



Larson Specialty Structures, Inc
5831 Hobe Lane
White Bear Lake, Minnesota 55110
651 429 5143 Fax: 651 207 8146
internetengineering@comcast.net

May 12, 2011

Persson All Renovation Co. LLC
Bill Persson
20115 Excelsior Blvd.
Shorewood, MN 55321

Re: 69 Douglas St.
St. Paul, MN
Comm. No. 8180

Dear Bill,

On May 11, 2011 I inspected the above referenced residence. The primary purpose of this inspection was to evaluate settling of two posts in the basement. There has also been some settlement and movement in other parts of the home. These issues are also dealt with below.

The house is a two story home with a concrete block foundation. There is a porch on the front of the house. There is also a brick and concrete front entry stoop area.

Post Settlement

There are two posts in the basement that have settled approximately two inches or more. There has been an attempt to shim the posts up in the past. (See Pictures # 6 & 8) The concrete floor around the posts has also settled. (See Picture # 7)

The majority of the rest of the foundation appears to be stable with no evidence of settlement except in the areas described below. The neighboring houses which are relatively close also appear to be stable. The site is a relatively flat site. These observations indicate to me the settlement under the posts is not due to any extensive underlying soils problems such as peat or a large uncompacted fill area. No soil borings or soil investigation was done however, so there is always a risk of the unknown.

The drainage around the exterior of the house is poor because of the flat site. The downspouts from the roof also do not have horizontal extensions and are dumping water right next to the foundation. The grade along the north side of the house has settled and is sloping towards the house, especially towards the west end. There was evidence of recent standing water along the west end of this area.
(See Pictures # 12- 15)

It is my opinion the settlement of the posts, and also the settlement of the areas described below, are due to the soils becoming saturated. Many clay type soils lose their bearing capacity when their moisture content is too high. The settlement conditions can be greatly improved by improving the exterior drainage conditions.

Recommendations:

- Improve Exterior Drainage Conditions.
Install horizontal extensions on downspouts to direct water as far away from the foundation as practical.
- Revise the grade along the north and west sides of the house so water is directed away from the foundation.
- Install two new footings under the posts that have settled as shown on Plan Sheet 1.
- Install two new 6 x6 treated wood posts as shown on Plan Sheet 1.
- It may be possible to raise the beam line somewhat to make the floors above more level.

Northwest Corner

The northwest corner of the house has experienced some settlement and movement. This is evidenced by the cracked stucco and cracked foundation. (See Pictures # 4, 5 & 14) There is also evidence of this movement on the interior side of the foundation. The concrete floor has also settled in this area.

In my opinion this settlement is caused by the poor drainage conditions which create conditions for the soil to lose bearing capacity. The movement we see can also be caused by frost problems generated by the poor drainage conditions.

In my opinion the settlement problems are not severe enough to warrant expensive corrective measures such as foundation replacement. It has taken many years for the house to get to this condition. If the drainage is improved it will greatly reduce the risk of further significant settlement.

Front Porch

The roof of the front porch has moved to the north and the upper portion of the porch wall is leaning to the north. (See Pictures # 1 & 3) This makes it appear as the whole house is leaning, but it is just the porch.

The entry area has also settled and tipped in the opposite direction. (See Picture # 3) The tipping of the entry area and the leaning of the porch are interrelated. Some settlement has taken place but in my opinion the conditions do not warrant an expensive repair.

The above evaluations and recommendations are made based on a limited visual inspection. No testing or invasive investigation was done. If I can be of further service please contact me at any time.

Yours truly,

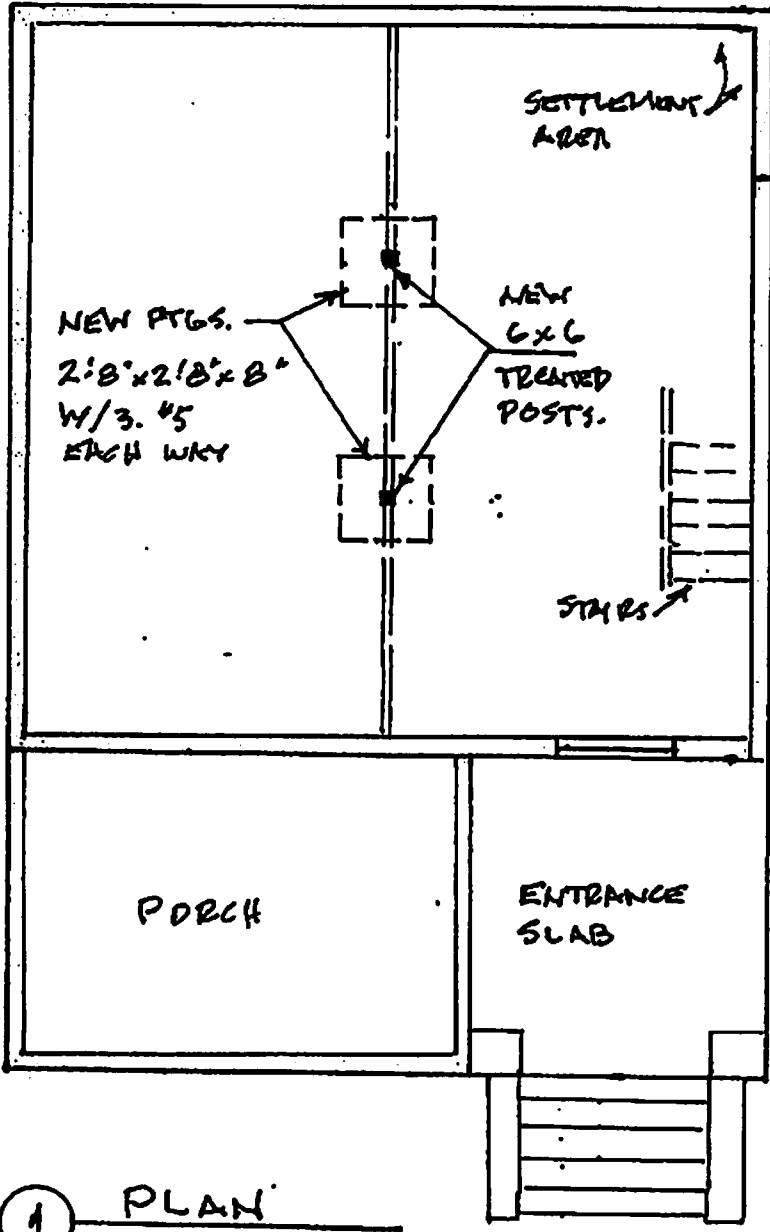
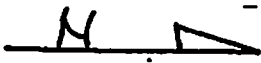

Wayne C. Larson, P.E.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Print Name: Wayne C. Larson

Signature: 

Date 5-12-2011 License # 7831



① PLAN

Larson
 Larson Specialty Structures, Inc
 5931 Kobe Lane
 White Bear Lake, Minnesota 55110
 651 429 5143 Fax: 651 207 8148
 Internet: engineering@comcast.net

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.
Wayne C. Larson
 Wayne C. Larson
 Date 5-12-2011 License # 7831

69 DOUGLAS ST.
ST. PAUL, MN.
PERSSON ALL RENOVATION
 Comm. No. 8180 | 1