

Members of the Hastings Planning Board  
Village of Hastings-on-Hudson  
7 Maple Avenue  
Hastings-on-Hudson, NY 10706

Re:  
Resubdivision of 196 Warburton Avenue to develop 1-family residence.

Nov 3rd, 2016

Dear Chairperson and Members of the Planning Board,

Please find attached drawing sheet A2 - neighborhood analysis and Site Drainage Report as a part of conference continuation for re-subdivision proposal of the property known as a 196 Warburton Ave. consisting of Tax Lot 17 and Tax Lot 18. Also, video presenting site condition during heavy rainstorm and path of water leaving the property can be accessed online using link below. I look forward to presenting this at the November 17, 2016 Planning Board meeting.

Thank you for your time and consideration to review our proposal.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lopinski', with a stylized, cursive script.

Tomasz Lopinski

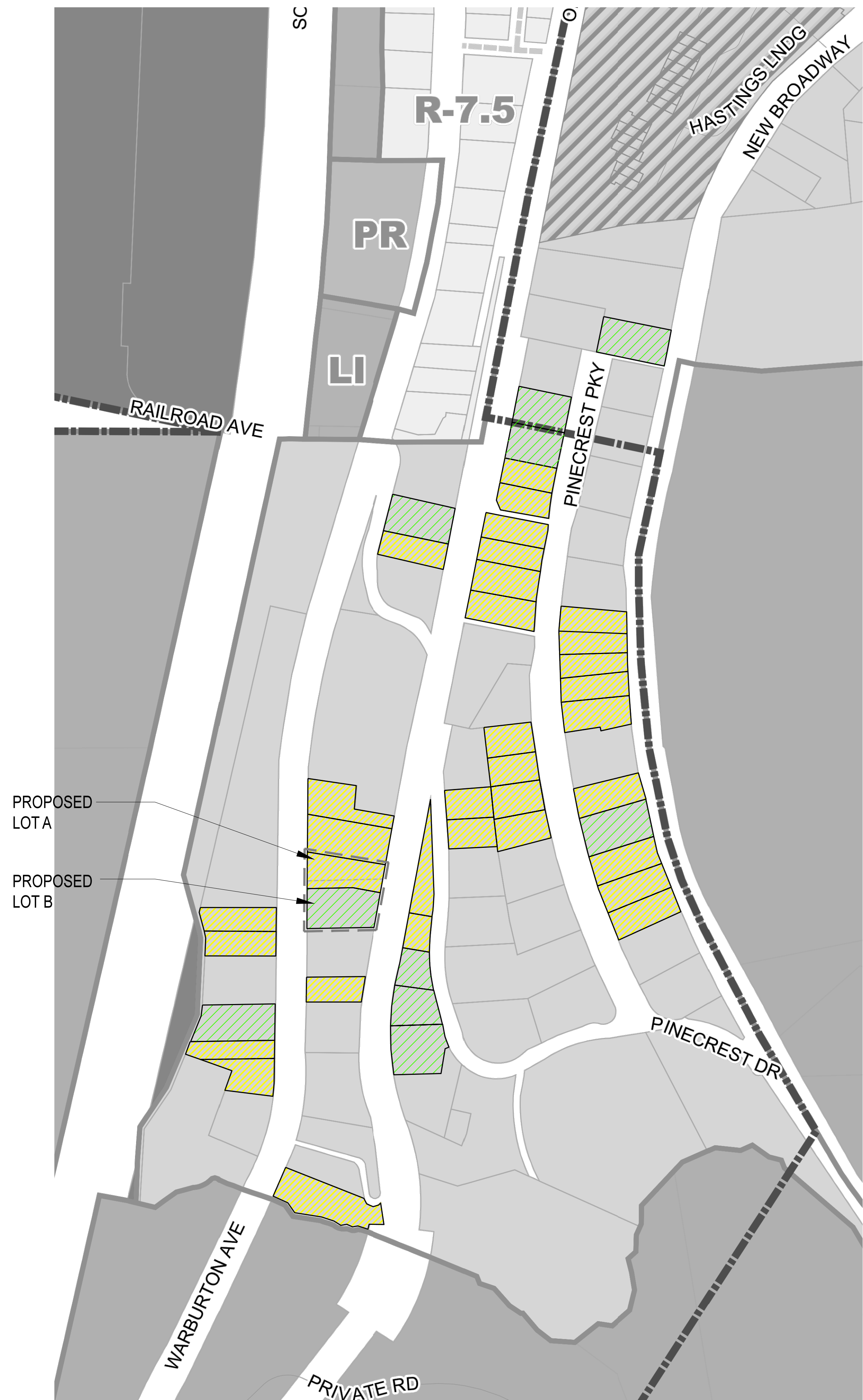
*"This is the link to the video that shows the path of water leaving the property.*

<https://drive.google.com/file/d/0BwdIUR0oehZAaVdmZFhxdFFzMlk/view?usp=sharing>

*Below is a link that shows an unusually heavy rainstorm. Please note that when this video was shot, there were still two wood board blocking 75% of the drain. Water drains even faster now that boards are removed. "*

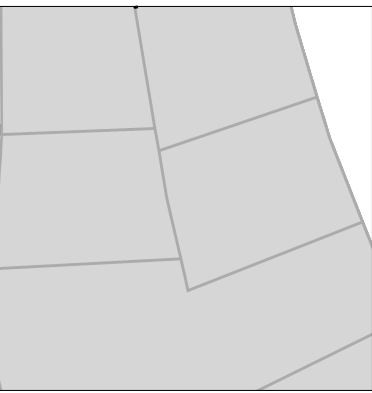
[https://youtu.be/bEbzXUx\\_rYE](https://youtu.be/bEbzXUx_rYE)

cc: Dean Wetherell, Paul Petretti

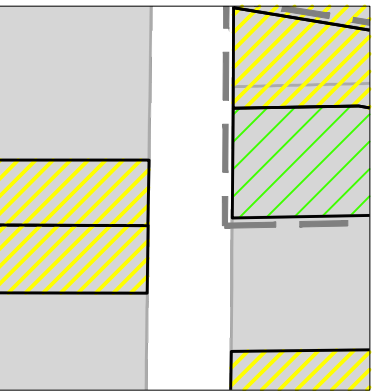


Part of the Zoning Map of the Village of Hastings-on-Hudson

LEGEND



R-10 zone conforming lots by width  
- approx. 50 % of lots in neighborhood area \*



R-10 zone non-conforming lots by width  
- approx. 50 % of lots in neighborhood area \*

- width < 75 ft.

- width > 75 ft.

\* neighborhood area - lots surrounding Warburton Ave.,  
Pinecrest Dr. and Pinecrest Pkwy.

RESUBDIVISION  
to 196 Warburton Ave.  
Hastings-on-Hudson,  
New York, 10706

PAUL J. PETRETTI  
CIVIL ENGINEER & LAND SURVEYOR  
30 GOULD AVENUE, DOBBS FERRY, NEW YORK 10522

NEIGHBORHOOD



**Paul J. Petretti**  
Civil Engineer & Land Surveyor  
Certified Wetland Delineator  
Certified Floodplain Manager

CIVIL ENGINEERING - LAND SURVEYING & MAPPING - SITE DESIGN & PLANNING  
ENVIRONMENTAL & GEOTECHNICAL - DRAINAGE & STORMWATER QUALITY  
EROSION & SEDIMENT CONTROL STORMWATER POLLUTION PREVENTION PLANS  
FLOODPLAIN MANAGEMENT & HYDROLOGY

November 3, 2016

Village of Hastings-on-Hudson  
7 Maple Avenue  
Hastings-on-Hudson, New York 10707

Attention: Kathleen Sullivan, Chairperson and Planning Board

Re: Subdivision Application of Dean L. Wetherell and Marie T. de Bethune  
Wetherell, 196 Warburton Avenue, Hastings-on-Hudson, NY 10706.

Site drainage - October 30 Soil Test Pit

Dear Chairperson and Planning Board:

We appeared before the Planning Board for a pre-application discussion of the re-subdivision of the above referenced premises. This proposal being a two lot subdivision that will create one lot for the existing residence and a new building lot; this application will require an action before the Zoning Board of Appeals for area variances.

The new lot on the east side of Warburton Avenue has a depression behind a low stone wall along line of Warburton Avenue. In the depression is a drainline that catches runoff from the steeply sloping lands that rise to the back of the lot to the right-of-way of the Old Croton Aqueduct (OCA). Along the length of the OCA we find stone culverts that catch and convey runoff under the OCA; at times significant stormwater flows have been observed and we have a video taken at the time of a heavy rainfall event to confirm this.

The drainline we find in the depression catches all the runoff from the lot and the OCA. Looking into the line we see a very clean corrugated pipe that appears to make a change to a reinforced concrete pipe at the location of the low property wall line of the lot. We assume this drainline is connected to a deep drain manhole on the west side of Warburton Avenue with an outlet at the base of a very high stone retaining wall; the base of the wall being at what was once a ravine before Warburton Road was set out.



Site drainage - October 30 Soil Test Pit

A test was made by inserting a hose in the drainline in the depression allowing water to run constantly. After a time we see water running in the open channel at the base of the high retaining wall on the west side of Warburton Avenue. This confirms that the pipe we find in the depression is connected to a working drainage system.

On October 30 Th. a test pit was made on the lot in the depressed area with a small backhoe to a depth of 6.8 feet and an in-place test to determine how well the soil will drain was made by putting a hose into the test pit. Water filled the test pit to a depth of approximately thirteen inches (13") and remained at that level as the hose continued to run constantly and the test pit did not fill and kept taking water.

The soil excavated from the test pit is a clean granular fill with a few bricks and rock with no signs of deleterious matter and not very dense.

We determined the rate to the test pit by filling a bucket with the hose to be a flow rate of 6.1 Gallons per minute. The soil is accepting water at a very high rate and using the dimensions of the test pit we calculate a soil adsorption rate (SAR) of 72.5 cf/sf/day (Cubic Feet per Square Foot Per day), which for soils in this area is a very high SAR. Soils rates for the glacially loaded soils in the Rivertowns range between a low of 1.0 to a high of 13.0 cf/sf/day.

The water that discharges from the stone culvert under the OCA at the back of the lot runs down the slope and although this flow rate is witnessed to be significant there is no visible signs of erosion of the steep slope. The existing drain line in the depression would be removed as part of the action of building a house and driveway. New drainage works would be installed, a circular stone catchments about one-third the way up the slope to catch the runoff from the OCA, a new large diameter drainline to move water from the catchment around the newly constructed house with a few drain manholes to make the necessary turns in the drainline around the house to be connected to the drainline we see at the wall along the east side of Warburton Avenue.

A drywell can be installed to accommodate the increased impervious area; however, at times when you have such a high soil rate it may be best to make a direct connection to the existing drainline.

The question raised by several board members is can we deal with the drainage aspects related to development of this new lot. Drainage issues can be addressed by the above means.

Subdivision Application of Dean L. Wetherell and Marie T. de Bethune  
Wetherell, 196 Warburton Avenue, Hastings-on-Hudson, NY 10706.

Site drainage - October 30 Soil Test Pit

We attach several photos taken at the time the test pit was made and a marked-up plan showing the existing and proposed drainage features. Should you have any further questions on this matter, please do not hesitate to call.

Very truly yours,



Paul J. Petretti, P.E., L.S., CFM

cc: C:\My Documents\VOH Projects\196 Warburton Avenue\ 196 Warburton Avenue  
Correspondence.doc  
Applicant Dean L. Wetherell and Marie T. de Bethune  
Project architect, Mr. Tomasz Lopinski

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