

March 6, 1998

Mr. Quinn Peitz  
Planning Group Support  
Manager  
City of Colorado Springs  
30 South Nevada Avenue  
Colorado Springs, CO 80903

Dear Mr. Pietz:

The Housing & Building Association of Colorado Springs/Pikes Peak Region, several land developers, including Berry & Boyle Masterplanned Land Venture (The Boulders Broadmoor), COG Land & Development Company (Broadmoor Resort Community), Elite Properties of America, Inc. (Houck Estate, The Reserve), Gates Land Company (Cheyenne Mountain Ranch), La Plata Investments, LLC (Briargate), Nor'wood Limited, Inc. (Nor'wood) and Schuck Communities, Inc. (Cedar Heights, Mountain Shadows and Stratton Estates), and local geotechnical engineering firms, including CTL/Thompson, Inc., Entech Engineering, Inc., Kumar and Associates, Inc. and Terracon, wish to bring to your attention difficulties we are encountering in the City's administration of the Geological Hazard Study and Mitigation Ordinance (the "Geohazard Ordinance") codified in Article 3, Part 5 of the City of Colorado Springs Zoning Code and problems we perceive in the language, application and interpretation of the City's HS - Hillside Area Overlay ordinance (the "Hillside Ordinance") codified in Article 2, Section 504 of the Zoning Code. The entities identified above, all of whom are signatories to this letter, wish to make it clear that we support the concept of geological hazard study and mitigation, as well as reasonable regulation of hillside development. We believe these to be prudent policies that serve the common interests of the development community, City government and the public-at-large. However, as with all new regulations, practical experience with the Geohazard Ordinance and the Hillside Ordinance in the initial period after they have been implemented reveals some language, issues and procedures that need adjustment or clarification. Our concerns and suggested solutions are outlined in this letter.

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COLORADO SPRINGS  
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FIGURE 1

ITEM 4

A. Geologic Hazard Study Review.

As you know, the Geohazard Ordinance requires a "Geologic Hazard Study" with virtually every type of land development proposal (subject to exceptions discussed below). Geologic Hazard Studies are to be "reviewed concurrently by the City's Planning and City Engineering staffs in conjunction with the City's normal review of the land development proposal." The Geohazard Ordinance also provides that "City staff, Planning Commission or City Council may, at their discretion, have Geologic Hazard Studies independently reviewed by the Colorado Geological Survey (CGS) or by an independent professional geologist or qualified geotechnical consultant." We believe that the intent, rationale and purposes of the review process are clearly set forth in the following statements contained in Subsection A of Section 507 of the Geohazard Ordinance:

The City's review shall determine whether the findings, conclusions and recommendation of the Geologic Hazard Study have been incorporated into the design of the Development Plan, Subdivision Plat, Drainage Plan, Grading Plan and Street construction documents. If the review by the City determines that the study submitted is incomplete or fails to comply with the guidelines set forth in this Part 5, the study may be rejected and a new supplemental study may be required. In cases where significant geologic hazards are identified, appropriate mitigation measures shall be required in conjunction with the approval of the project.

The City currently has an insufficient number of geological and geotechnical experts on staff. Consequently, City staff has routinely referred most Geological Hazard Studies done in hillside areas, at least those areas with landslide type deposits, to the Colorado Geological Survey for review. The referral is done without any guidance from the City as to the purpose or scope of the review by CGS. Unfortunately, the review policies and procedures implemented by CGS go far beyond what is intended by the Geohazard Ordinance, with the result that CGS is effectively setting policy with respect to development of

hillside areas in Colorado Springs. In our view, this creates the following problems for the City, land developers and professional consultants:

1. CGS is usurping a policy-making role that properly belongs only to the City. We can identify several instances in which CGS has issued recommendations that no building or development take place on certain parcels, despite the fact that the Geologic Hazard Studies have identified the hazards and risks and recommended mitigation measures that trained, professional geological and geotechnical consultants have determined to be appropriate to reduce the risks, and the developer has agreed to implement such measures. When a City staff person receives a letter from CGS that says, in effect, "do not allow this development," the City staff is not going to overrule or ignore that recommendation, and it is not reasonable to expect him or her to do so. City staff should not be put in that position. We know of one instance in which CGS flatly stated that the City should pass a specific ordinance, the terms of which were described by CGS, to regulate hillside development. The hillside development policy has already been set by City Council in the Geohazard and Hillside Ordinances, and it should not be second-guessed by CGS. Review of a Geologic Hazard Study by CGS should be limited to determining whether or not: (i) the terms of the ordinance have been met; (ii) mitigation measures are required; (iii) when required, reasonable mitigation recommendations have been provided; and (iv) credible, qualified experts have determined that development can safely take place. If those conditions are met, CGS should not be able to effectively rewrite the recommendations and assessments provided by the professionals who prepared the Geologic Hazard Study and preclude development from occurring.

2. From the developers' point of view, review by CGS is extremely costly. First of all, CGS seldom if ever completes its review within the 21-working-day time frame required by the ordinance, thereby causing frequent and substantial delays. Secondly, in many instances, CGS has made recommendations to the City that developers have carried out, only to have CGS recommend to the City additional studies (without specifying what studies are required) and additional mitigation, then still more studies with more mitigation. The City staff generally defers to these recommendations, which is understandable. This creates additional delay, uncertainty and expense for developers, builders and home buyers. Finally, CGS's recommendations have precluded building on parcels worth millions of dollars, even though independent geological and geotechnical consultants have

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concluded that building on those parcels can be safely done with proper engineering, construction and other mitigation measures.

3. CGS has never questioned the identification of hazards contained in Geologic Hazard Studies prepared for the developers named in this letter. With respect to risk assessment and mitigation, however, geological and geotechnical consultants are having their professional judgments and conclusions routinely second-guessed by someone at CGS. All Geologic Hazard Studies from Colorado Springs are reviewed by the same person at CGS, who is a geologist and may not be qualified to question engineering judgments on complicated projects about which the consulting engineer may have special knowledge. The solutions to geologic risks are invariably engineering solutions, and the geologist at CGS is probably not qualified to assess the risks or the mitigation measures. The geotechnical consultants who have signed this letter are all trained, licensed professional engineers who are eminently qualified to determine the mitigation measures that are necessary to minimize identified risks. They should not be subject to a veto of their professional opinions and recommendations by CGS.

look up definition

Representatives of the signatories of this letter would like to meet with you and appropriate members of the City staff to discuss our experiences, concerns and proposed solutions in detail. Some of us have attempted to resolve these problems with CGS, and we believe that there is little or no hope of satisfactory resolution if CGS remains the City's outside reviewer of choice. We believe that the solution is relatively simple, and consists of the following elements:

1. The City administration should confirm the clear policy stated in the Geohazard Ordinance, that the purpose of the City's review of a Geologic Hazard Study is to determine whether or not (a) the study is complete; (b) the study complies with the guidelines set forth in the Geohazard Ordinance; (c) where significant hazards are identified, reasonable mitigation measures are recommended; and (d) the findings, conclusions and recommendations of the Geologic Hazard Study have been incorporated into the development plan, subdivision plat, grading plan and street construction documents. This policy must be communicated clearly to City staff members who review land development proposals. To assist in this review process, we propose the creation of a checklist to be used by City staff in reviewing Geologic Hazard Studies. A proposed checklist is enclosed for the City's consideration.

2. The City should no longer use CGS to review reports but should engage qualified professional firms that include both geologists (whose primary role is to determine whether all hazards have been properly identified) and geotechnical engineers (whose primary role is to analyze hazards, determine the need for mitigation and, if mitigation is required, evaluate appropriate mitigation measures). These reviewing consultants should be advised by the City that the scope of their review is as described above in item 1. The process should contemplate that the reviewer would consult with the geotechnical consultant who prepared the Geologic Hazard Study if there are questions or concerns, so that consensus can be reached. If ultimately the reviewing consultants disagree with the findings, conclusions and recommendations of the expert who prepared the Geologic Hazard Study, they should be entitled to express their professional opinions, which the City may or may not choose to act upon. The reviewing consultants should not be permitted to set policy.

*geologists  
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3. If certain mitigation measures are to be required or if development is to be precluded, such a decision should be made by a designated individual or group of individuals at the appropriate level of the City administration. A denial of a right to develop or a requirement for mitigation measures would be subject to appeal by the applicant in accordance with normal City procedures.

B. Applicability of Geohazard Ordinance to Non-Hillside Areas.

The second major problem with the Geohazard Ordinance is its blanket applicability to all areas of the City, which results in the generation of Geologic Hazard Studies that serve no useful purpose. There are major developments within the City, such as Briargate and Nor'wood, that have virtually no hillside areas and no geologic hazards that pose significant risks, other than seismicity and the possibility of radon, expansive/compressive soils and bedrock and water problems, all of which can be mitigated with long established and commonly used foundation design and construction practices. Nevertheless, the Geohazard Ordinance as written still requires a Geologic Hazard Study or a waiver from the City (which poses its own problems, as discussed below) with every plat and development plan. In those cases, the study requirement does nothing but add expense.

*(not will be)*

One solution to this problem is simply to exempt developments without hillside areas from the provisions of the Geohazard Ordinance. Alternatively, the Geohazard Ordinance

should be amended to allow a single overall study for a development without hillside areas. For new developments, this study should be done at the time of master plan approval; for existing developments, it can be done at any time. If that study identifies no significant geological hazards (other than the common ones referred to above), then site-specific studies should not be required with each land development proposal.

C. Waiver of Geologic Hazard Study Requirement.

The third aspect of the Geohazard Ordinance that is causing some concern is Section 503, which sets forth the criteria for obtaining a waiver of the Geologic Hazard Study requirement. This issue is related to, but is narrower than, the exemption issue discussed above under Section B. The specific problem is item 2.d of Subsection A of Section 503, which sets one of the requirements for a waiver, as follows:

- d. The proposed site exhibits no geologic hazards which pose risks to the proposed project, other than slight to moderately expansive soils or expansive bedrock which can be mitigated with standard foundation design construction practices.

If taken literally, the foregoing requirement can never be met and no waivers can be granted. There is no site anywhere in the State of Colorado that "exhibits no geologic hazards which pose risks." All sites in Colorado Springs involve some geologic hazards, including seismicity and radiation (radon) concerns, but the level of risk is not cause for rejection of the project without a Geologic Hazard Study. As a prerequisite to exemption, Subsection B of Section 503 requires a letter from a professional geologist or geotechnical engineer stating that the project meets all of the criteria listed in Subsection A.2. Given the absolute nature of item 2.d, most reputable professionals are uncomfortable signing such a letter without qualification.

In practice, waivers have been obtained in appropriate circumstances where the letter from a geologist or geotechnical engineer hedges on item 2.d. We do not think that the professional consultants should be put in the position of submitting letters that, while truthful and accurate, do not technically comply with the ordinance requirements; and City staff should not have to make judgments about having to accept technically noncomplying certifications in order to grant a waiver.

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This problem can be solved by amending items 2.a and 2.d of Section 503A to read as follows:

- a. No portion of the project lies within the Hillside (HS) Overlay zone in an area that exhibits geologic hazards that may affect the health and safety of the residents or occupants of the project.
- d. The project site exhibits no geologic hazards, as defined in Section 501, which pose risks to the proposed project, other than seismicity, radiation (radon), expansive/compressible soils and bedrock, shallow water tables, springs or flood-prone areas that can be mitigated with proper foundation design and construction practices.

The Geologic Hazard Study Exemption Request form used by the City should then be modified to be consistent with the foregoing.

D. Hillside Ordinance--25 Percent Slope.

The most problematic provisions of the Hillside Ordinance are the ones that preclude building on areas with a slope greater than 25 percent, specifically Subsection 504.D.2.1), stating that "slopes greater than twenty-five (25%) percent shall be avoided," and Subsection 504.D.1.f), stating that "slopes greater than twenty-five (25%) percent shall not be included in the building envelope."

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These provisions are overly restrictive. The first problem is that there are no standards for measuring a 25 percent slope. What distances do you consider in determining the slope? What area of the site must have a 25 percent slope for the site to be disqualified? Furthermore, prohibiting all building on 25 percent slopes is not sensible and may sometimes be inconsistent with other goals of the Hillside Ordinance, such as preserving sight lines and protecting ridge tops.

The purpose of the 25 percent slope requirement was to provide an easy measure to indicate land that needs to have more detailed analysis to determine building suitability. Additional analysis could include geotechnical/slope stability; visual impact; vegetation impact; extent of 25 percent slope within the proposed building area; and other pertinent site features. The general code requirement is to insure that each lot that is created has a reasonable building site. The 25 percent slope



should be used as a guideline and as one of several factors to be examined, but not as an absolute. In production housing outside of hillside areas where overlot grading occurs, 4:1 slopes, or 25 percent, are intentionally created where walkout homes are being planned. On many hillside sites, having a slope of 25 percent is a building advantage, not a constraint.

E. Hillside Ordinance--Vegetation Preservation.

In many cases, the City is being overly narrow in its interpretation of the vegetation preservation provisions of the Hillside Ordinance. The City's evaluation of vegetation preservation features of Hillside Site Plans/Lot Grading Plans should not just look at each individual lot in isolation but needs to take into account the overall development. The City should give credit for preservation of large areas of scrub oak or other vegetation, landscaping added by the developer and designation of land as open space. It is unreasonable to allow only very small building pads on large hillside lots where there is adequate preservation of vegetation in the development as a whole. A provision should be added to the Hillside Ordinance expressly requiring staff to look at vegetation preservation and landscaping enhancement throughout a project as a whole, and not just on a lot-by-lot basis, when evaluating a Hillside Site Plan/Lot Grading Plan.

There are other problems with the Hillside Ordinance that need to be discussed and resolved. These are identified in a memorandum from N.E.S., Inc. to the Land Development Review staff dated January 14, 1998, a copy of which is enclosed.

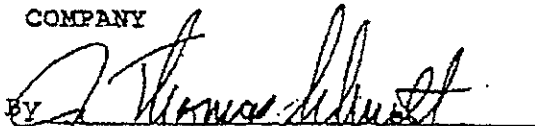
Thank you for your consideration of these issues. We will be contacting you to arrange a meeting to discuss these matters, which we consider to be of great importance to both the City and the building and development industry.

Sincerely,

BERRY & BOYLE MASTERPLANNED  
LAND VENTURE

BY   
Earl Robertson

COG LAND & DEVELOPMENT  
COMPANY

BY   
J. Thomas Schmidt

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ELITE PROPERTIES OF AMERICA,  
INC.

By Jerry Novak  
Jerry Novak

LA PLATA INVESTMENTS, LLC

By Scott E. Smith  
Scott E. Smith

SCHUCK COMMUNITIES, INC.

By Fred Veitch  
Fred Veitch

CTL/THOMPSON, INC.

By William C. Hoffman, Jr., P.E.  
William C. Hoffman, Jr., P.E.

KUMAR AND ASSOCIATES, INC.

By Bruce E. Berends  
Bruce E. Berends, P.E.

HOUSING & BUILDING ASSOCIATION  
OF COLORADO SPRINGS/PIKES  
PEAK REGION

By David Keller  
David Keller, President

GATES LAND COMPANY

By Stephen L. Sharkey  
Stephen L. Sharkey

NORWOOD LIMITED, INC.

By David D. Jenkins  
David D. Jenkins

ENTECH ENGINEERING, INC.

By Joseph P. Goode, Jr., P.E.  
Joseph P. Goode, Jr., P.E.

CTL/THOMPSON, INC.

By Martin F. Essigman  
Martin F. Essigman, P.E.

TERRACON

By C. Kirk Fraser  
C. Kirk Fraser, C.P.G.  
Office Manager

Enclosures

cc: Mr. James H. Mullen (w/encls.)  
Members of City Council (w/encls.)

CLERK'S OFFICE  
JAN 9, 1999

Draft Geologic Hazard Study Review Checklist  
From Section 506 - Geologic Hazard Report Guidelines  
Ordinance 96-74

A. General Project Information

Was a general description of the project identified?

A general description of the project may include information such as project size, location, types of development, existing and proposed zoning.

B. Study Overview

Was a general overview of the study presented?

A general overview may include information such as a general description of the field investigation, a review of available geologic literature, a description of the general physiographic and geologic setting, and a review of regional surface drainage and groundwater conditions.

C. Site Evaluation Techniques

Were the techniques used to evaluate the site presented and described?

This presentation may include a description of the surface and subsurface evaluation techniques used for the study. The surface and subsurface evaluation techniques may include geologic mapping, use of aerial photographs and remote-sensing imagery, geophysical investigations, soil/rock borings/ test pits and trenches, field and laboratory testing, and monitoring programs.

D. Geologic Descriptions

Were geologic descriptions of the various geologic units encountered presented?

This presentation may include a description of surficial deposits and bedrock. The description may include such items as age, dimensional characteristics, physical characteristics, chemical characteristics, bedding attitude, and extent.

Were descriptions of geomorphic and structural features presented?

This may include descriptions of such items as landslides, earthflows, debris flows, rockfalls, fault scarps, soil creep, erosional features, joints, faults, shear zones, and bedding. The

Bill Hoffmann  
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lots 1, 2, and 6

descriptions may also include location, extent, age, orientation, physical characteristics, and history of activity.

Were surface drainage and ground water discussed?

This may include identification of streams, creeks, draws, springs, and confined and unconfined aquifers. Discussions of these features may include location, drainage patterns, relationship to geologic features, source, permanence, flow rates, flood limits, hydraulic gradients, depth to groundwater and seasonal variations.



E. Geologic Interpretation

Were interpretations of the collected geologic information presented?

Interpretations may include geomorphic and structural processes, man-induced processes and conditions, activity, long-term stability, effect of natural or man-made induced changes, potential impact and risk to project, and amenability of adverse conditions to mitigation.

look up

F. The Bearing of Geologic Factors Upon the Intended Land Use

Were effects of geologic conditions on the intended land use discussed?

Discussions may include the effects of the geologic features and conditions on the proposed grading, construction, and land use. The discussions may also include how the proposed project may affect future geologic processes. Items that may be included in the discussions are general compatibility with natural features, proposed cut and fill grading, special recommendations regarding removal/buttrussing slide masses, flood protection, ground water, faults, and avoidance.

G. Conclusions

Were conclusions presented in the report?

The presentations should include whether the proposed land use is compatible with site geologic conditions and planning and construction aspects such as landscaping, stability of earthen materials, site grading, facility location, and special design parameters.

H. Recommendations

Were recommendations presented? *minimize*

Recommendations may include the need for additional geologic information, a discussion of mitigation alternatives to reduce the impact of the site geologic conditions on the project. These recommendations should focus on long-term stability and safety of the project.

From Section 507 - Review of Geologic Hazard Studies  
Ordinance 96-74

Were the findings, conclusions and recommendations of the Geologic Hazard Study incorporated into the design of the Development Plan, Subdivision Plat, Drainage Plan, Grading Plan and street construction documents?

The Geologic Hazard Study is one portion of the total submittal for the project. The various portions of the submittal should incorporate and be consistent with the conclusions and recommendations of the Geologic Hazard Study.

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