

CALIFORNIA COASTAL COMMISSION

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Staff: FSY-LB ~~FSY~~
Staff Report: August 19, 2004
Hearing Date: September 8-10, 2004
Commission Action:

**STAFF REPORT: REGULAR CALENDAR****APPLICATION NUMBER:** 5-04-013**RECORD PACKET COPY****APPLICANTS:** Gary & Carol Primm**AGENT:** Mark Maize**PROJECT LOCATION:** 4507 Brighton Road, City of Newport Beach, County of Orange

PROJECT DESCRIPTION: Demolition of an existing single-family residence and construction of a new 6,683 square foot one-story single-family residence with a subterranean level on a coastal bluff top lot with an attached 3,000 square foot garage. Grading will consist of 2,600 cubic yards of cut, 15 cubic yards of fill and 2,585 cubic yards of export.

SUMMARY OF STAFF RECOMMENDATION:

The subject site is a coastal bluff top lot located between the first public road and the sea in Corona Del Mar (Newport Beach). The primary issues addressed in this staff report are the conformance of the proposed development with the geologic hazard policies of the Coastal Act.

Staff is recommending **APPROVAL** of the proposed project with **Seven (7) Special Conditions** regarding: 1) assumption of risk; 2) no future blufftop protective device; 3) additional approvals for any future development; 4) evidence of conformance with geotechnical recommendations; 5) conformance with the Drainage and Run-off Control Plan; 6) submittal of a Revised Landscaping Plan; and 7) a Deed Restriction against the property, referencing all of the Special Conditions contained in this Staff Report.

LOCAL APPROVALS RECEIVED: Approval in Concept (#3254-2003) from the City of Newport Beach Planning Department dated January 5, 2004.

SUBSTANTIVE FILE DOCUMENTS: Coastal Development Permits #5-96-087-[Casanova), #5-96-150-[Pritt] and #5-96-156-[DAFA]; City of Newport Beach Land Use Plan, *Preliminary Geotechnical Investigation, Primm Residence, 4507 Brighton Road, Cameo Shores, City of Newport Beach, California* (Project No. 03-5589) prepared by Associated Soils Engineering, Inc. dated September 24, 2004; Letter to Mark Maize (Agent) from Commission staff dated February 11, 2004; *Precise Grading Plan Review and Response to California Coastal Commission Review, 4507 Brighton Road, Cameo Shores, City of Newport Beach, California* (Project No. 03-5589-1) prepared by Associated Soils Engineering, Inc. dated March 19, 2004 and *Response to California Coastal Commission Review, 4507 Brighton Road, Lot 156, Tract 3357, Cameo Shores, City of*

Newport Beach, California (Project No. 03-5589-1) prepared by Associated Soils Engineering, Inc.
dated July 27, 2004.

LIST OF EXHIBITS

1. Location Map
 2. Assessor's Parcel Map
 3. Site Plan
 4. Floor Plans
 5. Elevations Plans
 6. Section Plan
 7. Foundation Plan
 8. Hardscape Plan
 9. Landscape Plan
 10. Grading Plans/Drainage Plans
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STAFF RECOMMENDATION:

Staff recommends that the Commission adopt the following motion and resolution:

MOTION:

"I move that the Commission approve Coastal Development Permit No. 5-04-013 pursuant to the staff recommendation."

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.

I. APPROVAL WITH CONDITIONS

The Commission hereby **GRANTS** a 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 this permit is reported to the Commission. 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. Assumption of Risk, Waiver of Liability and Indemnify

- A. By acceptance of this permit, the applicants acknowledge and agree (i) that the site may be subject to hazards from erosion and wave uprush; (ii) to assume the risks to the applicants and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

2. No Future Blufftop Protective Device

- A(1). By acceptance of this Permit, the applicants agree, on behalf of themselves and all other successors and assigns, that no blufftop protective device(s) shall ever be constructed to protect the development approved pursuant to Coastal Development Permit No. 5-04-013 including, but not limited to, the residence, and any future improvements, in the event that the development is threatened with damage or destruction from waves, erosion, storm conditions or other natural hazards in the future. By acceptance of this permit, the applicants hereby waive, on behalf of themselves and all successors and assigns, any rights to construct such devices that may exist under Public Resources Code Section 30235.

- A(2). By acceptance of this Permit, the applicants further agree, on behalf of themselves and all successors and assigns, that the landowner shall remove the development authorized by this permit, including the house, garage, foundations, and patio, if any government agency has ordered that the structure is not to be occupied due to any of the hazards identified above. In the event that portions of the development fall to the beach before they are removed, the landowner shall remove all recoverable debris associated with the development from the beach and ocean and lawfully dispose of the material in an approved disposal site. Such removal shall require a coastal development permit.

3. Future Development

- A. This permit is only for the development described in Coastal Development Permit No. 5-04-013. 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 No. 5-04-013. Accordingly, any future improvements to the single family house authorized by this permit, including but not limited to improvements to the existing deck and stairway, change in use from a permanent residential unit and repair and maintenance identified as requiring a permit in Public Resources Section 30610(d) and Title 14 California Code of Regulations Sections 13252(a)-(b), shall require an amendment to Permit No. 5-04-013 from the Commission or shall require an additional coastal development permit from the Commission or from the applicable certified local government.

4. Conformance with Geotechnical Recommendations

- A. All final design and construction plans, including foundations, grading and drainage plans, shall be consistent with all recommendations contained in the geologic engineering investigations: *Preliminary Geotechnical Investigation, Primm Residence, 4507 Brighton Road, Cameo Shores, City of Newport Beach, California* (Project No. 03-5589) prepared by Associated Soils Engineering, Inc. dated September 24, 2003; *Precise Grading Plan Review and Response to California Coastal Commission Review, 4507 Brighton Road, Cameo Shores, City of Newport Beach, California* (Project No. 03-5589-1) prepared by Associated Soils Engineering, Inc. dated March 19, 2004; and *Response to California Coastal Commission Review, 4507 Brighton Road, Lot 156, Tract 3357, Cameo Shores, City of Newport Beach, California* (Project No. 03-5589-1) prepared by Associated Soils Engineering, Inc. dated July 27, 2004.
- B. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicants shall submit, for the Executive Director's review and approval, evidence that an appropriately licensed professional has reviewed and approved all final design and construction plans and certified that each of those final plans is consistent with all the recommendations specified in the above-referenced geologic engineering report.

- C. The permittees shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment unless the Executive Director determines that no amendment is required.

5. Conformance with the Drainage and Runoff Control Plan

The applicants shall conform with the Drainage and Run-Off Control Plan received on March 26, 2004 showing roof drainage and runoff from all impervious areas directed to dry wells or vegetated/landscaped areas. Vegetated landscaped areas shall only consist of native plants or non-native drought tolerant plants, which are non-invasive. Any proposed changes to the approved plan shall be reported to the Executive Director. No changes to the approved plan shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

6. Landscaping Plan

- A. **PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT**, the applicants shall submit, for the review and approval of the Executive Director, a Revised Landscaping Plan that demonstrates the following:
- (1) All planting shall provide 90 percent coverage within 90 days and shall be repeated if necessary to provide such coverage;
 - (2) All 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 the landscape plan;
 - (3) Landscaped areas in the rear yard area not occupied by hardscape shall be planted and maintained for erosion control. To minimize the need for irrigation and minimize encroachment of non-native plant species into adjacent or nearby native plant areas, all landscaping shall consist of native or non-native non-invasive, drought resistant plants.
 - (4) Landscaped areas in the front yard area shall consist of native or non-native non-invasive, drought tolerant plants.
 - (5) No permanent in-ground irrigation systems shall be installed on site. Temporary above ground irrigation is allowed to establish plantings.
- B. The permittees shall undertake development in accordance with the approved plan. Any proposed changes to the approved final plan shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is required.

7. **Deed Restriction**

PRIOR TO ISSUANCE OF THE COASTAL DEVELOPMENT PERMIT, the applicants shall submit to the Executive Director for review and approval documentation demonstrating that the landowners have executed and recorded against the parcel(s) governed by this permit 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; and (2) imposing the 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 entire parcel or parcels governed by this permit. 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.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. Project Location, Project Description and Previous Commission Action On-Site

The proposed single-family residence is on a lot situated on the seaward side of Brighton Road in the community of Cameo Shores (Newport Beach) (Exhibits #1-2). The project is located within an existing developed urban residential area. The residential development along this southern portion of Brighton Road is located on top of a coastal bluff face. To the North, East and West of the project site are existing single-family residential development. To the South of the project site is a sea bluff, a rocky beach and the Pacific Ocean. The project site is a relatively flat parcel. At the rear of the lot is a sea cliff that is roughly 25-feet high with the rocky coastline below (shore platform of bedrock). Also at the rear of the lot is an existing multi-level wood deck with stairways leading to the rocky beach. No work is proposed or approved on this deck or access structure with the submitted application.

The proposed project consists of demolition of an existing single-family residence and construction of a new 6,683 square foot one-story single-family residence, 11'-6" above finished grade with a subterranean level on a coastal bluff top lot with an attached 3,000 square foot garage (Exhibits #3-10). The garage area is split into two levels. A three (3)-car garage is located on the 1st story and an additional car storage area is located in the subterranean level, which is accessed by a 385 square foot car elevator located at the upper level garage. Additional work will consist of hardscape work, an outdoor trellis, a spa and a sump pump. The foundation system of the proposed residence will consist of continuous and spread footings. Grading will consist of 2,600 cubic yards of cut, 15 cubic yards of fill and 2,585 cubic yards of export. Export location shall be outside of the coastal zone.

1. **Prior Commission Actions at Subject Site**

In 1983, the Commission approved an exemption request for the reconstruction of a deck and beach access structure located at the rear of the lot. This structure consisted of a

multi-level wood deck with stairways leading to the rocky beach. Based on aerial maps, Commission staff determined that the deck and stairs were constructed prior to passage of the Coastal Act and have been maintained and in-use since its construction. The applicant has submitted a copy of the building permit from the City of Newport Beach Building Department dated June 6, 1983, which describes the project as "*remove demolished stairs and reinstall.*" This building permit also referenced a Coastal Commission Exemption Letter. This structure still exists currently. No work is proposed or approved on this deck or access structure with the submitted application.

B. Geological Hazard

Section 30253 of the Coastal Act states, in relevant part states:

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, geologic 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.*

The findings in this section of the staff report include generalized findings regarding the susceptibility of coastal bluffs to erosion and site-specific findings from the geological report.

1. General Findings on Bluff Erosion

The proposed development is located on a coastal bluff, which is subject to wave attack and erosion. Coastal bluffs in California are located at the intersection of land and ocean, are composed of relatively recent uplifted geologic materials and are exposed to severe weathering forces.

Coastal bluff erosion is caused by a combination of inherent environmental factors and erosion caused by man. Environmental factors include gravity, seismicity, wave attack, wetting and drying of bluff face soils, wind erosion, salt spray erosion, rodent burrowing and piping, percolation of rain water, poorly structured bedding, surface water runoff and poorly consolidated soils.

Factors attributed to man include: improper irrigation practices; building too close to the bluff edge; improper site drainage; use of impermeable surfaces which concentrate runoff; use of water-dependent vegetation; pedestrian or vehicular movement across the bluff top, face and toe, and breaks in irrigation lines, water or sewer lines. In addition to irrigation water or runoff at the bluff top, increased residential development inland leads to increased water percolating beneath the surface soils and potentially outletting on the bluff face along fracture lines in the bluff or points of contact of different geologic formations, forming a potential slide plane.

2. Site Specific Bluff Information

Erosion

To address bluff erosion, the applicants have submitted a geotechnical investigation prepared by Associated Soils Engineering, Inc. (Project No. 03-5589) dated September 24, 2003. The geotechnical investigation dated September 24, 2003 states that subsurface exploration discovered that the site is directly underlain by marine terrace deposits consisting of varying mixtures of silts, sands and clays. Underlying these terrace deposits are siltstone and shale of the Monterey Formation. The bedrock encountered was moderately hard to hard while the sea cliff exposures consisted of very hard resistant sandstone and shale. Furthermore, this investigation states: *"Although the exposed sea cliff is complexly folded, one common trend of folding and bedding was found with the southern limb of a tight anticline striking northwest and the limb dipping steeply toward the southeast, to vertical. Along the southern limb of one of the anticlines, apparently coinciding with some less resistant beds of siltstone, a tidal cave has formed. Moderate seepage is evident in the rear of the cave, likely as a result of irrigation water for the landscaping above. Due to the tightly folded and discontinuous nature of the bedding planes, the gross stability of the sea cliff is considered satisfactory from an engineering geologic viewpoint. However, surficial instability of the oversteepened cliff should be expected with occasional rockfalls and isolated wedge failures likely during heavy winter rainstorms."*

Commission staff requested that additional information be submitted that discusses the "sea cliff" and hazards that exist on site. In response, the applicants submitted an addendum to the geotechnical investigation prepared again by Associated Soils Engineering, Inc. (Project No. 03-5589-1), dated March 19, 2004 entitled: *Precise Grading Plan Review and Response to California Coastal Commission Review, 4507 Brighton Road, Cameo Shores, City of Newport Beach, California* (Project No. 03-5589-1). This geotechnical investigation states: *"The sea cliff is currently in a natural state and is proposed to remain in a natural state as an oversteepened sea cliff. Natural steep slopes are inherently surficially unstable and periodic minor failures should be anticipated. However, in order to increase the performance of the natural sea cliff, all grading and improvements have been set well back from the bluff edge, and the drainage at the top of the bluff is to be modified to drain away from the slope towards area drain inlets. Additionally, it is our understanding that drought resistant, low water-consuming landscaping is planned for the entire rear yard."*

In addition, due to the generalized information submitted regarding the long-term bluff retreat rate, Commission staff requested further additional information be submitted that discusses bluff retreat of the project site. In response, the applicants submitted an addendum entitled: *Response to California Coastal Commission Review, 4507 Brighton Road, Lot 156, Tract 3357, Cameo Shores, City of Newport Beach, California* (Project No. 03-5589-1) prepared by Associated Soils Engineering, Inc. dated July 27, 2004. This geotechnical investigation states that reviewing historic topographic maps of the site and the neighboring homes: *"Utilizing the more conservative 4 feet of bluff retreat over the past 42 (+/-) years, the site specific bluff retreat rate can be assumed as 0.10 feet per year. That equates to 7 1/2 feet over the assumed life (75 years) of the structure. As the proposed structure is set back a minimum of 40 feet [actually a minimum of 35 feet] from the bluff top, the structure should not be adversely affected by anticipated bluff retreat."*

The Commission's Staff Geologist has reviewed these geotechnical investigations and has concurred that these investigations have adequately addressed concerns regarding bluff erosion and slope stability of the project site.

Along the urbanized seacliffs of southern California, geologic instability has been increased through the addition of large volumes of irrigation water required to maintain lawns (as stated previously in the geotechnical investigation) and non-native vegetation in the yards of cliff top homes. Landscape irrigation alone is estimated to add the equivalent of 50 to 60 inches of additional rainfall each year to garden and lawn areas. This irrigation has led to a slow, steady rise in the water table that has progressively weakened cliff material and lubricated joint and fracture surfaces in the rock along which slides and block falls are initiated. In addition to these effects, surface runoff discharged through culverts at the top or along the face of the bluffs leads to gulying or failure of weakened surficial materials.

The geotechnical investigation states that water should be directed away from the top of bluff and the applicants have submitted a Drainage and Run-Off Control Plan (Exhibit #10) and states that the proposed on site runoff will now be redirected away from the bluff face via the use of inlets, perforated PVC and a sump pump, which will assist in preventing any damage to the structural stability of the bluff. The runoff will be collected and pumped to Brighton Road that flows into the storm drain system and ultimately into the ocean.

The applicants have submitted a Landscaping Plan (Exhibit #9) detailing what the landscaping improvements involve. The submitted landscaping plan proposes use of the following vegetation: *Metrosideros Excelsus* "New Zealand Christmas Tree", *Pittosporum "Tobira"*, and *Rhododendrun "Azalea"*. Much of the existing vegetation is ornamental non-native variety due to surrounding residential development. However, use of non-native vegetation that is invasive can have an adverse impact on the existence of native vegetation. Invasive plants are generally those identified by the California Invasive Plant Council (<http://www.caleppc.org/>) and California Native Plant Society (www.CNPS.org) in their publications. The proposed landscaping plan does not contain any invasive species. As discussed previously, any plants in the landscaping plan should be drought tolerant to minimize the use of water. The term "drought tolerant" is equivalent to the terms 'low water use' and 'ultra low water use' as defined and used by "A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California" prepared by University of California Cooperative Extension and the California Department of Water Resources dated August 2000 available at <http://www.owue.water.ca.gov/landscape/pubs/pubs.cfm>. Commission staff reviewed the submitted Landscaping Plan for drought tolerant vegetation and determined that *Rhododendrun "Azalea"* is not drought tolerant.

As stated previously, along the urbanized seacliffs of southern California, geologic instability has been increased through the addition of large volumes of irrigation water required to maintain vegetation. The applicants have stated no permanent irrigation systems are proposed. However, the applicants' state that temporary above ground irrigation will be used to allow new plants to mature.

Due to the fragile nature of coastal bluffs and their susceptibility to erosion, the Commission requires special conditions regarding conformance with the Drainage and Runoff-Control Plan and a Revised Landscaping Plan for the review and approval of the Executive Director. The use of native or non-native non-invasive drought tolerant plants

will minimize any adverse impacts that the landscaping plan may have on coastal bluff stability. Additionally, to minimize any adverse effect on any native vegetation in the area, either native or non-native drought tolerant vegetation, which would not supplant native species, should be used.

Further discussion of these two special conditions can be found later in this report in Section 5 below.

Geotechnical Issues

To address geotechnical issues, the applicants have submitted a geotechnical investigation prepared by Associated Soils Engineering, Inc. (Project No. 03-5589) dated September 24, 2003. The purposes for this investigation was: *"...to evaluate the feasibility of the construction a proposed new residence and the general conditions at the site and provide geotechnical recommendations for the design and construction of the proposed project."* The scope of the investigation included: review of available project data and preparation of an exploratory program; field exploration consisting of drilling five (5) hand auger borings to varying depths; field geologic mapping of the sea cliff exposures; laboratory testing of selected samples; and interpretation, analysis and evaluation of the data and preparation of the geotechnical report which presents recommendations for grading, foundation design and construction.

The geotechnical investigation concludes:

Based on the results of our field exploration and laboratory testing, combined with engineering analysis and our experience and judgment, it is the opinion of ASE that the site may be developed as planned, provided the site grading and foundation criteria discussed herein are incorporated into the project plans and specifications and implemented during construction.

This geotechnical investigation included recommendations for the proposed project. Among those recommendations are: 1) in proposed structural areas, the upper approximately two and one half to three feet of existing soils should be removed prior to additional fill placement; 2) conventional continuous and spread footings bearing an approved compacted fill should be used to provide support for the proposed residence; and 3) surface grades adjacent to buildings and slopes should be designed and constructed to facilitate drainage away from structures and the top of descending slopes.

In order to avoid adverse impacts of the proposed development on bluff erosion and instability, and prevent the necessity for bluff protective structures, as required by Section 30253 of the Coastal Act, **Seven (7) Special Conditions** are being imposed. These special conditions are more thoroughly discussed later in this report in Section 5 below.

3. Certified LUP Hazard Policies

The City of Newport Beach certified Land Use Plan includes policies regarding the development on coastal bluffs. Pages 25-27 of the LUP contain policies regarding definition of a bluff, grading, provision of geologic reports, setbacks and building in hazardous areas.

The policy on grading requires that the alteration of natural coastal landforms be minimized and that waivers of liability are required in areas of geologic hazard. Another LUP requirement is the submittal of a site-specific geologic report to assess areas of potential geologic instability.

The certified LUP includes a discussion of hazard areas, which it defines as areas where natural processes can pose a threat to the public health, safety, and welfare. It further defines specific geologic hazards as earthquake faults, existing or potential landslides, areas with expansive or collapsible soil, excessive settlement and subsidence, flood hazard areas, and areas subject to potential erosion and siltation. Coastal bluffs qualify as areas of geologic hazard and areas subject to erosion.

The certified LUP also contains a discussion of bluff top setbacks. However, the setback policies pertain only to all new tracts and subdivisions, residential developments greater than four residences, and commercial development. This policy states: *"As a general guideline, the property line setback from the edge of a bluff should be no closer to the edge of the bluff than the point at which the top of the bluff is intersected by a line drawn from the solid toe of the bluff at an angle of 26.6 degrees to the horizontal."*

The intent of this policy section, as stated in the certified LUP, is to require setbacks in new subdivision development for public access purposes. Because the proposed development is a single-family residence it is exempt from this policy. Therefore, there are no specific LUP policies, which would provide guidance as to bluff setbacks in this instance.

Approximately 2,600 cubic yards of grading will be required for construction of the subterranean component. Although not a minimal amount of grading, the amount does not result in extensive landform alteration, because the proposed grading is located below and within the generally existing footprint. As per the LUP requirements, an assumption of risk special condition is being required and a comprehensive geological report was supplied with the application. Therefore, the proposed development is consistent with the certified LUP policies.

4. Bluff Top Setback

Development on coastal bluffs is inherently risky due to the potential for slope failure. Bluff top development poses potential adverse impacts to the geologic stability of hillsides and the stability of residential structures. To meet the requirements of the Coastal Act, bluff top developments must be sited and designed to assure geologic stability and structural integrity for their expected economic lifespans while minimizing alteration of natural landforms. In order to assure that this is the case, a development setback line must be established that places the proposed structures a sufficient distance from unstable or marginally stable bluffs to assure their safety, and that takes into account bluff retreat over the life of the structures, thus assuring the stability of the structures over their design life. The goal is to assure that by the time the bluff retreats sufficiently to threaten the development, the structures themselves are obsolete. Replacement development can then be appropriately sited behind a new setback line.

The first aspect to consider in establishing development setbacks from the bluff edge is to determine whether the existing coastal bluff meets minimum requirements for slope

stability. If the answer to this question is "yes," then no setback is necessary for slope stability considerations. If the answer is "no," then the distance from the bluff edge to a position where sufficient stability exists to assure safety must be found. In other words, we must determine how far back from the unstable or marginally slope must development be sited to assure its safety. Assessing the stability of slopes against landsliding is undertaken through a quantitative slope stability analysis. In such an analysis, the forces resisting a potential landslide are first determined. These are essentially the strength of the rocks or soils making up the bluff. Next, the forces driving a potential landslide are determined. These forces are the weight of the rocks as projected along a potential slide surface. The resisting forces are divided by the driving forces to determine the "factor of safety." A value below 1.0 is theoretically impossible, as the slope would have failed already. A value of 1.0 indicates that failure is imminent. Factors of safety at increasing values above 1.0 lend increasing confidence in the stability of the slope. The industry-standard for new development is a factor of safety of 1.5.

In this case, the applicant has submitted slope stability analyses, supported by site-specific soil and rock strength parameters, that demonstrate that the bluff has a factor of safety of 1.73 to 2.29, and a pseudostatic (seismic) factor of safety of 1.30 to 1.80. The Commission's Staff Geologist has reviewed these calculations and concurs that the coastal bluff is safe from global instability, although surficial slumping and rock fall will continue to occur as a result of marine and subaerial erosion.

The second aspect to be considered in the establishment of a development setback line from the edge of a coastal bluff is the issue of more gradual, or "grain by grain" erosion. In order to develop appropriate setbacks for bluff top development, we need to predict the position of the bluff edge into the future. In other words, at what distance from the bluff edge will bluff top development be safe from long-term coastal erosion?

At the subject property, the applicant has submitted materials, described above, that indicate that the historic long-term average bluff retreat rate is approximately 0.10 ft/yr. Given an assumed design life for the development of 75 years, it can be anticipated that the bluff will retreat approximately 7.5 feet during the design life of the structure.

The development setback necessary to assure stability for the design life of the structure is thus 7.5 feet. To this, a buffer, generally a minimum of 10 feet, should be added to address uncertainty in the analysis, to allow for any future increase in the long-term bluff retreat rate, to assure that the foundation elements aren't actually undermined at the end of the design life of the development, and to allow access for remedial measures. A buffer is not necessary if the slope stability setback equals or exceeds about ten feet, as it can do "double duty" as both a setback to assure slope stability and a buffer for the purposes listed above. Thus a minimum setback to assure stability for the life of the development at this site would be approximately 17.5 feet.

In this area, however, the Commission has generally used a 25-foot setback from the top of the bluff (i.e. CDP #5-96-150-[Pritt] and #5-96-156-[DAFA]) as an absolute minimum development setback.

The Commission typically requires that structures be setback at least 25-feet from the top of slope and hardscape features be setback at least 10-feet from the top of slope to minimize the potential that the development will contribute to slope instability. The

proposed residence will be setback a minimum of 35-feet from the top of slope. The hardscape features will be set back a minimum of 11-feet from the top of slope. Therefore, the proposed development does conform to the 25-foot and 10-foot setback.

5. Conclusions and Special Conditions

Section 30253 of the Coastal Act states that new development shall minimize the impacts of the proposed development on bluff erosion and instability, and prevent the necessity for bluff protective structures. William Kockelman, U.S. Geological Survey, wrote an article entitled "Some Techniques for Reducing Landslide Hazards" that discusses several ways to minimize landslide hazards such as bluff erosion and instability, including:

- A. Require a permit prior to scraping, excavating, filling, or cutting any lands.
- B. Prohibit, minimize, or carefully regulate the excavating, cutting and filling activities in landslide areas.
- C. Provide for the proper design, construction, and periodic inspection and maintenance of weeps, drains, and drainage ways, including culverts, ditches, gutters, and diversions.
- D. Regulate the disruption of vegetation and drainage patterns.
- E. Provide for proper engineering design, placement, and drainage of fills, including periodic inspection and maintenance.

Kockelman also discusses the option of disclosure of hazards to potential buyers by the recordation of hazards in public documents. The recordation of hazards via the assumption of risk is one means the Commission utilizes to inform existing and future buyers of property of the potential threat from soil erosion and slope failure (landslide) hazards. Several of these recommendations are routinely required by local government, including requiring permits for grading, minimizing grading, and requirements for proper engineering design.

The Commission has imposed many of these same recommendations, including requiring the consulting geologist to review foundation and drainage plans in order to confirm that the project conforms to the policies of the Coastal Act. The findings in the staff report regarding the general causes of bluff erosion and the specific findings from the geotechnical report confirm that the coastal bluff at this location is eroding and that measures to minimize bluff erosion are necessary. The following special conditions will mitigate the impacts of the proposed development on bluff erosion and instability, and prevent the necessity for bluff protective structures, as required by Section 30253 of the Coastal Act.

a. Assumption of Risk

Coastal bluffs in southern California are recently emergent landforms in a tectonically active environment. Any development on an eroding coastal bluff involves some risk to development.

Although adherence to the geotechnical consultant's recommendations will minimize the risk of damage from erosion, the risk is not entirely eliminated. The findings in sections 1-4 above, including site-specific geologic information, support the contention that development on coastal bluffs involves risks and that structural engineering can minimize some of the risk but cannot eliminate it entirely. Therefore, the standard waiver of liability condition has been attached via **Special Condition No. 1**.

By this means, the applicants and future buyers are notified that the proposed development is located in an area that is potentially subject to bluff erosion that can damage the applicants' property. In addition, the condition insures that the Commission does not incur damages as a result of its approval of the Coastal Development Permit.

b. Bluff Top Protective Device

Bluff top lots are inherently hazardous. It is the nature of bluffs to erode. Bluff failure can be episodic, and bluffs that seem stable now may not be so in the future. Even when a thorough professional geotechnical analysis of a site has concluded that a proposed development is expected to be safe from bluff retreat hazards for the life of the project, it has been the experience of the Commission that in some instances, unexpected bluff retreat episodes that threaten development during the life of a structure sometimes do occur. In the Commission's experience, geologists cannot predict with absolute certainty if or when bluff failure on a particular site may take place, and cannot predict if or when a residence or property may become endangered.

Section 30253 of the Coastal Act requires that new development shall not require construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. The proposed development could not be approved as being consistent with Section 30253 of the Coastal Act if projected bluff retreat would affect the proposed development and necessitate construction of a protection device.

No bluff top protection device is proposed. However, because the proposed project includes new development, it can only be found consistent with Section 30253 of the Coastal Act if a blufftop protective device is not expected to be needed in the future. Therefore, the Commission imposes **Special Condition No. 2**, which states that no bluff top protective devices shall be permitted to protect the proposed development.

c. Future Development

The development is located within an existing developed area and is compatible with the character and scale of the surrounding area. However, without controls on future development, the applicants could construct amenities to the proposed home that would have negative impacts on coastal resources, and could do so without first acquiring a coastal development permit. In order to prevent the current authorization from allowing such future negative effects, it is necessary to ensure

that any future development -- including the development of amenities that would otherwise normally be exempt -- will require a permit. To assure that future development is consistent with the Chapter 3 policies of the Coastal Act, the Commission finds that a future improvements special condition (**Special Condition No. 3**) must be imposed. As conditioned the development conforms with the Chapter 3 policies of the Coastal Act relating to geologic hazards.

d. Conformance with Geologic Recommendations

The geotechnical consultant has found that the proposed development is feasible provided the recommendations contained in the geotechnical report prepared by the consultant are implemented as regards the design and construction of the project. The geotechnical recommendations address foundations, excavation, and footings. In order to insure that risks of development are minimized, as per Section 30253, the Commission imposes **Special Condition No. 4**, which states that the geotechnical consultant's recommendations should be incorporated into the design of the project. As a condition of approval the applicants shall submit for the review and approval of the Executive Director foundation plans reviewed and signed by a consulting geologist.

e. Drainage and Runoff and Landscaping Special Conditions

In approving development on a coastal bluff the Commission must condition the development to minimize potential erosion or, as it is stated in Section 30253 "...to *neither create nor contribute significantly to erosion...*"

The role of water percolation in association with water-dependent vegetation is documented in this staff report. The Commission has also acted on many coastal development permits in which an applicant has applied for bluff protective measures following the failure of irrigation lines, water or sewer lines which then cause slope failure. It is extremely difficult to discover breaks in in-ground irrigation lines until after a certain period of time passes and plants start to die. By then the slope may have become saturated. It is also difficult to assess the long-term damage caused by the accumulation of water on bluff topsoils due to watering of lawns and other water intensive vegetation. It is estimated that watering a lawn on a regular basis is the equivalent of 60 inches of rainfall a year. The average rainfall in southern California is 12 to 20 inches per. In fact, although the consulting geologists routinely make recommendations concerning landscaping and site drainage, geologists do not review landscaping plans. In this respect the Commission fills an important role in minimizing landsliding and erosion.

The applicants have submitted a Drainage and Run-Off Control Plan (Exhibit #10) and states that the proposed on site runoff will now be redirected away from the bluff face via use of inlets, perforated PVC and a sump pump, which will assist in preventing any damage to the structural stability of the bluff. To ensure that drainage does not increase the potential for site erosion, the Commission is imposing **Special Condition No. 5**, which requires the applicants to conform to the submitted Drainage and Runoff Control Plan received on March 26, 2004.

Because of the fragile nature of coastal bluffs and their susceptibility to erosion, the Commission requires a special condition regarding the types of vegetation to be planted. The submitted Landscaping Plan (Exhibit #9) contains a mixture of plants that include plants that are not drought tolerant or the watering needs could not be determined. The use of native or non-native non-invasive drought tolerant plants will minimize any adverse impacts of the landscaping plan on coastal bluff stability and on any on-site native plants. Also, to minimize any adverse effect on native vegetation in the area, either native or non-native drought tolerant vegetation, which would not supplant native species, should be used. Therefore, the Commission imposes **Special Condition No. 6**, which requires the applicants to submit a Revised Landscaping Plan, which consists of native plants, or non-native drought tolerant plants that are non-invasive.

f. Deed Restriction

To ensure that any prospective future owners of the property are made aware of the applicability of the conditions of this permit, the Commission imposes **Special Condition No. 7** requiring that the property owners record a deed restriction against the property, referencing all of the above Special Conditions of this permit and imposing them as covenants, conditions and restrictions on the use and enjoyment of the Property. Thus, as conditioned, any prospective future owners will receive actual notice of the restrictions and/or obligations imposed on the use and enjoyment of the land including the risks of the development and/or hazards to which the site is subject, and the Commission's immunity from liability.

g. Conclusion

The Commission has required several **Seven (7) Special Conditions**, which are intended to bring the proposed development into conformance with Section 30253 of the Coastal Act. These special conditions include: **1)** assumption of risk; **2)** no future blufftop protective device; **3)** additional approvals for any future development; **4)** evidence of conformance with geotechnical recommendations; **5)** conformance with the Drainage and Run-off Control Plan; **6)** submittal of a Revised Landscaping Plan; and **7)** a Deed Restriction against the property, referencing all of the Special Conditions contained in this Staff Report. Only as conditioned to comply with the provisions of these special conditions does the Commission find that the proposed development conforms with Section 30253 of the Coastal Act.

C. Public Access and Recreation

Section 30212 of the Coastal Act states, in relevant part states:

- (a) *Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:*
 - (2) *adequate access exists nearby.*

Section 30252 of the Coastal Act states, in relevant part states:

The location and amount of new development should maintain and enhance public access to the coast by...

- (4) *providing adequate parking facilities or providing substitute means of serving the development with public transportation...*

The subject site is located between the nearest public roadway and the shoreline. Adequate access and public recreation opportunities exist nearby at Little Corona Beach to the northwest and Crystal Cove State Beach and Park to the southeast. The site is currently developed with a single-family residence. Upon completion of the project, the development will remain as a single-family residence. The proposed development would provide adequate parking based on the Commission's regularly used parking standard of two (2) parking spaces per individual dwelling unit. Therefore, the Commission finds that the proposed development would be consistent with Section 30212 and 30252 of the Coastal Act regarding public access.

D. Local Coastal Program

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 which conforms with the Chapter 3 policies of the Coastal Act.

The Newport Beach Land Use Plan was effectively certified on May 19, 1982. The certified LUP was updated on January 9, 1990. The City currently has no certified implementation plan. Therefore, the Commission issues CDP's within the City based on the development's conformance with the Chapter 3 policies of the Coastal Act. The LUP policies may be used for guidance in evaluating a development's consistency with Chapter 3. As per the LUP requirements, an assumption of risk special condition is being required and a comprehensive geological report was supplied with the application.

The proposed development, as conditioned, is consistent with Chapter 3 of the Coastal Act and with the certified Land Use Plan for the area. Approval of the project, as conditioned, will not prejudice the ability of the local government to prepare a Local Coastal Program that is in conformity with the provisions of Chapter 3.

E. California Environmental Quality Act

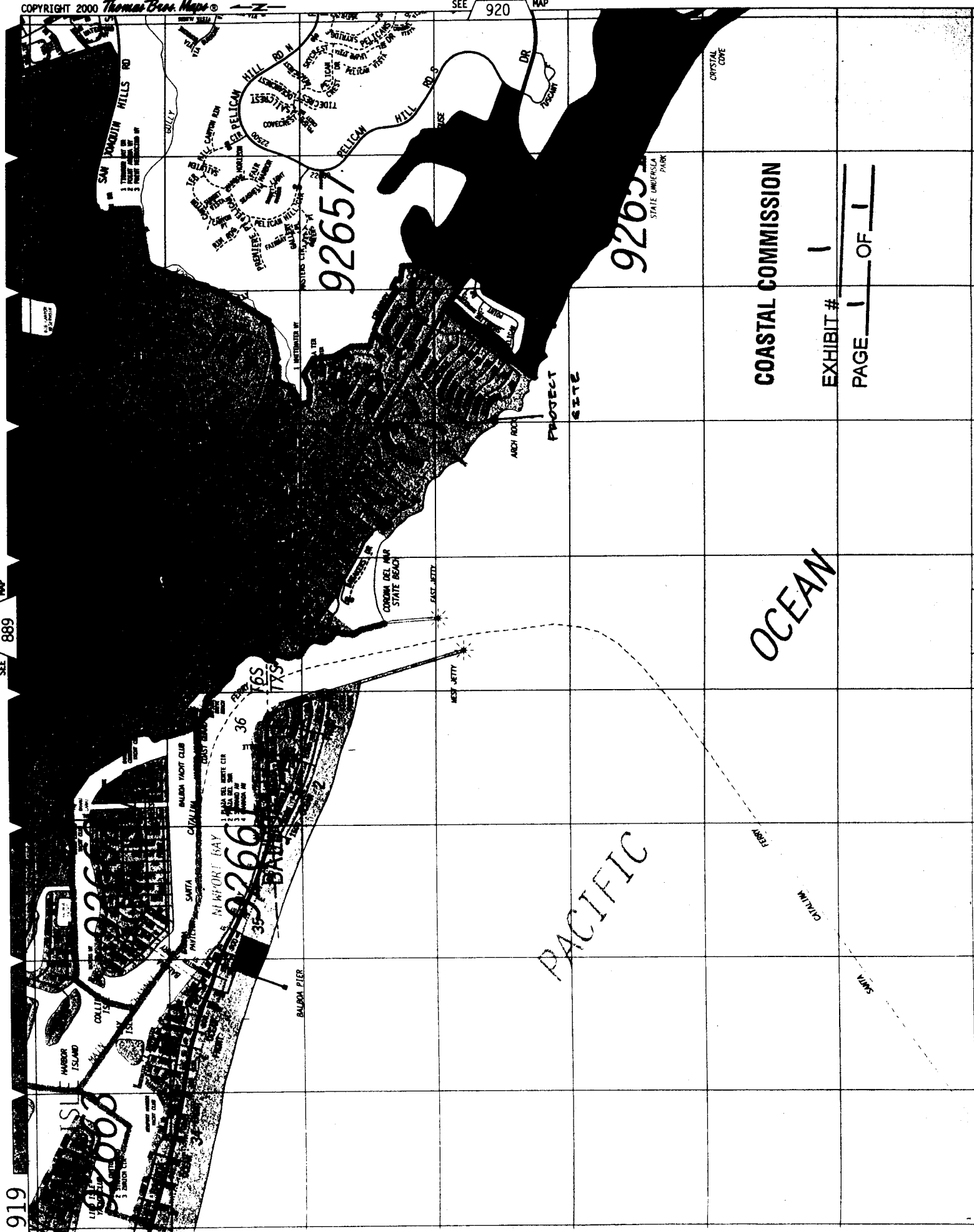
Section 13096(a) of Title 14 of the California Code of Regulations requires Commission approval of Coastal Development Permit applications to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California 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 further feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The proposed project is located in an urban area. All infrastructure necessary to serve the site exists in the area. As conditioned, the proposed project has been found consistent with the hazard policies of Chapter 3 of the Coastal Act. Mitigation measures include Special Conditions requiring conformance with geotechnical recommendations, submittal of a drainage and run-off control plan and submittal of a final landscaping plan.

As conditioned, there are no feasible alternatives or additional feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is the least environmentally damaging feasible alternative and can be found consistent with the requirements of the Coastal Act to conform to CEQA.

SEE 889 MAP

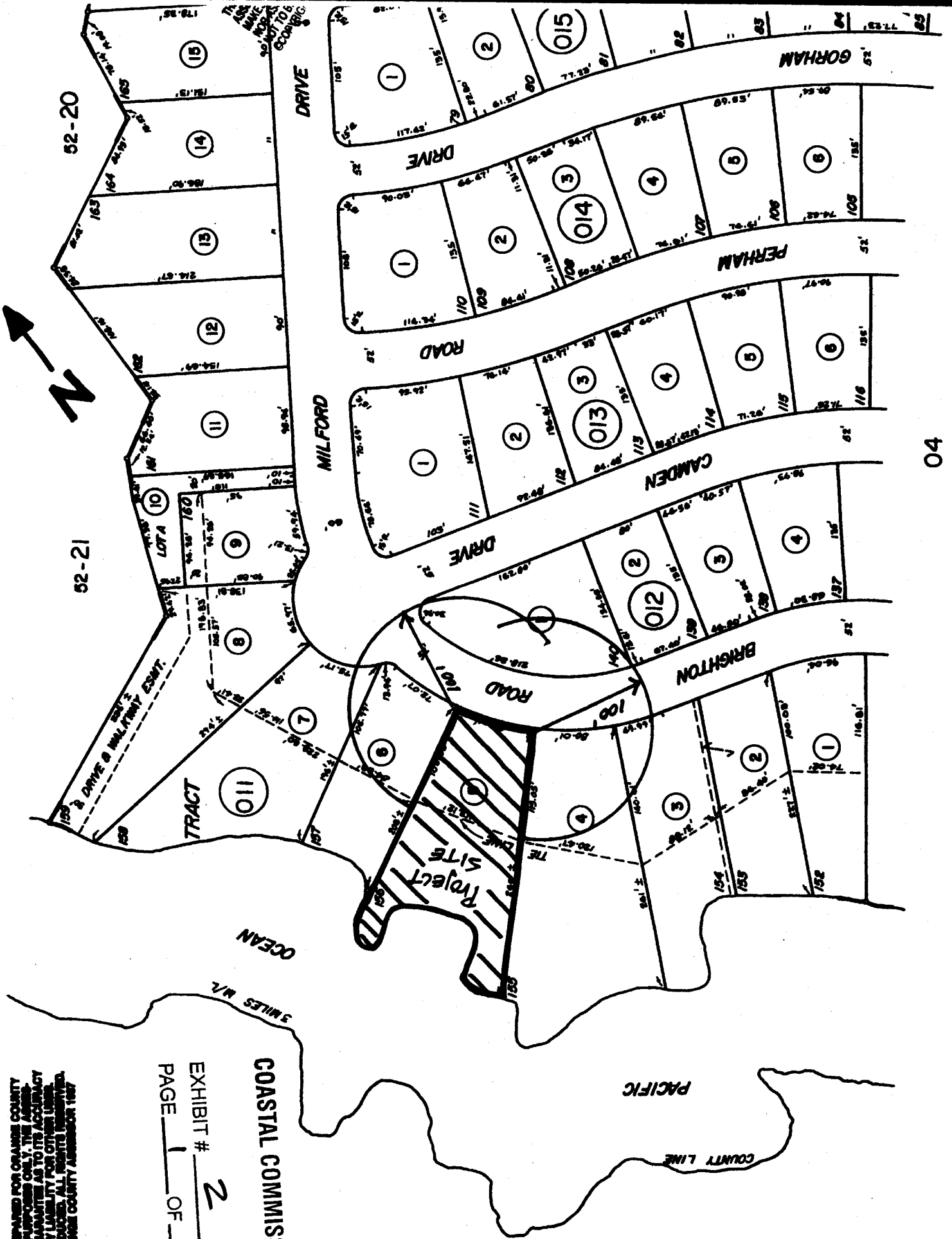
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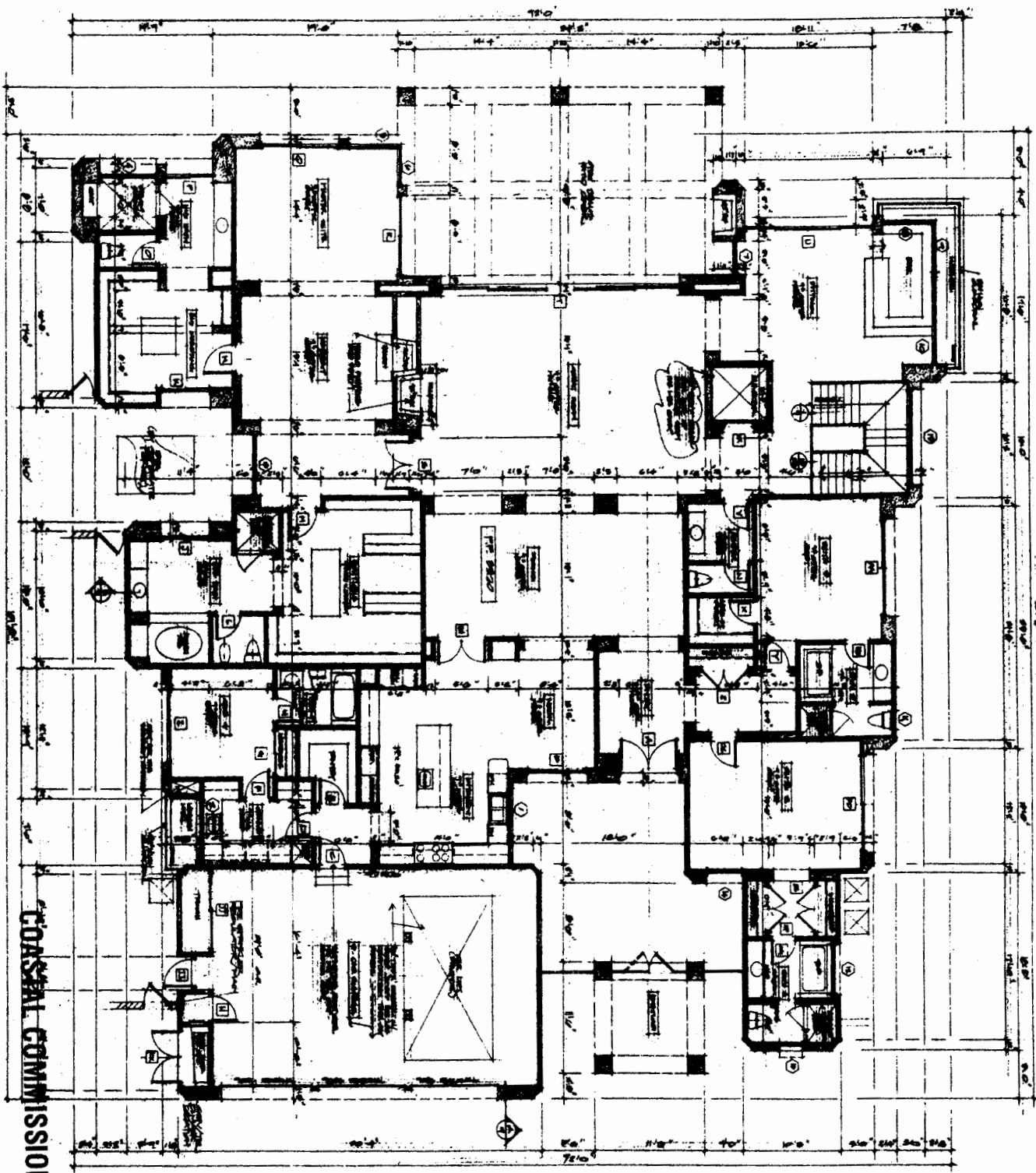


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EXHIBIT # 2
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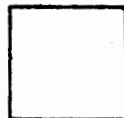


THIRD FLOOR PLAN
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EXHIBIT # 4
PAGE 1 OF 2

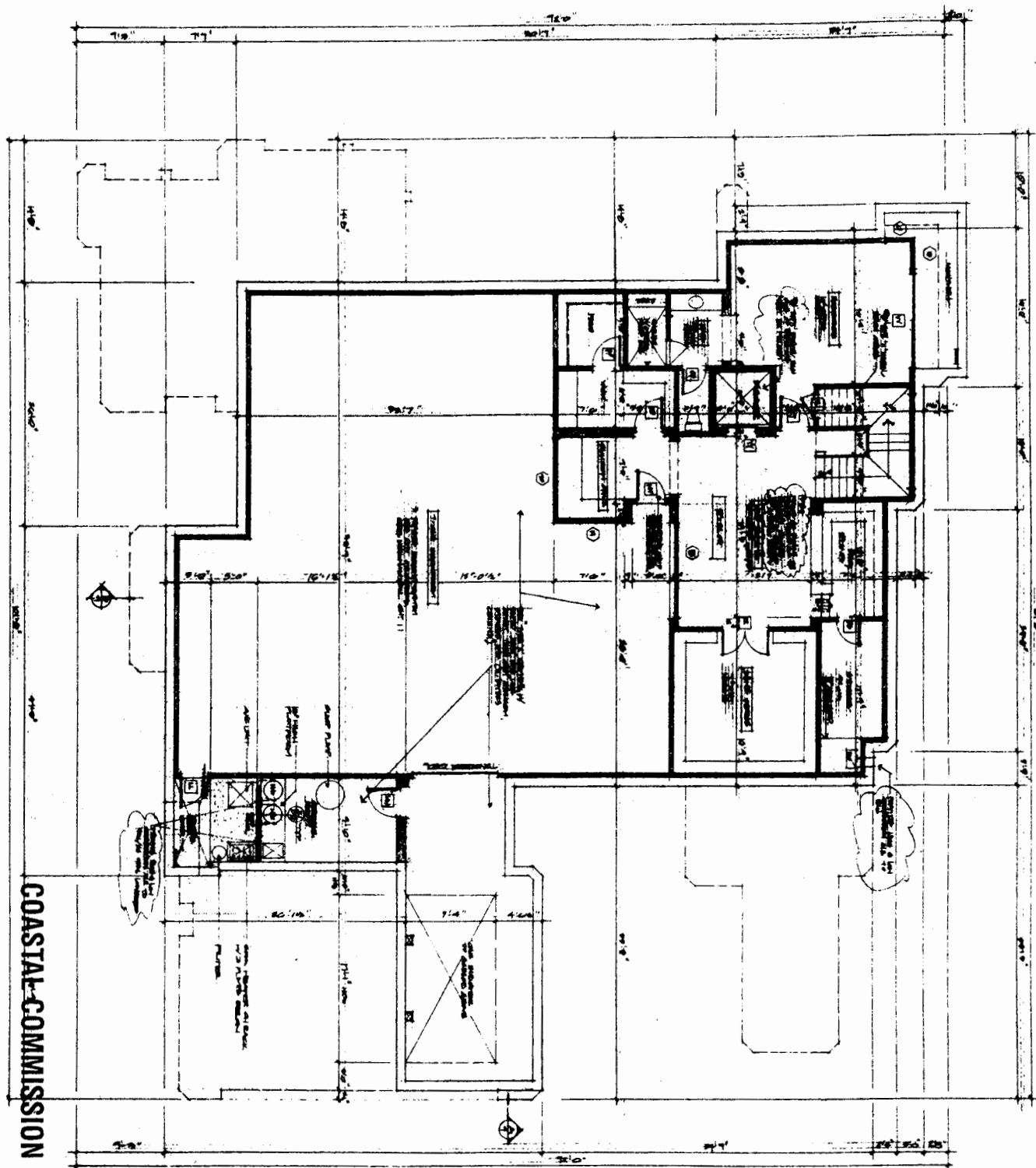
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EXHIBIT # 4

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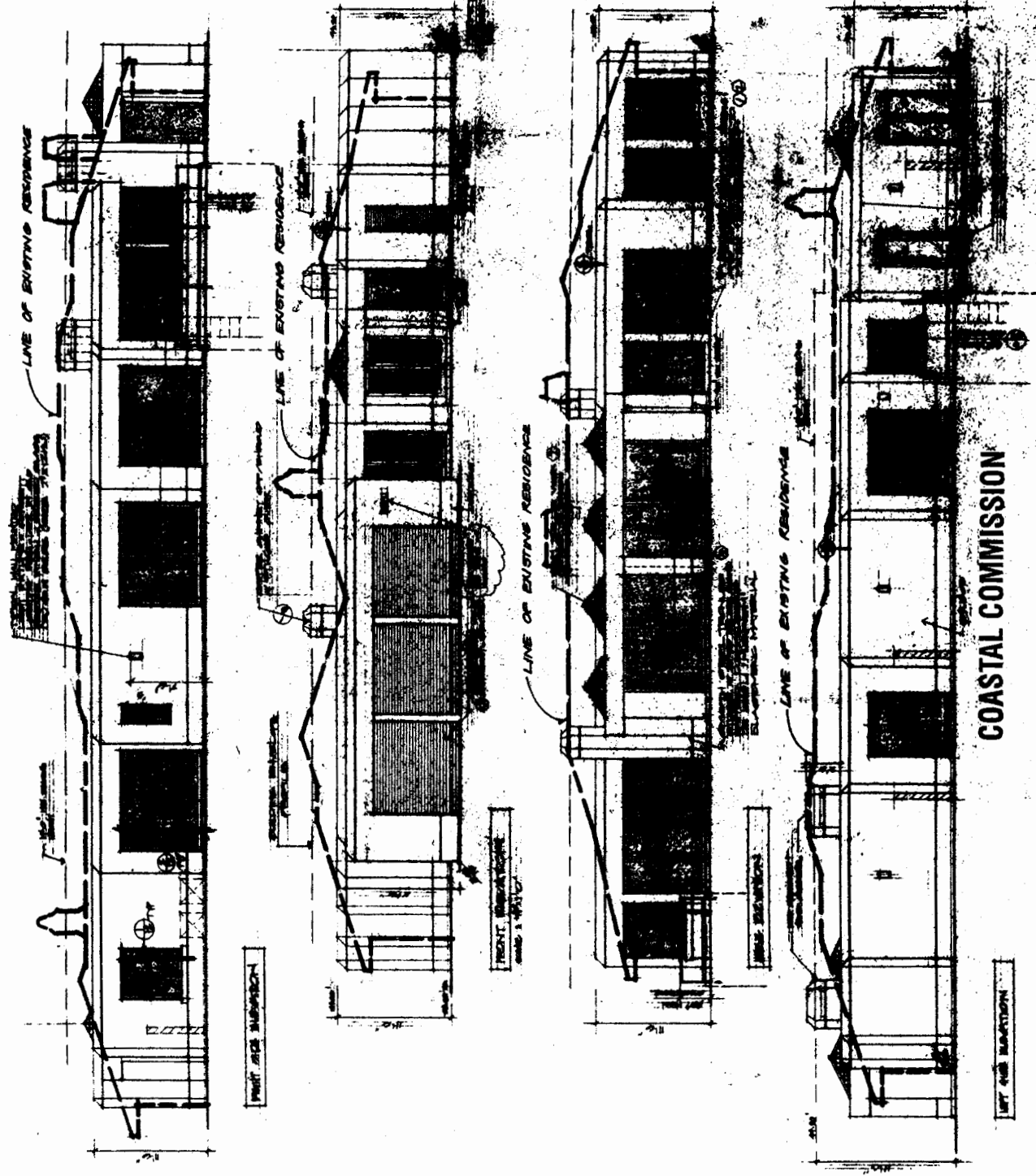
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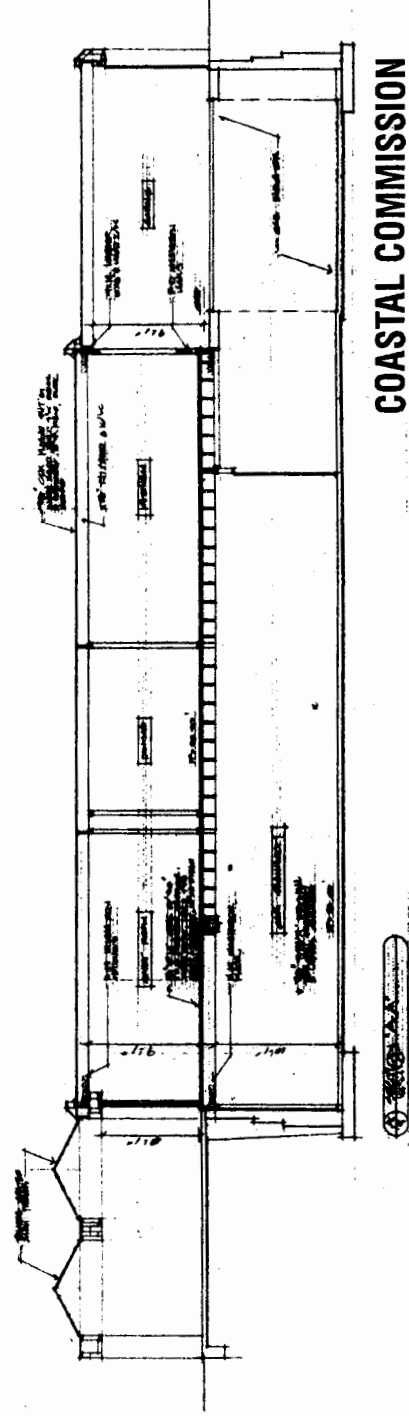
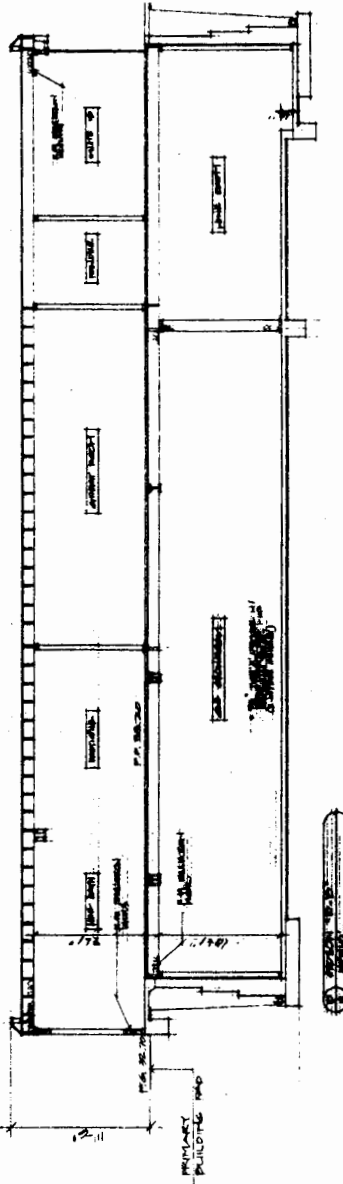
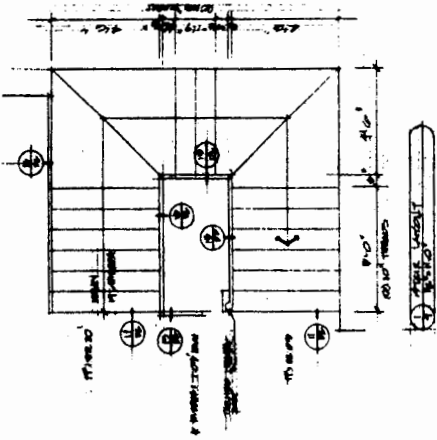
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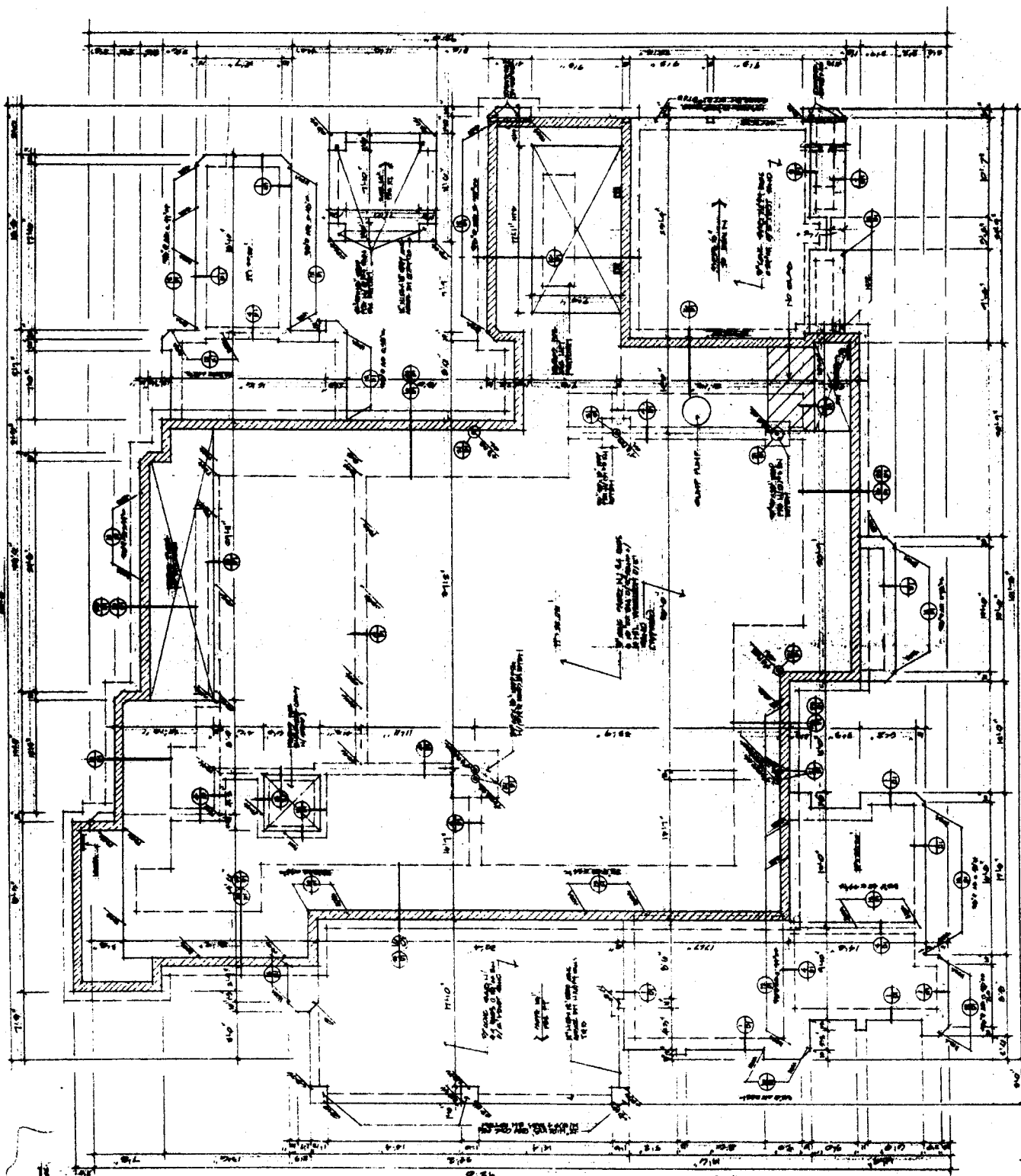


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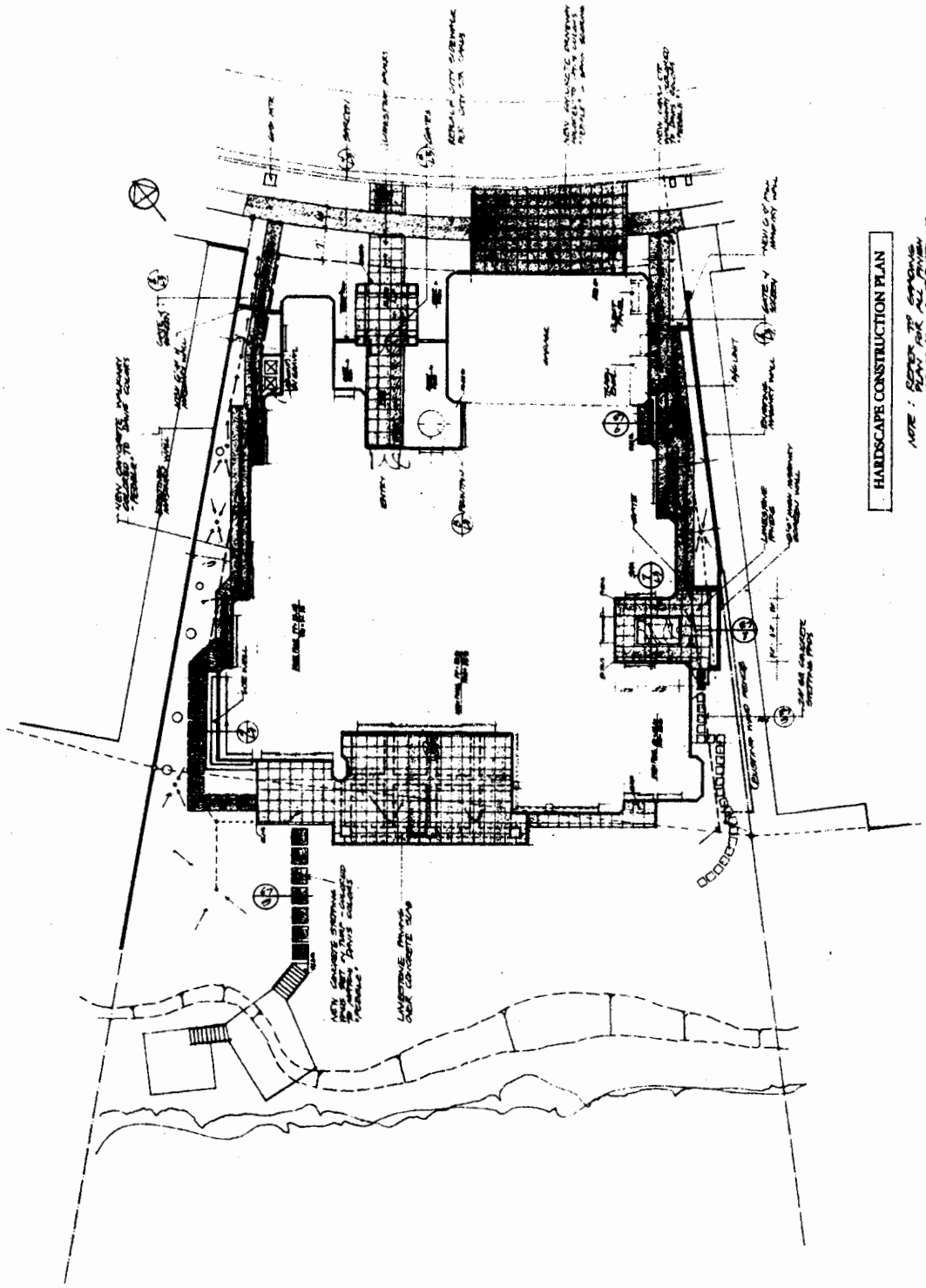
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SHEET: 19 OF 20
DRAWN BY: J. L. BROWN
CHECKED BY: J. L. BROWN

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EXHIBIT # 2
PAGE 1 OF 1



HANDSCAPE CONSTRUCTION PLAN

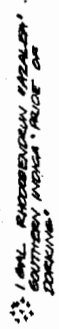
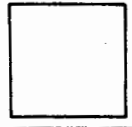


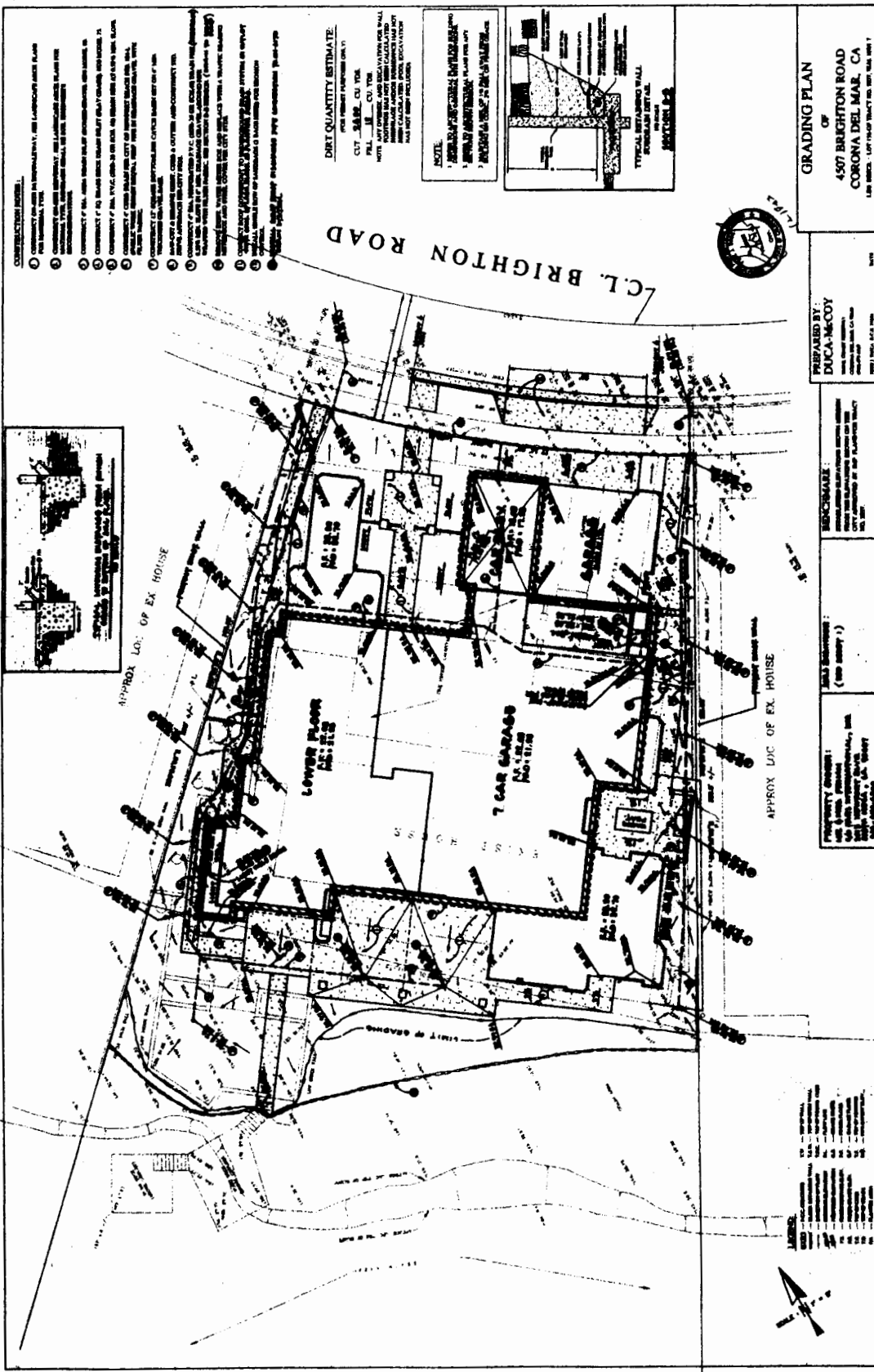
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PAGE 1 OF 1

NOTES: 1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED. 2. ALL GRADES ARE TO BE VERIFIED BY THE FIELD ENGINEER. 3. ALL CUTS ARE TO BE PROTECTED BY A 12" MIN. DRAINAGE DITCH. 4. ALL FILL ARE TO BE PROTECTED BY A 12" MIN. DRAINAGE DITCH. 5. ALL EROSION ARE TO BE PROTECTED BY A 12" MIN. DRAINAGE DITCH. 6. ALL SLOPES ARE TO BE PROTECTED BY A 12" MIN. DRAINAGE DITCH. 7. ALL GRADING ARE TO BE PROTECTED BY A 12" MIN. DRAINAGE DITCH. 8. ALL GRADING ARE TO BE PROTECTED BY A 12" MIN. DRAINAGE DITCH. 9. ALL GRADING ARE TO BE PROTECTED BY A 12" MIN. DRAINAGE DITCH. 10. ALL GRADING ARE TO BE PROTECTED BY A 12" MIN. DRAINAGE DITCH.



DATE: 11/2/84
PROJECT: PRIMM ESTATE
DRAWN: J. J. J.
CHECKED: J. J. J.
APPROVED: J. J. J.

G2

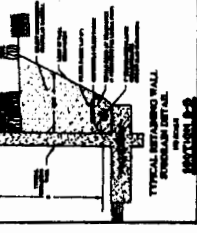


- CONSTRUCTION NOTES:
- 1. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
 - 2. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.
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DIRT QUANTITY ESTIMATE
FOR PRELIMINARY PURPOSES ONLY

CUT: 10,000 CU. YD.
FILL: 10,000 CU. YD.

NOTE:
1. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
2. ALL GRADES ARE TO BE VERIFIED BY THE FIELD ENGINEER.



GRADING PLAN
OF
4507 BRIGHTON ROAD
CORONA DEL MAR, CA

PREPARED BY:
DUCA-MCCOY
CITY ENGINEER

RECEIVED:
CITY ENGINEER

PROPERTY OWNER:
J. J. J.

COASTAL COMMISSION

