In the United States Court of Federal Claims

No. 14-388L
(Filed: December 14, 2018)

WILLIAM C. HARDY & BERTIE ANN HARDY et al.,	*	
Plaintiffs,	*	Rails-to-Trails; Valuation Trial; Yellow Book; Value of Property Rights Remaining in the Servient Estate; Special Benefit; General Benefit; Severance Damages; Verification; Comparable Sales; Adjustments
v.	*	
THE UNITED STATES,	*	
Defendant.	*	

Elizabeth A. Gepford McCulley and Thomas S. Stewart, Kansas City, MO, for plaintiffs.

Amarveer Brar, United States Department of Justice, Washington, DC, for defendant.

OPINION AND ORDER

SWEENEY, Chief Judge

In this Rails-to-Trails action, plaintiffs own real property adjacent to a rail corridor in Newton County, Georgia. Until 2013, the Central of Georgia Railroad Company and its predecessors held easements for railroad purposes that crossed their land. Defendant United States then authorized the conversion of the railroad rights-of-way into recreational trails pursuant to the National Trail Systems Act, conduct that resulted in a taking in violation of the Just Compensation Clause of the Fifth Amendment to the United States Constitution. At issue is the amount of compensation owed to plaintiffs for the taking. As explained below, the court awards damages to plaintiffs in an amount to be determined in accordance with the court's findings and conclusions.

I. FACTS

Detailed descriptions of the statutory and regulatory context of this case, initial acquisition of the land in question, and proceedings before the Surface Transportation Board are provided in the court's summary judgment ruling on the issue of liability and need not be repeated herein.[1] See Hardy v. United States, 127 Fed. Cl. 1, 5-7 (2016). In that ruling, the court determined that the Surface Transportation Board's issuance of a Notice of Interim Trail Use or Abandonment ("NITU") on August 19, 2013, constituted a taking with respect to property owners holding a cognizable Fifth Amendment property interest. Id. at 21-22. It further determined which plaintiffs held such an interest. Id. at 10-21. The court later reconsidered its ruling with respect to certain parcels, finding that additional plaintiffs held a cognizable Fifth Amendment property interest as of the date of taking. Hardy v. United States, 129 Fed. Cl. 513, 518 (2016); see also Jt. Stip. 1 (discussing the parties' stipulation regarding ownership).

On November 18, 2016, the Surface Transportation Board issued a public notice of correction of the NITU, modifying the NITU's description of the location of the eastern terminus of the portion of the rail line covered by the NITU—a modification that affected eleven plaintiffs owning twelve parcels. Hardy v. United States, 131 Fed. Cl. 534, 536-37 (2017); see also Cent. of Ga. R.R. Co.—Abandonment Exemption—in Newton Cty., Ga., No. AB 290 (Sub-No. 343X), 2016 WL 6839539 (S.T.B. Nov. 18, 2016). The court determined that the NITU's modification impacted the duration of the taking, not whether a taking had occurred, and that the plaintiffs affected by the NITU's modification suffered a temporary taking from August 19, 2013, to November 18, 2016. Hardy, 131 Fed. Cl. at 539-40.

The court then held an eight-day trial in Atlanta, Georgia from September 25 through October 4, 2017, to ascertain the value of the property interests that were found to have been taken. Six landowners, as well as experts for both sides, testified during the trial. During posttrial briefing, the parties filed cross-motions for partial summary judgment as to the appropriate interest rate necessary to provide just compensation. On June 21, 2018, the court determined that "[p]laintiffs are entitled to delay damages between the date of taking and the date of payment at an interest rate equivalent to the [Moody's Composite Index of Yields on Aaa Long Term Corporate Bonds ("Moody's")] rate, compounded quarterly."[2] Hardy v. United States, 138 Fed. Cl. 344, 357 (2018). After posttrial briefing concluded, the court heard closing arguments on August 16, 2018.

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[1] This section contains the court's findings of fact as required by Rule 52(a)(1) of the Rules of the United States Court of Federal Claims. The court derives these facts from the parties' Joint Stipulation of Facts ("Jt. Stip."); the transcript of testimony elicited at trial ("Tr."); the exhibits admitted into evidence during trial ("PX" or "DX"); relevant statutes, regulations, and prior decisions; and matters of which the court may take judicial notice pursuant to Rule 201 of the Federal Rules of Evidence. Citations to the trial transcript will be to the page number of the transcript and the last name of the testifying witness.

[2] The Moody's rate for August 19, 2013, was 4.71%. Federal Reserve Economic Data, Moody's Seasoned Aaa Corporate Bond Yield, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/DAAA/ (last visited Dec. 14, 2018).

A. Status of the Trail

Newton County is a suburban/rural community in north central Georgia. PX 220 at 9; DX 416 at 45. It comprises 279 square miles of land and had 105,473 residents in 2015. PX 220 at 9. The county seat, Covington, is a half-hour drive east from Atlanta, and thus serves as a "convenient commuting bedroom community" for Covington's 13,916 residents.[3] Id. at 9-10. The trail at issue extends approximately 14.9 miles from its eastern terminus near Newborn to its western terminus in Covington. Id. at 9. On September 28, 2016, the Central and Georgia Railway Company and the Newton County Trail-Path Foundation, Inc. ("Newton Trails") notified the Surface Transportation Board that they had executed a lease agreement for interim trail use and railbanking. Cent. of Ga. R.R. Co., 2016 WL 6839539, at *1. At the time of trial, the hiking and biking trail included three impassible trestle bridges, DX 416 at 41, and its construction was not complete,[4] Tr. 88, 113 (Greer); PX 138 at 1-2; PX 186 at 1.

> First, access to the subject trail is constrained by the lack of trailheads (save Beaver Park, located between Manchester and Newborn), such that owners abutting the trail and subdivisions where community-specific access points were added are generally the only users that do not have to trespass to access the trail. . . .
>
> Second, closed bridges effectively divide the subject trail into relatively short segments that are less conducive for users wanting longer stretches of trail . . . . Funding required to repair the bridges and open up larger segments of the subject trail appears to be a significant obstacle . . . . [I]t is highly unlikely that the trail will be more than 1.5± miles to 2.5± miles in length during the foreseeable future.

DX 416 at 170. Notwithstanding the lack of trailheads, "[t]he segment of trail between downtown Covington and the Alcovy River bridge is accessible by several street crossings." Id. at 173.

[3] Census figures indicate that the population of Covington was 13,116 in 2010. PX 220 at 10. The 13,916 figure reflects an extrapolation of the 6.1% growth in Covington's population from 2010 to 2015. See id.

[4] The court recognizes that the current status of the trail is not relevant to valuation, see infra Section II.B, but provides the information in this section for background purposes. See also Tr. 1842 (Sheppard) (indicating that information regarding the status of the trail was included to "bring the user of the appraisal to a point of understanding" the work performed).

B. Plaintiffs' Property Interests as of the Date of the Taking

The parties stipulate that all but one of the plaintiffs held a cognizable Fifth Amendment property interest in one or more parcels adjacent to the former rail corridor as of August 19, 2013. Jt. Stip. Ex. A. The parties disputed whether an additional plaintiff, James Jackson, owned the parcel identified as claim 106 as of the date of the taking. Id. at 15; Tr. 684 (Matthews). Although no deed conveying the property to Mr. Jackson could be located, an appraisal report reflects that he held "[t]itle to the subject property" as of August 19, 2013, and for at least ten years prior. DX 410 at 8. The appraisal report further reflects that Mr. Jackson purchased the relevant parcel from its prior owner in the 1970s and a lot survey was performed for Mr. Jackson in 1990. Id. at 9-10. Thus, Mr. Jackson held a cognizable Fifth Amendment property interest in a parcel adjacent to the former rail corridor as of August 19, 2013.

C. Size of the Land Taken

The parties stipulate to the portion of each parcel situated within the former rail corridor—i.e., the size of the taking—for the majority of the plaintiffs. Jt. Stip. Ex. A (listing the stipulated measurements, where applicable, for all parcels); see also PX 112 (maps of all parcels and the former railroad corridor).

One of these stipulations—with respect to the area of the claims 21.A through 21.BB, all owned by Drapac Group 28 LLC ("Drapac")—contains an error. The parties' joint stipulation indicates that the aggregate land taken with respect to the Drapac parcels is 2,058 feet long and 25 feet wide, for a total area of 51,450 square feet, i.e., 1.181 acres. Jt. Stip. Ex. A at 4. However, these figures conflict with the information for the individual Drapac parcels that is contained within the joint stipulation. That information reflects that the width of the taking is 25 feet for all parcels and that the length of the taking varies from 33 feet to 130 feet, summing to 2,167 feet. See id. at 2-4. At 2,167 feet long and 25 feet wide, the total area taken is 54,175 square feet, i.e., 1.244 acres. Indeed, the experts for both parties used this latter figure in their calculations, rather than 51,450 square feet. PX 220 at 21-24 (reflecting an area of "54,175 SF or 1.244 acres"); DX 320 at 4 (noting that "[t]he subject has 54,174± SF of land area being acquired"[5]), 18-44 (individual parcel maps reflecting lengths that match those listed in the joint stipulation).

The parties dispute the size of the taking for the following claims: 17, 26.A, 26.B, 69.A, 69.B, 70, 86, and 95. Jt. Stip. Ex. A; Tr. 521 (Matthews). In support of its position, defendant offers the areas supplied by its expert, who did not perform his own measurements but merely relied on the numbers provided by defense counsel.[6] DX 316 at 9 (claim 17); DX 325 at 10

[5] The difference of one square foot has no significance in the instant case.

[6] During trial, defendant's expert stated that he reviewed, for accuracy, all of the measurements that were provided to him. Tr. 1016 (Sheppard). Further, in his expert report, he describes having made adjustments to maps that reflected area adjustments. DX 416 at 34. However, these remarks were relevant to the trail as a whole—not for individual properties along the trail. None of his individual reports regarding the parcels for which the area of taking was

(claims 26.A and 26.B); DX 369 at 10 (claims 69.A and 69.B); DX 370 at 9 (claim 70); DX 391 at 9-10 (claim 86); DX 402 at 11 (claim 95). In contrast, plaintiffs offer the areas supplied by their expert, who performed his own measurements and calculations. Tr. 520-22 (Matthews); PX 220 at 546 (claim 17), 556 (claim 26.A), 557 (claim 26.B), 606 (claim 69.A), 607 (claim 69.B), 608 (claim 70), 583 (claim 86), 617 (claim 95). The actual measurements and calculations of plaintiffs' expert are more credible. Thus, the sizes of the land taken at issue are as follows:

Claim	Square Footage	Acres[7]
17	6,425	0.147
26.A	5,850	0.134
26.B	6,550	0.150
69.A	8,800	0.202
69.B[8]	161,100	3.698
70	14,350	0.329
86	16,275	0.374
95	35,850	0.823

D. Impact of the Trail on Landowners

Six plaintiffs testified credibly regarding their concerns pertaining to the trail. Written comments from all plaintiffs regarding the trail were also admitted into evidence. Plaintiffs generally expressed concerns related to privacy, safety, crime, law enforcement response times, trespassers, trash, farm animals being disturbed by trail users, and the trail negatively impacting the value of the their property.

Fred Greer owns a 250-acre farm near Mansfield that has been in his family for six generations.[9] Tr. 56 (Greer). His farm is bisected by the trail, and includes barns and other

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not stipulated provides any indication that he made any adjustments to the measurements that were provided by defense counsel.

[7] One acre equals 43,560 square feet. Acre, Black's Law Dictionary (10th ed. 2014); Tr. 397 (Matthews); see also U.S. Customary System of Weights and Measures: Commercial Weights and Measures Units, 33 Fed. Reg. 10,755, 10,755 (July 27, 1968) (listing "common weights and measures used in normal commerce throughout the United States"). The acreage based on the square footage is rounded to the nearest thousandth (i.e., three decimal places).

[8] The parties' disagreement with respect to claim 69.B amounts to a rounding dispute. Compare PX 69.D at 2 (reflecting an area equal to 161,100 square feet, i.e., 3,222 feet long and 50 feet wide), and PX 220 at 607 (same), with DX 369 at 10 (reflecting an area equal to 161,087 square feet, i.e., 3,221.73 feet long and 50 feet wide).

[9] Mansfield is near Newborn, both of which are located in the southeastern portion of Newton County. PX 220 at 9; DX 416 at 51.

structures near the trail itself.[10] Id. at 61, 75; PX 77.B; PX 77.C at 2; DX 376 at 11-12; DX 377 at 11-12; DX 379 at 10; DX 380 at 13. He described having items stolen from his barn, Tr. 66 (Greer), trespassers on his property, id. at 88, cattle being disturbed by trail users, id. at 72, a "substantial" increase in trash along the trail, id. at 76, and feeling that safety will be impacted once trail construction is complete, id. at 88.

Jack Morgan owns a 32-acre residential property that is bisected by the trail on its southern side. Id. at 118, 142, 148-49, 155 (Morgan); PX 68.E.1; DX 368 at 10. His home is located approximately 600 feet from the trail, at the end of a half-mile private drive accessible via a cul-de-sac. Tr. 119-20, 141 (Morgan); PX 68.E.1. His property includes a pond and other structures. Tr. 120-21, 141 (Morgan); PX 68.E.1. Mr. Morgan also owns Morgan Plaza, which is commercial property within the Covington city limits. Tr. 117-18 (Morgan). Along with other neighbors, he formed a group opposed to recreational trails in Newton County. Id. at 130-32. His primary concern with the trail is that it "opens up a right-of-way" through his property giving users "blind access," whereas people did not use the corridor when the railroad was running. Id. at 121-22. He remarked that "interlopers" can determine whether he is home and then access his barn. Id. at 128. Mr. Morgan explained that has to be "on guard more so now than ever before" due to the ability of the public to use the trail, despite barriers that are in place surrounding a trestle bridge just to the south of his property. Id. at 128, 150. In June 2017, for example, a cell phone belonging to a registered sex offender was found near the pond. Id. at 123-26; PX 232. In addition, although the trail "is not supposed to be used for vehicle traffic," he occasionally hears all-terrain vehicles on the trail. Tr. 122-23, 151 (Morgan).

Jeremiah Frazier lives in a small Covington subdivision on approximately one-third of an acre at the end of a cul-de-sac. PX 37.C; PX 37.D; DX 337 at 10. The trail corridor is located at the back of his property adjacent to a street that is not safe to walk along. Tr. 170-71 (Frazier); PX 37.C; DX 337 at 10. He and his wife purchased their property in December 2006 to be closer to family members, and two adult children still live at home. Tr. 158, 165 (Frazier); PX 37.B. Mr. Frazier's primary concerns are privacy and safety because he spends "quite a bit of [his] time" in the backyard. Tr. 165-68 (Frazier). Although his backyard is enclosed by a fence that is "somewhere between six and seven feet tall," trail users can see into the backyard and in his windows due to the elevation of the trail and lack of foliage immediately off the ground, and he can hear whenever people are using the trail. Id. at 166-68, 172; accord PX 37.E.3, 37.E.4, 37.E.5. Mr. Frazier noted that, at night, someone on the trail can see into his home if the lights are on, but he would not be able to see outside since the trail is not lit. Tr. 167 (Frazier); PX 155 at 1. Mr. Frazier also described increased trash and trespassing, and explained that he recently installed a security system, because of the presence of the trail.[11] Tr. 168-70 (Frazier). He stated that the trail "absolutely" impacted his property values because a potential buyer "would have the same concerns." Id. at 171-72.

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[10] Mr. Greer's farm comprises several contiguous parcels, not all of which are adjacent to the trail corridor. See, e.g., PX 220 at 21.

[11] Mr. Frazier also referenced a break-in, but acknowledged that the perpetrators did not access his property via the trail. Tr. 170, 179 (Frazier).

Jim Anderson's family owns approximately 170 acres of farmland that has been in his family since the nineteenth century.[12] Id. at 196, 208 (Anderson); PX 59.C; DX 358 at 8. The property, which abuts a river, includes a small home, two barns, and a Native American campground. Tr. 196-97 (Anderson); PX 59.B. Mr. Anderson raises cattle on the property, which is approximately 80% open and 20% wooded. Tr. 195-96, 200 (Anderson). The property is bisected by 5,087 feet of the trail on its western side, and another 467 feet of the trail abuts the property's southern edge. PX 59.C at 1; DX 358 at 9-10. There are two private crossings on the property approximately 1,500 feet apart over the former rail corridor that were previously maintained by the railroad, and a trestle bridge on the trail where it crosses the river just northwest of the property. Tr. 199-200, 211 (Anderson). Mr. Anderson, like Mr. Morgan, shared his concerns regarding the trail with his neighbors, and prefers to simply have his land back instead of having a trail sever the property. Id. at 205. He described the loss of privacy due to the public trail as "hurt[ing] the value of the property." Id. at 206. Specifically, he listed "gross trespassing," "illegal hunting and poaching," "unabated littering," and "vandalism" as concerns associated with "unauthorized persons . . . access[ing] a property." Id. at 200. Mr. Anderson recounted how people "began cruising the track" after the railroad ceased regular service. Id. at 201. Since then, he has found trash along the trail and discovered campgrounds where squatters "set up housekeeping" on multiple occasions. Id. at 201-02, 216. He has also had tools stolen from the barns and fences along the former rail corridor cut, causing his cattle to get loose and roam the trail. Id. at 202-03. Mr. Anderson noted that before the rail track was removed, theft was higher during hunting season, but now thefts occur "year round." Id. at 215-16. He remarked that law enforcement assistance has been unhelpful due to delayed response times. Id. at 204.

Michael Solomon lives next door to Mr. Frazier. Id. at 219 (Solomon); DX 336 at 10, with DX 337 at 10. Similar to Mr. Frazier, Dr. Solomon's property also comprises approximately one-third of an acre and is located at the end of the cul-de-sac. Id. The trail corridor is located at the back of his property, separated by a fence, and is adjacent to the same street described by Mr. Frazier as not safe to walk along. Tr. 170-71 (Frazier), 227 (Solomon); DX 336 at 10; DX 337 at 10. Dr. Solomon explained that he and his wife moved to Covington for "seclusion and quiet." Tr. 226 (Solomon). He expressed concerns with needing to "enhance security" surrounding his property, despite having had a security system in place since building the home, because he travels abroad for business approximately 90% of the year. Id. at 226, 230-31. Dr. Solomon has, similar to Mr. Frazier, seen people on the trail, including one occasion in 2017 when he was upstairs showering. Id. at 228-29. He has also seen "significant trash built up on [his] property" due to the presence of the trail. PX 154 at 1.

Mark Sanders also lives in Covington. Tr. 238 (Sanders). His property is a ten-acre single-family residential tract, with its east border abutting approximately 758 feet of the trail. Id. at 244, 251; PX 16.B; PX 16.D; DX 315 at 8-10, 12. Mr. Sanders purchased the five-bedroom home—a replica of an antebellum mansion—in a dilapidated state in 2012 at a bankruptcy sale for $300,500 (the property having sold for $1.4 million in 2002) and has since spent considerable funds on renovations. Tr. 240-41, 247 (Sanders); PX 16.B; DX 315 at 8. His

[12] The record owner of the farmland is Jane Greer Anderson. PX 59.B; DX 358 at 8.

home is approximately 100 yards from the trail. Tr. 259 (Sanders). He also has a barn that is approximately 25 yards from the trail. Id. at 248; PX 16.B; DX 315 at 11. Mr. Sanders explained that he is concerned with people having "access to [his] property without [him] being able to see them" since the trail is "very hidden," although he has seen people walking the trail. Tr. 249, 251-52 (Sanders). He remarked that he is worried about trespassing and vandalism based on previous break-ins to his barn and the topography of his land, and averred that it would be naïve to think that the trail would not provide a "platform" for nefarious activity. Id. at 249-54.

Other plaintiffs provided sworn declarations that were admitted into evidence in which they shared concerns similar to those expressed by the plaintiffs who provided live testimony during trial. For example, Luckie Jerry Ward explained:

> The Trail above and well behind my home allows EXCESS water to flow down[,] therefore[] trash left by trail users ends up in my back yard. The trail is a huge nuisance because it is being used as a "shooting alley" by ATVs, motorcycles, and trail bikes.

PX 172 at 1. Similarly, Michael Lassiter averred:

> We have continually cleaned the area between the old railroad track and our land ever since the [rail] line was abandoned. We have used a swing blade since a lawn mower would certainly be wrecked with rocks, branches jutting up from the ground[,] and trash thrown by "trail" users. The stretch of the abandoned track has not been prepared for a walking trail and yet we have experienced noisy walkers, bicycles, golf carts, and speedsters in Trailblazers, Explorers, three wheelers & motorcycles. The abandoned track is at a level that anyone can peer into our private backyard. The City of Covington has posted a sign stating "Primitive Path" but people still come through.

PX 138 at 1. Mr. Lassiter noted that there has been vandalism, graffiti, and trash along the trail. Id. at 2. He further stated that "multiple walkers and people on bicycles" cut through his property to access the trail. Id. Several other plaintiffs have also seen people trespass on their property to access or leave the trail. See, e.g., PX 130 at 4; PX 140 at 1; PX 163 at 1. Wayne Blackwell, who owns a grocery store that is adjacent to the trail, has had people treat his store's parking lot as a trailhead, leaving fewer parking spots for his customers. PX 206 at 1. Some plaintiffs, similar to Mr. Frazier and Dr. Solomon, observed that trail users can see into their homes. PX 132 at 1; PX 153 at 1. For Patricia Alexander, the safety concerns due to the trail caused her to move away, PX 173 at 4, and Maxine Romeo Smith remarked that she may, if it becomes necessary, do so as well, PX 150 at 4. Anthony Sinyard is currently considering selling his property because of safety concerns. PX 190 at 1.

In addition, several plaintiffs emphasized that Newton Trails does not actively maintain the trail. See, e.g., PX 145 at 1; PX 159 at 1; PX 167 at 1; PX 193 at 1. Thomas Fulton explained that the trail is not safe for users:

> [T]here is a major concern with the trestle located on the west end of my parcel. [Newton Trails] put up some barriers and signs around the trestle, but they quickly were torn down. The trestle poses a serious liability issue[] for the trail users. . . . The trestle acts as an attractive nuisance for people.

PX 194 at 1. According to defendant's expert, "most of the trail is inaccessible for trash collection due to bridges that are out of service and impassible." DX 416 at 173.

Some plaintiffs indicated that they had no concerns regarding the trail, but specified that their lack of concern was due to the fact that the trail was not fully operational. E.g., PX 125 at 1; PX 168 at 1. Ultimately, the general sentiment was that the trail had an adverse impact on property values. See, e.g., PX 129 at 1; PX 147 at 1; PX 165 at 2; PX 171 at 2; PX 178 at 1; PX 180 at 2; PX 187 at 1.

E. Highest and Best Use

As a final matter, each of the parcels at issue can be placed in a category that reflects its highest and best use. The relevant categories include small residential, large residential, agricultural/timber, commercial, and industrial. Jt. Stip. Ex. A. The parties generally do not dispute the highest and best use of any of the land in question. Tr. 335 (Matthews), 1411 (Sheppard). There are two exceptions: claims 91.C and 91.D.

Mr. Matthews grouped claims 91.C and 91.D among the agricultural/timber parcels, and averred that the highest and best use for each was residential. PX 220 at 634-35; PX 221.A at 10. He noted that both parcels are zoned for agricultural use, and specified that claim 91.C is primarily wooded and that claim 91.D is used as a park for recreational purposes. Tr. 621 (Matthews); PX 220 at 634-35. Aerial maps support his assertions. See PX 112 at 24.

Meanwhile, Mr. Sheppard grouped claim 91.CD (combined) among the industrial parcels. DX 397 at 15. He observed that although the current zoning was "for agricultural use as of the effective date . . . , future land use maps indicate a probable change to commercial or industrial use." Id. He remarked that "the subject site is of sufficient size, per current and retrospective zoning regulations, to support agricultural, commercial, or industrial use" and that "[i]t is logical that the subject site would be developed in an industrial capacity," and concluded that the highest and best use for claim 91.CD was industrial. Id.

Mr. Matthews is correct. "To be a property's highest and best use, the use must be (1) physically possible; (2) legally permissible; [and] (3) financially feasible," and "must result in the highest value." Interagency Land Acquisition Conference, Uniform Appraisal Standards

for Federal Land Acquisitions ("Yellow Book") 23 (6th ed. 2016).[13] Industrial use is not legally permissible for claims 91.C and 91.D because those parcels are zoned for agricultural use. Of course, rezoning can factor into the highest-and-best-use analysis. However, "[f]or any highest and best use that will require a property to be rezoned, the probability of that rezoning must be thoroughly investigated and analyzed." Id. (emphasis added); accord Bd. of Cty. Supervisors of Prince William Cty. v. United States, 276 F.3d 1359, 1365 (Fed. Cir. 2002) ("[A] proposed 'use' requires a showing of reasonable probability that, at the time of the taking, the land was both physically adaptable for such use and that there was a need or demand for such use in the reasonably near future."). Mr. Sheppard failed to demonstrate that he thoroughly investigated and analyzed the potential for claims 91.C and 91.D to be rezoned. He simply alluded to future land use maps in stating that it was "logical" that the land would be developed for industrial use. Although he indicated that it was "probable" that the land use would change, his report lacks any analysis of the magnitude of such probability (including, for example, whether there was any demand for industrial use). Further, claim 91.D is currently exempt from property taxes because the land is developed as a park. DX 397 at 14. Its current use as a park is drastically different from industrial use, thus further demonstrating the need for a thorough discussion of the likelihood that such use would change.

In short, the highest and best use for claims 91.C and 91.D is residential, and they are properly classified as agricultural/timber parcels.

II. STANDARDS FOR DECISION

A. Legal Standards

The Fifth Amendment to the United States Constitution prohibits the federal government from taking private property for public use without paying just compensation. As relevant here, the Surface Transportation Board's issuance of a NITU effected a taking by preventing plaintiffs from enjoying possession of their property unencumbered by a railroad easement. Hardy, 127 Fed. Cl. at 7, 21-22 (citing Ladd v. United States, 630 F.3d 1015, 1019, 1024 (Fed. Cir. 2010); Barclay v. United States, 443 F.3d 1368, 1374, 1378 (Fed. Cir. 2006); Caldwell v. United States, 391 F.3d 1226, 1233-34 (Fed. Cir. 2004)). It is well settled that just compensation is measured by the fair market value of the property taken. Bauman v. Ross, 167 U.S. 548, 574 (1897). "Under this standard, the owner is entitled to receive what a willing buyer would pay in cash to a willing seller at the time of the taking." Kirby Forest Indus., Inc. v. United States, 467 U.S. 1, 10 (1984) (internal quotation marks omitted).

In Rails-to-Trails cases, the "measure of damages for just compensation must be the difference between the value of plaintiffs' land unencumbered by a railroad easement and the value of plaintiffs' land encumbered by a perpetual trail use easement subject to possible reactivation as a railroad." Raulerson v. United States, 99 Fed. Cl. 9, 12 (2011). However, courts have consistently found that such possible reactivation (i.e., "railbanking") is not a "relevant consideration of analysis" in Rails-to-Trails cases because the possibility is so remote.

[13] Plaintiffs' exhibit 124 is a complete copy of the 2016 version of the Yellow Book.

Ingram v. United States, 105 Fed. Cl. 518, 540-41 (2012) (collecting cases describing railbanking as "hypothetical," a "vague notion," "unlikely," "speculative," and "unrealistic"); accord Howard v. United States, 106 Fed. Cl. 343, 367 (2012) ("[T]here is no real prospect that the property owners will ever again have unencumbered use of their property.").

B. Appraisal Standards

Having concluded that plaintiffs are owed just compensation, the court must determine the value of the property interests taken from them. The approach that government appraisers are to follow in opining on the value of land taken by the federal government is found in the Yellow Book.[14] Yellow Book 3. Specifically,

> [a]ppraisers must exercise sound judgment based on known pertinent facts and circumstances, and it is their responsibility to obtain knowledge of all pertinent facts and circumstances that can be acquired with diligent inquiry and search. They must then weigh and consider the relevant facts, exercise sound judgment, and develop an opinion that is completely unbiased by any consideration favoring either the landowner or the government. . . . [I]t is inappropriate for an appraiser to "give the benefit of the doubt" to either a landowner or the United States.

Id. at 204.

Acquisitions in Rails-to-Trails cases are "partial acquisitions"—i.e., those in which the federal government "acquires only part of a larger parcel." Id. at 111. In partial acquisitions, "compensation is measured by the difference between the market value of the larger parcel before the government's acquisition and the market value of the remainder after the government's acquisition." Id. This approach is known as the "before and after method of valuation," id. at 151, and is the "conventional method of valuation" used in Rails-to-Trails cases,[15] Rasmuson v. United States, 807 F.3d 1343, 1345 (Fed. Cir. 2015) (internal quotation marks omitted); accord Yellow Book 199. Appraisals utilizing the before-and-after method of valuation "must analyze and reflect all compensable damages and direct (special) benefits to the value of the remainder property due to the government's acquisition and disregard all non-compensable damages and indirect (general) benefits . . . in accordance with federal law." Yellow Book 151. In the "after" condition, appraisers are to assume that the hiking and biking trail is in place and has been constructed. Tr. 324-25 (Matthews), 1404-05, 1409-10 (Sheppard). All claimed damages must be "supported by actual market evidence." Yellow Book 157. When

[14] The standards set forth in the Yellow Book "have guided the appraisal process in the valuation of real estate in federal acquisitions since their original publication by the Interagency Land Acquisition Conference in 1971." Yellow Book 1.

[15] The "before and after method of valuation" is often referred to as the "federal rule." Yellow Book 152.

properly applied to partial acquisitions, the before-and-after method incorporates compensable damages and benefits. Id. at 164. The amount of compensation due to each landowner is "measured by the owner's loss, not the government's gain." Id. at 154. The same rules apply to both permanent and temporary takings. Id. at 160.

Under the Uniform Standards of Professional Appraisal Practice ("USPAP"), there are two written reporting options for appraisers—an "appraisal report" and a "restricted appraisal report"—as well as the option to provide an oral report. Id. at 56. Oral reports are not permitted under the Yellow Book. Id. Similarly, restricted appraisal reports, i.e., appraisals in which "the intended user of the report is restricted to the client only," are not permitted under Yellow Book guidelines for "litigation matters" (although they may be used internally). Id. For partial acquisitions, written appraisal reports must include an introduction; factual data, data analysis, and conclusions regarding the "before" condition; factual data, data analysis, and conclusions regarding the "after" condition; acquisition analysis; and exhibits and addenda. See generally id. at 57-72. When multiple properties are acquired simultaneously, a project appraisal report (a type of appraisal report) may be used to satisfy USPAP requirements. Id. at 56, 72-73.

A project appraisal report "include[s] the appraisal of more than one parcel in a single report." Id. at 73. Such reports

> are not appraisal shortcuts; they are clerical shortcuts. A separate opinion of market value must still be developed for each acquisition[,] but the results of each valuation can be reported in a more efficient form.

Id. Project appraisal reports that "contain opinions of value of properties owned by persons not parties to the lawsuit and introduce a myriad of collateral issues" are "rarely conducive to litigation purposes."[16] Id. (emphasis added). Project appraisal reports must contain the same information as appraisal reports, organized into three major parts: (1) "introduction, factual data, and analysis relating to all properties included in the report"; (2) "individual parcel reports"; and (3) "addenda and exhibits relating to all properties included in the report." Id. at 73. See generally id. at 73-79 (discussing the required contents of project appraisal reports).

Regardless of whether a project appraisal report is used, appraisers must "report the opinion of value of the land for its highest and best use as if vacant and available for such use." Id. at 65. The "sales comparison approach is the preferred valuation approach for forming an opinion of the market value of the land." Id.

[16] In the instant case, all of the properties on which the appraisers offered opinions of value are owned by one or more plaintiffs.

III. THE EXPERTS

In addition to the six plaintiffs who testified as fact witnesses, each party presented the testimony of an expert appraiser. David Matthews testified as an expert appraiser on behalf of plaintiffs. Tr. 262-63, 294 (Matthews). Prior to trial, Mr. Matthews submitted appraisal reports for each property at issue. See generally PX 220; PX 221. Mr. Matthews averred that his work conformed to Yellow Book standards, Tr. 317 (Matthews); PX 220 at 6, although he was not actually required to follow the Yellow Book since he was not a government appraiser, Tr. 1866 (Matthews). Mr. Matthews has been an appraiser since 1969, received his MAI designation in 1975 and his senior residential appraiser designation in 1991, and owned and actively managed an appraisal business from 1980 through 2017. Id. at 264, 275-77, 280; PX 217 at 24. Mr. Matthews is also a member of the Real Estate Counseling Group of America, an invitation-only group of approximately thirty preeminent appraisers in the United States, and served as its president and chair from 2008 through 2011. Tr. 281-83 (Matthews); PX 217 at 24. In addition to his other qualifications, Mr. Matthews has appraised over 500 individual properties across thirty Rails-to-Trails cases since 2000 as either a joint appraiser, consultant, reviewer, or plaintiffs' expert, and has experience appraising railroad corridors dating back to 1976. Tr. 286-89, 293 (Matthews).

Andrew Sheppard testified as an expert appraiser on behalf of defendant. Tr. 992-93, 1009-10 (Sheppard). Prior to trial, Mr. Sheppard submitted appraisal reports for each property at issue. Id. at 1010-11. See generally DX 305-416.A. Mr. Sheppard has been an appraiser since 1998, and received his MAI designation in 2007. Tr. 993, 1392 (Sheppard); DX 416 at 10. At the time of trial, Mr. Sheppard served as president of the Atlanta-area chapter of the Appraisal Institute.[17] Tr. 995 (Sheppard); DX 416 at 10. Mr. Sheppard's practice focuses on "atypical" properties. Tr. 997, 1392 (Sheppard). His experience includes easement corridors, appraisal review work, and six Yellow Book appraisals. Id. at 998-1007. However, his work in the instant case was his first Rails-to-Trails project. Id. at 1418.

The experts' testimony revealed three major areas of dispute: (1) identifying the property rights available to the landowners in the "after" scenario; (2) whether there were any compensable benefits or damages to the remainder parcel in the "after" scenario; and (3) the comparable sales analyses performed by the experts, including the adjustments made (or lack thereof), verification, and reporting format. See, e.g., id. at 1900 (Matthews).

[17] The Appraisal Institute is the "nation's leading appraisal education organization." Tr. 994 (Sheppard).

IV. PROPERTY RIGHTS REMAINING IN BURDENED LAND

The first major area of dispute between the parties involves the scope of property rights each plaintiff now holds in the land burdened by the trail easement in the "after" scenario. The trail easement itself is the dominant estate; the land burdened by the trail easement is the servient estate. Yellow Book 168. With respect to easement valuation, the Yellow Book provides that the owner of the servient estate may "make any use of the realty that does not interfere with the easement holder's reasonable use of the easement and is not specifically excluded by the terms of the easement." Id. Therefore, appraisers must "carefully and precisely state what interest(s), if any, will remain with the landowner" in the "after" scenario. Id. at 169 (emphasis added). In other words, "the appraiser must clearly understand the specific terms of the easement involved to analyze the burden the easement imposes on the servient estate and the resulting impact on the value of the affected land." Id. Mr. Matthews opined that, as a result of the taking effected by imposition of the perpetual trail use easement, plaintiffs retained no valuable rights in the servient estate. Tr. 329-31 (Matthews). Mr. Sheppard opined that plaintiffs retained 15%—and conversely, lost only 85%—of their fee simple property rights. Id. at 1416, 1422-23 (Sheppard); DX 416 at 200.

A. Defendant's Position

Mr. Sheppard based his opinion that 85% of plaintiffs' property rights in the servient estate were taken primarily on what he described as the "Sherwood Matrix," which is an "easement valuation matrix [serving] as a general guide for the impact or allocation from fee simple value a host of typical easement types may have on the total bundle of rights." DX 416 at 199. The Sherwood Matrix emerged in an article titled "Easement Valuation" that was written by Donald Sherwood and appeared in the May/June 2006 issue of the Right of Way magazine.[18] Id. The Sherwood Matrix is reproduced here from Mr. Sheppard's report:

Percentage of Fee	Comments	Potential Types of Easements
90% – 100%	Severe impact on surface use Conveyance of future uses	Overhead electric Flowage easements Railroad ROW Irrigation canals Access roads
75% – 89%	Major impact on surface use Conveyance of future uses	Pipelines Drainage easements Flowage easements

[18] Mr. Sheppard incorrectly stated during trial that Mr. Sherwood's "Easement Valuation" article was published in 2016. Tr. 1168 (Sheppard). The correct year of publication is 2006, as reflected in Mr. Sheppard's expert report. DX 416 at 199; Donald Sherwood, SR/WA, Easement Valuation, Right of Way, May/June 2006, at 30, 33, available at https://www.irwaonline.org/members/publications/archives-2000-2009/.

Percentage of Fee	Comments	Potential Types of Easements
51% – 74%	Some impact on surface use Conveyance of ingress/egress rights	Pipelines Scenic easements
50%	Balanced use by both owner and easement holder	Water or sewer lines Cable line Telecommunications
26% – 49%	Location along a property line, location across non usable land area	Water or sewer line Cable lines
11% – 25%	Subsurface or air rights that have minimal effect on use and utility Location with a setback	Air rights Water or sewer line
0% – 10%	Nominal effect on use and utility	Small subsurface easement

Id. Mr. Sheppard stated that "a percentage of fee-simple value for the affected easement area ranges between 75% and 89%, considering the severity of impact of the surface's use." Id. at 200. Specifically, he contended that that the trail use easement was a "major" impact rather than a "severe" or "total" impact. Tr. 1424 (Sheppard). Mr. Sheppard explained that

> [t]he trail easement was not considered to be as onerous as overhead transmission lines, access roads, or railway right-of-way, because there is no aesthetic quality lost as a result of the trail, vehicles are precluded from using the trail, and there is no expectation that rail cars will use the trail.

DX 416 at 200. He further contended that the "permanent easement includes only limited ownership rights benefitting [plaintiffs], and there is a stipulation that the trail . . . may be converted back into an active rail line if needed." Id. Mr. Sheppard averred that "sales evidence" utilizing "high-percentage floodplain sales where there is little utility in the purchased site" supports his conclusion that only 85% of property rights were taken because such examples "illustrate how fallow or significantly unusable land is worth more than $0." Id. In describing the utility of floodplain land, Mr. Sheppard indicated that building thereon was generally impractical, but owners could exclude others and use the land for parking and setback purposes. Tr. 1428-31, 1823-24 (Sheppard).

During trial, Mr. Sheppard acknowledged that "the right to use that land [underlying the imposed trail easement] is restricted," but posited that abutting property owners—i.e., plaintiffs—retained a "right to access" the trail that nonabutting property owners did not share. Id. at 1170; accord id. at 1421. He also explained that, in the "before" scenario where plaintiffs are assumed to have 100% of the fee simple rights, plaintiffs could have used the land underlying

the perpetual trail easement for "whatever" purpose they desired, and provided the following examples:

- as a factor in "density calculations" if the land was "in a more densely populated area," such as during the permitting process when building an apartment complex;
- landscaping, including planting;
- setback requirements under zoning laws;
- erecting improvements;
- parking; and
- exclusion of others.

Id. at 1419-21. Mr. Sheppard then explained that, in the "after" scenario where the perpetual trail use easement had been imposed and the trail was constructed, plaintiffs could not control what the land was used for, but retained access rights. Id. at 1421. Specifically, he observed that plaintiffs could not use the land for any purpose not shared by the general public—including building, parking, landscaping, and exclusion—other than convenient access. Id. at 1170-71, 1427-28. He also assumed that, because plaintiffs technically retained "reversionary" interests in the land underlying the trail easement in the "after" scenario, plaintiffs could potentially use the land to meet setback requirements.[19] Id. at 1826.

B. Plaintiffs' Position

Mr. Matthews similarly considered the "value of the remaining rights in the easement." Id. at 329 (Matthews); accord id. at 324-25. He explained that the "value of the rights," rather than the "name of the rights," was the proper focus. Id. at 327-28. Unlike Mr. Sheppard, however, Mr. Matthews determined that there was no "remaining or residu[al] value" in the land burdened by the perpetual trail use easement, id. at 330, because plaintiffs "lost all the rights of use" of the land taken, id. at 325. Therefore, Mr. Matthews suggested, there was no need to include in his reports a separate section that discussed the market value of retained rights. Id. at 877. He remarked that plaintiffs have no more rights in the land in the "after" scenario than do members of the general public—most importantly, plaintiffs cannot exclude others from the trail—except for more convenient access, which did not impact the land's value. Id. at 330-31. He observed that, in having conducted hundreds of appraisals in Rails-to-Trails cases, he has

[19] Both parties use the term "reversionary interest" as shorthand for the possibility of plaintiffs or their successors enjoying unencumbered ownership of the land in the event that the trail easement is completely extinguished, i.e., not converted to another use upon its termination (by abandonment or otherwise).

consistently opined that the land underlying the easement "has no value" (beyond perhaps a de minimis amount) because the land is simply not usable. Id. at 331-32. Mr. Matthews noted that although plaintiffs maintain "reversionary" rights, such rights were too speculative to have any value. Id. at 974. In short, he asserts, a buyer would not be willing to pay for land that is burdened by a perpetual trail use easement since the buyer could "get no use out of it." Id. at 975.

C. Analysis

The court agrees with Mr. Matthews that plaintiffs retained no valuable rights in the land underlying the perpetual trail use easement.

As an initial matter, Mr. Matthews recognized that the possibility of the trail easement being extinguished was too remote to have any value. Id. at 974. Meanwhile, Mr. Sheppard acknowledged that he was unaware that such a possibility was "totally speculative." Id. at 1823 (Sheppard). Since Mr. Sheppard relied on the possibility of easement extinguishment as a valuable right plaintiffs retain in the servient estate, his conclusion that plaintiffs retained 15% of the value of their rights in the land burdened by the trail easement is flawed. Further, the potential ability of plaintiffs to use the servient estate in density calculations (due to the possibility of easement extinguishment) is similarly speculative and thus has, at best, negligible value. The other valuable right that Mr. Sheppard relied on was more convenient access to the trail than nonadjacent property owners. As explained below, the court is not persuaded that typical buyers would pay a premium for abutting the trail, and agrees with Mr. Matthews that such increased access did not increase the value of the remainder parcel or the servient estate.[20] In any event, Mr. Sheppard double-counts the purported value of increased access, thus undermining his overall approach, since his valuation opinions rely on both (1) proximity to the trail as a special benefit to the unburdened portion of the remainder parcel and (2) special access as a retained property right in the servient estate.[21]

Second, even assuming, for the sake of argument, that the Sherwood Matrix constitutes reliable authority, Mr. Sheppard's reliance on it is inapposite. He testified that when a typical drainage or flowage easement is present (a "major" impact on surface use in which 75% to 89% of property rights are taken per the Sherwood Matrix), the owner of the servient estate is typically able to use the surface land, subject to the parameters of the easement, and that it would be unusual for a landowner to be completely prevented from using any portion of the surface. Id.

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[20] The land burdened by the trail easement—i.e., the servient estate—is actually part of the remainder parcel, but in the "after" condition it has no value.

[21] That Mr. Sheppard's overall approach is internally inconsistent is also demonstrated by his statements that, with respect to the temporarily taken parcels, "100% of the ownership rights for land within the subject corridor were curtailed during the temporary easement." DX 398 at 4 (claim 91.E); DX 405 at 4 (claims 101.A and 101.B); DX 406 at 4 (claim 102); DX 407 at 4 (claims 103.A and 103.B); DX 408 at 4 (claim 104); DX 409 at 4 (claim 105); DX 410 at 4 (claim 106); DX 411 at 4 (claim 107); DX 413 at 4 (claim 109).

at 1425. He also indicated that when a power easement is present (a "severe" impact on surface use in which 90% to 100% of property rights are taken per the Sherwood Matrix), the owner of the servient estate is restricted from building on the land, but can generally use the land for parking and landscaping purposes.[22] Id. at 1426. Here, however, both Mr. Sheppard and Mr. Matthews recognize that plaintiffs cannot exclude others from the trail or make any use of the trail (such as parking and landscaping), other than increased access and perhaps setback purposes in density calculations, beyond that which members of the general public enjoy. See, e.g., Kaiser Aetna v. United States, 444 U.S. 164, 176 (1979) (describing the "right to exclude others" as "one of the most essential sticks in the bundle of [property] rights"). Accordingly, the restrictions on plaintiffs' use of the trail easement are greater than the restrictions on owners of a servient estate underlying a power easement.

Mr. Sheppard characterized an easement in which the owner of the servient estate could only use the land for "a setback calculation" as a "worst-case example," Tr. 1167-68 (Sheppard), yet nevertheless opined that only 85% of plaintiffs' property rights in the land underlying the trail easement were taken. In fact, an access road easement is listed as a "severe" impact in the Sherwood Matrix, and Mr. Sheppard remarked that in his experience with road condemnations, he typically treats a "perpetual county road easement" as a "100 percent fee simple take." Id. at 1432. Treating a county road easement as a 100% taking is appropriate because owners of land underlying an access road easement have no rights to use the underlying land other than as a member of the general public. Since plaintiffs similarly have no right to use the land burdened by the trail use easement other than as a member of the general public, Mr. Sheppard's analysis should similarly have led him to treating the imposed trail use easement as a "100 percent fee simple take." Such testimony undermined the credibility of Mr. Sheppard's analysis.

Further, Mr. Sheppard's comparison of the trail use easement to floodplain land misses the mark. He is correct that "[t]here is some value associated with rights to unproductive land." Id. at 1760. Unlike plaintiffs' inability to use the land burdened by the trail easement, however, owners of floodplain land are able to use their land for significant, valuable purposes not available to the general public. Morgan Plaza, for instance, is located on floodplain land—a fact that Mr. Sheppard even noted in his claim 5 appraisal. DX 308 at 9.

Defendant relies on several authorities for the proposition that imposed easements do not effect a taking of all property rights. In particular, defendant relies on Childers v. United States to demonstrate that other judges of this court have "rejected the argument that land burdened by a trail easement is worthless." Def.'s Posttrial Br. 40.

> Plaintiffs are asking the Court to find that the 35-foot buffered strip is valueless. But that is not the case. Plaintiffs still own the land under the 35-foot buffer, and they have not demonstrated how the buffer adversely affected the value of either the land underneath it or the valuation of the remainder.

[22] A power easement is described in the Sherwood Matrix as an "[o]verhead electric" easement. DX 416 at 199.

Childers v. United States, 116 Fed. Cl. 486, 533 (2013), quoted in Def.'s Posttrial Br. 40. This excerpt from Childers correctly states the law—as relevant here, that (1) the proper focus must be on the valuation of property rights and (2) a 100% taking is only appropriate when there is no value remaining—but defendant's application of the excerpt to the instant case is misguided. In Childers, a recreational trail easement was imposed on thirteen subject properties following issuance of a NITU. 116 Fed. Cl. at 495. The court determined that the "record as a whole establishe[d] that the Legacy Trail had a negative impact on the value of the land adjacent to the Legacy Trail." Id. at 512. One of the properties was subject to restrictive covenants requiring, in part, a fifty-foot buffer between the trail and the remainder of the property. Id. at 514-15. Since there was already a fifteen-foot setback assumed in the "before" condition, an additional thirty-five-foot buffer was designated to comply with the restrictive covenants. Id. at 532. In addition to the value of the land encumbered by the trail easement itself, the Childers plaintiffs sought damages for the value of the land underlying the thirty-five-foot buffer, arguing that "the buffered land could not be used for other purposes." Id. The court observed that the plaintiffs were required to show that "the taking caused a diminution in the value of the remainder" to be compensable. Id. at 533. The court went on to explain that the plaintiffs failed to meet that burden:

> While the Legacy Trail itself caused a diminution in value to the remainder by exposing landowners to noise, trespass, and nuisance, Plaintiffs have not established that mitigation of this harm in the form an additional 35-foot buffer would equate to a diminution in value of the remainder.

Id. The court then made the statement quoted by defendant above, and remarked that the buffered areas had independent value. Id. Thus, with respect to the statement from Childers quoted by defendant, the court was not discussing the value of the land underlying the trail easement itself, but was discussing the effect of a buffer beyond the impact of the trail easement. Indeed, with respect to the trail easement itself, the Childers court used 99% diminution (based on the parties' agreement) of the full market value of the land burdened to calculate damages. Id. at 532, 551. In other words, the court effectively concluded that the NITU effected a taking of 99% of the value of the property rights in the land burdened by the trail easement. This conclusion stands in stark contrast to defendant's position.

Defendant's position is further undermined by other precedent in Rails-to-Trails cases. In Howard, for example, another judge of this court considered, among other issues, the extent of property rights remaining in the servient estate after a perpetual trail use easement was imposed. 106 Fed. Cl. at 366-68. Although Howard was decided under Indiana law, and the property rights at issue in the instant case are governed by Georgia law, the salient issue with respect to the remaining property rights in both cases is the same: neither interim trail use nor railbanking is considered a "railroad purpose." Id. at 367. Indeed, the Howard court emphasized that the land burdened by the trail easement "would appear to be lost to [plaintiffs] for all intents and purposes in perpetuity." Id.

In the instant case, the court similarly concludes that plaintiffs have no remaining use of the land burdened by the trail easement that is not available to the general public. While defendant is correct that the determination of remaining property rights is a question of law, defendant fails to recognize that determining the value of those rights is a question of fact. Although plaintiffs may indeed have nominal property rights in the burdened land, those rights have no pecuniary value and thus cannot impact the just compensation analysis.

V. BENEFITS AND DAMAGES TO THE REMAINDER

The next area in which the parties disagree concerns the benefits and damages to the remainder parcels. As noted above, the Yellow Book provides that just compensation for each plaintiff must be set off by any special benefits to the remainder parcel (i.e., the "after" condition in which plaintiffs' land is subject to a perpetual trail use agreement), whereas general benefits do not offset the compensation due. See Yellow Book 162-63. A special benefit is present when the "remainder property 'is specially and directly increased in value by the public improvement.'" Id. at 162 (quoting Bauman, 167 U.S. at 574). General benefits "are those 'which result to the public as a whole.'" Id. at 163 (quoting Bauman, 167 U.S. at 581); accord id. (describing a general benefit as a "general increase in the value of property in the neighborhood" (quoting Bauman, 167 U.S. at 580)). Just compensation must also include, in addition to the value of the property actually taken, severance damages, which "compensate for the diminution in value in the owner's remaining property resulting from the taking." Boyer v. United States, 135 Fed. Cl. 121, 127 (2017). As noted above, special benefits and severance damages, if any, are taken into account by proper application of the before-and-after rule. Yellow Book 155, 164.

Plaintiffs argue that small, single-family residential lots in Covington lose one-third of their land value due to the presence of a hiking and biking trail abutting the rear property line. Tr. 588 (Matthews); PX 220 at 15. Plaintiffs also argue that the severance damages for other property types can be measured by the cost of erecting a fence. Tr. 588 (Matthews); PX 220 at 15-16. On the other hand, defendant suggests that

> there is a premium of $5,000/lot coinciding with suburban residential lots along the subject trail and $0 for rural residential lots, but no discount. Further, there appears to be no premium or discount accruing to any commercial, industrial, agricultural, rural lot, or larger tracts of land along the subject corridor.

DX 416 at 169; accord Tr. 1115-17 (Sheppard).

A. Defendant's Position

Specifically, defendant posits that even assuming that the trail provides a general benefit to the surrounding community, such a general benefit "does not somehow negate direct and special benefits experienced by properties directly adjoining the trail." Def.'s Posttrial Br. 29; accord Tr. 1451 (Sheppard). Defendant also emphasizes that special benefits can be the same "to

'each and every lot of land upon the same street' where the same advantages 'are direct and special to each lot.'" Def.'s Posttrial Br. 29 (quoting United States v. River Rouge Improvement Co., 269 U.S. 411, 416 (1926)). Mr. Sheppard explained that he analyzed property sales to determine whether there was any evidence of damages or premiums based on the presence of a trail. Tr. 1093 (Sheppard). He separately examined "commercially oriented" sales, "industrial-oriented sales," and "suburban residential sales." Id. at 1093-94.

1. Sales Along Other Trails in Newton County

Mr. Sheppard examined sales abutting trails in Newton County other than the subject trail: the 0.5-mile Yellow River Trail, the 1.2-mile Oxford College Trail, and the 2.4-mile Eastside Trail (which is located less than a mile east of the trail at issue). Id. at 1119; DX 416 at 159-60. The only available sales along these trails were "residential-oriented." DX 416 at 160. Mr. Sheppard noted three large-acre sales along the Eastside Trail to owners who planned to sell off subdivided portions of their tracts. Id. He also noted that an access path was added to the Highgrove subdivision, which is located along Fernhill Court and Westwood Drive, to connect the subdivision to the Eastside Trail. Id. Mr. Sheppard discussed the following sales along the Eastside Trail:

- 40 Fernhill Court, built in 2016 at 1,622 square feet with three bedrooms and two bathrooms, is located approximately 25 feet from the trail (separated by county-owned land), and sold on December 16, 2016, for $146,600. Id.

- 30 Fernhill Court, built in 2016 at 1,690 square feet with three bedrooms and two bathrooms, is located ten feet from the trail (separated by privately-owned land), and sold on December 19, 2016, for $157,500. Id.

- 20 Fernhill Court, built in 2016 at 1,622 square feet with three bedrooms and two bathrooms, is located "a similar distance from the trail" as 40 Fernhill Court, and sold on December 30, 2016, for $146,900. Id. at 161.

- 10 Fernhill Court, built in 2016 at 1,690 square feet with three bedrooms and two bathrooms, is located approximately 75 feet from the trail but adjacent to the access path, and sold on December 20, 2016, for $146,000. Id. In addition, this property "includes a 'corner' lot along a curve." Id.

Mr. Sheppard observed that a $10,900 premium was paid for 30 Fernhill Court relative to the adjacent 40 Fernhill Court. Of that premium, he allocated $5,100 to the "bricks and sticks" by assuming $75 per square foot in construction costs according to the Marshall & Swift index, a "national costing service that every appraiser uses," and the remaining $5,800 to the lot itself. Tr. 1102-04 (Sheppard); accord DX 416 at 160-61. Mr. Sheppard made no references to the lot

sizes of any of the Fernhill Court properties in his expert report, but during trial he testified that if the "only difference is location" of the land, assuming the same lot size, then the $5,800 difference could be attributed to being closer to the trail. Tr. 1102 (Sheppard). He averred that 30 Fernhill Court "effectively abutt[s] the trail" because, despite the ten-foot buffer owned by a third party, it is "pragmatically three or four steps" away, and "[u]nless signage was posted or surveys were examined in detail, most people would expect that they owned up to the corridor when there was only an intervening 10′ strip of land owned by someone else." DX 416 at 161. Further, Mr. Sheppard asserted that because "the same sized house [10 Fernhill Court] sold contemporaneously for $11,500 less than 30 Fernhill Court," he "inferr[ed] a premium for effectively abutting the trail." Id. He concluded that "suburban residential lots along the paved Eastside Trail command a $5000± premium." Id.

2. Sales Along the Subject Trail

Mr. Sheppard also examined sales along the subject trail after the August 19, 2013 effective appraisal date to determine the effect of the trail on property values. He found "no instance of a different (higher or lower) price being paid for unimproved land sales along the subject corridor," including commercial, industrial, suburban residential, rural residential, bulk lot, and other types. Id. at 158-59. He also reviewed improved sales taking place after August 19, 2013, finding twenty-nine such sales (including three outliers).[23] Id. at 162. In the Brookline subdivision consisting primarily of homes along Baltusrol Way that were both "on and off the subject corridor," he calculated an "$18,563 premium for abutting the subject corridor . . . prior to considering time aspects," and a $15,000 time-adjusted premium, for sales between August 6, 2013, and December 7, 2016. Id. at 164. He allocated $10,000 of this difference to the "woods-view aspect" of abutting homes and the remaining $5,000 being "attributable to the underlying land . . . associated with owning a suburban residential develop[ed] lot along the unpaved subject corridor." Id. at 164-65.

> So in the world of reasonableness, if you [have a] $15,000 spread that includes two variables and you're trying to account for one of the variables and you have data that says 5,000 is a reasonable allocation of that $15,000, it makes sense to me that within that 15,000 that 5,000 associated with the trail is reasonable.

Tr. 1115 (Sheppard). He also noted that the developer of the Brookline subdivision indicated that the presence of the trail "had no impact" on the timing of either development or sales. DX 416 at 165. Mr. Sheppard concluded that "improved sales with the same age, type, and scale of construction provide evidence of a $5,000 premium being applicable for suburban residential lots along the subject corridor." Id. at 166.

[23] Mr. Sheppard provided a chart listing thirty sales, one of which was listed as having taken place prior to the August 19, 2013 effective appraisal date. See DX 416 at 162.

Mr. Sheppard's anecdotal evidence—consisting of conversations with purchasers of three homes adjacent to the trail and nine homes that were not adjacent to the trail—suggested that "[n]o premium or discount was paid by any of the respondents . . . from any of the unimproved or improved sales along the subject corridor (or other trail corridors in Newton County) occurring after the effective date of appraisal." Id. at 168.

3. Impact of the Trail

Continuing further in his proximity study, Mr. Sheppard "analyzed the potential impact of the subject trail," id. at 171, and opined as follows:

- "The trail easement does not appear to create a less usable or less marketable site between the Before and After scenarios unless otherwise noted . . . ." Id.

- "[T]he corridor would not directly cause lesser-quality development or preclude[] better-quality development . . . ." Id.

- "I considered the potential loss in value due to increased noise and/or decreased privacy resulting from the corridor's trail use. Pragmatically, the mere existence of a rear or side neighbor invites the potential for noise and the lack of privacy on any given property. Noise and privacy issues from adjoining uses/properties all have legal remedies." Id. at 172.

- There is a "general tendency toward homes 'on' trails having security systems." Id. The present value of the cost of installing and maintaining a security system for fifteen years is approximately $3,256. Id. In addition, "[s]ales and evidence from 'after' sales along the subject and other Newton County trails suggest[] that a small premium (up to $1,000/lot) is being paid for suburban/downtown residential lots." Id. Therefore, in places "where the trail is paved and it is more obvious that the trail exists, . . . there is the potential for a buyer and seller to negotiate a price that is $2,250/lot lower than what would be expected at lots not abutting the trail." Id.

- Considering the cost of trash cleanup "in reflection of an expected $1,000/lot premium noted from an analysis of after sales of lots and homes abutting trails in Newton County, it does not appear reasonable that the typical buyer or seller would negotiate the purchase price of a home or suburban residential lot abutting the subject corridor upward or downward." Id. at 173.

- There was "no evidence that an insurance company would charge more for a site being on a corridor." Id. at 174.

4. Data From Trails Outside of Newton County

Mr. Sheppard also reviewed data related to trails outside of Newton County. He acknowledged that he could not obtain sufficient data from the Silver Comet Trail or the Suwanee Greenway for meaningful analysis of "a comparison for being on or off the trail." Id. at 178-79. However, he determined that the Big Creek Greenway showed a $15,000 premium for "suburban residential lots abutting an existing paved trail." Id. at 178. He averred that the $15,000 premium "should be adjusted downward to reflect the location and population differences between the case study areas and the subject's submarkets between Covington and Manchester." Id. at 184.

5. Mr. Sheppard's Conclusion Regarding Special Benefits

After discussing his research with respect to the subject trail and its impact, other trails in Newton County, and trails in areas outside of Newton County, Mr. Sheppard summarized his findings:

> My conclusion, from "after" sales data is that the trail corridor likely commands a negligible/small premium in certain instances, but not a discount. Sales along the paved Eastside Trail suggest a $5,000/lot premium. Sales along the unpaved subject corridor provide evidence of a $5,000± lot premium.
>
> It is important to note that the subject's trail will likely only be paved over the first "segment" of area, between downtown Covington and the Alcovy River bridge, for the foreseeable future. . . . [I]t appears unreasonable to assume that most of the trail will be paved or accessible to the public at large over [the next fifteen years].
>
> Considering the unpaved nature of the subject trail, comments from buyers, and matched pair analysis from sales along both the subject trail corridor and the nearby Eastside Trail in Covington, there is a premium of $5,000/lot coinciding with suburban residential lots along the subject trail and $0 for rural residential lots, but no discount.[24] Further, there appears to be no

[24] Mr. Sheppard remarked that "[t]he distinction between suburban and rural, pragmatically, reflects properties north of and south of the Alcovy River bridge, respectively." DX 416 at 169.

> premium or discount accruing to any commercial, industrial, agricultural, [or] rural lot, or larger tracts of land along the subject corridor.

DX 416 at 169 (footnote added).

B. Plaintiffs' Position

Plaintiffs argue that "the small residential urban properties sustained 33% damage to the land due to the proximity of the hiking and biking trail." Pls.' Posttrial Br. 30. Plaintiffs also argue that "the large residential parcels generally could be cured by building a fence that was fairly inexpensive, for either privacy or security depending on the circumstance, and that the commercial and industrial parcels would generally require a chain link fence for security purposes." Id. Finally, plaintiffs contend that there is no damage, "either diminution in value to the land or cost to cure damages, for parcels across the road from the hiking and biking trail or where a substantial buffer already existed." Id.

1. Trail Proximity Damage Studies

To reach his conclusions, Mr. Matthews conducted seven studies to analyze the impact of the trail on property values, and found that "the overwhelming results were that the properties abutting the trail did tend to sell for less than the homes without a trail in their back yard." PX 220 at 13. He noted that in four decades of appraising, he has completed "studies in multiple states for the construction of local roads, highways, interstates, pipelines, power lines, local utility lines[,] and trails," and that such studies "also show loss in value to abutting single family residential properties if the corridor is fairly close to the home and privacy is lost." Id. at 14.

Mr. Matthews began by searching trails in the surrounding area to find a similar trail that would provide "meaningful" results, and identified the Fall Line Trail in Columbus, Georgia as such a trail. Tr. 361-62 (Matthews). He explained that the Fall Line Trail is an excellent comparable because it is located approximately 50 to 100 feet away from houses, at grade, and at the rear of residential parcels. Id. at 362.

His first study examined the "overall average difference in adjusted price per square foot of the house, comparing homes with and without trails in the backyard." Id. at 536-37. He compared sixteen sales of properties located off the trail with eight sales in which the trail was located at the back of the property with "light trees" as a buffer. PX 221 at 828. In each sale, Mr. Matthews first applied a time adjustment utilizing the Case-Schiller Index applicable for the date of sale. Id. Mr. Matthews explained that the Case-Schiller Index is used by appraisers "to make market condition adjustments." Tr. 355 (Matthews). He noted that there is a separate index for each large metropolitan area in the United States, and that the Atlanta area index includes Newton County. Id. at 354-55; see also PX 221 at 684 (providing a list of the Case-

Schiller Index values for each month from November 2006 through November 2014[25]). To use the Case-Schiller Index, Mr. Matthews indicated that he would "find the date of sale, find the index for that date of sale, find the date of valuation, find the index for [the date of valuation], and calculate a percentage change." Tr. 356 (Matthews). After adjusting the sale price by the appropriate percentage change in the Case-Schiller Index from the date of sale to the date of valuation,[26] Mr. Matthews applied additional adjustments to the sales to account for the age of the house and whether the house had a garage, a basement, or a large lot. PX 221 at 828. Mr. Matthews then divided the adjusted sale price for each transaction by the square footage of the house to compute the price per square foot. Id. He then computed the average price per square foot for all of the homes abutting the trail ($76.65) and for all of the homes not abutting the trail ($79.96) before comparing the two. Id. The difference between these two values ($3.31) represents a 4.1% decrease from the "no trail" condition to the "abutting a trail" condition. See id. Mr. Matthews opined that the land itself, and not the house, is what actually loses value based on proximity to the trail, and thus he "had to convert the damage to the entire property to damage to the land." Tr. 369 (Matthews); accord id. at 371 ("[T]he land takes all the damage and the house is not damaged at all."). He explained that he used a 5:1 ratio of total value to land value to perform his allocations—in other words, the land value was 20% of the total value—based on the literature and his prior experience. Id. at 371; see also PX 221 at 826 ("Both local data and national data indicate that a reasonable . . . ratio of total property value to land value is 5:1 which means land contributes 20% to the total property."). Using this ratio, Mr. Matthews determined that a 4.1% decrease in overall property value reflected a 20.5% decrease in land value because the decrease in overall property value was entirely allocable to the land. PX 221 at 826.

In his second study, Mr. Matthews used the adjusted sale price per square foot values from his first study to perform two linear regressions: one for sales of homes abutting the trail

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[25] As reflected in the addenda to Mr. Matthews's expert report, the Case-Schiller Index provides values to the nearest hundredth, i.e., two decimal places. See PX 221 at 684. Mr. Matthews generally appears to have used these values to the nearest tenth, i.e., to one decimal place. The distinction had no material impact on his conclusions since he rounded correctly.

[26] For example, a December 2012 (Case-Schiller Index of 96.0) sale price of $139,000 is adjusted to August 2013 (Case-Schiller Index of 113.5), the baseline valuation date, as follows: (1) 113.5 – 96.0 = 17.5, the increase in the Case-Schiller Index from the sale date to the valuation date; (2) 17.5 ÷ 96.0 = 0.182, reflecting an 18.2% increase; (3) $139,000 × 0.182 = $25,339, the amount of the adjustment; and (4) $139,000 + $25,339 = $164,339 (without rounding at intermediate steps). Thus, all else being equal, a $139,000 sale price in December 2012 is equivalent to a $164,339 sale price in August 2013. See PX 221 at 684, 828. Alternatively, the adjusted sale price can be computed by solving for *x* in the following proportion: $\frac{139{,}000}{96.0} = \frac{x}{113.5}$. (In each ratio, the numerator represents the price on a given date, and the denominator represents the Case-Schiller Index for that date. The variable, x, represents the price for the second date that would be equivalent to the given price for the first date.) Either approach yields the same $164,339 result.

and one for sales of homes not abutting the trail. See id. at 829. He then used the linear regressions to predict that an "average" home—1,500 square feet—would sell for $88.23 per square foot if located "off" of the trail and $77.53 per square foot if located "on" the trail. Id. The decrease from $88.23 to $77.53 reflects "12.1% of the house value." Id. at 826. Using the 5:1 ratio, the decrease in land value was 60.5%. Id. Mr. Matthews noted that the average loss in value per square foot between his first two studies was 8.1%, reflecting an average land value loss of 40.5%. Id. at 829.

For his third study, Mr. Matthews performed a matched pair analysis of the "sale and resale of the same property before and after the trail was built," which he described as "an ideal situation." Tr. 538 (Matthews). Prior to the construction of the Fall Line Trail, 5360 McCaghren Drive sold for $160,000 on March 1, 2006; after the construction of the trail, it sold for $124,500 on December 19, 2013. PX 221 at 838. Using Case-Schiller Index values of 130.0 and 113.4, respectively,[27] see id. at 684, 838, Mr. Matthews computed the time-adjusted sales prices to be $139,692 and $125,051,[28] id. at 830. After applying additional adjustments for age and other property characteristics, and dividing by 1,576 square feet, Mr. Matthews computed that, as adjusted, the property sold for $70.41 per square foot before the trail was built and $63.03 after the trail was built. Id. Therefore, the "loss to the total property" was 10.5%, and land damage was 52% using the 5:1 allocation ratio. Id. at 826; Tr. 538 (Matthews).

Studies four and five were also matched pair analyses following the same format as the third study. Tr. 538-39 (Matthews). In study four, Mr. Matthews compared "a property on the trail . . . to a similar home off the trail." PX 221 at 826. The off-trail property was 5940 Fornof Road, a 1,382-square-foot property built in 1972 that sold for $125,350 on March 8, 2012, when the Case-Schiller Index was 82.5. Id. at 684, 830, 854. The on-trail property was 5356 McCaghren Drive, a 1,664-square foot property built in 1992 that sold for $160,000 on June 24, 2013, when the Case-Schiller Index was 109.2. Id. at 684, 830, 837. The time-adjusted sales prices for March 2012 and June 2013 were $172,451 ($124.78 per square foot) off of the trail and $166,606 ($100.12 per square foot) on the trail.[29] Id. at 830. The time-adjusted difference in price per square foot thus reflected a 19.8% decrease in total value, and 99% decrease in land value, due to the presence of the trail. Id.; Tr. 538-39 (Matthews). After applying age and characteristics adjustments, the adjusted sales prices were $140.93 per square foot off of the trail and $84.54 per square foot on the trail, reflecting a 40.0% decrease in total value, and 200% decrease in land value, due to the presence of the trail. PX 221 at 830.

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[27] As he did in his first study, Mr. Matthews appears to have used August 2013 (with a Case-Schiller Index value of 113.5) as the baseline value.

[28] In providing the backup computations for his third and fourth studies, Mr. Matthews rounded to the nearest ten cents (i.e., one decimal place) for the time-adjusted sale price values. The court refers to the values as rounded to the nearest whole dollar.

[29] As in his other studies, Mr. Matthews appears to have used August 2013 as the baseline valuation date.

In study five, Mr. Matthews utilized 5900 Fornof Road as the off-trail property and 5881 Fornof Road as the on-trail property. Id. The off-trail property was built in 1968, was 1,653 square feet, and sold for $104,586 on August 17, 2016, when the Case-Schiller Index was approximately 133. Id. at 830, 855. The on-trail property was built in 1969, was 1,412 square feet, and sold for $88,795 on September 30, 2016, when the Case-Schiller Index was approximately 133. Id. at 830, 842. The time-adjusted sales prices were $89,252 ($53.99 per square foot) on the trail and $75,776 ($53.67 per square foot) off of the trail, a loss of 0.6% in total value, and 3.0% in land value, due to the presence of the trail. Id. at 830. After applying age and characteristic adjustments—5900 Fornof Road contained a finished basement of 826 square feet—the adjusted sales prices were $62.06 off of the trail and $66.24 on the trail. Id. The difference reflected a 6.3% increase in total value due to the presence of the trail. During trial, Mr. Matthews testified that study five "indicated a loss of 15.1 percent" to the total property value, or "75 percent loss" to the land value after utilizing the 5:1 ratio. Tr. 539 (Matthews).

For his sixth study, Mr. Matthews attempted to find pairs of sales of houses in Covington that were both on and off a trail. Id. After finding no such pairs that were reliable, Mr. Matthews used a pair of sales "with one house abutting the highway and the other identical house three lots in from the highway." PX 221 at 827. He explained that although a highway had a somewhat "different impact" than a trail, it was "still a transportation corridor next to a house" and was "the best [he] could find in Covington to show some local flavor to it." Tr. 539-40 (Matthews). Mr. Matthews then compared 15 Magan Court and 35 Magan Court. Id. at 540; PX 221 at 827. There are a total of nine houses on Magan Court, which is accessible only via Crowell Road. PX 221 at 865. The "on" property, 15 Magan Court, is located at the intersection of these two streets. Id. It was built in 2007, is 1,656 square feet on 0.14 acres, and sold on April 13, 2010, for $129,000. Id. at 866. The "off" property, 35 Magan Court, is the third house on the left side of Magan Court after entering Magan Court from Crowell Road. Id. at 862. It was also built in 2007, is 1,668 square feet on 0.13 acres, and sold on March 2, 2010, for $134,900.[30] Id. at 863. Mr. Matthews opined that "[t]hese are similar enough that no adjustment is required," id. at 827, because the two sales reflect that "same date, same size, [and] same lot size," Tr. 541 (Matthews). He attributed "[t]he difference in price of $5,900 . . . to the location" of 15 Magan Court. PX 221 at 827; accord Tr. 541 (Matthews). Because the $5,900 drop in price due to being adjacent to the highway represented 4.4% of the total property value, Mr. Matthews used the 5:1 allocation ratio to determine that the land value declined by 21.9%. Tr. 541 (Matthews); PX 221 at 827.

The seventh study was similar to the sixth study, but examined pairs of sales of vacant lots along Magan Court instead of improved properties. Tr. 541 (Matthews). The "on" property, 10 Magan Court, is located at the intersection of Crowell Road and Magan Court. PX 221 at 858. It comprises 0.21 acres, is wooded on the back half of the property, and was purchased by Thomas Singleton from The People's Bank on October 31, 2008, for $20,000. Id. at 858-59.

[30] In the discussion section of his expert report and during trial, Mr. Matthews inadvertently indicated that the sales price was $139,400. PX 220 at 15; PX 221 at 827; Tr. 540 (Matthews). However, his backup documentation clearly indicated that the sales price was $134,900. PX 221 at 862-63.

The "off" property, 40 Magan Court, is the fourth house on the right side of Magan Court after entering Magan Court from Crowell Road. Id. at 860. It comprises 0.14 acres, has some wooding at the back of the property, and was also purchased by Thomas Singleton from The People's Bank on October 31, 2008, for $20,000. Id. at 860-61. Mr. Matthews explained that "[t]hese are similar enough that no adjustment is required." Id. at 827. He emphasized that the lot abutting the highway sold for $95,238 per acre and that the lot not abutting the highway sold for $142,857 per acre, demonstrating that the loss in land value due to being located adjacent to the highway was 33.3%. Id.; Tr. 541 (Matthews). He remarked that no allocation was necessary because the entire value was in the land (since there were no improvements at the time of sale). Tr. 541 (Matthews). He also acknowledged that "a small size adjustment if made would bring the damage down slightly." Id. Even if such an adjustment were made, he explained, the paired sales nevertheless suggested a loss in value for being next to the highway and therefore provided "additional data to show that if you lose privacy, you're going to suffer some loss in the value of the property." Id. at 541-42; accord PX 221 at 827.

After completing the seven studies, Mr. Matthews reconciled the results as follows:

> Study #1: 20.5%
> Study #2: 60.5%
> Study #3: 52%
> Study #4: 99%
> Study #5: 75%
> Study #6: 21.9%
> Study #7: 33.3%
> Range: Low 20.5% High 99%
> Average: 51.8%
>
> The Covington sales indicated a loss from 20% to 33%, and are given heavy weight, but not total weight since they do not measure the influence of a trail. Study #1 is a good indicator since it measures the impact on a single property before and after the trail was built. [Studies one, six, and seven] indicate an average loss of 25.2%. The others which measure loss due to a rear trail [studies two through five] average 71.6%. It is my opinion that the probable loss to the land value lies within the range of 25% and 50% with my best estimate in the middle of that range at 33.3% loss. This is supported by the lot sales in Covington impacted by the abutting highway.
>
> Estimated loss in residue lot value for small single family lots due to rear trail is 33.3%.

PX 220 at 15.

Although Mr. Matthews opined that certain properties along the trail can expect to lose "about a third of [their] land value," he did not apply the one-third loss of value to all of the parcels. Tr. 543 (Matthews). Rather, he only applied the one-third loss "[w]here it was appropriate," as in "a close setback and a shallow lot [and] the trail's in the backyard" or if the trail was "alongside the house." Id. He noted that, in a few instances, the proximity damages would be higher or lower depending on "proximity [to the trail] and . . . what is done to the lot." Id. at 588-89; accord id. at 1954. On the other hand, Mr. Matthews explained, if the trail was "across the street" or "500 feet away from any kind of probable improvement," then the one-third diminution would be inapplicable. Id. at 543.

2. Cost to Cure

Mr. Matthews testified that in some of the instances where proximity damages would not apply, "there might be a security or trespass concern" which could be ameliorated by erecting a fence, id. at 372, but averred that privacy fences would be "inadequate" for the small residential parcels in Covington, id. at 590. Thus, if fencing was appropriate, the type of fencing that was needed varied:

> [T]he cost to cure is a method of estimating damages to make the land owner whole again. For example, if there is a loss of security created by an unfenced trail along the property line of an industrial property where materials or personal property are stored that might attract trespassers, graffiti artists[,] or thieves[,] the safety and security can be reinstated by paying to erect a 6 foot chain link fence with top rail and barbed wire as is frequently seen in industrial areas. A 6 foot solid board privacy fenc[e] is more appropriate for single family residential property and woven wire security fencing is more appropriate for agricultural and woodland property.

PX 220 at 15-16.

Mr. Matthews calculated the cost to cure, where appropriate, by multiplying the length of property taken by the cost per linear foot for the type of fence needed. Tr. 591 (Matthews). He obtained the costs per linear foot by consulting the Marshall Valuation Service Cost Manual, which he stressed is "widely used by appraisers throughout the [United States] as a reliable cost resource." PX 220 at 16. The costs for each type of fencing are as follows:

- $25 per linear foot for privacy fencing, Tr. 365 (Matthews); e.g., id. at 600; PX 63.D;

- $5 per linear foot for woven-wire security fencing in agricultural/timber areas, e.g., PX 220 at 629-30; PX 61.D; PX 72.D; and

- $20 per linear foot for chain-link security fencing in commercial and industrial areas, e.g., PX 220 at 36; PX 1.D at 8.[31]

These costs are for installation only; they do not include expected future maintenance. Tr. 591-93 (Matthews). Finally, Mr. Matthews emphasized that in choosing between proximity damages or cost to cure, he applied "whichever is less expensive." Id. at 590.

C. Analysis

In resolving the dispute concerning the benefits and damages to the remainder parcels, the court first addresses the issue of special (i.e., direct) and general (i.e., indirect) benefits.

> Distinguishing between special and general benefits is not always an easy task. [A]s a general matter, special benefits are those which inure specifically to the landowner who suffered the partial taking and are associated with the ownership of the remaining land. In contrast, benefits that inure to the community at large are considered general. [In other words,] special benefits are those which arise directly and proximately to the remaining land as a result of the public work on the part taken, due to the peculiar relation of the land in question to the public work. In contrast, resulting benefits that are more or less common to all lands in the vicinity of the land taken are general.

Hendler v. United States, 175 F.3d 1374, 1380 (Fed. Cir. 1999) (citations omitted).

While the parties appear to agree on the definitions of special and general benefits, they disagree on how they apply in the instant case. Defendant contends that "the recreational trail presents the special benefit of access to abutting residential property owners." Def.'s Posttrial Br. 26. Plaintiffs argue that "the hiking and biking trail in the after condition is a general benefit" and that "[b]etter access than the public as a whole is not a special benefit as a matter of law and is also false in most instances as a matter of fact." Pls.' Posttrial Br. 22.

The court agrees with plaintiffs that the presence of the trail represents a general benefit to residential landowners in the neighborhood surrounding the trail. The court also agrees with defendant that the presence of a general benefit does not, in and of itself, mean that properties directly adjoining the trail cannot also be specially impacted. Indeed, plaintiffs' position that residential properties in Covington that abut the trail lose a portion of their land value supports such a conclusion. In other words, a particular parcel can experience special benefits or damages even while a general benefit is also present. Because the landowners of parcels adjacent to the trail are specially situated vis-à-vis nonadjacent landowners, it is legally possible for special

[31] During trial, Mr. Matthews also alluded to a cost of $23 per linear foot for chain-link fencing in one particular instance. See Tr. 649 (Matthews); see also PX 220 at 399.

access not enjoyed by others to be a benefit. It is also legally possible for direct proximity not experienced by others to result in damages. Of course, whether there is such a benefit or damage is a question of fact.

The court finds that in general, landowners place value on having trails nearby, but do not want trails adjacent to (or running through) their properties. This value judgment, in turn, impacts their property values. In other words, the presence of the trail is a general benefit to the community, while the trail's proximity is a special damage to adjacent landowners. Although Mr. Sheppard identified one landowner (who is not a plaintiff because she purchased her home in August 2015) who "thinks the trail will be good to have in her back yard," "cannot wait until the trail is paved," and "plans to add a gate to [her] existing fence" to access the trail once it is paved, DX 416 at 168, that perspective is an anomaly. Mr. Sheppard also noted that another landowner "wants a buffer/barrier between her house and the trail." Id. All three responses that he received from trail-adjacent landowners—none of whom is a plaintiff because the respective properties were purchased after the NITU was issued—indicated that they were not even aware of the presence of the trail when they purchased their homes. Id. Meanwhile, at the time of trial, one plaintiff had already moved away due to safety concerns related to the trail, and at least two others were considering doing so. Further, plaintiffs testified credibly regarding their myriad concerns pertaining to safety, security, privacy, trespassing, vandalism, trash, and noise due to the creation of the hiking and biking trail. Mr. Sheppard candidly acknowledged that there are multiple homes where people walking along the trail can see into backyards and windows, and those people would not have the access to do so absent the trail. Tr. 1498 (Sheppard). Mr. Sheppard also acknowledged that although he was not aware of any such occurrences, bringing people into proximity with homes via the trail had the potential to increase vandalism and theft. Id. at 1503-04. Even if plaintiffs' concerns are unfounded or misplaced, as defendant attempted to demonstrate through cross-examination, the salient issue with respect to valuation is whether those concerns are genuinely held. That plaintiffs' concerns are indeed authentic cannot reasonably be disputed.

Of course, there is more to the inquiry. As Mr. Sheppard correctly observed with respect to special benefits and damages, "even if it's common sense, you have to have evidence." Id. at 1094. In other words, whether being adjacent to the trail is a special benefit or damage must be supported by market evidence.

The court cannot credit Mr. Sheppard's benefit analysis, in which he relies primarily on the Fernhill Court sales to arrive at $5,000 benefit. His analysis of those four sales is fundamentally flawed for two main reasons. First, none of the Fernhill Court parcels is actually adjacent to the Eastside Trail. Id. at 1476; PX 222.1 at 1. Mr. Sheppard treated 30 Fernhill Court as "pragmatically" adjacent despite it being separated from the trail by a ten-foot strip of land owned by a private individual and thus requiring a trespass in order to utilize the purported special access. Tr. 1099 (Sheppard). Yet he treated 40 Fernhill Court as being nonadjacent to the trail because it was separated by a 25-foot buffer and thus "is a little bit further removed," id. at 1101, and similarly viewed both 10 Fernhill Court and 20 Fernhill Court as nonadjacent because of their distance from the trail. For each parcel, however, he only considered the property lines—for example, he emphasized that "10 feet's kind of two or three steps" away, id.

at 1099—rather than the distance between the house and the trail. From a "pragmatic" standpoint, the distance between the house and the trail should have factored into Mr. Sheppard's analysis, but he admitted that he did not measure it. Id. at 1475. Since he stressed that 30 Fernhill Court was "visually" near the trail (according to its property line) in arguing that it was effectively adjacent, id. at 1099, he should have used the same approach with respect to the other properties and explained why they either met or failed to meet that same criteria. Therefore, even under (for the sake of argument) the dubious assumption that the need to trespass in order to directly access the trail is a nonissue, his basis for treating only 30 Fernhill Court as "pragmatically" adjacent to the trail is unsupported.

Second, although Mr. Sheppard properly made no time adjustments in comparing the four Fernhill Court sales and properly allocated total sale prices between improvements and land, he failed to consider other land characteristics. For example, he noted that 10 Fernhill Court was a corner lot along a curve, but apparently assumed that such status did not impact the land value in either direction. Such an assumption should at least be clearly stated. He also failed to account for the topography of the land, neglecting to consider that there were varying amounts of dense wooding between the street and the trail on each of the four Fernhill Court properties before the houses were built. Id. at 1932 (Matthews); PX 222.1. Most importantly, Mr. Sheppard simply assumed that each parcel had "the same size lot and its only difference is location" with respect to the trail, Tr. 1102 (Sheppard), but did not actually reference the individual lot sizes anywhere in his expert report or during trial. Indeed, the properties all have different shapes and sizes, although the extent of the size differences is unclear. Id. at 1931-32 (Matthews); PX 222.1 at 1. It is entirely possible that 30 Fernhill Court commanded a premium because of the size and/or shape of its lot. Given that both experts focused on per-acre values in their appraisals, it is beyond peradventure that the lot size is a vital component of land value. Therefore, Mr. Sheppard's failure to consider lot sizes in comparing the Fernhill Court sales to one another renders his conclusions regarding those sales unreliable.

In any event, it is entirely unclear how Mr. Sheppard reconciles the $5,800 difference in sale price between 30 Fernhill Court and 40 Fernhill Court after accounting for the "bricks and sticks," Tr. 1102 (Sheppard), with the $11,500 difference in sale price between 10 Fernhill Court and 30 Fernhill Court where no adjustments were appropriate, id. at 1105, to conclude that "suburban residential lots along the paved Eastside Trail command a $5000± premium," DX 416 at 161. The court simply cannot credit a conclusion where the path to that conclusion is opaque.

The remainder of Mr. Sheppard's conclusions regarding the value of parcels being directly proximate to the trail are unreliable because they incorporate this $5,000 premium. After finding that there was a $15,000 time-adjusted premium for sales along Baltusrol Way in the Brookline subdivision, he allocated $5,000 of that premium to being adjacent to the trail and the remaining $10,000 to the view available to trail-abutting homes. Id. at 164-65. Mr. Sheppard explained that, in deciding how to allocate the $15,000 total between trail proximity and the "natural backyard versus not having a great backyard," it was reasonable to allocate $5,000 to the trail proximity where he had "other evidence" showing that "[$]5,000 associated with the trail is reasonable." Tr. 1115 (Sheppard). He similarly found a $15,000 premium with

respect to the Big Creek Greenway, but averred that it "should be adjusted downward." DX 416 at 184.

Ultimately, Mr. Sheppard's summary of his conclusions demonstrates that his analysis lacked the appropriate foundation. Mr. Sheppard explained that in addition to anecdotal evidence and his matched pair analyses from Fernhill Court and the Brookline subdivision, he considered "the unpaved nature of the subject trail" in reaching his conclusions because it "appear[ed] unreasonable to assume that most of the trail will be paved or accessible to the public at large" for the "foreseeable future." Id. at 169. As stated above, appraisers are to assume that in the "after" condition, the hiking and biking trail is in place and has been constructed. During trial, Mr. Sheppard repeatedly recognized this basic principle of Rails-to-Trails valuation, e.g., Tr. 1404-05, 1410 (Sheppard), and asserted that he "assume[d] the trail is there in existence," id. at 1125, yet in his expert report he explained that his conclusion regarding special benefits was based, in part, on his perception of the current condition of the trail and its likely future development, DX 416 at 169. His attempt to reconcile having considered the unpaved nature of the trail (in relying on the Brookline subdivision sales) with the requirement to assume that trail construction is complete was wholly unavailing:

> So, at the end of the day, yes, assume the trail is there in existence, but have evidence that shows both ways. Have as much evidence as possible because more is more.

Tr. 1125-26 (Sheppard). In short, Mr. Sheppard's finding of a special benefit is unreliable and the court gives it no weight.

Having rejected Mr. Sheppard's analysis, the court must examine the reliability of the conclusion reached by Mr. Matthews that the small residential parcels in Covington experienced a decrease of one-third of their land value due to their adjacency to the trail. The court agrees that these parcels experienced a decrease in value, but it remains plaintiffs' burden to quantify that decrease with market evidence.

The court finds that Mr. Matthews's first study is reliable. First, Mr. Matthews used twenty-four sales as data points. It is axiomatic that, all else being equal, using more data points will produce more accurate results when searching for average values. Second, since both experts used price per square foot as a measure of property values at various points in their work, the parties do not dispute the propriety of such a measure. Third, the Case-Schiller Index is a reasonable proxy for time and market conditions adjustments. Mr. Matthews used the correct baseline date of August 2013 (the baseline date was apparent based on his computations even though it was not explicitly stated), used the correct values for each date, and computed the adjustments correctly. Fourth, Mr. Matthews applied adjustments for the age of each home, as well as other property conditions. Those adjustments appear reasonable, and it would have been improper not to account for those characteristics. Fifth, based on the inputs, Mr. Matthews accurately computed the 4.1% decrease in price per square foot. Sixth, his use of a 5:1 ratio of total property value to land value was supported. Finally, his determination that the decrease in property value due to trail proximity should be entirely allocated to the land was reasonable.

The court cannot credit the findings of Mr. Matthews's second study, which involved a linear regression of the values obtained from the first study. The linear regressions themselves—one each for trail-adjacent and nonadjacent homes—appear to have been performed correctly. However, Mr. Matthews based his finding of a 12.1% decrease in total property value, and thus 60.5% decrease in land value, on a hypothetical 1,500-square-foot home by comparing the predicted values in each of the two linear regressions. While his computations are correct, the assumption of a 1,500-square-foot home appears to have been somewhat arbitrary. The average size of the "on trail" homes was 1,514 square feet, but the average size of the "off trail" homes was 1,622 square feet. PX 221 at 828. The composite average, based on the number of homes in each category, is 1,586 square feet. The median size is 1,503 square feet for "on trail" homes, 1,615 square feet for "off trail" homes, and 1,576 square feet for all homes. Accordingly, although there appears to be some factual support for using 1,500 square feet as the hypothetical average sized home, there is also factual support for using other figures, and Mr. Matthews did not explain his selection of the 1,500 figure either in his expert report or during trial.

Mr. Matthews's third study compared the sale of the same property both before and after the Fall Line Trail was constructed. As with the first study, Mr. Matthews did not explicitly state that he used a baseline date of August 2013, but it is apparent from his computations.[32] The main problem with the third study is the age adjustment. Since 5360 McCaghren Court was built in 1992, id. at 838, Mr. Matthews correctly observed that the home was twenty-one years old on the hypothetical baseline valuation date, id. at 830. Based on its date of construction, the home was only fourteen years old on the date it was sold in the "off trail" condition in March 2006 (before trail completion), and was twenty-one years old on the date it was sold in the "on trail" condition in December 2013 (after trail completion). See id. at 830, 838. Despite this disparity, Mr. Matthews applied the same age adjustment to both sales. Thus, the court cannot credit the findings of his third study.

Studies four and five suffer from the same defect as one another. These two studies appear to have been properly performed, but the reporting of the results is deficient.[33] In stating that studies four and five showed losses of 19.8% and 15.1% in total property value (and thus

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[32] Mr. Matthews computed a time-adjusted sales price of $125,051 for August 2013 vis-à-vis the unadjusted sales price of $124,500 from December 2013. PX 830. His calculation of the $125,051 figure reflects a change in the Case-Schiller Index from 113.5 to 113.0 between the two dates. The Case-Schiller Index, rounded to the nearest tenth (i.e., one decimal place) was indeed 113.5 for August 2013, but was actually 113.4 for December 2013. Id. at 684. A change in the Case-Schiller Index from 113.5 in August 2013 to 113.4 in December 2013 would yield a time-adjusted sale price of $124,610 (rather than $125,051). The slight discrepancy reflects a 0.3% difference from the "off trail" time-adjusted sale price, which is immaterial.

[33] In study four, Mr. Matthews used a Case-Schiller Index value of 109 to compute the time-adjusted sale price of $166,606 for the "on trail" sale. See PX 221 at 830. Using the correct value of 109.2 for June 2013, see id. at 684, would have yielded a time-adjusted sale price of $166,300. The discrepancy is immaterial, as it would have resulted in insignificant changes to the results.

losses of 99% and 75% in land value), respectively, see id. at 828, Mr. Matthews was not making a true apples-to-apples comparison. The 19.8% figure from study four represents the decrease in the time-adjusted price per square foot, before any other adjustments (i.e., age and other property characteristics) were made. Id. at 830. The 15.1% figure from study five represents the decrease in time-adjusted price, before figuring in the square footage or making any other adjustments such as age and other property characteristics. Id. If the same values were compared across studies three, four, and five, the resulting change in total property values—before allocating any or all of the decrease to the land—due to the presence of the hiking and biking trail would be as follows:

- time-adjusted price per square foot, plus adjustments for property characteristics
    - study three: 10.5% decrease
    - study four: 40.0% decrease
    - study five: 6.7% increase

- time-adjusted price per square foot, without additional adjustments for property characteristics
    - study three: 10.5% decrease
    - study four: 19.8% decrease
    - study five: 0.6% decrease

- time-adjusted overall home price, without additional adjustments for size or other property characteristics
    - study three: 10.5% decrease
    - study four: 3.4% decrease
    - study five: 15.1% decrease

Id. Notably, Mr. Matthews's 20.5% decrease in land value due to the presence of the trail from study one (which was much more rigorous as that study involved twenty-four properties) was based on a time-adjusted price per square foot, after adjusting for property characteristics, id. at 828, which seems to be the most authentic approach out of the three listed above. Thus, while his approach in studies three, four, and five—analyzing the same house both before and after the trail was constructed (study three); comparing two houses on different streets, one that was off the trail and one that was on the trail (study four); and comparing two houses on the same street sold almost contemporaneously with one another, one abutting the trail and one off the trail (study five)—was sound, Mr. Matthews's results from those three studies as reported are not reliable.

The sixth study that Mr. Matthews performed correctly included no adjustments because the two properties compared were built and sold at the same time, were approximately the same size, and had essentially identical characteristics. Thus, it was appropriate to simply examine the sale price of each. Although neither property on Magan Court abutted a trail, as Mr. Matthews candidly acknowledged, one of the properties abutted a highway, so the sixth study appropriately provides context for the impact of a transportation corridor on property values in Covington.

The court credits the findings of this study because the data was properly selected, properly analyzed, and properly reported.

The seventh study also involved a matched pair analysis on Magan Court, but considered vacant lots rather than improved properties. The approach of comparing vacant lots, one abutting the highway and one not, for the purpose of providing context (like the sixth study) is sound, but the court cannot credit the findings. Mr. Matthews did not make any adjustments to either sale because both parcels were vacant lots at the time and sold on the same date. Although Mr. Matthews compared the per-acre values, both lots were sold by the same seller to the same buyer on the same date. Additionally, the record reflects that other vacant lots on Magan Court were transferred from the same seller to the same buyer on that same date.[34] See id. at 858-67. Mr. Matthews did not consider whether the "bulk" aspect of the purchase impacted the price, such that a per-acre comparison would be inappropriate, nor did Mr. Matthews consider the amount of wooded land that was available on each lot and its impact on the sale price.

On balance, the court finds that plaintiffs have demonstrated that small residential parcels in Covington lose 20.5% of their land value if they are adjacent to the trail. This result is based on the credible data from the comparable Fall Line Trail (study one).[35] The result from study six is not directly applicable because that study analyzed the impact of properties abutting a highway rather than a trail, but its 21.9% result provides context showing that the 20.5% decrease from study one is a reasonable figure.

In addition, the court finds that Mr. Matthews's findings regarding the cost to cure are entirely reliable. He accurately analyzed whether the cost to cure was appropriate for each property at issue, utilized the suitable type of fencing for each scenario and its associated cost, based those costs on reputable data that is routinely relied upon by appraisers throughout the nation, and meticulously applied such damages where proper.

VI. COMPARABLE SALES AND ADJUSTMENTS

Having addressed property rights remaining in the burdened land and the benefits and damages to the remainder, the court now turns to the comparable sales selected, and adjustments made, by each expert to opine on property values. The Yellow Book provides that appraisers "may need to adjust each comparable sale through quantitative and/or qualitative analysis to derive an indication of the market value of the subject property." Yellow Book 121. Whether a particular sale is sufficiently comparable to be helpful "is largely a function of three variables:

[34] These other lots were later improved before the sales analyzed in the sixth study took place. PX 221 at 858-67.

[35] The court's finding that trail-adjacent residential homes in Covington suffer a decrease in property values is buttressed by an individual property appraisal for 9121 Dearing Street in Covington with a June 16, 2016 effective date. See generally PX 156 at 6-24. That appraisal, which utilized the sales comparison approach, contained an $8,000 adjustment to the value of one of the comparable sales for "r-rd noise" due to its proximity to the trail. Id. at 8.

characteristics of the properties, their geographic proximity to one another, and the time differential." Id. at 120. The veracity of the comparable sales selected, and adjustments made, by each expert is perhaps the most significant area of disagreement between the parties.

Both experts utilized the sales comparison approach. Plaintiffs argue that defendant's expert, Mr. Sheppard:

> artificially limited the scope of his search for comparable sales, intentionally chose comparable sales at the very low end of the market or simply missed potential comparable sales within his artificial time restriction, and then failed to make proper adjustments based on size and other factors to make the comparable sales he chose as comparable as possible to the actual parcels at issue.

Pls.' Posttrial Br. 32. Defendant asserts that plaintiffs' expert, Mr. Matthews, failed to follow Yellow Book standards by failing to verify comparable sales, making inappropriate adjustments and failing to make property-specific adjustments, and "inappropriately complet[ing] a project appraisal rather than individual appraisals of each subject property and [failing] to provide the appropriate data to explain his results." Def.'s Posttrial Br. 13. Defendant also contends that Mr. Matthews's "math is incorrect" in several instances and thus his value conclusions are unsupported. Id. at 25-26.

The court will first address the disputes concerning verification, report format and supporting data, and math errors, since those issues pertain to all parcels. The court will then address the issue of comparable sales and adjustments with respect to each parcel type.

A. Points of Error

1. Verification

The court begins by examining the dispute pertaining to verification. As relevant here, the Yellow Book includes a directive that all sales used by appraisers in forming their value conclusions "must be confirmed by the buyer, seller, broker, or other person having knowledge of the price, terms, and conditions of sale." Yellow Book 25. The Appraisal of Real Estate treatise provides that the Yellow Book standards "require an appraiser to talk directly to a party to the transaction to verify data . . . , which is a higher level of verification than is usually necessary . . . for mortgage lending purposes." DX 60 at 34.

Mr. Sheppard explained that verification is "a cornerstone of the appraisal process" because "there could be issues that are behind the scenes that you learn through the verification process." Tr. 1019-20 (Sheppard). He relied primarily upon speaking directly with someone involved in the sale, and also used data available through the county tax assessor's office, LoopNet (which he described as a "broker provided data service" that is "helpful in rural

counties where there aren't any subscription based data services"), and other commercial sources. Id. at 1023-26.

Mr. Matthews agreed that the "verification process is important," id. at 306 (Matthews), and stated that "[a]ll sales" were verified with a "party with first-hand knowledge of the facts of the sale," PX 220 at 7; accord Tr. 825 (Matthews). He explained that although he did not verify the data personally with buyers, sellers, brokers, or bankers, he utilized the data from LoopNet and the local tax assessor. Tr. 824-26 (Matthews). He described such information as "good" and "excellent," respectively, and asserted that it was "verified data" because it was supplied by attorneys on a PT-61 form under the threat of misdemeanor for providing false information. Id. at 306.

The court agrees with Mr. Matthews that his underlying data was sufficiently reliable such that further verification was unnecessary. The Appraisal of Real Estate treatise provides that a "primary purpose of verifying a sale of real property is to make sure that the sale occurred under conditions that meet the definition of value used in the appraisal." DX 60 at 34. According to the treatise, when verifying sales, appraisers should seek the following "essential" information regarding each sale:

- Is the data correct?
- Is the data complete?
- Was the sale or rental an arm's-length transaction?
- Were there any contingencies?
- Were any concessions involved?
- Does the data conform to relevant standards or regulatory requirements?
- Did any special or unusual conditions affect the sale or rental?

Id. Although the "most common verification technique is interviewing market participants," id. at 35, there is no specific requirement that verification be accomplished through the interview process. Indeed, "the reliability of the original data source" impacts "the scope of data verification." Id. at 34.

Mr. Matthews is correct that, for purposes of this case, tax assessor data is verified data. In Georgia, a real estate transfer tax is "determined on the basis of written disclosure of the actual consideration of the interest in the property." Ga. Code Ann. § 48-6-4(c) (2015). This disclosure "shall be made on a form or in electronic format prescribed by the [state revenue commissioner]." Id. Accordingly, the Georgia Administrative Code provides that "any deed, instrument[,] or other writing which conveys any lands, tenements, or other realty must be

accompanied by Form PT-61." Ga. Comp. R. & Regs. 560-11-2-.16(1) (2016). A properly completed Form PT-61 must contain the following information:

> (a) Seller's Information – The form shall contain the complete name, street mailing address, city, state[,] and zip code of the seller and month, day[,] and year the sale occurred.
>
> (b) Buyer's Information – The form shall contain [the] complete name, street mailing address, city, state[, and] zip code of the buyer for the purpose of receiving tax notices and billings. The intended use of the property by the buyer at the time of the transfer shall be listed and designated as being residential (R), agricultural (A), commercial (C), or industrial (I).
>
> (c) Property Information – The complete description of the property being conveyed, the county name where the property is located[,] and the city name (if the property lies within the limits of a city) [shall be listed]. The number of acres of property, map and parcel number, district, land lot and sublot[,] and block shall be shown.
>
> (d) Value and Tax Information – The actual value of the consideration received by the seller for the real and personal property conveyed to the buyer shall be shown separately on the form[ ](PT-61) prescribed in subsection (c) of Code section 48-6-4. This consideration total should reflect all cash, other property or goods, and the assumption of mortgages or other obligations. . . .
>
> (e) Other Information – Any other information requested on the most current version of form PT-61 shall be listed.
>
> (f) Certification – The seller or seller's authorized agent shall certify that all items of information entered on the transfer form PT-61 are true and correct (to the best of his knowledge and belief) and that he is aware that the making of any willful false statement of material facts will subject him to the provision of the penal law relative to the making and filing of false instruments. . . .

Id. A false statement on a Form PT-61 subjects the declarant to a misdemeanor. Ga. Code Ann. § 48-6-10. The declarant submitting the Form PT-61, which is typically the closing attorney managing the transaction, Tr. 307 (Matthews), certainly qualifies as a "person having knowledge of the price, terms, and conditions of sale" per Yellow Book standards, Yellow Book 25.

Because Georgia law requires accurate sales prices to be contemporaneously disclosed under the threat of criminal penalty, the court finds that the data maintained by the tax assessors is more reliable than data provided by parties to a transaction several years after the fact. See Tr. 956-60 (Matthews). The tax assessor data is inherently reliable since it was effectively verified at the time of sale; further verification is unnecessary.[36] This conclusion comports with the Appraisal of Real Estate's edict that the scope of verification needed is informed, at least in part, by the reliability of the available data. Indeed, Mr. Sheppard acknowledged that (1) in all of his conversations with parties to real estate transaction, he did not find a single discrepancy in the sales price reported to the tax assessor via Form PT-61; and (2) in many instances, he was unable to speak with either a buyer or seller, so he relied on the information available through the county tax assessor. Id. at 1836-37 (Sheppard). Further, appraisers are generally able to ascertain whether a transaction is "a good arm's length sale, qualified or not qualified" based on data from the tax assessor. Id. at 307 (Matthews).

In short, defendant's argument that Mr. Matthews did not appropriately verify his data is unavailing.

2. Report Format and Supporting Data

Next, the court addresses the dispute concerning the sufficiency of Mr. Matthews's reporting format and supporting documentation. Defendant avows that "Mr. Matthews inappropriately completed a project appraisal rather than individual appraisals of each subject property and did not provide the appropriate data to explain his results." Def.'s Posttrial Br. 13. Therefore, defendant proclaims, his data cannot be verified and thus the court "is left in the dark." Id. at 21. Plaintiffs, on the other hand, stress that even though Mr. Matthews was not bound by the Yellow Book, he nevertheless comported with its requirements. Further, plaintiffs argue, Mr. Matthews "developed complete and consistent conclusions of value for each and every parcel." Pls.' Posttrial Resp. Br. 32.

As an initial matter, the parties are correct that, as a matter of law, Mr. Matthews was not bound by the Yellow Book. The Yellow Book applies only to appraisers hired by the federal government for condemnation purposes; it is not mandatory with respect to appraisers not hired by the government. See Tr. 1865-66 (Miller). However, the Yellow Book standards are relevant as pertaining to Mr. Matthews's credibility since he testified that his work complied with those standards. Id. at 880 (Matthews); see also PX 220 at 6.

[36] The court observes that this conclusion would not be applicable if the underlying data was not sufficiently reliable. For instance, Mr. Matthews remarked that—unlike in the instant case—tax assessor and LoopNet data for some geographic areas is not always accurate or even available. Tr. 306-06 (Matthews).

In discussing the application of the sales comparison approach, the Yellow Book provides:

> In reporting the results of the sales comparison approach for land valuation, the appraiser shall provide detailed descriptions of confirmed sales of lands that have the same or similar highest and best use as the subject property. The description of each sale transaction used as a comparable sale should at a minimum include the date of the transaction, the price paid, the name of the seller, the name of the buyer, the size of the property, the location of the property, the zoning or other legal restraints on the property, and a description of the physical characteristics of the property. The person with whom the transaction was verified should also be identified.
>
> Differences between the comparable sales and the subject property should be considered and adjustments made to the sales to address these differences. Items of comparison shall include property rights conveyed, financing terms, conditions of sale, market conditions, location, physical characteristics, economic characteristics, legal characteristics, and non-realty components of value. The adjustments must be summarized in an adjustment grid and each adjustment (whether qualitative or quantitative) should be supported with market data. The data and analysis must provide sufficient detail for the client and intended users to understand the data, the analysis, and the logic of the appraiser's opinion of market value for the subject land as if vacant.

Yellow Book 65. The Yellow Book standards "address the content and level of information and analysis required to communicate the results of an appraisal prepared for federal property acquisitions," and are "intended to establish requirements for appraisal report content and documentation." Id. at 56. In other words, the standards exist to ensure that appraisers include sufficient information within their reports.

The court finds that project appraisal reports meet Yellow Book standards if appropriately compiled. As explained above, USPAP standards allow for two types of written reports—appraisal reports and restricted appraisal reports—and also for oral appraisal reports. However, only unrestricted written appraisal reports are acceptable pursuant to the Yellow Book. Project appraisal reports are a type of unrestricted written appraisal report that is allowable under Yellow Book guidelines. While the Yellow Book contains a warning that project appraisal reports are "rarely conducive to litigation purposes," that warning is premised on the notion that project appraisal reports "typically contain opinions of value of properties owned by persons not parties to the lawsuit." Id. at 73. Here, Mr. Matthews's project appraisal report included opinions of value for 156 parcels; each of these properties is owned by one or more plaintiffs, i.e., a party to the instant suit. PX 220 at 2. Thus, not only does the Yellow Book not actually

foreclose project appraisal reports from being utilized in litigation, the stated reasons against such use are not applicable here. Further, Mr. Matthews's project appraisal report (including its addenda) fully satisfied the Yellow Book requirements for such reports. Compare id. at 5 (containing the Table of Contents for Mr. Matthews's project appraisal report), with Yellow Book 72-79 (outlining the Yellow Book standards for project appraisal reports).

Finally, and most importantly here, the court agrees with plaintiffs that nobody is "'in the dark' as to how Mr. Matthews made his adjustments." Pls.' Posttrial Resp. Br. 32. An individual one-page report, standing alone, is certainly insufficient, but none of the reports stands alone. The full report, including the addenda, contain all of the backup documentation supporting the valuation opinions reached for "[e]ach and every one" of the 156 parcels at issue in this case. Tr. 303 (Matthews); accord PX 220 at 16 ("The sales data upon which these values and the damages are based are shown in the addenda by property type."). Mr. Matthews's project appraisal report, including the addenda, is by no means a model of stellar organization, but the data is all available. Mr. Matthews's deficiencies with respect to organization do not equate to any deficiencies with respect to the information itself. A holding to the contrary would be improper because the Yellow Book standards address content and documentation, but "are not, however, intended to establish an absolute requirement for appraisal formatting." Yellow Book 56. It is the content—not the organization—that matters. Even Mr. Sheppard, who issued a separate written appraisal report for each property, observed that his addenda was "integral to each individual appraisal report." DX 416 at 37. Contrary to defendant's averment that the court was left in the dark regarding how Mr. Matthews arrived at his conclusions of value, the court is able (with a few exceptions, each of which is discussed below) to follow Mr. Matthews's reasoning. See, e.g., infra Section VI.A.3 (addressing defendant's suggestion that Mr. Matthews's approach with respect to certain parcels was mathematically unsound).

As specified in the Yellow Book, project appraisal reports "are not appraisal shortcuts; they are clerical shortcuts." Yellow Book 73 (emphasis added). The project appraisal approach followed by Mr. Matthews was just that—a clerical shortcut. Mr. Sheppard emphasizes that he completed "in excess of 100" individual appraisals, i.e., one for each parcel, Tr. 1012 (Sheppard), but he overstates the importance of having done so. Mr. Sheppard's individual reports, which are in the record as defendant's exhibits 305 through 415, average just over thirty pages each.[37] However, the majority of the information within each of his reports is either boilerplate, duplicative, or both. Most importantly, as discussed below, he used the same comparable sales across groups of properties with the same highest and best use. See DX 416 at 190-97. Mr. Sheppard could easily have taken a "clerical shortcut" and issued one project appraisal report utilizing the same data as is reflected in his 110 individual reports while still

[37] Defendant did not offer an exhibit numbered 326. Compare Tr. 1245 (Sheppard) (reflecting that claims 26.A and 26.B were both addressed in one appraisal report, i.e., defendant's exhibit 325), with Def.'s Ex. List 18 (reflecting that claims 26.A and 26.B would be addressed in two separate appraisal reports, i.e., defendant's exhibits 325 and 326).

comporting with Yellow Book standards.[38] There was no substantive difference between the manners in which each expert presented his appraisals.

In short, Mr. Matthews did not err by completing a project appraisal report. Further, although his report could have benefited from better organization and presentation, the report's overall content was not deficient or unclear. Mr. Matthews included sufficient documentation in his report and the addenda referenced therein to support his opinions of value.

3. Math Errors

In addition to charging that Mr. Matthews erred by failing to properly verify comparable sales, issuing a project appraisal report, and failing to provide backup documentation, defendant suggests that Mr. Matthews's math is incorrect in several places. Specifically, defendant identifies a list of parcels for which Mr. Matthews's "purported methodology for determining damages did not add up." Def.'s Posttrial Reply Br. 12.

Mr. Matthews succinctly described his methodology in his expert report. After comparing the "before" and "after" values of the land based on per-acre value and size, he then factored in residual damages where applicable to determine the net "after" value. PX 220 at 16. The difference between the "before" and "after" values "is the compensation estimate owed the land owner," which he "allocated between the value of the part taken and the residu[al] damages." Id. He noted that, for some parcels, the per-acre value in the "after" condition (where there is a smaller land size due to the taking) can be higher than the per-acre value in the "before" condition. Id. The increased per-acre value in the "after" condition, if applicable, "creates a benefit which offsets some or all of the damages created by the take." Id.

Defendant identifies twenty-two specific parcels for which it asserts that Mr. Matthews's "formula does not add up to his remainder damages conclusions." Def.'s Posttrial Reply Br. 13 (containing a list of twenty-one parcels); see also Def.'s Posttrial Br. 25-26 (discussing an additional parcel). Each will be addressed below.[39]

With respect to claim 6, the land had a fair market value of $67,485 (0.409 acres at $165,000 per acre) in the "before" condition. In the "after" condition, the land had a fair market value of $38,533 (0.340 acres at $170,000 per acre, i.e., $57,800, less $19,267—one-third of $57,800—for proximity damages), for a net per-acre value of $113,333 ($38,533 divided by 0.340 acres). The diminution in value was thus $28,952. Of that amount, $11,385 is allocable to the value of the property taken (0.069 acres at $165,000 per acre), and the remaining $17,567 is

[38] Pursuant to the Yellow Book, "the larger parcel is the tract or tracts of land that possess a unity of ownership and have the same, or an integrated, highest and best use." Yellow Book 110 (emphasis added). For both experts, there are fewer appraisals than total parcels because "some of those parcels were combined." Tr. 303 (Matthews).

[39] For the sake of simplicity, the court uses figures rounded to the nearest dollar; however, there was no rounding at intermediate steps in the computations.

allocable to the damages to the remainder. As with many claims, Mr. Matthews shows slightly different numbers due to differences in rounding. See PX 6.D; see also Tr. 387 (Matthews) (discussing rounding). The discrepancy between the $19,267 in proximity damages and $17,567 in damages to the remainder equals $1,700—the increase in per-acre value of the land in the "after" condition, i.e., 0.340 acres multiplied by the $5,000 per-acre increase in value. In other words, the one-third proximity damages ($19,267) were partially offset by $1,700 to reflect the increase in per-acre value. Although Mr. Matthews perhaps should have "left the light on" by explicitly explaining each step in his computations within his one-page summary report, the descriptions of his process and supporting documentation "flip the switch" (so that nobody is left "in the dark") by making it easy to recreate his work, thus demonstrating that his process is reliable.

Of the remaining claims for which defendant posits that Mr. Matthews's "formula does not add up," claims 20.B, 27, 28, 29, 30, 33, 34, 37, 46, 48, 49, 50, 51, and 55 follow the same pattern as claim 6. In these fifteen claims (including claim 6), the difference between the one-third proximity damages and the damages to the remainder is equal to the per-acre increase in value multiplied by the acres remaining in the "after" condition. Simply put, Mr. Matthews's formula does, in fact, add up.

The math employed by Mr. Matthews in the remaining seven claims identified by defendant, none of which experienced a per-acre increase in land value in the "after" condition, also adds up. Mr. Matthews's appraisals reflect damages that, while not immediately apparent due to a lack of explanation on the one-page summary reports, become clear when considering the entirety of his expert report (including the supporting data in the addendum). Whether such damages are appropriate for each parcel is a separate issue from the mathematics, and is addressed below in the discussions regarding comparable sales and adjustments with respect to each parcel type. See infra Sections VI.B (small residential parcels), VI.D (large residential parcels).

For claim 12, Mr. Matthews doubled the proximity damages. PX 12.D. As noted above, he explained that proximity damages could be higher or lower than the typical one-third depending on how close a home was in relation to the trail. Tr. 588-89 (Matthews); see also PX 12.E.1 (showing a photograph of the trail vis-à-vis the home); PX 12.E.5 (same); Tr. 428-30 (Matthews) (discussing the photographs). When the normal one-third proximity damages are doubled, the math is correct.

For claim 22, Mr. Matthews opined that the damages to the remainder parcel were $8,600 (after rounding). PX 22.D; Tr. 446 (Matthews). This figure represents proximity damages of 20% (rather than one-third) plus the cost of privacy fencing. Before factoring in special damages, the land value in the "after" condition was $36,900 (0.410 acres at $90,000 per acre). Twenty percent of $36,900 is $7,380. The cost of privacy fencing is $1,260—50 feet, the length of the property taken, multiplied by $25 per linear foot. See Jt. Stip. Ex. A at 5 (reflecting the length of the property taken). The sum of the proximity damages ($7,380) and privacy fencing ($1,260) equals $8,640, which rounds to the $8,600 figure for total residual damages used by Mr. Matthews.

For claim 24, Mr. Matthews opined that the damages to the remainder parcel were $7,300 (after rounding). PX 24.D; Tr. 449 (Matthews). This figure represents proximity damages of 20% (rather than one-third). Before factoring in special damages, the land value in the "after" condition was $36,400 (0.280 acres at $130,000 per acre). Twenty percent of $36,400 is $7,280, which rounds to the $7,300 figure used by Mr. Matthews.

For claim 86, Mr. Matthews opined that the damages to the remainder parcel were $2,200 (after rounding). PX 86.D; Tr. 519 (Matthews). This figure represents the cost of privacy fencing ($25 per linear foot) for approximately 88 feet, subject to a slight rounding adjustment, which is less than the length of the property taken.[40] Mr. Matthews did not find that proximity damages were applicable to any of the residential parcels, like this one, located in Mansfield.

For claim 87, Mr. Matthews opined that the damages to the remainder parcel were $4,500 (after rounding). PX 87.D; Tr. 523 (Matthews). This figure represents the cost of privacy fencing ($25 per linear foot) for approximately 180 feet, subject to a slight rounding adjustment, which is less than the length of the property taken. See Jt. Stip. Ex. A at 12 (reflecting that the property taken was 278 feet long and 25 feet wide).

For claim 88, Mr. Matthews opined that the damages to the remainder parcel were $5,800 (after rounding). PX 88.D; Tr. 580 (Matthews). This figure represents the cost of privacy fencing ($25 per linear foot) for 233 feet, the length of the property taken, for a total cost of $5,825 before rounding. See Jt. Stip. Ex. A at 13 (reflecting that the property taken was 233 feet long and 25 feet wide).

Finally, for claim 89, Mr. Matthews opined that the damages to the remainder parcel were $3,100 (after rounding). PX 89.D; Tr. 525 (Matthews). This figure represents the cost of privacy fencing ($25 per linear foot) for approximately 124 feet, subject to a slight rounding adjustment, which is greater than the length of the property taken. See Jt. Stip. Ex. A at 13 (reflecting that the property taken was 117 feet long and 25 feet wide).

In sum, defendant's argument that Mr. Matthews's math does not add up, and therefore leaves the court and the parties "in the dark," is wholly meritless.

B. Small Residential Parcels

The majority of claims in this case concern small residential parcels, i.e., parcels that are smaller than one acre. Each expert selected comparable sales and performed various analyses to reach their conclusions regarding the value of such land.

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[40] The parties did not stipulate to the size of the property taken with respect to claim 86. However, Mr. Sheppard suggested that the property taken—which is smaller than both the court's finding and the figure used by Mr. Matthews—was approximately 400 feet long and 25 feet wide. DX 391 at 9.

After discarding outliers and nonqualified sales, Mr. Matthews found over 100 comparable sales, identified each with a reference number, and organized them by highest and best use.[41] Tr. 338-39 (Matthews). He found forty-nine total comparable sales in Newton County for small residential parcels that took place between January 1, 2008, and December 31, 2013. Id. at 340; PX 221 at 676. Mr. Matthews explained that he chose this time frame because he did not want to go beyond the valuation date. Tr. 340 (Matthews). He then applied a time adjustment for each sale using the Case-Schiller Index and divided by the number of acres to compute the time-adjusted, per-acre value for each comparable sale before graphing the results. Id. at 340-41; PX 221 at 676-77. Using the graph, Mr. Matthews divided the market into high quality, average quality, and inferior quality locations. Tr. 342 (Matthews); PX 221 at 677. He emphasized that his graphical analysis "show[ed] the entire universe of all the comparable sales and how they fall into patterns," which allowed him to "be consistent from beginning to end." Tr. 343 (Matthews). Mr. Matthews asserted that an important trend shown by his graph was that buyers "pay less per acre for large properties." Id.

From the graph, Mr. Matthews selected specific properties from among the forty-nine small residential comparable sales to be used in the sales grids for each representative appraisal. For example, he selected comparable sales 106, 116, and 121 for the Bouchillon representative appraisal because those three comparable sales were all in Covington and of average quality, similar to the Bouchillon property (claim 14). Id. at 384. He opined that Bouchillon property had a fair market value of $90,000 per acre in the "before" condition and $90,000 per acre in the "after" condition before considering proximity damages. PX 220 at 131 (sales grid for the "before" condition), 137 (sales grid for the "after" condition). As another example, Mr. Matthews selected comparable sales 124, 128, 176, and 216 for the Pierre representative appraisal because those four comparable sales were located in "higher end residential subdivisions," similar to the Pierre property (claim 48). Tr. 394-95 (Matthews). He opined that the Pierre property had a fair market value of $165,000 per acre in the "before" condition and $170,000 per acre in the "after" condition before considering proximity damages. PX 220 at 265 (sales grid for the "before" condition), 271 (sales grid for the "after" condition).

After calculating the per-acre value in the "after" condition for each of the small residential parcels, Mr. Matthews multiplied that value by the acreage in the remainder to compute a preliminary "after" value. He then applied proximity damages where applicable. As discussed above, Mr. Matthews opined that the following small residential properties in Covington (designated by claim number) lost one-third of the market value of their land in the "after" condition due to proximity to the trail: 6, 7.B, 13, 14, 15, 17, 18, 19, 20.A, 20.B, 20.C, 23, 25, 26.A, 26.B, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 44, 45, 46, 47, 48, 49, 50, 51, 54, 55, and 110.[42] E.g., PX 220 at 541. As noted above, the one-third proximity damages were doubled for claim 12. Mr. Matthews applied 20% in proximity damages for claims 24 and 32. Id. at 554,

[41] For example, comparable sale number 128 referred to the September 29, 2009 sale of 250 Stonecreek Parkway. See PX 221 at 676, 750-51.

[42] Some of these claims were larger than one acre, but were discussed at trial with the small residential properties.

562.1. Claim 22 experienced 20% in proximity damages plus cost-to-cure damages (for fencing). Id. at 552. Claims 2 and 16 experienced only cost-to-cure damages for fencing. Id. at 539, 545. Claims 38.A and 38.B experienced neither proximity nor cost-to-cure damages because the trail is located on the other side of Dearing Street. Id. at 568-69; Tr. 492-93 (Matthews). For the small residential properties in Mansfield, the following claims experienced no proximity damages because the trail is located across the highway: 81.B, 81.C, 83, and 84. PX 220 at 579-82; Tr. 512-17 (Matthews). The following claims experienced cost-to-cure damages for fencing: 86, 87, and 89. PX 220 at 583-85. Mr. Matthews applied his standard one-third in proximity damages to claim 93.[43] Id. at 586. In addition, there were five small residential properties in Newborn: claims 104, 105, 106, 107, and 109. Id. at 646-49, 52. Mr. Matthews applied 20% in proximity damages for claims 104, 105, 106, and 109, and found that claim 107 experienced no proximity damages. Id.

Mr. Sheppard found a total of thirty-seven comparable sales, including nine industrial, six commercial, twelve residential, five agricultural, and five bulk lot sales, and identified each comparable sale with a reference number.[44] Tr. 1528-30 (Sheppard); DX 416 at 70 (listing industrial sales), 92 (commercial), 108 (residential), 135 (agricultural), 147 (bulk). All thirty-seven of his comparable sales took place from January 2010 to August 2013. Tr. 1017 (Sheppard). Mr. Sheppard explained that he limited his search accordingly because going further back in time would require more adjustments. Id. He averred that in 2008 and 2009, many buyers and sellers had yet "to come to the realization that we were in a decline" since the beginning of the Great Recession in September 2008. Id. at 1017-18. After finding comparable sales, Mr. Sheppard applied a time adjustment reflecting a straight-line 2% annual increase in property values, which he based on the average rate of inflation from 2010 to 2013 of 2.1% per year in the United States Department of Labor national Consumer Price Index for all goods. DX 416 at 186.

Of Mr. Sheppard's twelve residential comparable sales, only three were small residential, i.e., less than one acre: comparable sales 17, 23, and 24. Id. at 108-10. Mr. Sheppard utilized comparable sales 17, 23, and 24 for all suburban residential properties that were smaller than three acres: claims 2, 6, 7.B, 12, 13, 14, 15, 17, 18, 19, 20.A, 20.B, 20.C, 22, 23, 24, 25, 26.A, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 41, 44, 45, 46, 47, 48, 49, 50, 51, 54, 55, and 110. DX 416 at 193. He utilized comparable sales 19, 21, and 26 for all rural (generally, those outside of Covington) residential and agricultural lots smaller than ten acres, which includes both small and large residential parcels. Id. at 195. With respect to the suburban residential lots, Mr. Sheppard applied a "slight upward adjustment" to lots that were smaller than one-third of an acre: claims 12 and 24. Id. at 193. For the remaining suburban residential lots, he made no size adjustments. Id. He determined that the suburban residential parcels had a typical land market value of

[43] Mr. Matthews described the location of claim 93 as being in Newborn. PX 93.D. However, the Newton County parcel map indicates that claim 93 is located in Mansfield. PX 93.C at 2; see also PX 112 at 23 (parcel location map).

[44] For example, comparable sale number 17 referred to the August 25, 2010 sale of 5150 Lewis Street. See DX 416 at 113.

$25,000 per acre, claims 12 and 24 had land market values of $30,000 per acre, and claims 54 and 55 had land market values of $20,000 per acre. Id.; DX 416.A. He further determined that all of the rural residential lots had land market values between $6,000 and $7,500 per acre, with smaller properties commanding values at or near the top of this range. DX 416 at 195; DX 416.A.

Mr. Sheppard's across-the-board treatment of all suburban residential properties smaller than three acres, and similar across-the-board treatment of all rural residential properties smaller than ten acres, render his value conclusions unreliable. For instance, Mr. Sheppard found that both the Bouchillon and Pierre properties (claims 14 and 48) had a land value of $25,000 per acre, and that no adjustments were needed because both properties were "similar in size" to the comparable sales, had "full access to city services," and were "zoned for residential purposes." Compare DX 313 at 20 (Bouchillon), with DX 347 at 21 (Pierre). He stated that there were "aspects" of being "in the old town City of Covington area versus being outside closer to the golf communities . . . that are similar." Tr. 1573 (Sheppard). Beyond classifying each property as being suburban or rural, Mr. Sheppard utterly failed to account for location despite acknowledging, in discussing special benefits, that location and view aspects of a property need to be considered as part of the valuation analysis. Id. at 1112-13. Meanwhile, Mr. Matthews emphasized that the Bouchillon property is located in an "average quality neighborhood," whereas the Pierre property is located in a "high-end" neighborhood. Id. at 394-95 (Matthews). Mr. Sheppard also failed to adjust for property size beyond assigning a higher per-acre value for claims 12 and 24 for being smaller than one-third of an acre. His own figures indicated that claim 14 was under this threshold in the "before" condition, and that claims 46, 47, 48, 49, and 50 were under this threshold in the "after" condition, yet he applied no size adjustments to any of those claims. Therefore, it appears that Mr. Sheppard did not properly apply his own methodology (at least with respect to claim 14).

In addition, Mr. Sheppard's time adjustment reflecting a straight-line 2% annual increase in property values based on the overall rate of inflation is flawed for two reasons. First, Mr. Sheppard's figures are based on the increase in prices for all goods nationally, rather than real estate locally. DX 416 at 186. Mr. Matthews emphasized that the Consumer Price Index has not been in sync with real estate values since at least the early 2000s. Tr. 1921 (Matthews). Second, even assuming that the inflation rate for all goods nationally is a reasonable proxy for the rate of increase in real estate values locally, the inflation rate between 2010 and 2013 was not a flat 2% each year. In fact, Mr. Sheppard's own figures indicate that the inflation rate was 1.6% in 2010, 3.2% in 2011, 2.1% in 2012, and 1.5% in 2013. DX 416 at 187. Even within each year, the rate fluctuates monthly.[45] Id. Therefore, a flat rate for the entire time period from 2010 to 2013 is an improper shortcut. As Mr. Matthews explained, "to use a straight-line method through [that time period] totally ignores what was going on." Tr. 821 (Matthews).

The Case-Schiller Index is a much more reliable benchmark by which to make time adjustments. Because its value changes monthly, any two sales can be compared using the index

[45] These annual figures for the inflation rate are not disputed. See Hardy, 138 Fed. Cl. at 353.

regardless of market trends in the interim. Id. Further, it is focused on real estate within the greater Atlanta metro area, which includes Newton County. Id. Mr. Sheppard criticizes Mr. Matthews's use of the index because the index includes the entire Atlanta metropolitan area; indeed, Mr. Matthews acknowledged that the Case-Schiller Index includes twenty-eight counties. Id. at 819. However, Mr. Matthews also remarked that Newton County is the "approximate average" of those twenty-eight counties, an assertion that Mr. Sheppard does not contest. Id. at 821. Therefore, the court finds that Mr. Sheppard's criticism of the Case-Schiller Index rings hollow, and agrees with Mr. Matthews that the index "is the best indication of what the [Newton County real estate] market was doing." Id. at 820-21.

Because the Case-Schiller Index allows for property sales to be adjusted for market conditions, Mr. Matthews did not err by including comparable sales from 2008 and 2009 in his analysis. On the other hand, Mr. Sheppard artificially limited the number of comparable sales available by restricting his search to 2010 through 2013 and summarily ignoring 2008 and 2009 sales. Despite his good intentions in doing so, he ran afoul of the Yellow Book's edict that "an appraiser may not discard an entire market as aberrational."[46] Yellow Book 96 (internal quotation marks and alteration omitted). Had he found a sufficient number of comparable sales from 2010 to 2013, his time restriction might not have been improper, but he did not. Further, had he utilized a proper market adjustment mechanism, such as the Case-Schiller Index rather than a straight-line method, he would not have needed to set aside sales from 2008 and 2009.

Mr. Sheppard's selection of the comparable sales themselves is even more fundamental to the unreliability of his value conclusions than any of his shortcuts. Comparable sales 23 and 24 provide one example. These parcels were both sold on May 24, 2012, from the same seller to different buyers. DX 416 at 109. Both lots are located in an "older established neighborhood," and were unimproved when sold for $5,000 each. Id. at 109, 126, 128. Comparable sale 23, located near the end of a cul-de-sac at 7233 Louise Street in Covington, is 0.3445 acres, reflecting a May 24, 2012 per-acre sale price of $14,514. Id. at 125-26. Comparable sale 24, a corner lot at 7226 Louise Street in Covington, is 0.3714 acres, reflecting a May 24, 2012 per-acre sale price of $13,463. Id. at 127-128. Mr. Sheppard indicated that both comparable sales—i.e., 23 and 24—appear to have taken place upon arm's-length, cash-equivalent terms. Id. at 125, 127. Just as Mr. Sheppard erred in treating different properties the same (with respect to the Bouchillon and Pierre properties), he repeated that error in treating 7233 and 7226 Louise Street the same. They are not the same. For instance, one was a corner lot and the other is at the end of a cul-de-sac, yet Mr. Sheppard failed to make any adjustments for location and view. Further, and more importantly, comparable sales 23 and 24 more closely resemble one bulk sale than two individual lot sales. While both sales ostensibly took place upon arm's-length, cash-equivalent terms, the seller sold two different size lots that are in close proximity to one another on the same day for the same price to different buyers. In other words, Mr. Sheppard failed to consider the seller's circumstances with respect to those two sales.

[46] Mr. Sheppard's casting aside of sales from 2008 and 2009 as being "inflated by the fact that . . . nobody wanted to come to the realization that we were in a decline," Tr. 1018 (Sheppard), amounts to discarding the 2008 and 2009 markets as aberrational.

The court finds that Mr. Matthews's per-acre value conclusions are reliable and adopts them, with some exceptions discussed herein. Mr. Matthews found forty-nine small residential comparable sales and was able to separate them into subsets based on neighborhood quality. Such separation allowed him to render accurate valuation opinions without having to make further adjustments. The primary adjustments to comparable sales that Mr. Matthews did make—time adjustments and computing per-acre values based on total sales price—were purely mathematical, and correctly performed. Mr. Matthews also made qualitative adjustments where appropriate. Quantitative adjustments are generally preferable, but qualitative adjustments can be particularly useful in certain circumstances. See Yellow Book 121-22. If excessive adjustments are necessary, a comparable sale should generally be discarded, but Mr. Matthews did not reach that threshold.

The exceptions to Mr. Matthews's per-acre value conclusions are limited to three parcels: claims 14, 20.C, and 54. There was no increase to the per-acre value in the "after" condition for any of these three parcels. Mr. Matthews should have applied a $5,000 upward adjustment to the per-acre value of each of these parcels in the "after" condition to remain consistent with his valuations for the other small residential parcels, based on their relative "before" and "after" sizes.

With respect to damages to the remainder, the court has already determined that small residential parcels in Covington lose 20.5% of their land value if they are adjacent to the trail, rather than one-third of their value as championed by plaintiffs. Therefore, the court will substitute 20.5% for the one-third diminution in value. Mr. Matthews also applied proximity damages other than one-third to a handful of small residential parcels. With respect to claim 12, the evidence in the record clearly demonstrates that the trail is located immediately adjacent to the home rather than a typical distance away. See, e.g., PX 12.E.5. Therefore, the court finds that doubling the typical proximity damages is a reasonable qualitative adjustment, and will substitute 41% (which is twice 20.5%) for the two-thirds diminution in value. Similarly, Mr. Matthews applied lower proximity damages of 20%, rather than one-third, to claims 22, 24, 32, 104, 105, 106, and 109 due to somewhat further than typical setbacks. See PX 112 at 7. Since 20% equals three-fifths of one-third, a reduction of 12.3% (three-fifths of 20.5%) will be applied to claims 24, 32, 104, 105, 106, and 109. However, proximity damages are improper for claim 22. In addition to proximity damages, Mr. Matthews found that cost-to-cure damages for a privacy fence were appropriate for claim 22. Since Mr. Matthews failed to explain why both cost-to-cure and proximity damages would simultaneously be appropriate, the lesser amount is applicable. Here, the cost to cure ($1,260) is less than the proximity damages ($4,539, which is 12.3% of $36,900, the land value in the "after" condition before accounting for special damages). Further, proximity damages are not appropriate for claim 93. Mr. Matthews applied his standard one-third proximity damages that he found were applicable to small residential properties in Covington, but parcel 93 is located in Mansfield, and none of the residential properties in Mansfield experienced proximity damages.

Mr. Matthews found that proximity damages were not applicable to claims 2, 16, 38.A, 38.B, 81.B, 81.C, 83, 84, 86, 87, 89, 103.A, 103.B, and 107. Among those claims, he found that cost-to-cure damages for a privacy fence were appropriate for claims 2, 16, 86, 87, and 89. The

court credits these conclusions, with one exception. With respect to claim 89, the cost-to-cure damages advanced by Mr. Matthews reflect a privacy fence that is 124 linear feet, which is greater than the stipulated length of the property taken of 117 feet. Mr. Matthews did not provide support for the excess amount. Accordingly, the cost-to-cure damages for claim 89 must be reduced to reflect a privacy fence that is 117 linear feet.

In sum, the court rejects the per-acre opinions of value for small residential parcels suggested by Mr. Sheppard. The court adopts the per-acre opinions of value and damages to the remainder for small residential parcels suggested by Mr. Matthews, with the adjustments noted above.

C. Drapac's Parcels

The court turns next to the twenty-seven parcels owned by Drapac: claims 21.A through 21.BB.[47] PX 220 at 213. Drapac acquired these parcels as part of a bulk lot purchase of unimproved land on July 9, 2013. Id. at 215; DX 320 at 54-55.

Mr. Matthews completed a full appraisal with respect to the Drapac bulk lot acquisition. See generally PX 220 at 176-246. He noted that Drapac owns a total of forty parcels in the Dorchester Place residential subdivision that are part of the "larger parcel" he appraised, which was 10.704 acres in the "before" condition and 9.460 acres in the "after" condition. Id. at 177, 195, 202. The "entire subdivision under Drapac ownership" includes additional parcels beyond those forty that were included in his appraisal. Id. at 221. Mr. Matthews explained that the Drapac bulk lot ownership was a "very difficult property [to] appraise because there's just not a lot of good comparable sales." Tr. 408 (Matthews). He utilized the same comparable sales for both the "before" and "after" condition in his Drapac appraisal, which he identified as 1A, 2A, 3A, 1S, 2S, 3S, and 4S. Id.; PX 220 at 195, 202. He noted that the "A" referred to agricultural land, while the "S" referred to subdivisions. Tr. 408-09 (Matthews).

Comparable sales 1A, 2A, and 3A were large rural tracts.[48] Id. at 409. Comparable sale 1A is a 21.13-acre unimproved agricultural parcel that sold for $73,900 on December 10, 2013. PX 220 at 202; PX 221 at 756-57. Comparable sale 2A is a 30-acre unimproved agricultural parcel that sold for $93,000 on December 6, 2013. PX 220 at 202; PX 221 at 759-60. These two parcels are adjacent to one another. Compare PX 221 at 756, with id. at 759. Comparable sale 3A is a 34.73-acre unimproved agricultural parcel that sold for $317,000 on October 28, 2013. Id. at 762-63; PX 220 at 202. Because the Drapac subdivision already has utilities and roads, comparable sales 1A and 2A received upward adjustments; comparable sale 3A needed no such adjustment because it "had a road through the middle of it already." Tr. 410 (Matthews). Mr.

[47] There is no claim 21.E. PX 220 at 213; DX 320 at 18-44.

[48] Mr. Matthews also utilized these three sales to appraise the Fulton property (claim 79), an agricultural tract. Compare, e.g., PX 220 at 195 (Drapac appraisal), with id. at 325 (Fulton appraisal). See also PX 221.A at 8 (describing the Fulton property as an "Ag/Timber" tract).

Matthews made no time adjustments to these three sales because they took place close to the effective appraisal date. Id. at 409.

Comparable sales 1S, 2S, 3S, and 4S were partially developed subdivisions that were sold out of foreclosure and were in "suburban comparable locations" to the Drapac lots. Id. at 411. Comparable sale 1S comprises 5.56 total acres and sold for $63,172 in July 2013. PX 220 at 195. Comparable sale 2S comprises 51.3 acres and sold for $235,000 on July 17, 2013. Id.; PX 221 at 724-25. Comparable sale 3S comprises thirty-four lots and 256 total acres, and sold for $655,000 on January 14, 2014. PX 220 at 195; PX 221 at 730-36. Comparable sale 4S comprises 29 lots and 12.23 total acres, and sold for $85,000 on December 28, 2011. PX 220 at 195; PX 221 at 737-41. Mr. Matthews made no time adjustments to these four sales, but made various adjustments for size and conditions. Tr. 411-412 (Matthews); PX 220 at 195-97, 202. Based on all of these comparable sales, Mr. Matthews calculated that the Drapac land would have sold for $11,000 per acre as of the date of the taking in both the "before" and "after" conditions. PX 220 at 195, 202.

Mr. Matthews also employed an alternative "discounted subdivision lot value" method. Tr. 412 (Matthews); PX 220 at 197. Under that approach, he estimated that the individual parcels would normally sell for $25,000 per lot, but a 70% discount would apply for a bulk sale of all twenty-seven lots. Tr. 414 (Matthews); PX 220 at 197. The net result then rounds to $19,000 per acre.[49] Tr. 414 (Matthews); PX 220 at 197. He opined that the discounted subdivision lot value method "is a better approach since the typical buyer would give it more weight." PX 220 at 197. After opining that the Drapac land was worth $19,000 per acre in both the "before" and "after" condition, he then considered damages. Mr. Matthews concluded that fencing "will not totally cure the loss" and thus his standard one-third proximity damages for small residential properties in Covington were applicable. Id. at 203. His valuation opinion for the Drapac properties can be summarized as follows:

- "Before" scenario: 10.704 acres × $19,000 per acre = $203,376 (rounded to $203,000)
- "After" scenario:
    - Without damages: 9.460 acres × $19,000 per acre = $179,740 (rounded to $180,000)
    - Proximity damages: one-third of $180,000 = $60,000
    - Net: $180,000 – $60,000 = $120,000

[49] Mr. Matthews explained his calculations as follows: (1) $25,000 per lot × 27 lots = $675,000; (2) $675,000 × 30% (to reflect a 70% discount) = $202,500 total price; and (3) $202,500 ÷ 10.704 acres = $18,918 per acre. Tr. 414 (Matthews); PX 220 at 197.

- Diminution: $203,000 – $120,000 = $83,000

- Allocation:

    - Property taken: 1.244 acres × $19,000 per acre = $23,636 (rounded to $23,600)

    - Proximity damages: $83,000 – $23,600 = $59,400[50]

Tr. 417 (Matthews); PX 220 at 197-98 ("before" values), 203 ("after" scenario), 204 (total diminution).

Mr. Sheppard followed a similar comparable sales approach. He found five comparable sales, which he numbered 33 through 37. DX 416 at 147. Comparable sale 33, located along Alcovy Reserve Way in the Sauntee Bluff subdivision in Newton County, occurred on June 12, 2012, and included eight unimproved, unsewered lots varying in size from 0.59 acres to 1.32 acres. Id. at 148-49. The total sales price for 6.42 acres was $30,000, which is $3,750 per lot and $4,673 per acre. Id. at 148. Comparable sale 34, located in the Riverstone subdivision in Newton County, occurred on April 29, 2013, and included fourteen unimproved, unsewered lots varying in size from 0.25 to 0.33 acres. Id. at 150-51. The total sales price for 4.00 acres was $112,000, which is $8,000 per lot and $28,000 per acre. Id. at 150. Comparable sale 35, also located in the Riverstone subdivision, occurred on July 12, 2013, and included twenty-one unimproved lots ranging in size from 0.23 acres to 0.42 acres, with all utilities available including sewer. Id. at 152-53. The total sales price for 5.85 acres was $125,000, which is $5,952 per lot and $21,368 per acre. Id. at 152. Comparable sales 34 and 35 had the same buyer. Id. at 150, 152. Comparable sale 36, located on Line Drive in Newton County, occurred on May 10, 2013, and included four unimproved, unsewered lots ranging in size from 0.59 acres to 1.13 acres. Id. at 154-55. The total sales price for 3.00 acres was $37,500, which is $9,375 per lot and $12,500 per acre. Id. at 154. Comparable sale 37, located along King Street in the Dorchester subdivision, occurred on July 9, 2013, and included 108 total lots—including the twenty-seven parcels owned by Drapac identified as claims 21.A through 21.BB—with all utilities available including sewer. Id. at 156-57. The total sales price for 14.704 acres, including common areas, was $920,000, which is $8,519 per lot and a ratable share of the common areas and $62,568 per acre for the lots and common areas.[51] Id. at 156.

[50] The proximity damages allocation does not match the $60,000 figure computed in the earlier step due to intermediate rounding. Without rounding at any step, the math adds up correctly to a total diminution of $83,549, of which $23,636 is allocated to the property taken and the remaining $59,913 (which is one-third of $179,740) to proximity damages.

[51] In his addenda, Mr. Sheppard indicated that each of the 108 lots were approximately 0.3 acres, and that the total of 14.704 acres included 6.024 acres "with [l]ots" and 8.88 acres of common areas. DX 416 at 156. A total of 6.024 acres across the twenty-seven subject lots provides an average lot size of 0.223 acres.

Mr. Sheppard utilized comparable sales 34, 35, and 37 in his sales grid for the Drapac appraisal.[52] DX 320 at 57; see also DX 416 at 197 (reflecting that Mr. Sheppard used comparable sales 34, 35, and 37 to appraise the Drapac claims). As with the small residential parcels discussed above, he applied a time adjustment reflecting a straight-line 2% annual increase in property values. DX 320 at 56-57. He also noted that that "[s]ales 34 and 35 were most applicable" because they were "similarly-sized and similarly-located lots," and thus they needed no further adjustments.[53] Id.; accord Tr. 1806 (Sheppard). He applied adjustments to comparable sale 37 to account for its inclusion of "additional lots[] and additional greenspace/common-area land" beyond the "subject lots." DX 320 at 56-57. Ultimately, he concluded that the Drapac land was worth $25,000 per acre. Tr. 1572 (Sheppard); DX 320 at 56. He also concluded that no premium was applicable to the Drapac land. Tr. 1572 (Sheppard); DX 320 at 5. He then opined that the diminution in value was $26,428 by assuming a taking of 85% of property rights in the land burdened by the trail easement. Tr. 1240 (Sheppard); DX 320 at 4, 56. His calculations are as follows:

- Drapac land: 316,579 square feet ÷ 43,560 square feet per acre = 7.268 acres

- Size of the property taken: 54,174 square feet ÷ 43,560 square feet per acre = 1.244 acres

- Unencumbered land in the "after" condition: 316,579 square feet – 54,174 square feet = 262,405 square feet

    - 262,405 square feet ÷ 43,560 square feet per acre = 6.024 acres[54]

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[52] During trial, Mr. Sheppard testified that he used comparable sales 33, 34, 35, and 36, but his incorrect description of comparable sale 36 as "the sale of the subject property and additional common area and additional lots," Tr. 1239 (Sheppard), indicates that he intended to refer to sales 34, 35, 36, and 37, which more closely match the comparable sales included in his sales grid. Mr. Sheppard did not explain—during trial, in his appraisal report for the Drapac parcels, or in his addenda—why comparable sale 36 was not included in his sales grid. He merely indicated that comparable sales 34 and 35 were the "most applicable." DX 320 at 56.

[53] Mr. Sheppard did not apply an upward adjustment to comparable sale 34 for being unsewered. DX 320 at 57. The court assumes that, since he was aware of the available utilities with respect to the subject property and each comparable sale, he determined that a 0% adjustment for the lack of sewage availability was proper.

[54] In the addenda to his appraisal report, Mr. Sheppard indicated that the Drapac land included 6.024 acres "with lots" plus other land. DX 416 at 156. This area is consistent with his figures for (1) the Drapac land including the property taken and (2) the size of the property taken itself. His statement within the Drapac appraisal that the lots comprise approximately 6.017 acres, DX 320 at 8, is unsupported.

- Rights taken: $25,000 per acre × 1.244 acres × 85% = $26,428[55]

DX 320 at 3-4; DX 416.A at 1.

The court finds that Mr. Matthews's comparable sales with respect to his Drapac appraisal are insufficient. First, the backup documentation that is labelled as comparable sale 1S is both incomplete and unclear. See PX 221 at 721-23. It is incomplete because it refers to only one specific lot sale, rather than a bulk lot purchase. Id. at 722. It is unclear because it shows that the individual lots may have been sold to multiple entities and in separate transactions. Specifically, there are twenty-one lots listed by address for comparable sale 1S, nineteen of which are owned by Victory at Riverwalk Farm LLC, and two of which are owned by Victory at Riverwalk Land LLC.[56] Id. at 723. The latter two lots owned by Victory at Riverwalk Land LLC (the grantee with respect to comparable sale 2S) appear to be included within the land transferred in conjunction with comparable sale 2S. Compare id. at 721-23, with id. at 724-29. Moreover, comparable sales 1S and 2S appear to have been made to related entities on the same date and include contiguous parcels of land.[57]

Second, Mr. Matthews's decision not to make time adjustments to his comparable sales is flawed. The Case-Schiller Index for August 19, 2013 (the effective appraisal date) was 113.47. PX 221 at 684. Two of Mr. Matthews's comparable sales took place in December 2013, two others in July 2013, and one each in January 2014, October 2013, and December 2011. PX 220 at 195, 202. The Case-Schiller Index for each of these months, as well as the adjustment needed to equate each month's price to its August 2013 equivalent, was as follows:

Month	Case-Schiller Index	Adjustment Needed
December 2011	87.3	+29.98%
July 2013	111.54	+1.73%
August 2013	113.47	N/A
October 2013	113.72	–0.22%
December 2013	113.35	+0.11%
January 2014	113.23	+0.21%

[55] Mr. Sheppard used the exact acreage represented by 54,174 square feet, rather than the rounded figure of 1.244 acres, in his computations. He did not explicitly calculate the acres in the area of the property taken. Further, he rounded the acreage in the Drapac land to eight decimal places rather than three.

[56] Victory at Riverwalk, Victory at Riverwalk LLC, and Victory at Riverwalk Land LLC appear to be the same entity. See PX 221 at 724-29.

[57] Victory at Riverwalk Farm LLC appears to be a different, albeit related, entity vis-à-vis Victory at Riverwalk Land LLC. Compare PX 221 at 722, with id. at 724.

PX 221 at 684. However, the error is largely harmless because, except for comparable sale 4S with its December 2011 sale date (which was disregarded as being an outlier), the adjustments would have been de minimis. The adjustment to comparable sale 4S would have increased its per-acre value from $6,950 to $9,035, which is more in line with the remaining amounts.

Third, Mr. Matthews made adjustments of 100% or greater to four of his seven comparable sales. See PX 220 at 195, 202. The necessity of making such large adjustments, while not disqualifying per se, renders the resulting value conclusions less reliable. Had Mr. Matthews utilized comparable sales showing greater similarity to the Drapac land, his valuation opinion with respect to that land would carry more weight. His failure to do so cannot be disregarded because, as discussed below, such comparable sales were indeed available.

At first glance, these failures would appear to be immaterial because Mr. Matthews ultimately utilized the values derived from his discounted subdivision lot value method. However, because his discounted subdivision lot value method was based, in part, on the "value graphs [he] developed from lot sales," id. at 197, the foundation of his alternative analysis with respect to the Drapac land is shaky at best. Further, his calculation of proximity damages is overstated. Mr. Matthews properly included lots beyond the abutting lots as part of the "larger parcel." He then computed the proximity damages as being one-third of the value of the unencumbered land in the "after" condition. His computations are mathematically correct, but only land abutting the trail is damaged. The portion of the larger parcel representing nonabutting lots and common areas should not factor into the calculation of proximity damages.

Mr. Sheppard, meanwhile, used comparable sales in his sales grid for the Drapac land that required no location or condition adjustments because they were close in time and type to the subject property—except for the Drapac bulk lot acquisition itself, which necessitated significant adjustments due to common areas and improvements. Indeed, Mr. Sheppard indicated that two other comparable sales—34 and 35—were "most applicable" because they "involve[ed] similarly-sized and similarly-located lots," DX 320 at 56, and accordingly received greater weight. The midpoint of these two comparable sales, as well as the average of all three comparable sales that Mr. Sheppard used in his sales grid, was close to his reconciled value conclusion of $25,000 per acre.

The main weakness of Mr. Sheppard's comparable sales is his straight-line time adjustment. As discussed above, the Case-Schiller Index is a superior approach to making time adjustments. The shortcoming in Mr. Sheppard's approach to valuing the Drapac land can be rectified mathematically. The comparable sales that he used in his sales grid—34, 35, and 37 (the Drapac bulk lot acquisition)—took place on April 29, 2013, July 12, 2013, and July 9, 2013, respectively. His straight-line adjustments versus the appropriate adjustments utilizing the Case-Schiller Index are as follows:

Month	Straight-Line Adjustment	Case-Schiller Index	Case-Schiller Adjustment
April 2013	+0.61%	102.01	+10.10%
July 2013	+0.21%	111.54	+1.70%
August 2013	N/A	113.47	N/A

Compare id. at 57 (Mr. Sheppard's adjustment grid), with PX 221 at 684 (Case-Schiller Index values). Had Mr. Sheppard instead applied the Case-Schiller time adjustments rather than the straight-line adjustments, his "per-acre value indications" for comparable sales 34, 35, and 37 would have been $30,828, $21,731, and $26,091, respectively, rather than $28,172, $21,412, and $25,083, respectively.[58] See DX 320 at 57. Because utilizing the appropriate time adjustment would have increased the comparable sale per-acre values by approximately $2,000, $0, and $1,000, respectively, including $2,000 and $0 for the two most relevant comparable sales, the reconciled per-acre value should be increased by $1,000.

In addition to his failure to utilize a proper time adjustment, Mr. Sheppard only included 7.268 acres in the Drapac land. He agreed with the explanation that his use of 7.268 acres, as opposed to the 10.704 acres used by Mr. Matthews, was "because [he] only utilized the properties that were actually abutting the trail as opposed to the other properties that were included . . . that were technically part of the larger parcel but were not affected by the trail." Tr. 1571 (Sheppard). In other words, Mr. Sheppard utilized an improper size for the Drapac land. However, that error did not impact his overall valuation opinion because the increased acreage would have been added to both the "before" and "after" condition. Even had he determined that special benefits or damages applied to the Drapac land, such special benefits and damages would only apply to parcels adjacent to the trail.

In sum, the court finds that the Drapac land is worth $26,000 per acre in both the "before" and "after" condition. Proximity damages of 20.5%, see supra Section V.C, apply only to the land contained within the individual parcels that are directly adjacent to the trail, i.e., 6.024 acres.

[58] No adjustments, other than a time adjustment, were applied to comparable sales 34 and 35. DX 320 at 57. Thus, the $28,000 per-acre sale price for comparable sale 34 need only be increased by 10.10%; the $21,368 per-acre sale price for comparable sale 35 need only be increased by 1.70%. Meanwhile, comparable sale 37 received a 35% downward adjustment for land area and a 25% downward adjustment for zoning and land use. Id. Thus, when combined with the appropriate Case-Schiller Index time adjustment for July 2013, the $62,568 per-acre sale price for comparable sale 37 should be decreased by 58.3%.

D. Large Residential Parcels

The court next considers the large residential parcels, which are the residential parcels that are larger than one acre.

Mr. Matthews selected fifteen comparable sales for his analysis of the large residential parcels. See PX 221 at 678. He chose these particular sales "because they were rural in nature and not in the city or close suburbs which affects the value by location" and generally "happened to sell very close to the date of valuation." Tr. 545 (Matthews). He explained that "minimal adjustments were needed" because rural land does not experience speculation in the same manner as single-family residential properties.[59] Id. After selecting the comparable sales, he computed the per-acre sale price for each transaction and graphed the per-acre price and the number of acres for each property, with the number of acres as the independent variable and the per-acre price as the dependent variable. Id.; PX 221 at 678. Mr. Matthews averred that, with the exception of two outliers, the sales "fall into a reasonable pattern." PX 221 at 678. With respect to the outliers, he explained that comparable sale 10A was "benefited by it[s] proximity to a commercial development," id., and comparable sale 3A had a center road passing through it, Tr. 546 (Matthews).

Mr. Matthews also accounted for cost-to-cure damages, where applicable, of $5 per linear foot for a woven-wire security fence and $25 per linear foot for a privacy fence. Id. at 588-89; see also supra Section V.B.2. Mr. Matthews emphasized that a fence would only be built "for the area that is going to be impacted," which is not necessarily the entire length of a particular property. Tr. 589 (Matthews). He observed that privacy fences were typically insufficient in town, and hence proximity damages applied, because trail users could still see and hear activity on adjacent properties even if such a fence had been installed. Id. at 590. See generally supra Part V (discussing the benefits and damages to the remainder). On the other hand, he asserted, because large residential parcels tend to have natural buffers, a woven-wire security fence is often sufficient to cure damages to the remainder parcel; for parcels with a house located near the trail corridor, a privacy fence is necessary. Tr. 588-89 (Matthews).

Using his comparable sales and graphs, Mr. Matthews determined per-acre values for each of the large residential parcels. Id. at 545-47. None of the parcels experienced an increase in per-acre value due to being reduced in size by the taking. He determined that the following cost-to-cure damages were appropriate:

- privacy fence for the entire length of the property taken: claims 57.B, 88, and 90;

[59] Mr. Matthews applied a slight downward adjustment to comparable sale 13A because it was located "on a small river." Tr. 545 (Matthews); see also PX 221 at 678.

- privacy fence for less than the length of the property taken: claims 57.A, 63.AB (combined), and 78;[60]

- security fence for the entire length of the property taken: claims 52.AB (combined), 56.A, 56.B, 62, 64, 65, 66, 67, 68, 69.B, 70, 71, 74, 75, and 80;

- security fence for greater than the length of the property taken: claims 60, 69.A, and 108.AB (combined); and

- no cost-to-cure damages: claims 39, 40, 41, 58, 85.ABC (combined), 95, 103.A, and 103.B.

PX 220 at 590-618, 626, 650-51. In addition, he explained that access damages of $44,000 applied to claim 69.B, in addition to security fencing along the length of the property taken, due to "loss of access after construction of the trail." Id. at 607.

Mr. Sheppard found a total of twelve residential comparable sales that sold between July 30, 2010, and February 26, 2013. DX 416 at 106-08. Of these, comparable sales 16, 20, and 25 were deemed "large" parcels due to their land areas of 15.950, 13.765, and 27.094 acres, respectively. Id. at 108, 110. The six "average" residential parcels (comparable sales 18, 19, 21, 22, 26, and 27) ranged in size from 1.670 acres to 5.000 acres. Id. The three "small" residential parcels (comparable sales 17, 23, and 24) ranged in size from 0.320 acres to 0.371 acres. Id. In addition, comparable sales 20, 22, and 27—the latter two of which were described by Mr. Sheppard as "average" parcels at 1.670 and 3.840 acres, respectively—were classified as lakefront property. Id. He also found five comparable sales of properties that were zoned as agricultural, with sale dates ranging from August 5, 2010, to December 6, 2013. Id. at 135. The agricultural tracts he described as "large" (comparable sales 28 and 30) were 88.100 and 1,095.466 acres, respectively. Id. at 135-36. The "average" agricultural tracts (comparable sales 29 and 32) were 33.973 and 33.458 acres, respectively. Id. The single "small" agricultural tract (comparable sale 31) was 10.000 acres. Id. Comparable sale 32 also contained frontage along Melody Lake. Id. at 136, 146.

[60] Mr. Matthews stated that cost-to-cure damages for claim 63.AB (combined) were $12,900 due to the necessity of a 516-foot privacy fence (516 feet × $25 per foot = $12,900). PX 220 at 600. He also determined that the cost to cure for claims 57.A and 78 were $5,900 and $10,400, respectively, and noted for both claims that "[d]amages were based on the study in the addenda." Id. at 595, 612. At $25 per linear foot, these figures reflect privacy fencing of approximately 236 feet and 416 feet (subject to slight rounding adjustments) for claims 57.A and 78, respectively. The length of the property taken in claim 57.A is 800 feet; the length of the property taken in claim 78 is 782 feet. Jt. Stip. Ex. A at 8, 11.

Mr. Sheppard utilized comparable sales 20, 25, 28, and 32 to appraise properties containing a pond or lake. DX 416 at 195; Tr. 1293-94 (Sheppard) (claim 59), 1309-10 (claim 68), 1311 (claim 69.AB combined),[61] 1333-34 (claim 77.C), 1336 (claim 79); see also DX 358 at 22 (describing claim 59 as "includ[ing] two water amenities from both a pond and the river frontage"); DX 368 at 11 (describing claim 68 as being "improved with a man-made lake" and other features); DX 369 at 18 (describing claim 69 in the same manner); DX 380 at 14 (describing claim 77.C as being "improved with a lake" and other features); DX 382 at 13 (describing claim 79 in the same manner). He also described claim 85 as being "improved with a lake" and other features, but utilized comparable sales 25, 28, 29, and 32 to appraise that property. Tr. 1346-47 (Sheppard); DX 389 at 15, 26-27; see infra Section VI.E (discussing agricultural/timber parcels).

Mr. Sheppard's appraisal for claim 68, the Morgan residential property, reflects that the subject property was just under 33 acres in the "before" condition, including approximately 0.867 acres that were part of the trail corridor in the "after" condition. DX 368 at 4, 6. Mr. Sheppard applied a time adjustment reflecting a straight-line 2% annual increase in property values to each comparable sale, and made no other adjustments. Id. at 22-23. His results are as follows:

Comp. Sale	Size (Acres)	Per-acre Value
20	13.765	$15,390
25	27.094	$6,341
28	88.100	$4,515
32	33.458	$7,602

Id. at 23. Ultimately, he determined that the Morgan residential property had a land value of $12,500 per acre. Id. at 22. Mr. Sheppard explained that he "estimated the value at the higher end of the range" due to the "size of the subject property." Id. He then used the same sales grid for claim 69—making a time adjustment reflecting a straight-line 2% annual increase in property values, and no other adjustments—before estimating that claim 69, at approximately 104 acres, had a land value of $10,000 per acre. DX 369 at 8, 29-30. He did not explain his $10,000 estimate beyond noting that "[n]o specific property adjustments applied" and that "[t]he adjusted range exhibited by the sales data indicates a per-acre value between $4,515 and $15,390." Id. at 29. Similarly, with respect to claim 77.C (with an area of approximately 72 acres), Mr. Sheppard estimated a land value of $10,000 per acre after finding that "[n]o adjustment for property differences was warranted" and using the same sales grid. DX 380 at 8, 25-26. Mr. Sheppard did not discuss property adjustments, or the lack thereof, in his appraisal for claim 79 (with an area of approximately 82 acres), but again found a $10,000 per-acre value based on the same sales grid. DX 382 at 8, 24-25.

[61] Mr. Matthews treated claims 69.A and 69.B separately, while Mr. Sheppard treated claims 69.A and 69.B as if they were one parcel. Compare, e.g., PX 220 at 606-07, with DX 369 at 8, 16-19.

Mr. Sheppard used comparable sales 19, 21, and 26 to appraise claims of rural residential properties that were smaller than ten acres and lacked water features. DX 416 at 195; see, e.g., DX 370 at 22 (claim 70); DX 371 at 21 (claim 71); DX 374 at 22 (claim 74); DX 381 at 22 (claim 78); DX 411 at 23 (claim 107); DX 412 at 24 (claim 108). For each of these claims, he used the same sales grid and made no adjustments—other than a time adjustment reflecting a straight-line 2% annual increase in property values—to arrive at the following results:

Comp. Sale	Size (Acres)	Per-acre Value
19	4.720	$4,271
21	2.330	$8,125
26	2.090	$3,146

Id. His final opinions of value for each of these claims is provided below:

Claim	Size (Acres)	Per-acre Value
70	5.261	$6,000
71	7.385	$6,000
74	5.537	$6,000
78	3.467	$6,000
107	5.968	$6,000
108	5.841	$6,000

DX 416.A at 2.

The court cannot credit Mr. Sheppard's opinions of value with respect to properties containing water features. He utilized comparable sales 20, 25, 28, and 32 to appraise claims 68, 69, 77.C, and 79.[62] He explained that lakefront properties, like properties featuring a pond or river, are typically at the "higher end of the range" and that properties with water features such as ponds are "certainly different than vacant land without a pond." Tr. 1081-82 (Sheppard). Mr. Sheppard is correct that ponds are unique property features, but frontage along a lake—as with comparable sales 20 and 32—is a poor proxy for either "natural or man-made ponds." Id. at 1082. Given that he made no adjustments to the comparable sales he used to appraise any of the large residential properties, beyond time adjustments that were insufficient for reasons previously discussed, his selection of comparable sales demonstrates that the per-acre value for such properties depended primarily on the presence of a pond. See id. at 1627. Even assuming, for sake of argument, that lake frontage is a viable proxy for a pond, Mr. Sheppard's analysis failed to adjust the comparable sales that did not include lake frontage. Instead, he simply chose per-acre values ($12,500 for claim 68 and $10,000 for claims 69, 77.C, and 79) that were within

[62] Mr. Sheppard appraised claim 85, which was "improved with a lake" and other features, utilizing comparable sales 25, 28, 29, and 32. DX 389 at 15, 27; see infra Section VI.E (discussing agricultural/timber parcels).

the range ($4,515 to $15,390) and above the average ($8,462) of the per-acre values for the comparable sales used.[63]

Similarly, the court cannot credit Mr. Sheppard's opinions with respect to the remaining large residential parcels, which he appraised using comparable sales 19, 21, and 26 for two reasons. First, his time adjustments were insufficient. Second, he selected the same per-acre value ($6,000) for claims 70, 71, 74, 78, 107, and 108. Although that value was within the range ($3,146 to $8,125) and above the average ($5,181) of the per-acre values for the comparable sales used, he failed to explain why he selected the particular value that he did. That Mr. Sheppard selected the same value for all six of these claims is also troublesome given their relative sizes.

On the other hand, the court finds Mr. Matthews's per-acre value conclusions for large residential properties to be credible. He utilized a total of thirteen comparable sales (having found fifteen but deeming two of them to be outliers) in his analysis,[64] compared with the three or four comparable sales used by Mr. Sheppard. Mr. Matthews's failure to make time adjustments is mitigated by the timing of his comparable sales; the majority of his comparable sales occurred in 2013, whereas Mr. Sheppard used comparable sales that were more spread out. Further, with two exceptions, the court agrees with Mr. Matthews's assessment regarding cost-to-cure damages because those damages were adequately explained, well supported, and were determined in accordance with the unique characteristics of each property. Mr. Matthews demonstrated that he considered each property individually, rather than applying a blanket approach, by applying different types of special damages (i.e., security fencing, privacy fencing, and access damages) in different amounts (i.e., not necessarily the full length of the property taken, and none at all for certain claims).

The first exception is Mr. Matthews's determination of cost-to-cure damages for fencing that is greater than the length of the property taken. While it is possible that such extra fencing could be necessary, Mr. Matthews failed to provide any explanation for the extra fencing either

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[63] Plaintiffs argue that Mr. Sheppard's valuation opinions with respect to the large residential properties containing water features should be discarded because his opinions were formed under the assumption that size was largely immaterial. See, e.g., Tr. 1627 (Sheppard). Indeed, Mr. Sheppard found that claims 69, 77.C, and 79—comprising 104, 72, and 82 acres, respectively—each had the same land value of $10,000 per acre. However, he opined that claim 68—comprising 33 acres—had a higher land value of $12,500 per acre due to its size. Further, although Mr. Matthews stated that smaller properties are generally worth more per acre, he recognized that this pattern "flattens out" after approximately 30 acres. Tr. 546 (Matthews); PX 221 at 678. Thus, it appears that Mr. Sheppard did incorporate size into his analysis with respect to the claimant parcels containing water features to some extent.

[64] The R^2 value for the regression line on Mr. Matthews's graph of the per-acre price versus acreage for the large residential parcels is artificially low because the two outliers are included. See PX 221 at 678.

during trial or within his reports and addenda that were admitted into evidence. Where necessary, the amount of fencing shall be reduced to reflect the length of the property taken.

The second exception is Mr. Matthews's determination of access damages for claim 69.B. Unlike the extra fencing, he explained the inputs and calculations for his $44,000 figure, and the court finds no reason to question their accuracy. However, the court also finds that Mr. Matthews failed to demonstrate the necessity of constructing a gravel road connecting the buildings to Elks Club Road. It appears that access would still be available to Morgan Road even after construction of the trail. See PX 68.E.1; PX 112 at 16.

Mr. Matthews also made a computation error with respect to claim 57.A. Although he indicated that the size of the property taken was 36,125 square feet in accordance with the parties' stipulations, Jt. Stip. Ex. A at 8; PX 220 at 595, he erred in stating that the size of the property taken was equal to 0.280 acres, Tr. 556 (Matthews); PX 220 at 595. The correct acreage for the size of the property taken is 0.829.[65] The discrepancy resulted in Mr. Matthews understating the damages for area of the take.

In sum, the court rejects the per-acre values for large residential parcels suggested by Mr. Sheppard, and adopts the per-acre values suggested by Mr. Matthews. Further, the court adopts the cost-to-cure damages suggested by Mr. Matthews, except that (1) fencing in excess of the length of the property taken shall be reduced to reflect the length of the property taken, (2) access damages to build a gravel road for claim 69.B shall not be awarded, and (3) the acreage in the property taken for claim 57.A shall be corrected to 0.829.

E. Agricultural/Timber Parcels

The next category of parcels at issue is the agricultural/timber parcels.

Mr. Matthews found nine comparable sales of agricultural land, PX 221 at 678, and focused on comparable sales 1A, 2A, 3A, and 4A as the most relevant, see id. at 755-68. Indeed, Mr. Matthews used these four comparable sales in his sales grid to determine the per-acre value for claim 79, the Fulton property, which he selected as the representative agricultural/timber

[65] For claim 57.A, the land area was 3.220 acres exclusive of the area of the property taken. PX 220 at 595; DX 356 at 8. Therefore, claim 57.A is deemed to comprise 4.049 acres, including the trail corridor, in the "before" condition. Mr. Matthews incorrectly utilized 3.500 acres for the larger parcel, i.e., 3.220 acres exclusive of the property taken plus 0.280 acres for the (incorrect) size of the property taken. PX 220 at 595. For claim 57.B, the land area was 1.000 acres exclusive of the property taken. PX 220 at 596; DX 356 at 8. The size of the property taken for claim 57.B was stipulated to be 5,250 square feet, Jt. Stip. Ex. A at 8, which equals 0.121 acres. Therefore, claim 57.B is deemed to comprise 1.121 acres, including the trail corridor, in the "before" condition. For his part, Mr. Sheppard utilized the correct acreage for the property taken in appraising claims 57.A and 57.B when combined—41,375 square feet total (36,125 square feet for claim 57.A and 5,250 square feet for claim 57.B), i.e., 0.950 acres. Jt. Stip. Ex. A at 8; DX 356 at 8, 11-12.

parcel. Tr. 597-98 (Matthews); PX 220 at 325. As noted above, comparable sale 1A is a 21.13-acre unimproved agricultural parcel that sold for $73,900 on December 10, 2013. PX 220 at 358-60. Comparable sale 2A is a 30-acre unimproved agricultural parcel that sold for $93,000 on December 6, 2013. Id. at 361-63. These two parcels are located next to one another. Id. at 357. Compare id. at 358, with id. at 361. Comparable sale 3A is a 34.73-acre unimproved agricultural parcel that sold for $317,000 on October 28, 2013. Id. at 364-66. Comparable sale 4A is 21.36-acre agricultural parcel with a center road that sold for $85,000 on December 18, 2012. Id. at 367-69.

Claim 79, the Fulton property, is an agricultural tract encompassing 82.430 acres in the "before" condition and 79.690 acres in the "after" condition. Id. at 324-25, 329. Although the subject property is larger than any of the comparable sales, Mr. Matthews did not make size adjustments because the comparable sales and the subject property were all above the point at which "prices level off." Id. at 326. He also did not make time adjustments because all of the sales took place close to the effective appraisal date "during a slowly recovering market." Id.; accord Tr. 350 (Matthews) (noting that "[f]armland didn't really take a big hit" due to the recession, unlike residential properties). He applied location adjustments to comparable sales 3A and 4A due to those parcels being in areas with greater development potential. PX 220 at 326. He also adjusted comparable sale 4A to reflect the presence of a paved road on site. Id. After making these adjustments, he computed per-acre values of $3,251, $3,100, $6,389, and $3,382, respectively, for each of his comparable sales. Id. at 325. Ultimately, Mr. Matthews opined that the Fulton property was worth $4,000 per acre in both the "before" and "after" conditions, which was near the average for the comparable sales. Id. at 325, 331; Tr. 597-98 (Matthews).

In addition to damages for the area of the property taken, Mr. Matthews opined that access damages were appropriate. He observed that the trail corridor must be crossed to access the Fulton property from 2nd Avenue (County Highway 213). PX 220 at 332, 340-41, 345. Mr. Matthews noted the existence of a crossing "near the mid-point of the property," but explained that "there is no guarantee that there will be a legal crossing [there] after the take" because "[t]here are no signed documents after the date of valuation to indicate that there is a guaranteed access from 2nd Avenue over the trail." Id. at 332. He contended that property for which there was literally no access would experience a 100% loss in value because "nobody's going to buy it if you can't get there." Tr. 600-01 (Matthews). He then remarked that "there's always a demand by the adjacent property owner for good quality cropland," id. at 601, and that ten or more adjacent property owners is generally sufficient "to create a normal market demand resulting in no probable value loss," PX 220 at 332. He further explained:

> The greater the number of adjacent owners the lower the damage and the greater the residue value. A sliding scale is used as a reasonable way to measure loss with between 0 and 10 adjacent owners. So 1 adjacent owner results in a 90% loss, 2 result in 80% loss[,] and so on.

Id. Because the Fulton property had eight adjacent landowners, Mr. Matthews expected the remainder parcel to lose 20% of its value. Id.; Tr. 602 (Matthews). He also specified that, as of

the date of valuation, it was a "yes or no, 50-50" probability that access would actually be lost; in other words, the owner "may or may not be able to cross" the trail. Tr. 602 (Matthews). Thus, he multiplied the 20% loss based on eight adjacent property owners by the 50% probability of lost access to conclude that the Fulton property experienced a 10% diminution in value in the "after" condition "because of that potential loss in access." Id.; see also PX 220 at 331-32.

Mr. Matthews followed the same approach in applying access damages of 5% and 15%, respectively, to claims 76.ABCD (combined) and 100. PX 220 at 631 (claim 76.ABCD), 640 (claim 100). He also applied access damages of $40,000 for claim 53.AB (combined) and $20,000 for claim 59. Id. at 628 (claim 53.AB), 638 (claim 59). In addition, Mr. Matthews applied damages due to irregular parcel shapes in the amounts of $8,000 for claim 77.ABC (combined) and $2,000 for claim 96.B. Id. at 632 (claim 77.ABC), 636 (claim 96.B). He opined that special damages for security fencing were applicable to claims 53.AB, 61, 72, 76.ABCD, 77.ABC, 91.D, and 96.B.[66] Id. at 628-32, 635-36. Finally, he opined that no special damages of any type were applicable to claims 73, 81.A, 91.C, and 111.[67] Id. at 588, 633-34, 639.

Mr. Sheppard utilized comparable sales 25, 28, 29, and 32 for most of the agricultural/timber parcels.[68] Specifically, he utilized these particular comparable sales for parcels that he described as "large agricultural," "large agricultural/residential," and "agricultural/residential."[69] E.g., Tr. 1320 (Sheppard), 1323-24. One such example is his appraisal for claim 73, which Mr. Sheppard classified as "large agricultural." Id. at 1320. The pertinent data from the comparable sales used is summarized in the following table:

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[66] The amount of security fencing necessary is equal to the length of the property taken, with two exceptions: claims 76 and 77. For claim 76, where the property taken was 4,876 feet long and 50 feet wide, Jt. Stip. Ex. A at 10-11, Mr. Matthews opined that only 1,000 linear feet of security fencing at $5 per foot was appropriate, PX 220 at 631. For claim 77, the amount of security fencing necessary is equal to the entire length of the property taken on both sides, for a total of 5,824 linear feet—the sum of 860 feet for claim 77.B (which abuts the trail on one side only) and twice the amount of 2,482 feet for claim 77.C (which is bisected by the trail). Jt. Stip. Ex. A at 11; PX 220 at 632; DX 379 at 10; DX 380 at 13.

[67] Mr. Matthews acknowledged that claim 111 was improperly classified as agricultural/timber, and should have been designated as a residential parcel. Tr. 626-27 (Matthews); see PX 220 at 588.

[68] Mr. Sheppard used comparable sales 25, 28, 29, and 32 to appraise the land value for each of the following claims: 40, 56.AB (combined), 61, 62.AB (combined), 63.A, 72, 73, 75, 76.AB (combined), 76.CD (combined), 77.B, 80, 81.A, 85.ABC (combined), 95, 96.B, 100, and 103.AB (combined). DX 355 at 29; DX 416 at 194, 196.

[69] Mr. Sheppard used comparable sales 18, 25, and 31 to appraise claim 52.AB (combined), which he described as "large residential/agricultural." Tr. 1283-84 (Sheppard). He used comparable sales 27, 28, and 32 to appraise claim 72, which he described as "large agricultural/residential." Id. at 1318-19.

Comp	Acres	Sale Date	Sale Price	Price/Acre
25	27.094	January 15, 2013	$169,798	$6,267
28	88.100	August 5, 2010	$375,000	$4,257
29	33.973	November 15, 2013	$157,000	$4,621
32	33.458	December 6, 2013	$255,870	$7,647

DX 373 at 24. Comparable sale 25 is zoned as "Agricultural Residential." Id. at 15. Comparable sale 28, a multi-tract sale, is zoned partially as "Agricultural Residential" and partially as "Agricultural." Id. at 17-18. Comparable sales 29 and 32 are both zoned as "Agricultural," and each is "part of a multi-parcel assemblage." Id. at 19-21. In addition, comparable sale 29 previously sold on July 7, 2011, for $125,000 ($3,679 per acre). Id. at 20. Mr. Sheppard applied a time adjustment reflecting a straight-line 2% annual increase in property values to each comparable sale, and no other adjustments, to arrive at per-acre values of $6,341, $4,515, $4,600, and $7,602, respectively. Id. at 23-24. With that data, he concluded that the land value for claim 73 was $5,500 per acre as of the date of the taking. Id. His per-acre value conclusions for the other agricultural parcels appraised utilizing the same comparable sales are as follows:

Claim	Per-Acre Value
40	$5,500
56.AB	$7,000
61	$6,500
62.AB	$6,500
63.A	$6,500
72	$6,500
73	$5,500
75	$6,500
76.AB	$6,500
76.CD	$6,000
77.B	$6,500
80	$6,500
81.A	$5,000
85.ABC	$6,500
95	$6,500
96.B	$6,000
100	$5,000
103.AB	$5,500

DX 416.A at 1-2. Each of these values is greater than the per-acre value conclusions that Mr. Matthews champions.[70] Mr. Sheppard did not find any special benefits or damages to any of these claims. Id.; Tr. 1402 (Sheppard).

[70] Mr. Matthews appraised the land in claims 56.A and 56.B separately. His per-acre land values were $8,000 for claim 56.A and $6,000 for claim 56.B. Using his "after" condition

The court finds that both experts utilized sufficient comparable sales for the agricultural/timber parcels and that Mr. Matthews sufficiently supported his lack of time adjustments. Meanwhile, Mr. Sheppard applied the same straight-line time adjustments to his agricultural/timber comparable sales that he did to other parcel types. However, with respect to the agricultural/timber parcels, his comparable sales were close in time to the valuation date and thus the time adjustments did not significantly impact his valuation opinions.

The court further finds that Mr. Matthews performed a more robust analysis with respect to the agricultural/timber parcels than did Mr. Sheppard. Mr. Matthews considered the unique circumstances of each property and computed access and/or cost-to-cure damages only where appropriate. For instance, with respect to claim 76.ABCD (combined), Mr. Matthews determined that only 1,000 feet of fencing was necessary, rather than the full 4,876 feet representing the length of the property taken.[71] See Jt. Stip. Ex. A at 10-11. Regarding time adjustments, Mr. Matthews (unlike Mr. Sheppard) treated agricultural/timber properties different from small residential properties for specific reasons. Mr. Sheppard, meanwhile, went no further in his analysis by choosing per-acre values and then simply inserting those numbers, along with the sizes of each larger parcel and the property taken, into his spreadsheets. The only differences he recognized were the properties containing water features. See supra Section VI.D. In other words, his methodology with respect to the agricultural/timber parcels more closely resembles a one-size-fits-all approach. Further, because Mr. Sheppard improperly classified claims 91.C and 91.D as industrial parcels rather than agricultural/timber parcels, his valuation opinions for those claims are not useful.

In sum, the court adopts Mr. Matthews's valuation opinions in full with respect to the agricultural/timber parcels, and rejects those of Mr. Sheppard.

F. Commercial Parcels

The next category to be addressed is the commercial parcels: claims 1.B, 5, 43, 85.D, 92.A, 92.B, 92.C. Mr. Matthews provided full appraisal reports with respect to claims 1.B and 92.C, and provided one-page summary reports regarding claims 5, 43, 85.D, 92.A, and 92.B. Mr. Sheppard provided full appraisal reports for each claim.

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acreages of 9.750 and 15.710, respectively, the total land value for claim 56.AB (combined) per Mr. Matthews is $172,260—(1) $8,000 per acre × 9.750 acres plus (2) $6,000 per acre × 15.710 acres—before applying cost-to-cure damages. See PX 220 at 593-94. At $7,000 per acre (the value assigned by Mr. Sheppard), the combined 25.460 acres would have a total value of $178,220.

[71] Mr. Matthews did not explicitly show many of his computations in his summary sheets, but the court was able to discern his calculations from the record as a whole. Therefore, his computations are supported, even if not always presented in the most straightforward manner.

Claim 1.B contains retail and office buildings and an auto service garage, while claim 1.C contains a small industrial warehouse building and is used for parking. PX 220 at 35, 47; see infra Section VI.G (discussing industrial parcels). Both parcels are owned by George W. Hart, Jr. Jt. Stip. Ex. A at 1. The trail corridor cuts northwesterly between the two parcels along the southern edge of claim 1.B and the northern edge of claim 1.C. PX 220 at 29, 73, 81; DX 305 at 12; DX 306 at 11. Mr. Matthews appraised both claims in the same report, but addressed each separately. See generally PX 220 at 28-112.[72]

Mr. Matthews found a total of ten comparable sales of commercial land. See PX 221 at 706-10 (comparable sales C-7 through C-10), 791-803 (comparable sales C-1 through C-6). He grouped the comparable sales into "prime" and "secondary" subgroups to examine trends for each. Id. at 679-80. He utilized comparable sales C-1, C-2, C-4, and C-6 to appraise the land in claim 1.B. PX 220 at 54. He indicated that no time adjustments were needed because Newton Country sales data "indicated a stable market for commercial land with no measureable change during [the relevant] period." Id. at 51-52; accord Tr. 349 (Matthews). In addition, no adjustments for shape, topography, or highest and best use were necessary. PX 220 at 51-52. However, he applied size adjustments to "reflect the tendency of larger tracts to sell for less per acre than smaller tracts." Id.; accord Tr. 634-35 (Matthews). He also applied location adjustments to "all sales but C-1 due to their much inferior locations" plus other "appropriate adjustments such as corner premiums." PX 220 at 51-52. He explained that commercial land in Covington "is at least twice as valuable . . . than [that in] Mansfield because [of] the greater population numbers, greater traffic flows," and other factors. Tr. 632 (Matthews). He gave comparable sale C-1 the most weight because it was the most similar, and ultimately opined that the land value for claim 1.B was $365,000 per acre in both the "before" and "after" conditions. PX 220 at 51, 61. Mr. Matthews remarked that he made size adjustments in the "after" condition to reflect the small size, but determined that the land was still worth $365,000 per acre. Tr. 636-37 (Matthews). He noted that the subject parcel sold in July 2014 for $750,000, which reflected $474,405 for improvements and $275,595 for land ($382,770 per acre, which would have been roughly equivalent to $364,000 in August 2013). Id. at 633-34; PX 220 at 87. In addition, Mr. Matthews determined that a chain-link security fence costing $6,000 (i.e., 300 feet at $20 per linear foot) was necessary to alleviate potential theft, trespass, and vandalism, emphasizing that "[t]he loss in value without the fence is greater than the cost to fence." PX 220 at 36, 61; accord Tr. 637 (Matthews).

Mr. Matthews followed a similar approach for claim 92.C, Mr. Blackwell's grocery store in Mansfield. Tr. 651 (Matthews); PX 220 at 461. He used comparable sales C-1 through C-6, made no time or access adjustments, and made adjustments for size, location, and unique factors. Tr. 654 (Matthews); PX 220 at 465-67. He gave the most weight to comparable sales C-2 and C-6 because they most closely resembled the subject property, and concluded that the land was worth $125,000 per acre in the "before" condition. Tr. 655 (Matthews); PX 220 at 465-67. He also determined that, because the entire property as improved was worth approximately $100,000 on the date of the taking in the "before" condition, the improvements themselves were worth

[72] Mr. Matthews's appraisal for claims 1.B and 1.C is also reproduced in its entirety at PX 1.D.

$79,000 after subtracting out the land value. Tr. 655-56 (Matthews); PX 220 at 468-70. In the "after" condition, Mr. Matthews opined that the land was worth $128,000 per acre, reflecting a slight upward adjustment to reflect sensitivity to size. Tr. 657 (Matthews); PX 220 at 478-79.

The imposition of the trail easement also eliminated six improved parking spaces across the street from the grocery store building. PX 220 at 471-73. Mr. Matthews calculated that these six spaces contributed $1,700 towards the value of the improvements, and thus the improvements were worth $77,300 in the "after" condition before applying special damages.[73] Id. at 480, 533. He then explained that "the loss of parking hurts the value of the retail building" because such a loss can make a building "functionally obsolete." Tr. 656-57 (Matthews). He remarked that because a retail building the size of the subject grocery store would typically have twenty-four parking spaces, and the store only had fourteen spaces before the taking, "parking [was] already tight." PX 220 at 480. Thus, the loss of six of the fourteen available parking spaces would damage the building by the same percentage. Id.; Tr. 659 (Matthews). In other words, the $77,300 remaining improvements value was reduced by 43% (the ratio of six to fourteen, rounded to the nearest whole percent), for a decrease of $33,239. Tr. 659 (Matthews); PX 220 at 480. The total diminution in value for claim 92.C was therefore allocated among the land taken, improvements taken, and damages to the remaining improvements, and was partially offset by the increase in the per-acre value of the remaining land. PX 220 at 482.

Two of the other commercial properties—claims 92.A and 92.B—are also owned by Mr. Blackwell. Tr. 660-61 (Matthews). Mr. Matthews indicated that although claims 92.A and 92.B are located "in very close proximity" to claim 92.C, they were not appraised as one "larger parcel" because they are "separated physically and legally by another building in between the two." Id. For claim 92.A, which was unimproved, the land value was $90,000 per acre in the "before" condition and $100,000 per acre in the "after" condition. Id. at 662; PX 220 at 623. For claim 92.B, the land value was $150,000 in both the "before" and "after" conditions, and the improvements were worth $25,000 in the "before" condition. Tr. 663 (Matthews); PX 220 at 624. Similar to claim 92.C, Mr. Matthews found that $1,100 of the total improvements value was attributable to the parking taken, and that the remaining improvements experienced a 40% diminution in value based on the lost parking. Tr. 664 (Matthews). Mr. Matthews further indicated that the remaining commercial claims—5, 43, and 85.D—experienced neither residual damages nor any changes in per-acre values between the "before" and "after" conditions. Id. at 664-68; PX 220 at 620-22.

Mr. Sheppard completed separate written appraisal reports for each commercial property. He found a total of six comparable sales of commercial properties, one of which he discarded as an outlier, after "exclud[ing] all commercial sales [that] reflect considerabl[y] superior locations." DX 416 at 91-93. Sales with lower per-acre values reflected "less developed" and "more rural" locations. Id. at 92. His commercial comparable sale with the highest per-acre value is located "along a main corridor near the more urban area of Covington." Id. at 93.

[73] Mr. Matthews appears to have used "building" as shorthand to refer to the sum total of all improvements on the property, i.e., both improved parking and the constructed building.

From among his commercial comparable sales, Mr. Sheppard used sales 12, 13, and 15 to appraise claim 1.B. DX 305 at 23. He applied a time adjustment reflecting a straight-line 2% annual increase in property values to all three comparable sales in his sales grid and a 25% upward adjustment to comparable sale 12 to reflect its inferior location relative to that of Mr. Hart's commercial parcel. Id. Comparable sales 13 and 15 each had both inferior and superior aspects and thus "warrant[ed] no net adjustment." Id. at 22. Reconciling the data, Mr. Sheppard opined that Mr. Hart's commercial parcel had a land value of $105,000 per acre as of the date of the taking. Id. at 23.

Mr. Sheppard used comparable sales 10, 11, 12, and 13 to appraise claim 92.A. DX 399 at 23. He applied a time adjustment reflecting a straight-line 2% annual increase in property values to all four comparable sales in his sales grid, a 20% upward adjustment to comparable sales 11 and 12 to reflect their inferior locations, and a 20% downward adjustment to comparable sale 13 to reflect its superior location. Id. at 24. Reconciling the data, he opined that the land value was $85,000 per acre. Id. He found that no special benefits or damages applied. Id. at 4. He also used the same four comparable sales to appraise claims 85.D and 92.BC (combined). DX 390 at 22 (claim 85.D); DX 400 at 2, 24 (claim 92.BC). He made the same adjustments, similarly found that no special benefits or damages applied, and reached the same conclusion that the land value for claims 85.D and 92.BC was $85,000 per acre. DX 390 at 4, 22; DX 400 at 5, 25.

Mr. Sheppard used comparable sales 11, 12, and 13 to appraise claim 43. DX 342 at 26. Besides his time adjustment reflecting a straight-line 2% annual increase in property values, the only adjustment he applied was a downward adjustment to comparable sale 13 to reflect its superior location. Id. He also found that no special benefits or damages applied, and concluded that the land value was $65,000 per acre. Id. at 5, 26.

Finally, Mr. Sheppard used comparable sales 11, 12, and 14 to appraise claim 5, Mr. Morgan's commercial plaza. DX 308 at 21. For each comparable sale, he applied a time adjustment reflecting a straight-line 2% annual increase in property values and a 25% downward adjustment "in recognition [that they are not in a] floodplain, which is superior to the condition at the subject property." Id. at 21-22. In addition, he applied a 20% upward adjustment to comparable sale 14 due to its shape and a 25% upward adjustment based on "Conditions of Sale." Id. at 22. Although Mr. Sheppard did not allude to the "Conditions of Sale" adjustment within his explanation of sale-specific and property-specific adjustments, see id. at 21, he indicated, in his remarks regarding comparable sale 14, that the buyer "also purchased the adjacent properties" on both sides, including the store on the west-adjacent property, id. at 20.

As with the agricultural/timber parcels, the court finds that Mr. Matthews performed a more robust analysis of the individual commercial parcels than did Mr. Sheppard. For instance, Mr. Sheppard treated all of the commercial properties in Mansfield exactly the same despite his assertion that claim 92.A encompassed an area two-and-one-half times that of claim 85.D. Compare DX 390 at 4 (stating that claim 85.D included approximately 5,000 square feet of unencumbered land in the "after" condition), with DX 400 at 4 (stating that claim 92.A included approximately 12,500 square feet of unencumbered land in the "after" condition). Meanwhile,

Mr. Matthews found that each claim had a different land value based on its unique characteristics, including increases to 92.A and 92.C in the "after" condition based on a reduced size. Further, Mr. Matthews considered the impact of parking on Mr. Blackwell's grocery store in Mansfield as well as Mr. Hart's retail and office buildings in Covington. Mr. Sheppard only "conceptually" considered the impact of lost parking upon the value of improvements; the lost parking did not actually impact his valuation opinions. Tr. 1400-02 (Sheppard). He averred that Mr. Blackwell had other "existing parking spaces" and "additional land" that provided ample parking near his store, and suggested that the presence of the trail could even create "new business . . . on what would normally be a piece of property with no parking." Id. at 1401. Finally, Mr. Matthews's contention that 300 feet of chain-link security fencing is needed for claim 1.B appears reasonable. See PX 220 at 69, 83.

The court does not, however, accept Mr. Matthews's opinions in full. First, his rounding at intermediate steps skewed his computations of the difference in property values between the "before" and "after" conditions. For example, with respect to claim 1.B, Mr. Matthews rounded his $268,640 "before" value to $270,000, id. at 53, and his $262,800 "after" value (before cost-to-cure damages) to $260,000, id. at 61, and thus he showed a "net" difference of $10,000 instead of $5,840 due to intermediate rounding. In other words, although his process is solid, his presentation of that process is lacking.

Second, Mr. Matthews erred in his computation of damages due to the loss of parking with respect to claim 92.B. He computed damages to the improvements in claim 92.B as 40% of $25,000, or $10,000, of which he allocated $1,100 to the parking taken and the remaining $8,900 to damages to the remaining improvements, for an improvements value of $15,000 after the taking. Tr. 663-64 (Matthews); PX 220 at 624. Applied properly based on the approach that he followed for claim 92.C, the value of the improvements in the "after" condition should have been calculated as follows:

- Improvements in the remainder: $25,000 improvements value – $1,100 parking lost = $23,900
- Damages to the remaining improvements: 40% × $23,900 = $9,560
- Improvements value after the taking: $23,900 – $9,560 = $14,340

Thus, because he overstated the value of improvements in the "after" condition, Mr. Matthews's computation error understated the just compensation due to Mr. Blackwell with respect to claim 92.B.

In sum, the court rejects Mr. Sheppard's opinions of value with respect to the commercial parcels. The court adopts Mr. Matthews's opinions of value with respect to the commercial parcels, with the mathematical computation adjustments noted above.

G. Industrial Parcels

Next, the court considers the industrial parcels: claims 1.C, 91.AB (combined), 91.E, 101.A, 101.B, and 102. DX 416 at 192. As discussed above, Mr. Sheppard also (improperly) included claims 91.C and 91.D among the industrial parcels. See supra Section I.E.

Mr. Matthews found a total of seven comparable sales of industrial land in Newton County. PX 221 at 686, 769; see also id. at 696-705, 770-90. He determined that size adjustments were not necessary, nor were adjustments appropriate for shape, topography, and tree cover, because those variables did not appear to impact pricing. Id. at 686. He found that a time adjustment reflecting a straight-line 2% annual increase in property values was appropriate for industrial parcels because industrial real estate "did not suffer the steep declines in value as the [housing market] did since there was no pre-recession bubble." Id.; accord Tr. 639-40 (Matthews). He also found that a suburban location was inferior to land located within Covington city limits, and that properties further removed from the city center would require greater adjustments. PX 220 at 686. His seven comparable sales ranged in size from 1.0 to 8.5 acres and had unadjusted sale prices of $40,000 to $60,000 per acre. Id.

Claim 1.C, located within Covington, includes an occupied warehouse and a paved area for parking. Id. at 47; DX 306 at 12. It was zoned "Corridor Mixed Use District, for various commercial uses including retail, goods and services, offices, [and] residences" as of the date of the taking. DX 306 at 12. Mr. Matthews utilized two commercial comparable sales, C-2 and C-10, and three industrial comparable sales, I-3, I-5, and I-6, to appraise claim 1.C. PX 220 at 54. He explained that some commercial land can be used for light industrial purposes, such as with claim 1.C itself, and thus it was appropriate to consider comparable sales of both commercial and industrial land. Tr. 639 (Matthews). Mr. Matthews applied a time adjustment reflecting a straight-line 2% annual increase in property values to all five comparable sales, size adjustments to all comparable sales due to the size of the subject property, location adjustments to C-2 and I-6 due to their locations outside of Covington, and conditions adjustments to each of the commercial comparable sales. PX 220 at 54; see also Tr. 639-42 (Matthews) (discussing the adjustments). He gave comparable sale C-10 the most weight due to its similarity in size and location to the subject parcel. PX 220 at 54. Mr. Matthews then determined that the land value for claim 1.C was $95,000 per acre in both the "before" and "after" conditions. Id. at 54, 62. In addition, Mr. Matthews determined that a chain-link security fence costing $2,000 (i.e., 100 feet at $20 per linear foot) was necessary to alleviate potential theft, trespass, and vandalism, and emphasized that "[t]he loss in value without the fence is greater than the cost to fence." Id. at 61-62; accord Tr. 642-43 (Matthews).

To appraise claim 91.AB, the representative industrial parcel, Mr. Matthews used all seven of his industrial comparable sales. PX 220 at 393. He applied a time adjustment reflecting a straight-line 2% annual increase in property values plus a location adjustment to each sale, and no other adjustments. Id. at 393-94. He then determined that the land value was $30,000 per acre in both the "before" and "after" conditions. Id. at 395, 400. He also explained that the trail corridor "is located through the middle of the property and separates the manufacturing and parking," thus creating a security issue that could be addressed by erecting a chain-link security

fence along the manufacturing portion. Id. at 400; Tr. 649 (Matthews). He remarked that an alternative fencing option would be a "solid wood board" (i.e., privacy) fence, and that the costs of the two different types of fencing are "very similar." PX 220 at 399. He then calculated that 497 feet of fencing at $23 per linear foot would cost $11,431, which he rounded to $11,000. Id.; Tr. 649 (Matthews).

Mr. Matthews then utilized claim 91.AB as a model for the remaining industrial parcels: claims 91.E, 101.A, 101.B, and 102. PX 220 at 642-45. He opined that the land value was $7,500 per acre for claims 91.E, 101.A, and 101.B, and $10,000 per acre for claim 102. Id. In addition, Mr. Matthews computed access damages of 20% for claim 91.E,[74] explaining that the trail corridor bisects the property and landlocks approximately ten acres on the south side of the corridor with two adjacent landowners. Id. at 642; see also PX 91.C at 9 (Newton County parcel map of claim 91.E); PX 112 at 25 (Google Earth map of claim 91.E and surrounding parcels); DX 398 at 10 (survey with respect to claim 91.E), 12 (Google Earth map of claim 91.E).

Mr. Sheppard found a total of nine potential comparable sales of industrial land in and around Newton County, but discarded three of them as outliers. DX 416 at 72. Of the remaining six comparable sales, four are located in Newton County and two are in Rockdale County. Id. at 69-72. He explained that he expanded his search for comparable sales into Rockdale County because "there were too few sales to cover the breadth of industrial properties that we needed to appraise." Tr. 1041 (Sheppard). These six comparable sales of industrial land ranged in size from 0.970 to 8.580 acres and unadjusted sale prices of $26,224 to $50,515 per acre. DX 416 at 70-72.

Mr. Sheppard used comparable sales 4, 5, and 9 to appraise claim 1.C. Id. at 192; see also DX 306 at 21-22 (discussing the adjustments made to comparable sales for Mr. Sheppard's appraisal of claim 1.C). He applied a time adjustment reflecting a straight-line 2% annual increase in property values to each comparable sale. DX 306 at 21-22. He also applied a downward adjustment to each comparable to account for their larger sizes, explaining that the larger sizes "would allow more outside storage and parking, relative to the smaller subject property." Id. Mr. Sheppard made no further adjustments to his comparable sales, and determined that the land was worth $45,000 per acre. Id. He also found that no special benefits or damages applied in the "after" condition. Id. at 23; Tr. 1402 (Sheppard).

Mr. Sheppard utilized comparable sales 1, 6, and 9 to appraise the remaining industrial parcels: claims 91.AB, 91.CD (combined), 91.E, 101.AB (combined), and 102. DX 416 at 192; see also DX 396 at 22 (claim 91.AB); DX 397 at 23 (claim 91.CD); DX 398 at 22 (claim 91.E); DX 405 at 23 (claim 101.AB); DX 406 at 21 (claim 102). He followed the same process, used the same adjustments, and came to the same value conclusions for each of these claims. Specifically, he applied a time adjustment reflecting a straight-line 2% annual increase in

[74] In his appraisal report, Mr. Matthews indicates that the access damages with two adjacent landowners was 50%. PX 220 at 642. However, his numbers appear to reflect that "50%" was a typo, and that 20% was actually used in computations (along with rounding at intermediate steps). See id. Therefore, the court will refer to the access damages as 20%.

property values to each of the three comparable sales and a 25% downward adjustment to comparable sale 9 to reflect its superior location relative to the subject property. E.g., DX 396 at 22-23. He did not apply any other adjustments, nor did he find that any special benefits or damages applied. Id. at 4, 22-23. After adjustments, his per-acre values for comparable sales 1, 6, and 9 were $28,158, $15,843, and $29,894, respectively. He then concluded that the land value was $20,000 per acre for claim 91.AB and $17,500 per acre for claims 91.CD, 91.E, 101.AB, and 102. DX 416.A at 2; see also DX 396 at 23 (sales adjustment grid for claim 91.AB); DX 397 at 24 (sales adjustment grid for claim 91.CD); DX 398 at 23 (sales adjustment grid for claim 91.E); DX 405 at 24 (sales adjustment grid for claim 101.AB); DX 406 at 22 (sales adjustment grid for claim 102).

Mr. Sheppard's value conclusions for the industrial parcels are not reliable, and therefore his testimony with respect to those parcels is not credible, because his comparable sales are insufficient.[75,76] Comparable sale 9, for instance, has an elongated shape and limited road access. DX 416 at 72, 90. Both of these conditions potentially call for adjustments, but none were applied, nor did Mr. Sheppard explain why such adjustments would have been inappropriate. Comparable sale 9 also lies along an abandoned rail corridor and was sold to an individual—"the adjoining property owner that owns the parcels on either side of the line"—who had been attempting to buy the land for twenty-five years because he was already using the site for part of a recycling operation. Id. at 72, 89. Therefore, the buyer's assertion that the purchase price "was based on prevailing prices for industrial land in the area," id. at 89, is somewhat suspect because the buyer appears to not have been a typical arms-length purchaser. Comparable sale 6 is even more problematic. Mr. Sheppard remarked that it was an "outlier[] due to the conditions of sale . . . , the larger size, and the amount of floodplain on site." Id. at 71. Despite discarding it as an outlier, Mr. Sheppard utilized comparable sale 6 to appraise all of the industrial parcels except claim 1.C. Making matters worse, its adjusted value appeared to weigh most heavily in his value conclusions.

The court finds that Mr. Matthews's comparable sales for the industrial parcels are reliable and adopts his per-acre value conclusions. His appraisal for claim 1.C properly included both commercial and industrial comparable sales due to the nature of the subject property. Because the use of both commercial and industrial comparable sales was appropriate, Mr. Matthews properly applied adjustments to his comparable sales for claim 1.C, noting that his assertion that no adjustments to his industrial comparable sales did not apply to claim 1.C because he also used commercial comparable sales to appraise that property. With respect to claim 91.AB, however, Mr. Matthews overstated the cost to cure for fencing. He averred that 497 feet of chain-link security fencing, or privacy fencing in the alternative, was necessary and

[75] In addition, Mr. Sheppard's incorrect classification of claim 91.CD (combined) as industrial, see supra Section I.E, requires the court to give no weight to his value conclusions for that parcel.

[76] Both experts applied a time adjustment reflecting a straight-line 2% annual increase in property values to their comparable sales for the industrial parcels. Due to their agreement in this regard, the court accepts that portion of their conclusions as undisputed.

would cost $23 per linear foot. Since he used $20 per linear foot as the cost for chain-link security fencing for other parcels, the cost to install fencing must be reduced to this lower amount. The higher cost for privacy fencing is not appropriate because only the lowest cost to cure that will actually cure the damage can be awarded; Mr. Matthews noted only that privacy fencing was an alternative, not a necessity. However, in asserting that a chain-link security fence along the manufacturing portion of the property was necessary, he also appears to have slightly understated the amount of fencing necessary. The stipulated lengths of the property taken are 500 feet for claim 91.A (the manufacturing portion) and 272 feet for claim 91.B (the parking portion). Jt. Stip. Ex. A at 13; PX 220 at 405-06. Therefore, the court finds that 500 feet is an appropriate figure to utilize in computing cost-to-cure damages for claim 91.AB.

In sum, the court rejects Mr. Sheppard's opinions of value for the industrial parcels. The court adopts the value opinions of Mr. Matthews, except that the cost-to-cure damages for claim 91.AB shall be computed using 500 feet of chain-link security fencing at $20 per linear foot.

H. Temporarily Taken Parcels

Finally, the court turns to the temporarily taken parcels. Pursuant to the Yellow Book, just compensation for a temporary taking is "measured by the market rental value for the term of the easement." Yellow Book 171. Based on the court's prior rulings, the following parcels were subject to a temporary taking from August 19, 2013, to November 18, 2016: claims 91.E, 101.A, 101.B, 102, 103.A, 103.B, 104, 105, 106, 107, and 109. See PX 221.A at 10-11.

A twelfth parcel, claim 100, was potentially subject to a both a permanent and temporary taking because it was unclear where the eastern terminus of the portion of the rail line covered by the amended NITU was located in reference to the property line separating claim 100 from claims 91.E and 101.A. See PX 112 at 25; DX 404 at 15. However, claim 100 was treated by both experts as being subject only to a permanent taking. Jt. Stip. Ex. A at 14; PX 220 at 640; DX 404 at 4. Accordingly, the court finds that as a matter of law, claim 100 is subject to a perpetual recreational trail use easement along the entire length of the property taken. In other words, the location of the eastern terminus of the portion of the rail line covered by the amended NITU coincides with Margaret A. Harker's property line.

Mr. Matthews explained that the "rental value of the property is paid for the term of the easement." PX 220 at 16. His approach was to "estimate the value of the property taken and apply a rate of return to estimate the rental value." Id.; accord Tr. 669 (Matthews). After determining the annual rental value, he "then discount[ed] the net rent [for the entire term of the easement] to present value based on typical and appropriate discount rates." PX 220 at 16; accord Tr. 669 (Matthews). Mr. Matthews relied on Realty Rates, which he described as a national database "which provides reliable rates of return or capitalization rates for land uses and discount rates for various land uses," to determine the annual rental value and appropriate discount rate. PX 220 at 16. He explained that the capitalization rate is the expected annual income of the property expressed as a percentage of the property value, and that the discount rate, which is the sum of the capitalization rate and the expected inflation rate, represents the necessary return on investment to keep pace with inflation. Tr. 694-95 (Matthews). He included

Realty Rates data for land leases for the third quarter of 2013 in his addenda. PX 221 at 899. The average capitalization rate, i.e., the "rent factor," for all property types for July through September 2013 was 7.27%, which he rounded down to 7%. Id.; PX 220 at 16; Tr. 674 (Matthews). Mr. Matthews then multiplied the "permanent" diminution in value by 7% to determine the annual rental value. PX 220 at 16; Tr. 674 (Matthews). The average discount rate for all property types for July through September 2013 was 8.19%, which he rounded down to 8%. PX 220 at 16; PX 221 at 899. He used the discount rate of 8% per year and a taking of 3.25 years to compute a discount factor of 2.53 using an HP 12C financial calculator. PX 220 at 16. His final step was to multiply the annual rental value by a discount factor of 2.53 to determine the net present value (as of the date of the taking) for the hypothetical stream of rental payments. Id.; Tr. 674 (Matthews). With respect to claim 91.E, for example, Mr. Matthews determined that the diminution in value for a permanent taking would be $58,500, and then determined the compensation owed for a temporary taking as follows:

> The rent is estimated based on a 7% rate of return which is then discounted 3.25 years at 8%/year based on "Realty Rates" research. The factor is 2.53. So, $58,500 × 7% rent × 2.53 = $10,400 compensation.

PX 220 at 642.

Mr. Sheppard similarly estimated the just compensation that would be due under a permanent taking, calculated an annual rental value, and then discounted the annual rent for the term of the easement to the present value as of the date of the taking. DX 416 at 212. Mr. Sheppard utilized Realty Rates land lease data for the third quarter of 2016. Id. He observed that "[n]one of the subject properties, save the few commercial- and industrial-oriented properties within the pool of [temporarily taken] properties requiring appraisal, correlate to the list." Id. He then determined that 8% was an appropriate discount rate, noting that the average discount rate for all property types was 8.13%. Id. He used his 8% discount rate and his estimate of a straight-line 2% annual increase in property values that he applied as time adjustments to comparable sales to opine that the appropriate annual rent factor is 6%. Id. Mr. Sheppard indicated that the present value of the hypothetical stream of annual rent payments also should reflect an appreciation rate and the length of time for the temporary taking. Id. He then input an appreciation rate of 2% to represent his estimate of the annual increase in property values, 3.25 years, and the annual rent payment amount into the present value function in a Microsoft Excel spreadsheet ("Excel") to compute the compensation due for the term of the temporary taking. Id.

Both experts therefore followed the correct steps to determine the just compensation owed for a temporary taking: compute the value of a hypothetical permanent taking, multiply that by a rent factor to determine the annual rent, and then discount the stream of annual rent payments to the present value as of the date of the taking. The property values themselves have already been addressed within the appropriate categories above; those discussions need not be repeated herein. The court need only address the rent factors and present value discount factors used by each expert.

As an initial matter, the court finds that it was reasonable for the experts to rely on Realty Rates data; indeed, both experts did so. Mr. Matthews used a rent factor based on the average capitalization rate for all property types, which he then rounded, for the time frame that included the date of the taking (August 19, 2013). He correctly used the time frame corresponding to the effective appraisal date because the constructive rental agreement for the term of the temporary taking would have been entered into at the beginning of that term, not the end (or some point in between). He also correctly used the capitalization rate to determine the annual rental value because the capitalization rate measures the expected income—which, for land leases, is rent. Further, he correctly based his rent factor for the residential and agricultural/timber parcels on the average capitalization rate for all property types because there was not an appropriate category for those parcels contained within the list. However, there is a separate "Industrial" category contained within the list, PX 221 at 899, and four of the temporary taking claims—91.E, 101.A, 101.B, and 102—are industrial parcels. Mr. Matthews should have applied the average capitalization rate for industrial properties to the industrial parcels. In addition, his rounding of the capitalization rate, which he then properly used as the rent factor, skewed his final results. He should not have rounded the capitalization rate.

Mr. Sheppard used a rent factor based on the average discount rate for all property types, which he then rounded, for the time frame from July through September 2016. He should have used the Realty Rates data from the third quarter of 2013 to coincide with the effective date of valuation, whereas the third quarter of 2016 is close to (but does not include) the end of the term of the temporary taking. In addition, like Mr. Matthews, Mr. Sheppard's results are somewhat skewed due to rounding his rent factor and not using the industrial rate for the industrial parcels. More fundamentally, Mr. Sheppard should have used the Realty Rates capitalization rate to determine a rent factor rather than combining the discount rate with his own appreciation (i.e., inflation) rate. The discount rate is relevant with respect to the timing of payment, whereas the capitalization rate is relevant with respect to the amount of the payment (here, the annual rental value) in the first instance. In other words, an appreciation or discount rate is used to determine the present value of a stream of payments, whereas the capitalization rate is the appropriate benchmark to use in determining the amount of those payments. Mr. Sheppard's rent factor is therefore unreliable.

After determining the annual rental amount, the present value of the hypothetical stream of those payments must be determined, and is calculated using two numbers: the discount rate and the length of time for which payments will be made. As Mr. Sheppard explained, "[t]he term of the temporary easement equates to how long use of the corridor was curtailed," and there were 1,187 days between August 19, 2013, and November 18, 2016. DX 416 at 212. Both experts thus correctly used 3.25 years as the length of time.[77] E.g., PX 220 at 643; DX 405 at 4.

[77] Mr. Sheppard incorrectly referred to the 1,187 days as "3.64959 years" in his addendum, DX 416 at 212, but correctly used 3.25 years in his individual property appraisals, e.g., DX 405 at 4.

The discount rate that should be applied to reduce the hypothetical stream of payments to a lump-sum present value as of the August 19, 2013 date of taking is the discount rate for the relevant property type. The discount rate varies based on the type of investment because investors expect different types of investments to grow at different rates. The discount rate is separate from the interest rate necessary to make plaintiffs indifferent to the timing of that lump-sum payment (which the court previously determined is the Moody's rate). In other words, the discount rate is used to collapse a future stream payments into cash on one specific date, and the interest rate is then used to compensate plaintiffs for the delay in receiving that payment.[78]

Mr. Matthews used the average discount rate for all property types in deriving his present value discount factor, but should have used the separate industrial discount rate for the industrial properties. Moreover, although it is unclear, his present value discount factor of 2.53 appears to be based on a discount rate of 9% for a three-year period, rather than 3.25 years at 8% as he explained. Mr. Sheppard's use of Excel rather than a present value discount factor is easy to replicate.[79] However, Mr. Sheppard's present value analysis is flawed because he utilized his appreciation rate instead of the appropriate discount rate for each property type.

In addition, both experts' calculations appear to reflect annual rental payments paid in arrears, i.e., at the end of each year, rather than in advance, i.e., at the beginning of each year. Whether the hypothetical rent payments are to be paid in arrears or in advance impacts the present value calculations because payments in advance have a higher present value. No evidence was presented during trial by either party regarding whether the hypothetical rent payments should be treated as being paid in arrears or in advance. It is plaintiffs' burden to establish that they are entitled to the higher amount, and they have failed to meet this burden. Further, under Georgia common law, it is well settled that "where the contract of rental does not specify the day upon which rent is due, rent is not due until the end of the term." Hinton v. Jackson, 50 S.E.2d 254, 256 (Ga. Ct. App. 1948). That presumption can be rebutted by a specific contractual provision to the contrary, "necessary implication from the acts and circumstances of the parties," or by "custom and usage in the community," id., but there is no such evidence before the court.

In sum, the court finds that the appropriate rent factors for the temporarily taken parcels are 6.32% for the industrial properties and 7.27% for the remaining properties, which reflect the Realty Rates capitalization rates in effect on the date of the taking. See PX 221 at 899. (As described above, the annual rent amount for each parcel is calculated by multiplying the total diminution in value by the applicable rent factor.) The court also finds that the proper discount rates to be used in computing the net present values are 7.32% for the industrial properties and 8.19% for the remaining properties, which reflect the Realty Rates discount rates in effect on the date of the taking. See id. Finally, the court finds that the net present values should be

[78] Once converted into cash, the type of investment becomes irrelevant. See Hardy, 138 Fed. Cl. at 349, 353.

[79] It is well understood that replication is an indicia of reliability. Cf., e.g., Daubert v. Merrell Dow Pharm., 509 U.S. 579, 593 (1993).

calculated using Excel's present value function under the assumption that the hypothetical annual rent payments are paid in arrears for 3.25 years. In other words, the annual rent amounts should be multiplied by a present value discount factor of 2.802 for the industrial properties and 2.756 for the remaining properties.[80]

VII. CONCLUSION

The court has considered all of the parties' arguments. To the extent not discussed herein, they are unpersuasive, without merit, or unnecessary for resolving the issues currently before the court.

Plaintiffs have no remaining valuable property rights in the land burdened by the perpetual trail use easement. The presence of the trail is a general benefit to the community as a whole. The presence of the trail also results in special damages to several remainder parcels due to the loss of privacy and security. Plaintiffs are therefore entitled to just compensation based on the diminution in value between the "before" and "after" conditions as discussed above, plus proximity damages, access damages, and/or cost-to-cure damages where appropriate. Finally, plaintiffs are entitled to delay damages at the Moody's rate, compounded quarterly, from August 19, 2013, through the date of payment.

Because the court did not adopt either party's position on damages in its entirety, it cannot enter judgment until plaintiffs' damages are recalculated in accordance with the court's findings and conclusions. To facilitate the prompt entry of judgment, the court shall use the following procedure:

- By **no later than Monday, January 14, 2019**, the parties shall file a joint status report proposing the amount of judgment that should be entered in this case. The parties shall specify how much of the proposed amount is to compensate for the diminution in value of each parcel and how much of the proposed amount is attributable to delay damages, assuming that the judgment will be paid on Tuesday, February 19, 2019.[81] In addition, the parties shall indicate the specific

[80] The present value of a stream of $1.00 annual payments paid in arrears for 3.25 years at 7.32% is $2.802, which is calculated in Excel using the formula =PV(7.32%, 3.25, -1.00, 0, 0). The formula can be truncated to =PV(7.32%, 3.25, -1.00) because the last two inputs are zero. If paid in advance, the present value becomes $3.008, i.e., =PV(7.32%, 3.25, -1.00, 0, 1). The present value of a stream of $1.00 annual payments paid in arrears for 3.25 years at 8.19% is $2.756, i.e., =PV(8.19%, 3.25, -1.00, 0, 0) or =PV(8.19%, 3.25, -1.00). If paid in advance, the present value becomes $2.982, i.e., =PV(8.19%, 3.25, -1.00, 0, 1).

[81] Interest to compensate plaintiffs for delay damages runs from the August 19, 2013 date of taking and is to be compounded quarterly. Hardy, 138 Fed. Cl. at 357. Therefore, as of February 19, 2019, interest will have compounded twenty-two times.

numerical interest rate that applies for future delay damages, if any, beyond February 19, 2019, which shall continue to be compounded quarterly (i.e., every three months thereafter). Agreeing upon an amount of judgment does not signify agreement with the court's findings and conclusions, waive any arguments or rights the parties might otherwise have, or impact either party's right to an appeal.

- If the parties disagree as to the amount of any component of the proposed judgment, each party shall, in the joint status report, indicate its proposed amounts and explain why its proposed amounts most accurately conform to the court's findings and conclusions. Then, by **no later than Monday, January 28, 2019**, each party shall file a response addressing why the other party's proposed amount does not most accurately conform to the court's findings and conclusions.

- The parties shall not use this process to reargue or seek reconsideration of any of the issues resolved by the court's findings and conclusions.

IT IS SO ORDERED.

s/ Margaret M. Sweeney
MARGARET M. SWEENEY
Chief Judge