

ARMSTRONG PARK

* In addition to the normal building permit requirements, some additional items are required for construction in the Armstrong Park Subdivision.

* Each building permit shall include a drainage plan. The drainage plan shall be stamped by a professional engineer and include the following:

1. Design contours.
2. Identification of water flow on drawing.
- ✓3. Groundwater problems and solutions (the engineer may wish refer to the HCI Geotech report.)
4. Slope stabilities - submission of the completed checklist CDA-AP-1 will meet this requirement.
- ✓5. Erosion control - the engineer needs to specify the methods to be used to attenuate erosion problems. He may wish to reference the landscape plan for this.

* Items 3, 4 and 5 may be discussed either on the drawing or by an accompanying stamped letter from the engineer.

** Prior to inspection by the Building Department, the appropriate areas of attached form CDA-AP-1 will have to be completed by an engineer and available on the job site.



CITY OF COEUR D'ALENE

PUBLIC WORKS DEPARTMENT

CITY HALL - 710 MULLAN
COEUR D'ALENE, IDAHO 83814
208/667-9533

IMPORTANT NOTICE TO ARMSTRONG PARK PERMITEES

Because soil conditions vary from one region to another it is sometimes important to modify the design and construction practices and requirements to coincide with those differences. To ensure that your particular project runs as smoothly as possible it is important that you acquaint yourself with certain requirements peculiar to Armstrong Park. Included among them are:

Foundation plans for all buildings are required to be stamped by a professional engineer and designed by him for compliance consistent with the recommendations contained in the geotechnical report by Howard Consultants, Inc. dated January 30, 1989. In addition, verification of various inspections and activities identified in the above mentioned report and a letter from Howard Consultants, Inc. dated May 22, 1989 are required by an engineer per letter attached. To assist you we have provided a copy of form #CDA-AP-1, which is a check list of items some, or many of which, may apply in your particular situation necessitating engineer certification.

NOTE: THE PERTINENT ACTIVITY VERIFICATION AND CERTIFICATION BY THE RESPECTIVE ENGINEER ARE A PREREQUISITE TO A BUILDING INSPECTORS ACCEPTANCE OF FOOTINGS AND FOUNDATIONS. IF YOU HAVE ANY QUESTIONS PERTAINING TO THE SITE PREPARATION AND FOOTING AND FOUNDATIONS INSPECTIONS AND REQUIREMENTS PLEASE CALL THE BUILDING DEPARTMENT AT 667-9533 OR STOP BY CITY HALL BETWEEN 8:00 AND 5:00 MONDAY THRU FRIDAY. WE WILL BE HAPPY TO ASSIST YOU IN UNDERSTANDING ALL OF THE REQUIREMENTS.

HCI Howard Consultants, Inc.
Consulting Geotechnical Engineers & Geologists
11100 Airport Drive #7, Hayden Idaho 83835 208-772-2428

May 22, 1989

J-U-B Engineers, Inc.
2005 Ironwood Parkway
Coeur d'Alene, Idaho 83814

Attention: Mr. James R. Coleman, P.E.

RE: Construction Monitoring
Armstrong Park Subdivision
Coeur d'Alene, Idaho

Gentlemen:

The purpose of this letter is to clarify recommendations presented in our geotechnical engineering evaluation report dated January 30, 1989. This letter is a follow-up to the meeting of May 19, 1989 between Roger Lewerenz and Mike Jacobs of the City of Coeur d'Alene, Roger Stewart of Stewart Construction and myself.

Proof rolling should take place in slab-on-grade floor areas and pavement areas. Proof rolling should be observed by an engineer, engineering geologist or experienced engineering technician. It is not practical to proof roll pipe trenches or footing trenches. The trench bottoms should be compacted in accordance with the recommendations in our report. Soft, wet or loose soil will be apparent because it will not compact. This soil should be excavated to minimize the potential for differential settlement.

The areas which will support structures, slab-on-grade floors, pavement or structural fill should be compacted to a minimum of 92% of the maximum dry density as determined by ASTM D-1557. The on-site soils, with the exception of clay, are suitable for re-use as structural fill. The fill should be approved by the design engineer prior to placement. If the soil differs from those described in our report, a geotechnical engineer should evaluate the soil before it is used as structural fill. Compaction testing should be performed by an engineer, engineering geologist or experienced engineering technician.

Non-structural fill should be compacted to at least 90% of the maximum dry density as determined by ASTM D-1557. If less than 3 feet of non-structural fill is placed, compaction tests are not required. If greater than 3 feet of non-structural is placed, one of the following two options should be chosen for compaction verification and to maintain a positive slope away from the structures:

1. Compaction tests shall be performed if greater than 3 vertical feet of fill is placed. The 3 vertical feet does not include drain rock that may be placed adjacent to buried structures.
2. The top of concrete shall be at least 12 inches above the design final grade adjacent to the structure. The design final grade adjacent to the structure should be sloped away from the structure. Fill may be placed to within 6 inches of the top of concrete to allow for settlement.

Clay is not suitable for support of structures or for re-use as structural fill. The clay should be excavated from beneath foundations, slab-on-grade floors and pavement areas. The clay may be used to construct the retention pond berms. If used in the retention pond berms, the clay should be compacted in accordance with the structural fill recommendations in our report.

Rock should be over-excavated when a structure is underlain by both rock and native soil or fill. The excavation should then be backfilled with structural. If the rock is not over-excavated, differential settlement may occur.

The foundation bearing pressures presented in our report are maximum allowable bearing pressures. Structures may be designed for lower bearing pressures but not higher ones.

A qualified civil or geological engineer should evaluate the slopes in GTU-4 prior to construction.

The design engineer should verify that the recommendations in the geotechnical engineering evaluation report are followed. If the conditions encountered during construction differ from those presented in the report, a geotechnical engineer should evaluate the conditions and provide recommendations at that time.

Sincerely,

HOWARD CONSULTANTS, INC.



Chris C. Beck, P.E.
Geological Engineer

ARMSTRONG PARK ADDITIONAL BUILDING PERMIT REQUIREMENTS

PERMIT REQUIREMENTS	ENGINEERS INITIALS	GTU-1	GTU-2	GTU-3	GTU-4
<u>A - SITE PREPARATION</u>					
1. Remove topsoil		X	X	X	X
2. Topsoil cannot be used as structural backfill		X	X	X	X
3. Proofroll slab on grade building site to engineers satisfaction	_____	X	X	X	X
4. Compact or remove soft/loose fill	_____	X	X	X	X
5. Compact slab on grade building site to 92% MDD, per ASTM D-1557	_____	X	X	X	X
6. Structural fill approved by engineer	_____	X	X	X	X
7. No clay soil for structural fill	_____	X	X	-	X
8. Compact structural fill in 6" lifts to 92% MDD per ASTM D-1557	_____	X	X	X	X
9. Compact non-structural fill in 6-12" lifts to 90% MDD per ASTM D-1557	_____	X	X	X	X

<u>B - FOUNDATIONS</u>					
10. Remove all clay	_____	X	X	X	X
11. Over excavate rock 12"	_____	-	-	X	-
12. Compact upper 12" of foundation base to 92% MDD to ASTM D-1557	_____	X	X	X	X
13. 30" Minimum footing depth below grade	_____	X	X	X	X
14. Design for 3000 PSF	_____	X	X	-	X
15. Design for 4000 PSF	_____	-	-	X	X
16. Lateral pressure limits	_____	X	X	X	X
17. Slope set backs for building	_____	X	X	X	-
18. Design basements for water drainage	_____	X	X	X	X
19. Evaluate slopes on individual basis	_____	-	-	-	X
20. Competent professional to "on site" verify above requirements	_____	X	X	X	X

ENGINEERS CERTIFICATION FOR ARMSTRONG PARK BUILDING SITE

LEGAL DESCRIPTION: LOT: _____, BLOCK _____, Armstrong Park

ADDRESS: _____

I, _____ do hereby certify that relative to the above identified lot, the permit requirements outlined on this form, that I have initialed above, conform to the applicable recommendations stated in the Geotechnical Report, dated January 30, 1989, by Howard Consultants Inc., and subsequent letter to J-U-B Engineers, Inc., dated May 22, 1989.

ENGINEERS STAMP & SIGNATURE