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BEFORE THE LAND USE BOARD OF APPEALS
OF THE STATE OF OREGON

CARSON LINKER,
Petitioner,

vs.

MULTNOMAH COUNTY,
Respondent.

LUBA No. 99-182

FINAL OPINION
AND ORDER

Appeal from Multnomah County.

Michael C. Robinson, Portland, filed the petition for review. With him on the brief was Stoel Rives, LLP.

Sandra Duffy, Chief Assistant County Counsel, Portland, filed the response brief.

BRIGGS, Board Member; BASSHAM, Board Chair; HOLSTUN, Board Member, participated in the decision.

AFFIRMED

05/24/2000

You are entitled to judicial review of this Order. Judicial review is governed by the provisions of ORS 197.850.

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NATURE OF THE DECISION

Petitioner challenges a county decision denying his application for a forest template dwelling.

FACTS

Petitioner, the applicant below, owns a 39.73-acre, flag-shaped parcel designated Community Forest Use (CFU-4) on the county’s zoning map. The majority of the property (the flag) is composed of essentially a large, rectangular-shaped parcel. The remainder (the flag pole) is composed of a 24-foot wide strip of land extending approximately 540 feet from the northwest corner of the main portion of the property to a county road.¹ The property is currently undeveloped. Eleven lawfully created parcels lie completely or partially within a 160-acre square area that is centered on the center of the subject property. Some of those parcels contain dwellings.

Petitioner applied for a forest template dwelling on the subject property. The county’s template criteria require, among other things, that the applicant demonstrate that at least five dwellings are located within a 160-acre square centered on the center of the subject parcel. Petitioner submitted evidence from a registered surveyor indicating that the application satisfied the relevant criteria. The county’s staff report relied on two methodologies to determine the center of the subject property. Applying the county’s methodologies, the requisite fifth dwelling is located approximately 40 feet north of the edge of the centered 160-acre square template.

The county hearings officer reviewed the evidence, and concluded that the county staff’s method of establishing the center of the subject property was more credible than the applicant’s. She therefore denied the application. The applicant appealed the hearings

¹A drawing of the subject property and the area of analysis is included in this opinion.

1 officer’s decision to the board of commissioners which, except for one minor correction that
2 is not relevant to this appeal, affirmed the hearings officer’s findings and decision.

3 This appeal followed.

4 **FIRST, SECOND, THIRD AND FOURTH ASSIGNMENTS OF ERROR**

5 ORS 215.750(1) provides, in relevant part:

6 “In western Oregon, a governing body of a county * * * may allow the
7 establishment of a single-family dwelling on a lot or parcel located within a
8 forest zone if the lot or parcel is predominantly composed of soils that are:

9 “* * * * *

10 “(c) Capable of producing more than 85 cubic feet per acre per year of
11 wood fiber if:

12 “(A) All or part of at least 11 other lots or parcels that existed on
13 January 1, 1993, are within a 160-acre square centered on the
14 center of the subject tract; and

15 “(B) At least three dwellings existed on January 1, 1993, on the
16 other lots or parcels.”

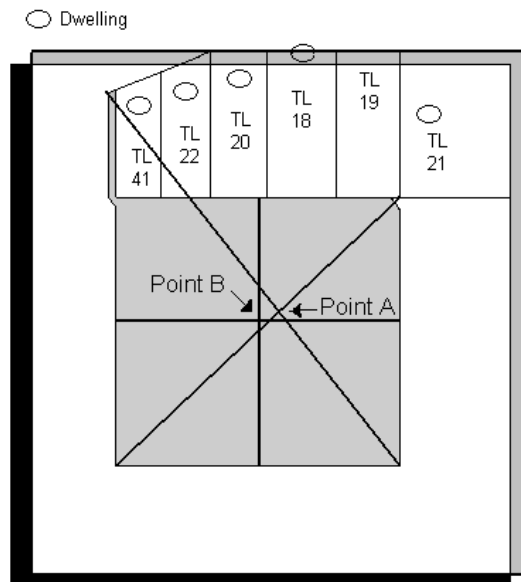
17 Multnomah County imposes stricter requirements than ORS 215.750(1)(c).
18 Multnomah County Code (MCC) 11.ES.2052(A)(3)(c)(i) and (ii) permit a dwelling to be
19 sited on a lot capable of producing more than 85 cubic feet per acre per year of wood fiber,
20 provided:

21 “(i) The lot upon which the dwelling is proposed to be sited and at least all
22 or part of 11 other lawfully created lots existed on January 1, 1993
23 within a 160-acre square when centered on the center of the subject
24 tract *parallel and perpendicular to section lines*; and

25 “(ii) At least *five* dwellings lawfully existed on January 1, 1993 within the
26 160-acre square.” (Emphasis added.)

27 To understand petitioner’s arguments, some explanation of the methods used to
28 determine the center of the subject parcel for the purpose of satisfying MCC
29 11.ES.2052(A)(3)(c)(i) and (ii) is needed. As a further aid in understanding the methods
30 described below, and the different areas included in the 160-acre squares that result, we

1 illustrate the various methods using a diagram of the relevant area. The subject property
2 appears in gray. The white area containing the subject property and relevant portions of
3 surrounding tax lots represents the area that would be included in the 160-acre square
4 resulting from any of the described methods. The black area along the west and south sides
5 represents the remainder of the 160-acre square resulting from the county's methods. The
6 gray area along the north and east sides represents the remainder of the 160-acre square
7 resulting from petitioner's method. This diagram is provided for illustrative purposes only



8 and is not drawn to scale.

9 **A. “Centerpoint” Method (Applicant’s Methodology)**

10 Petitioner argues that the center of the subject property is determined by establishing
11 a point equally distant from the extreme property corners. To illustrate this concept before
12 the county, petitioner’s surveyor drew a line from the northwest corner of the subject
13 property to the southeast corner, and then drew another line from the northeast corner to the

1 southwest corner, forming an “X” across the subject property. Petitioner contends that the
2 center of the X is the center of the subject parcel, because it is equidistant from its corners. In
3 this case, the center of the “X” is located towards the northeast corner of the flag portion of
4 the property. If the center is located in this manner, five dwellings are located within the 160-
5 acre square template, including one that straddles the north template line.

6 This point is referred to as “Point A” on the diagram.

7 **B. “Center of Gravity” Test**

8 In the “center of gravity” method, an irregularly shaped parcel is broken up into
9 composite polygons, such as triangles, squares and rectangles. The center of each composite
10 piece is calculated, then the average of those centers is found, weighted by the area of each
11 piece.

12 In the hearings officer’s decision, the county’s application of this method to the
13 subject property is described as follows:

14 “The bulk of said property consists of a ‘box’ approximately 1307 feet east-
15 west by approximately 1316 feet north-south. The small amount of area cut
16 off of the northeast corner was not taken into consideration. A line was drawn
17 from the midpoint of the north boundary to the midpoint of the south
18 boundary. Another line was drawn from the midpoint of the west boundary to
19 the midpoint of the east boundary. Where these two lines intersect is the
20 center of the ‘box.’ This method is also outlined in the Bureau of Land
21 Management’s ‘[M]annual of Surveying Instructions’ as [proper] procedure to
22 establish the legal center of section.

23 “The subject property also has an access strip 24 feet wide by approximately
24 540 feet long connecting the northwest corner of the ‘box’ to Trout Creek
25 Road. This [flag pole] contains approximately 13,000 square feet, which does
26 contribute to the overall area of the property. Since the [flag pole] is
27 geographically located north of the ‘box’ the center of said ‘box’ was adjusted
28 approximately 10 feet to the (due) north to compensate for the are[a] of this
29 strip. The center was not adjusted in an east-west position since the overriding
30 question is the north-south position. Dividing 13,000 square feet by the east-
31 west width of the property (approximately 1307 feet) arrived at the 10 foot
32 dimension.” Record 15.

1 The center point produced by the “center of gravity” test is referred to as “Point B”
2 on the diagram.

3 **C. “Pin” Test**

4 In the “pin” test, an outline of the property is traced onto a sheet of paper, which is
5 then used as a template for a cardboard cutout of the property. Once the cardboard cutout is
6 made, the cutout is balanced on the end of a pin, like a top, in order to find the center point.
7 The theory behind this method is that the mass of the cardboard is distributed across the
8 width of the cardboard, and the center of the mass also represents the center of the area.

9 County staff applied this test to determine the center of the subject parcel; however,
10 the test was not reproduced before the hearings officer or the board of commissioners.
11 Because the county’s decision states that the county’s methodologies established the same
12 center point, this point is represented as “Point B” on the diagram as well.

13 **D. Petitioner’s Arguments**

14 Petitioner alleges that the two methods used by the county to determine the center of
15 the subject parcel are inconsistent with state law and, as applied here, are so undermined by
16 petitioner’s evidence, that petitioner’s evidence must be believed as a matter of law.
17 According to petitioner, the county’s application of the “center of gravity” test does not
18 properly account for the access road and, therefore, the result did not establish the “center of
19 the subject tract” as required by statute and ordinance. Petitioner challenges the board of
20 commissioners’ and hearings officer’s reliance on the “pin” test, because the test was not
21 demonstrated during the public hearings. Petitioner contends that the evidence of the results
22 of the “pin” test included in the staff report cannot be believed in the absence of such a
23 demonstration. Petitioner also argues that the county erred in determining that petitioner’s
24 method of establishing the center of the subject property improperly included property
25 outside of the subject parcel.

26 The county responds that the methods it used to determine the center of the subject

1 parcel are reasonable and correct.

2 In reviewing the evidentiary basis for a denial, petitioner prevails only if his evidence
3 must be believed as a matter of law. *Jurgenson v. Union County Court*, 42 Or App 505, 510,
4 600 P2d 1241 (1979). Accordingly, petitioner here must demonstrate that the county's
5 reliance on the two alternative tests is contrary to the law, or is so unreasonable that only
6 petitioner's alternative can be believed.²

7 To the extent that petitioner argues that the county's choice of tests to determine the
8 center of the subject property is contrary to the applicable law *per se*, we disagree. Neither
9 the statute nor the county code define "center" or specify a procedure for determining the
10 "center of the subject tract" for purposes of determining compliance with the relevant
11 criteria. Therefore, the county could choose more than one method to locate the "center of
12 the subject tract," so long as the methods selected are reasonable. Here, the record
13 demonstrates that both the "pin" test and the "center of gravity" test are commonly used
14 methods to determine the center of a polygon. The "center of gravity" test is supported by a
15 document authored by a Princeton mathematics professor. Record 278-79. While we do not
16 claim to have a complete understanding of the Euclidean principles articulated in the
17 document, it is reasonably clear that the concept of dividing an irregularly shaped parcel into
18 smaller, more easily measured components, and then locating the composite center in a
19 manner that accounts for their respective areas, is an accepted practice. Similarly, the record
20 indicates that the "pin" test, when applied correctly, will establish the center point.³

²Although petitioner presents his challenge as an evidentiary challenge, it is more a question of defining the undefined term "center" where the relevant tract is irregularly shaped. Nevertheless, we approach the question as a substantial evidence question, as do the parties.

³An oddity that was likely unanticipated by the legislature is that certain irregularly shaped polygons have a center point located outside the polygon. For example, a horseshoe-shaped lot would have a center point located outside the horseshoe itself, in the area partially enclosed by the horseshoe.

1 We now turn to petitioner’s arguments regarding the application of the two tests. As
2 we understand petitioner’s arguments, petitioner contends that the county’s application of the
3 “center of gravity” test is so flawed that it cannot be relied upon as a matter of law. Petitioner
4 contends that county staff’s explanation of how the center of the property was established
5 does not adequately explain where the center of the access road is, and how that affects the
6 movement of the center point of the property. Petitioner contends that the staff’s calculations
7 do not adequately account for the access road and, therefore, the results of the “center of
8 gravity” test should be completely disregarded.

9 Contrary to petitioner’s contention, the “center of gravity” test as applied by the
10 county does take into account the area within the access strip in its calculation of the center
11 of the subject property. As staff noted, the center of the main portion of the parcel is adjusted
12 10 feet northward to account for the area included in the flag pole. While the county’s
13 application of the test was not mathematically precise, we believe it is sufficiently accurate
14 that the hearings officer and the board of commissioners could rely on it.

15 As for the “pin” test, we do not agree with petitioner that an actual demonstration
16 before the decision makers that the center is where staff established it to be was required
17 before the board of commissioners could rely on the result produced by the “pin” test. The
18 methodology and raw data from field tests and mathematical calculations that support expert
19 opinions are rarely fully presented to the decision maker during oral testimony. Typically,
20 the results are presented, and if the decision maker has a question regarding the methodology
21 or its application, the documentation can be discussed or supplied.

22 Here, the decision maker used the results of the “pin” test to confirm the results of the
23 “center of gravity” test. Even if we agreed with petitioner that the county’s reliance on the
24 results of the “pin” test is misplaced, it does not undermine the county’s alternate
25 justification for denying the application. We therefore conclude that the county’s reliance on
26 the results of the “center of gravity” test to determine that only four dwellings lie within the

1 template area is reasonable and supported by substantial evidence. Petitioner has not
2 sustained his burden to show, as a matter of law, that only his evidence could be believed.⁴

3 The first, second, third and fourth assignments of error are denied.

4 The county's decision is affirmed.

⁴We also agree with the hearings officer that petitioner's method of establishing the center of the subject parcel incorrectly locates the center. Petitioner's method does not account for relative mass or area. That is, the narrow strip pulls the center point farther north than its size in proportion to the main portion of the parcel would warrant.