clearance radius that extends into the riparian area. Removal of native habitat in and adjacent to stream corridors contributes to indirect impacts such as erosion and sedimentation, as well as microclimatic changes which can degrade water quality and aquatic habitat, and adversely impact sensitive plant and animal species. However, due to the relatively low fire risk posed by riparian areas, and the firebreak provided by the road that separates the stream from the project site, little or no brush clearance would be performed in the riparian area, according to the County of Los Angeles Fire Department Brush Clearance Unit.

Finally, the proposed development includes the installation of on-site private sewage disposal systems to serve the residence. The County of Los Angeles, Department of Health Services, has given in-concept approval of the proposed septic system, determining that the system

meets the requirements of the plumbing code. The Commission has found that conformance with the provisions of the plumbing code is protective of coastal resources.

For the reasons set forth above, the Commission finds that the proposed project, as conditioned to incorporate and maintain a drainage and polluted runoff control plan, a landscaping and erosion control plan, and a fuel modification plan, is consistent with Section 30231 of the Coastal Act.

#### **D. Visual Resources**

Section 30251 of the Coastal Act states:

*The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline reservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

Section 30251 of the Coastal Act requires scenic and visual qualities to be considered and preserved. The subject site is located within a rural area characterized by expansive, naturally vegetated mountains and hillsides.

The applicant proposes to construct a 1,699 sq. ft. two story single family house with 443 sq. ft. attached two car garage, driveway, septic tank and seepage pit, retaining walls, 208 cubic yards of cut and 310 cubic yards of fill. This proposed development is in the El Nido subdivision, where many residences have been approved and built throughout the subdivision. The proposed project site is located approximately 100 feet north from a bend in Sequit Drive that overlooks Solstice Canyon State Park. Solstice Canyon Park is located to the south of the proposed project site. The park consists of one large canyon, Solstice Canyon, and a few secondary canyons that branch off the main canyon. One of the secondary canyons, Dry Canyon, extends up towards the El Nido subdivision. A trail within this canyon follows the canyon to just below the subdivision. Some of the development in this subdivision, especially the development located in the southern portion of the subdivision, is visible from the trail. Any structures located south of the proposed residence along the bend in Sequit Drive and to the east are very visible from the park.

Because of the topography of the area, with the southern portion of the subdivision sloping towards the park lands, development along and near the southern edge of the subdivision would be visible from the park. Due to its location, the proposed development will be visible from the park, in the area of the National Park Service offices, and from various trails. Even so, the development will not have a significant visual impact since the proposed development is located in a developed area and will be visually compatible with the character of the surrounding area. In addition, the applicant has minimized the proposed grading for the project, which is proposed only within the immediate area of the building pad and driveway to prepare the site for construction of the new development. The proposed access road/driveway is designed to meet the minimum standards required for Fire Department access. Therefore, the Commission finds, in consideration of the character of the area, that the proposed development

is reasonable and has been adequately modified through reductions in landform alteration and square footage of the structure to fit in with the character and scale of the surrounding area.

Nonetheless, the Commission finds that it is necessary to require further mitigation measures to minimize visual impacts associated with development of the project site, such as, requiring the residence to be finished in a color consistent with the surrounding natural landscape and, further, by requiring that windows of the proposed structure be of a non-reflective glass type to minimize impacts on public views. To ensure visual impacts associated with the colors of the structure and the potential glare of the window glass are minimized, the Commission requires the applicant to use colors compatible with the surrounding environment and non-glare glass, as detailed by **Special Condition No. 5**.

Visual impacts associated with proposed grading, and the structure itself, can be further reduced by the use of appropriate and adequate landscaping. As such, **Special Condition No. 2** requires the applicant to prepare a landscape plan relying mostly on native, noninvasive plant species to ensure that the vegetation on site remains visually compatible with the native flora of surrounding areas. Implementation of Special Condition No. 2 will partially screen the proposed structures and soften the visual impact of the development from public views. To ensure that the final approved landscaping plans are successfully implemented, Special Condition No. 2 also requires the applicant to revegetate all disturbed areas in a timely manner and includes a monitoring component to ensure the successful establishment of all newly planted and landscaped areas over time.

Finally, regarding future developments or improvements, certain types of development to the property, normally associated with a single family residence, which might otherwise be exempt, have the potential to impact scenic and visual resources in this area. It is necessary to ensure that any future development or improvements normally associated with the entire property, which might otherwise be exempt, are reviewed by the Commission for compliance with the scenic resource policy, Section 30251 of the Coastal Act. **Special Condition No. Six 6**, the Future Development Restriction, will ensure that the Commission will have the opportunity to review future projects for compliance with the Coastal Act. Finally, **Special Condition No. 7** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the subject property and provides any prospective purchaser with recorded notice that the restrictions are imposed on the subject property.

The proposed project, as conditioned, will not result in a significant adverse impact to scenic public views or character of the surrounding area. Therefore the Commission finds that, as conditioned, the proposed development is consistent with section 30251 of the Coastal Act.

#### **E. Cumulative Impacts**

The proposed project involves the construction of a new single family residence, which is defined under the Coastal Act as new development. New development raises issues with respect to cumulative impacts on coastal resources. Sections 30250 and 30252 of the Coastal Act address the cumulative impacts of new development.

Section 30250(a) of the Coastal Act states:

***New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of the surrounding parcels.***

Section 30252 of the Coastal Act states:

***The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.***

Section 30105.5 of the Coastal Act defines the term "cumulatively," as it is used in Section 30250(a), to mean that:

***the incremental effects of an individual project shall be reviewed in conjunction with the effects of past projects, the effects of other current projects, and the effects of probable future projects.***

Throughout the Malibu/Santa Monica Mountains coastal zone there are a number of areas, which were subdivided in the 1920's and 30's into very small "urban" scale lots. These subdivisions, known as "small lot subdivisions" are comprised of parcels of less than one acre but more typically range in size from 4,000 to 5,000 square feet. The total buildout of these dense subdivisions would result in a number of adverse cumulative impacts to coastal resources. Cumulative development constraints common to small lot subdivisions were documented by the Coastal Commission and the Santa Monica Mountains Comprehensive Planning Commission in the January 1979 study entitled: "Cumulative Impacts of Small Lot Subdivision Development In the Santa Monica Mountains Coastal Zone".

The study acknowledged that the existing small lot subdivisions can only accommodate a limited amount of additional new development due to major constraints to buildout of these areas that include: Geologic, road access, water quality, disruption of rural community character, creation of unreasonable fire hazards and others. Following an intensive one year planning effort regarding impacts on coastal resources by Coastal Commission staff, including five months of public review and input, new development standards relating to residential development on small lots in hillsides, including the Slope-Intensity/Gross Structural Area Formula (GSA) were incorporated into the Malibu District Interpretive Guidelines in June 1979. A nearly identical Slope Intensity Formula was incorporated into the 1986 certified Malibu/Santa Monica Mountains Land Use Plan under policy 271(b)(2) to reduce the potential effects of buildout as discussed below.

The Commission has found that minimizing the cumulative impacts of new development is especially critical in the Malibu/Santa Monica Mountains area because of the large number of lots that already exist, many in remote, rugged mountain and canyon areas. From a comprehensive planning perspective, the potential development of thousands of existing undeveloped and poorly sited parcels in these mountains creates cumulative impacts on coastal resources and public access over time. Because of this, the demands on road capacity, public services, recreational facilities, and beaches could be expected to grow tremendously.

Policy 271(b)(2) of the Malibu/Santa Monica Mountains LUP, which has been used as guidance by the Coastal Commission, requires that new development in small lot subdivisions comply with the Slope Intensity Formula for calculating the allowable Gross Structural Area (GSA) of a residential unit. Past Commission action certifying the LUP indicates that the Commission considers the use of the Slope Intensity Formula appropriate for determining the maximum level of development that may be permitted in small lot subdivision areas consistent with the policies of the Coastal Act. The basic concept of the formula assumes the suitability of development of small hillside lots should be determined by the physical characteristics of the building site, recognizing that development on steep slopes has a high potential for adverse impacts on resources. Following is the formula and description of each factor used in its calculation:

***Slope Intensity Formula:***

$$\text{GSA} = (A/5) \times ((50-S)/35) + 500$$

GSA = the allowable gross structural area of the permitted development in square feet. The GSA includes all substantially enclosed residential and storage areas, but does not include garages or carports designed for storage of autos.

A = the area of the building site in square feet. The building site is defined by the applicant and may consist of all or a designated portion of the one or more lots comprising the project location. All permitted structures must be located within the designated building site.

S = the average slope of the building site in percent as calculated by the formula:

$$S = I \times L/A \times 100$$

I = contour interval in feet, at not greater than 25-foot intervals, resulting in at least 5 contour lines

L = total accumulated length of all contours of interval "I" in feet

A = the area being considered in square feet

In addition, pursuant to Policy 271 of the Malibu/Santa Monica Mountains LUP, the maximum allowable gross structural area (GSA) as calculated above, may be increased as follows:



- (1) Add 500 square feet for each lot which is contiguous to the designated building site provided that such lot(s) is (are) combined with the building site and all potential for residential development on such lot(s) is permanently extinguished.
- (2) Add 300 square feet for each lot in the vicinity of (e.g. in the same small lot subdivision) but not contiguous with the designated building site provided that such lot(s) is (are) combined with other developed or developable building sites and all potential for residential development on such lot(s) is permanently extinguished.

The proposed project is located in the small lot subdivision of El Nido and involves the construction of a new 1,699 sq. ft. two story single family house and a 443 sq. ft. attached two car garage. The applicant has submitted a GSA calculation in conformance to Policy 271(b)(2) of the Malibu/Santa Monica Mountains LUP. This calculation arrived at a maximum GSA of 1,475 sq. ft. of habitable space. However, the applicant is proposing a 1,699 sq. ft. single family residence, which is 224 sq. ft. greater in size than that allowed by the calculated GSA. In order to comply with Policy 271(b)(2) of the certified LUP, the applicant proposes to extinguish the development rights on one small lot subdivision parcels previously approved by the Commission for the purpose of GSA credit. As proposed to extinguish the development rights on one small lot subdivision parcels the maximum GSA in this case is 1,775 square feet. To ensure that the development rights are extinguished on one appropriate small lot subdivision parcel, the Commission must require **Special Condition No. 8**. This condition provides a means to increase the total allowable GSA in conjunction with extinguishing development rights on contiguous lots or non-contiguous lots within the El Nido small lot subdivision, or on other lots designated for this purpose. An addition of one 500 sq. ft. bonus for a contiguous lot, or one 300 sq. ft. bonus for a non-contiguous lot or other designated lot would be required to cover the proposed additional 224 sq. ft. beyond the allowed GSA. This will bring the development into conformance with Policy 271(b)(2) of the Malibu/Santa Monica Mountains LUP, as used as guidance in past Commission decisions.

Some additions and improvements to residences on small steep lots within these small lot subdivisions have been found to adversely impact the area. Many of the lots in these areas are so steep or narrow that they cannot support a large residence without increasing or exacerbating the geologic hazards on and/or off site. Additional buildout of small lot subdivisions affects water usage and has the potential to impact water quality of coastal streams in the area. Other impacts to these areas from the buildout of small lot subdivisions include increases in traffic along mountain road corridors and greater fire hazards. For all of these reasons, future improvements on the subject property could cause adverse cumulative impacts on the limited resources of the subdivision. The Commission, therefore, finds it necessary for the applicant to record a future improvements deed restriction on this lot, as noted in **Special Condition No. 6**, which would ensure that any future structures, additions, change in landscaping or intensity of use at the project site, that may otherwise be exempt from coastal permit requirements, are reviewed by the Commission for consistency with the resource protection policies of the Coastal Act.

Further, **Special Condition No. 7** requires the applicant to record a deed restriction that imposes the terms and conditions of this permit as restrictions on use and enjoyment of the property and provides any prospective purchaser of the site with recorded notice that the restrictions are imposed on the subject property.

The Commission therefore finds that the proposed project, only as conditioned, is consistent with Sections 30250(a) and 30252 of the Coastal Act.

**F. Local Coastal Program**

Section 30604 of the Coastal Act states:

*a) Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a local program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200).*

Section 30604(a) of the Coastal Act provides that the Commission shall issue a Coastal Development Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program that conforms with Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed project will be in conformity with the provisions of Chapter 3 if certain conditions are incorporated into the projects and are accepted by the applicant. As conditioned, the proposed development will not create adverse impacts and is found to be consistent with the applicable policies contained in Chapter 3. Therefore, the Commission finds that approval of the proposed development, as conditioned, will not prejudice the County of Los Angeles' ability to prepare a Local Coastal Program for this area which is also consistent with the policies of Chapter 3 of the Coastal Act, as required by Section 30604(a).

**G. CEQA**

Section 13096(a) of the Commission's administrative regulations requires Commission approval of a Coastal Development Permit application to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect that the activity may have on the environment.

The Commission finds that the proposed project, as conditioned, will not have significant adverse effects on the environment within the meaning of the California Environmental Quality Act of 1970. Therefore, the proposed project, as conditioned, has been adequately mitigated and is determined to be consistent with CEQA and the policies of the Coastal Act.

# LOT 81 VICINITY MAP

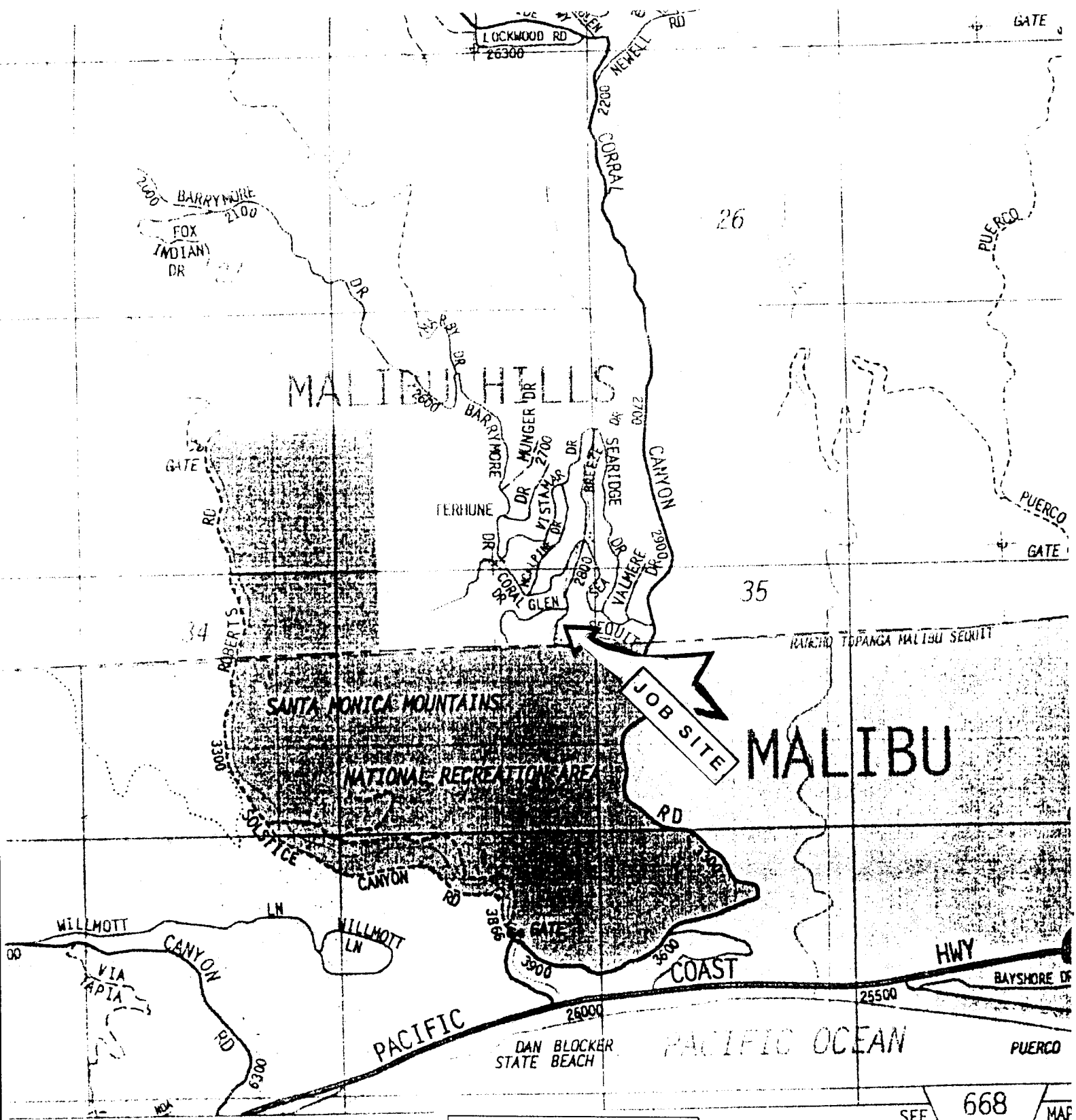
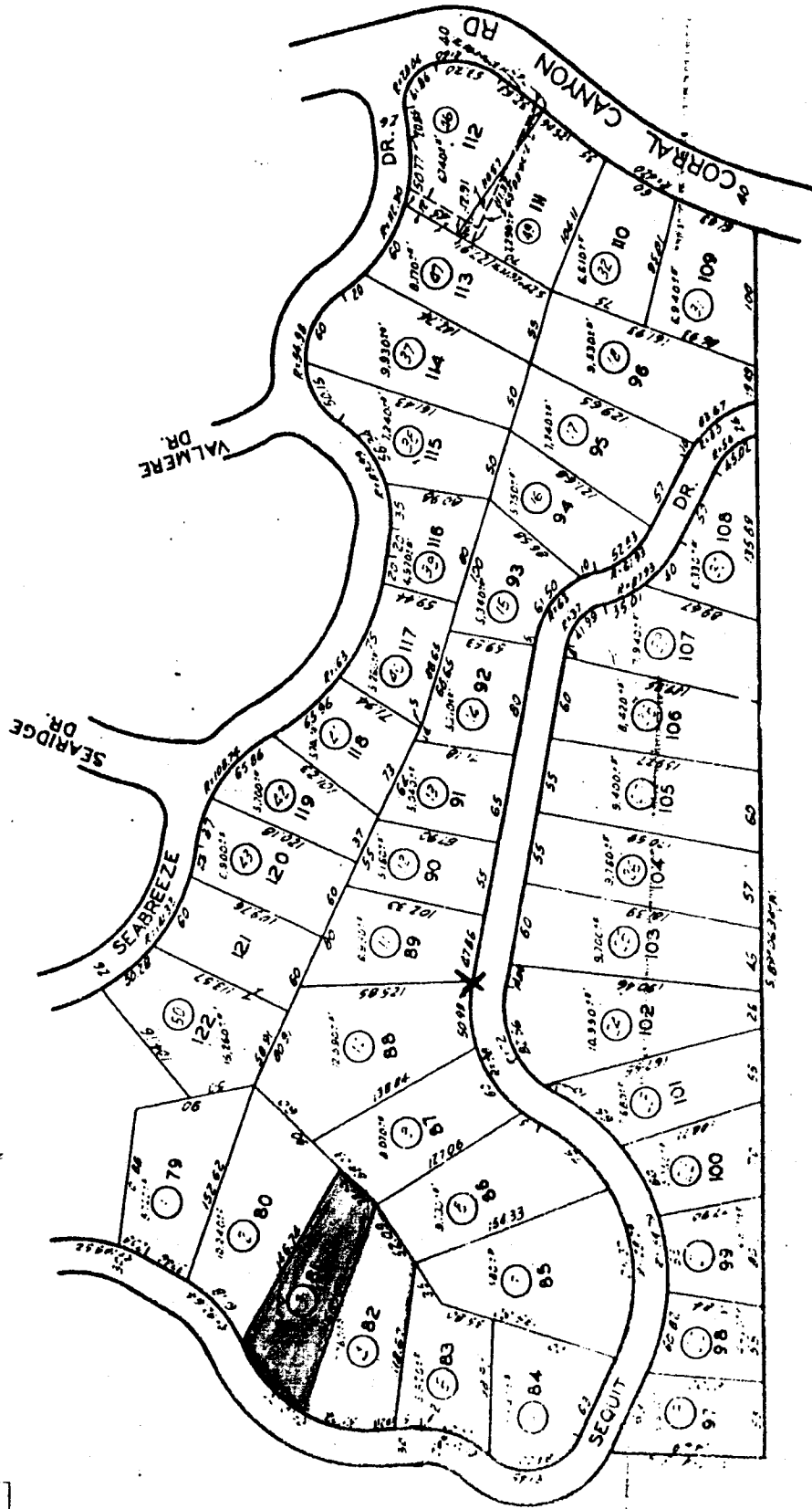


EXHIBIT 1  
4-02-216  
Vicinity Map

SEE 668 MAP

4457 16

SCALE 1" = 80'



TRACT NO. 9456

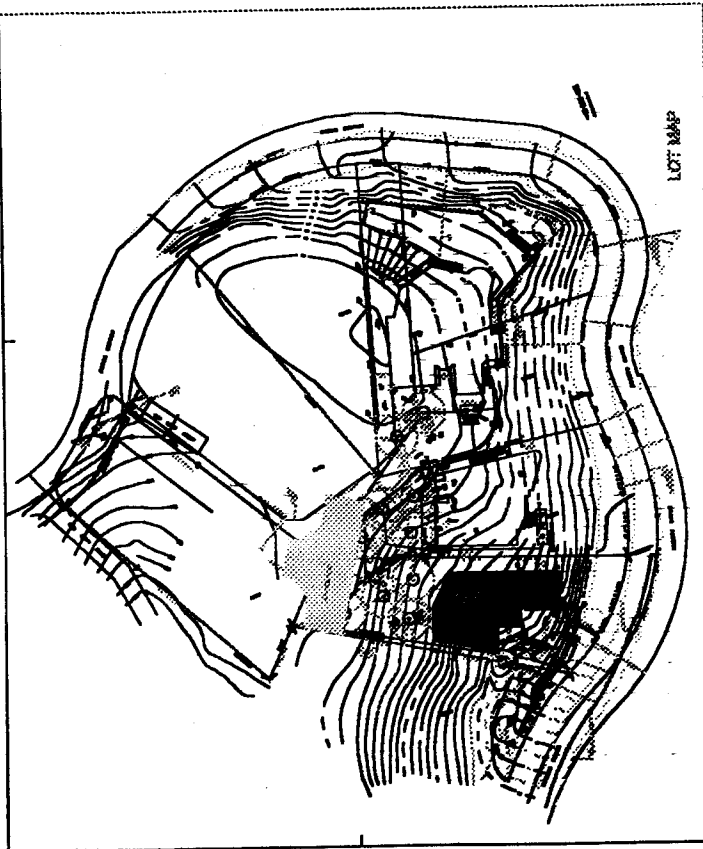
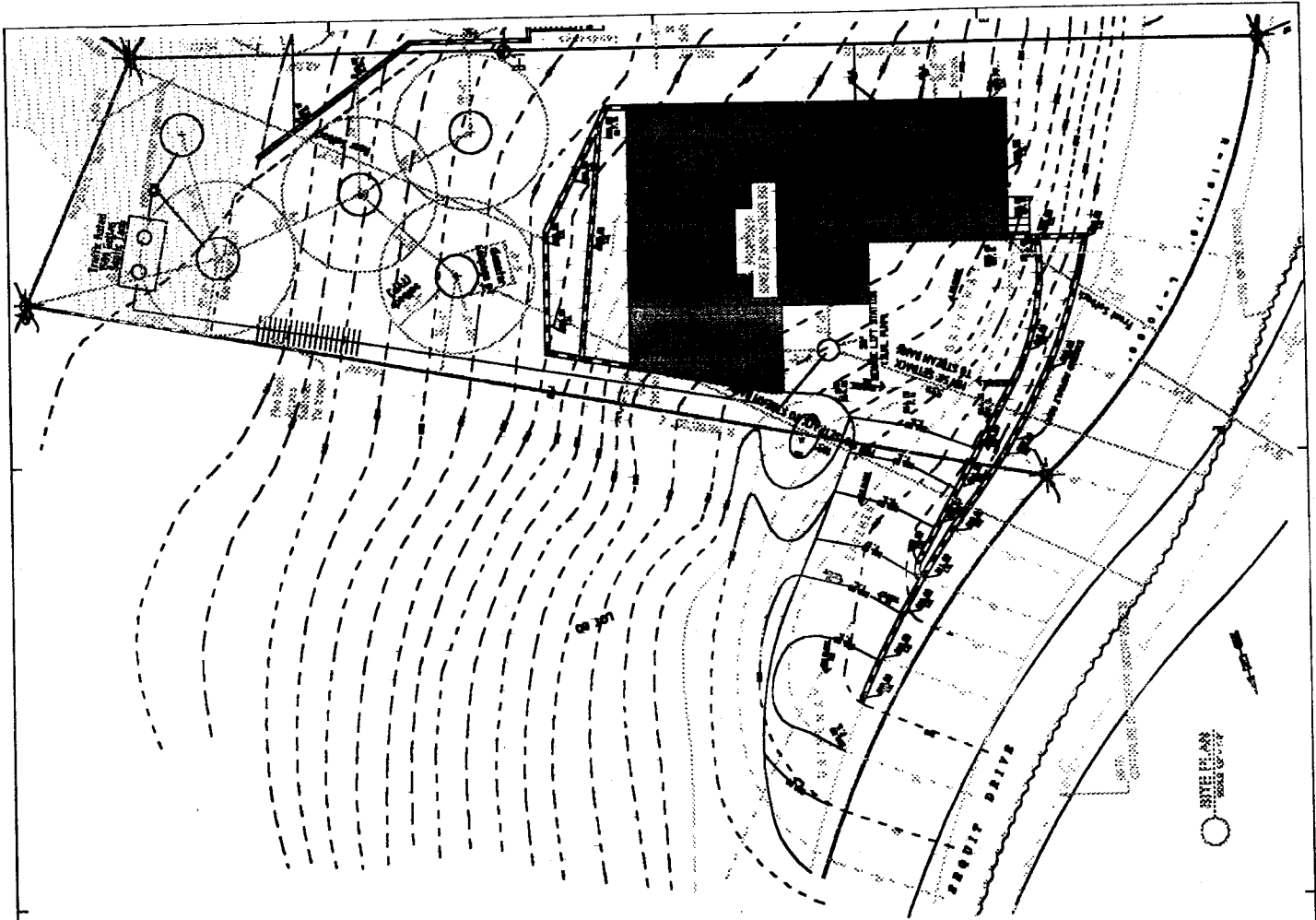
M. B. 131-30-32

COM 8663

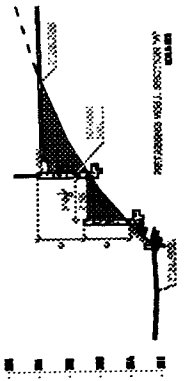
FOR PREV ASSMT. SEE 482-15&16

ASSISTANT'S MAP  
COUNTY OF LOS ANGELES, CAL

EXHIBIT 2
4-02-216
Parcel Map



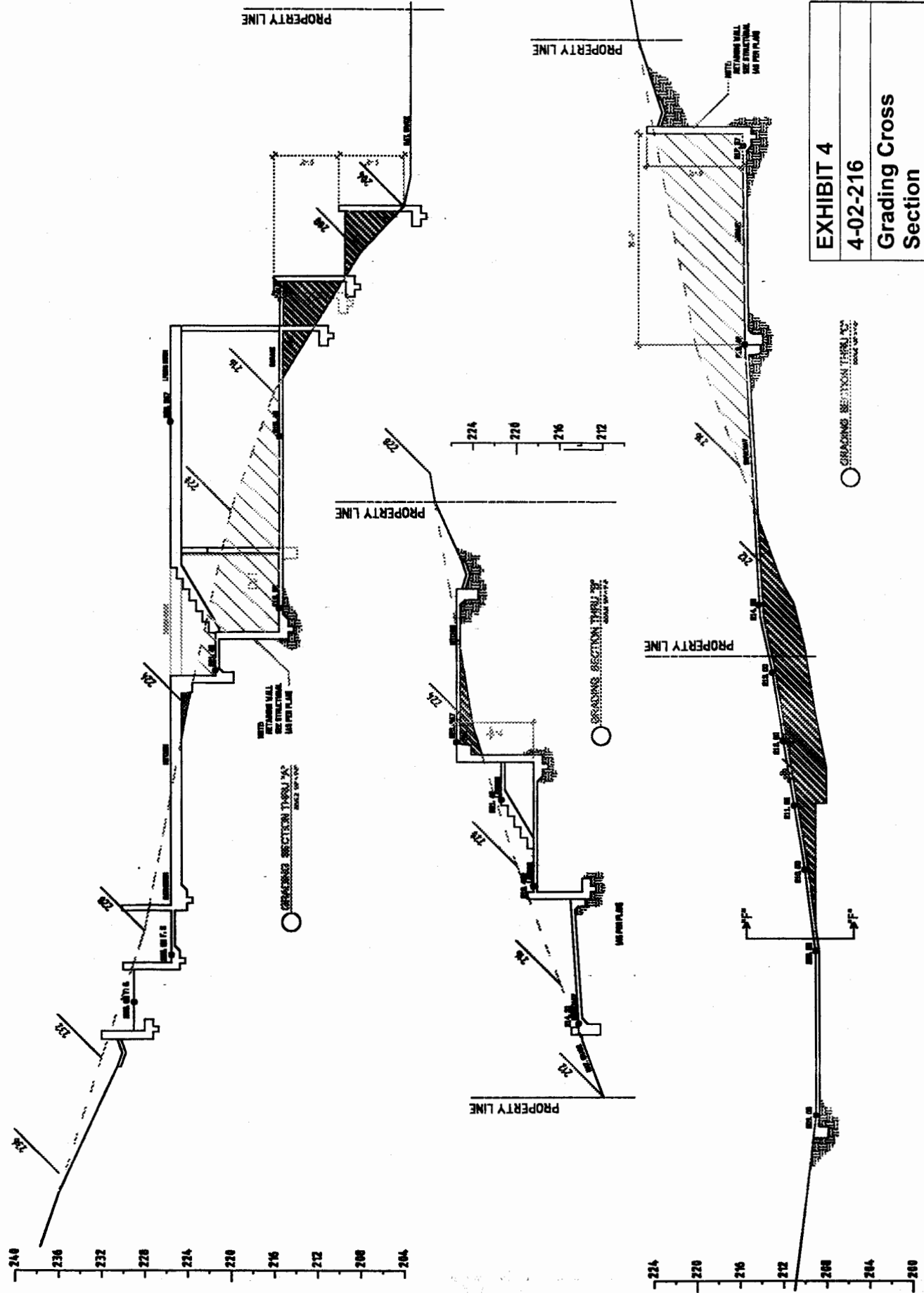
**EXHIBIT 3**  
**4-02-216**  
**Site Plan**

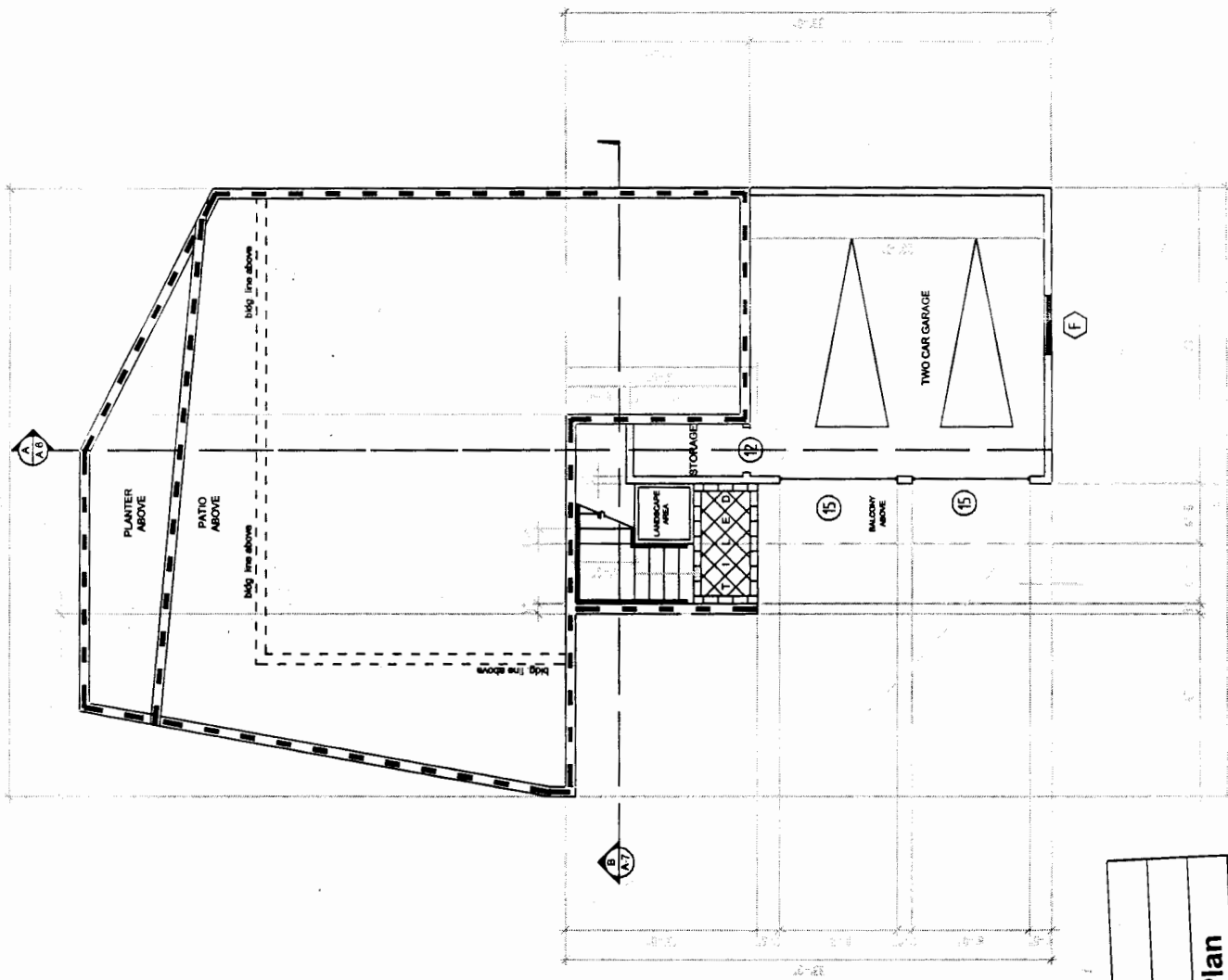


**EASEMENT**  
**FOOT PRINT**

**EXHIBIT 4**  
**4-02-216**  
**Grading Cross**  
**Section**

○ GRADING SECTION TABLE 202  
 SCALE 1/8" = 1'-0"





















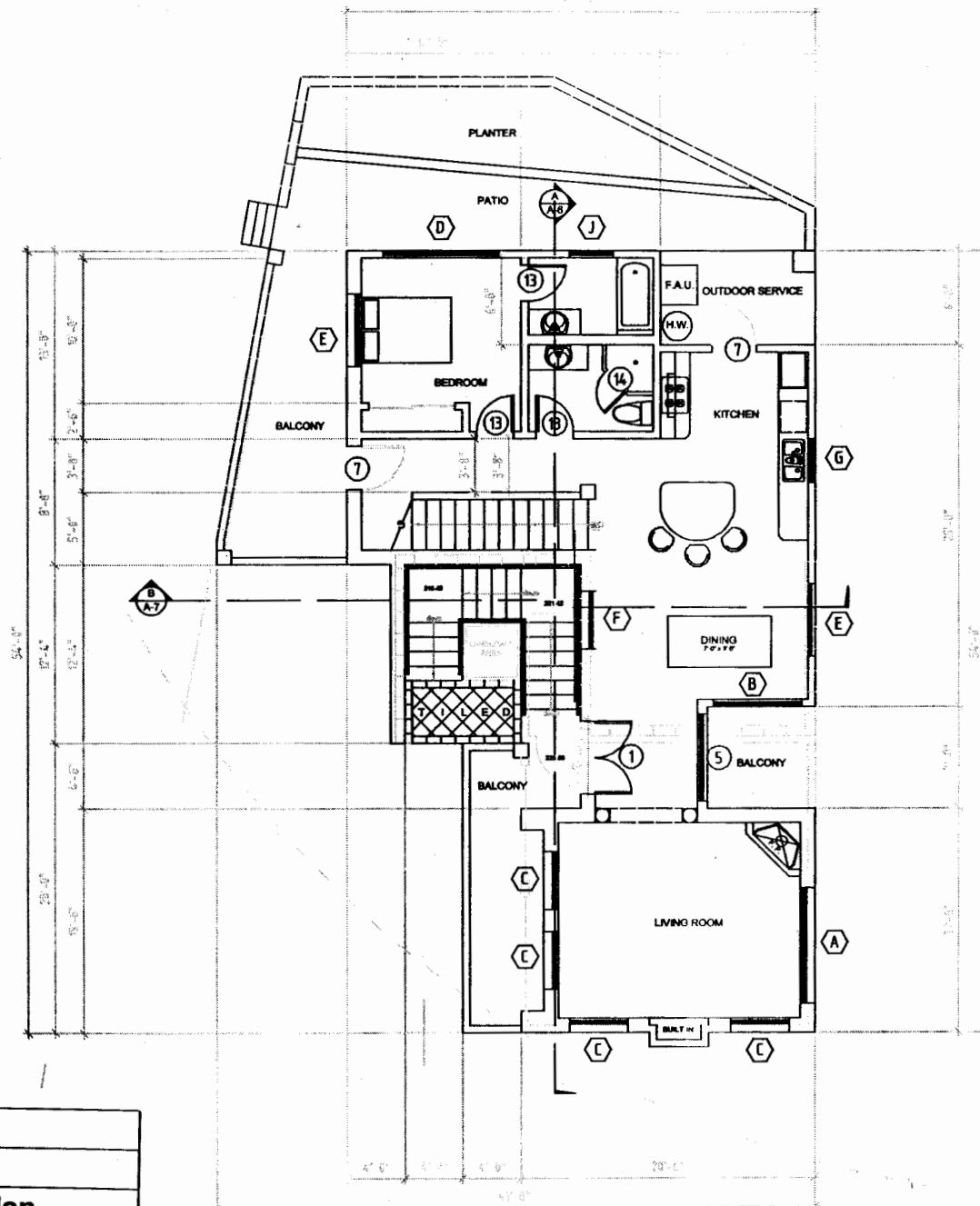


GARAGE LEVEL PLAN  
SCALE 1/8" = 1'-0"


EXHIBIT 5  
4-02-216  
Garage Level Plan

**SYMBOL LEGEND**

-  NEW WALL
-  CONTROL PANEL
-  CEILING MOUNTED LIGHT FIXTURE
-  CEILING MOUNTED LIGHT FIXTURE
-  LIGHT FIXTURE CONTROL BY TIMER
-  LIGHT WALL MOUNTED LIGHT FIXTURE
-  RECESS LIGHTING
-  NEW OUTDOOR REFLECTORY LIGHTING FIXTURE
-  DUPLEX OUTLET
-  RECEPTACLE WITH GROUND FAULT INTER
-  SINGLE TYPE SWITCH
-  3-WAY SWITCH
-  SMOKE DETECTOR (HARD-WIRE TYP.)
-  EXHAUST FAN (54" A/C HR.)
-  TELEVISION OUTLET
-  VENT THROUGH ROOF
-  HOSE BIBB
-  GAS BIBB





















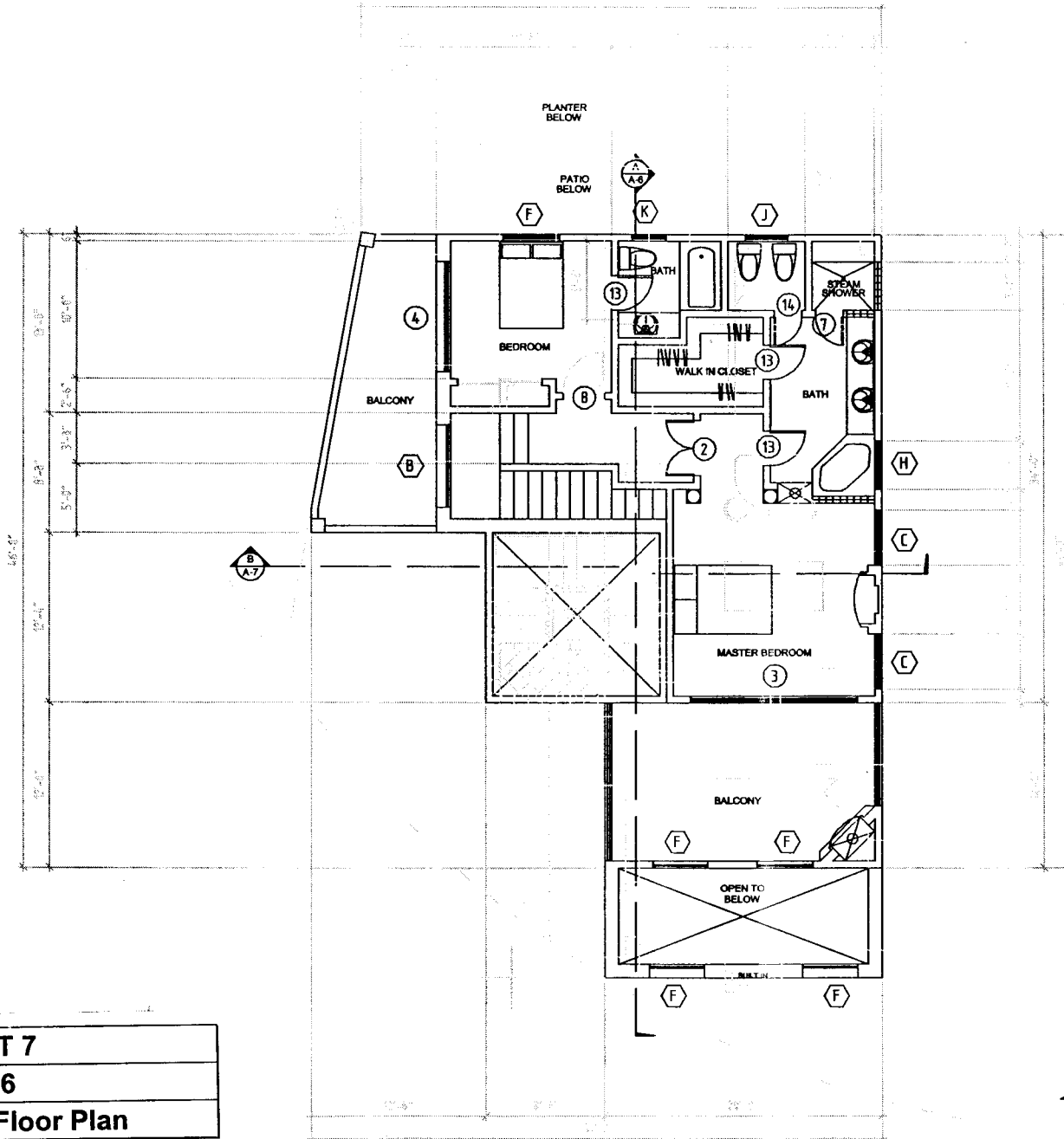
<b>EXHIBIT 6</b>
<b>4-02-216</b>
<b>Main Floor Plan</b>

 **MAIN FLOOR PLAN**  
SCALE 1/4" = 1'-0"




**SYMBOL LEGEND**

-  NEW WALL
-  CONTROL PANEL
-  CEILING MOUNTED LIGHT FIXTURE
-  LIGHT FIXTURE CONTROL BY TIMER
-  LIGHT WALL MOUNTED LIGHT FIXTURE
-  RECESS LIGHTING
-  NEW OUTDOOR REFLECTORY LIGHTING FIXTURE
-  DUPLEX OUTLET
-  RECEPTACLE WITH GROUND FAULT INTER
-  SINGLE TYPE SWITCH
-  3-WAY SWITCH
-  SMOKE DETECTOR (HARD-WIRE TYP.)
-  EXHAUST FAN (SM. A/C HR.)
-  TELEVISION OUTLET
-  VTR
-  VENT THROUGH ROOF
-  HOSE BIBB
-  GAS BIBB



<b>EXHIBIT 7</b>
<b>4-02-216</b>
<b>Upper Floor Plan</b>

 **UPPER FLOOR PLAN**  
SCALE 1/4" = 1'-0"

**ROOF DRAIN**

1. ROOF DRAIN SHALL BE J.R. SMITH 1310Y OR 1320 C.I. OR APPROVED EQUAL. NO HUB CONNECTION TO 3"Ø OR 4"Ø A.B.S. DRAIN PIPE & CARRY TO 6"Ø A.B.S. (SEE SITE PLAN)
2. PROVIDE 2"x4" G.I. OVERFLOW SCUPPERS @ EACH DRAIN 2" ABOVE ROOF.

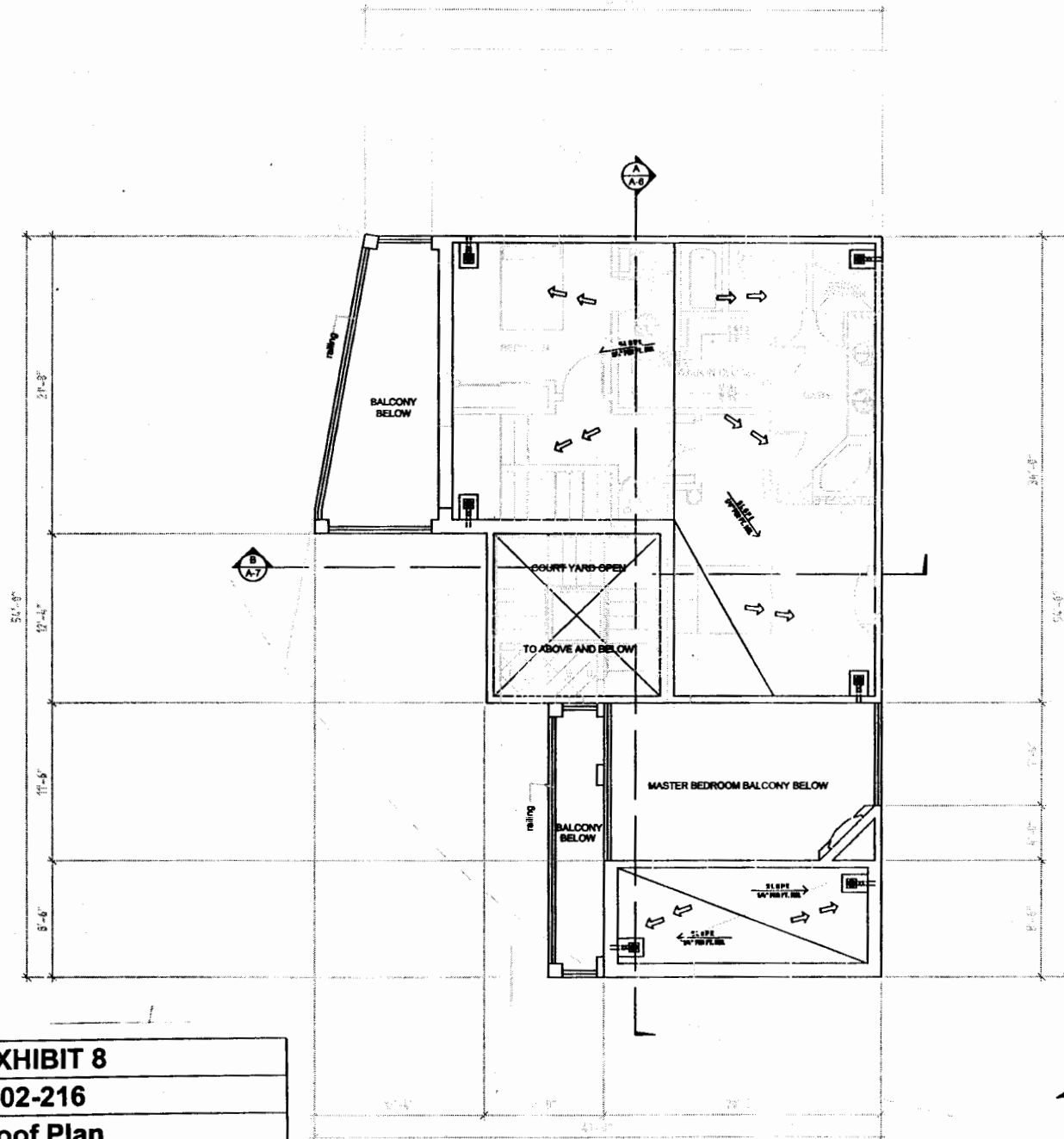
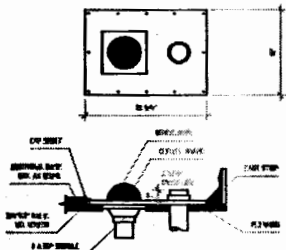
**ROOF SPEC. (CLASS 'A' ROOF)**

ONE LAYER OF GLASS BASE SHEET	25 LBS.
THREE LAYERS OF TYPE IV GLASS FELT.	33 LBS.
THREE LAYERS OF ASPHALT BETWEEN LAYERS OF FELT @ 25# EACH TOTAL	75 LBS.
FLOOD COAT OF ASPHALT.	80 LBS.
GRAVEL SURFACING.	400 LBS.
<b>TOTAL WEIGHT</b>	<b>583 LBS</b>

**INSTALL IN COMPLIANCE WITH ONE OF THESE MFG.**

1. MANVILLE #3 GNG
2. OWENS-CORNING #41NG
3. LUNDAY-TRAGARD # LTB-W

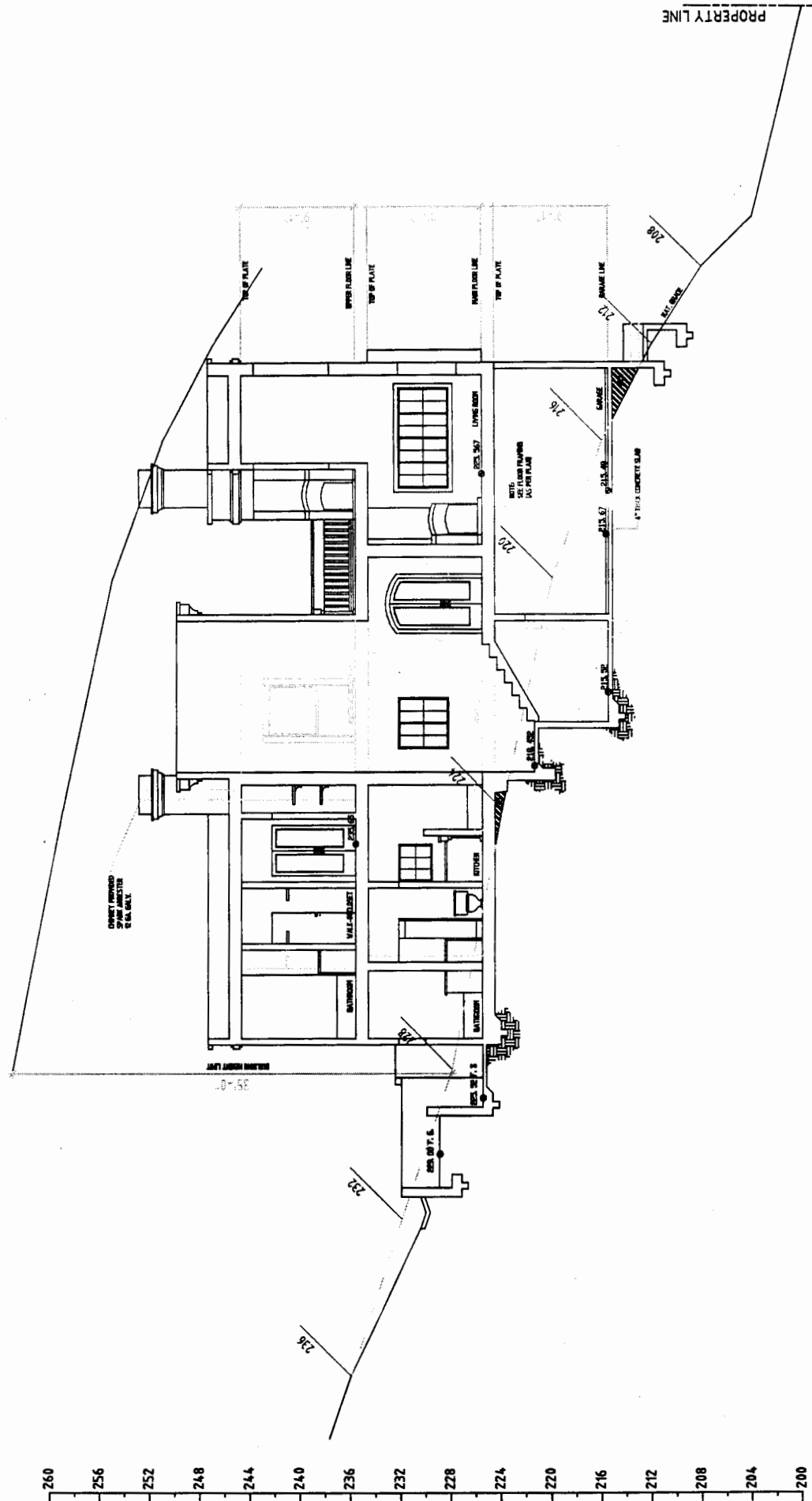
**TECH. SPECIALTIES**  
ROOF DRAIN and GRATE



**EXHIBIT 8**  
**4-02-216**  
**Roof Plan**



EXHIBIT 9  
4-02-216  
Cross Section A



260  
256  
252  
248  
244  
240  
236  
232  
228  
224  
220  
216  
212  
208  
204  
200

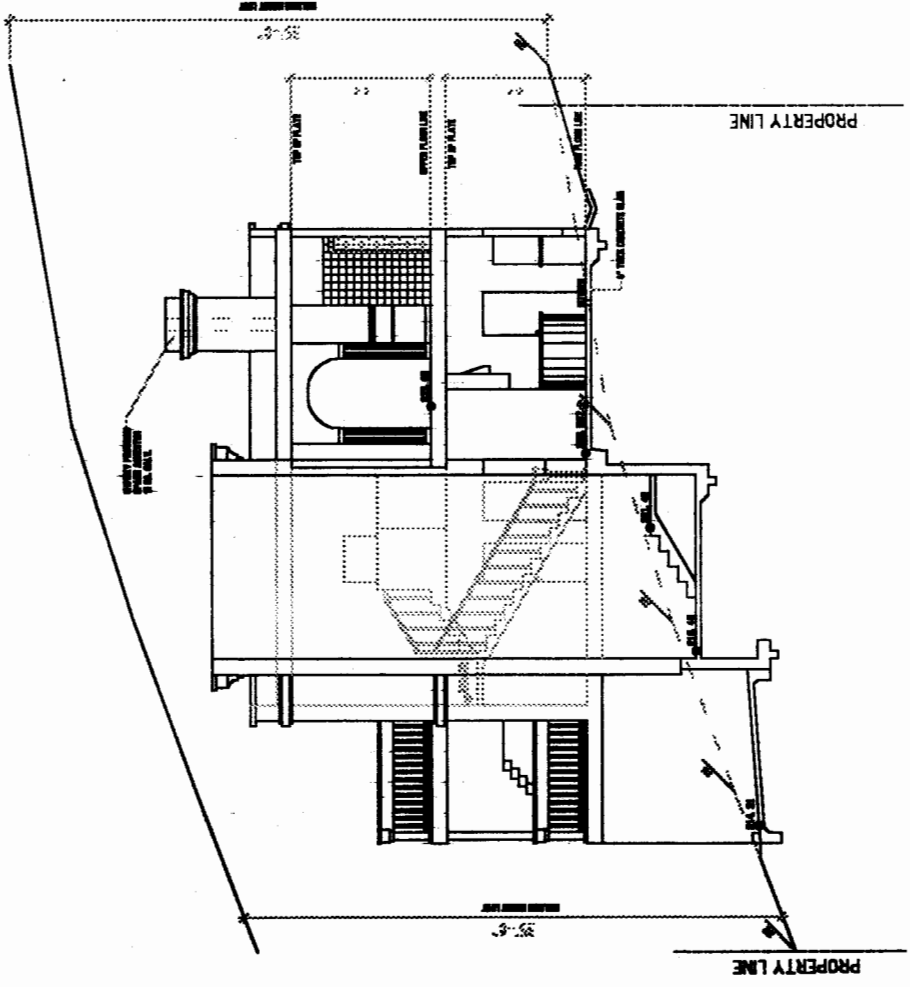
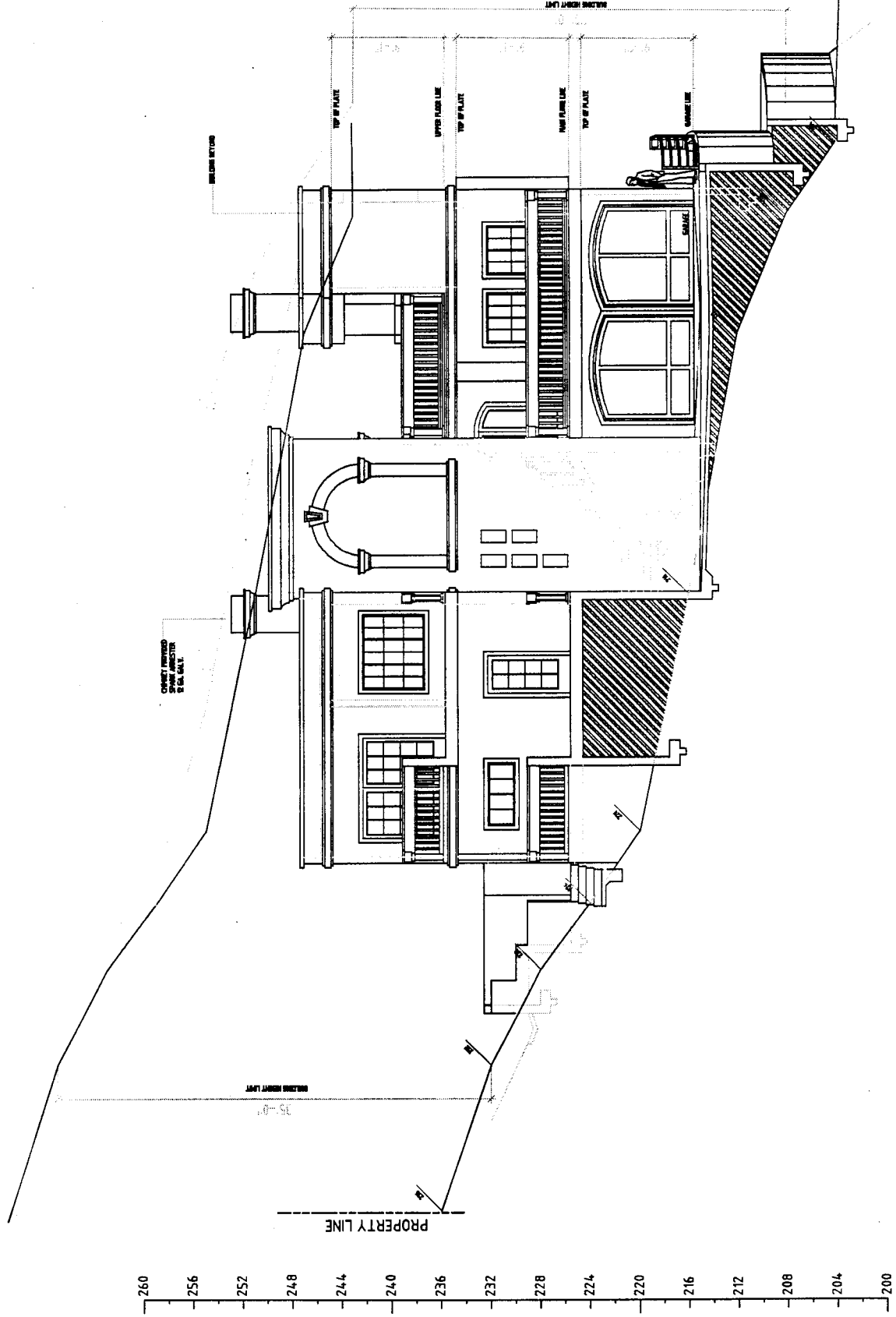


EXHIBIT 10  
4-02-216  
Cross Section B

SECTION THRU 'B'  
SCALE 1/4" = 1'-0"



**EXHIBIT 11**  
**4-02-216**  
**North Elevation**

**NORTH ELEVATION**  
 SCALE 1/4" = 1'-0"

260  
256  
252  
248  
244  
240  
236  
232  
228  
224  
220  
216  
212  
208  
204  
200

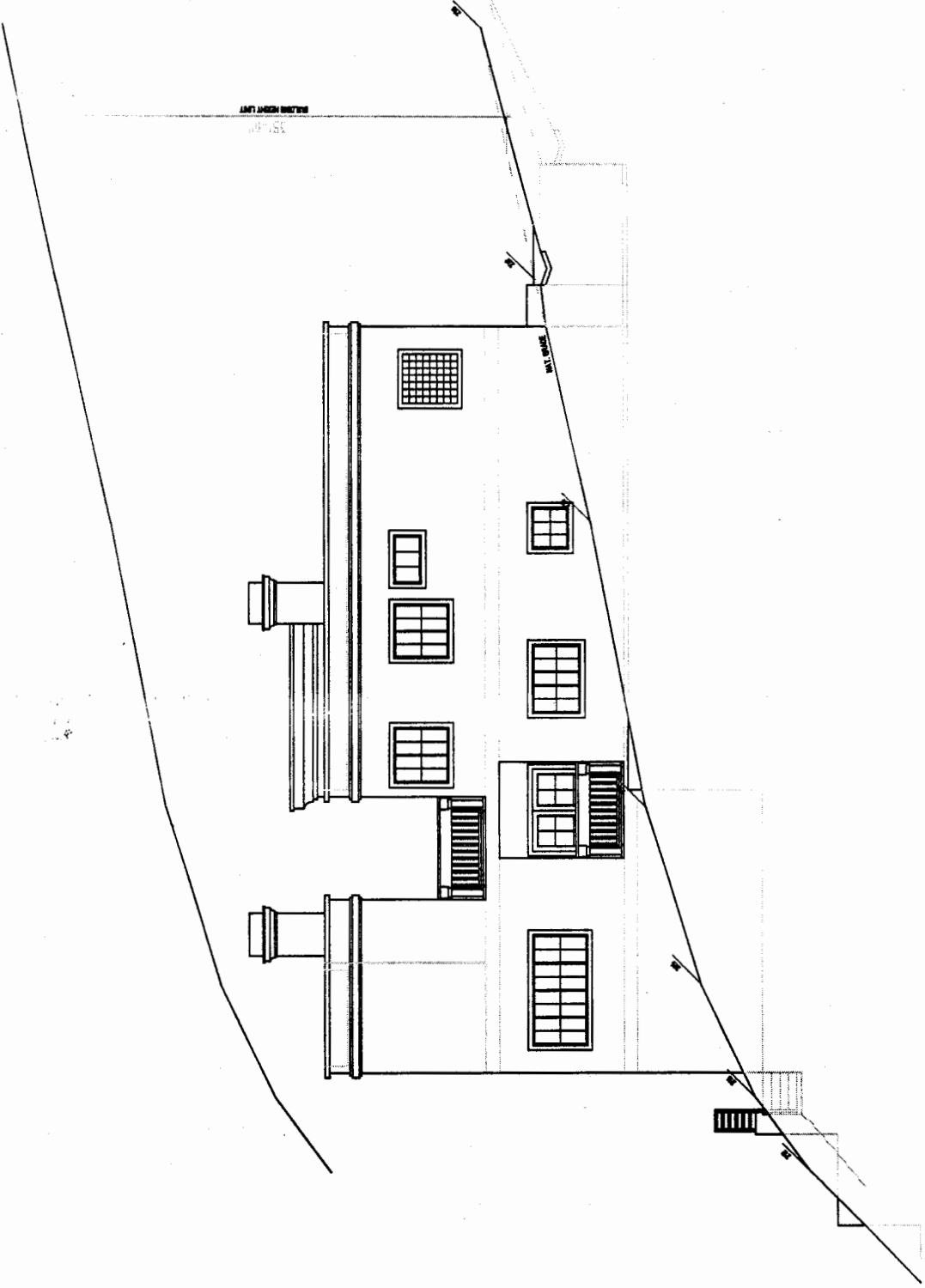


EXHIBIT 12
4-02-216
South Elevation

SOUTH ELEVATION  
SCALE 1/4" = 1'-0"

260  
256  
252  
248  
244  
240  
236  
232  
228  
224  
220  
216  
212  
208  
204  
200

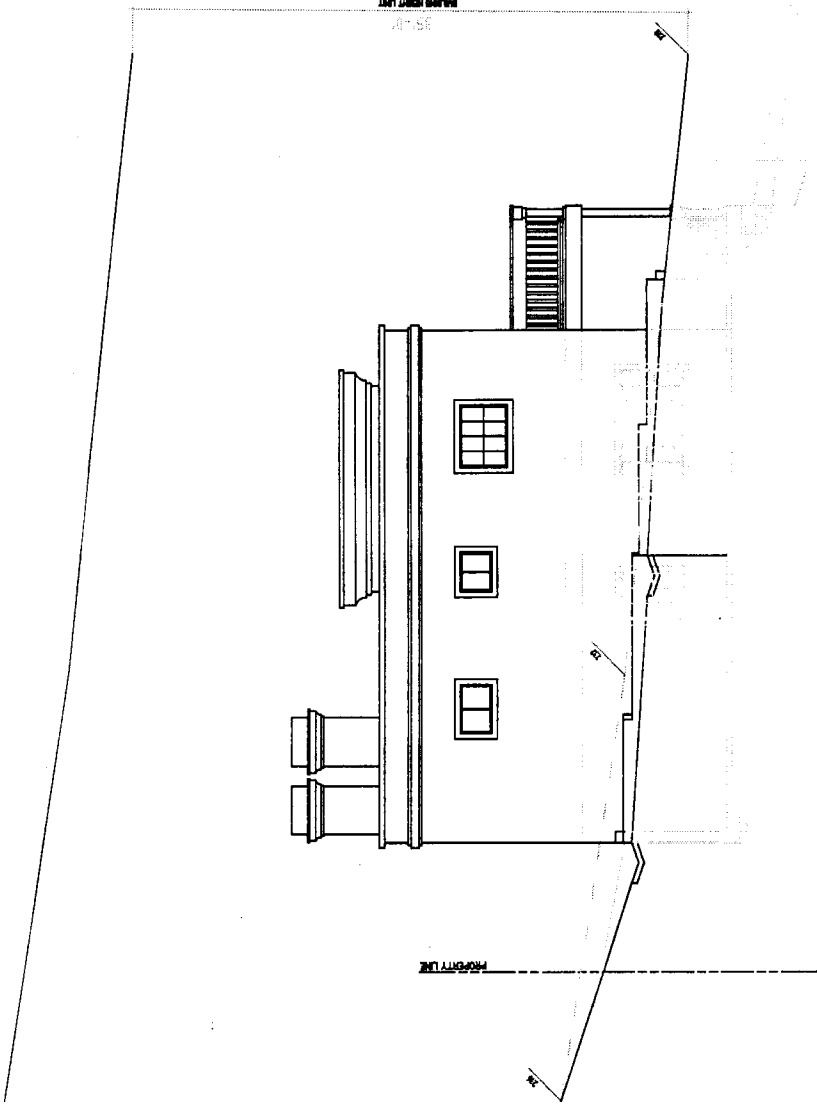
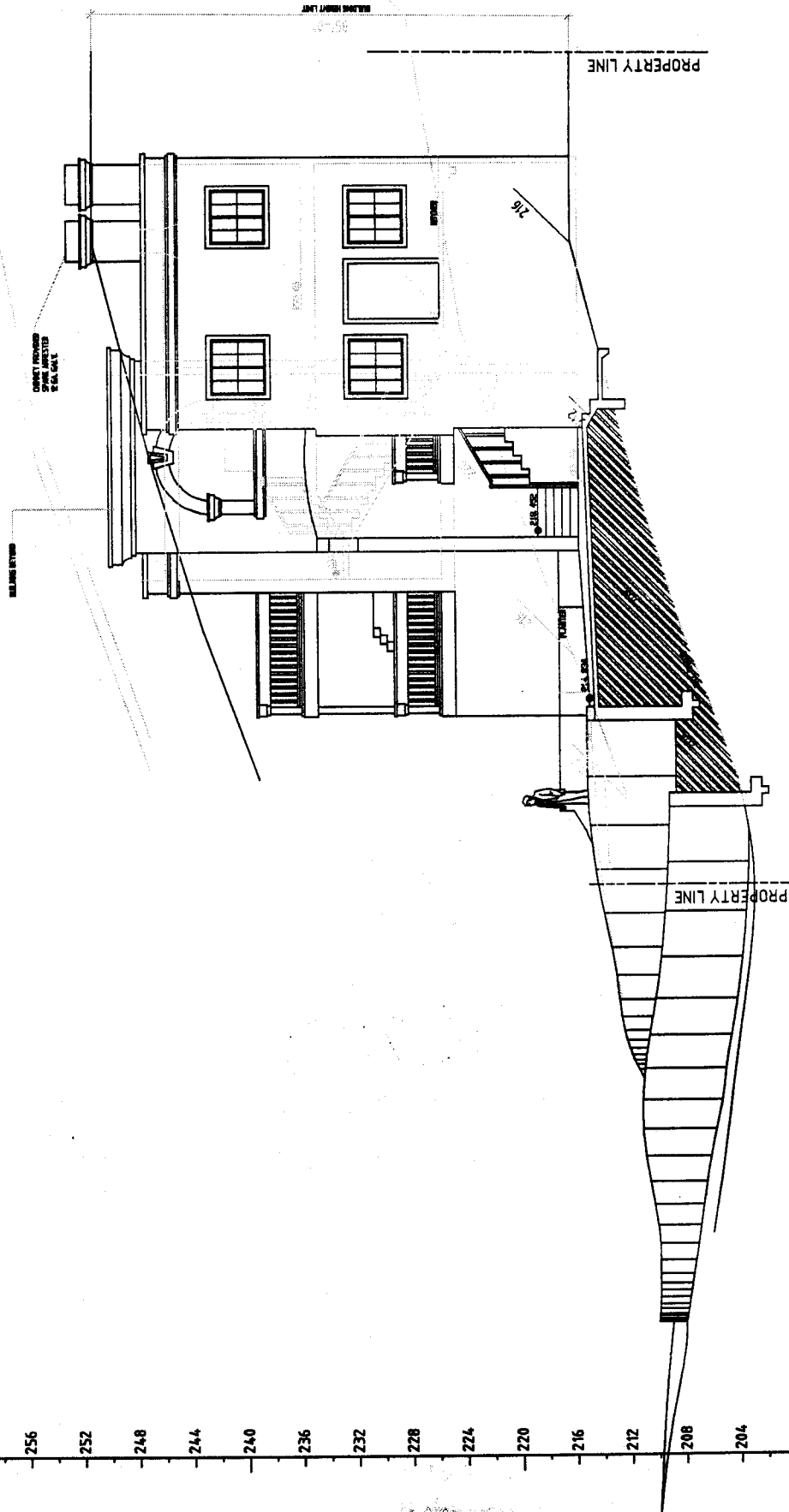


EXHIBIT 13  
4-02-216  
East Elevation

EAST ELEVATION  
SCALE 3/4"=1'-0"

260  
256  
252  
248  
244  
240  
236  
232  
228  
224  
220  
216  
212  
208  
204  
200



**EXHIBIT 14**  
**4-02-216**  
**West Elevation**

WEST ELEVATION  
SCALE 1/4"=1'-0"