

# JOB AND JOB

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November 20, 2012

Mayor & Council  
Borough of Little Ferry  
215-217 Liberty Street  
Little Ferry, NJ 07643

Re: Hurricane Sandy  
Borough of Little Ferry  
Bergen County, New Jersey

Dear Mayor & Council:

We are writing you this letter as a followup to our November 13, 2012 correspondence concerning documenting, from a "topographical" perspective, the "severity" of the flooding which occurred as a result of Hurricane Sandy.

As we indicated in that correspondence, the purpose of this documentation is to provide a "Baseline" to establish the severity of this storm, relative to the theoretical "100 Year Storm."

As also indicated in our November 13, 2012 correspondence, this is the same type of documentation our office provided following the 1992 Nor'easter and Hurricane Irene.

The High Water Elevation Tabulation included with our November 13, 2012 report, provided elevation data for the portion of the Borough south of Main Street.

However, due to "standing water" and "debris cleanup", it was not possible to obtain elevation data for the flooded areas, north of Main Street, including Frederick Street, Poplar Avenue, Kaufman Avenue, Garden Street, Brandt Street and Grand Street.

Therefore, when conditions permitted, our office obtained elevations for those areas.

As we discussed in detail in our November 13, 2012 report, the 100 Year Flood Elevation for the Borough is established, relative to "Mean Sea Level," using what is known as the "National Geodetic Vertical Datum of 1929" (NGVD29).

Therefore, the first step in documenting the severity of the flooding was to establish semi-permanent control points (benchmarks) referenced to that Vertical Datum.

These semi-permanent benchmarks were then used to set a semi-permanent control point (benchmark) on Frederick Street, Kaufman Avenue and Poplar Avenue.

As with our "original" field survey work, the three (3) additional semi-permanent benchmarks were set at an even foot.

Since our office had, as part of our original topographic survey work, established benchmarks along Main Street, it was not necessary to set additional semi-permanent benchmarks to obtain elevation data for Garden Street, Brandt Street or Grand Street.

After establishing the above referenced benchmarks, we located readily discernable "High Water" marks on the above six (6) streets and established their elevations, relative to the NGVD 29 Vertical Datum.

The flooding which impacted the Borough was the result of "tidal surge". However, from a hydrologic perspective, there were some minor differences as to the "source" of this "tidal surge".

The source of the "tidal surge" was the Hackensack River. Therefore, properties in close proximity to this waterway such as Frederick Street, Kaufman Avenue and Poplar Avenue would have more of a "direct" impact from the river proper, as opposed to other drainage areas such as along the Losen Slote. Hydrologically this means that, for areas such as these streets, that are in closer proximity to the Hackensack River, we would expect a slightly higher "High Water Elevation" than in other drainage areas.

Since Brandt Street, Garden Street and Grand Street are also from a hydrologic standpoint, primarily influenced by the Hackensack River, the "High Water Surface Elevations", for those roadways, should be "in line" with those of Kaufman Avenue, Poplar Avenue and Frederick Street.

The enclosed tabulation confirms that, in fact this was the case with the "High Water Elevations" for the above roadways, averaging 8.93' NGVD 29. As we indicated in previous correspondence, the 100 Year Flood Elevation for the Borough is 9.0' NGVD 29.

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Since, as indicated, Poplar Avenue, Kaufman Avenue, Frederick Street, Garden Street, Brandt Street and Grand Street are, from a hydrologic standpoint, primarily influenced by the Hackensack River, showing the High Water Elevations from those areas as a separate tabulation provides a "line of demarcation" for the High Water Elevations based on the tidal influence of the Hackensack River or Losen Slote.

This additional topographic survey data has been plotted on our "Base Map" which was prepared using the Borough's Tax Map.

This additional topographic survey data basically "ties in" the areas of the Borough south of New Jersey State Highway Route 46 which were flooded as a result of the tidal surge from Hurricane Sandy.

Our office is now moving forward with obtaining the same type of topographic survey documentation of the "High Water Elevations" for the portion of the Borough north of New Jersey State Highway Route 46, primarily in the Bergen Turnpike/Lakeview Avenue area.

As we indicated in our previous correspondence, the Tabulation Data and Map is available to residents of the Borough, as well as the Federal Emergency Management Agency as required.

Our office has been contacted by residents concerning the issue of the flood levels. This is due to the fact that they undertook a "clean-up" of their properties, dwellings, etc., prior to an inspection by FEMA. We were told that FEMA representatives indicated that they were having difficulty establishing the level of flooding in their particular residence.

I advised the property owners that our office had documented, topographically, the High Water Elevations throughout the Borough and that this information was available for their use.

In accordance with the discussion at the November 19, 2012 Council Meeting, our office will determine the feasibility/construction cost to install a permanent emergency standby generator for the Main Street Pump Station.

We hope to have this information available, for the week of November 26, 2012.

We will, of course, continue to keep the Governing Body advised as to the status of this matter.

Also enclosed is our voucher covering additional professional services rendered to date in connection with this storm.

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As we indicated in our previous correspondence, it is our understanding, based on our experience with similar events that these costs are reimbursable through the Federal Emergency Management Agency.

If you have any questions or require any additional information, please do not hesitate to contact me.

Yours very truly,

JOB & JOB CONSULTING ENGINEERS  
Borough Engineer  
Borough of Little Ferry



Kenneth L. Job, P.E.

KJJ:jmm

cc: Michael Capabianco, Administrator w/enclosure  
William Holley, w/enclosure  
Joseph Monaghan, Esq.

Enclosures

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**BOROUGH OF LITTLE FERRY**  
**BERGEN COUNTY, NEW JERSEY**  
**HURRICANE SANDY**  
**HIGHWATER ELEVATION TABULATION**  
**(AREAS PRIMARILY INFLUENCED BY HACKENSACK RIVER TIDAL SURGE)**

<u>LOCATION</u>	<u>HIGH WATER ELEVATION*</u>
30 Brandt Street	8.74'
41 Brandt Street	8.79'
15 Frederick Street	9.01'
35 Frederick Street	8.93'
70 Frederick Street	9.01'
67 Frederick Street	9.05'
18 Garden Street	8.82'
30 Garden Street	8.84'
22 Grand Street	8.97'
33 Grand Street	8.88'
37 Grand Street	8.97'
28 Kaufman Avenue	9.06'
27 Kaufman Avenue	9.02'
58 Kaufman Avenue	8.87'
30 Poplar Avenue	9.05'
34 Poplar Avenue	9.02'
37 Poplar Avenue	8.94'
10 Werneking Place	8.97'
36 Werneking Place	8.92'

Average Elevation High Water Mark 8.93' NGVD 29  
\*All Elevations based on N.G.V.D. 29 Datum  
Elevations established based on readily discernable "High Water Marks".

November 20, 2012

  
Kenneth J. Job, P.E., L.S.