



3820 E. Broadway Ave.  
Spokane, WA 99202  
Tel: 509.535.8841  
Fax: 509.535.9589

Mr. Bob Frisch  
Tomlinson Black  
8205 N. Division  
Spokane, WA 99208

December 16, 2003  
(revised from July 1, 2003)

Project Number H96423

PROJECT: Falcon Ridge (formerly  
Sunset Meadows Addition)  
Five Mile Prairie  
Spokane, WA

SUBJECT: Basements

Dear Mr. Frisch,

At your request, we've prepared a summary of preliminary criteria for planning of basements for the residential subdivision based on anticipated subsurface conditions. The existing information consists of the following

- 7 borings and test pits for proposed stormwater ponds, February 2003
- 16 shallow (5') test pits for pavement subgrade classification south of Maxine Avenue, July 2002
- 21 borings and test pits for original investigation, November 1996 and March 1997

Risks of moisture related problems are inherently associated with residential basements for many reasons including

- uncertain hydrogeologic conditions
- variations in climate and precipitation
- variations in construction practices
- numerous sources of moisture including
  - water wicked by capillarity
  - vapor transmission of normal soil moisture surrounding basement
  - direct injection from surface water around foundation
  - leaking water lines
  - conveyance through permeable backfill of utilities
  - recharge from irrigation
  - inundation by regional and perched groundwater

This report only addresses the last source of moisture related risk described above from inundation by regional and perched groundwater.

*Geotechnical Engineers  
Construction Materials Testing & Inspection*

In many areas of Spokane, risks are remote due to significant depth to groundwater, lack of perching layers, and highly permeable soils. At the proposed Falcon Ridge development, we conclude that the risks range from low to high for conventional full basements with reference to the following scale.

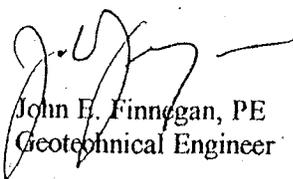
Risks	Description of Risk for Conventional Basement from Inundation By Groundwater
Remote	Problems only from significant construction deficiencies, damage, and large scale climate and/or hydrogeologic change(s)
Low	Seasonal shallow groundwater not likely to rise above depth of conventional basements even with some changes in hydrogeologic conditions
Medium	Possible shallow groundwater levels, but not anticipated under normal conditions
High	Basements likely to intercept seasonally shallow groundwater

A summary by Block of anticipated conditions and suggested preliminary criteria for planning purposes is provided in Table 1, attached. The block and lot numbers correspond with plans by CLC Associates dated 7/31/01, except that we've labeled the 11 lots at the far west end "Block 5/6" due to apparently duplicated block numbers on that plan, as illustrated in Figure 1.

Site specific evaluation is anticipated to be required by local ordinance and is warranted, in our opinion, due to the difficult and variable conditions in the area, as well as the limited existing subsurface information in many areas of the site. The criteria provided in no way comprise an endorsement of the use of basements, nor do they provide a warranty of dry basement living space. The client may reasonably expect that the criteria were developed in accordance with the generally accepted standards of geotechnical engineering practice in the area. The criteria constitute our professional opinions offered without express or implied warranties.

We appreciate the opportunity to offer this service. Please call if you have any questions.

Respectfully Submitted:  
BUDINGER & ASSOCIATES

  
John E. Finnegan, PE  
Geotechnical Engineer

JEF/gc

Addressee -2

Attachments:

- Table 1
- Figure 1

Table 1 - Basement Criteria

Block	Relief (ft)	Risk	Description	Recommended Preliminary Basement Criteria
1	9	M-H	Clay 2'-10' & limited relief	No basements other than partial or daylight that can be drained
2	15	L	Basalt or clay >13', large areas of Block unexplored (particularly W 1/2) beyond 5' depth	Shallower than 8'
3	9	L-M	No information - nearest adjacent test locations indicate possible conditions similar to Block 2	Shallower than 8'
4	23	L-M	Test locations only at east end of Block - indicate >10' to basalt & relief available for daylight basements	Daylight or shallower than 8'
5/6	46	L-M	Test locations only at south end - indicate basalt >20'	Daylight or shallower than 8'
7	21	M	Existing information only to 5' depth on south & west ends - >5' to basalt	No basements other than partial or daylight that can be drained
8	9	H	Basalt ~4' deep	No basements
9	15	H	Possible shallow basalt	No basements other than partial or daylight that can be drained
10	10	M-H	Shallow basalt or clay & little relief	No basements
11 Lots 1-24	100?	H	Shallow basalt & high relief	No basements unless daylight, excavate without blasting
11 Lots 25-32	85?	L	Basalt >14' & relief available for daylight	Daylight
11 Lots 33-40	70?	M-H	Shallow basalt & high relief	No basements except daylight, excavate without blasting
12 Lots 1-10	22	M	Basalt likely >8'	Daylight or shallower than 5' (partial), excavate without blasting
12 Lots 11-17	17	L-M	Possible shallow basalt	No basements except daylight, excavate without blasting

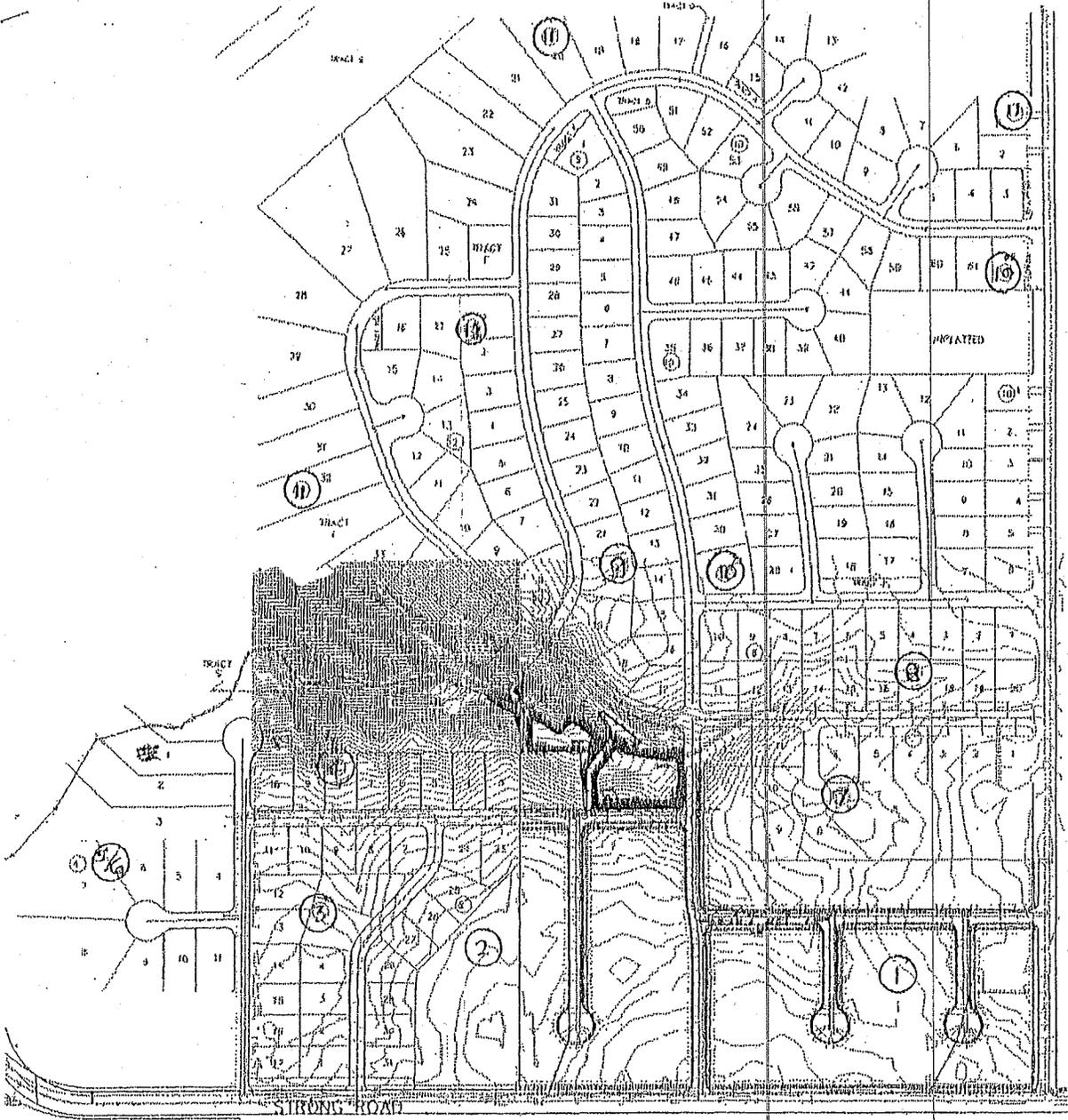
Budinger & Associates, Inc.  
 Geotechnical Engineers  
 Construction Materials Testing & Inspection

Falcon Ridge

H96423

July 1, 2003

1" = 400'  
North



Block/Lot Layout

Figure 1