

CH

Chatham

7-Jan-1979

Morris Cty. FHC v. Boonton

Deposition of Robert O'Grady
re: planning and zoning for the
Twp. of Chatham, assorted expert
reports that set out percentages of
land reserved for potential multi-family
housing.

pgs = 94

CH0000435

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94

SUPERIOR COURT OF NEW JERSEY
LAW DIVISION - MORRIS COUNTY
DOCKET NUMBER: L-6001-78-P.W.

42-4270

1 MORRIS COUNTY FAIR HOUSING :
2 COUNCIL, et al, :

3 Plaintiffs :

DEPOSITION OF:

4 vs. :

ROBERT O'GRADY

5 BOONTON TOWNSHIP, et al, :

6 Defendants :

7
8
9 -----
10 December 28, 1979
Friday, 10:00 A.M.

11 2 Valley Road
12 Denville, New Jersey

13 A P P E A R A N C E S :

14 STANLEY C. VAN NESS, Public Advocate
15 BY: KEITH A. ONSDORFF, ESQ.
Attorneys for the Plaintiffs

16 MESSRS: SACHAR, BERNSTEIN, ROTHBERG, SIKORA & MONGELLO
17 BY: DANIEL S. BERNSTEIN, ESQ.
Attorneys for Chatham Township

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22 SUPERIOR COURT
MORRIS COUNTY,
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23 JAN 21 1980

24 FRANK A. HEADLEY
COUNTY CLERK
DEPUTY CLERK
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J. Crisitello
1/7/79

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PENGAD CO., BAYONNE, N.J. 07002 FORM 2046

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I N D E X

<u>Witness</u>	<u>Direct</u>
ROBERT O'GRADY	
By Mr. Onsdorff	2

E X H I B I T S

<u>No.</u>	<u>Description</u>	<u>For Iden.</u>
PO-21	Smaller copy of Exhibit 11, a zoning map for the Township of Chatham	2
PO-22	Handwritten calculations of ground coverage with impervious surfaces	42

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ROBERT O'GRADY, having been duly sworn,
testified as follows:

CONTINUED DIRECT EXAMINATION

BY MR. ONSDORFF:

Q At the last deposition in this matter,
Mr. O'Grady, I showed you a copy of a zoning map for the
Township of Chatham dated January 1979 and I believe you
identified it as identical to the zoning map which we have
as the large exhibit which we plan to use at trial. That
would be Exhibit 11.

Can you just verify that for us, again?

A Yes, that's correct.

MR. ONSDORFF: At this time, I ask that
we have this smaller copy of Exhibit 11 marked
as Exhibit 21.

(PO-21 for identification is a smaller copy
of Exhibit 11, a zoning map for the Township of
Chatham.)

Q As we discussed briefly before beginning
today, we have some very severe time constraints as a
result of the existing discovery order which indicates
the depositions will terminate on January 15, 1980.

1 You have four towns which, in essence, you acted on
2 behalf of in your capacity as a planner in this litigation,
3 and what we are going to endeavor to do is to get as much
4 of Chatham down as we can this morning and then we have
5 East Hanover scheduled for this afternoon.

6 In light of that, I'm going to bounce around and
7 cover some of your other expert reports and then try to
8 come back, if we have sufficient time. So, we may be
9 somewhat out of sequence and I apologize for that. I
10 think you understand why we have to do it that way.

11 As I indicated to your counsel, Mr. Bernstein, we
12 have filed a motion right now to get the discovery period
13 extended so we may have some opportunity to spend some more
14 time with you.

15 MR. BERNSTEIN: I just want to report for
16 the record that I'd be happy if Mr. Onsdorff deposed
17 Mr. O'Grady all day on Chatham Township, and I'd
18 be willing to set up another date before January
19 15.

20 It's not my idea to preclude you from depos-
21 ing Mr. O'Grady, vis-a-vis Chatham Township, and
22 it's the Public Advocate's decision as to whether
23 or not it wants to spend the remaining approximately
24 20 days keying in on certain towns or doing a more
25 generalized job on all of them.

O'Grady - direct

1 You can question Mr. O'Grady to your heart's content
2 on Chatham Township.

3 MR. ONSDORFF: I appreciate that.

4 Q I direct your attention to your expert report
5 of October 29, 1979 which is marked as PO-14 for identifi-
6 cation. Specifically, on Page 2 of your October 29th
7 report, in the next to the last paragraph, and I quote,
8 "It is evident from the foregoing that the Township zoning
9 regulations provide not only for substantial variety of
10 housing but also 69.8 percent of the future housing will
11 be multi-family."

12 Have you analyzed that housing to determine where
13 it will be built as far as the environmental constraints
14 on the land?

15 A In terms of where it will be built in a given site,
16 specifically within that site, no, I have not. Only in
17 terms of the properties in which the housing would be
18 located.

19 Q In your first report you indicated -- I draw
20 your attention to the October 26th report, PO-13 that,
21 "The remaining vacant land, 223.9 acres, had been designat-
22 ed for multi-family housing development."

23 Is this the land which you are now addressing in
24 terms of your second report when you talk about the 69.8
25 percent of potential future housing as being multi-family?

1 A Yes.

2 And, may I call your attention to a typographical
3 error in the last paragraph in the October 26 report. The
4 first line reads, "Remaining vacant lands are located in
5 the R-1A, R-3A, R-3B and R-3C." That should be changed so
6 that "R-1A" reads "R-2A".

7 Q In considering the potential multi-family
8 housing which you evaluated for Chatham Township, did these
9 include instances where there are options for single family
10 housing in addition to multi-family housing?

11 A Yes, they do, in all instances.

12 Q Depending upon developer's wishes and market
13 conditions, it is possible that no further multi-family
14 housing will be built in Chatham Township, is that correct,
15 pursuant to that zoning ordinance?

16 MR. BERNSTEIN: I object here.

17 I'll let him answer the question, but the
18 reason is that you could zone a property for any
19 use and due to the dictates of the marketplace, it's
20 always possible that nothing would be built. Or,
21 due to the fact that you may have a recalcitrant
22 land owner.

23 So, I don't think the question is pertinent,
24 but I will let the witness answer.

25 MR. ONSDORFF: Off the record.

1 (An off the record discussion takes place.)

2
3 A As I stated, in all instances the property owner or
4 applicant, as the case may be, would have the option of
5 either single family development or whatever form of
6 multi-family development is permitted in a given zone. And,
7 it's possible that the individual would not develop for
8 multi-family, he might not develop for single family.

9 In other words, it might remain vacant.

10 Q In those areas where a multi-family housing
11 option is permissible, have you determined or analyzed
12 whether or not the zoning ordinance, the provisions of the
13 zoning ordinance which provides for those multi-family
14 housings types, would allow for the construction of least
15 cost housing within those districts?

16 A I have not made a determination as to whether or
17 not these would allow for the construction of least cost
18 housing. I can only add that the particular zones in the
19 zoning requirements were established on the basis of the
20 maximum densities that we felt the particular areas would
21 sustain.

22 Q You indicate the Township is presently 14
23 percent multi-family dwellings.

24 Have you determined what type of multi-family
25 dwellings this 14.8 percent constitutes or represents?

1 A Yes, that 14.8 percent constitutes garden apartments.

2 Q Do any of these existing garden apartments,
3 in your opinion, provide for present least cost housing in
4 Chatham Township?

5 MR. BERNSTEIN: I offer an objection here.

6 The term: least cost housing, is not one
7 that is crystal clear and possibly Mr. O'Grady's
8 conception of least cost housing might be different
9 from the Public Advocate's conception.

10 If you're asking for Mr. O'Grady's opinion
11 based upon his conception of least cost housing,
12 that's fine. But, it's a difficult word and I just
13 want to point that out for the record.

14 Having said that, if you want him to answer
15 the question, fine.

16 MR. ONSDORFF: A clarification would be
17 appropriate.

18 Q In your view, Mr. O'Grady, for Chatham
19 Township, what would constitute least cost housing?

20 A I think, in my view, in Chatham Township and perhaps
21 for any community, least cost would be the maximum density
22 of a particular type of housing unit that would be construc-
23 ted, given the physical characteristics of the property.

24 Q Given that definition, have you or would
25 you have an opinion as to whether the existing garden

1 apartments are within your definition of least cost housing
2 for Chatham Township?

3 A From my knowledge of the two areas which contain
4 the existing garden apartments, I would say that we have
5 developed at virtually maximum density. If -- again, given
6 the physical characteristics of the particular areas, I
7 doubt that either area could sustain higher density than
8 they are presently developed for.

9 Q What is that present density?

10 A The densities differ in the two areas. One area,
11 the density is 13 garden apartments per acre.

12 The other property which I am not certain as to the
13 precise density, I think it is somewhere in the neighbor-
14 hood of six dwelling units per acre. In that particular
15 instance the development was constructed on a very steep
16 hillside.

17 Q The latter which is at six per acre, the
18 slopes of that hillside, do they exceed, to your knowledge,
19 15 percent?

20 A They do.

21 Q Are you aware of the locations of these
22 apartments?

23 A Yes.

24 Q Would you point that out on one of the exhibits
25 on the wall, whichever is most convenient for you?

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1 A Yes.

2 Using the map in the center which, I believe, is
3 PO-11 for identification, one area is the R-3C zone located
4 between Green Village Road and Southern Boulevard, and
5 bisected by Hickory Place. That is the one that is develop-
6 ed at 13 units to the acre.

7 The one developed at 6 units to the acre is a portion
8 of the R-1B zone located on the northwesterly side of
9 River Road, slightly west of Passaic Street.

10 MR. BERNSTEIN: Off the record.

11

12 (An off the record discussion takes place.)

13

14 Q The latter apartments which are found within
15 the R-1B zone, I believe you indicated that that area was
16 on a steep slope.

17 Do you know when those apartments were constructed?

18 A I believe they were constructed around 1970 or 1971,
19 give or take a year.

20 Q They are found in what you would designate
21 as an environmentally sensitive area?

22 A Yes.

23 Q Are you aware of any adverse environmental
24 consequences which have resulted from that land use in that
25 location?

1 A I'm not aware of any specific environmental conse-
2 quences.

3 Q In addition, your concern or your application
4 of densities as being a prime factor in determining the
5 least cost housing, have you considered any cost generating
6 mandates in the zoning ordinance such as requirements for
7 basements or garages or other types of additions in addi-
8 tion to living space as being pertinent, what would con-
9 stitute least cost housing?

10 A Well, I'm not sure I understand that question
11 completely.

12 Q Let me try to rephrase it.

13 Is a basement a cost generating factor in housing?

14 MR. BERSTEIN: The only objection I have here--
15 the witness can answer it, but as I understand
16 least cost housing -- and this got into my original
17 comment, everything is a cost generating factor.
18 Indeed, if you have installation, it's cost generat-
19 ing. But, I had understood least cost to be unnec-
20 essary cost generating factors.

21 If I'm not wrong, and it could be I am, then
22 your question would be pertinent about asking for
23 any cost generating factors. But, I just want it
24 on the record that you haven't asked whether or not
25 this specific item or reasonable cost generators are

1 unreasonable. And, if you want to keep the question,
2 I have no problem with it.

3 I just want to explain my objection to it
4 and let it ride.

5 MR. ONSDORFF: Okay.

6 A Well, if I can answer the question is this way:
7 certainly, an apartment unit constructed with a basement
8 would probably be more costly to construct than an apart-
9 ment without a basement.

10 In other words, a basement apartment versus an
11 apartment on a slab would be more expensive to construct,
12 I would assume.

13 Q Incorporating Mr. Bernstein's comments in
14 regards to findings of least cost housing, have you made
15 any analysis of the land use ordinances of Chatham Township
16 to evaluate requirements as to housing provisions to deter-
17 mine whether or not any cost generating requirements are
18 unreasonable or reasonable, in the sense of those reasonable
19 which are necessary to protect the health and safety of
20 the housing occupants as opposed to what would be defined
21 as unreasonable cost generating factors which are either
22 aesthetically pleasing or add to the comfort but are not
23 related to the fundamental provisions of health and safety?

24 Have you done that type of analysis in arriving at
25 your definition of least cost housing?

1 A I have not specifically evaluated the Chatham
2 Township ordinance relative to any cost generating require-
3 ments.

4 Q Again, directing your attention specifically
5 to the sites as analyzed in your October 29 report, on
6 Page 3 you have defined Site A as being within a R-3A
7 zone and you indicate that it provides or allows "quadriplex
8 dwellings as options used for single family development."

9 Could you indicate on your map where this site is
10 located?

11 A Yes.

12 Q On the exhibits on the wall ---

13 MR. BERNSTEIN: Is this Site A?

14 MR. ONSDORFF: That's correct.

15 A Site A is the R-3A zoned district located on either
16 side of Green Village Road, approximately 1,500 feet south
17 of Shunpike Road.

18 Q According to Exhibit 11, what portion of that
19 tract is vacant land?

20 A What portion of the tract or the zone?

21 Q The zone.

22 A Most of this zone on the northerly side of Green
23 Village Road is vacant. The developed portions being
24 immediately fronting properties which extend to a depth
25 of, approximately, 200 feet from the road. I believe

1 there are, approximately, 29 acres of vacant land on the
2 northerly side.

3 Q That portion which is already developed,
4 what use has it been put to?

5 A One family residences.

6 Q Have you determined whether or not or what
7 the environmental characteristics are of that portion of
8 the tract which has already been developed as one family
9 residences?

10 A Yes.

11 Generally speaking, the developed properties are
12 somewhat higher elevations than the undeveloped portion
13 and they're relatively level properties. They have some
14 greater slope than the rear undeveloped portion and the
15 soil types are more favorable to development. They have
16 relatively deep water tables, presumably.

17 Q When you say: relatively deep, have you
18 determined what the actual water table depth is on the
19 developed portion of that zone?

20 A Based upon the Morris County Soil Survey, the water
21 table would presumably be at a depth of 10 feet, possibly
22 greater.

23 Q Can you tell me what the elevation specifically
24 is at the developed portion of that zone, generally?

25 A The water table elevation?

1 Q No, the elevation.

2 A Topographic elevation?

3 Q Correct.

4 A Not specifically.

5 I would have to estimate that probably the elevation
6 is around 246-248 feet, generally in that area.

7 MR. BERNSTEIN: Is this for all the vacant
8 lands in question being asked or all of the land
9 that was developed?

10 MR. ONSDORFF: That question was limited to
11 the developed portion of the zone.

12 Q I believe you've indicated that according
13 to the HUD Flood Hazard Area Map, 64 percent of the site
14 is in a flood hazard area.

15 What is the elevation of this flood hazard area?

16 A I don't know the specific elevation of the flood
17 hazard area. It's my understanding that in delineating
18 the flood hazard area an elevation of, approximately, two
19 feet above adjoining streams is used as a general criteria
20 for making the delineation.

21 The HUD maps in this instance do not indicate an
22 elevation, as I recall.

23 Q In addition to the flood hazard which you
24 have delineated in this zone, you also indicated that 32
25 percent of the site consists of Parsippany Soils which are

1 subject to frequent flooding?

2 A Yes.

3 Q This is an area which is outside the flood
4 hazard as delineated by the HUD maps?

5 A No.

6 Thirty-two percent of the site consists of Parsippany
7 Soils and according to the HUD maps, most of the PK soils
8 are subject to flooding. Not all, but a good portion of
9 them are -- a good portion of the PK soils are subject
10 to flooding.

11 Q In your bottom line conclusion, if I can
12 describe it as that, is that it's estimated that not more
13 than 50 percent of the site is suitable for development.

14 Could you elaborate on what were the factors which
15 led you to that conclusion?

16 A Well, in one instance the HUD maps indicate that
17 64 percent of the site is flood prone and in another in-
18 stance the County Soil Survey indicates that 32 percent of
19 the site consists of Parsippany soils which have water --
20 seasonable water table depths at the surface.

21 The soil boundary and the flood hazard boundary
22 do not correspond totally, and I'm more or less averaging
23 the two in arriving at a maximum estimate of 50 percent
24 of the site that might be suitable for development, or
25 have sufficient elevation above either wetland or flood

1 hazard area, so that they could be developed.

2 Q Do the present zoning controls applicable
3 to this site limit or constrain the development of 50
4 percent which you have estimated to be suitable for develop-
5 ment?

6 A The ordinance does not specifically require or
7 confine development to the suitable areas of the site.
8 The ordinance in establishing the density for this zone
9 recognizes the flood plain and we had land conditions so
10 that through the process of site plan review the dwelling
11 units could be located and clustered in a more desirable
12 area.

13 Q If the development was clustered, what would
14 be the net density that would be achievable under the
15 present zoning provisions?

16 A Assuming, again, that 50 percent of the site is
17 suitable for development, the net density would be eight
18 dwelling units to the acre.

19 Q In viewing this eight dwelling units to the
20 acre as the appropriate density in light of environmental
21 constraints as you apparently have, what would you describe
22 that as as far as density in terms of is that a moderate
23 density, high density or is that a low density?

24 A For quadriplex or townhouse development -- and
25 quadriplex is a townhouse or has in mind a townhouse type

1 of development, I would consider that towards the high side
2 as far as a desirable density for townhouse development.

3 I think, also, that if the flood hazard area, the
4 percentage of the area that's in a flood hazard area is
5 accurate and that is 64 percent, that the net density is
6 actually greater than the eight dwelling units per acre
7 that we indicated here. Maybe more in the neighborhood
8 of ten dwelling units to the acre.

9 Q At ten dwelling units to the acre, we would
10 be netting, in your view, what would be a quite high
11 density.

12 Is that correct?

13 A Yes.

14 I think that on a net basis that about ten dwelling
15 units to the acre for townhouse development is about
16 maximum.

17 Q This is in a cluster type development which
18 respects the environmental constraints to the site and
19 limits the placement of the residential dwelling units
20 to those areas outside the boundaries of the sensitive
21 area.

22 Is that correct?

23 MR. BERNSTEIN: My objection here would be
24 that we are not just talking about the dwelling
25 units, themselves, but also the appurtenances such

1 as the driveways, paved areas, possible recreational
2 facilities which might also be in the net area that's
3 developable. So, I think the question -- when it's
4 just about buildings, is unduly narrow.

5 However, I direct the witness to answer the
6 question.

7 A Can I have the question, again?

8
9 (The Court Reporter reads the requested question:
10 This is in a cluster type development which respects
11 the environmental constraints to the site and limits
12 the placement of the residential dwelling units to
13 those areas outside the boundaries of the sensitive
14 area.

15 Is that correct?)

16
17 A Yes, that's correct.

18 I think the -- certainly, the ordinance intends that
19 through this density the dwelling units would be concentra-
20 ted and clustered in a more favorable land, and certainly
21 not all of that favorable land could be covered with
22 buildings. There has to be land around the buildings,
23 separation of buildings. There has to be room for parking
24 and circulation around the buildings.

25 Q In essence, in your analysis of this site

1 you have come down to the point where you've evaluated
2 as to the flooding and poor soil constraints and given
3 an estimate as what actual portion of that site can be
4 classified as vacant land and developable as opposed to
5 vacant and undevelopable due to the environmental constraints.

6 Is that correct?

7 A Yes, that's correct.

8 Q Again, examining that site, possibly on
9 Exhibit 12 on the wall, could you briefly indicate the
10 juxtaposition of the vacant developable portion as opposed
11 to that portion of the site which is in the environmental
12 sensitive category?

13 A Yes.

14 Would it be helpful if I were to outline it in
15 red on that map?

16 MR. BERNSTEIN: The only problem I have,
17 and the objection is that these are what is going
18 into evidence and I would like to have them clean
19 because Judge Muir -- we will have all these trans-
20 cripts. It's unlikely that he can relate the
21 transcript with certain markings you've put on the
22 maps.

23 MR. ONSDORFF: I don't want him marking the
24 map.

25 A I'm sure I can describe it.

1 The particular site we're discussing, generally
2 constitutes -- off the record.

3 I'm trying to think how I can describe it.

4 I'll outline the area we're referring to.

5 Generally speaking, it is the rear portion of the
6 site and a portion of the southwesterly section of the site
7 that falls within the flood plain. The more favorable
8 soils are located in the front of this site.

9 Q Let me see if I understand how you delineated
10 that.

11 As it appears to me, in essence the flood hazard
12 area has somewhat of a horseshoe shape, and the space in
13 the interior of that horseshoe would comprise the non-criti-
14 cal vacant developable portion of the tract with the very
15 center portion of the horseshoe being the wet soils, also
16 within the environmentally sensitive area. So, the front
17 portion of the interior of the horseshoe would be ^{the} unrestric-
18 ted portion of the tract.

19 Is that correct?

20 A That is correct, with the one exception that we'll
21 say the northerly leg of the horseshoe is located in another
22 zone.

23 In other words, we're limited -- that is the zone
24 boundary line where I'm indicating with my pen, this leg
25 being in the adjoining zone.

1 Q That was, approximately, the top of the right
2 leg of the horseshoe almost to the top where the curb begins.

3 Is that correct?

4 A That is correct.

5 Q The environmentally sensitive areas, then,
6 abut the vacant developable portion essentially of the left
7 leg with a flood area at the top with the wet soils, and
8 then the right which is in another zone -- again, with the
9 flood hazard zone. So, in essence, you have the very
10 contiguous boundary of going from vacant development direct-
11 ly into these two types of environmentally sensitive areas.

12 Is that correct?

13 A That is correct.

14 Q Mr. O'Grady, have you performed any quantita-
15 tive analyses to evaluate the adverse environmental conse-
16 quences which would flow from the development of this site
17 either for single family homes or for the quadriplex town-
18 house structures?

19 A Are you asking: have I made any quantitative analysis
20 of the environmental effects of one family development as
21 permitted by the ordinance versus quadriplex as permitted
22 by the ordinance?

23 Q There are a number of different variables
24 as to how the environmental effects can be quantified.

25 What type of environmental impacts would you envision

1 via the development of this tract?

2 A I think the environmental effects would largely have
3 to do with, obviously -- where if within the tracts the
4 development were to occur, naturally, we hope and assume
5 that the developments for the most part, if not entirely,
6 will be concentrated in the more favorable soils outside
7 of the flood prone area. Certainly, the environmental
8 effects would be much lesser in that more favorable land.
9 The water tables are deeper, the land, presumably, can
10 absorb storm water to some degree. Obviously, there will
11 be runoff from any type of development and that runoff
12 will be into the adjoining flood prone areas and high
13 water table soils.

14 Any type of runoff which collects whatever materials
15 may be on pavements or roofs would naturally go into these
16 flood prone and wet land areas and have a potential pollut-
17 ing effect to that extent. But, the intent is to minimize
18 the environmental impacts by concentrating development in
19 more favorable land.

20 Q As I understand your answer, then, you've
21 identified two potential environmental impacts, one being
22 increased flooding as a result of development and the
23 additional is potential pollution resulting from runoff
24 from developed portions of the tract.

25 Is that correct?

1 A Yes.

2 Q Have you undertaken to analyze either the
3 potential for runoff pollution or the increased flooding
4 which would occur through any senario of development of
5 this site?

6 A I have not, as far as this particular site is concern-
7 ed, attempted to evaluate the runoff of, for example, single
8 family housing versus a quadriplex under the present zone
9 requirements. I would assume that with the quadriplex at
10 four dwelling units to the acre versus single family develop-
11 ment at roughly half an acre, that the amount of runoff
12 from the quadriplex development would probably be somewhat
13 greater than for the single family development.

14 Q I don't mean to interrupt you, but because
15 of the limitation of time, rather than kind of estimating
16 or projecting now as to what the results might be of the
17 development, I'd like you to limit your response to whether
18 or not you performed any quantitative analyses in the past--

19 MR. ONSDORFF: If that's fair to ask?

20 MR. BERNSTEIN: That's fair.

21 A Relating to these sites?

22 Q That's correct.

23 A No, not related to that site.

24 Q The next site which you have described in
25 your report of October 29 is Site B, R-B3 zone which is

1 northeast of Site A.

2 Could you quickly point that out on Exhibit 11 as
3 to where this Site B is situated?

4 MR. BERNSTEIN: R-B3 zone?

5 MR. ONSDORFF: Yes.

6 A Site B lies immediately north and adjoining site A
7 and is situated on the northerly -- or northwesterly side
8 of Green Village Road and extends to Shunpike Road.

9 Q Have you determined what portion of Site B
10 is presently vacant?

11 A We've estimated that 33.2 acres are vacant. The
12 33.2 acres referred to in my letter of October 29 relates
13 to the vacant lands on the entire zone.

14 Q Have you determined, specifically, how much
15 higher this site is than Site A which we've just finished
16 discussing?

17 A I have not determined exactly how much higher, but
18 from previous referral reference to the Township topographic
19 maps, the elevation in Site B is higher or greater than
20 Site A by several feet, in most instances.

21 Q Apparently, the HUD Flood Hazard Maps have
22 delineated approximately 40 percent of the site as subject
23 to flooding.

24 Is that correct?

25 A That is correct.

1 Q Has Chatham adopted any land use controls
2 as a result of that HUD Flood delineation which governed
3 the development of this site in response to that environ-
4 mental condition?

5 A Yes.

6 If I can draw a relationship between Site A and
7 Site B, the fact that Site B has a greater percentage of
8 the area at higher elevation and outside of flood prone
9 areas than in Site A, the ordinance allows for a greater
10 density.

11 Q In addition to allowing for a greater density,
12 is there any specific land use control which endeavors to
13 limit or prohibit the construction of dwellings within the
14 40 percent of this site which has been delineated within
15 a HUD flood hazard area?

16 A No, and as I stated in connection with Site A,
17 the ordinance does not specifically limit development to
18 the more favorable areas.

19 Again, the density established recognized the
20 environmental limitations and it was assumed that through
21 site plan -- the site plan review process, the Township
22 would be able to control and regulate the location of
23 development on the site.

24 Q Has Chatham Township, to your knowledge,
25 taken any specific action in regards to the HUD Flood Hazard

1 maps except for setting densities in area zones which are
2 subject to the delineation that HUD has arrived at?

3 A To the best of my knowledge, the Township has adopted
4 in its land use ordinance limitations -- regulations relat-
5 ing to the flood hazard area along the Passaic River and the
6 flood hazard area of the Great Swamp -- to the best of my
7 knowledge, it has not developed regulations beyond those
8 areas.

9 Q You mentioned along the Passaic River and the
10 Great Swamp certain regulations have been adopted as a result
11 of the flood delineations?

12 A Yes.

13 Q Specifically, do you know what regulations
14 have been adopted pertaining to those two areas?

15 A Generally, the zoning regulations relating to those
16 areas identify the contour elevation which is known to be
17 the approximate flood level and established limitations on
18 development within those areas or below those contours.

19 Q If I understand your answer, then, the Great
20 Swamp area and the Passaic River area, the HUD delineations
21 are used as establishing the boundary of what areas can be
22 built in and what areas cannot be built in those tracts along
23 those two water bodies?

24 A Yes.

25 I don't recall -- or as I do recall, I don't believe

1 the ordinance would specifically preclude -- necessarily
2 preclude development below those contour elevations. But,
3 certainly it would require that certain provisions be made
4 in the development of those areas to avoid aggravating flood
5 conditions; to protect structures that are being built from
6 damage from flooding by requiring flood proofing measures
7 and proper location of structures; control over filling of
8 land and regulations of that nature which are frequently
9 found in flood plain zoning regulations.

10 Q As opposed to being a prohibition, what they
11 have adopted is a regulation which seeks to obviate, to
12 the greatest extent possible, the adverse environmental
13 consequences that would flow from the construction of the
14 environmentally constrained land?

15 A That's correct.

16 Q Are you aware of what type of measures --
17 you indicate, I believe in regards to flood proofing struc-
18 tures, certain measures can be taken to protect them and the
19 proper location within the flooding area can be done to
20 reduce the flood hazard. But, I don't believe you specified
21 any examples of what type measures can be taken to avoid
22 aggravating the flooding that will occur if structures are
23 put in a flood hazard area.

24 Are you aware of what type of regulations avoid
25 aggravating the increase in flood waters?

1 A Well, specifically, most regulations -- and as I
2 recall, Chatham Township's regulation also requires the
3 minimum elevation of the first floor of any structure be
4 located above the flood hazard area. And, this of course,
5 would be a protection to the health and welfare of the
6 occupants or residents by hopefully assuring that their
7 living quarters or liveable floor space would not be
8 inundated by flooding.

9 Q That certainly is a measure that goes to
10 preventing flood damage to the structure, but you indicated
11 in your answer that certain regulations were imposed to
12 prevent aggravating floods, in general.

13 What measures are included in those regulations
14 which prevent or reduce the aggravation to the flooding
15 over the land?

16 A As I recall, there's no specific requirement, only
17 that the applicant would have to demonstrate to the Township
18 and conceivably to the Department of Environmental Protection
19 which would have regulation over the flood hazard area, that
20 the applicant would have to demonstrate to their satisfac-
21 tion that the location of the structure and its type of
22 construction would not increase the potential for flooding;
23 perhaps, for example, on adjoining properties since the
24 placement of that structure in a flood hazard area would be
25 displacing water that would normally flood in that location.

1 So, it would be a matter of really performance, giving the
2 applicant the latitude -- or the opportunity to build pro-
3 vided he can provide evidence that the construction will not
4 aggravate flooding conditions.

5 Q In addition to the Great Swamp and Passaic
6 River areas, you've addressed at least two additional areas
7 in Site A and Site B which are also delineated as having
8 portions of their tracts within HUD delineated flood hazard
9 areas.

10 Do you know why Chatham Township selectively regu-
11 lated the areas of the Great Swamp and Passaic River as
12 opposed to these areas in Site A and B?

13 A In regards to the Passaic River and in regards to
14 the Great Swamp -- specifically with respect to the Passaic
15 River, there are -- there's a specific delineation of the
16 flood hazard area by contour.

17 In the Great Swamp, the elevation of 240 feet has
18 historically been known to be the water level of the swamp.
19 It's possible -- flooding would even occur above that eleva-
20 tion of 240 feet. That's the normal elevation of the swamp.

21 Beyond those areas, beyond the Passaic River and beyond
22 the Great Swamp, the Township did not receive nor do the
23 HUD maps depict specific elevations that the Township could
24 use in adopting flood plain regulations beyond those areas.

25 Q Not using contour elevations, do you know what

1 the HUD delineations depict in delineating the flood areas
2 outside of the Passaic River and Great Swamp tracts?

3 A The maps depict in the given area which can be
4 related to particular properties through scaling -- and
5 this is how the flood hazard area shown on the map outside
6 of the Great Swamp was reflected on the exhibits on the
7 wall -- but, there is no specific elevation shown on the
8 HUD maps, to the best of my knowledge.

9 Q Do you know why in the two instances the
10 flood maps produced by HUD depict contour elevations as
11 opposed to the other areas where they do not?

12 A No.

13 I can only surmise that the specific -- either a
14 specific delineation was not made or there was, perhaps,
15 a lack of historical data on areas that were flood prone.
16 And in all probability, what HUD attempted to do was to
17 estimate the extent of the flood hazard area, approximating
18 one or two feet above adjoining streams. I believe two
19 feet is the normal criteria used in making a delineation
20 where there is a lack of recorded flood data.

21 Q With reference to Exhibit 11, could you show
22 us, generally, where the Great Swamp and Passaic River
23 areas are situated on that map which have been delineated
24 with the flood plain regulations consistent with the HUD
25 contour elevation mapping which you have just related?

1 A Referring to Exhibit 11, the zoning map of the
2 Township indicates a contour elevation along the Passaic
3 River extending from the -- in this instance, from what
4 would be Fairmount Avenue to the Passaic Street at an
5 elevation of 212 feet. From Passaic Street to the Borough
6 of Chatham boundary, the flood elevation is shown at 210
7 feet. This is shown in an approximate manner on the zoning
8 map. A more precise delineation would be found on the HUD
9 map itself.

10 Q As far as vacant lands which are found at
11 or below that elevation, are there any vacant lands which
12 are currently zoned for residential uses?

13 A Yes.

14 In the area I just described, all of the properties
15 are zoned for residential development or uses.

16 Q All the vacant lands?

17 A All of the vacant lands within that flood hazard
18 area are zoned for residential uses.

19 Q What residential uses are permissible in
20 those zones?

21 A Depending upon area, both single family development
22 and townhouse development.

23 Q I am sorry, I believe you also were going to
24 depict or show where the Great Swamp contoured delineations
25 have been established within Chatham Township?

1 A The map does not indicate the 240 feet elevation
2 of the Great Swamp. I would say that the best indication
3 would be on Exhibit PO-12 which shows the extent of the
4 240 foot contour elevation being the outer edge of the
5 blue color.

6 I should note that a portion of the wet soils shown
7 down north of Meyersville Road would also fall within that
8 blue area. And, I believe that probably our drafting
9 department in rushing to get some exhibits prepared for
10 these depositions overlooked including that portion of the
11 Great Swamp flood elevation in those wet soil areas north
12 of Meyersville Road.

13 MR. BERNSTEIN: Will that be done prior to
14 the trial?

15 THE WITNESS: Yes, we will make sure that
16 all of these exhibits reflect the proper information.

17 Q Just let me ask one more question in regards
18 to this Great Swamp area.

19 Are any of these lands which may be vacant or are
20 vacant zoned for residential uses within or below the
21 contour elevation as delineated by the HUD maps?

22 MR. BERNSTEIN: Are you talking about all
23 residential uses?

24 MR. ONSDORFF: Yes.

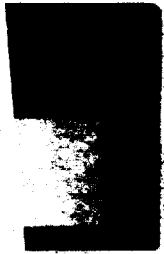
25 MR. BERNSTEIN: You're talking about properties

O'Grady - direct

that may have some in the flood hazard areas and some that may not be?

MR. ONSDORFF: Correct.

A I would say that on virtually all of the flood hazard areas in the Township are situated within, for the most part, within residential zones, with some minor exception on Southern Boulevard in the vicinity -- or including portions of the P.I. and excluding also the Great Swamp, itself, the National Wildlife Reserve property, which is simply designated as a wilderness area district, all of the land within that district being owned by the federal government.



Q I'm sorry, Mr. O'Grady. My question was specifically addressed to the Great Swamp area, alone.

Are any of the areas which are below, or at the flood contour elevation as delineated by HUD, are these vacant lands which are zoned for residential development?

A Yes.

Most of the vacant land adjoining the National Wildlife Reserve which fall below the elevation of the Great Swamp are zoned for residential uses.

Q Can you tell us what housing types ^{are} permitted within those areas?

A For the most part, one family dwellings.

Q In regard to both Site A and Site B, have you personally inspected either one of these tracts of land?

1 A Yes, I have.

2 Q When would that have been?

3 A I would say that I have inspected those properties
4 on various occasions from the late 1950's to the present.

5 Q Have you observed flooding at those sites?

6 A I have not -- I have never inspected those sites
7 during a flood period. I have observed wetland conditions
8 and surface waters at various times in portions of those
9 areas.

10 Q As pertaining to Site B, the environmental
11 constraint which you've identified appears to be limited
12 to the flood hazard as defined by the HUD maps.

13 Is that accurate?

14 A Yes, for the most part -- well, a portion of Site B
15 does contain wetland soils. Most of the wetland soils
16 with only one minor exception is in a flood hazard area.

17 Q Directing your attention to your Exhibit 12
18 which depicts the environmentally critical as opposed to
19 the unrestricted vacant developable lands, could you describe--
20 and take your time -- the limitations as reflected on that
21 exhibit for Site B, how the vacant developable portion is
22 bounded by the environmentally sensitive areas?

23 A The developable portion of the site, for the most
24 part, covers the more southeasterly section of the site
25 nearest Green Village Road and a portion of the site

1 immediately adjoining Shunpike Road. The rear portions
2 of the site extending beyond those developable areas from
3 both streets is located within the flood hazard area.

4 Q If I understand your answer correctly, the
5 area closest to Green Village Road is bounded to the rear
6 immediately -- it's immediately adjacent to a flood hazard
7 area all along its rear boundary.

8 Is that correct?

9 A That's correct.

10 Q And the portion at the northeast corner of
11 the site is sort of finger-shaped, and at its southerly
12 terminus is bounded by a flood hazard area, and to its
13 western boundary it is adjacent to a wet soil condition
14 area.

15 Is that correct?

16 A Generally, that's correct.

17 Q Have you determined what portions of this
18 site comprise the environmentally constrained land as
19 opposed to the unconstrained or vacant developable portions?

20 A Well, generally, we've estimated that approximately
21 40 percent of the site is subject to flooding and would
22 have environmental constraints as a result. That's the
23 minimum of 40 percent. But, I would say, fairly close.

24 Q Recalling your earlier answer, you indicated
25 that 33 acres were vacant. So, out of the 33 vacant acres,

1 we're talking about, approximately, 12 to 15 then would be
2 constrained as opposed to the remaining 18 or so which would
3 be not subject to such environmental constraints?

4 A That's correct --

5 I am sorry, what was the number you gave me?
6 12 to 15, did you say?

7 Q That's correct.

8 That would be your estimate of --

9 A Approximately, yes.

10 In other words, approximately 20 acres -- I would
11 say, probably, 13, is a good round number to use in this
12 instance as being environmentally sensitive.

13 Q Thirteen acres as environmentally sensitive?

14 A Right.

15 Q If the development is limited to that and
16 clustered in the unrestricted areas, we would get a density
17 of, approximately, what? A net density.

18 A Well, I've estimated here in my report a net density
19 of, approximately, 10 dwelling units per acre assuming that
20 60 percent of the site would be favorable for development.

21 Q You also conclude that that is quite a high
22 density for land considering the needs for the various
23 roadways and other appurtenances that go along with the
24 development.

25 Is that correct?

1 A I would consider that to be correct.

2 I think we have to not only look at the percentages
3 of a site that may have critical dimensions, but we also
4 have to look at the location and configuration of the lands
5 suitable for development.

6 In this instance, for example, within the zone,
7 there are two areas -- two separated areas that appear
8 to be favorable for development, separated by a flood
9 hazard area so that there's a loss of efficiency over a
10 site where all of the favorable lands might be concentrated
11 in one given area.

12 Q Examining Exhibit 12, would you be able
13 to estimate the size of the two sites?

14 As you say, they are separated -- each one, as
15 far as what its acreage comprises?

16 A I could only guesstimate from looking at the map
17 that, approximately, 75 percent is in one area and 25
18 percent in another area which would result in, approximately,
19 15 acres and five acres.

20 Q And the five acre tract being in the northeast
21 corner dominated to the east by wet soils and to the south
22 by the flood hazard areas.

23 Is that correct?

24 A I think you're confusing your east with your west.

25 Q I am sorry.

1 On the west boundary the dominant characteristic
2 is the wet soils and the south is the flood hazard zone?

3 A Correct.

4 Q Have you performed any quantitative analysis
5 to determine what the impacts as regards the flood hazard
6 would be as to any type of residential development as
7 permitted by the zoning ordinance if that type of develop-
8 ment took place in Site B?

9 A The only thing, I have not made a specific evaluation
10 relating to Site B. I can only relate it to my answer in
11 regards to a similar question on Site A.

12 I would say that, for example, I have made an
13 estimate --

14 Q I am sorry, Mr. O'Grady, I am going to
15 interrupt.

16 My request is limited to whether or not you've
17 done any quantitative analysis?

18 A No, I haven't.

19 Q Have you done any quantitative analysis as
20 to the impacts on flooding where this -- what these vacant
21 developable portions of Site B -- if they were to be
22 developed for least cost housing as defined by Alan Mallach --
23 the dense housing type as defined by Alan Mallach in his
24 report?

25 MR. BERNSTEIN: When you speak of quantitative,

1 you're referring to mathematical computations rather
2 than estimates based on Mr. O'Grady's experience
3 in planning.

4 Is that correct?

5 MR. ONSDORFF: Well --

6 MR. BERNSTEIN: The word "quantitative" to
7 me refers to specific numbers rather than to a
8 general appraisal, and I assume that that's the
9 way you're using it.

10 MR. ONSDORFF: Let me define what I would
11 mean by "quantitative" analysis.

12 Q You have a certain amount of density of
13 development in which structures would displace open vacant
14 lands. As a result of that construction the land surface
15 would no longer be available to hold water.

16 As you've already indicated, whenever a structure
17 goes in you have runoff from the paved areas and from the
18 buildings. That water then would flow on to other areas
19 which still remain vacant. And, if those areas are holding
20 surface water, this additional water would result in
21 increases in water elevations.

22 My question is to determine as to whether you've
23 analyzed the displacement of water to determine any adding
24 to surface water in adjacent vacant lands as a result of
25 the construction of housing at the sites we've been

1 discussing?

2 A The only evaluation I made was to calculate the
3 amount of impervious ground coverage; that being buildings,
4 pavement of the various densities -- housing types and
5 densities suggested by Mr. Mallach versus other types
6 of development permitted in the Township.

7 For example, single family houses on half acre lots.

8 I have made estimates of the amount of impervious
9 surface coverage that would probably result -- and we can
10 assume that the greater the coverage, presumably the greater
11 amount of surface runoff.

12 Q These estimates of impervious cover, are
13 they reflected in any of the reports which we have been
14 discussing which have been identified as exhibits in this
15 case?

16 A No, I don't believe they are.

17 Q Has that analysis been reduced to paper?

18 A I have -- I don't have it with me in this room.
19 I just have some handwritten notes on some calculations.

20 Q Is that intended to be used at trial of
21 this case?

22 A I don't know.

23 MR. ONSDORFF: I would ask that if it is
24 we would request that it be produced in response
25 to our subpoena.

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MR. BERNSTEIN: Can we take a short break and let me talk to Mr. O'Grady about those documents. And, if we plan to use them, then we would make copies available to you.

MR. ONSDORFF: Fine.

(A short recess is taken.)

MR. BERNSTEIN: I spoke with Mr. O'Grady and he showed me some analyses I had not seen which was based on your first depositions which got his mind working in other directions. And, we decided his analysis was pertinent.

We'll be happy to give you a copy. This all emanated out of questions you had asked him at the initial set of depositions.

MR. ONSDORFF: Certainly, I'd like to have the opportunity to take a look at whatever analysis Mr. O'Grady performed as a result of the prior deposition.

Of course, I don't know what the impact of the various rulings that the Court has made pertaining to deadlines for getting in reports or such, so without waiving any rights we may have, I'll certainly look at the material.

1 Q Possibly, you could identify, Mr. O'Grady,
2 what it is you have done -- I guess it's a single sheet
3 which we're now examining?

4 A Yes, and it will require considerable explanation
5 because these are just handwritten notes -- or handwritten
6 calculations, and what I'm attempting to do here is to
7 demonstrate what the absolute minimum ground coverage would
8 be for various types of development, ground coverage being
9 buildings and impervious surfaces. And, I have compared
10 the ground coverages for single family houses on 5,000
11 square foot lots; townhouses at 10 units to the acre and
12 garden apartments at 15 units to the acre with single
13 family houses at -- on lots of 100,000 square feet and
14 20,000 square feet.

15 Q Let me interrupt you, at that point.

16 MR. ONSDORFF: Let us mark this as PO-22
17 for identification.

18
19 (PO-22 for identification is handwritten
20 calculations of ground coverage with impervious
21 surfaces.)

22
23 Q Your calculations, Mr. O'Grady, reminded me
24 of another question we had at the previous deposition
25 in regards to the Dodge tract. You indicated that you

1 were going to check your files to determine whether or not
2 they reflected the square footage of commercial development--
3 buildings, in essence -- which were provided for or allowed
4 under the zoning ordinance.

5 Q Do you recall that request?

6 A Yes.

7 Q Do you recall whether you had an opportunity
8 to check on those figures?

9 A Yes, I did.

10 Q Can you share what information you gleaned
11 from that with us, at this time?

12 A Assuming that the Dodge property were to be used
13 for office building development, the ordinance establishes
14 a building coverage limitation of 10 percent and a combined
15 building and parking coverage of 15 percent.

16 Q Moving along as quickly as possible with
17 PO-14, your October 29 report, Site C is also intended for
18 six townhouses per acre pursuant to your report on the
19 northerly side of Shunpike Road. You indicate that the
20 one environmental constraint on development of Site C is
21 sloping terrain.

22 Q Is that correct?

23 A That is the major environmental constraint of that
24 property.

25 Q When you say: major, is there an additional

1 one which is not reflected on your report of October 29?

2 A No.

3 I would say that the evaluation indicates that
4 topography is the sole limitation.

5 Q You've estimated that, approximately, 50
6 percent of the site contains grades in excess of 15 percent.

7 Is that correct?

8 A That is correct.

9 Q How is that estimate arrived at?

10 A We arrived at that estimate by using a planimeter --
11 well, first on a topographic map coloring in the area of
12 the tract with grades greater than 15 percent, or 15 percent
13 or greater, and then using a planimeter to calculate the
14 square footage of those slopes.

15 Q The source data for the topographical informa-
16 tion was what?

17 A I believe in this instance it was the Township
18 topographic maps.

19 Q Have you examined the sites personally?

20 A I have.

21 Q 18.6 acres are vacant land at Site C?

22 A That is correct.

23 Q Is there any governmental control which would
24 limit the development to that 50 percent portion of those
25 18 acres which are having slopes less than 15 percent?

1 A No.

2 Q What environmental consequences would you
3 foresee from the maximum development of this tract as
4 permitted by the current zoning?

5 A The environmental constraints I would see here --
6 and just for the moment to backtrack to the previous ques-
7 tion -- again, while the ordinance does not require that
8 development be limited to slopes less than 15 percent,
9 again, the site plan review procedure would hopefully
10 assure that the steeper slopes would be disturbed to the
11 least degree possible, as to the impact of development on
12 steep slopes, number one.

13 A development will involve the removal of trees
14 and other forms of vegetation which on steep slopes are
15 important to the stabilization of the soil. Removal of
16 that vegetation will expose the steep slopes to erosion.

17 There will be problems in developing this site --
18 steep grades with -- which will be necessary for driveway
19 access and difficult as a result in controlling storm water
20 runoff.

21 Q In your personal inspection of this site,
22 what type of vegetation did you note on the sloping ground
23 situated therein?

24 A That particular site, for the most part, is heavily
25 treed.

1 Q If this site was developed in accordance
 2 with the cluster option and limited to the nine acres
 3 suitable for development, where would this then result in
 4 obviating the environmental impacts of erosion and runoffs
 5 which you have just described?

6 A It would not obviate. I believe that it would
 7 reduce the impacts, or at least hold them to a minimum
 8 in that the effects of removal of the vegetation on more
 9 level terrain are less than on steeper terrain.

10 Q If runoff were to occur from this site,
 11 what would be the adverse environmental consequences
 12 specifically, in your mind?

13 A Certainly, during the course of construction with
 14 the removal of vegetation and the disturbance of the soil,
 15 particularly on the steeper slopes, there is the hazard
 16 of soil erosion and the ^{carrying} ~~removal~~ -- or the siltation with
 17 water -- storm water carrying suspended particles of soil
 18 to downstream areas.

19 Q Are there any specific streams which would
 20 be so effected with siltation?

21 A I don't know the streams by name. In that parti-
 22 cular area there are several small streams -- as I recall,
 23 drainage courses which extend southerly from -- yes, basically
 24 southerly from Shunpike Road. Drainage of the site is
 25 down to Shunpike Road where it would be carried either

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1 across the road or through the storm drains crossing the
2 road and into these drainage courses.

3 Q Are there any environmental controls which
4 may be applied to construction activities to minimize the
5 soil runoff and sedimentation problems which you have
6 addressed?

7 A In the process of site plan review, a soil erosion
8 and sedimentation control plan would be required and the
9 certification of such a plan by the Soil Conservation Service
10 District.

11 Q You indicate that a net density of 12 units
12 per acre would be achieved by limiting the development
13 to the nine acres.

14 Can that be done, in your opinion, within the limits
15 of the environmental quality concerns which you have described.

16 Put another way, would the 12 units per acre in the
17 nine acres which are not subject to the steep slope result
18 in any environmental impacts which you deem to be inconsis-
19 ent with protecting the environment of Chatham which you
20 seek to do through land use controls?

21 A Without making a specific site evaluation or actually
22 performing an actual site development design, it's difficult
23 to answer that in precise terms.

24 I believe that knowing the physical characteristics
25 of that particular site -- it's going to be a very difficult

1 site to develop without some adverse impact. There's
2 going to have to be some removal of vegetation; there's
3 going to have to be some disturbance of steeper slopes in
4 order to gain access to the favorable areas of the site.

5 I would say that some unfavorable impacts will not
6 be possible to avoid, some unfavorable impacts from develop-
7 ment of the site regardless of the use for which it is
8 developed.

9 Q My question is limited to knowing that in
10 any development you're going to have adverse environmental
11 impacts.

12 In your view, will the cluster development result
13 in such impacts as to be deemed unacceptable or inconsistent
14 with the essential environmental concerns that you've express-
15 ed throughout your reports?

16 A I feel that the site can be developed within reason-
17 able limits of environmental impact and, in fact, the
18 zoning of the property for townhouse use was prompted by
19 a recommendation on my part to the municipality. And, I
20 would not have made that recommendation had I thought that
21 townhouse development cannot take place without unreasonable
22 environmental impacts.

23 Q Examining this same site in the context of
24 the Alan Mallach recommendations for least cost housing,
25 the densities and deletion of cost -- general cost features

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1 which Alan Mallach addressed, have you determined whether
2 or not development of that nature would result in the
3 unacceptable environmental consequences which you view
4 can flow from some development at this site?

5 MR. BERNSTEIN: I'd like to know whether
6 the question pre-supposes any of the -- any or all
7 of the densities Mr. Mallach has assumed. And,
8 if you could just go over them for Mr. O'Grady's
9 benefit, whether you're looking for the single
10 lots at 50 x 100 or the townhouses or garden at
11 15 deep per acre, or all of the above?

12 MR. ONSDORFF: We had this same discussion
13 at the previous session and we indicated townhouses
14 at 10 units per acre, garden apartments at 15 per
15 acre, the single family homes on 5,000 square foot
16 lots, and mobile homes at seven per acre.

17 Q Examining the development with any of these
18 housing types, would you envision unacceptable environmental
19 consequences flowing therefrom?

20 A I would certainly envision unfavorable environmental
21 consequences for single family lots at 50 x 100 or mobile
22 homes because of not only the sloping terrain of the pro-
23 perty but the configuration of the topography of the site
24 which, I believe, will make the property very difficult
25 to develop for the single lot type of difficulty which

1 would involve both the single family conventional house --
2 I'd go as far as to say that even development at half an
3 acre lots would be difficult given the physical topographic
4 features of that site.

5 I think that what we have done here in recognizing
6 the topography and the amount of land that has favorable
7 grades is come up with a net density that actually exceeds
8 what Alan Mallach has recommended as the minimum for town-
9 house development and falling only two to three units per
10 acre short of what he has recommended for garden apartment
11 development.

12 Q Limiting your analysis to the nine acres,
13 would any of the housing types and densities as described
14 by Alan Mallach be objectionable for environmental reasons
15 on those portions of the site?

16 MR. BERNSTEIN: Are you speaking of net
17 densities that Alan Mallach was suggesting for the
18 development of this site or overall gross densities
19 of ten units per acre on the entire tract which
20 would result in a net density of 20 dwelling units
21 per acre on the developable portion?

22 The question is not clear to me. I have
23 no objection to your asking it, but I'm not sure
24 if you're talking about a net density of 10 units
25 per acre or an overall gross density of 10 units per

1 acre which would result in 20 units per acre on the
2 developable site.

3 MR. ONSDORFF: I was going to differentiate
4 it.

5 Q You have certain needs for open spaces in
6 conjunction with developments.

7 Would the environmentally sensitive areas of this
8 site provide sufficient vacant land to allow for the gross
9 densities at, say, 20 to the acre, realizing that the ad-
10 jacent portions which are subject to the environmental con-
11 straints would constitute the necessary open areas of
12 development?

13 MR. BERNSTEIN: I am sorry, I think you said
14 gross densities of 20 to the acre. Did you mean
15 a net density of 20 per acre on the developable
16 portion?

17 MR. ONSDORFF: That's correct.

18 A It's my feeling and belief in this instance that a
19 net density of 20 to the acre in the favorable area of the
20 site, even assuming that all or part of the common open
21 space, so to speak, in the steeper slope areas would be
22 excessive.

23 Q Have you performed any quantitative analyses
24 to determine the extent of the runoff which you have indicated
25 would occur would be in the excessive range?

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1 A I have not made a calculation as to the runoff under
2 a particular circumstance relating to that particular site.

3 Q In your own mind, have you calculated what
4 amount of runoff would constitute objectionably high or
5 excessive runoff?

6 A No, I have not.

7 Q Moving on to Site D on Page 4 of your report,
8 you indicate that this comprises 29.1 acres.

9 Is that the vacant land at Site D?

10 A Yes, that is a single site totalling 29.1 acres.

11 Q According to your report, a soil mining
12 operation was active at this site at some period of time?

13 A That's correct.

14 Q Do you know when that soil mining operation
15 was active?

16 A No, I don't.

17 Q It is now ended, however?

18 A It's inactive now.

19 Q Do you know if the land is owned by the
20 mining company and whether it might be revived for a
21 mine at any time in the foreseeable future?

22 MR. BERNSTEIN: Wait.

23 I would object on a legal basis that the
24 ownership of the land is irrelevant to the zoning.

25 I think the Washington Township case that

1 Judge Gellman decided is one happy reminder of that.

2 And, there are others I can cite.

3 Whether or not the mine might be reopened

4 I don't think is pertinent to the present issue.

5 However, I will direct the witness to answer the

6 question.

7 A To the best of my knowledge, the property is owned
8 by the owner of the Chatham Hill Apartments, which owner
9 intends to develop the property for garden apartment use.

10 Q Could you describe the configuration or the
11 land characteristics at this site in regards to the mining
12 operation?

13 What does the tract look like, in essence?

14 A As you enter the property the tract has a bowl
15 shaped configuration. The previous soil mining operation
16 has created -- there's a flat, fairly level section of the
17 property in the center with extremely steep slopes extend-
18 ing up forming a bowl created by the soil mining operation.
19 A small stream runs down through the center of the tract
20 and somewhere, I would say in the southerly half of the
21 tract, is a pond. The pond along with the steep slopes
22 and the limited fairly level area results in a considerable
23 limitation in terms of the area of the tract which is
24 suitable for development.

25 Q You indicated that a developer is intending

1 to construct garden apartments at this site. What is the
2 basis of your knowledge of that proposal? Where did you
3 get that information?

4 A The particular property owner has conferred with
5 the planning board on numerous occasions over the -- his
6 intended development.

7 To the best of my knowledge, an actual application
8 has not been submitted. However, I had a call from the
9 property owner's engineer indicating that plans are being
10 drafted and asking me if I can recommend a planning consul-
11 tant. So, I assume that the applicant or property owner
12 is quite serious about proceeding with an application.

13 Q You've indicated that the unusual topographic
14 feature of the dugout or bowl cut in this tract limits its
15 development potential. However, there is 63 percent of the
16 site which is vacant and developable.

17 Is that correct?

18 A Yes.

19 That 63 percent -- in fact, including the pond area,
20 which I understand is intended to be retained as a storm
21 water retention area, would reduce the 63 percent to about
22 50 percent.

23 Q In any development of this site your net
24 useable acres is somewhere near 18 which results in a net
25 density of 19 dwelling units per acre.

1 Is that correct?

2 A That is correct.

3 Q You envision, then, based upon the density
4 of development which can take place at this site, that that
5 development should be consistent with the definition for
6 least cost housing densities which you have previously
7 testified to?

8 A Yes.

9 In this instance, putting least cost in terms of
10 densities -- certainly, the resulting net density would be
11 very consistent, what I had previously indicated to be
12 desirable densities or least cost densities, if we want
13 to use that term.

14 Q If this development goes forward at a net
15 density of 19 dwelling units per acre, have you evaluated
16 what the environmental impacts will be of such a development?

17 A No, I have not.

18 Q Do you have an opinion as to what environmental
19 impacts would be foreseeable from such an apartment develop-
20 ment at a net density of 19 dwelling units per acre?

21 A I have a general opinion that assuming that the
22 favorable area of the site is used, the steep slopes are
23 avoided and the pond is maintained as a retention pond --
24 storm water retention basin, that the impacts will be --
25 should be minimal from this particular site.

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1 Q In other words, the one environmental constraint
2 which you've identified appears to be a flooding problem,
3 is that correct, contained in this site?

4 A There's perhaps a potential flooding problem because
5 of the fact that a stream does run through the property
6 and that stream is adjoined by wet soils.

7 I think with the use of the retention pond, the
8 flood could be -- flooding potential could be reduced.
9 The impact downstream from potential flooding would be
10 reduced by retaining storm waters for a period of time.

11 Q Additionally, the other problem would be the
12 avoidance of the steep slopes which exist around the prior
13 pit -- pit of the prior mining operation, rather?

14 A That is correct.

15
16 (A short recess is taken.)

17
18 Q The final site which has potential for
19 development along multi-family residential lines you've
20 identified as Site E in the R-2A zone.

21 Is that correct?

22 A That is correct.

23 Q You indicate in your report that this site
24 contains 114 acres. Are those 114 acres all vacant lands?

25 A That is correct.

1 Q You've also listed in your report the several
2 environmental constraints which limit the full development
3 of this tract as flood plains, 12 acres; and slopes exceeding
4 15 percent, 18.7; and utility easements 9 acres.

5 Is that correct?

6 A Correct.

7 Q Utility easement is a new category we haven't
8 discussed before.

9 Can you define what is meant by that?

10 A These are overhead electrical transmission lines
11 falling within rights of way of 100 feet, I believe, 100
12 feet in width.

13 Q In other words, that area which has been
14 dedicated for a special purpose relating to the transmission
15 of electrical power are precluded for use for other purposes.

16 Is that correct?

17 A Correct.

18 Q As opposed to being an environmental constraint,
19 we're talking about a prior dedication for special use?

20 MR. BERNSTEIN: It has a use that may preclude
21 other uses.

22 MR. ONSDORFF: I would certainly see the
23 reasonableness of that to the extent that a utility
24 easement has permanency.

25 Q Are these transmission lines already in place?

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Yes, they are in place.

MR. ONSDORFF: That certainly constitutes a structure in a development, I would say, then.

Q Do you see any environmental constraints flowing from the fact that a transmission line runs through a property?

A I would not specifically see an environmental impact. I would see T.V. and radio interference and things like that.

Q As to the 12 acres of flood plains, how is that acreage estimated or determined?

A This was estimated by plotting the flood plain areas as indicated by the HUD maps, our map and using a planimeter to calculate the acreage.

Q The flood plain here is along the Passaic River which has the contour delineation that we already discussed at some length previous to that.

Is that correct?

A That is correct.

Q The 18.7 percent of this tract with slopes exceeding 15 percent, how is that acreage determined?

A In the same manner as the flood plain by coloring in the steeper slopes on the Township topographic map and using a planimeter to calculate the area.

Q If this area is developed in a like manner



1 as is Site D which we previously discussed and the flood
2 plains and slopes are dedicated to their environmental
3 purposes, do you see the remaining areas as being within
4 the vacant developable category without being limited by
5 any environmental constraints?

6 A I see one additional environmental constraint
7 which we neglected to indicate with reference to this site.
8 And, that is that as Exhibit 12 indicates, most of the site
9 in question does contain wet soils, and the impact of the
10 development in wet soils I have previously commented on
11 relative to other areas of the Township.

12 Q In other words, based upon the depiction
13 placed on Exhibit 12, you would revise your environment
14 delineation as reflected in your October 29 report?

15 Is that what you are saying?

16 A Yes, I would have to revise that to a degree.

17 I think, perhaps, the reason that the wet soil
18 limitation was overlooked was the fact that the topography
19 of the site seemed more favorable to development despite
20 the fact that the soils are wet soils or have a relatively
21 high water table. But, it certainly is an additional
22 constraint as far as the land is concerned.

23 Actually, in looking at Exhibit 12, I'd say that,
24 perhaps, 90 percent or more of Site E contains environmental
25 constraints which the wetland characteristics are included.

1 Q Have you visited Site E yourself?

2 A I have.

3 Q On what occasion have you done so?

4 A Again, over the past 20 years on various occasions
5 I've had the opportunity to be in that area and examine
6 the property. More recently in the past two years with
7 the development of the current Township master plan, and
8 subsequent to the master plan in connection with this liti-
9 gation I have examined the property. That would be within
10 the past year.

11 Q Have you observed any flooding on this site?

12 A I have not observed any flooding on the site at any
13 time when I inspected the area.

14 Q The wet soils, how did you determine that they
15 are found in this site?

16 A This is based upon the interpretation of the -- given
17 the particular soil by the Soil Conservation Survey, Soil
18 Survey of Morris County, which indicates that the particular
19 soils, as I recall, have a water table of one and a half --
20 to within one half to one and a half feet of the surface.

21 Q Have you performed any quantitative analysis
22 to determine the environmental consequences of the develop-
23 ment of this site pursuant to the provisions of the current
24 zoning ordinance?

25 A I have not made a specific evaluation to determine

1 the environmental consequences of development of this site.

2 Q Very quickly, I want to move on to your
3 memo, Number 3.

4 MR. ONSDORFF: Off the record.

5
6 (An off the record discussion takes place.)

7
8 Q Directing your attention to Page 2 of the
9 October 29, 1979 report, Number 3 which we've identified
10 as PO-15.

11 You have: Chatham Township As A Developing
12 Municipality.

13 "This question is addressed in the master plan as
14 well as my memorandum Number 1. However, the pertinent
15 statements are repeated here for your convenience."

16 I endeavored to locate this material which you've
17 quoted here and was not able to locate it.

18 A My apologies.

19 That's taken from the master plan which I don't
20 have in the room with me. I'll be happy to give you the
21 specific page.

22 Q Fine.

23 It states in that quoted material, "The existing
24 study reveals that 2,000 acres or one-third of the Township
25 area is privately owned vacant lands."

1 Then there is an asterisk, "Subsequent studies
2 have reduced this figure to 1,525 acres of which only
3 273 acres have conditions favorable to development."

4 Is that asterisk also found in the footnote of the
5 master plan or is that --

6 A No, that's a footnote strictly confined to this
7 memorandum.

8 Q Can you identify the approximate 500 acres
9 which has been taken out of the vacant category and in
10 what manner that reduction was done?

11 A Not specifically.

12 There were some properties that at the time the
13 master plan was developed that were vacant and have subse-
14 quently received approval, preliminary or final approval
15 from the planning board for development. Additional lands
16 were acquired subsequent to the master plan by the federal
17 government and added to the National Wildlife Refuge. And,
18 I believe that the remaining acreage, whatever it might be,
19 may have included the Fairmount Country Club which we have
20 considered for purposes of these discussions as either
21 developed land or land otherwise committed and not available
22 for development.

23 Q Do you know the date of development study,
24 when that was published?

25 A The existing development which is Exhibit 10 is

1 dated February 1, 1978. There were subsequent minor
2 revisions to that, but the 2,008 acres referred to in the
3 master plan as being vacant would have been as of February
4 1978.

5 Q You also participated in the preparation
6 of that master plan.

7 Is that correct?

8 A That is correct.

9 Q Quickly, directing your attention to PO-17
10 for identification, your memo of October 30, 1979, Memorandum
11 Number 5 on Page 3 -- the first paragraph appearing
12 on Page 3: Zone Densities Versus Sewer Capacity.

13 You discuss at some length matters pertaining to
14 the availability of sanitary sewage service within the
15 Township.

16 What was the source for this material?

17 A The source was conversations with members of the
18 Township Committee, the Planning Board and the Township
19 Attorney who were given to understand that the maximum
20 expansion of the plant which the State or the federal
21 government would allow, would be 300,000 gallons. Subse-
22 quently, that has been reduced to 250,000 gallons, 50,000
23 of which is already actually in use in the plant -- is
24 over capacited by approximately 50,000 gallons. So, the
25 available additional capacity as of latest information

1 given to me is 200,000 gallons per day.

2 Q The figure given of 75 gallons per day,
3 per person to arrive at a projection of 14,000 additional
4 residents, what is the source for your 75 gallon per day,
5 per person figure?

6 A That particular figure I had personally seen used
7 a number of times as an approximation of water useage,
8 and the sanitary sewer engineer for the Township has indicat-
9 ed at a meeting I attended that their experience with actual
10 multi-family development is that 75 gallons per person,
11 per day is an accurate figure. He also indicated, however,
12 that the State would probably require the use of a figure
13 of 100 gallons per person, per day if single family develop-
14 ment were being considered.

15 MR. ONSDORFF: I think we will break it off
16 there for five or ten minutes.

17
18 (A short recess is taken.)

19
20 Q Directing your attention once again,
21 Mr. O'Grady, to PO-13, your October 26 report and memoran-
22 dum, on Page 2, Paragraph 4 you indicate, "There is a tract
23 south of Loantaka Way comprising 242.7 acres of vacant
24 lands."

25 Is that correct?

1 A That is correct.

2 Q It's indicated that this is the largest
3 concentration of vacant land.

4 That perplexes me to a certain extent.

5 As you turn the page, on your fifth numbered para-
6 graph you indicate that there is a tract south of Green
7 Village Road comprising 405 acres.

8 A I can only surmise that in drafting the report I
9 just overlooked the fact that the area south of Green
10 Village Road was larger. Perhaps, because I was thinking
11 in terms of splitting the area south of Green Village Road
12 into two different areas -- the two potential areas.
13 One is accessible from one road and the other is accessible
14 from another.

15 Q In essence, you would revise that statement,
16 "without this separation of the south of the Green Village
17 Road tract of 405 acres"?

18 A I would revise Paragraph 4 to state that, "This is
19 the second largest concentration of vacant land."

20 Q You indicate, also, that about 80 percent
21 of this site is subject to flooding or contains a high
22 water table.

23 Can you break that down as to what percentage falls
24 within each of those categories?

25 A I probably have it broken down on the worksheet I

1 had given you when we last met. I don't have that in
2 front of me. I can get it from my office right away.

3 Q Please do that.

4

5 (A short recess is taken.)

6

7 A I have to assume that for purposes of my October 26
8 letter, I had combined certain adjoining sites which are
9 broken down on the worksheet. It would be very difficult--
10 without taking several minutes to make some calculations
11 to determine what portions of the 242 acres would be
12 flood prone and what portion would be wetland, I would
13 judge from looking at Exhibit 12 that the dominant char-
14 acteristic is the flood plain -- or flood hazard area
15 designation, perhaps, representing as much as 75 percent
16 of the 80 percent.

17 My guesstimate would be that 60 percent is flood
18 prone and 20 percent adjoining wetlands.

19 Q In regards to the flood prone areas, what
20 is the source data for that designation?

21 A The HUD flood hazard boundary maps.

22 Q In this instance, is this within the areas
23 where the flood hazard maps as generated by flood include
24 the contour elevations or is this outside of the Passaic
25 River or Great Swamp?

1 A This is outside the Passaic River or Great Swamp.

2 Q Under current zoning, what is the maximum
3 density that this land would be developed at?

4 A It's single family residential zone with a minimum
5 lot size of 100,000 square feet.

6 Q Are there any governmental controls existing
7 in Chatham Township to restrict or limit the portions of
8 the tract which can be so developed?

9 A There's no provision that would restrict or limit.
10 There is a provision that would presumably direct develop-
11 ment in that clustering at approximately -- well, cluster-
12 ing at 41,250 square feet is permitted. And, this is
13 intended to help direct development towards or into more
14 favorable areas.

15 Q Assuming for the moment that the development
16 was clustered as provided for in the present ordinance,
17 have you done any analyses to determine what the environ-
18 mental impacts would be of the maximum development of the
19 tract pursuant to that development option?

20 A No, I have not.

21 Q On the next page of your October 26 memo,
22 the fifth in your paragraph, it addresses the zone south
23 of Green Village Road comprising 405 acres.

24 What are the environmental constraints to the
25 development of this land area?

1 A This particular area borders on the Great Swamp,
2 240 foot contour interval -- or contour, rather, extends
3 well into the area and contains a large land fill area
4 no longer in operation but in which there are frequently
5 fire outbreaks in peat formation. Not only natural peat
6 formation, but peat that is formed through the compression
7 of materials that have been dumped in the landfill area.

8 There's the hazard or potential hazard of release
9 of dangerous gases by disturbing the landfill area.

10 MR. BERNSTEIN: Off the record.

11
12 (An off the record discussion takes place.)

13
14 A (Continuing) It's an area in which, in my opinion,
15 falls into the Great Swamp regime, Great Swamp basin. Soils
16 beyond the flood plain itself or the flood hazard area are
17 extremely wet type soils according to the Morris County Soil
18 Survey.

19 Q In the areas outside the landfill area, your
20 concern is with flooding.

21 Is that correct?

22 A Outside of the landfill area my major concern would
23 be flooding, number one.

24 Does that answer your question?

25 Q Did you testify previously that the Township

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adopted regulations which would limit or otherwise the development within this area in such a fashion the flooding hazard could be mitigated to the maximum at feasible?

The -- I did indicate previously that there are provisions in the land use ordinance and in the zoning regulations that would require performance on the part of applicant in developing at or below the 240 foot contour elevation.

Q Which are intended to permit development to go forward but to maintain the impact on the flooding condition within acceptable limits.

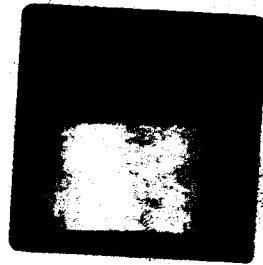
Is that correct?

That would be correct.

Q Would you also have a concern for the impact of development in this area outside the landfill area as far as runoff pollution entering the swamp?

I would be extremely concerned about the impact of development and development resulting in runoff into this swamp since it is a national wildlife refuge. Well, it is a ^{rational} national wildlife refuge and the Department of Interior, I believe, being committed to the maintenance and preservation of wildlife species in that area --

Q What is the distance of this tract to the National Wildlife Refuge?



1 A The area borders on -- has common boundary lines
2 with the National Wildlife Refuge.

3 Q What are the water courses which would carry
4 any runoff into the Great Swamp?

5 A The major stream flowing through the area and enter-
6 ing through the swamp is Loantaka Brook, and then there are
7 several other minor streams or water courses which either
8 cross Green Village Road, enter the area and flow into the
9 swamp, or originate in the area and flow into the swamp.

10 Q Are there any natural conditions found within
11 this tract which tend to filter out or inhibit the flow of
12 runoff pollutants into the brook or the swamp?

13 MR. BERNSTEIN: When you're talking about the
14 tract, you're speaking of the entire 405 acres?

15 MR. ONSDORFF: No, that portion of it which
16 is across from the landfill.

17 MR. BERNSTEIN: All right.

18 A The area beyond the landfill --
19 May I have the question, again?

20 MR. ONSDORFF: Certainly.

21
22 (The Court Reporter reads the requested question:
23 Are there any natural conditions found within this tract
24 which tend to filter out or inhibit the flow of runoff
25 pollutants into the brook or the swamp?)

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1 A The only condition that I would know of, offhand,
2 would be the soils themselves which are, for the most part,
3 water retention soils which act as a sponge. And, I would
4 assume would retain water to a degree and reduce the velocity
5 of flow into the swamp and presumably filter out any pollut-
6 ing materials.

7 Q If this site was developed for residential
8 housing, would it be feasible to direct runoff into street
9 sewers and away from the brook into the swamp in order to
10 obviate the potential for pollution reaching those water
11 bodies?

12 MR. BERNSTEIN: I object to the form of the
13 question.

14 I think the question pre-supposes that if
15 you had a storm sewer that somehow the water would
16 stay in the sewer and never get to the Great Swamp.

17 It's my understanding that storm sewers have
18 to lead somewhere, and the Great Swamp would be the
19 obvious swamp.

20 On the basis of the phraseology of the question,
21 I have to object. But, since this is depositions,
22 I will allow the witness to answer if he can.

23 A I don't think it would be possible to direct the
24 drainage in another direction since the natural drainage
25 is southerly across Green Village Road from higher elevations

to this area which has a lower elevation. The only thing --
solution I could see would be to pump the water upstream
and retain it upstream.

Q Would there be another artificial mechanism
which would be used in conjunction with street sewers lead-
ing downstream in such a manner that they would filter out
pollutants from the water being discharged into the water
course?

A I don't know of any -- personally, the only possibil-
ity I could think of, offhand, would be the potential use
of storm water retention or detention basins which would
help filter out pollutants.

Q Your sixth site is R-1A, a zone lying to
the north of Meyersville Road and comprising 171.3 acres.

Is that correct?

A That is correct.

Q You indicate that as much as 90 percent of
this site is wetland and subject to flooding.

How was that percentage arrived at?

A Again, by -- as far as flooding is concerned, using
the 240 foot contour and adjoining the Great Swamp, wetland
soils calculated from the Morris County Soil Survey and
by use of a planimeter.

As an aside, I would mention that this is the area
in which we have to correct the map to reflect the area

1 subject to flooding.

2 Q Using Exhibit 11, could you just point out
3 where the site is?

4 A Yes.

5 It lies on the northerly side of Meyersville Road,
6 easterly from the Passaic Township border. Most of it is
7 located in the R-1A zone.

8 Q Which would allow development at what density?

9 A 100,000 square foot house intended for single family
10 dwellings.

11 Q In your last sentence in Paragraph 6 is
12 that the entire area is virtually undevelopable based upon
13 swamp conditions.

14 Is that consistent with the current zoning?

15 A I think that while a given area of land may be
16 considered undevelopable, that a municipality cannot right-
17 fully preclude the owner of a private property from using--
18 being allowed to use his property to some degree.

19 The area had to be zoned for some use. The conclusion
20 that was drawn was that development should be held to a
21 minimum, that density, as well as possible, be required for
22 a given area since the three acre -- pardon me, the two and
23 a half acre lot, 100,000 square feet was the largest lot
24 size used elsewhere. It was included in this particular
25 area, as well.

1 Q Have you analyzed the environmental impacts
2 which would flow from the development of this tract to the
3 maximum extent permitted under the present zoning ordinance
4 to determine whether the environmental impacts would be
5 within the acceptable range as a result of that development?

6 A We did not make any -- I did not make any calculation.
7 A calculation in this instance would seem unnecessary since
8 almost all that entire area falls below elevation 240 feet.

9 Although not reflected on the map, I do recall the
10 general location of the 240 foot contour.

11 Q I'm not sure I understand your answer, how
12 that obviates the need to perform an analysis of the
13 environmental impacts?

14 A The fact that I would consider development in any
15 flood prone area undesirable, and in terms of the size of
16 this particular area, I think development could have a
17 significant impact on the water quality in the swamp.

18 Q Your seventh tract analyzed is the R-B1 zone
19 along River Road comprising 125.4 acres.

20 Is that all vacant, that 125 acre tract?

21 A Yes.

22 This is not a single tract. It's a group of proper-
23 ties, some of which are not adjoining along the northerly
24 side of River Road and including some properties also lying
25 south of River Road. But, the 125 acres refers to vacant

1 lands.

2 Q In the portion which is north of River Road,
3 how much of that vacant land is incumbered with steep slopes?

4 A Virtually all of it, with the possible exception on
5 two or three properties where immediately adjoining the road
6 there is a limited area of not more than 200 feet where
7 grades -- pardon me, would be less than 20 percent, but
8 probably up to 15 percent.

9 Virtually all of it with only very minor -- an
10 extremely minor exception would have grades of less than --
11 or would have grades in excess of 15 percent.

12 Q Have you visited these areas, yourself?

13 A I have.

14 Q You indicate another 11 acres south of
15 River Road is subject to flooding.

16 What is the basis for that conclusion?

17 A That is based upon the delineation of the flood
18 hazard area along the Passaic River as shown on the HUD
19 Flood Hazard Area Maps.

20 Q You indicate that 12 acres are not subject
21 to either the extreme slopes or the flooding hazard.

22 Are these then placed into your category of both
23 vacant and developable lands?

24 A These are areas I would say, as I indicate here,
25 would be somewhat -- some have somewhat favorable developable

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1 conditions in that grades would be less than 15 percent
2 and the soils are either not subject to flooding or are not
3 wetland soils.

4 Q When you say: somewhat favorable development
5 conditions are presented, have you done any analysis to
6 determine what the maximum carrying capacities of these
7 lands are?

8 A In terms of their location, configuration, adjoining
9 land uses, I can only conclude that their capacity would
10 be limited to a continuation of single family lots. The
11 vacant areas in question lie immediately along the frontage
12 of River Road and development on either side of these vacant
13 areas is single family, immediately along the road.

14 Q In light of the location and other character-
15 istics which you've just enumerated, have you determined
16 what would be the smallest lot size for these single family
17 homes which would be consistent with the environmental
18 characteristics of these adjoining lands?

19 MR. BERNSTEIN: You're speaking of the entire
20 125 acres?

21 MR. ONSDORFF: No, we're talking about the
22 12 acres which are not subject to the --

23 MR. BERNSTEIN: The 12 developable acres?

24 MR. ONSDORFF: That's correct.

25 A Well, I think the present zoning map reflects what

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1 would be the desirable maximum -- desirable intensity of
2 use for these particular properties.

3 While they are somewhat favorable for development,
4 the vacant properties north of River Road will have grades
5 approximating 15 percent. South vacant properties immediate-
6 ly adjoining the southerly side of River Road, for the most
7 part, extend not more than 200 feet in depth and immediately
8 join the flood plain area. And, with the lack of sanitary
9 sewer facilities in that area, given the slopes, the
10 relationship of some to the flood plain, I believe that the
11 one acre minimum lot size requirement represents the maximum
12 carrying capacity of the land.

13 Q In the 11 acres south of River Road --

14 Excuse me, in the acreage south of River Road which
15 is unincumbered by the flooding or steep slope constraints
16 they were developed at the density of a lot size of 50 x 100.

17 What would be the adverse environmental consequences
18 which you envision from that type of development?

19 A This is the area south of River Road, now?

20 Q That's correct.

21 A I believe the major environmental impact would be,
22 number one, the potential for pollution due to the use
23 of septic systems on some small lots.

24 Secondly, additional runoff from higher density
25 developments into the adjoining flood plain.

1 Q Have you performed any quantitative analyses
 2 to determine the amounts of pollution from septic systems
 3 and/or the amount of runoff pollution which would emanate
 4 from such high density single family lots as I've described
 5 them previously at these locations?

6 A Well, only to the extent of estimating that since
 7 the density at 5,000 square foot lots is about eight times
 8 the density permitted by the ordinance, that the potential
 9 for pollution is correspondingly that much greater.

10 Q Your eighth zone you describe as being 15.2
 11 acres on Green Village Road consisting of two parcels,
 12 have you determined the size of the individual parcels within
 13 this 15.2 acre zone?

14 A No, I have not. But, I believe they are approximate-
 15 ly equal in size of examining Exhibit 12 which would -- each
 16 would be about seven and a half acres, give or take.

17 Q "The development potential is limited by
 18 wetland conditions."

19 Could you elaborate upon that conclusion?

20 A Yes.

21 The entire property falls into a high water table
 22 soil based on the Morris County Soil Survey. It's an
 23 extremely flat area having very little change in elevation
 24 throughout.

25 I think the environmental impact is obviously the

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1 impact from development covering wetland soils reducing
2 the infiltration and infiltration absorption capacity of
3 the land. And, perhaps forcing lands which previously could
4 have been absorbed into adjoining lands and, perhaps,
5 creating even more greater wetland conditions on adjoining
6 lands.

7 Q Are there entire vacant areas of these
8 two tracts? Do they all consist of wetlands, or are there
9 some portions which are outside the wetland soils?

10 A They are entirely wetland soils.

11 Q Current zoning permits development at what
12 density?

13 A Minimum lot size of 41,250 square feet intended for
14 single family residences.

15 Q Have you quantified the adverse environmental
16 impacts which would flow from development at a maximum level
17 as currently permitted under the zoning ordinance?

18 A No, I have not made a calculation.

19 Q Without being able to provide specific data
20 as to the extent of the adverse impacts, as a quantitative
21 matter what would you anticipate occurring under that type
22 of development?

23 A I would certainly think and believe that the zoned
24 density would provide for a reasonable minimum amount of
25 disturbance of the land and reasonable minimum amount of

1 land coverage.

2 Q But what would be the adverse environmental
3 impacts that would flow from such development?

4 A I think it's a matter of -- really relative, depend-
5 ing upon density.

6 A 5,000 square foot lot or lots would produce consider-
7 ably more development, considerably more land coverage than
8 the 41,250 square foot lots. And, the impact of that develop-
9 ment in wetland areas from the higher density development
10 would be correspondingly greater.

11 Q I am sorry, we are not communicating at this
12 point.

13 All I'm looking for is: what would be the type
14 of adverse environmental impacts from any development on
15 wetlands which are found dominating the lands within these
16 two tracts? Would we get flooding, pollution, runoff: what's
17 it going to do to the environment of Chatham Township?

18 A I believe there is certainly the potential for
19 pollution. Since this is an area not served by sanitary
20 sewers, individual septic systems would have to be used.

21 This is a wetland area which is in the Great Swamp
22 basin and ground water eventually finds its way, I believe,
23 from this area into the Great Swamp.

24 There's also the -- construction becomes expensive
25 to overcome the unstable conditions.

1 During winter months there's the hazard from roads
2 heaving and cracking from frost, from frozen ground.

3 Q Number 9, the R-2 zone, either side of Hillside
4 Avenue, 36.2 acres, you indicate that this area is dominated
5 by steep slopes. You also indicate that, approximately,
6 20 acres are 55 percent favorable for development.

7 If I understand your statement correctly, then these
8 20 acres are land areas where the slope is less than 15
9 percent.

10 Is that correct?

11 A That would be correct.

12 Q Have you performed any analyses to determine
13 the maximum carrying capacity of these 20 acres for residen-
14 tial type development?

15 A Not in any specific -- I have not made any specific
16 evaluation, only a general evaluation in terms of the
17 physical characteristics of the land, particularly the
18 slope areas and the limitations they would impose upon
19 any type of intensive development.

20 Also, some of the wetland characteristics particular-
21 ly on the southerly side of Hillside Avenue which, I believe,
22 limit the carrying capacity of the land and also which form
23 the basis for establishing a minimum lot size of 1 acre.

24 Q If I understand your answer correctly, in
25 addition to steep slopes you're now adding as an additional

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1 environmental constraint to the development of this area
2 wetland conditions?

3 A There are some wetland conditions south of -- on the
4 southerly side of Hillside Avenue where the water table is
5 presumably at a depth of one half to one and a half feet
6 of the surface.

7 Incidentally, some portion of that area is developed.
8 There is a large estate within the property on the southerly
9 side of Hillside Avenue.

10 Q If these 20 acres were developed at a density
11 of 20 townhouses per acre, what would be the environmental
12 consequences which would flow from such a development, in
13 your opinion?

14 A If the 20 acres were alone -- were developed at
15 20 units to the acre?

16 Q That's correct.

17 A (No response.)

18 Q Taking into account the steep slope areas
19 adjoining them comprising open spaces and restricted from
20 development to give you a net density for the entire tract
21 of substantially less, approximately a net density of
22 about 10 townhouses per acre considering the 45 percent
23 of the areas which are subject to those environmental
24 constraints?

25 A Well, I haven't made an -- any evaluation of the

1 impact of that particular area, if it were developed for
2 townhouse development at any density.

3 Q In the R-2 zone south of River Road, 63.5
4 acres, you indicate that 84 percent of this lies within
5 the flood hazard areas of the Passaic River. This then
6 is within the -- or at the contour as delineated by the
7 HUD Flood Map.

8 Is that correct?

9 A That is correct.

10 Q Have you analyzed the maximum carrying
11 capacity of the ten acres which are outside the flood
12 prone areas as to their use for residential development?

13 A Again, I think that the limitation here is the
14 location of the property and its very shallow depth.

15 Q Your eleventh tract which you described is
16 within an R-3 zone and comprises various properties total-
17 ing 30 acres.

18 Is that correct?

19 A That is correct.

20 Q This consists of four separate parcels which
21 have the potential for further subdivision.

22 Is that correct?

23 A That is correct.

24 Q You indicate that these parcels are located
25 within established residential neighborhoods which dictate

1 further use.

2 In what manner is future use dictated by their
3 location in residential neighborhoods?

4 A Well, the fact that they are, for the most part,
5 surrounded on most sides by established residential -- single
6 family residential neighborhoods. And access, for the
7 most part to the properties or into the properties, is only
8 through an established residential neighborhood.

9 It would seem to me to be logical and sound planning
10 practice to continue that neighborhood character rather
11 than to inject an alternate type of housing or a greater
12 density.

13 Q Do you know the maximum density of the
14 established neighborhoods that you refer to in this context?

15 A There are, approximately, minimum lot size of
16 20,000 square feet.

17 Q You indicated two of these properties contain
18 relatively steep slopes and one contains a relatively high
19 seasonal water table.

20 Can you specify specifically which properties are
21 so contained?

22 A Yes.

23 One property lies on the easterly side of Fairmount
24 Avenue, on the steep hill of Fairmount Avenue, extending
25 from Meyersville Road to River Road. And, the major portion

1 of that particular area or site contains slopes exceeding
2 15 percent.

3 The other area lies on the southerly side of
4 Fairmount Avenue and that site, for the most part, has
5 slopes exceeding 15 percent.

6 The site with the wetland characteristics is this
7 one which we neglected to reflect on Exhibit 12. But,
8 a portion of that site has wetland conditions.

9 Q In the remaining site, could you tell us
10 exactly where that's located, which apparently is not
11 subject to these environmental constraints which you have
12 cited?

13 A The other one is this small portion of the land in
14 the R-3 zone lying on the northerly side of Meyersville
15 Road adjacent to Passaic Township, which would allow a
16 development of houses only along Meyersville Road.

17 Q The final paragraph, Number 12, dealing with
18 the specific zoned areas is a P.I. zone comprising 15 acres.

19 Is that correct?

20 A Correct.

21 Q What is the density and nature of the develop-
22 ment permitted in this area?

23 A The nature of the development: the zone is intended
24 for professional office building, primarily. It does allow
25 nursing homes, it does allow a conditional use, indoor

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1 recreational facilities such as tennis and squash facilities.

2 The minimum lots size for these uses is 45,000 square
3 feet.

4 Q Could you specify on the zoning map where these
5 areas are located?

6 A The properties are located in the P.I. zone on the
7 southerly side of Southern Boulevard, immediately south of
8 Hickory Place.

9 Q Are these tracts subject to any unusual
10 environmental constraints?

11 A A portion of the properties lie within the flood
12 hazard area of the Great Swamp.

13 In other words, at or below elevation 240 feet.

14 The remaining portion, and most of the property,
15 has extremely high water tables based upon the Soil Survey
16 of Morris County.

17 Q Have you analyzed the adverse environmental
18 impacts which would flow from the maximum development per-
19 mitted under the current zoning ordinance on these lots
20 to determine whether or not they fall within the acceptable
21 range?

22 A I have not made a specific evaluation or calculation.

23 MR. ONSDORFF: Let us call it quits there.

24 MR. BERNSTEIN: There is no question in my
25 mind that you are entitled to go as far as you can

1 on depositions. But, by the same token, I think
2 that from my advantage point I am entitled to
3 depose your environmentalist for whatever informa-
4 tion I can get, so that I would want a linkage there.

5 I have the fear that Judge Muir possibly won't
6 extend depositions, and I'm willing to cooperate.

7 I think this is the only town where the planner
8 has been deposed so far. If not, one of the few.
9 And, I want to cooperate and I've been willing to
10 stay here longer than normal because I appreciate
11 your problems.

12 On the other hand, we are concerned about
13 what your environmentalist will say. And since
14 there are rebuttal witnesses, we won't be getting
15 anything in writing. So, it will be catch-as-catch-can
16 at the trial. So, I would link further depositions
17 with my town with at least us getting a crack at
18 your environmentalist.

19 MR. ONSDORFF: Fine. I have no response at
20 this time.

21 MR. BERNSTEIN: You would check with Carl
22 Bisgaier?

23 MR. ONSDORFF: Any further determinations with
24 regard to deposition schedules will be forth coming
25 with the lead counsel in the case.

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MR. BERNSTEIN: Check with your witnesses to see what dates they would be available, assuming you get the green light from Carl Bisgaier, which I assume you would

MR. ONSDORFF: Of course that information needs to be made available as soon as possible, and that's a reasonable request.

(The deposition adjourns at 2:05 p.m.)

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C E R T I F I C A T E

I, Roxanne Malanga,
a Shorthand Reporter of the State of New Jersey,
do hereby state that the foregoing is a true
and accurate transcript of my stenographic notes
of the within proceedings, to the best of my ability.

NOTARY PUBLIC OF NEW JERSEY