



# **DESIGN AND CONSTRUCTION GUIDELINES**

**2011**



# PREFACE

The Ranch Club – Undulating hills of western Montana’s Clark Fork Valley provide an idyllic setting for this extraordinary recreational, golf community, which is taking shape on 343 acres of scenic ranchland just 10 minutes from downtown Missoula and the highly respected University of Montana campus.

A total of 365 residences thoughtfully sited are planned for the property, incorporating a mix of luxury developer-built cabins and townhomes, plus an extensive inventory of premium custom homesites that offer buyers the flexibility to choose their own architects and builders.

Facilities at the clubhouse’s existing links-style golf course are being expanded and upgraded to include a new full-service pro shop and golf academy, along with an impressive list of first-class social and recreational amenities. Members will enjoy a state of the art fitness center, a lovely outdoor pool and barbecue area, a choice of dining options, and the area’s only indoor tennis facility.

The architectural vision for The Ranch Club marries home to land, creating the opportunity for timeless and unique architecture fit naturally into a rolling landscape. Design And Construction Guidelines for all developer-built structures and custom homes call for harmonious use of natural wood and stone, and specify natural colors and native landscape materials. The architectural style reflects the area’s rich Western heritage and preserves the magnificent mountain views that make this timeless countryside such an appealing place to call home.

More than a promise, The Ranch Club will deliver the finest community environment of warmth, camaraderie and allure, and will promote a lifestyle that’s unique to Missoula.

To assist Owners in taking full advantage of the unique opportunities of their homesites in the planning and design of a residence, a comprehensive design review process administered by the DRC has been established. This process allows for the Owner to draw on the expertise that has been acquired during the planning and development of The Ranch Club. The DRC is charged with the responsibility of maintaining the standards set forth in the design review guidelines.

In its ongoing efforts to achieve the vision of The Ranch Club, the DRC may modify or create additional guidelines, policies or procedures. In exercising its discretionary authority, the DRC may also modify its interpretations of various portions of the guidelines. It is the goal of the DRC to promote early and open communication with Owners and their designers/builders prior to beginning the design process. Please contact a DRC representative for an appointment to receive the latest amendments to the guidelines or current policies prior to proceeding with design.

Each Owner, through their architect or designer, is responsible for reviewing City regulations and other applicable Governmental requirements and/or restrictions to ensure the proposed design is in compliance.

The following architectural guidelines and standards have been developed to achieve the environmental and aesthetic visions of The Ranch Club.

Prior to the start of construction, the owner/contractor shall meet with a representative of the DRC to review the final plans, construction process and regulation. The builder shall coordinate scheduling, parking and construction staging.

In order to assure that the construction process and Design And Construction Guidelines are adhered to, the following Construction Regulations shall be made a part of the construction contract documents for each Residence or other improvement. All builders and owners shall be bound by these Regulations and any violations by a builder or his subcontractors or suppliers or vendors shall be deemed to be a violation by the Owner of the Homesite.

It is the intent of the drafters of these Design And Construction Guidelines to create a flexible system for the protection of the homesite Owners in The Ranch Club. It is anticipated that there may be situations arising in which the characteristics of a homesite, the existence of alternatives, or the strict technical application of a rule or regulation may demonstrate a need to vary the restrictions. In those types of circumstances, the DRC may allow alternatives to be submitted and approved in accordance with the process set forth herein for a variance. If the DRC determines that a variance is appropriate given the criteria set forth herein, the DRC may grant a variance from any rule or regulation.

The Design Review Committee, Association, or Declarant may enforce these Design And Construction Guidelines as provided herein or in the Covenants, Conditions and Restrictions and Bylaws. If an Owner or any owner Representative violates any term or condition set forth herein, the DRC shall have the following rights and remedies, in addition to any other or additional rights provided for by law or under the Declaration



## **DESIGN AND CONSTRUCTION GUIDELINES**

### **THE RANCH CLUB A DESIGNED LIFE STYLE COMMUNITY**



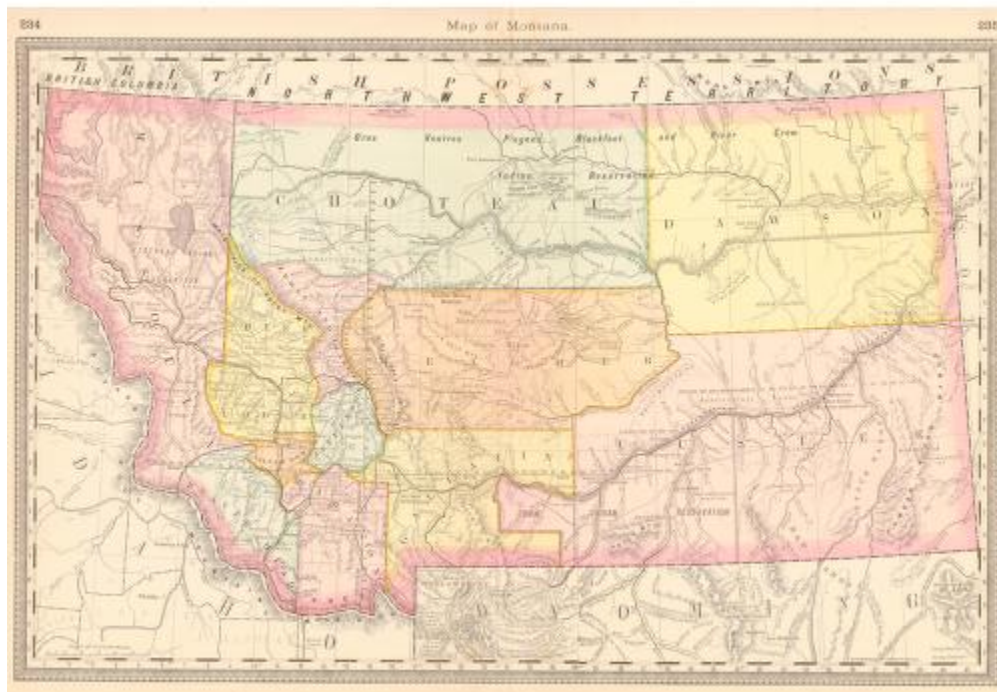
WGM  
Planning Surveying Engineering Design

NFA Architects  
Architecture

Les Ferber  
Golf Course Architects

Rocking M Design  
Landscape Architects









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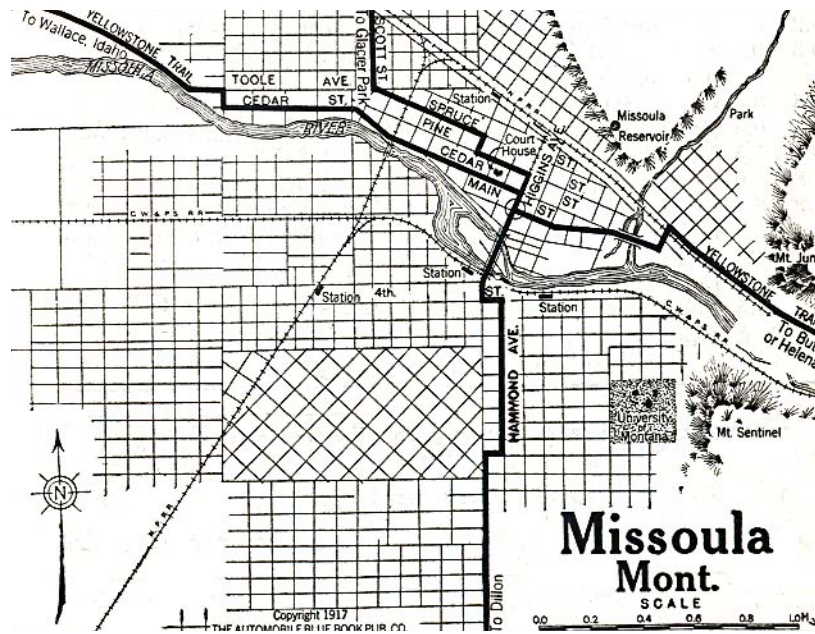
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## **SECTION 1**

# **INTRODUCTION**

## **THE VISION OF THE RANCH CLUB**

The Ranch Club – Undulating hills of western Montana’s Clark Fork Valley provide an idyllic setting for this extraordinary recreational, golf community, which is taking shape on 343 acres of scenic ranchland just 10 minutes from downtown Missoula and the highly respected University of Montana campus.

A total of 365 residences thoughtfully sited are planned for the property, incorporating a mix of luxury developer-built cabins and townhomes, plus an extensive inventory of premium custom homesites that offer buyers the flexibility to choose their own architects and builders.

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More than a promise, The Ranch Club will deliver the finest community environment of warmth, camaraderie and allure, and will promote a lifestyle that’s unique to Missoula.

## **1.1 THE OBJECTIVE OF DESIGN AND CONSTRUCTION GUIDELINES**

Keeping The Ranch Club's uniqueness and distinction – in harmony with our Covenants, Conditions and Restrictions (Covenants) – established guidelines assist Owners in all steps of planning site and home. Working with Owners throughout the process, a Design Review Committee (DRC) will assure that building concepts support The Ranch Club's vision.

It is the purpose of the Design And Construction Guidelines to protect and enhance the

environment of The Ranch Club. Insuring adherence with the fundamental Design And Construction Guidelines and styles will preserve the economic value of the community.

A variance from the literal translation of these guidelines will be considered objectively. However, all decisions made by the DRC will be final and not subject to review.











## **SECTION 2**

### **THE REVIEW AND APPROVAL PROCESS**

To assist Owners in taking full advantage of the unique opportunities of their homesites in the planning and design of a residence, a comprehensive design review process administered by the DRC has been established. This process allows for the Owner to draw on the expertise that has been acquired during the planning and development of The Ranch Club. The DRC is charged with the responsibility of maintaining the standards set forth in the design review guidelines.

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## **2.1 IMPROVEMENTS**

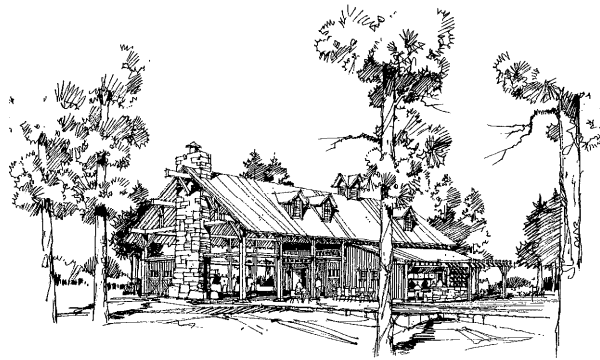
The Design Review Committee evaluates all the following improvements:

- Construction of all new buildings.
- Renovation, expansion, or refinishing of the exterior of the existing buildings.
- Any site or landscape improvements.
- Construction of, or addition to, fences or enclosure structures.

## **2.2 SUBMITTALS**

The DRC evaluates all submittals on the basis of the Design And Construction Guidelines. These guidelines are written as a broad standard, and the interpretation is left up to the DRC.

Some guidelines, such as building height or setbacks are governed by the City of Missoula. Owners and their designer/builders shall review and comply with current City of Missoula zoning regulations and building code requirements.



## **2.3 REVIEW PROCESS**

In general, The Ranch Club design review process is divided into five steps:

1. A Pre-Design Meeting between the Owner, Architect/Builder and DRC
2. Conceptual Plan Submittal & Review
3. Final Plan Submittal
4. Design & Construction Process
5. Final Construction Review

We would encourage Owners to allow three months for the entire review process. The Owner must start construction within six months of receiving their Final Submittal Review and Approval.

It is important that each Owner retains competent professional services for planning and design. A thorough analysis and understanding of a particular site and the Owner's special needs and the skill to translate this into building form, as well as the ability to convey to the DRC the concept and design of a proposed residence or other improvements, are all important elements of the design review process. Lack of knowledge, understanding and skill may result in a design not being approved by the DRC.

The design review process was developed to provide adequate checkpoints along the way, in an effort to minimize time and money spent on designs that do not adhere to the Design And Construction Guidelines of The Ranch Club, or to the overall philosophy of The Ranch Club. In order to bring the design review process to a timely and satisfactory conclusion, each Owner is directly responsible for complying with The Ranch Club's design review guideline's, all other applicable provisions of the Declaration, and all rules and regulations of any governmental authority.

The DRC will conduct reviews of the projects during their regular meetings, or at such times as deemed appropriate. Owners, architects, and builders shall have no right to attend any meeting of the DRC unless specifically requested to do so by the DRC. The DRC will respond in writing to the Owner no later than thirty (30) days after a submittal has been received by the DRC. All official actions, responses and communication from the DRC or any of its members will be conveyed in writing. All communications from the Owner to the DRC should be in writing. Conceptual Plan Submittals must be made a minimum of twenty (20) calendar days prior to the review meeting at which they will be discussed. Final Submittals and any revised submittals must be made a minimum of ten (10) calendar days prior to the review meeting at which they will be discussed. Dates of regularly scheduled Committee meetings are available from the DRC at the sales office.

Although the DRC will enforce all provisions of the Guidelines, the following will be of particular concern:

- Architectural character as viewed from all sides and specifically from the golf course, streets and common areas
- Exterior paint and natural material colors, as well as color usage and distribution
- Landscape character and plant materials native to the environment

## **2.4 PRE-DESIGN MEETING**

In order to begin the Design Review process the Owners and their architect are required to meet with the DRC or its representative to review the proposed residence and to explore and resolve any questions regarding building requirements in The Ranch Club, the Design Review Process or the interpretation of The Ranch Club's Design And Construction Guidelines. Any amendments to these Guidelines as well as the current policies and procedures may be obtained at this time.

This informal review is a way of offering guidance and opening lines of communication prior to the initiation of preliminary design. An appointment for the Pre-Design Meeting must be made at least ten (10) days in advance. The Pre-Design Meeting is required and preliminary submittals will not be accepted without a Pre-Design Meeting.



## **2.5 THE CONCEPTUAL PLAN SUBMITTAL**

Conceptual drawings, including all of the exhibits and fees outlined below, must be submitted to the DRC after the pre-design meeting and you should allow at least twenty (20) calendar days in advance of a regularly scheduled DRC meeting at which the submittal will be discussed. Dates of regularly scheduled DRC meetings are available at the sales office.

In order to defray the expense of reviewing plans and related data, and to compensate any consulting architects, landscape architects, and other professionals the covenants establish a Design Review Fee. These fees are subject to revision annually.

This package should include two (2) copies, of plans only, at 24" x 36" minimum, and one (1) copy at 11" x 17" of the following materials:

1. The Application Form, supplied by the DRC at the pre-design meeting, with all information completed, along with the non-refundable Design Review Fee, for either a new home or for an addition to an existing home, must accompany the submittal. Checks should be made out to The Ranch Club Homeowners Association, Inc. The required design fee is \$350.
2. Parcel survey by a licensed surveyor or civil engineer, shall include:
  - 1" = 20'-0" minimum
  - All property boundaries
  - All easements
  - All utilities
  - Five foot contours
  - Any significant feature
  - Any significant drainage
  - Street names
  - Legal description of parcel
  - The survey should extend 20' past all property lines

Site plan at 1" = 20'-0".

- Show existing topography and proposed grading
  - Show proposed drainage (and how this plan ties into the Master Site Drainage Concept and Plan)
  - Building footprint, setbacks, and finished floor elevations
  - Driveway and parking
  - Fences, deck or any amenities
3. Preliminary floor plans and roof plan at 1/8" minimum.
    - Include all exterior mechanical and electrical locations
    - Include all fences and hardscape areas
  4. Preliminary elevations at 1/4" minimum.
    - Identify roof heights, overhangs, existing and finished grades
    - Notation of exterior materials and finish. Color selections may be general and not specific for the Conceptual Plan Submittal
  5. Any other drawings, materials or samples requested by the DRC.

All accessory improvements contemplated on the homesite must be shown on the Conceptual Submittal Plan.

### **CONCEPTUAL PLAN REVIEW & APPROVAL**

After fulfillment of all elements of the Conceptual Plan Submittal, the Submittal will be deemed complete, except for any additional materials, information or staking requested in writing by the DRC. The DRC will then review the Submittal for conformance with The Ranch Club Design And Construction Guidelines and will provide a written response to the applicant.



## **2.6 FINAL SUBMITTAL**

After obtaining Conceptual Plan approval, the following documents complying with or satisfactorily resolving the stipulations for Conceptual Approval shall be submitted to the DRC for final approval. Owners should allow at least ten (10) calendar days prior to a regularly scheduled DRC meeting at which the Final Submittal will be discussed. Dates of regularly scheduled DRC meetings are available at the sales office.

The Owner shall provide two sets at 24" x 36" minimum, one set at 11" x 17", and a final material samples. For the samples, a 4' x 4' mock-up shall be produced and left on site for review. Plus color photos of mock-up shall be submitted on an 11 x 17 identifying the owner name, homesite number builder, architect, date and each material.

1. The Application Form
2. Site Plan – 1:20
3. Parcel Survey
4. Floor Plans at 1/4" minimum
5. Roof Plan at 1/8" minimum
6. Elevations at 1/4" minimum
7. Sections and all structural documents required by the City of Missoula Building Department.

### **FINAL SUBMITTAL REVIEW & APPROVAL**

Once the complete Final Submittal has been received, the DRC will review the submittal for compliance with The Ranch Club Design And Construction Guidelines, and with any stipulations of the DRC's Conceptual Plan approval. Upon determination that the required submittals have been received and are in a form acceptable to the Committee, the DRC will provide a written response to the applicant within thirty (30) days after submission of all required materials. Approval of the plans by the DRC does not relieve the applicant of responsibility for compliance with The Ranch Club Design And Construction Guidelines, and the requirements of all other governmental agencies having jurisdiction over the building process.

### **LANDSCAPE SUBMITTAL REVIEW & APPROVAL**

Once the Owner completes The Final Submittal has been received and approved the Owner will have eight (8) weeks to submit the Landscape Plan as well as the Sample Material Board, and the Exterior Lighting Plan.

#### **Landscape Plan at 1:20 minimum**

- Provide final plant and tree specifications
- Provide irrigation outline specifications
- Indicate the material and locations for walkways, patios, fences, mulches, retaining walls and finish slopes, if not already shown on Architectural or Engineering plans.

#### **Sample Material Board (to include material and color)**

- Roofing
- Wall and Trim
- Windows and Doors
- Stone or Rock
- Fence
- Hardscape

#### **Exterior Lighting at 1:20 minimum**

- All exterior building lights and site light locations with light fixture cut sheets.

## **2.7 BUILDING PERMITS**

The Owner may apply for all applicable building permits only after receiving final approval from the DRC, except when prior approval is given by the DRC.

## **2.8 DESIGN & CONSTRUCTION PROCESS**

Securing any plan check approval, permits or inspections from governmental agencies is the responsibility of the Owner. Construction shall be in accordance with the approved Final Submittal, and shall be in accordance with all applicable governmental rules and regulations.

On receipt of approval of a Final Submittal from the DRC, the Owner shall proceed as follows:

### **COMMENCEMENT OF CONSTRUCTION**

The Owner shall commence construction pursuant to the approved Final Submittal within six (6) months from the date of approval. If the Owner fails to comply with this, any approval given shall be deemed revoked unless, upon written request of the Owner made to the DRC prior to the expiration of the six (6) month period, and after review of the circumstances by the DRC, an extension may be granted for an additional six (6) months.

The Owner shall complete construction of foundation and all exterior surfaces within eighteen (18) months after commencing construction and complete all construction (including landscaping) within twenty four (24) months of commencement without prior written approval by the DRC.

### **WORK IN PROGRESS-OBSERVATION FOR DESIGN CONFORMANCE**

The DRC may inspect all work in progress and issue a notice to comply if changes or alterations have been found that have not been approved. The builder is required to inform the DRC in writing at least ten (10) days prior to the completion of rough framing so that an inspection for design conformance may be made prior to completion of sheathing. A written statement affirming compliance with this requirement shall be shown by the architect, designer or builder on the floor plan or framing plan as part of the Final Submittal. Absence of any such inspection and notification during the construction period does not constitute approval by the DRC of work in progress or of compliance with these Guidelines or the Declaration.

### **NOTICE TO COMPLY**

When, as a result of a construction observation, the DRC finds changes and/or alterations that have not been approved, the DRC will issue a notice to comply within three (3) working days of the observation. The DRC will describe the specific instances of non-compliance and will require the Owner to comply or resolve the discrepancies.

### **NOTICE OF COMPLETION**

The Owner will provide the DRC with a notice of completion of any construction or improvement(s) given Final Design approval by the DRC, including all landscape work. The DRC will make a final inspection of the property within seven (7) working days of notification. The DRC will issue in writing a notice of completion within seven (7) working days of observation. If it is found that the work was not done in compliance with the approved Final Design documents, the DRC will issue a notice to comply within three (3) working days of observation.



## **2.9 FINAL CONSTRUCTION REVIEW**

Upon completion of any residence or other improvement for which final approval was given by the DRC, the Owner shall give written Notice of Completion to the DRC prior to occupancy by the Owner.

Within such reasonable time as the DRC may determine, but in no case exceeding twenty (20) calendar days from receipt of a required written Notice of Completion, the DRC may review the residence and/or improvements. If it is found that work was not done in strict compliance with the approved Final Plan Submittal, the DRC shall notify the Owner in writing of such non-compliance within thirty (30) calendar days of its receipt of the Owner's Notice of Completion, specifying in reasonable detail the particulars of non-compliance, and requiring the Owner to remedy the same.

If the Owner has failed to remedy any non-compliance within thirty (30) calendar days from the date of the DRC's notice, the DRC shall notify the Owner. The DRC may then take such action to remedy or remove the non-complying improvements as is permitted by law and/or in these Guidelines or the Declaration including, without limitation, injunctive relief or the assessment of a fine.

If an Owner chooses to occupy the residence prior to Final Construction Review by the DRC, the Owner may do so provided that the work is continued and the written Notice of Completion is given to the DRC within forty five (45) days of occupancy. If improvements are not completed within forty five (45) days of occupancy, the DRC reserves the right to take such action to cause the completion of the improvements as is permitted by law and/or in these Guidelines or the Declaration including, without limitation, the imposition of fines.



## **2.10 ADDITIONAL CONSTRUCTION AND/OR EXTERIOR CHANGES**

Any changes to the approved drawings must be submitted for review to, and approved by, the Design Review Committee.

## **2.11 NON-WAIVER**

The approval by the DRC of any drawings or specifications for any work done or proposed, or in connection with any other matter requiring such approval under these Guidelines or the Declaration, including a waiver by the DRC, shall not be deemed to constitute a waiver of any right to withhold approval as to any similar drawing, specification, or matter whenever subsequently or additionally submitted for approval or of a nonconforming design or aspect that has not been identified earlier. For example, the DRC may disapprove an item not in conformance with the Guidelines shown on the Final Submittal even though it may have been evident and could have been, but was not, disapproved at the Conceptual Submittal. Furthermore, should the DRC overlook or not be aware of any item of non-compliance at any time during the review process, construction process or during its final inspection, such oversight or lack of awareness in no way relieves the Owner from compliance with The Ranch Club Design And Construction Guidelines, Declaration and all other applicable codes, ordinances and laws.

## **2.12 RIGHT OF WAIVER**

The Design Review Committee reserves the right to waive or vary any of the procedures or standards set forth herein at its discretion.

## **2.13 DESIGN REVIEW COMMITTEE DISCLAIMER**

The DRC review is not for conformance to City Zoning Regulations, building code compliance, requirement or any other specification of specific building practices or engineering. This is the sole responsibility of the owner and their representatives.









### **SECTION 3**

## **SITE DEVELOPMENT AND LANDSCAPE GUIDELINES**

Each Owner, through their architect or designer, is responsible for reviewing City regulations and other applicable Governmental requirements and/or restrictions to ensure the proposed design is in compliance.

### **3.1 SITE DEVELOPMENT AND LANDSCAPE GUIDELINES**

The Ranch Club is set within the rolling prairie found in a high mountain valley area locally called “The Five Valleys”. Views to the near distant mountains on every horizon span the waving grasses and clusters of majestic Ponderosa Pine trees nestled in protected ravines. The Site Development and Landscape Guidelines intend to capture the essence of the natural landscape and weave it throughout The Ranch Club.

Changes to the submitted, approved landscape plan must have prior approval by the DRC. A Pre-Construction Meeting with the DRC and landscape contractor 60 days prior to starting construction is required.

Our main objectives for landscape and site design at the Ranch Club are as follows:

- To enhance views and vistas to the surrounding mountains and golf course
- To maintain and restore the native grassland and agricultural grazing landscape character historically present on the site
- To minimize the use of resources to maintain the landscape
- To provide privacy, separation and screening in a manner that is a natural extension of the surroundings and allows restoration of the natural character of the site
- To minimize grading and general site disturbance
- To maximize natural water infiltration
- To create outdoor spaces that are natural extensions of the indoor spaces
- To utilize plants, landscape structures and details that draw upon the region’s heritage and respond to the unique climate and setting
- To incorporate site specific construction techniques that facilitate high quality, durable landscapes that respond to specific site conditions
- To extend appropriate landscape treatments throughout The Ranch Club land creating connectivity and definition for the golf course, residential areas, common areas and natural areas while preserving a strong reference to the larger high mountain valley context

Homeowners and their design team will be provided:

- Pre-agricultural Grassland Habitat type,
- Plant List for the Landscape Zones, and a
- Diagram: Typical Landscape Design, illustrating the application of the Guidelines to a typical single family home homesite.

### **3.2 GRADING, SITING AND DRAINAGE**

Grading shall be kept to a minimum maintaining The Ranch Club’s natural state. Changes in the natural grade should be made only to prevent erosion. The main objectives are:

- To blend new improvements into the site
- To maintain and preserve the natural drainages on the site
- To retain the character of the site’s natural topography by minimizing grading disturbance

General siting and grading principles are as follows:

- Slopes shall not exceed 3:1 unless it is a rock cut or it can be demonstrated that a steeper slope will not erode. When 3:1 slopes are used, their visibility shall be minimized and incorporate a landscape treatment that helps mitigate the abrupt visual character of the slope.
- Natural slopes covered with vegetation are to be used instead of structures wherever feasible.
- Homesites shall not increase water running onto adjacent homesites or the golf course surfaces. Where drainage pipes daylight, the openings shall be concealed from view through integration in to the landscape, providing a planted, infiltration swale or an on-site, subsurface distribution feature.

The natural soil at The Ranch Club is a dense clay soil with unique drainage properties. Drainage from individual sites shall not increase water on adjacent sites, whether the adjacent site is the golf course, common or public area, or neighboring residence.

Roof drainage will be collected in gutters and conveyed via downspouts directly in to the site's storm water collection system. Irrigation will be minimized and monitored to prevent over watering and creating overland or underground flow. Sites sloping toward adjacent sites shall provide a means to stop, slow and infiltrate or collect water generated by irrigation systems before the water leaves the site. The goal is to maintain the same volume of water draining from the property as existed prior to development, when the site was in its natural vegetated condition.

All roof drains from each house shall be directly connected to the roof drain service stub provided to each homesite. The roof drain service stub is 4" PVC Sch 40 pipe. The roof drain lines from the house to the service stub shall be 4" PVC or flexible HDPE drain pipe with appropriate transition fitting the Sch 40 service stub. The service stub elevation shall be verified before installation of drain lines to ensure connection. Drain lines from the house to the service stub shall maintain positive grade with a minimum 1% slope. A minimum of one cleanout shall be provided at the house to clean the line to the service stub. Additional cleanouts may be required based on roof drain and drain line configuration. Only direct runoff from the house roof shall be permitted to be connected to the roof drain line.

### **3.3 DRIVEWAYS, SIDEWALKS, CURBS**

Entrance driveways should be located so as to minimize their visual impact. For a two car garage a driveway should measure a minimum of twenty (20) feet width and shall intersect the street preferably at a 90 degree angle. The driveway width shall be limited to the size and scale of the garage opening. The material of the driveway shall be concrete, or other suitable hard surface as seen by the DRC. Only one driveway entrance off of the street will be permitted for each homesite, except that when two (2) or more homesites are tied together to create a single homesite, and the two driveway arrangement disturbs less than a single entrance, the DRC may, at its sole discretion, approve up to, but not exceeding two (2) driveway entrances. A driveway can not exceed 10% grade.

All sidewalks are contiguous in the neighborhood. If a sidewalk is disturbed during construction it is the responsibility of the owner to replace all the damaged that has occurred back to its original state.

When curbs are cut for the driveway it is highly recommended that they are removed and replaced with a lay-down where the driveway is. and may be waived in unusual circumstances by the DRC.

### **3.4 COMBINING HOMESITES**

In cases where the Owner purchases two or more contiguous Homesites and wants to combine two or more Homesites into a single Homesite, the Owner must receive the consent of the DRC. Following approval by the DRC, any required regulatory approvals will be the responsibility of the Owner.

When reviewing a Residence on Combined Homesite, the DRC will carefully review the size to make sure the design results in an appropriate scale to the size of the Combined Homesite.

### **3.5 RETAINING WALLS**

The DRC shall approve all retaining walls. A civil or structural engineer must certify the structural stability of any retaining wall that exceeds four (4) feet in height. Wherever possible, retaining walls shall appear to be an extension of the residence and are subject to the same criteria relative to color, materials, and durability as the building itself.

Retaining walls or foundation walls shall not exceed six (6) feet in height from finished grade adjacent to the wall, to top of wall or finished floor. Where walls taller than six (6) feet would be required to solve a grading issue, terracing with multiple walls with planting terraces is required. Egress window wells shall be reviewed on a case by case basis.



Walls shall be shaped to blend with natural contours. Ends of walls shall not be abrupt, but are to be designed to create natural-looking transitions with the existing land landforms and vegetation.



### **3.6 GOLF COURSE IMPACT**

Homesites adjacent to the golf course have a risk of golf balls and play impacting the homesite or residence. The DRC strongly recommends that during the site planning process consideration be given to the possibility of errant golf balls striking structures, windows and other breakable surfaces of a dwelling. Evaluation of the proper siting, orientation, and setbacks should provide for maximum golf view with minimum impact from golf play. Netting, screens, excessive landscaping, fences, hedge walls, or large blank walls will not be permitted. Drainage from homesites shall not impact adjacent golf course uses.

Plant selection on homesites shall take into consideration the potential for seeding or other types of spreading habits of plants to avoid impacting adjacent golf course vegetation.

### **3.7 LANDSCAPE PLANT MATERIALS**

The goal of these planting landscape guidelines is to ensure that developed areas harmonize and blend with, rather than dominate the natural environment or significantly change its color or texture.



### **3.7.1 PLANTING**

All disturbed areas that are not paved or graveled shall be revegetated with appropriate native and adapted plant materials from the approved Ranch Club Plant List. These documents will assist Homeowners and their design team in creating landscape designs that support the overall community landscape objectives. Homeowners are encouraged to utilize plant materials that require little water.

Owners are encouraged to employ a Landscape Architect in the design and execution of landscape and irrigation plans at The Ranch Club.

Vegetation should be used to create spatial progression, landmarks and three-dimensional enclosure. Use plant materials to help complete, define and connect spaces, provide shade, texture or a focal point for outdoor spaces and create comfortable outdoor living areas.

Shrubs may be used as accents, informal low walls, and transition masses or screening. Shrubs can provide habitat for birds and butterflies and aid in the control of erosion. Minimum size for shrubs at planting shall be 12-18 inches with at least 50% of the shrubs planted of a size equivalent to one half the expected size at maturity.

Trees should be used sparingly and in a manner that references the natural condition. The maximum number of large canopied trees, (25 feet diameter and greater) is not to exceed one (1) tree per 2,000 square feet of landscape area. Trees can provide scale to building masses and shade. Minimum height for new coniferous trees shall be six (6) feet, with fifty percent of new trees measuring over eight (8) feet. Minimum caliper for new deciduous trees shall be one and a half inches, with fifty percent having a caliper size over two inches.



Perennials and Grasses (both native and ornamental) may be a major component of the landscape and ground cover as they are especially suited to the native grassland species. Invasive or noxious plants shall not be used.

Lawns of traditional mowed and irrigated turf grasses should be located in areas that are less than ten (10) percent slopes and adjacent to outdoor use areas such as patios and front porches to help develop the inside to outside living connection. The total lawn coverage shall be a maximum of 50% of the area not covered by structures or paving, 0-50% lawn is encouraged.

Mulch materials shall be used to conserve moisture and to aid in controlling weed growth. Organic mulches, such as bark, shredded cedar or soil pep shall compose a minimum of 60% of the planting bed areas. Stone mulches may be used for the remaining 40% by combining cobble sized stones with smaller gravels to create naturalized-looking drifts similar to the photos included in the Design Guidelines. Decomposed Granite and Granite Crusher Fines may be used for courtyard and walkway areas. Flagstones are encouraged for pathways.



When locating plants, maintain at least a two (2) foot clear, no vegetation zone around the base of all structures to allow adequate space for plant growth and facilitate future maintenance.

## SOIL AMENDMENT

It is recommended to have soil in the building envelope analyzed before the final selection of plant material and the development of site specific soil amendment prescriptions. At a minimum, planting soils shall be prepared according to the following:

- Native grassland planting and seeding areas planting shall be amended with two (2) inches of organic matter; compost or soil pep, incorporated to a minimum six (6) inch depth.
- Boulevard Plantings and non-native plantings and lawns shall amend six (6) inches of the subgrade same as above and provide six (6) inches of topsoil with one (1) inch of organic matter amendment thoroughly incorporated.
- Trees are to be planted with 25% organic matter amendment mixed with native backfill. The planting pits will be excavated to include a four-way trench for outward root growth.

These amendments will aid in alleviating the plant establishment challenges associated with heavy clay, low organic matter soils by improving drainage and fertility.



Planting designs should provide a balance of larger material to provide immediate impact with smaller material that will need time to mature before providing significant impact. Plants should be placed at spacing indicated in the Plant List to prevent overcrowding, disease and future maintenance issues.

All trees, shrubs and ground covers shall be maintained properly. All dead or dying plants shall be replaced in a timely manner by the homeowner and no later than sixty (60) days if notification is sent to the Homeowner by the DRC, weather permitting.

### **3.6.2 LANDSCAPE STYLES**

#### **LINKS COURSE**

Planting associated with the golf course will follow the low grass and shrubland style that defines the links style course. Turf grasses that are mowed regularly and the fescue grass rough areas may be repeated to blend with adjacent golf course areas. Native grasses will be used to augment the rough areas. Native grasses and low shrubs will be planted to enhance the native areas. Existing native plants will be transplanted from construction areas as is feasible. The water feature edges will be naturalized to accept transitional wetland species plantings. Deep ravines, drainage areas and areas needing screen plantings will be planted with the appropriate native and adapted vegetation to enhance plant diversity and visual qualities of the course. In limited situations, where screening is necessary and other options are not feasible, taller native shrubs and trees may be used. Where the course crosses roads the Links Style planting will be carried through. Refer to the Native Plant List.

#### **NATIVE GRASSLAND**

The Native Plant List includes species from the original Grassland habitat (FESC-AGSP) that was the major component of the pre-agricultural vegetation, as well as, plants selected from the Ponderosa Pine habitat and the Basin Wildrye habitat.

The grassland habitat is best adapted to the south and west facing slopes and ridges, the Ponderosa Pine habitat is best adapted to the deep ravines and north facing slopes and the Basin Wildrye habitat is adapted to the drainages, wetter areas and microclimates that conserve moisture. The Native Grassland Landscape Style will be planted in the transition areas outside of the golf course rough, in natural portions of Common Areas and in the transition areas from Private Gardens to adjacent Native Grassland Areas.

#### **NATIVE & ADAPTED**

The Native Plant List and the Boulevard Planting List combine to form the Plant List best suited for The Ranch Club homesites. The Native & Adapted Landscape Style can be applied to all landscape areas on residential sites.

#### **NATIVE PRIVATE GARDENS**

The Private Garden area, which is immediately adjacent to the private residences; lawn, patio and entry spaces, may include ornamental species not included on the Plant Lists provided. Careful attention to soil amendment and limited irrigation application will be key to success in these areas. The Private Garden Landscape Style must be designed to dissolve discretely into the adjacent areas creating gentle, natural transitions and eliminating sudden sharp contrasts in vegetation character to maintain the natural quality of The Ranch Club landscape.

### **3.6.3 TRANSITION ZONES**

On those homesites bordering the golf course or Common Areas, a ten (10) foot wide transition zone, planted with low growing vegetation, will continue the low open quality of the links style golf course and/or the native grasslands. In the transition area, no tree, plant, shrub, fence or other built element shall extend more than 3' above grade. Native plants that are well suited to this application are grasses, snowberry and rubber rabbitbrush, to list a few.



### **3.6.4 IRRIGATION**

The main objective is:

- To utilize irrigation systems that provide efficient water coverage and minimize water usage and runoff.

Landscaped areas will be irrigated. The use of drought tolerant plantings combined with minimal irrigation must be the basis of all landscape submittals. Group plant materials according to their water consumption needs.

All water application shall be through 'low-volume' spray or drip devices to minimize the rate of application to allow for maximum infiltration and to avoid run-off. Automatic systems shall utilize controllers that have moisture sensors. A moisture sensor will aid in determining adjustments to apply the correct amount of water based on the current moisture conditions. The design and installation of irrigation systems shall conform to local codes and requirements.

Water conservation, plant health and eliminating run-off from homesites onto adjacent land will result from carefully monitoring and adjusting irrigation application in combination with selection of drought tolerant plant materials and appropriate soil amendments.

### **3.7 SPAS / HOT TUBS & WATER FEATURES**

The goal is to design spas / hot tubs and water features which augment the outdoor spaces and extend the architectural character and style of the main building.

In general, spas/hot tubs and water features are to be designed to be integral parts of the outdoor rooms and visually blend with the landscape.

Above ground hot tubs must be screened with low landscape walls and/or plantings to minimize their visibility from adjacent Homesites, Common Areas, streets or the golf course. Mechanical equipment must be completely disguised with landscape, building feature and / or fencing.

Outdoor swimming pools are not permitted.









#### **SECTION 4**

### **ARCHITECTURAL GUIDELINES AND STANDARDS**

The following architectural guidelines and standards have been developed to achieve the environmental and aesthetic visions of The Ranch Club.

#### **4.1 DESIGN CHARACTER**

These guidelines are not intended to dictate architectural style of design within The Ranch Club, although all designs must be of a character appropriate to The Ranch Club. The DRC encourages architecture that uses natural materials in keeping with their physical nature and structural capabilities, and construction types that have shown permanence, durability, and architectural integrity. The building materials should include wood, stone, timber or the like, as approved by the DRC. Designs that deviate from this will not be permitted. The design character should create a residence that harmonizes, blends and complements, rather than dominates the natural environment of The Ranch Club, the site and the surrounding environments. Building forms, materials and colors must blend with and complement, not compete with the natural landscape. Emphasis on natural materials and muted colors is essential. A list of those materials specifically not allowed is included in the Guidelines. That list is not, however, exhaustive, and a material that is not included on the list may nonetheless not be allowed. All materials used will be at the final discretion of the DRC.

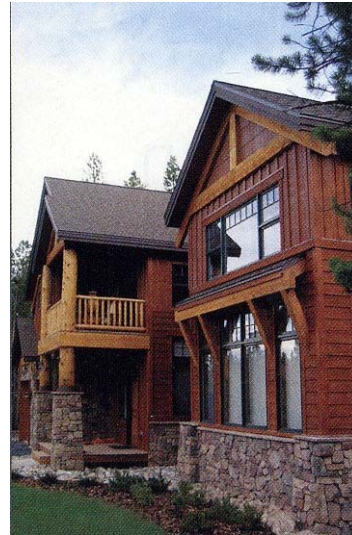
#### **4.2 EXTERIOR BUILDING MATERIALS & CONSTRUCTION TECHNIQUES**

Because of the emphasis on natural materials in The Ranch Club, finishes that complement and enhance the material's intrinsic qualities are encouraged. Natural earth and muted tone colors that complement and blend, rather than contrast with the surrounding natural features should be used. Colors should generally be recessive, particularly those used for roofs and walls. All colors and materials must be approved by the DRC. Some colors may require closer review by the DRC, in which case samples will be reviewed at the site. This requirement will be made at the sole discretion of the DRC. In most cases preliminary reviews can be made from manufacturers color chips.

The design character of a Residence should be considered uniformly from all sides, not just the front or rear elevations, and all elevations should maintain the same visual integrity and interest.

#### **4.2.1 BUILDING HEIGHTS**

Building Heights will be governed by the City of Missoula requirements.



#### **4.2.2 BUILDING SIZE**

Unless the DRC grants a specific variance, residences shall contain at least one thousand six hundred (1,600) square feet of main level heated living space, exclusive of garages, basements, patios, breezeways, storage rooms and other similar areas. Variances of the minimum square footage are at the discretion of the DRC. Any size residence may be approved by the DRC if, in its opinion, the design would not result in a residence which would be out of character with the other residences in The Ranch Club. The DRC will be reviewing submittals to ensure that all improvements and Residences are appropriately scaled to the Homesite and surrounding landscape.

Unless the DRC grants a specific variance, Cabin and town home / condominium sites shall have a minimum main level area, exclusive of open porches, or garages of one thousand two hundred (1,200) square feet.

### **4.2.3 ROOFS**

Because rooflines will form an important part of the visual environment of The Ranch Club, they must be carefully designed. Long expanses of continuous roofline will be discouraged. Open and exposed sites generally benefit from lower, flatter rooflines. A primary roof pitch between 7:12 to 12:12 will be required while secondary roof pitches shall not be less than a 4:12 pitch. Flat sod roofs may also be used as a secondary element. Hipped roofs will be allowed. Roofing materials must be of Class A, fire-retardant material and should be natural and recessive in color. Sod and naturally weathered or patinated standing seam copper as well as naturally rusted steel roofing (corten) may be used. All roofing materials must be approved by the DRC.

Skylights and solar panels, where approved by the DRC, must have a low profile above the roof plane no more than four (4)-inches and glazing must be flat rather than bowed or slanted. The frames of the skylights and solar panels must be the same color or a complimentary color as the roof.

Gutters, in general, shall be incorporated into the overall design of the house and shall not appear as if they are “tacked” on. Integral gutters with disguised downspouts and drains are encouraged at long overhangs. Exposed downspouts are to be located to avoid long return sections from the eave to the wall. Integrating downspouts with vertical elements, such as structural columns or trim, is encouraged.

### **4.2.4 EXTERIOR WALLS & FINISHES**

In general, the exterior wall design of all residences and improvements will incorporate the use of at least two (2) different complementary materials in order to create subtle textural changes.

All materials should express logical structural relationships. Exterior building projections of not less than two (2) feet are encouraged to break up the mass of the structure and add appeal to the architecture.

Changes in material should occur on the inside corners of masses or where there is a clear break in the plane of the surface and relate to a structural or architectural volume expression.

### **4.2.5 STONE WALLS**

We strongly encourage all Residences to incorporate a minimum of 5% of the exterior elevation in natural stone. Faux stone is strongly discouraged and may only be used with written approval of the DRC on a case-by-case basis. Continuous stone “skirts” along the entire elevation of a building are not acceptable and should be interrupted with other materials and structural projections.

### **4.2.6 FOUNDATIONS**

Exposed concrete foundation walls should be minimized and all exposed concrete walls are to be disguised with color, texture, faced with stone or blended into the natural grade of the site’s landscaping.





#### **4.2.7 DOORS & WINDOWS**

Doors and windows should not appear as openings cut into the side of a box, but rather as architectural features. All facades shall include an appropriate degree of doors, windows or openings in the wall. Attention to door and window placement and their relationship to one another and the overall context of the elevation is critical. Windows in combination are generally more appealing than a number of individual units repeated across a wall and repetition of consistent sizes and shapes are better than an unrelated assortment of windows.

Glass may be coated or tinted to control solar heat gain, but a reflective mirrored appearance will not be approved. All glass is to be consistent with in the residence.

The use of clad-wood windows is encouraged. High quality wood frames with exterior treatment in pre-finished vinyl or baked-on pre-finished metal are acceptable. Unfinished aluminum or shiny metal is not permitted.

#### **4.2.8 BUILDING PROJECTIONS & ACCESSORY STRUCTURES**

The use of architectural extensions such as porches, verandas, courtyards and patios for climate control and/or outdoor living and circulation is encouraged. The style and details of these architectural elements should be consistent with the architectural design of the main Residence.

Covered areas, such as pergolas, trellises and colonnades which extend the roofline and/or are freestanding are strongly encouraged and are to be a minimum of 6-feet wide.

Entry and/or side porches that provide shelter from the sun or rain and accentuate entry areas are to be a minimum of 6-feet in depth.

Vents and flues on sloping roofs are encouraged to be concealed within architectural structures (i.e., chimneys). Small vents or flues may be painted to match the roof color. Ganging of vent/flues is encouraged to minimize the number of projections. Roof mounted mechanical equipment is prohibited. Materials and colors shall be the same or similar to the main structure or roof.

The design of Accessory Structures must be consistent with the main Residence, integrated into the overall Residence composition and are to be visually related to it by walls, courtyards, or major landscape elements.



#### 4.2.9 COLOR

The color palette for Residences at the Ranch Club will use muted and recessive colors that will allow the natural colors to predominate, complementing rather than contrasting with the setting. A limited color palette has been selected:

**Earth tones:** earth tone colors, with their organic origins, should be used for the primary color composition.

**Recessive colors:** colors that recede, rather than advance, should be used. Generally, these are darker colors.

**Multi-hued:** Large areas of monochromatic surfaces tend to stand out in the sunshine. As a result, colors which have a “tonal complexity” shall be encouraged.

**Roofs:** Non-Reflective natural cedar shingles, medium to dark brown, dark green, gray or black colors are acceptable.

**Walls:** Natural earth tones. Large areas of monochromatic surfaces shall be minimized. Wall surfaces shall utilize texture and/or multi-layered application of color where possible to achieve subtle color variation on walls.

**Trim and accent colors:** Dark, rich earth tones that come from stains, woods and/or paint are acceptable.

In dealing with color the DRC will consider the native landscape character zone in which the Residence is located, the entire neighborhood and the individual Residence.

#### 4.2.9.1 APPROVED MATERIALS & MATERIALS NOT ALLOWED

The following lists will help in selecting exterior materials which may be utilized for residential construction within The Ranch Club. Recognizing the progressiveness of the building industry, the DRC does not intend for these lists to be all-inclusive but is open to consideration of new materials that can be used effectively while maintaining the aesthetic character of The Ranch Club. All exterior finish materials must be approved by the DRC during the Design Review Process.

##### ROOF SURFACES

All materials used for roofs must be Class A, fire-retardant rated

Cedar shingles & shakes

Slate

Steel, such as weathering Steel (rusted steel) including corrugated or standing seam

Copper (patina finished)

High quality asphalt composition shingles

Materials that are not allowed include:

Any Fire-retardant material not Class A,

Roll Roofing

Fiber Glass shingle

##### WALL SURFACES

Exterior wall materials may include:

Natural Wood siding which may be stained or painted

Timber

Wained edge clapboard

Board and Batten

Natural Stone

Wood Shingles or Shakes

Hand troweled Stucco

Brick

Lap Siding

Hardi Plank or the like

Materials that are not allowed include:

Aluminum, Vinyl or Plastic Siding

Simulated Brick or Low Grade sheeting / siding,

Low grade adhesive applied imitation stone , Low

grade adhesive applied venires, Simulated Brick

or Wood, including T-111

Most Faux Stone

#### **4.3 WALLS, FENCES, GATES & RAILINGS**

The main objectives are:

- To promote a continuous feeling of open space by discouraging fences, walls or hedges that define property lines.
- To design walls, fences, gates and railings that are related to and are natural extensions of the buildings
- To achieve privacy through considered siting, use of land forms, low walls and careful building and planting design, thereby minimizing the need for higher privacy walls, fences and railings.

Prior to the building of any wall, fence, gate or railing in The Ranch Club, the Owner shall provide to the DRC a design of the fence, including dimensions and a list of materials and colors, and thereafter obtain its approval. Side yard fences will be permitted with subsequent DRC review and approval. Side yard fences will be permitted with DRC review and approval. Side yard and perimeter fencing will be prohibited for lots bordering and/or immediately adjacent to the golf course. The DRC may, at its sole discretion, allow some partial fencing within the interior lot.

Site walls shall incorporate multiple offsets and vertical variation to follow the existing topography and avoid long straight lines in the landscape.

In general, fencing is strongly discouraged unless used as an architectural accent. Fences are prohibited between the front building line of the Residence and the street. When fencing is used as an architectural accent, unpainted wood is strongly encouraged. Wood should be a natural color, using a semi-transparent stain. No fence shall exceed four (4) feet in height. Vinyl clad cyclone, glass & plexiglass panels open grid metal fencing shall not be permitted.

The DRC will consider rear property line perimeter fencing on specific interior building lots which void golf course impacts. These lots

include: Lot #76 through #107, Lot #120, Lot #121 and Lot #125 through #130. A specific proposal and review process will be necessary for the DRC to approve such fencing. As a guide the following will apply:

The above guidelines shall be applicable.

- Perimeter fences along the property line shall be treated as a “transition zone” (Section 3.6.3) whereby los-growing native vegetation within 10’ of the fence will be required.
- Adjacent lot owners shall connect to and utilize a pre-existing property line perimeter fence, double row fences are prohibited. The pre-existing fence shall be the responsibility of the property owner who initially installed the fence and responsibility conveys if/when the property is sold.
- No fencing will be allowed in areas between residence and residential streets, boulevards, and common areas.



#### **4.4 GARAGES**

All homes shall include an enclosed garage that can accommodate a minimum of two cars. For guest parking, each Homesite shall contain a minimum of two additional guest parking spaces (the driveway), in addition to the required two enclosed spaces. Parking spaces shall have a minimum dimension of 8.5 feet by 20 feet.

Every effort should be made to minimize the impact of the garage and garage door(s). Garages should normally be set back and oriented away from the street where possible.

Detached garages or garages connecting with a breezeway may be allowed at the discretion of the DRC.

It is recommended that all garage doors stay within the architectural style of the residence in form, function and material. The Design Review Committee may request that a garage door be replaced with a different style or material if deemed necessary to maintain the architectural integrity of the complete structure.

Carports are not allowed.

#### **4.5 SERVICE YARD**

All above-ground mechanical equipment and other outdoor maintenance and service facilities must be completely screened and or disguised from adjacent homesites, streets, or common spaces by walls, gates, or landscaping.

All garbage, trash and or recycle containers must be kept in the garage.

#### **4.6 DOG RUNS & ANIMAL PENS**

Dog runs and animal pens must be enclosed to protect pets from predators. The design of the enclosure must go through the same review process as fences.

#### **4.7 EXTERIOR LIGHTING**

The main objectives are:

- To maintain minimal visual impact.
- To preserve the nighttime dark sky by minimizing the amount of exterior lighting.
- To utilize light fixtures which complement the architecture and enhance the landscape.

Exterior building lighting, either attached to or as part of the building, shall be the minimum needed to provide for general illumination, safety and security of entries, patios, outdoor spaces and associated landscape structures.

Exterior site lighting must be directed downward onto vegetation or prominent site features. It may not be used to light walls or building elements. Exterior site lighting of plant materials and prominent site features shall be achieved with hidden light sources and/or down lights from above, and shall not be used to light the building. Building mounted lighting must be directed away from adjacent Homesites, streets and Common Areas. All exterior site lighting must provide for significant shielding to ensure that light sources and lamps are not visible from other Homesites, streets or off-site.

To preserve the dark sky, uplighting is prohibited.

Only low voltage lighting, with a maximum of 25 watts, may be used for all exterior site lighting applications. Line voltage may be used for lights on the building but must be lamped with 75 watt maximum bulbs. Lamp posts are not allowed.

Lights on motion detectors for the purpose of security illumination are prohibited.



#### **4.8 ADDRESS IDENTIFICATION**

Address Identification must be subtle in design and complement the materials and colors as the Residence and reflect its design character.

#### **4.9 FLAGPOLES, ANTENNAE & SATELLITE DISHES**

Antennae and satellite dishes shall not exceed 36 – inches in diameter or length. Freestanding flagpoles are prohibited.











## **SECTION 5**

# **CONSTRUCTION GUIDELINES**

Prior to the start of construction, the owner/contractor shall meet with a representative of the DRC to review the final plans, construction process and regulation. The builder shall coordinate scheduling, parking and construction staging.

In order to assure that the construction process and Design And Construction Guidelines are adhered to, the following Construction Regulations shall be made a part of the construction contract documents for each Residence or other improvement. All builders and owners shall be bound by these Regulations and any violations by a builder or his subcontractors or suppliers or vendors shall be deemed to be a violation by the Owner of the Homesite.



## **5.1 OWNER'S BUILDING & LANDSCAPE DEPOSIT**

To assure compliance with these Regulations, each Owner, before beginning any construction, shall post a cash bond or deposit in the amount of \$1,500 with The Ranch Club Homeowners Association, Inc. The Cash bond or deposit will not be subject to interest while being held by the Association. Should it become necessary for either the DRC or the Association to remedy any violation of the Regulations, the cost of such remedy may be charged against the deposit. However, the obligation of the Owner and/or builder to repair, correct, complete or otherwise comply with these construction regulations shall not be limited to the amount of such deposit.

The Owner's deposit, less expenses to cure violations, will be returned to the Owner upon receipt of the Notice of Completion by the Owner and upon satisfactory completion of all requirements of the Final Construction Review.

## **5.2 ACCESS TO CONSTRUCTION AREA**

No storage of any materials will be allowed on the public roadways, or on neighboring homesites without written approval by the Owners and Declarant. If neighboring homesites are used for construction storage and/or access, then at the completion of the project the homesite(s) must be revegetated prior to having the construction/landscape deposit returned to the Owner.

All construction sites must be maintained in accordance with all applicable City of Missoula Municipal Codes and Rules and/or other Governmental regulations. Contractors shall contact the City of Missoula Public Works Department for current requirements.

## **5.3 DAILY OPERATION**

Daily working hours for each construction site shall be from 6:00 am until 7:00 pm, Monday through Saturday June through August, September through May 7:00am to 7:00pm. No interior construction causing noise audible from outside the residence shall be allowed on Sundays or before 7:00 am or after 7:00 pm.

## **5.4 CONSTRUCTION TRAILERS**

Builders wishing to locate a construction trailer on a construction site with The Ranch Club must approve the location with the DRC prior to the placement of the structure on site. All construction trailers must be removed upon completion of construction.

## **5.5 SANITARY FACILITIES**

Each builder shall be responsible for providing and maintaining adequate sanitary facilities for its construction workers in accordance with OSHA regulations. Facilities must be maintained weekly. Sanitary facilities must be provided and maintained within the homesite boundary lines.

## **5.6 DEBRIS & TRASH REMOVAL**

Builders shall clean up all trash and debris on the exterior of the construction site at the end of each day. Trash and debris shall be removed from each construction site frequently and not be permitted to accumulate. Lightweight material, packaging, and other items shall be covered or weighted down to prevent being blown off the construction site. In no case may debris and trash accumulate above the top of a dumpster. The DRC reserves the right to apply fines to builders and Owners who fail to control debris from blowing or being disposed on other homesites, common areas or Ranch Club property. Builders are prohibited from dumping, burying or burning trash anywhere on The Ranch Club development. During the construction period, each construction site must be kept neat and clean to prevent it from becoming a public eyesore or affecting other homesites or any open space. Dumpsters or other approved waste receptacles are required and must be located within the Homesite boundary lines, unless given prior permission by the DRC.

Dirt, mud or debris resulting from activity on each construction site must be removed daily from roads, open spaces, driveways, sidewalks or other portions of The Ranch Club. Any clean-up costs incurred by the DRC, or the Association in enforcing these requirements, will be billed to the Owner.

## **5.7 WASHOUT & CLEANING**

Washout of concrete trucks or the washout and cleaning of any equipment by masons, plasterers, painters, dry-wallers, etc. must be contained within the boundary lines of each homesite. Washout or cleaning residue shall not be allowed to flow out of the boundary lines. Fines will be imposed against a builder and/or its builder's bond for any violations and the builder will also be responsible for restoring any damaged area to its natural state.

## **5.8 EROSION CONTROL**

Erosion control must be dealt with in accordance with applicable codes. Temporary silt fencing shall be installed to intercept all sediment from run-off. Erosion shall not enter or interfere with the drainage system in any manner, including but not limited to plugging it up with dirt or debris. Silt or sediment will not be tolerated on the Golf Course.

## **5.9 CONSTRUCTION SCHEDULE**

Unless otherwise approved in writing by the DRC, each Owner shall ensure that its construction activity commences within six (6) months after the DRC's approval of the Final Plan Submittal. Building construction must be completed within eighteen (18) months of its commencement. Landscaping must be completed, weather permitting due to the winter season, within one hundred eighty (180) days after building construction is completed.

## **5.10 EXCAVATION MATERIALS**

Excess excavation materials must be hauled away from The Ranch Club and disposed of properly. Dumping of excess excavation materials within The Ranch Club is prohibited, unless approved in writing by the DRC for clean fill in approved locations. A fee may be charged.

## **5.11 VEHICLES & PARKING AREAS**

Construction crews shall not park on, or otherwise use, other homesites or any open space. All vehicles shall be parked so that no traffic inhibition on adjacent streets occurs or no damage to vegetation along the roadside happens.

## **5.12 RESTORATION OR REPAIRS OF OTHER PROPERTY DAMAGE**

Damage and scarring to property other than the Homesite, including, but not limited to, open space, other homesites, roads, driveways, and/or other improvements, resulting from construction operations will not be permitted. If any such damage occurs, it must be repaired and/or restored promptly at the expense of the builder. In the event of default by the builder in meeting these obligations, fines will be imposed against a builder and or the Owner's deposit.

### **5.13 CONSTRUCTION & REAL ESTATE SIGNS**

Temporary construction signage will be limited to one sign board per homesite. This sign shall not exceed 32 square feet in size. All proposed signs must be approved by the DRC prior to installation.

Contractor and real estate signs must be neat in appearance and maintained at all times. The DRC or the Association may remove signs if deemed necessary.

### **5.14 PETS**

No unleashed pets are allowed on a construction site at any time. Nuisance pets shall be removed immediately from the site.

### **5.15 DUST**

The builder shall be responsible for controlling dust.

### **5.16 NOISE**

Every effort to keep noise at a minimum shall be taken. Radios/Music will not be allowed if they can be heard at any point outside of the property line.

### **5.17 SMOKING**

Smoking is permitted only within homesite boundary and at least one 10-pound ABC-rated dry chemical fire extinguisher is present and available in a conspicuous place on the construction site at all times per OSHA regulations.

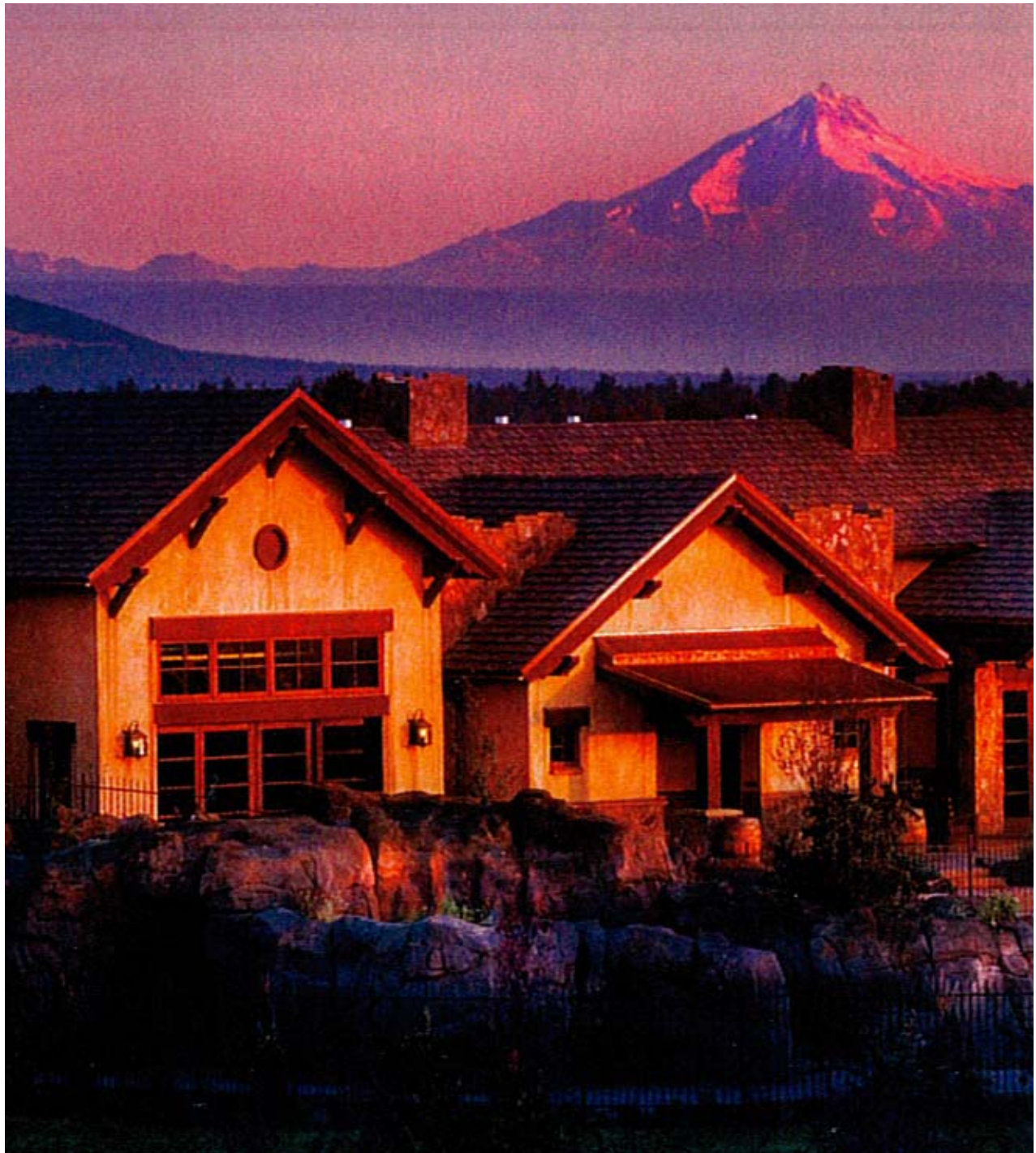
### **5.18 CONSTRUCTION PERSONNEL CONDUCT**

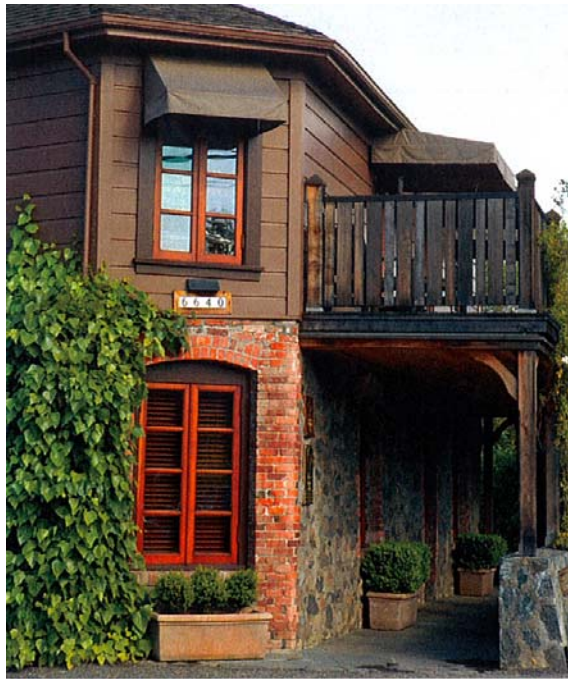
The contractor is responsible for all of employees and sub-contractors. No loud, unmannerly behavior or public nuisance shall be permitted.

### **5.19 BURNING**

No burning of any kind is allowed.







## **SECTION 6**

# **VARIANCE**

It is the intent of the drafters of these Design And Construction Guidelines to create a flexible system for the protection of the homesite Owners in The Ranch Club. It is anticipated that there may be situations arising in which the characteristics of a homesite, the existence of alternatives, or the strict technical application of a rule or regulation may demonstrate a need to vary the restrictions. In those types of circumstances, the DRC may allow alternatives to be submitted and approved in accordance with the process set forth herein for a variance. If the DRC determines that a variance is appropriate given the criteria set forth herein, the DRC may grant a variance from any rule or regulation.

## **6.1 VARIANCE PROCEDURE & STANDARD FOR GRANTING VARIANCE**

The procedure for granting a variance shall be the same as for a Conceptual Plan Submittal and approval as set for in these Guidelines. The request for the variance may be made at the time of the Conceptual Plan Submittal or subsequently following a conditional approval or denial. A variance may be granted only when the applicant has demonstrated that all of the following conditions are present:

- The restriction or requirement for which a variance is requested causes or will cause undue hardship to the party requesting the variance;
- The variance is not in conflict with the general community interest of The Ranch Club;
- The granting of the variance will not be materially detrimental to the neighboring property Owners; and,
- The granting of the variance is not contrary to the general goals and policies of these Guidelines and/or the Declaration of Covenants, Conditions and Restrictions.

The granting of a variance to an Owner is not to be construed as a waiver of any restriction or requirement of these Guidelines for other Owners.









## **SECTION 7**

# **ENFORCEMENT PROCEDURE**

The Design Review Committee, Association, or Declarant may enforce these Design And Construction Guidelines as provided herein or in the Covenants, Conditions and Restrictions and Bylaws. If an Owner or any owner Representative violates any term or condition set forth herein, the DRC shall have the following rights and remedies, in addition to any other or additional rights provided for by law or under the Declaration

### **7.1 RIGHT TO CURE**

The DRC may, at its sole discretion, enter upon the construction site and cure such violation at the Owner's cost and expense. If the DRC cures any such violation, the Owner's deposit shall be charged for the cost the Association incurs, plus a reasonable administrative fee. In the event that the Owner's deposit does not cover the cost incurred by the Association, the Owner will be invoiced for any difference and will be required to pay within ten (10) days of receiving the invoice.

### **7.2 RIGHT TO FINE**

The DRC reserves the right to impose a fine for any violation of the Design And Construction Guidelines.

### **7.3 RIGHT TO SUE FOR INJUNCTIVE RELIEF AND/OR DAMAGES**

The Association may sue the Owner to enjoin such violation and may sue the Owner for all damages, losses, costs and expenses, including, without limitation, reasonable attorney's fees and disbursements incurred by the DRC or Association as a result of the violation.

### **7.4 LIEN**

The Association shall have a lien against the site and all of the Owner's other properties within The Ranch Club to secure payment of: any fee, charge, fine or other amount due from the Owner to the DRC under these regulations or for any other violation or compliance expense incurred to enforce the Design And Construction Guidelines; interest on any unpaid amounts at a rate of twelve percent (12%) per annum from the date due until paid; and all costs and expenses of collecting any unpaid amounts, including, without limitation, reasonable attorney's fees and disbursements.

### **7.5 OTHER RIGHTS & REMEDIES**

The Association shall have all other rights and remedies available to it at law or in equity. All rights and remedies shall be cumulative and the exercise of one right or remedy shall not preclude the exercise of any other.

### **7.6 CONTESTING OF FINES**

An Owner may contest any fine imposed by the DRC in accordance with the following terms and conditions:

Within ten (10) days after receiving written notice from the DRC that it is imposing a fine, the Owner may file a written protest. If the owner fails to file a written protest with the DRC within the ten (10) day period, the Owner shall have no further right to contest the fine under this Section. If the Owner files a written protest within the ten (10) day period, the DRC shall review such protest and within forty five (45) days deliver a written decision to the Owner. If the DRC finds in favor of the Owner the notice of fine will be revoked. Otherwise the fine will be due by the Owner within ten (10) days from receipt of the written decision.







## **SECTION 8**

# **PROCEDURE FOR AMENDING DESIGN AND CONSTRUCTION GUIDELINES**



### **8.1 AMENDMENT OF DESIGN AND CONSTRUCTION GUIDELINES**

The Declarant may, from time to time and at its sole discretion, amend and repeal by unanimous vote rules and regulations to be incorporated into the Design And Construction Guidelines which, among other things interpret, supplement, implement or entirely revise the provisions of the Guidelines. All such rules, regulations, or amendments, as may from time to time be adopted, amended, or repealed, shall be appended to and made a part of the Design And Construction Guidelines, and shall have the same force and effect as if they were set forth in, and were part of, the applicable Guidelines. Each Owner is responsible for obtaining from the DRC a copy of the most recently revised Design And Construction Guidelines and should inquire if any substantive amendments to the Design And Construction Guidelines have been adopted since the most recent printing of the Design And Construction Guidelines.

### **8.2 INVALIDITY OF PROVISIONS, SEVERABILITY**

If any portion, interpretation or application of these Design And Construction Guidelines is contended to be, or is held invalid, the Parties hereby expressly warrant, covenant and agree that all such interpretations, applications and/or portions of these Design And Construction Guidelines which are consistent with the law and/or a reasonable extension thereof, shall, notwithstanding, continue in full legal force and effect and control any action taken hereunder or claimed to be available hereunder. Any invalid provision shall be deemed not a part of these Design And Construction Guidelines, stricken and of no force or effect.

### **8.3 WAIVER**

No alleged waiver of any provision of these Design And Construction Guidelines shall be valid unless reduced to writing and signed by the Party claimed to have waived the provision. No delay or failure by either Party to exercise any right hereunder, and no partial or single exercise of any such right, shall constitute an alleged waiver of that or any other right, unless such waiver is expressly set forth in writing and signed by all Parties hereto. This non-waiver provision may not be waived by any claimed, or actual, actions or inactions of the Parties unless agreed to in writing signed by the Parties. Waiver of any actual or alleged breach of any provision shall not be a waiver of any succeeding breach of that provision or any other provision. No course of conduct shall be utilized to establish an alleged waiver or that a Party waived their right to rely on the non-waiver provisions of these Design And Construction Guidelines. No Party may rely upon any unwritten declarations or course of conduct to claim, prove or establish that they were induced to believe that the other party intended and/or did in fact waive a provision of these Design And Construction Guidelines. Neither the failure nor any delay by any Party in exercising any right, power, or privilege under these Design And Construction Guidelines shall operate as a waiver of such right, power, or privilege, and no single or partial exercise of such right, power, or privilege will preclude any other or further exercise of such power, right or privilege. The actual or alleged waiver of any term or condition of these Design And Construction Guidelines or waiver of any breach of these Design And Construction Guidelines shall not be deemed or construed as a waiver of any other provision of these Design And Construction Guidelines or a waiver of any subsequent breach hereof. No actual or alleged failure by any Party to enforce any provision of these Design And Construction Guidelines shall be deemed, construed or evidence of a waiver of the right to enforce that or any other provision of these Design And Construction Guidelines thereafter.







## **APPENDIX A**

# **MASTER PLAN**







**APPENDIX B**

**DESIGN SAMPLES**

**HOUSE EXTERIORS**

**LANDSCAPE**

**FENCES**



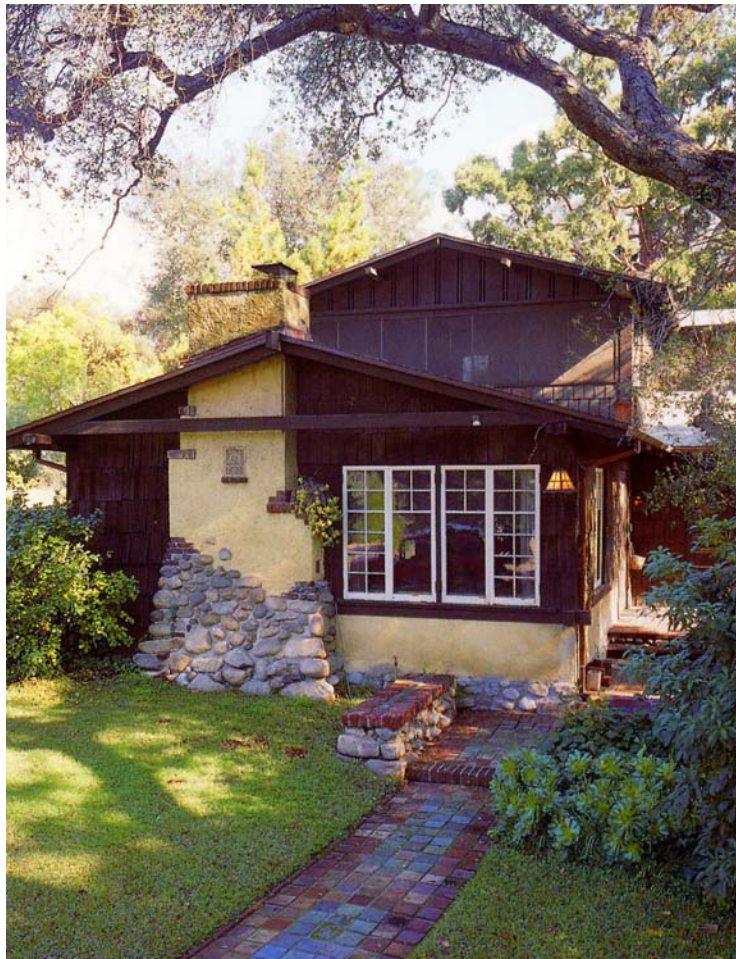
























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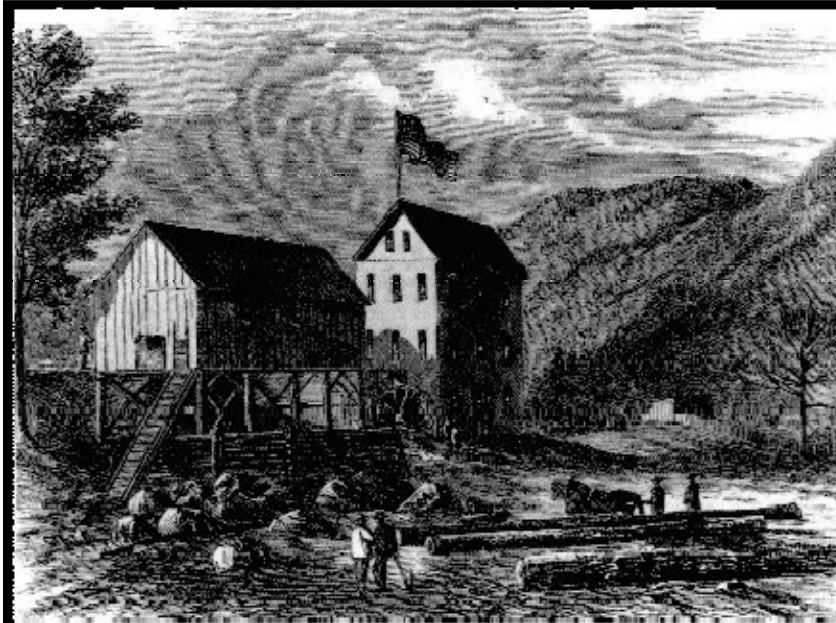












**The "Missoula Mills", ca 1866."  
Near the mouth of Rattlesnake Creek  
at what now is the north end of  
the Higgins Avenue Bridge**



**APPENDIX C**

**ORION ENGINEERING REPORTS**

**GEOTECHNICAL DISCLOSURE STATEMENT**

**HILLSIDE DEVELOPMENT FEASIBILITY REPORT**



March 12, 2002

Jonathan L. Gass, P.E.  
WGM Group  
3021 Palmer  
Missoula, MT 59808

RE: **Hillside Development Feasibility Report**  
Phantom Hills Subdivision  
Missoula, Montana

Dear Mr. Gass,

This report is written to address the "Hillside Requirements" referenced in the Missoula City Subdivision Requirements, Article 5, and Adopted March 22, 1999.

1. **Site Description:** The subject property consists of 300 + acres of land north of Mullan Road in Missoula, Montana and is located in a portion of Section 9 and 10, T13N, R20W in Missoula County, Montana.
2. **Site Inspection:** The site was visually inspected on February 8, 2002. The general topography was gently rolling with numerous natural drainages. Vegetation consisted primarily of grassland with few mature trees. Exposed materials revealed a Clay (CL) material with some gravel and cobbles. There was no evidence of significant earthwork or prior construction.
3. **Slope Conditions:** The Slope Category Map as prepared by WGM Group indicate existing slope conditions. The steepest slopes lie upon the western portion of the development, and were measured at approximately 20 to 25%. It is our understanding that the development plan includes re-grading to provide maximum slopes within developed areas of 15% and non-structural slopes no steeper than existing. Re-grading will consist of both cut and fill sections. The existing slope conditions exhibited no signs of either surficial creep or deep-seated slope failure. Based on estimated shear strength properties of subgrade soils, we feel the development plan will result in stable soil conditions, subject to proper construction methods, design recommendations, and water drainage. Additional provisions are required to control erosion.
4. **Existing Soil Conditions:** Please note the attached figures from the USDA-NRCS Soil Survey of Missoula County data. The soil units mapped within the proposed development include the Grassvalley deposits. The deposits primarily consist of Clay (CL) to Silty Clay (CL-ML) to a depth of 60-inches below existing ground surface elevation. The deposit is Glaciolacustrine (glacial lake deposit) and is typical for the area. The USDA mapping data is consistent with our experience in the area. We expect Clay (CL) to be the dominant subgrade material for roads, structures, and embankments

within the development. It is our experience that the Clay is relatively lean in this area, and possibly overconsolidated (pre-loaded). In summary, the subgrade conditions are suitable for the proposed development subject to construction requirements and proper drainage.

5. **Geology and Hydrogeology:** As noted above, the geologic deposition is Glaciolacustrine resulting from low-energy and fine-grained deposits during the many cycles of Glacial Lake Missoula filling. Glacial Lake Missoula emptied and filled approximately 36-times during the last ice age approximately 15,000 years ago. The groundwater hydrogeology can be complex within these soil units since the deposits are usually deep and relatively impermeable. Groundwater depths in these deposits can be variable, perched, and sometimes confined. The primary hydrogeologic concern related to the proposed development includes management of surface water precipitation within the "active" zone of the Clay subgrade. The active zone is defined as the depth at which moisture content fluctuates enough to affect the physical properties of the soil, and is usually confined to the upper two feet of soil in this area. It is also possible that near-surface water bearing lenses of sand or gravel will be encountered during excavation. Such encounters should be brought to the attention of the engineer and may be mitigated as encountered. In general, surface water will need to be overland or surface-drained. Dry well sumps will probably be ineffective. Therefore, proper site grading will be critical to storm water management.
6. **Conclusions and Recommendations for Grading Procedures:** The problems we have encountered with construction in similar soils relate to settlement caused by improper construction methods. The subgrade conditions are particularly reactive to moisture. Proper construction timing, attention to precipitation, and testing is critical to proper grading. Grading should proceed during dry periods. If exposed materials become wet, it will need to be dried and recompacted, or subexcavated to prevent settlement problems. All organic material should be removed prior to placement of fill. If native Clay is to be used as fill material, extreme care should be taken to ensure that it is placed at the proper moisture content and that each lift is compacted as directed by the engineer. This report does not provide specific recommendations for foundations; however, it is recommended at this time that no Clay fill be present under foundation elements. Water drainage provisions around homes will be an important design consideration. In addition, utility lines should have proper seals to prevent water migration within utility trenches into homes. In conclusion, the proposed grading procedures should not adversely affect the proposed development if constructed properly.
7. **Plans or Design for Any Proposed Corrective Measures:** There are no areas of instability that require corrective measures prior to construction. Future geotechnical designs to be submitted will include foundation recommendations and a pavement section thickness design. Subsurface investigation and laboratory testing is required for these designs.
8. **Opinions and Recommendations Covering the Adequacy of Sites to be Developed:** The sites are adequate and suitable for development subject to the recommendations previously discussed. Following subsurface investigation, we may recommend specific foundation and/or earthwork guidelines for specific structures or areas. As noted above, the primary development concern is related to quality control during earthwork (moisture control and compaction).



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9. **Instability/Water Encountered during Construction:** If excessively moist conditions, water bearing sand/gravel lenses, buried construction debris, and/or unanticipated materials are encountered, the geotechnical engineer should be consulted. Typical "field-designed" systems may include cut-off drains, perimeter drains and sumps, sheet drains, and specification of overexcavation and fill.
10. **Storm Water Management Plan:** It is our understanding that dikes may be constructed as part of storm water management. We anticipate providing subsurface investigation and construction guidelines for the dikes. Storm water and snow melt will probably need to be managed through overland draining only. The final grading plan should provide adequate drainage paths away from roads and structures. It is our opinion that perimeter or "French" drains should be used only when deemed necessary. The foundation soils would best be protected against storm water influence, by backfilling foundation trenches with Clay and providing positive drainage away from stem walls. Utility lines should be sealed at specific intervals to prevent migration of storm water within trenches.

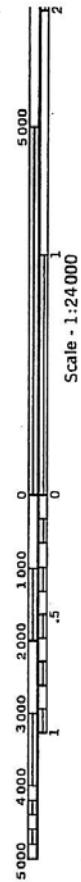
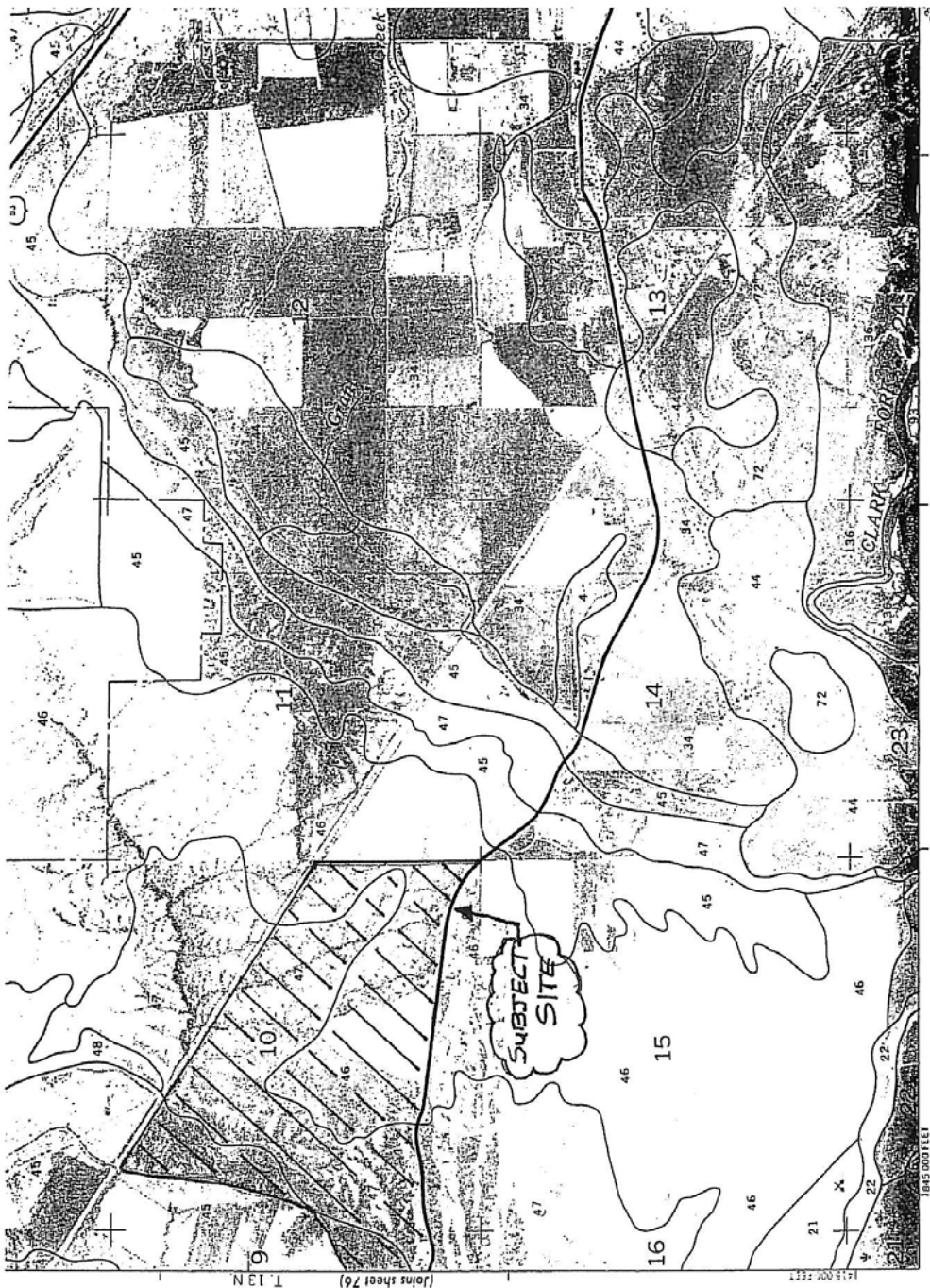
If you have any questions regarding this report, please call at 543-3100. We value the opportunity to be of service to you.

Sincerely,  
Orion Engineering, Inc.



Michael A. Dworsky, P.E.

Attached: USDA - NRCS Soil Survey of Missoula County Data  
Cc: John Crowley, Washington Development Corp.



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Missoula County Vickie M Zaleson

August 1, 2002

John Crowley  
Washington Development Corp.  
PO box 16630  
Missoula, MT 59808

RE: **Geotechnical Disclosure Statement**  
Phantom Hills Building Lots  
Missoula, Montana

Dear Mr. Crowley,

This report is based on our limited geotechnical investigation performed in July of 2002 (See report dated September 10, 2002).

#### RECOMMENDATIONS:

Due to the potential variability of subsurface conditions and the range of possible scenarios regarding foundation placement, **it is recommended that a geotechnical investigation be performed for each individual building lot.** We have performed numerous laboratory tests and engineering calculations for the anticipated soil conditions. Preliminary evaluation and laboratory testing indicates that strip/spread footings with some degree of over-excavation and fill will mitigate geotechnical concerns. Other foundation systems including piers and mats may be considered. We recommend that the geotechnical investigation consist of at least two soil borings at each building lot, to a minimum depth of 10-feet below bottom of proposed footing elevation. Geotechnical recommendations should include considerations for exterior strip/spread footings, interior column footings, interior/exterior slab-on-grade concrete, construction considerations related to working with Clay, water drainage, and protection of foundation soils from surface water influence. Perimeter drains are highly recommended subject to findings of individual geotechnical investigations.

#### SUBSURFACE CONDITIONS:

Three distinct soil units are expected to be present under building lots:

1. Compacted Silty Clay Fill: This material was generated locally from cuts associated with the mass-grading plan for the development. The material consists of units 2 and 3 below. The expected thickness will vary from zero to approximately 14-feet.

2. Dry/Stiff Silty Clay: This material is derived from a combination of colluvial/alluvial gully fill from Quaternary Glacial Lake Missoula sediments, and from surface desiccation of lacustrine

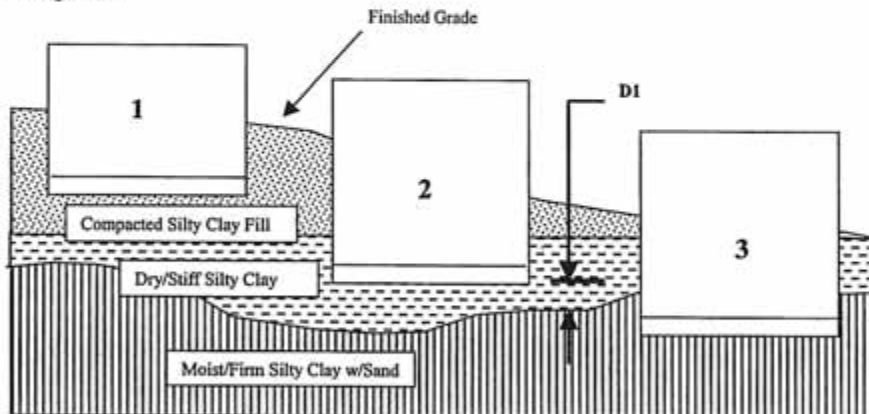


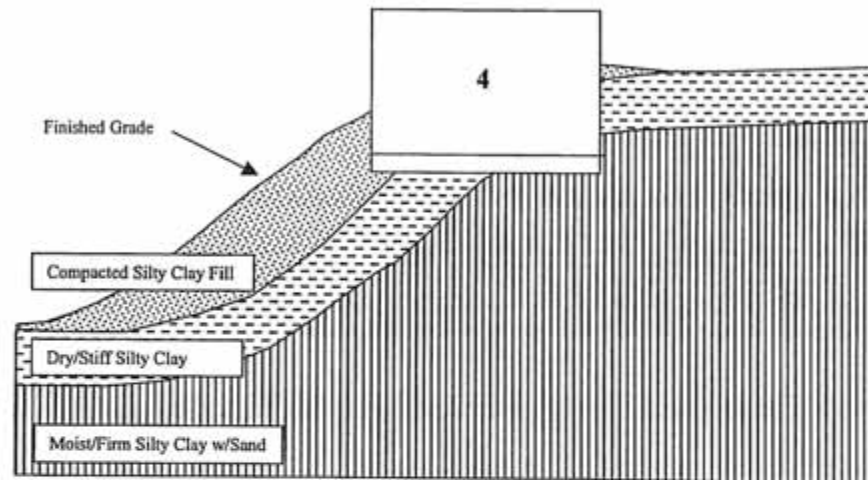
deposits. The material is relatively featureless and mostly absent of varved laminations. The thickness of this stratum is variable but is expected to be 5 to 10-feet, and may be less if building lots lie within an area cut during development.

**3. Moist/Firm Silty Clay with Sand:** This material derives from Quaternary Glacial Lake Missoula lacustrine deposits. These sediments extend to a depth beyond 30-feet. These sediments consist of a relatively uniform sequence of laminated, varved, Silty Clays with varying amounts (trace to 15%) of thinly interbedded sand lenses and less common sand beds. Sand lenses are typically 1/4" to 1" thick and consist of very fine-grained to medium-grained, clean, sand. They have poor lateral continuity and occur unpredictably within the Silty Clay sequence. The sand lenses can contribute to moisture introduction within this soil unit, however, due to the poor lateral continuity, moisture content fluctuation between building lots is expected. In general and based on our investigation, moisture content increases with depth. No static groundwater was encountered.

#### LIKELY SCENARIOS:

Although other scenarios are possible, the following are most likely based on our limited investigation:





Scenario 1 - Bottom of foundation within Compacted Clay Fill: This scenario will likely result in little to no amount of required foundation soil improvement.

Scenario 2 - Bottom of foundation within Dry/Stiff Clay: This scenario will likely result in a nominal amount of required foundation soil improvement depending on the results of the geotechnical investigation, and specifically, the thickness of stiff material between foundations and the underlying firm material (D1).

Scenario 3 - Bottom of foundation within Moist/Firm Silty Clay w/Sand: This scenario will likely result in more aggressive soil improvement requirements due to the potentially low bearing capacity of the material.

Scenario 4 - Bottom of foundation within variable soil conditions: This scenario will require evaluation of differential settlement potential, and will likely require some form of soil improvement applied to entire footprint of the structure. This scenario is most likely for sloping lots and homes with daylight basements.

Presence of sand: Although we not encounter significant thicknesses of sand during our limited investigation, beds of sand were encountered during the mass grading. Beds of sand may be encountered within the Moist/Firm Silty Clay w/Sand stratum. The primary concern of sand pockets is settlement. Variables affecting evaluation is the depth to the sand pocket from footing bottoms, the thickness of the sand bed, and relative density. These variables can be determined during the investigation. Sand beds could affect and influence the evaluation for scenarios 1 to 4 above.



Geotechnical Consultants • Drilling Services

2614 Murphy Street, Missoula MT 59808

406-543-3100 • fax 406-721-6629 • orioneng.net

#### CONCLUSIONS:

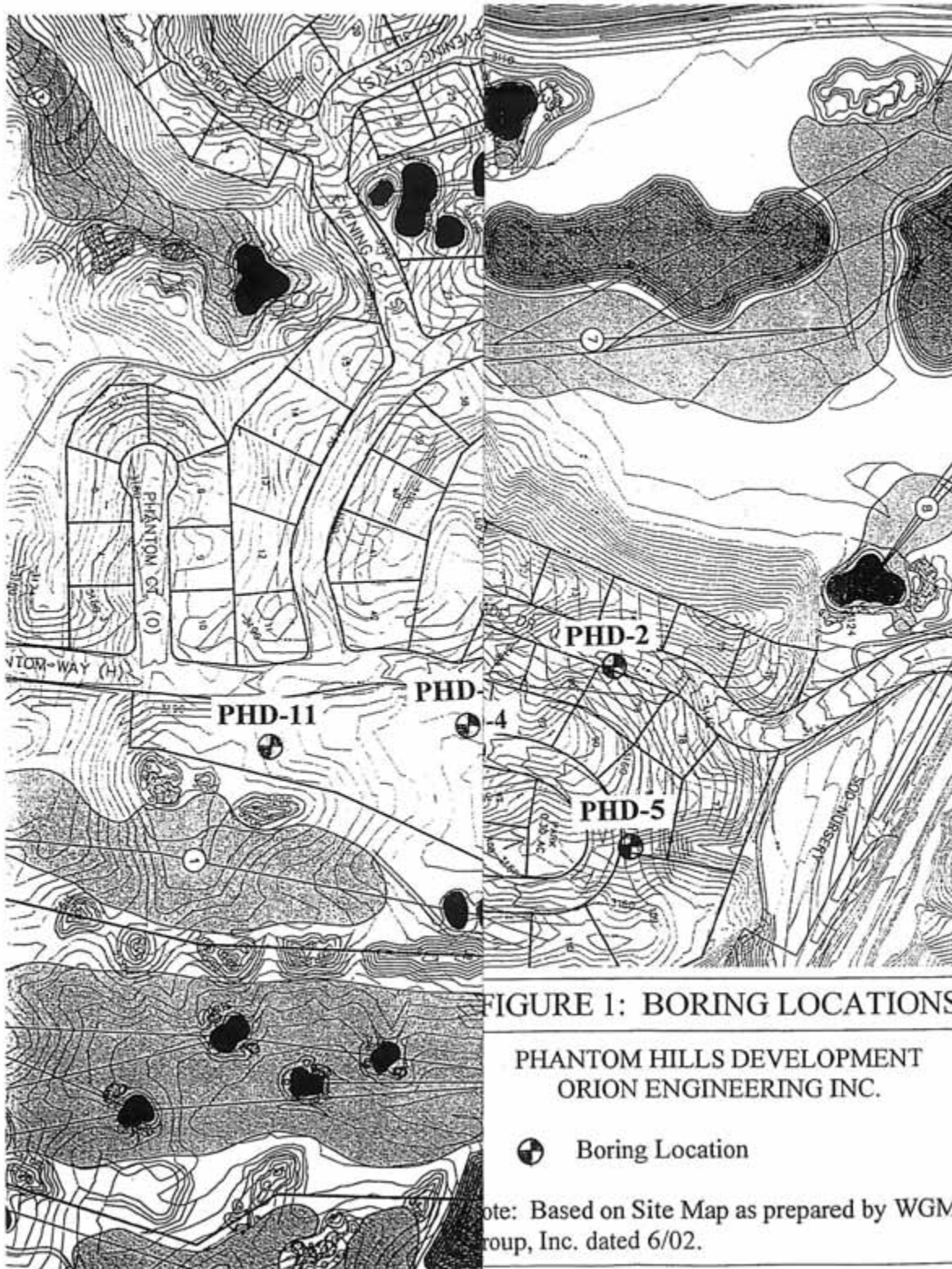
The primary geotechnical concern is based on foundation placement within, or near the Moist/Firm Silty Clay and/or pockets of sand. The concern is related to low bearing capacity and both total, and differential settlement potential. Due to the variability of subsurface conditions and since specific building plans are unknown at this time, it is not possible to provide specific foundation recommendations. In order to provide specific foundation recommendations for a home-site, a geotechnical investigation is required based on the building plan.

We have performed numerous laboratory tests and engineering calculations for the anticipated soil conditions, and preliminary findings indicate that strip/spread footings with some degree of over-excavation and fill will mitigate geotechnical concerns. Based on the site-specific subsurface findings, other foundation systems including piers and mats may be considered.

Please call me at 543-3100 if you have any questions.

Sincerely,  
Orion Engineering, Inc.

  
Michael A. Dworsky, P.E.





# SOIL BORING LOG

Project: Phantom Hills	BORING NO: PHD-1	
Location: Missoula, Montana	Sheet 1 of 2	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):
Project Manager: Michael Dworsky	Date Logged: 6/20/02	Overburden (Ft):
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	RQD %				
5		SS	2			Damp to mostly moist, firm, brown to reddish brown Clay, featureless, no laminations.	CL		Due to the lack of bedding, the clay from 0' to 6.5' appears to be a localized valley fill deposit, derived from surrounding in-place Glacial Lake Missoula sediments.
		SS	4						
		SS	6						
		ST	2						
		SS	3						
		SS	5						
		SS	2						
		SS	4						
		SS	6						
		SS	2						
10		SS	7			Moist, medium dense to loose, tannish brown, locally clayey Sand with 40% interbedded moist, firm brown Clay at 7.0'-7.3' and 7.8'-8.5'.	SC		Material from 6.5' to 27.5' is mostly well-laminated, flat lying, in-place Glacial Lake Missoula sediments.
		SS	4						
		SS	4						
		SS	4						
		SS	2						
		ST	3						
		SS	2						
		SS	3						
		SS	2						
		SS	4						
15		SS	1			Moist to wet, firm to soft, brown to reddish brown, Clay, locally silty, mostly laminations, with 15-20% thinly interbedded moist to wet, medium dense to loose, tannish brown Sand. Larger sand beds at 10'-10.2', 11.5'-11.7', 15'-15.5', and 16.5'-17.0'. Wet zones at 8.8'-9.8', locally 10.2'-13', 13'-13.5', 14.5'-15' and locally 15.5'-17'.	CL		Shelby tube samples collected from 2.0' to 4.0' and from 8.5' to 10.5'.
		SS	3						
		SS	4						
		SS	1						
		SS	3						
		SS	4						
		SS	1						
		SS	3						
		SS	4						
		SS	2						
20		SS	3			Moist to wet, firm, brown to reddish brown Clay and Silty Clay, mostly laminated, with 10-20% thinly interbedded, moist to wet, medium dense to loose, tannish brown Sand.	CL		
		SS	4						
		SS	2						
		SS	3						
		SS	4						
		SS	2						
		SS	3						
		SS	4						
		SS	1						
		SS	2						
		SS	6						
		SS	1						
		SS	2						

SS - 2" OD Split Spoon	NQ - Rock Core, 1-7/8"	BH - Backhoe Grab	HSA - Hollow Stem Augers	RW - Rotary Wash
SB - 3" OD Split Spoon	NX - Rock Core, 2-1/8"	HA - Hand Auger	CFA - Continuous Flight Augers	RC - Rock Core
ST - Shelby Tube	CJ - Cuttings		DC - Driving Casing	

GROUNDWATER INFORMATION:	BORING NO:
Numerous sporadic wet zones from 8.8' to 26.8' are associated with thin (1"-6") sand lenses containing minor amounts of ground water. After 30 minutes, no standing water was detected in the hole.	PHD-1



# SOIL BORING LOG

Project: Phantom Hills		<b>BORING NO: PHD-1</b>	
Location: Missoula, Montana		Sheet 2 of 2	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map	
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):	
Project Manager: Michael Dworsky	Date Logged: 6/20/02	Overburden (Ft):	
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered	

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	RQD %				
25		SS	2 2 5			Hole Terminated at 27.5'			
30									
35									
40									
45									

SS - 2" OD Split Spoon	NQ - Rock Core, 1-7/8"	BH - Backhoe Grab	HSA - Hollow Stem Augers	RW - Rotary Wash
SB - 3" OD Split Spoon	NX - Rock Core, 2-1/8"	HA - Hand Auger	CFA - Continuous Flight Augers	RC - Rock Core
ST - Shelby Tube	CU - Cuttings		DC - Driving Casing	

GROUNDWATER INFORMATION:		BORING NO: <b>PHD-1</b>
Numerous sporadic wet zones from 8.8' to 26.8' are associated with thin (1"-6") sand lenses containing minor amounts of ground water. After 30 minutes, no standing water was detected in the hole.		

BORING PIT FEET 010263.GPJ ORION GDT 7/14/04



# SOIL BORING LOG

Project: Phantom Hills	BORING NO: PHD-2	
Location: Missoula, Montana	Sheet 1 of 1	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):
Project Manager: Michael Dworsky	Date Logged: 6/21/02	Overburden (Ft):
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	RQD %				
0						Damp to moist, firm to stiff, brown to reddish brown Silty Sandy Clay, no laminations, fragmental texture 6'-7' suggesting alluvial/colluvial origin.	CL		Due to the lack of bedding, the clay from 0' to 7.0' appears to be a localized valley fill deposit, derived from surrounding in-place Glacial Lake Missoula sediments.
5		SS	1 3 5						
7		SS	2 5 7			Moist, firm, brown to reddish brown Clay and Silty Clay, mostly laminated, with 10-15% thinly interbedded, moist, medium dense to loose, tan to tannish brown Sand. Specific sand beds known at 12'-12.5', 16.2'-16.5' and 21.1'-21.7'.	CL		Material from 7.0' to 22.5' is mostly well-laminated, flat lying, in-place Glacial Lake Missoula sediments.
10		SS	2 3 5						Auger cuttings changed from moist to slightly wet at 10.0', down to 22.5'. No distinct wet zones seen within any of the split spoon samples.
15		SS	3 4 5						
20		SS	3 4 3						
22.5						Hole Terminated at 22.5'			

SS - 2" OD Split Spoon	NQ - Rock Core, 1-7/8"	BH - Backhoe Grab	HSA - Hollow Stem Augers	RW - Rotary Wash
SB - 3" OD Split Spoon	NX - Rock Core, 2-1/8"	HA - Hand Auger	CFA - Continuous Flight Augers	RC - Rock Core
ST - Shelby Tube	CU - Cuttings		DC - Driving Casing	
GROUNDWATER INFORMATION:				BORING NO: PHD-2
Numerous sporadic wet zones from 10' to 22.5' are associated with thin (1"-6") sand lenses containing minor amounts of ground water. After 30 minutes, no standing water was detected in the hole.				

BORING PIT FEET 010263.DPJ ORION.GDT 7/14/04





# SOIL BORING LOG

Project: Phantom Hills					<b>BORING NO: PHD-3</b>				
Location: Missoula, Montana					Sheet 1 of 2				
Client: Washington Development Corp			Drilling Equipment: Burley 2400			Location: See site map			
Project #: 010263			Drilling Method: 3 1/4" ID HSA			Surface Elevation (Ft):			
Project Manager: Michael Dworsky			Date Logged: 6/21/02			Overburden (Ft):			
Driller: Jim Lausch			Logged By: Kurisoo			Rock (Ft): Not Encountered			

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	RQD %				
0						Damp, firm to stiff, brown to reddish brown Clay, no laminations, fragmental texture 6.5'-8.0'+.	CL		Auger cuttings from damp to moist at 5.5'.
1		SS	1						
2			3						
3			6						
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									
28									
29									
30									

SS - 2" OD Split Spoon SB - 3" OD Split Spoon ST - Shelby Tube		SAMPLER TYPE NQ - Rock Core, 1-7/8" NX - Rock Core, 2-1/8" CU - Cuttings		BH - Backhoe Grab HA - Hand Auger		DRILLING METHOD HSA - Hollow Stem Augers CFA - Continuous Flight Augers DC - Driving Casing		RW - Rotary Wash RC - Rock Core	
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GROUNDWATER INFORMATION: No detectable wet or water bearing zones.		BORING NO: <b>PHD-3</b>	
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## SOIL BORING LOG

Project: Phantom Hills						<b>BORING NO: PHD-3</b>	
Location: Missoula, Montana						Sheet 2 of 2	
Client: Washington Development Corp			Drilling Equipment: Burley 2400			Location: See site map	
Project #: 010263			Drilling Method: 3 1/4" ID HSA			Surface Elevation (Ft):	
Project Manager: Michael Dworsky			Date Logged: 6/21/02			Overburden (Ft):	
Driller: Jim Lausch			Logged By: Kurisoo			Rock (Ft): Not Encountered	

DEPTH (ft)	GRAPHIC LOG	SAMPLES			MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL	DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %					
25					Hole Terminated at 23.0'				
30									
35									
40									
45									

SS - 2" OD Split Spoon SB - 3" OD Split Spoon ST - Shelby Tube	<b>SAMPLER TYPE</b> NQ - Rock Core, 1-7/8" NX - Rock Core, 2-1/8" CU - Cuttings	<b>DRILLING METHOD</b> BH - Backhoe Grab HA - Hand Auger HSA - Hollow Stem Augers CFA - Continuous Flight Augers DC - Driving Casing RW - Rotary Wash RC - Rock Core
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<b>GROUNDWATER INFORMATION:</b> No detectable wet or water bearing zones.	<b>BORING NO:</b> <b>PHD-3</b>
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BORING3.PIT FEET 010263.GPJ ORION QDT 7/14/04



# SOIL BORING LOG

Project: Phantom Hills		<b>BORING NO: PHD-4</b>	
Location: Missoula, Montana		Sheet 1 of 1	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map	
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):	
Project Manager: Michael Dworsky	Date Logged: 6/20/02	Overburden (Ft):	
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered	

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	RQD %				
0						Slightly damp, stiff, tan to brown Silty Clay, about 50% well-laminated.	CL		
1		SS	3						
2			4						
3			5						
4		SS	3						
5			4						
6			5						
7		SS	4						
8			7						
9			8						
10		SS	4			Damp, stiff, tan (40%) to reddish brown (60%) Clay, little to no silt, gradational upper contact, well-laminated.	CL		
11			8						
12		SS	5						
13			8						
14			10						
15		SS	3			Hole Terminated at 18.5'			
16			6						
17			6						
18									
19									
20									

SAMPLER TYPE				DRILLING METHOD			
SS - 2" OD Split Spoon	NQ - Rock Core, 1-7/8"	BH - Backhoe Grab	HSA - Hollow Stem Augers	RW - Rotary Wash			
SB - 3" OD Split Spoon	NX - Rock Core, 2-1/8"	HA - Hand Auger	CFA - Continuous Flight Augers	RC - Rock Core			
ST - Shelby Tube	CU - Cuttings		DC - Driving Casing				
GROUNDWATER INFORMATION:				BORING NO:			
No detectable wet or water bearing zones.				PHD-4			

BORING PIT FEET 010263.GPJ ORION GDT 7/14/04



# SOIL BORING LOG

Project: Phantom Hills	BORING NO: PHD-5	
Location: Missoula, Montana	Sheet 1 of 2	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):
Project Manager: Michael Dworsky	Date Logged: 6/25/02	Overburden (Ft):
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	ROD %				
0						Damp, firm, brown silty sandy Clay,	CL		Due to the lack of bedding, the clay from 0' to 7.1' appears to be a localized valley fill deposit, derived from surrounding in-place Glacial Lake Missoula sediments.
5		SS	4						
10		SS	4			Moist, firm, brown to reddish brown, silty Clay, locally sandy.	CL		Material from 7.1' to 23.5' is mostly well-laminated, flat lying, in-place Glacial Lake Missoula sediments.
		ST							Auger cuttings moist from 5.0' to 22.0'.
15		SS	3			Moist, firm, brown to reddish brown, silty, locally sandy Clay, 1/4" sand lenses at 12.5', 17.2', 18.0', 18.1', 18.3' and 22.2'.	CL		Shelby tube sample collected from 9.5' to 11.5'.
20		SS	2						
		SS	2						
		SS	7						
		SS	2						
		SS	2						
		SS	5			Wet, loose, tan, very fine-grained Sand, with silty clay interbeds.	SP-SC		

SS - 2" OD Split Spoon	NQ - Rock Core, 1-7/8"	BH - Backhoe Grab	HSA - Hollow Stem Augers	RW - Rotary Wash
SB - 3" OD Split Spoon	NX - Rock Core, 2-1/8"	HA - Hand Auger	CFA - Continuous Flight Augers	RC - Rock Core
ST - Shelby Tube	CU - Cuttings		DC - Driving Casing	
GROUNDWATER INFORMATION:				BORING NO:
Numerous sporadic wet zones from 17.7' to 23.5' are associated with thin (1/4"-5") sand lenses containing minor amounts of water. After 30 minutes, no standing water was detected in the hole.				PHD-5

BORING INT FILET 010263.GPJ ORION.GDT 7/14/04



# SOIL BORING LOG

Project: Phantom Hills					<b>BORING NO: PHD-5</b>				
Location: Missoula, Montana					Sheet 2 of 2				
Client: Washington Development Corp			Drilling Equipment: Burley 2400		Location: See site map				
Project #: 010263			Drilling Method: 3 1/4" ID HSA		Surface Elevation (Ft):				
Project Manager: Michael Dworsky			Date Logged: 6/25/02		Overburden (Ft):				
Driller: Jim Lausch			Logged By: Kurisoo		Rock (Ft): Not Encountered				

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	ROD %				
25						Hole Terminated at 23.5'.			
30									
35									
40									
45									

SS - 2" OD Split Spoon	NQ - Rock Core, 1-7/8"	BH - Backhoe Grab	HSA - Hollow Stem Augers	RW - Rotary Wash
SB - 3" OD Split Spoon	NX - Rock Core, 2-1/8"	HA - Hand Auger	CFA - Continuous Flight Augers	RC - Rock Core
ST - Shelby Tube	CU - Cuttings		DC - Driving Casing	

<b>GROUNDWATER INFORMATION:</b> Numerous sporadic wet zones from 17.7' to 23.5' are associated with thin (1/4"-5") sand lenses containing minor amounts of water. After 30 minutes, no standing water was detected in the hole.	<b>BORING NO:</b> <b>PHD-5</b>
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BORING PIT FEET 010263.GPJ ORION.GDT 7/14/04



# SOIL BORING LOG

Project: Phantom Hills				<b>BORING NO: PHD-6</b>			
Location: Missoula, Montana				Sheet 1 of 2			
Client: Washington Development Corp		Drilling Equipment: Burley 2400		Location: See site map			
Project #: 010263		Drilling Method: 3 1/4" ID HSA		Surface Elevation (Ft):			
Project Manager: Michael Dworsky		Date Logged: 6/26/02		Overburden (Ft):			
Driller: Jim Lausch		Logged By: Kurisoo		Rock (Ft): Not Encountered			

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	ROD %				
0						Dry to damp, firm to stiff, brown Clay, dry loose sand from 6.6' to 6.7'.	CL		Due to the lack of bedding and local fragmental textures, the material from 0' to 7.1' appears to be a localized valley fill deposit, derived from surrounding in-place Glacial Lake Missoula sediments.
5		SS	3						
7.1						Damp, firm, brown to reddish brown Clay, sand lense at 12.4'-12.5'.	CL		Material from 7.1' to 23' is mostly well-laminated, flat lying, in-place Glacial Lake Missoula sediments.
10		SS	3						
12.4									
15		SS	3						
17.1									
20		SS	4			Dry to damp, loose to soft, tan to tannish brown, silty Sand and Sand, with 10-15% thin, clayey silt interbeds.	SP-SM		
21.1						Damp, firm, brown to reddish brown, silty Clay, containing about 5% thin (1/16"-1/4") very fine-grained sand lenses.	CL		
23		SS	3						
25						Dry to damp, loose to medium dense, tan to tannish brown, very fine-grained silty Sand, with 20-30% clayey silt interbeds.	SP-SM		
26.1		SS	3						

SS - 2" OD Split Spoon SB - 3" OD Split Spoon ST - Shelby Tube		SAMPLER TYPE NQ - Rock Core, 1-7/8" NX - Rock Core, 2-1/8" CU - Cuttings		BH - Backhoe Grab HA - Hand Auger		DRILLING METHOD HSA - Hollow Stem Augers CFA - Continuous Flight Augers DC - Driving Casing		RW - Rotary Wash RC - Rock Core	
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GROUNDWATER INFORMATION:		BORING NO:
No detectable wet or water bearing zones.		
		<b>PHD-6</b>

BORING PIT FEET 010263.GPJ ORION.GDT 7/14/04





MOORING PIT FEET 610293.GPJ ORION.GOT 7/14/04



# SOIL BORING LOG

Project: Phantom Hills		<b>BORING NO: PHD-7</b>	
Location: Missoula, Montana		Sheet 1 of 2	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map	
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):	
Project Manager: Michael Dworsky	Date Logged: 6/26/02	Overburden (Ft):	
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered	

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	ROD %				
0						Damp to moist, firm, brown, sandy, silty Clay, top 0.5' is organic.	CL		Due to the lack of bedding, the clay from 0' to about 9' appears to be a localized valley fill deposit, derived from surrounding in-place Glacial Lake Missoula sediments.
5		SS	2 4 6						
10		SS	2 4 6			Moist to wet, firm, brown to reddish brown, silty Clay, containing 1/4" thick, vertical structures filled with fine to medium-grained, wet, loose sand from 11.9' to 13.0' and 17.6' to 18.0', and very fine- to medium-grained, wet, loose sand lenses at 17.5'-17.6', numerous 1/4" thick at 21.5'-21.8', and 21.8'-22.0' (5%-10% sand lenses and structures total).	CL		Material from 9' to 28' is mostly well-laminated, flat lying, in-place Glacial Lake Missoula sediments.  Auger cuttings damp 0'-5', moist 5'-11' and wet 11'-28'.
15		SS	1 2 3						
20		SS	2 4 4						

SS - 2" OD Split Spoon		SAMPLER TYPE		DRILLING METHOD	
SB - 3" OD Split Spoon		NQ - Rock Core, 1-7/8"		HSA - Hollow Stem Augers	
ST - Shelby Tube		NX - Rock Core, 2-1/8"		CFA - Continuous Flight Augers	
		CU - Cuttings		DC - Driving Casing	
		BH - Backhoe Grab		RW - Rotary Wash	
		HA - Hand Auger		RC - Rock Core	

GROUNDWATER INFORMATION:		BORING NO:	
Numerous sporadic wet zones from 11' to 28' are associated with thin (1/4"-3") sand lenses containing minor amounts of ground water. After 30 minutes, no standing water was detected in the hole.		PHD-7	

BORING PIT FEET 010263.GPJ ORION GDT 7/14/04



# SOIL BORING LOG

Project: Phantom Hills					<b>BORING NO: PHD-7</b>				
Location: Missoula, Montana					Sheet 2 of 2				
Client: Washington Development Corp			Drilling Equipment: Burley 2400		Location: See site map				
Project #: 010263			Drilling Method: 3 1/4" ID HSA		Surface Elevation (Ft):				
Project Manager: Michael Dworsky			Date Logged: 6/26/02		Overburden (Ft):				
Driller: Jim Lausch			Logged By: Kurisoo		Rock (Ft): Not Encountered				

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	RQD %				
25									
		SS	2 2 4			Moist to wet (15%), firm, gray (brown), silty Clay.	CL		
30						Hole Terminated at 28.0'.			
35									
40									
45									

SS - 2" OD Split Spoon SB - 3" OD Split Spoon ST - Shelby Tube		<b>SAMPLER TYPE</b> NQ - Rock Core, 1-7/8" NX - Rock Core, 2-1/8" CU - Cuttings		BH - Backhoe Grab HA - Hand Auger		<b>DRILLING METHOD</b> HSA - Hollow Stem Augers CFA - Continuous Flight Augers DC - Driving Casing		RW - Rotary Wash RC - Rock Core	
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<b>GROUNDWATER INFORMATION:</b> Numerous sporadic wet zones from 11' to 28' are associated with thin (1/4"-3") sand lenses containing minor amounts of ground water. After 30 minutes, no standing water was detected in the hole.		<b>BORING NO:</b> <b>PHD-7</b>	
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# SOIL BORING LOG

Project: Phantom Hills		<b>BORING NO: PHD-8</b>	
Location: Missoula, Montana		Sheet 2 of 2	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map	
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):	
Project Manager: Michael Dworsky	Date Logged: 6/27/02	Overburden (Ft):	
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered	

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	ROD %				
25									
		SS	1 2 4			Moist to wet, firm, brownish gray, silty Clay, with loose, wet, silty, very fine-grained sand from 27.4'-27.6'.	CL		
30						Hole Terminated at 28.0'.			
35									
40									
45									

SS - 2" OD Split Spoon	NQ - Rock Core, 1-7/8"	BH - Backhoe Grab	HSA - Hollow Stem Augers	RW - Rotary Wash
SB - 3" OD Split Spoon	NX - Rock Core, 2-1/8"	HA - Hand Auger	CFA - Continuous Flight Augers	RC - Rock Core
ST - Shelby Tube	CU - Cuttings		DC - Driving Casing	

GROUNDWATER INFORMATION:	BORING NO:  <b>PHD-8</b>
Numerous sporadic wet zones from 22.8' to 28' are associated with thin (1/4"-2") sand lenses containing minor amounts of water. After 30 minutes, no standing water was detected in the hole.	

BORING PIT FEET 010263.GPJ ORION.GDT T1404



## SOIL BORING LOG

Project: Phantom Hills	<b>BORING NO: PHD-8</b>	
Location: Missoula, Montana	Sheet 2 of 2	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):
Project Manager: Michael Dworsky	Date Logged: 6/27/02	Overburden (Ft):
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	RQD %				
25									
		SS	1 2 4			Moist to wet, firm, brownish gray, silty Clay, with loose, wet, silty, very fine-grained sand from 27.4'-27.6'.	CL		
30						Hole Terminated at 28.0'.			
35									
40									
45									

SS - 2" OD Split Spoon	NQ - Rock Core, 1-7/8"	BH - Backhoe Grab	HSA - Hollow Stem Augers	RW - Rotary Wash
SB - 3" OD Split Spoon	NX - Rock Core, 2-1/8"	HA - Hand Auger	CFA - Continuous Flight Augers	RC - Rock Core
ST - Shelby Tube	CU - Cuttings		DC - Driving Casing	
GROUNDWATER INFORMATION: Numerous sporadic wet zones from 22.8' to 28' are associated with thin (1/4"-2") sand lenses containing minor amounts of water. After 30 minutes, no standing water was detected in the hole.				<b>BORING NO: PHD-8</b>

BORING PIT FEET 010203.GPJ ORION QOT 7/14/04

# SOIL BORING LOG

Project: Phantom Hills					BORING NO: PHD-9				
Location: Missoula, Montana					Sheet 1 of 2				
Client: Washington Development Corp		Drilling Equipment: Burley 2400			Location: See site map				
Project #: 010263		Drilling Method: 3 1/4" ID HSA			Surface Elevation (Ft):				
Project Manager: Michael Dworsky		Date Logged: 6/27/02			Overburden (Ft):				
Driller: Jim Lausch		Logged By: Kurisoo			Rock (Ft): Not Encountered				
DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	ROD %				
5		SS	3 6 10			Damp, firm to stiff, brown, silty Clay, local fragmental texture.	CL		Auger cuttings damp 0'-15', moist 15'-20.5' and wet 20.5'-28.0'.
						Damp to moist, firm, brown to reddish brown, silty Clay, mostly well-laminated, with 2%-5% interbedded very fine-grained to medium-grained, loose, slightly wet sand lenses at 7.0' (1/4"), 7.5' (1/4"), 7.9' (1/2"), 12.8'-13.0', 16.6' (1/2"), 17.0' (1/4"), 17.9'-18.0'.	CL		
10		SS	2 6 10						
15		SS	2 4 6						
20		SS	2 2 3						
25		SS	2 2 4			Wet, firm, brown to reddish brown, silty Clay, with 10% interbedded loose, wet, very fine- to fine-grained sand lenses at 22.3' (1/2"), 22.5' (1/4"), 22.6' (1/4"), 22.7'-22.8' (silty), 22.9'-23.0' and 26.5'-27.0' (with 25% silty and clayey interbeds).	CL		
SAMPLER TYPE					DRILLING METHOD				
SS - 2" OD Split Spoon SB - 3" OD Split Spoon ST - Shelby Tube					NQ - Rock Core, 1-7/8" NX - Rock Core, 2-1/8" CU - Cuttings				
					BH - Backhoe Grab HA - Hand Auger HSA - Hollow Stem Augers CFA - Continuous Flight Augers DC - Driving Casing				
					RW - Rotary Wash RC - Rock Core				
GROUNDWATER INFORMATION:									BORING NO:
Numerous sporadic wet zones from 12.8' to 28' are associated with thin (1/4"-6") sand lenses containing minor amounts of water. After 30 minutes, no standing water was detected in the hole.									PHD-9





# SOIL BORING LOG

Project: Phantom Hills		<b>BORING NO: PHD-9</b>	
Location: Missoula, Montana		Sheet 2 of 2	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map	
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):	
Project Manager: Michael Dworsky	Date Logged: 6/27/02	Overburden (Ft):	
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered	

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	RQD %				
25		SS	2 2 4						
30						Hole Terminated at 28.0'			
35									
40									
45									

SAMPLER TYPE				DRILLING METHOD	
SS - 2" OD Split Spoon	NQ - Rock Core, 1-7/8"	BH - Backhoe Grab	HSA - Hollow Stem Augers	RW - Rotary Wash	
SB - 3" OD Split Spoon	NX - Rock Core, 2-1/8"	HA - Hand Auger	CFA - Continuous Flight Augers	RC - Rock Core	
ST - Shelby Tube	CU - Cuttings		DC - Driving Casing		
GROUNDWATER INFORMATION:					BORING NO:
Numerous sporadic wet zones from 12.8' to 28' are associated with thin (1/4"-6") sand lenses containing minor amounts of water. After 30 minutes, no standing water was detected in the hole.					PHD-9

BORING PIT FEET 010263.GPJ ORION QOT 7/14/04



# SOIL BORING LOG

Project: Phantom Hills		<b>BORING NO: PHD-10</b>	
Location: Missoula, Montana		Sheet 1 of 2	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map	
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):	
Project Manager: Michael Dworsky	Date Logged: 6/28/02	Overburden (Ft):	
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered	

DEPTH (ft)	GRAPHIC LOG	SAMPLES			MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %				
0		SS	4		Dry to damp, firm to stiff, tan to tannish brown, sandy silty Clay, locally fragmental texture, well-developed sand texture locally.	CL		Due to the lack of bedding and fragmental texture, the clay from 0' to 10' appears to be a localized valley fill deposit, derived from surrounding in-place Glacial Lake Missoula sediments.
5		SS	6					
10		SS	8		Dry to damp, firm to stiff, tan to tannish brown silty Clay, well-laminated, with interbedded 1/4" thick, loose, fine-grained sand lenses at 12.4', 17.5' and 22.6'.	CL		Material from 10' to 23' is mostly well-laminated, flat lying, in-place Glacial Lake Missoula sediments.
15		SS	8					
20		SS	8					
25		SS	8					
30		SS	5					Auger cuttings "dry" from 0' to 21.5'.
35		SS	8					
40		SS	14					Tight drilling most of hole.
45		SS	5					
50		SS	10					Material becoming gradually damper from 19' to 23'.
55		SS	15					
60		SS	4					
65		SS	7					
70		SS	11					

SAMPLER TYPE				DRILLING METHOD			
SS - 2" OD Split Spoon	NQ - Rock Core, 1-7/8"	BH - Backhoe Grab		HSA - Hollow Stem Augers		RW - Rotary Wash	
SB - 3" OD Split Spoon	NX - Rock Core, 2-1/8"	HA - Hand Auger		CFA - Continuous Flight Augers		RC - Rock Core	
ST - Shelby Tube	CU - Cuttings			DC - Driving Casing			
GROUNDWATER INFORMATION:							BORING NO:
No detectable wet or water bearing zones.							PHD-10

BORING #11 FEET 010263.OPJ ORION GDT 7/14/04



# SOIL BORING LOG

Project: Phantom Hills					<b>BORING NO: PHD-10</b>				
Location: Missoula, Montana					Sheet 2 of 2				
Client: Washington Development Corp			Drilling Equipment: Burley 2400		Location: See site map				
Project #: 010263			Drilling Method: 3 1/4" ID HSA		Surface Elevation (Ft):				
Project Manager: Michael Dworsky			Date Logged: 6/28/02		Overburden (Ft):				
Driller: Jim Lausch			Logged By: Kurisoo		Rock (Ft): Not Encountered				

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL	DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	ROD #					
25						Hole Terminated at 23.0'				
30										
35										
40										
45										

SS - 2" OD Split Spoon		NQ - Rock Core, 1-7/8"		BH - Backhoe Grab		HSA - Hollow Stem Augers		RW - Rotary Wash	
SB - 3" OD Split Spoon		NX - Rock Core, 2-1/8"		HA - Hand Auger		CFA - Continuous Flight Augers		RC - Rock Core	
ST - Shelby Tube		CU - Cuttings				DC - Driving Casing			

GROUNDWATER INFORMATION:								BORING NO:	
No detectable wet or water bearing zones.								PHD-10	

BORING PIT FEET 010263.GPJ ORION.GDT 7/14/04



# SOIL BORING LOG

Project: Phantom Hills		BORING NO: PHD-11	
Location: Missoula, Montana		Sheet 1 of 2	
Client: Washington Development Corp	Drilling Equipment: Burley 2400	Location: See site map	
Project #: 010263	Drilling Method: 3 1/4" ID HSA	Surface Elevation (Ft):	
Project Manager: Michael Dworsky	Date Logged: 6/28/02	Overburden (Ft):	
Driller: Jim Lausch	Logged By: Kurisoo	Rock (Ft): Not Encountered	

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	RQD %				
						Damp, firm to soft, dark brown to brown, silty, sandy Clay, organic from 0' to 1.0'.	CL		Auger cuttings very damp to locally moist from 0' to 10.5', damp from 10.5' to 22.0'.
5		SS	2 3 6			Damp to moist, firm, tannish brown to reddish brown, silty Clay, well-laminated, interbedded 1/8" loose sand lens at 7.6'.	CL		
10		SS	3 5 8						
15		SS	4 7 15			Almost dry to damp, firm, tannish brown to reddish brown, silty Clay, well-laminated.	CL		Tight drilling from 10.5' to 23.5'.
20		SS	3 7 11						
		SS	4 8 12						

SS - 2" OD Split Spoon		NQ - Rock Core, 1-7/8"		BH - Backhoe Grab		HSA - Hollow Stem Augers		RW - Rotary Wash	
SB - 3" OD Split Spoon		NX - Rock Core, 2-1/8"		HA - Hand Auger		CFA - Continuous Flight Augers		RC - Rock Core	
ST - Shelby Tube		CU - Cuttings				DC - Driving Casing			

GROUNDWATER INFORMATION: No detectable wet or water bearing zones.								BORING NO: PHD-11	
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BORING PIT FEET 010263.GPJ ORION GDT TT1404



# SOIL BORING LOG

Project: Phantom Hills						<b>BORING NO: PHD-11</b>		
Location: Missoula, Montana						Sheet 2 of 2		
Client: Washington Development Corp			Drilling Equipment: Burley 2400			Location: See site map		
Project #: 010263			Drilling Method: 3 1/4" ID HSA			Surface Elevation (Ft):		
Project Manager: Michael Dworsky			Date Logged: 6/28/02			Overburden (Ft):		
Driller: Jim Lausch			Logged By: Kurisoo			Rock (Ft): Not Encountered		

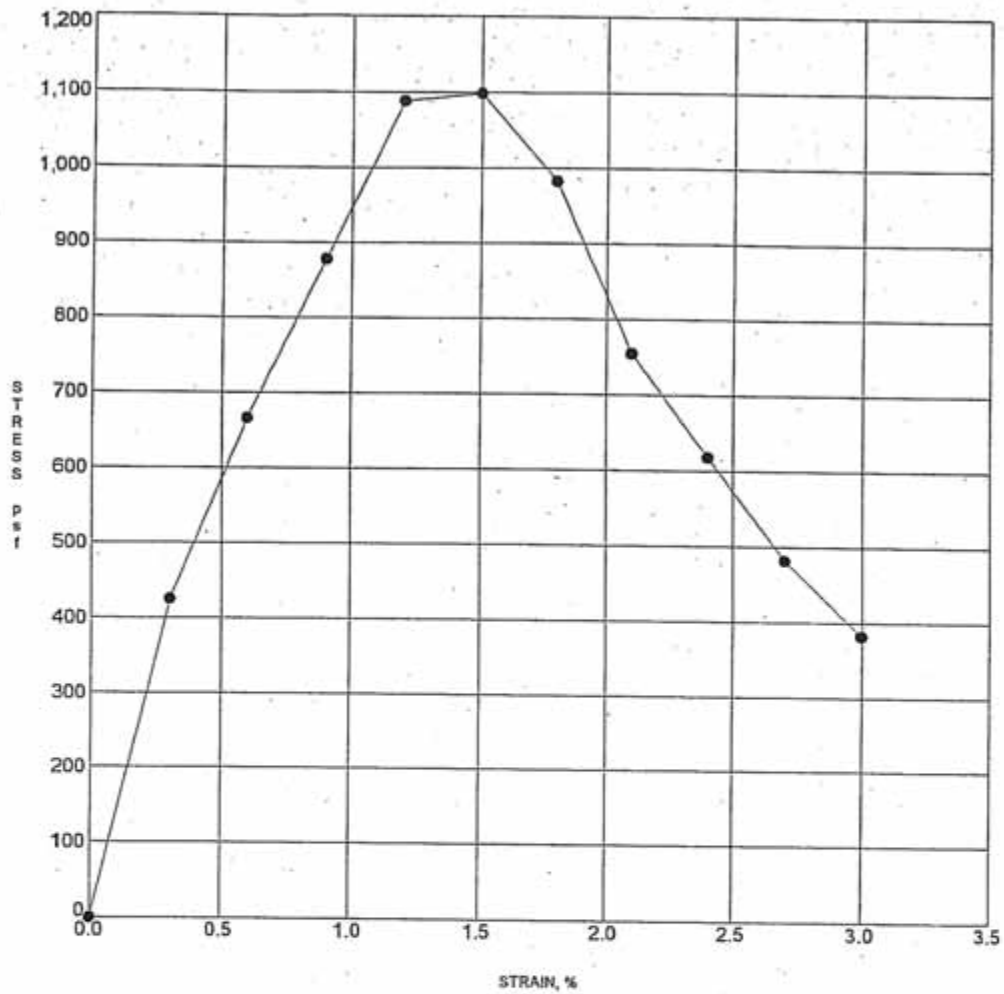
  

DEPTH (ft)	GRAPHIC LOG	SAMPLES				MATERIAL DESCRIPTION (ASTM D-2488)	USCS SYMBOL	WATER LEVEL DEPTH	REMARKS
		SAMPLE TYPE	SPT BLOWS PER 6-in	RECOVERY %	RQD %				
25						Hole Terminated at 23.5'			
30									
35									
40									
45									

SS - 2" OD Split Spoon SB - 3" OD Split Spoon ST - Shelby Tube		<b>SAMPLER TYPE</b> NQ - Rock Core, 1-7/8" NX - Rock Core, 2-1/8" CU - Cuttings		BH - Backhoe Grab HA - Hand Auger		<b>DRILLING METHOD</b> HSA - Hollow Stem Augers CFA - Continuous Flight Augers DC - Driving Casing		RW - Rotary Wash RC - Rock Core	
<b>GROUNDWATER INFORMATION:</b> No detectable wet or water bearing zones.								<b>BORING NO:</b> <b>PHD-11</b>	

BORING #111 FEET 010263.GPJ ORION.GDT 7/14/04



Specimen Identification		Classification	DD	MC%
●	PHD-1A 9.5	Lean Clay CL	83	37

PROJECT Phantom Hills, Dworsky  
Missoula, MT

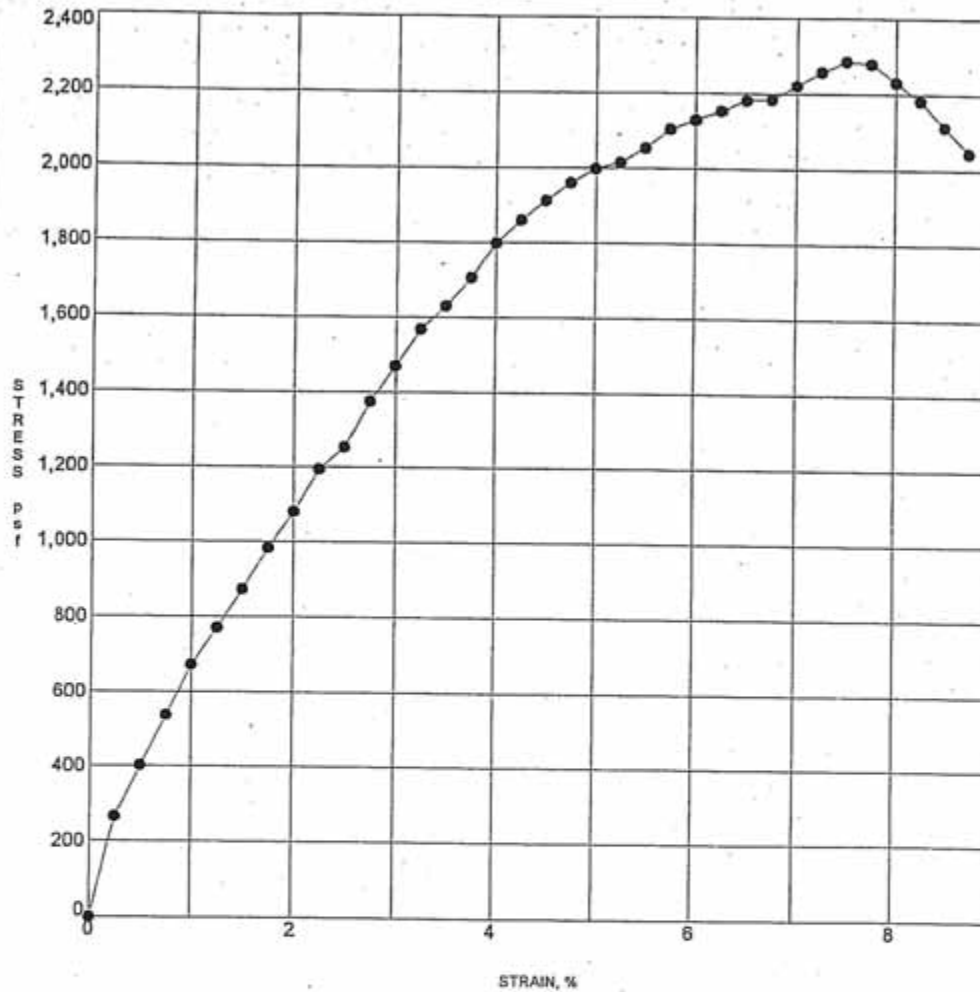
JOB NO. 02-300-12  
DATE 7/29/02



**UNCONFINED COMPRESSION TEST**  
NTL Engineering & Geoscience  
Great Falls, MT 59405

Plate No. 1





Specimen Identification		Classification	DD	MC%
●	PHD-1B 2.0	Lean Clay CL	90	27

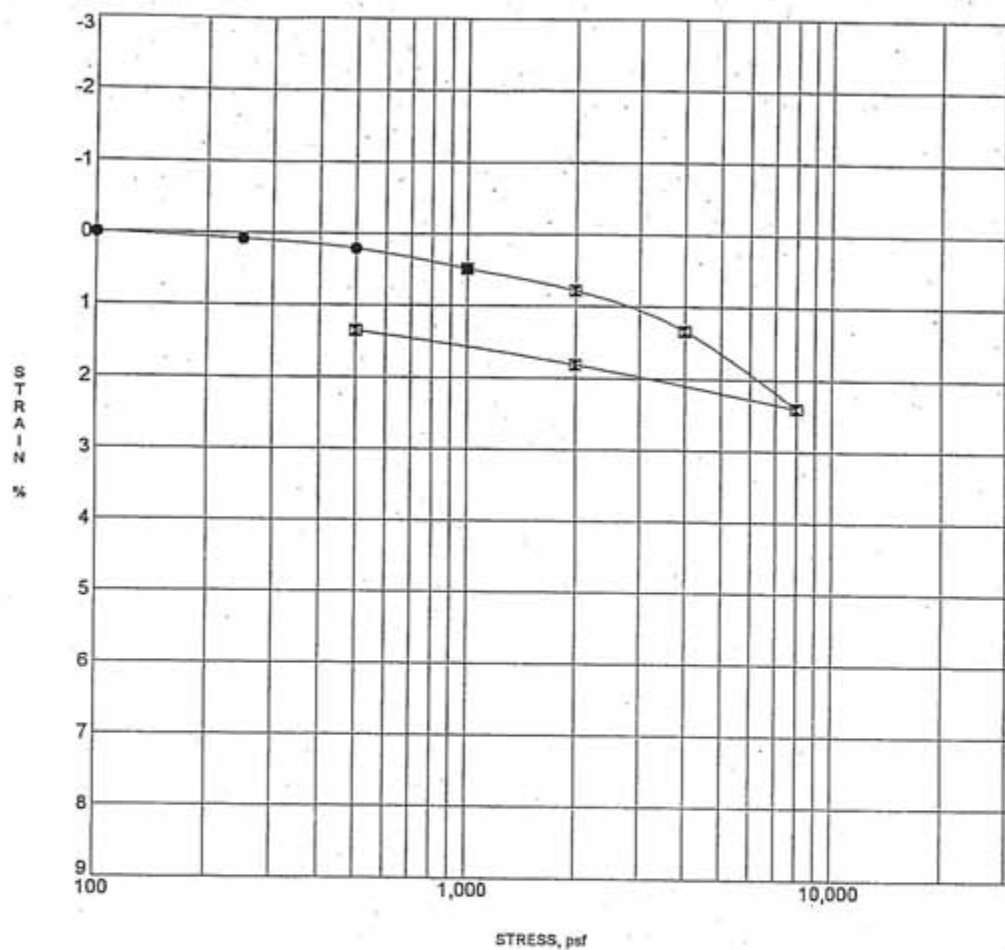
PROJECT Phantom Hills, Dworsky  
Missoula, MT

JOB NO. 02-300-12  
DATE 7/29/02



**UNCONFINED COMPRESSION TEST**  
NTL Engineering & Geoscience  
Great Falls, MT 59405

Plate No. 2



● FIELD MOISTURE

□ INUNDATED

Specimen Identification		Classification	DD	MC%
PHD-1A	8.5	Silt ML	82	38
FINAL MOISTURE CONTENT = 38%				

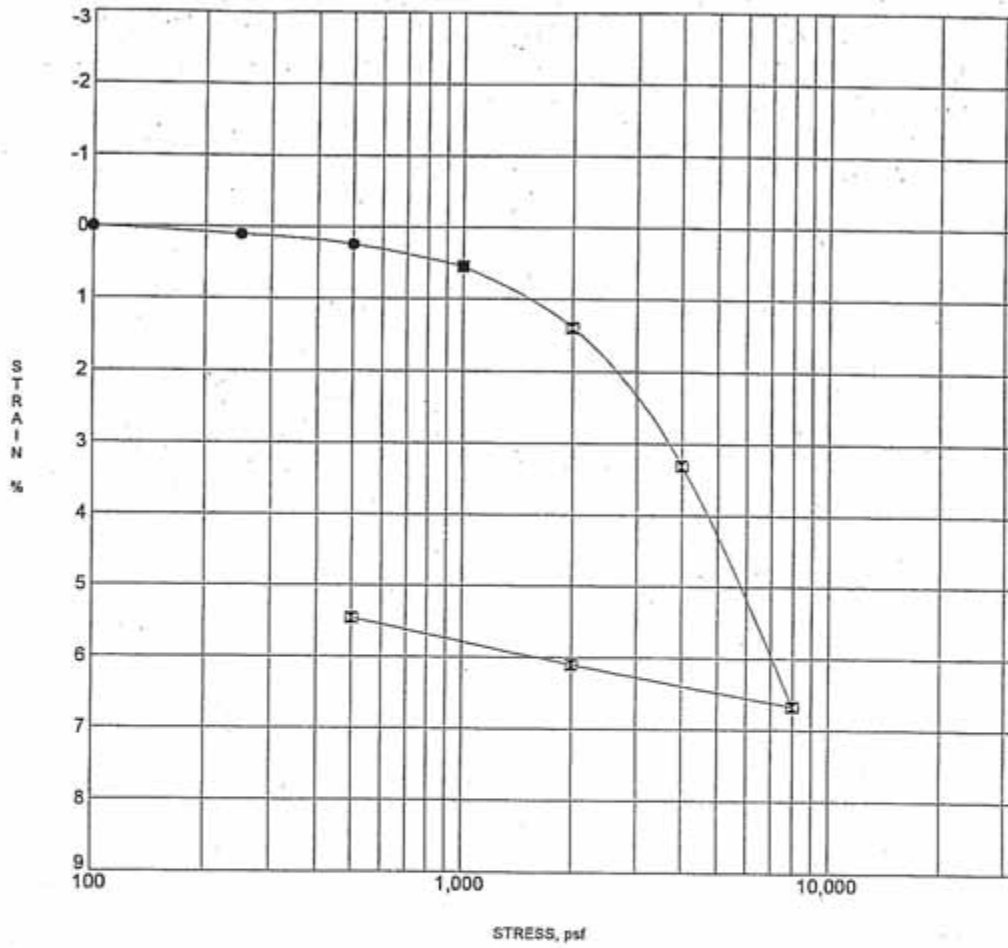
PROJECT Phantom Hills, Dworsky  
Missoula, MT

JOB NO. 02-300-12  
DATE 7/29/02



**CONSOLIDATION TEST**  
NTL Engineering & Geoscience  
Great Falls, MT 59405

Plate No. 3



Specimen Identification	Classification	DD	MC%
PHD-1B 2.2	Lean Clay CL	86	28
FINAL MOISTURE CONTENT = 29%			

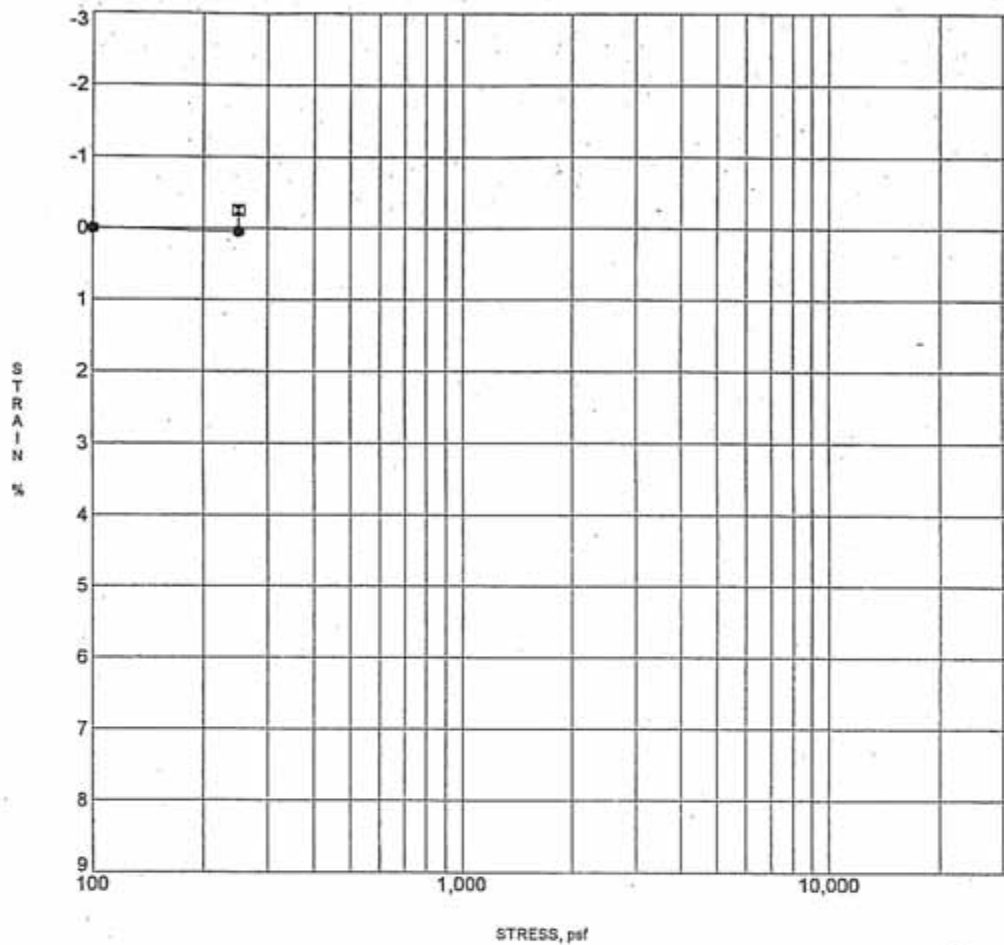
PROJECT Phantom Hills, Dworsky  
Missoula, MT

JOB NO. 02-300-12  
DATE 7/29/02



**CONSOLIDATION TEST**  
NTL Engineering & Geoscience  
Great Falls, MT 59405

Plate No. 4



● FIELD MOISTURE

■ INUNDATED

Specimen Identification		Classification	DD	MC%
PHD-1B	2.4	Lean Clay CL	87	28
		FINAL MOISTURE CONTENT =31%		

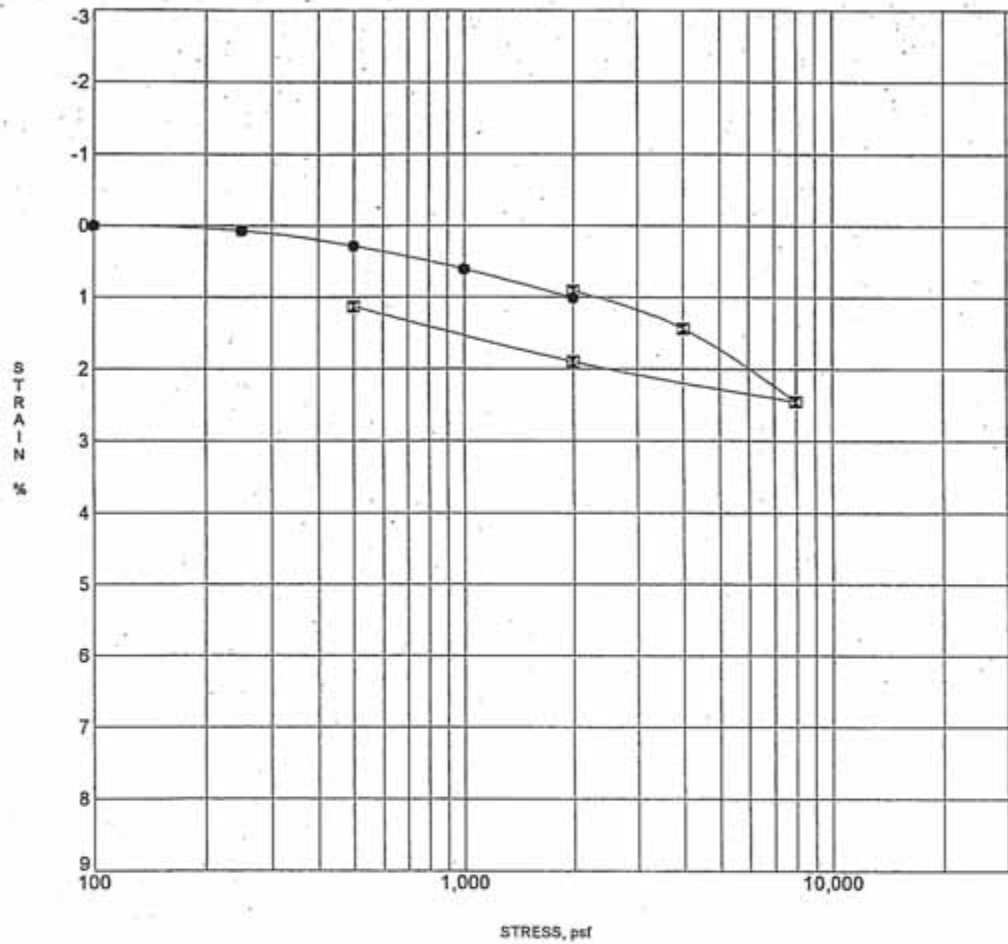
PROJECT Phantom Hills, Dworsky  
Missoula, MT

JOB NO. 02-300-12  
DATE 7/29/02



**CONSOLIDATION TEST**  
NTL Engineering & Geoscience  
Great Falls, MT 59405

Plate No. 5



● FIELD MOISTURE

□ INUNDATED

Specimen Identification		Classification	DD	MC%
PHD-5	9.5	Lean CLAY CL	91	30
FINAL MOISTURE CONTENT =30%				

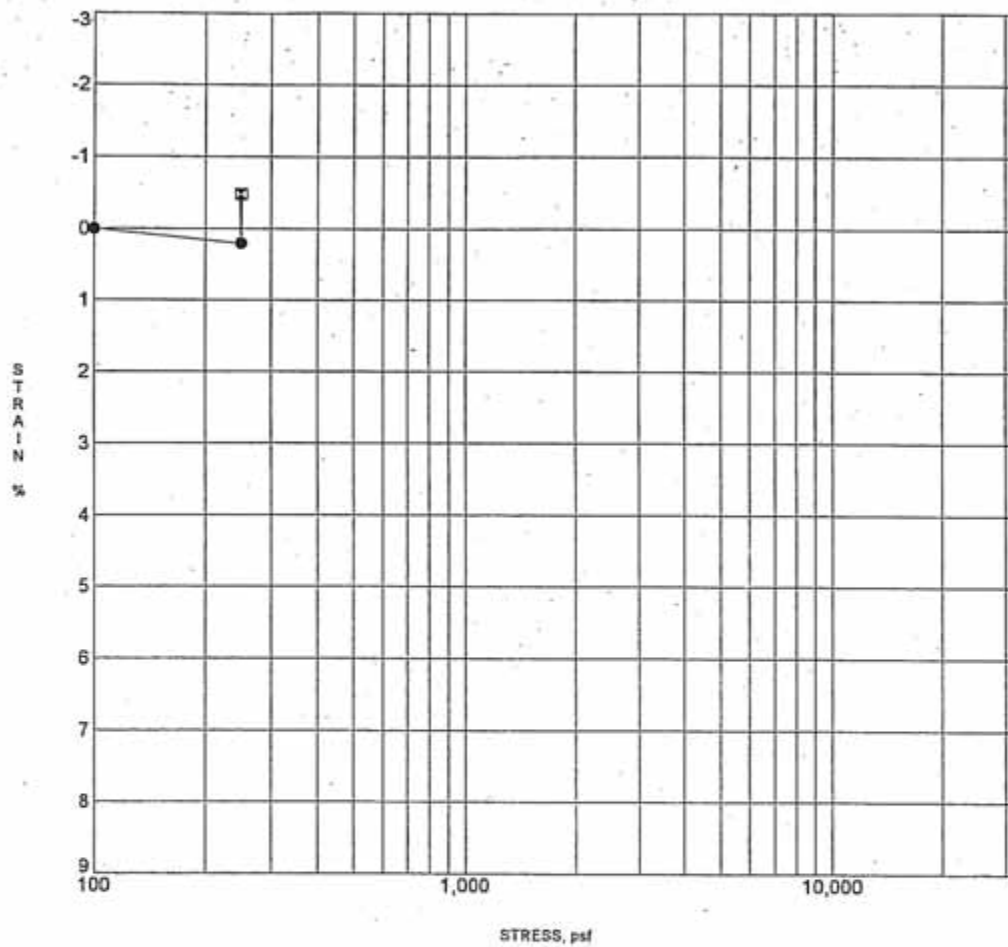
PROJECT Phantom Hills, Dworsky  
Missoula, MT

JOB NO. 02-300-12  
DATE 7/29/02



**CONSOLIDATION TEST**  
NTL Engineering & Geoscience  
Great Falls, MT 59405

Plate No. 6



● FIELD MOISTURE

▣ INUNDATED

Specimen Identification	Classification	DD	MC%
PHD-5 9.7	Lean CLAY CL	93	30
FINAL MOISTURE CONTENT =32%			

PROJECT Phantom Hills, Dworsky  
Missoula, MT

JOB NO. 02-300-12  
DATE 7/29/02



**CONSOLIDATION TEST**  
NTL Engineering & Geoscience  
Great Falls, MT 59405

Plate No. 7



# HOLMAN

CONSULTING ENGINEERS

• Construction Material Testing  
• Laboratory Services

July 12, 2002

Orion Engineering  
2010 S. Reserve St.  
Missoula, MT 59801

Project: Phantom Hills

Project No.: 402-417-02  
Item: SPT Samples

Location: Mullan Road Missoula, Montana  
Sampled by: Mike Dworsky

Lab No.: 02-1155

Tests: Moisture Content, Atterberg Limits (ASTM D-4318)

Location: Boring PHD-11/S1: 2.0'-3.5'

Results: Moisture Content (%): 30.2  
Liquid Limit: 54  
Plastic Index: 24

Location: Boring PHD-7/S4: 16.5'-18.0'

Results: Moisture Content (%): 30.1  
Liquid Limit: 44  
Plastic Index: 21

Location: Boring PHD-9/S4: 16.5'-18.0'

Results: Moisture Content (%): 34.0  
Liquid Limit: 45  
Plastic Index: 16

Location: Boring PHD-1/S6: 8.5'-10.0'

Results: Moisture Content (%): 34.0  
Liquid Limit: 49  
Plastic Index: 20

Location: Boring PHD-1/S2: 2.5'-4.0'

Results: Moisture Content (%): 27.2  
Liquid Limit: 46  
Plastic Index: 24

By:

Christopher J. Holman, P.E.

2010 South Reserve Street ? Missoula, Montana 59801 ? 406-543-3100 ? Fax 406-721-6629

# 010263 - Phantom Heights Investigation

Boring	Surface Elevation	Depth to Soft	Elevation Top Soft	Thickness Soft	Final Elevation	Proposed Fill
PHD-1	3156	8.5	3147.5	UD: 19' min	3161	5
PHD-2	3152	None to 22.5'			3151	-1
PHD-3	3144	10	3134	UD: 13' min	3156	12
PHD-4	3173	12.5	3160.5	5	3165	-8
PHD-5	3144	7	3137	UD: 16.5' min	3157	13
PHD-6	3165	None to 23.0'			3170	5
PHD-7	3140	9	3131	UD: 19' min	3150	10
PHD-8	3140	10	3130	UD: 18' min	3149	9
PHD-9	3169	13	3156	UD: 15' min	3173	4
PHD-10	3180	None to 23.0'			3182	2
PHD-11	3192	None to 23.5'			3192	0

Notes:

(1) Soft Material: "N" less than or equal to 7

(2) UD: Unable to Determine - Beyond Boring Depth



**APPENDIX D**

**LANDSCAPE & BOULEVARD DESIGN**

**NATIVE GRASSLAND PLANT LIST**

**BOULEVARD AND NATIVE & ADAPTED TRANSITION PLANT LIST**

**BOULEVARD PLANT DESIGN**

**SEED MIXES**

**HABITAT TYPE PLANT LIST**



## LANDSCAPE & BOULEVARD DESIGN

The natural landscape is rolling prairie interlaced with the links style golf course and homesites. The planting design approach is intended to preserve the infrastructure, conserve water, enhance native vegetation and to create the desired character for The Ranch Club.

### GOAL

The intention of the design is to reflect the western ranch landscape indigenous to the area and consistent with the historic use on this site.

- Where the native prairie landscape intersects with the roads in the development the native plantings will be carried across the road and through the boulevard planting.
- Where the golf course crosses the roads in the development the links style, low, open mowed or natural grassland plantings will be carried across the road and through the boulevard planting.
- Where Townhouse and Condominium development is present the Owner will provide full landscape and planting installation consistent with the Design And Construction Guidelines for The Ranch Club. Single-family homes adjacent to boulevards will be guided in the implementation of the homesite and boulevard landscape planting by The Ranch Club Design And Construction Guidelines.
- Where there are linear boulevard areas, space between the curb and sidewalk, the planting design will reflect the Landscape Styles described in the Guidelines and blend with the landscape treatments on the adjacent properties. The design and types of plantings will **vary** along the length of the boulevard. (It will **not** be a continuous band of turf and regularly spaced deciduous trees.)

The Ranch Club Design And Construction Guidelines promotes clusters of small trees with massing of shrubs, ground covers and ornamental grasses woven throughout the development. The boulevard areas will be designed and planted contiguous with the adjacent areas to provide a cohesive landscape that reflects the native landscape or adjacent 'Landscape Style' as described in the Guidelines.

### BOULEVARD PLANTING DESIGN

The tree planting quantities for boulevard areas will be based on the number of trees required at 30 feet on center for the linear feet of roadway. The quantity will be located to form clusters that are balanced throughout the planting design of the boulevard planting areas in combination with similar planting treatments on the adjacent homesites according to the Design And Construction Guidelines. A diagram of a typical boulevard planting design in two conditions is provided to illustrate how the approach will be applied to Townhouse and Single-family areas of the development.

Low water use turf may be incorporated where consistent with the adjacent landscape forms and where required for special uses. City of Missoula intersection clearance requirements must be followed. A preliminary Boulevard Plant List is included.

Implementation of The Ranch Club's Boulevard Planting Design Approach will promote regionally appropriate planting design, water conservation, preservation of infrastructure and contribute to developing the desired western ranch landscape character of the development.

## NATIVE GRASSLAND PLANT LIST

TREES		HABITAT TYPE
Water Birch	<i>Betula occidentalis</i>	Other
Paper	<i>Betula papyifera</i>	Other
Douglas Hawthorn	<i>Crataegus douglasii</i>	Other
Rocky Mt. Juniper	<i>Juniperus scopulorum</i>	Pinpon
Ponderosa Pine	<i>Pinus ponderosa</i>	Pinpon
Aspen	<i>Populus tremuloides</i>	Other
Douglas Fir	<i>Pseudotsuga menziesii</i>	Pinpon
SHRUBS & GROUND COVERS		HABITAT TYPE
Rocky Mt. Maple	<i>Acer glabrum</i>	Pinpon
Serviceberry	<i>Amelanchier alnifolia</i>	Pinpon
Kinnikinnick	<i>Arctostaphylos uva-ursa</i>	Pinpon
Sage	<i>Artemesia cana</i>	FESC-AGSP
Fringed Sage	<i>Artemesia frigida</i>	FESC-AGSP
Sage	<i>Artemesia ludoviciana</i>	FESC-AGSP
Sagebrush	<i>Artemesia tridentata</i>	FESC-AGSP
Oregon Grape Holly	<i>Berberis repens</i>	Pinpon
Curleaf Mt. Mahogany	<i>Cercocarpus ledifolius</i>	Other
Rubber Rabbitbrush	<i>Chrysothamnus nauseosus</i>	FESC-AGSP
Green Rabbitbrush	<i>Chrysothamnus viscidiflorus</i>	FESC-AGSP
Red Twig Dogwood	<i>Cornus stolonifera</i>	Other
Common Juniper	<i>Juniperus communis</i>	Pinpon
Juniper	<i>Juniperus horizontalis</i>	Pinpon
Mock Orange	<i>Philadelphus lewesii</i>	Other
Chokecherry	<i>Prunus virginiana</i>	Pinpon
Antelope Bitterbrush	<i>Purshia tridentata</i>	Other
Yellow Flowering Currant	<i>Ribes aureum</i>	Other
Skunkbush Sumac	<i>Rhus trilobata</i>	Other
Wild Rose	<i>Rosa arkansana</i>	FESC-AGSP
Greasewood	<i>Sarcobatus vermiculatus</i>	FESC-AGSP
Silverleaf Buffaloberry	<i>Shepherdia canadensis</i>	Other
Spirea	<i>Spirea betulifolia</i>	Pinpon
Snowberry	<i>Symphoricarpos albus</i>	FESC-AGSP
Yucca	<i>Yucca filamentosa</i>	Other

## NATIVE GRASSLAND PLANT LIST

GRASSES & FORBS		HABITAT TYPE
Western Wheatgrass	<i>Agropyron smithii</i>	FESC-AGSP
Bluebunch Wheatgrass**	<i>Agropyron spicatum</i>	Pinpon
Pussytoes	<i>Antennaria rosea</i>	FESC-AGSP
Sandwort	<i>Arenaria congestis</i>	FESC-AGSP
Aster	<i>Aster campestris</i> , spp.	FESC-AGSP
Balsamroot	<i>Balsamorhiza sagittata</i>	Pinpon
Carex	<i>Carex filifolia</i>	FESC-AGSP
Cerastium	<i>Cerastium arvense</i>	FESC-AGSP
Hairy Golden Aster	<i>Chrysopsis villosa</i>	FESC-AGSP
Basin Wildrye	<i>Elymus cinereus</i>	Other
Cutleaf Daisy	<i>Erigeron compositus</i> , spp.	FESC-AGSP
Sulfur Buckwheat	<i>Erigonum umbellatum</i> , spp.	FESC-AGSP
Idaho Fescue*	<i>Festuca idahoensis</i>	FESC-AGSP
Rough Fescue***	<i>Festuca scabrella</i>	FESC-AGSP
Prairie Smoke	<i>Geum triflorum</i>	FESC-AGSP
Juncus	<i>Juncus balticus</i>	FESC-AGSP
Prairie Junegrass*	<i>Koeleria cristata</i>	FESC-AGSP
Gayfeather	<i>Liatris pinctata</i>	FESC-AGSP
Bisquitroot	<i>Lomatium triternatum</i>	FESC-AGSP
Silky Lupine	<i>Lupinus sericeus</i>	FESC-AGSP
Penstemon	<i>Penstemon</i> , spp.	FESC-AGSP
Green Needlegrass*	<i>Stipa comata</i>	FESC-AGSP



## BOULEVARD & NATIVE & ADAPTED TRANSITION PLANT LIST

TREES		H x W
Rocky Mt. Maple	Acer glabrum	20'x12'
Northwood Red Maple	Acer rubrum 'Northwood'	40'x25'
Hot Wings Tartarian Maple	Acer tartaricum 'GarAnn'	15'x12'
Pattern Perfect Tartarian Maple	Acer tartaricum 'Patdell'	15'x12'
Lustre Allegheny Serviceberry	Amelanchier laevis 'Rogers'	20'x12'
	Amelanchier x grandiflora	
Autumn Brilliance Serviceberry	'Autumn Brilliance'	20'x20'
Thornless Cockspur Hawthorn	Crateagus crusgalli var. inermis	15'x15'
Toba Hawthorn	Crateagus x mordensis	15'x15'
Spring Snow Crab	Malus 'Spring Snow'	15'x15'
Sugar Thyme Crab	Malus 'Sugar Thyme', spp.	15'x12'
Bristlecone Pine	Pinus aristata	15'x12'
Limber Pine	Pinus flexis	30'x15'
Korean Pine	Pinus koraiensis	30'x15'
Canada Red Chokecherry	Prunus virginiana 'Schubertii'	15'x15'
Burr Oak	Quercus macrocarpa	50'x30'
Showy Mt. Ash	Sorbus decora	20'x20'
Redmond Linden	Tilia americana 'Redmond'	60'x30'
Littleleaf Linden	Tilia cordata 'Greenspire'	50'x30'

## BOULEVARD & NATIVE & ADAPTED TRANSITION PLANT LIST

SHRUBS, GROUND COVERS, PERENNIALS & GRASSES		HxW
Serviceberry	Amelanchier alnifolia	8'x8'
Pussytoes	Antennaria rosea	2"x1'
Columbine	Aquilegia, spp.	1-2'x2'
Kinnikinnick	Arctostaphylos uva-ursa	6"x6'
Fringed Sage	Artemesia frigida	2'x2'
Powis Castle Sage	Artemesia 'Powis Castle'	1'x3'
Curleaf Mt. Mahogany	Cercocarpus ledifolius	8'x8'
Rubber Rabbitbrush	Chrysothamnus nauseosus	4'x6'
Red Twig Dogwood	Cornus stolonifera	8'x8'
Larkspur	Delphinium, spp.	1-2'x2'
Tufted Hairgrass	Deschampsia caespitosa	3'x2'
Basin Wildrye	Elymus cineris	6'x4'
Blue Oatgrass	Helictotrichon sempervirens	3'x3'
Daylilly	Hemerocllis	2'x2'
Common Juniper	Juniperus communis	2'x6'
Horizontal Juniper	Juniperus horizontalis	1'x8'
Lavender	Lavendula, spp.	2'x3'
Peony	Paeonia spp.	2'x3'
Russian Sage	Perovskia atriplicifolia	3'x3'
Mock Orange	Philadelphus lewesii	6'x4'
Western Sand Cherry	Prunus besseyi	6'x8'
Nanking Cherry	Prunus tomentosa	8'x8'
Antelope Bitterbrush	Purshia tridentata	4'x6'
Gambel Oak	Quercus gambelli	12'x8'
Low Grow Sumac	Rhus aromatica 'Grow Low'	2'x8'
Skunkbush Sumac	Rhus trilobata	4'x4'
Sedum	Sedum, spp.	0-2'x1'
Spirea	Spirea betulifolia	3'x3'
Nippon Spirea	Spirea nipponica 'Snowmound'	4'x4'
Snowberry	Symphoricarpos albus	3'x4'
Lilac	Syringa, spp.	12'x8'
Creeping Thyme	Thymus, spp.	0'x1'
Yucca	Yucca filamentosa	2'x3'

## SEED MIXES

### **NATIVE GRASS SEES MIX**

#### **SEEDING RATE 15#/ACRE DRILL, 30 #/ACRE BROADCAST & HYDROSEED**

Agropyron smithii 'Rosanna', Western Wheatgrass:	4 lb./acre
Agropyron spicatum, Bluebunch Wheatgrass:	5 lb./acre
Koeleria cristata, Prairie Junegrass:	1 lb./acre
Festuca scabrella, Rough Fescue	3 lb./acre
Poa sandbergii, Sandberg Bluegrass:	1 lb./acre
Festuca idahoensis, Idaho Fescue	1 lb./acre

### **ALTERNATE NATIVE GRASS SEED MIX**

#### **SEEDING RATE 24#/ACRE - HYDROSEED**

Agropyron smithii 'Rosanna', Western Wheatgrass:	10 lb./acre
Agropyron spicatum, Bluebunch Wheatgrass:	6 lb./acre
Festuca idahoensis, Idaho Fescue:	4 lb./acre
Poa sandbergii, Sandberg Bluegrass:	3 lb./acre
Puccinella distans 'Fults', Alkaligrass:	1 lb./acre

### **WET / DRAINAGE AREA SEED MIX 29 POUNDS TOTAL PER ACRE FOR DRILL SEEDING REDUCE RATE BY 50%**

Agropyron elongatum, Tall Wheatgrass:	6.5 lb./acre
Agropyron smithii 'Rosanna', Western Wheatgrass:	6 lb./acre
Carex nebraskensis, Nebraska Sedge:	0.5 lb./acre
Elymus canadensis, Canada wildrye:	5 lb./acre
Elymus cinereus, Basin Wildrye:	5 lb./acre
Festuca arundinacea, Tall Fescue:	6 lb./acre

### **FESCUE LAWN MIX**

34% Chewings Fescue
34% Hard Fescue
32% Canada Bluegrass

## HABITAT TYPE PLANT LIST

### SHRUBS & GROUND COVERS

### GRASSES & FORBS

### BARE SOIL & ROCK

### AVERAGE 5% COVERAGE

### AVERAGE 80% GRASSES & 12% FORBS COVERAGE

### AVERAGE 5-10% COVERAGE

COMMON NAME	BOTANICAL NAME	
Yarrow	Achillea millefolium	FORB
	Agropyron canium, dasystachyum	GRASS
Western Wheatgrass	Agropyron smithii	GRASS
Bluebunch Wheatgrass	Agropyron spicatum	GRASS
	Anemone patens	FORB
	Antennaria dimorpha	FORB
Pussytoes	Antennaria rosea	FORB
	Antennaria umbrinella	FORB
	Arenaria congestis	FORB
	Arnica fulgens	FORB
Sage	Artemesia cana	SHRUB
Fringed Sage	Artemesia frigida	SHRUB
Sage	Artemesia ludoviciana	SHRUB
Sagebrush	Artemesia tridentata	SHRUB
	Aster campestris, spp.	FORB
	Aster falcatus	FORB
	Astragalus miser	FORB
Balsamroot	Balsamorhiza sagittata	FORB
	Bouteloua gracilis	GRASS
Carex	Carex filifolia	GRASS
	Carex pennsylvanica	GRASS
Cerastium	Cerastium arvense	FORB
Hairy Golden Aster	Chrysopsis villosa	FORB
Rubber Rabbitbrush	Chrysothamnus nauseosus	SHRUB
Green Rabbitbrush	Chrysothamnus viscidiflorus	SHRUB
	Comandra umbellata	FORB
	Danthonia intermedia, unispicata	FORB
	Danthonia parryi	FORB
	Erigeron compositus	FORB
Cutleaf Daisy	Erigeron compositus, spp.	FORB
	Erigeron subtrinervis	FORB
Sulfur Buckwheat	Erigonum umbellatum	FORB
Idaho Fescue	Festuca idahoensis	GRASS
Sandwort	Festuca scabrella	GRASS
Prairie Smoke	Geum triflorum	FORB
	Guara coccinea	FORB
Snakeweed	Gutierrezia sarothrae	FORB
	Helictotrichon hookeri	GRASS
Coral Bells	Huechera spp.	FORB
	Juncus balticus	GRASS
Prairie Junegrass	Koeleria cristata	GRASS
Gayfeather	Liatris pinctata	FORB

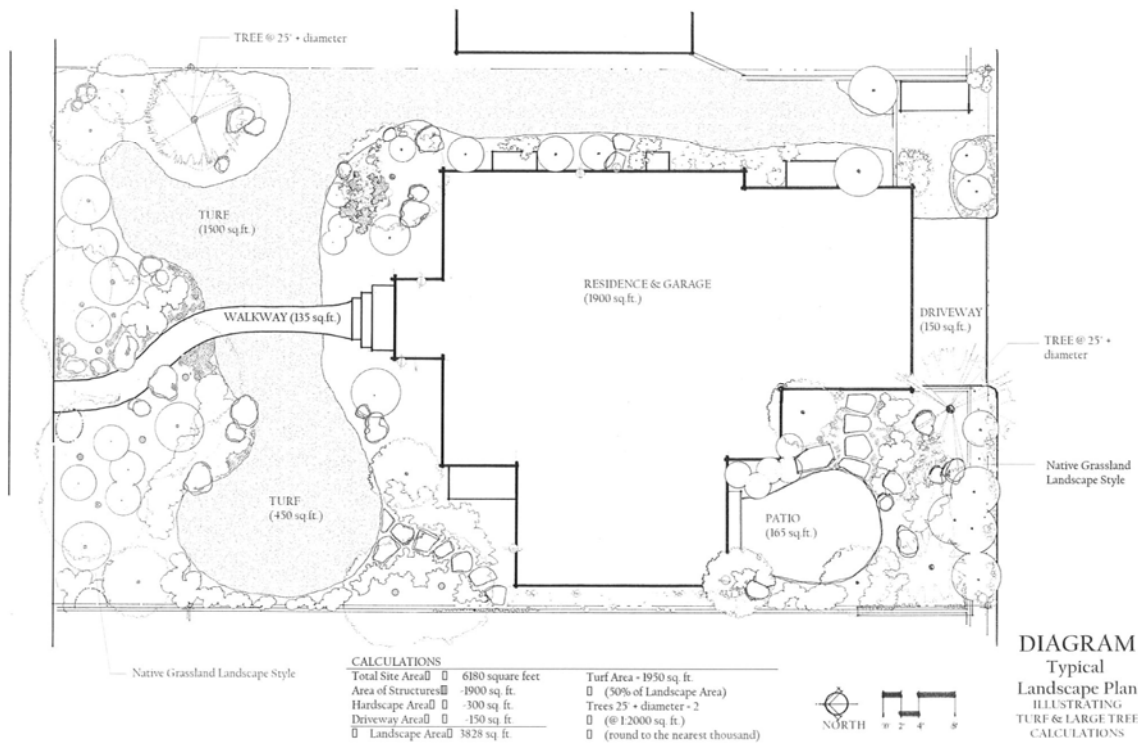
## HABITAT TYPE PLANT LIST

COMMON NAME	BOTANICAL NAME	
Bisquitroot	Lomatium triternatum	FORB
Silky Lupine	Lupinus sericeus	FORB
	Muhlenbergia cuspidata	FORB
	Penstemon, spp.	FORB
	Phlox albomarginata, hoodii	FORB
	Poa sandbergii	FORB
	Potentilla fruticosa	FORB
Wild Rose	Rosa arkansana	SHRUB
Greasewood	Sarcobatus vermiculatus	SHRUB
	Solidago missouriensis	FORB
	Sphaeralcea coccinea	FORB
Green Needlegrass	Stipa comata	GRASS
	Stipa occidentalis, spartea	GRASS
	Stipa richardsonii	GRASS









Native & Adapted  
Landscape Style

TREE @ 25' •  
diameter

Native & Adapted  
Landscape Style

FREE @ 25° +  
ameter

Native Grassland  
Landscape Style

Adjacent Golf Course- Rough

— TREE @ 25' •  
diameter

DIAGRAM  
Typical  
Landscape Plan  
ILLUSTRATING  
TURF & LARGE TREE  
CALCULATIONS

AS	AS name	AS type	Size
AS 1	United States	Global Internet Service Provider	2.7
AS 2	France	Global Internet Service Provider	1.0
AS 3	Germany	Global Internet Service Provider	1.0
AS 4	United Kingdom	Global Internet Service Provider	1.0
AS 5	Italy	Global Internet Service Provider	1.0
AS 6	Spain	Global Internet Service Provider	1.0
AS 7	Sweden	Global Internet Service Provider	1.0
AS 8	Denmark	Global Internet Service Provider	1.0
AS 9	Netherlands	Global Internet Service Provider	1.0
AS 10	Belgium	Global Internet Service Provider	1.0
AS 11	Austria	Global Internet Service Provider	1.0
AS 12	Switzerland	Global Internet Service Provider	1.0
AS 13	Portugal	Global Internet Service Provider	1.0
AS 14	Greece	Global Internet Service Provider	1.0
AS 15	Turkey	Global Internet Service Provider	1.0
AS 16	Poland	Global Internet Service Provider	1.0
AS 17	Czech Republic	Global Internet Service Provider	1.0
AS 18	Slovakia	Global Internet Service Provider	1.0
AS 19	Hungary	Global Internet Service Provider	1.0
AS 20	Slovenia	Global Internet Service Provider	1.0
AS 21	Croatia	Global Internet Service Provider	1.0
AS 22	Serbia	Global Internet Service Provider	1.0
AS 23	Bosnia and Herzegovina	Global Internet Service Provider	1.0
AS 24	Montenegro	Global Internet Service Provider	1.0
AS 25	Albania	Global Internet Service Provider	1.0
AS 26	Macedonia	Global Internet Service Provider	1.0
AS 27	Bulgaria	Global Internet Service Provider	1.0
AS 28	Romania	Global Internet Service Provider	1.0
AS 29	Bulgaria	Global Internet Service Provider	1.0
AS 30	Ukraine	Global Internet Service Provider	1.0
AS 31	Belarus	Global Internet Service Provider	1.0
AS 32	Latvia	Global Internet Service Provider	1.0
AS 33	Lithuania	Global Internet Service Provider	1.0
AS 34	Estonia	Global Internet Service Provider	1.0
AS 35	Finland	Global Internet Service Provider	1.0
AS 36	Sweden	Global Internet Service Provider	1.0
AS 37	Norway	Global Internet Service Provider	1.0
AS 38	Denmark	Global Internet Service Provider	1.0
AS 39	Germany	Global Internet Service Provider	1.0
AS 40	France	Global Internet Service Provider	1.0
AS 41	United Kingdom	Global Internet Service Provider	1.0
AS 42	Italy	Global Internet Service Provider	1.0
AS 43	Spain	Global Internet Service Provider	1.0
AS 44	Sweden	Global Internet Service Provider	1.0
AS 45	Denmark	Global Internet Service Provider	1.0
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AS 51	Greece	Global Internet Service Provider	1.0
AS 52	Turkey	Global Internet Service Provider	1.0
AS 53	Poland	Global Internet Service Provider	1.0
AS 54	Czech Republic	Global Internet Service Provider	1.0
AS 55	Slovakia	Global Internet Service Provider	1.0
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AS 58	Croatia	Global Internet Service Provider	1.0
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AS 65	Romania	Global Internet Service Provider	1.0
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AS 94	Slovenia	Global Internet Service Provider	1.0
AS 95	Croatia	Global Internet Service Provider	1.0
AS 96	Serbia	Global Internet Service Provider	1.0
AS 97	Bosnia and Herzegovina	Global Internet Service Provider	1.0
AS 98	Montenegro	Global Internet Service Provider	1.0
AS 99	Albania	Global Internet Service Provider	1.0
AS 100	Macedonia	Global Internet Service Provider	1.0

### CALCULATIONS

Total Site Area	11,725 square feet	Turf Area - 0 sq. ft.
Area of Structures	2,944 sq. ft.	0 (0% of Landscape Area)
Hardscape Area	837 sq. ft.	Trees 25" diameter - 3
Driveway Area	850 sq. ft.	0 (@ 1,000 sq. ft.)
Landscape Area	7,094 sq. ft.	0 (round to the nearest thousand)





**APPENDIX E**

**DESIGN REVIEW FORMS**



# *The Ranch Club*



## **APPLICATION FORM**

Date Submitted \_\_\_\_\_

**OWNER** \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_ Fax \_\_\_\_\_

**HOMESITE NUMBER** \_\_\_\_\_

**CONTRACTOR** \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_ Fax \_\_\_\_\_

**ARCHITECT / DESIGNER** \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_ Fax \_\_\_\_\_

**SITE ENGINEER** \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_ Fax \_\_\_\_\_

**PROJECT REPRESENTATIVE** \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_ Fax \_\_\_\_\_

Proposed anticipated construction start date \_\_\_\_\_

- Design Review Fee: \$350
- Check made out to : The Ranch Club Homeowners Association, Inc.
- Submit completed form and design fee to :  
The Ranch Club Homeowners Association, Inc.  
Attention Design Review Committee  
8501 Ranch Club Road  
Missoula, Montana 59808



# *The Ranch Club*



## **REQUEST FOR INSPECTION AND WARRANTY OF COMPLIANCE FORM**

We request inspection of \_\_\_\_\_

HOMESITE NUMBER \_\_\_\_\_

I warrant and certify that my home is in compliance with what was submitted and approved by the Design Review Committee.

Dated \_\_\_\_\_

Owner Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_ Fax \_\_\_\_\_

Dated \_\_\_\_\_

Owner Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_ Fax \_\_\_\_\_



# *The Ranch Club*



## **NON-LIABILITY OF DESIGN REVIEW COMMITTEE, DECLARANT, ASSOCIATION, AND OWNER**

Neither the Design Review Committee, any member thereof, the Association, nor the Declarant, nor the prior Owner of the Homesite, nor their respective successors or assigns, shall be liable for any loss, cost, claims, injury, damages or liability sustained or incurred to anyone submitting drawings or specifications to them for approval, or to any Owner or other person resulting from or arising out of any conduct or event, by reason of mistake in judgment, or nonfeasance arising out of or in connection with the approval or disapproval or failure to approve any drawings or specifications by the DRC to the fullest extent permitted by the law. By submission of such drawings and specifications for approval, an Owner agrees that he or she will not bring any action or suit against the DRC, any member thereof, the Association, the Declarant, or the prior Owner of the Homesite. Approval of a submittal shall not be deemed to be a representation or warranty that the Owner's drawings or specifications or the actual construction of a residence or other improvement complies with applicable governmental ordinances or regulations. It shall be the sole responsibility of the Owner or other person submitting drawings or specifications to the DRC or performing any construction to comply therewith.

Copies of any newly adopted amendment to these Design And Construction Guidelines shall be available to each Owner or Lessee after adoption by the DRC. The DRC shall compile all Design And Construction Guidelines at some location easily reviewable by the Owner and keep them with the Association books and records.

Dated this \_\_\_\_\_ Day of \_\_\_\_\_, 2007

### **DECLARANT**

The Ranch Club, LLC  
A Montana Limited Liability Company

By \_\_\_\_\_

Name \_\_\_\_\_

Title \_\_\_\_\_

With Full LLC Authority

### **OWNER'S ACKNOWLEDGMENT OF**



# *The Ranch Club*



## **RECEIPT OF UNDERSTANDING OF DESIGN AND CONSTRUCTION GUIDELINES AND ALL ATTACHMENTS FOR THE RANCH CLUB**

I have received a copy of the Design And Construction Guidelines and all of the attachments for The Ranch Club. I understand that I am responsible for reading and understanding the Design And Construction Guidelines and all of the attachments contained therein. I further understand that the interpretation and implementation of all Design And Construction Guidelines and attachments are within the sole discretion of the Design Review Committee, and that the Design Review Committee has final approval in all matters related to the design of residences and improvements within The Ranch Club. Furthermore, I understand that the Design Review Committee has the discretion and authority to amend or revoke any Design Guideline contained herein, or to add to these Design And Construction Guidelines in the Design Review Committee's sole discretion.

Dated \_\_\_\_\_

Owner Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_ Fax \_\_\_\_\_

Dated \_\_\_\_\_

Owner Signature \_\_\_\_\_

Printed Name \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Email \_\_\_\_\_ Fax \_\_\_\_\_





## 8-30-12 Amendment to The Ranch Club Design Review Guidelines

Welcome to The Ranch Club! In an effort to minimize the expense and time of the property owner, the following are amendments to the Design Review Guidelines.

1. Section 1 Introduction, Page 2: Delete indoor tennis facility at the end of Paragraph 3.
2. Section 2.3 Review Process, Page 7: Delete “we would encourage Owners to allow three months for the entire review process” at the beginning of paragraph 3.
3. Section 2.5 The Conceptual Plan Submittal, Page 9: After the second sentence in the second paragraph, Insert: submission of plans via pdf file is strongly encouraged. In 2.5.2. Delete 1<sup>st</sup> sentence and Insert: “Parcel survey by a licensed surveyor or civil engineer, is highly recommended and shall include:” Delete fifth bullet point (contours). Under “Site Plan at 1”=20’0”, Delete in 1<sup>st</sup> bullet point “existing topography and”.
4. Section 2.6 Final Submittal, page 10: strike paragraph 1 and 2 and line items 1 through 7. All site plans, parcel surveys, floor plans, roof plans and elevations may be submitted in PDF format to the DRC. If initial and final paper plans are submitted, they will be returned and not held by the DRC.
5. Section 2.6 Landscape Submittal Review and Approval, Page 10: Delete: “Sample Material Board” and Insert: Sample materials (to include material and color) may be submitted by cut sheets. A sample board is not required. Under Exterior Lighting, Delete: “at 1:20 minimum” and Insert should be delineated on the plan.
6. Section 3.7.1 Planting, Page 19: Delete: “Minimum caliper for new deciduous trees shall be one and a half inches, with fifty percent having a caliper size over two inches. Insert: “Minimum caliper for new deciduous trees shall be one and a quarter inches for deciduous trees.” at the end of the last paragraph.
7. Section 3.7.1 Soil Amendment, Page 20: six inches of top soil for native and/or non-native plantings is recommended.  
.
8. Section 4.2.3 Roofs, Page 27: In the 3<sup>rd</sup> Sentence of the 1<sup>st</sup> Paragraph Delete: “A primary roof pitch between 7:12 to 12:12 will be required while a secondary roof pitches shall not be less than a 4:12 pitch.” Insert: A primary roof pitch of 6:12 will be required while secondary roof pitch shall not be less than 4:12.

Other items of concern will be dealt with on a case by case basis. We look forward to having you as a member of The Ranch Club Community.



Enacted this 30<sup>th</sup> day of August 2012

By: FIRC, LLC:

By: Thomas E. Butorac, Manager

August 29, 2012

Thomas Butorac, FIRC, LLC Manager