

Scarsdale Valuation Trends
2013 Final - 2017 Tentative

This memo describes overall impacts of the Tyler and Ryan revals and other activity over the period from the 2013 Final Roll to the 2017 Tentative Roll. This is not deeply analytical, and there are not that many surprises. The revals may have been controversial, but I do not think these observations of the revals are controversial.

Section 1 describes how I have broken down the overall Scarsdale population to isolate the stable group of residential properties that can then be used for further analysis. Section 2 then observes this core group, based on further breakdowns such as neighborhood. Section 1 also explains the graphical format that is used extensively in Section 2.

Section 1

There have been eight official rolls beginning with 2013 Final Roll and ending with the 2017 Tentative Roll. In addition to these two rolls, this count of eight rolls includes the tentative and final rolls in each of 2014, 2015 and 2016.

There are 6,011 distinct properties (officially, “parcels”) that appear on at least one on these eight rolls. The property population changes over time. For example, a property that existed on the 2013 Final Roll may have been subdivided and thus replaced by two new properties starting with a later roll. There are also mergers and other rearrangements of properties.

For analytical purposes, I have segregated these 6,011 properties into four categories.

- **Stable Residences.** (4,994 properties.) These are properties that appear on all eight rolls as single family residences or in a few cases as two family residences. This category also excludes (i) properties with an actual or effective year built of 2014 or later, (ii) properties that had improvements that affected the assessment over this time period, (iii) properties that are split with another city or town, such as White Plains or Eastchester and (iv) tax exempt properties. The purpose of these limitations and exclusions is to establish a population for which valuation changes can be attributed to the revals and the grievance activity, and not to other factors.
- **Stable Land.** (162 properties.) These are properties that appear on all eight rolls as vacant residential land. This category excludes split properties and tax exempt properties.
- **Other Residences and Land.** (523 properties.) This category includes residences and vacant land that appeared or disappeared over the time frame due to subdivisions and other changes as discussed above. It also includes properties that switched from land to residence and/or *vice versa*. So, this includes teardowns and new construction. It includes improved properties that were excluded from the first category. There is much more assessment activity affecting this population than just revals and grievances, which makes it interesting in its own right.

- **Everything Else.** (332 properties.) Commercial, religious, cell towers, schools, government, etc.

I also looked at values over five distinct phases.

- **Initial.** The most recent 2013 values. This can include 2013 values that are more recent than what appear on the 2013 Final, because more recent data sources (such as 2014 FOILs) may reflect grievance resolutions that occurred after release of the 2013 Final Roll.
- **Tyler Reval.** The 2014 Tentative Roll, reflecting Tyler’s work before grievances.
- **Post-Tyler.** The most recent values for the 2015 Roll. Again, as explained with respect to the Initial phase, this can include 2015 values that are more recent than what appear on the 2015 Final Roll.
- **Ryan Reval.** The 2016 Tentative Roll, reflecting Ryan’s work before grievances.
- **Post-Ryan.** The values that appear on the 2017 Tentative Roll, reflecting 2016 grievances that were resolved prior to the completion of the 2017 Tentative Roll.

The basic counts and amounts are presented in Table 1.

Table 1 Aggregates by Phase (\$ millions except for Property Count)						
Population Category	Property					
	Count	Initial	Tyler Reval	Post-Tyler	Ryan Reval	Post-Ryan
Stable Residences	4,994	7,159	8,037	7,868	8,734	8,445
Stable Land	162	38	78	74	77	76
Other Residences and Land	523	555	688	752	949	1,013
All Other	332	1,183	1,278	1,305	1,491	1,440
Total	6,011	8,935	10,081	9,998	11,250	10,974

All values are based on the official Full Market Value (FMV). The FMV equals the Assessed Value divided by the Equalization Rate, so the FMV exceeds the Assessed Value (AV) where the Equalization Rate is below 100%. This is the case for the Initial, Ryan Reval and Post-Ryan phases.

It should also be noted that grievance activity is not yet final, even from the Tyler years, so these figures could change in the future.

Although I will spend much more time, below, discussing the trends, I will at least point out here that the Tyler Reval resulted in an \$8,037 million valuation for the Stable Residences, reduced based on grievances and other activity to \$7,868 million. The Ryan Reval resulted in an \$8,734 million valuation for this population, reduced to \$8,445 million.

A problem with looking at the aggregates is that they are affected by changes to the Equalization Rate. The Equalization Rate impact can be eliminated by showing each population’s share of the total amount for each phase, as presented in Table 2.

Table 2						
Share by Phase						
Population Category	Property	Initial	Tyler Reval	Post-Tyler	Ryan Reval	Post-Ryan
	Count					
Stable Residences	4,994	0.8012	0.7973	0.7869	0.7763	0.7696
Stable Land	162	0.0043	0.0077	0.0074	0.0069	0.0069
Other Residences and Land	523	0.0621	0.0683	0.0752	0.0843	0.0923
All Other	332	0.1324	0.1267	0.1305	0.1325	0.1312
Total	6,011	1.0000	1.0000	1.0000	1.0000	1.0000

This shows, more clearly than in Table 1, that the Stable Residences had constituted 80.12% of total value at the Initial point, but that share has now declined to 76.96%. It is also interesting to see that the Other Residences and Land went from 6.21% to 9.23%, consistent with the definition that this population contains properties with improvements and new construction.

In Table 3, for each population, the Initial share is normalized at 1.0000, and the later values are calculated by dividing the Table 2 share by the Table 2 Initial share. In this way, Table 3 shows how the share for each population has changed relative to the Initial share.

Table 3						
Share Relative to Initial Share						
Population Category	Property	Initial	Tyler Reval	Post-Tyler	Ryan Reval	Post-Ryan
	Count					
Stable Residences	4,994	1.0000	0.9951	0.9822	0.9689	0.9605
Stable Land	162	1.0000	1.8217	1.7509	1.6166	1.6196
Other Residences and Land	523	1.0000	1.0994	1.2103	1.3578	1.4862
All Other	332	1.0000	0.9569	0.9853	1.0005	0.9910
Total	6,011	1.0000	1.0000	1.0000	1.0000	1.0000

As an example, for the Stable Residences, the Post-Ryan value of 0.9605 is calculated by dividing 0.7696 by 0.8012. This shows directly that this population's share of total Scarsdale valuation in the 2017 Tentative Roll is 96.05% of what it had been in 2013.

It is interesting to see that the share for the small Stable Land population is now 161.96% of what it had been in 2013 and the share for the Other Residences and Land, with the improvements and new construction, is 148.62% of what it had been.

Having used Tables 1, 2 and 3 to present different metrics for each population, I am using Chart 1 as the format to bring all of this information together.



In Chart 1,

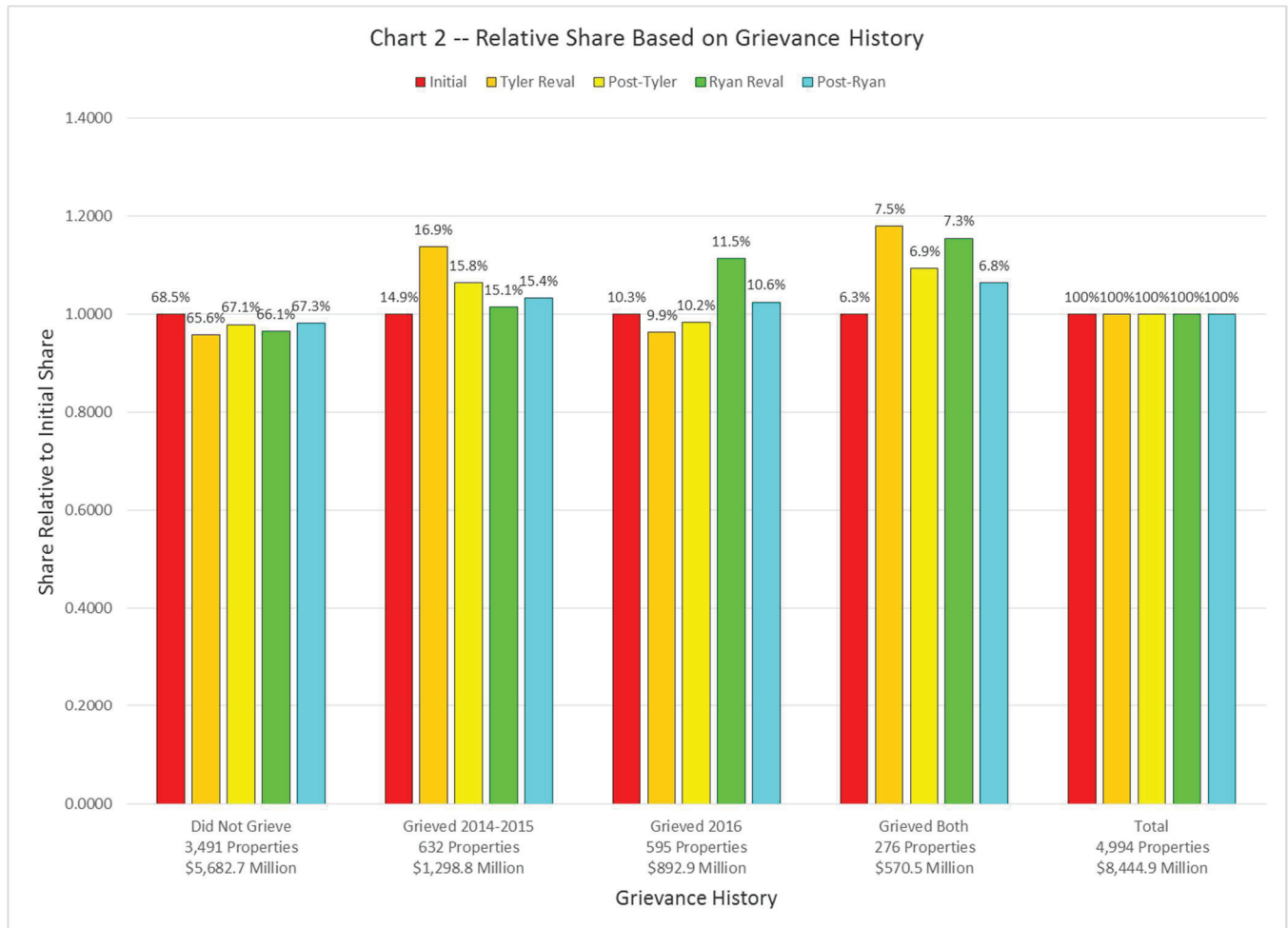
- The five colors for each population are the five phases, as explained in the Legend at the top.
- The descriptions of the populations along the horizontal axis show the Property Count and the Table 1 post-Ryan FMV (*i.e.*, the FMV from the 2017 Tentative Roll).
- The vertical axis shows the Table 3 share relative to Initial share. Thus, all the red columns for the Initial phase are at 1.0000.
- The actual Table 2 share for each population/phase is shown as a percentage at the top of each column.

Substantively, we see the steady decline in the Stable Residences share of total assessed value. The Stable Land shows dramatically how Tyler really increased land values, with subsequent grievance and Ryan activity somewhat reducing it. The Other Residences and Land shows a steady increase, consistent with improvements and new construction as explained above.

Section 2

This section shows a succession of charts, each based on breaking the Stable Residences population into different categories.

Thus, Chart 2 breaks the Stable Residences population into four categories, based on whether the taxpayer grieved in 2014-2015 and/or 2016.



This follows the Chart 1 format with one modification – each category’s share is based on its share of the Stable Residences population, not its share of the full Scarsdale population. I believe this is the cleanest way to isolate the true effects of the revals and grievances, shielding them from other effects. Colloquially, if you have had a single family residence property since 2013, with no improvements or new construction, how have revals and grievances impacted your share of the valuation relative to others similarly situated?

Bear in mind, of course, that all of these observations are based on the aggregate/average for each category. Individual properties may have had different experience.

Thus, we can say the following

- The Did Not Grieve category went down slightly under Tyler (orange column) and then bumped up to pay for others' successful grievances (yellow). The same pattern repeated with Ryan (green) and the post-Ryan grievances (blue).
- Not surprisingly, those who grieved Tyler but not Ryan, had a big Tyler increase (orange), not entirely offset by grievances (yellow). They were reduced in aggregate by Ryan (green), but then were bumped up to pay for others' successful grievances (blue). The pattern for those who grieved Ryan but not Tyler is the opposite.
- I feel really bad in a way for the 276 properties who grieved both. They won reductions after Tyler but were increased again by Ryan and went through another round of grievances.
- It is only the Did Not Grieve category that is down in aggregate from 2013.

None of these observations are a surprise, really, but I think it is interesting to see the validation of what we probably expected and to see the amounts of the reval and grievance impacts.

Chart 3 breaks the Stable Residences into five categories, based on traditional elementary school neighborhood.



This is not particularly interesting. The very slight patterns are that Edgewood and Quaker Ridge went down under Tyler and up under Ryan. Fox Meadow went up under both. Heathcote went up under Tyler and down under Ryan. Greenacres went down under both.

However, Chart 3 is a preface to the more interesting patterns based on Tyler neighborhood, presented in Charts 4 through 8. Before reviewing these charts, I should explain that Tyler defined 14 neighborhoods (or, “sub-neighborhoods”), splitting Greenacres into two sub-neighborhoods and each of the other elementary schools into three sub-neighborhoods. In Edgewood, for example, the three Tyler sub-neighborhoods were 101, 102 and 103, with 101 having the highest land values, followed by 102 and then 103 with the lowest land values. This same “01”, “02” and “03” pattern followed for the other elementary school neighborhoods.¹

Ryan reverted to the five elementary school neighborhoods.

¹ Except of course that there was no “03” for Greenacres.

Based on this history, it will not be surprising to see generally that Tyler impacts reflect the stratification of land values and that Ryan impacts reflect the “undoing” of this stratification impact.

Chart 4 is Edgewood.



The very small Edgewood 101 sub-neighborhood went up very slightly under Tyler and then down under Ryan, ending up at about 90% of 2013. The other sub-neighborhoods went down under Tyler and up under Ryan. There was not enough successful grievance activity in these sub-neighborhoods, in aggregate, to mitigate the Ryan impact significantly.

Chart 5 is Fox Meadow.

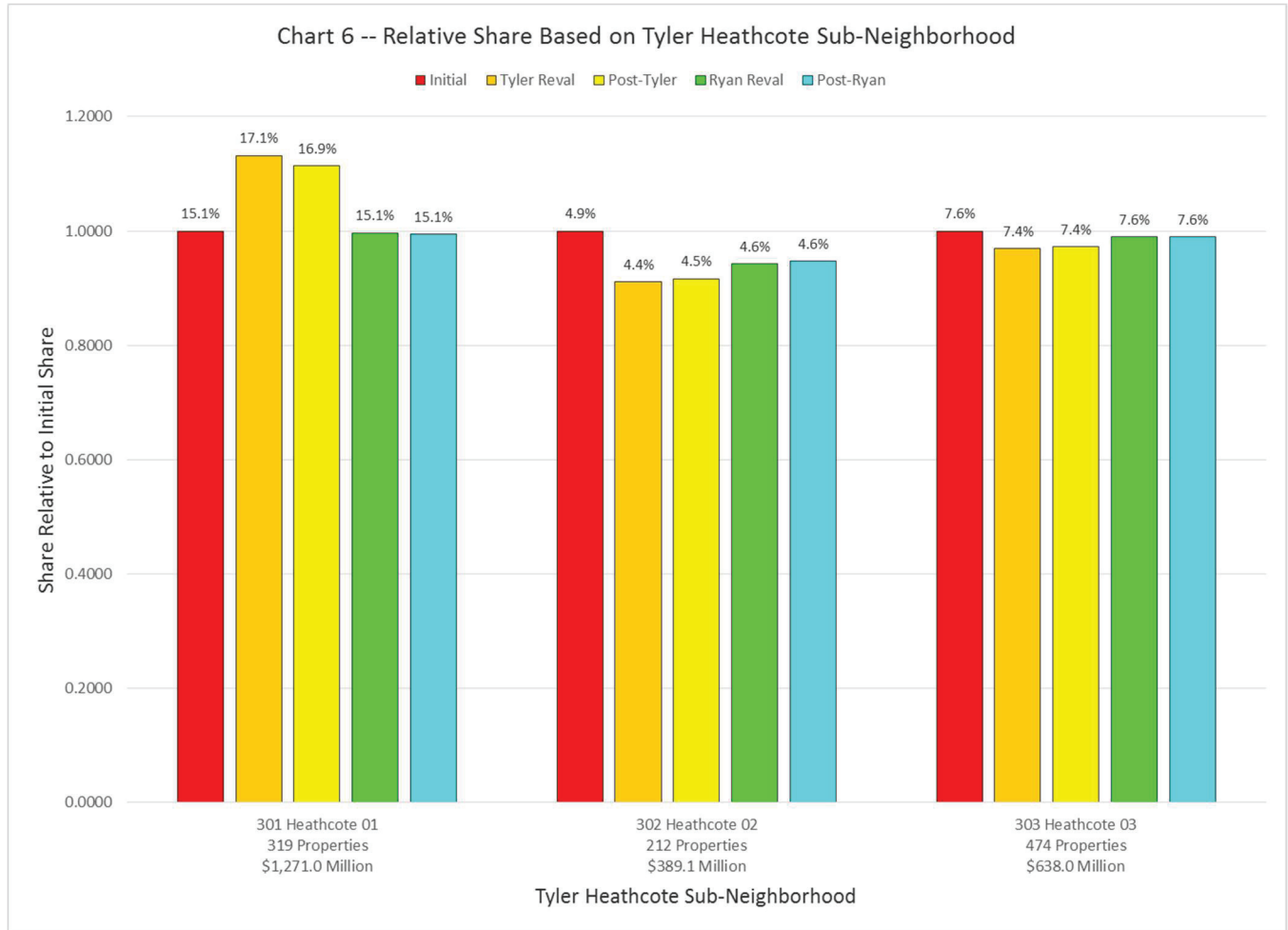


There is a clear Tyler differentiation by sub-neighborhood, with Fox Meadow 201 going up the most and Fox Meadow 203 going down the most.

Ryan’s treatment of Fox Meadow overall as the most expensive neighborhood causes all of these to stay above 2013.² Fox Meadow 203 is the ground zero of Ryan impact, even after grievances, because it loses its treatment as the least expensive Tyler sub-neighborhood and is merged with the others in Ryan’s expensive Fox Meadow.

² Specifically, Ryan employed a “multiplier” of 1.30 for Fox Meadow, as compared to 1.15 for Heathcote and 1.10 for the others.

Chart 6 is Heathcote

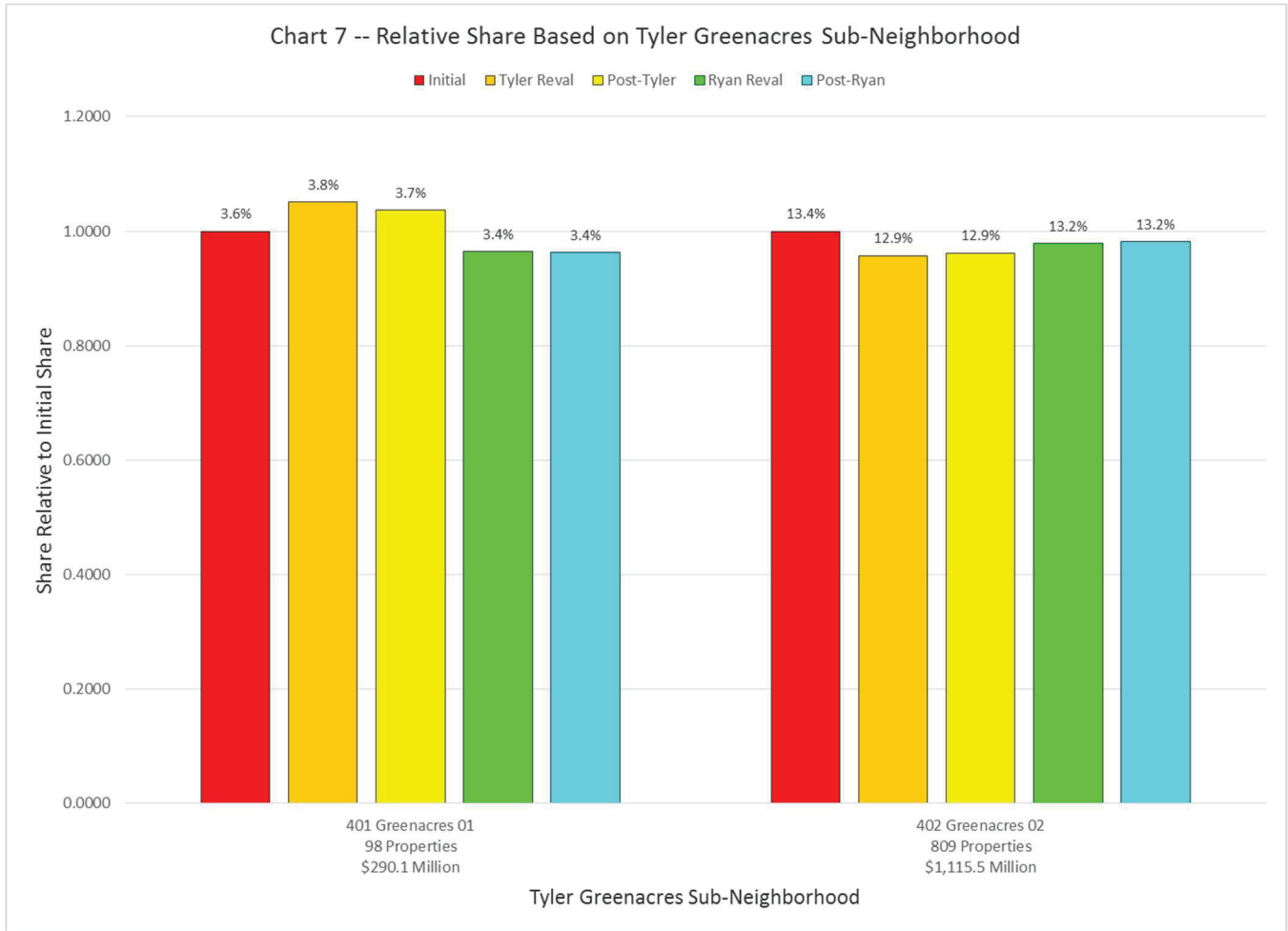


Heathcote 301 experienced the greatest overall increase among the 14 Tyler sub-neighborhoods, mitigated only somewhat by grievances, although it should be noted that some cases are still pending. Ryan restored Heathcote 301 to 2013 levels.

Heathcote 302 experienced significant Tyler reductions, which I think in part was due to the fact that under Tyler this neighborhood had the greatest prevalence of property-specific reductions for factors such as flooding.

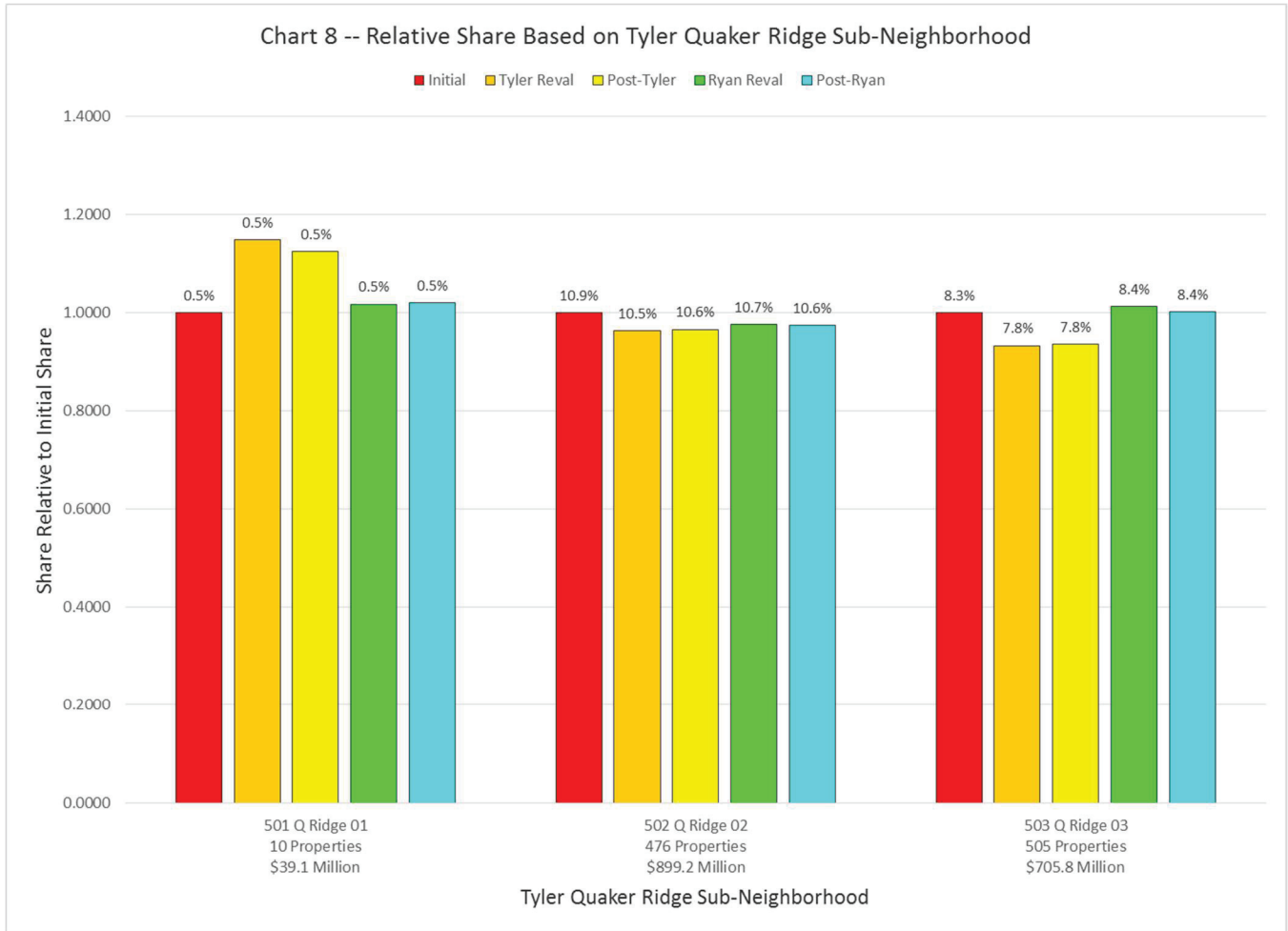
Heathcote 303 is quite stable. Unlike some of the other less expensive sub-neighborhoods it remains below 2013 levels.

Chart 7 is Greenacres, which has only two Tyler sub-neighborhoods.



Greenacres 401 went up under Tyler, but not as much as some of the other more expensive sub-neighborhoods, and Ryan put it below 2013 levels. Greenacres 402 is reduced in the aggregate.

Chart 8 is Quaker Ridge.



The very small Quaker Ridge 501 sub-neighborhood went up significantly under Tyler. Ryan reduced it but it is still slightly above 2013 levels. Quaker Ridge 502 is reduced in the aggregate. Quaker Ridge 503 went down under Tyler, but Ryan pushed it back up, to the extent that it is still slightly above 2013 levels.

Charts 9 through 12 examines impacts based on living area (*i.e.*, square footage), year built, grade and condition. The basic story, not surprisingly is that Tyler generally increases and Ryan generally decreases as the attribute improves. Also, obviously, these metrics are not independent of each other.

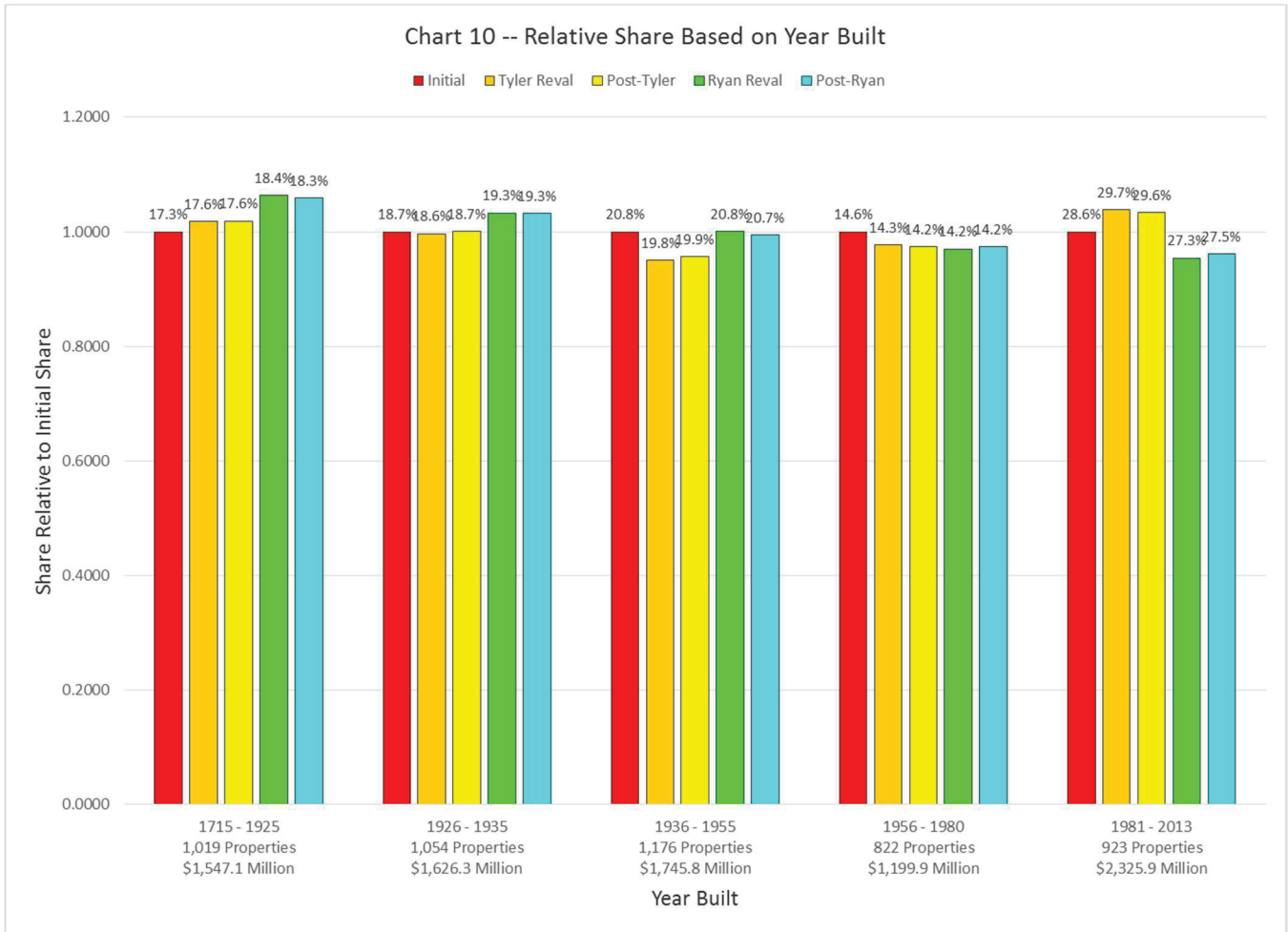
Chart 9 shows five square footage categories.



Here, the most distinct patterns are the Tyler increases in the highest category and the Ryan increases in the lowest category. Overall, the smallest houses are the most above 2013 levels.

Chart 10 shows five year built categories. In most cases, the “year built” is the actual year built. When a renovation is extensive enough the Assessor’s Office assigns a more recent “effective year built”, this chart uses that effective year built.

Note that, as explained above, the Stable Residences population excludes all properties built in 2014 or later.

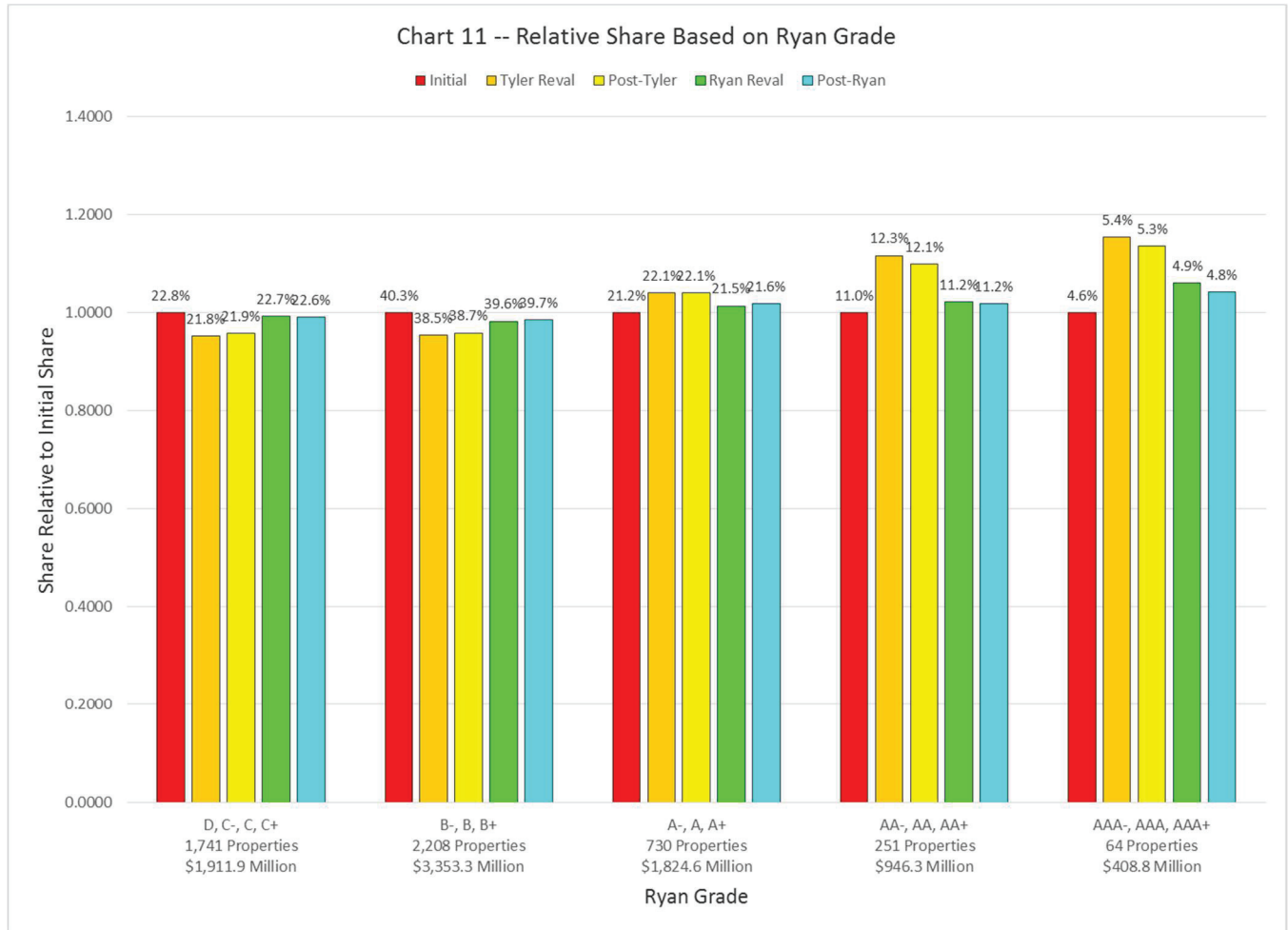


I did not attempt to use year ranges aligned with significant historical phases of Scarsdale development, such as Greenacres in the 1910s, Fox Meadow in the 1920s, etc. I could redo this with guidance.

Tyler explicitly used the year of construction in its model. All other things being equal, the value was decreased by \$1.2252 per square foot for each year of age. All other things being equal, a 3000 square foot property built in 1980 would be worth \$220,536 more than a 3000 square foot property built in 1920. ($3000 * 1.2252 * (1980 - 1920) = \$220,536$.)

Ryan did not use the year of construction explicitly, except for very recent construction (which is largely excluded from the Stable Residences). This is consistent with the observation that the Ryan shares increase for the older categories and decrease for the newer categories.

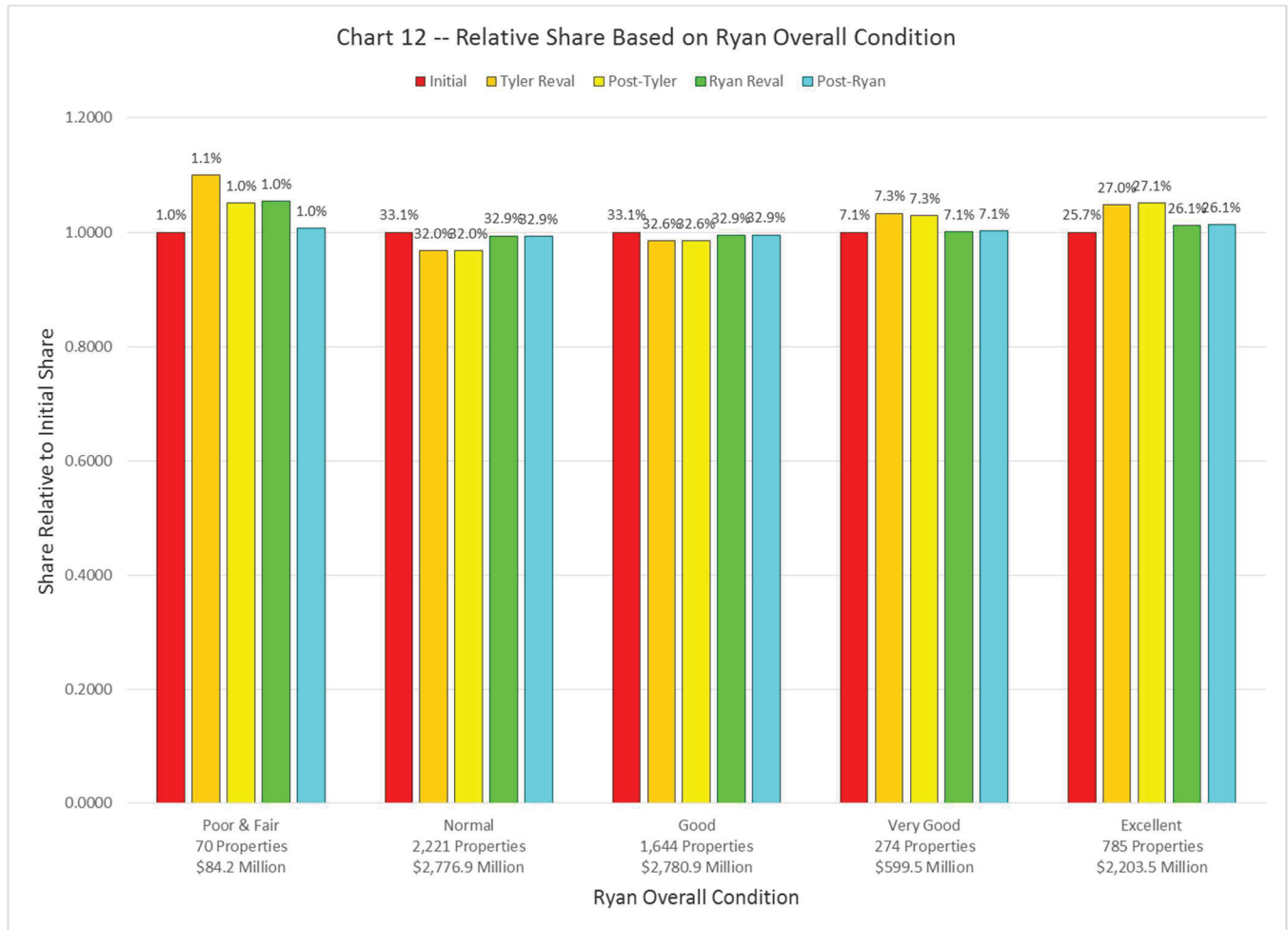
Chart 11 shows Grade categories. I used only the Ryan Grades, relying on the fact that there is a generally consistent mapping from Tyler Grade/Grade Adjustment to Ryan Grade.³



The Tyler impact clearly depends on Grade, once above the first two categories. Ryan dampens of the Tyler effect for all categories.

³ Ryan did not officially publish the mapping that he used to convert the Tyler Grade/Grade Adjustment to Ryan Grade, but a document that was obtained through a FOIL appears to show that mapping. Ryan’s actual grades are consistent with this mapping for 87.1% of the Stable Residences and are within one grade for another 6.5%.

Chart 12 shows Condition categories. As with Grade, I used only the Ryan categories, relying on the fact that there is a generally consistent mapping from Tyler Condition to Ryan Condition.⁴



Tyler raised the Poores and Fairs significantly, which is consistent with a criticism that I expressed back in June 2014 to the effect that Tyler had an obvious error that incorrectly inflated the values for the Poores and Fairs. Otherwise, the patterns here are similar to the Grade patterns.

Conclusion

As I suggested at the outset, this report mostly confirms existing understandings. Here are what I see as probably the most useful insights.

- Although not the main focus of this paper, I think it was useful to quantify the impact of improvements and new construction on the assessment base. Over the past four years, this

⁴ Ryan introduced a Very Good condition between Tyler's Good and Excellent. Ryan's conditions match Tyler's for 89.9% of the Stable Residences in the sense that either (i) there is an exact match of Poor, Fair or Normal, (ii) Tyler is Good and Ryan is Good or Very Good, or (iii) Tyler is Excellent and Ryan is Very Good or Excellent.

activity has added about 3% to the assessment base (*i.e.*, has reduced everyone else's aggregate share by 3%).

- The charts describing impacts by Tyler neighborhood support my emerging view that a dominant source of difference between Tyler and Ryan is in their different handling of land and location elements, including the designation of neighborhoods. I will be providing another memo soon that focuses on this topic.
- People do grieve when their assessments increase and grievances work, at least in aggregate. It will be interesting to revise this memo in September, after release of the 2017 BAR results.

Michael Levine
June 25, 2017