

**Chandler's Green Homeowners' Association
Response to Public Hearing of June 10, 2020
Weavers Grove Development Rezoning
June 11, 2020**

The Chandler's Green Homeowners Association (HOA) would like to see the Weavers Grove development succeed in achieving its vision of a mixed income development offering affordable housing and market rate homes adjacent to our community. We still have three primary concerns we feel are critical to the health and welfare of our residents which as yet have not been adequately addressed by the applicant or the town.

Executive Summary:

1) Amesbury Connection - critical concern

Require Amesbury to be clearly defined as emergency access only as previously agreed upon by Weavers Grove and Chandlers Green. Alternatives could include some combination of:

- 1. Removable bollards, gates, or floppy paddles.*
- 2. Distinct pavement, such as pervious pavers*
- 3. Emergency Access Only signs*
- 4. Traffic calming, such as planters, speed tables, humps, or bumps*

2) Sound and Particulate Pollution: critical concern

Require that Weavers Grove and Chandler's Green residents are able to enjoy neighborhoods that are safe from the scientifically proven health risks due to unsafe noise levels by:

- 1. Requiring the developer to conduct a new, expert sound study in coordination with the NC DOT, projected out to include the widening of I-40 and standard projections of traffic growth.*
- 2. Gaining assurances that no homeowner on the property will be exposed to unsafe noise levels greater than 67dB, the NC DOT noise standard (eg., not clear beyond the 67dB level).*
- 3. Gaining assurances from the developer that the Weavers Grove development will not impose noise levels that exceed current unhealthy levels to the homeowners of Chandlers Green as a result of their land clearing and/or berm construction.*
- 4. Once these assurances are provided, hold the developer accountable to achieve those assurances.*
- 5. Coordinate with NCDOT on the design and construction of any noise abatement tactic now to avoid the creation of noise channels into Chandler's Green between Weavers Grove berms and future NC DOT sound walls.*

3) Storm water, drainage, and flooding risks for Chandler's Green Properties along the Southern Stream: critical concern

Protect the Weavers Grove residents and the Chandler's Green neighbors from drainage and flooding issues:

- 1. Update the stream classification on the southern stream which has expired.*
- 2. Request the developer work with OWASA to come up with a plan for a sewer line that does not cross the wetlands or pass beneath the stream on the Chandler's Green property (minimizes the effect on any RCD and complies with Jordan Lake Rules).*
- 3. Require the developer to provide assurances that the storm water system and pervious pavement will be properly maintained for perpetuity.*

Analysis and Recommendations:

1) Amesbury Connection: critical concern

Issue:

Traffic will naturally move to the least congested path. If the net street width for New Ginger Road (with parking subtracted) is narrower than Sweeten Creek Road, there will be an incentive to enter Chandler's Green and exit through Sweeten Creek Road. Diverting traffic that would otherwise exit on New Ginger Road onto Sweeten Creek Road is an unnecessary health and safety hazard for Chandler's Green residents. Weavers Grove will produce on average, 2,300 trips per day. Most of these trips will take place through Amesbury. This is more than double the trips of Chandlers Green.

Background:

Through previous application cycles everyone (the CDC, The Planning Commission, the Town Council, the developer, and Chandler's Green) agreed that creating identical width of streets leading to the entrances to each neighborhood would ensure that neither neighborhood would be burdened with bypass traffic from the other neighborhood. If one neighborhood had a wider path with fewer traffic calming features, then the traffic from both neighborhoods might prefer this path.

Chandler's Green uses Sweeten Creek Road from Amesbury to Sunrise Road. The road is a 60 ft wide Right of Way, with 30 ft paved (curb to curb). No parking is allowed on the street during weekdays. The current proposed plan for New Ginger Road is for 29 ft (curb to curb) with an 8 ft wide parking lane subtracted from the net width, leaving only 20 ft for constrained two-way traffic. With intended traffic from City buses, school buses, garbage/recycle trucks, delivery vehicles and service vehicles, two-way, simultaneous traffic will not be possible. Weavers Grove traffic will have significant incentive to divert through Chandler's Green, where the roads are fully 50% wider and there is free movement of two-way traffic.

Require Amesbury to be clearly defined as emergency access only as previously agreed upon by Weavers Grove and Chandlers Green. Alternatives could include some combination of:

- 1. Removable bollards, gates, or floppy paddles.*
- 2. Distinct pavement, such as pervious pavers*
- 3. Emergency Access Only signs*
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Amesbury Drive Stub Out view from Sweeten Creek



2) Sound and Particulate Pollution: critical concern

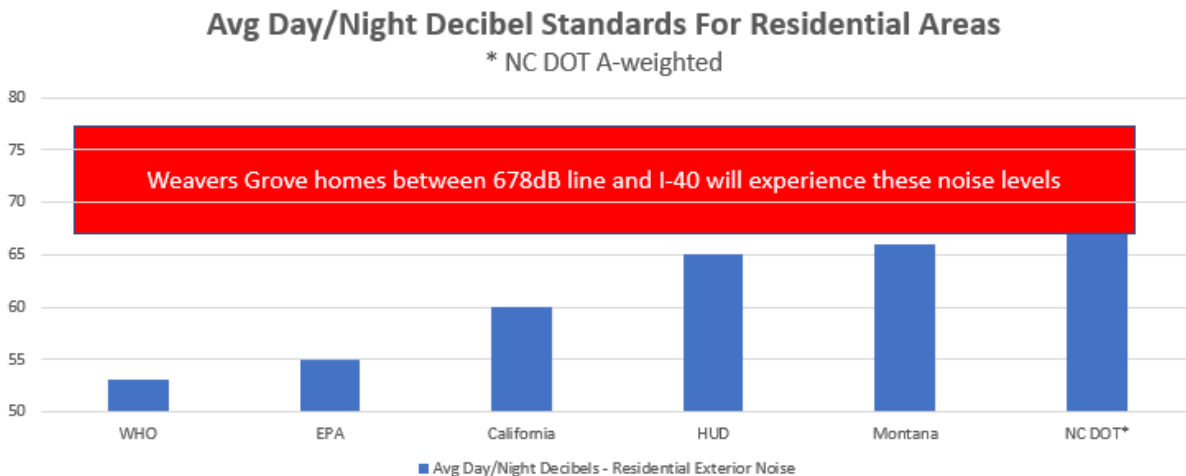
Issue:

Sound and particulate pollution from I-40 is a very serious health hazard to the residents of both Weavers Grove and Chandler's Green. The current proposal for Weavers Grove removes the 67 dB line and places affordable housing units in areas with noise levels above 70dB.

Background:

Experts disagree on the extent to which trees buffer sound, but the consensus is that they do provide some value. Removing trees and adding hard pavement, basketball courts and buildings will absolutely increase the sound levels. Removing the tree canopy to make way for this development is going to exacerbate this problem.

Developers and towns today have the benefit of research which unequivocally proves that exposure to [sustained noise beyond certain decibel levels](#), and high levels of [fine particulate matter](#), are harmful to health. Much like second-hand smoke years ago, we now have to worry about these two risk factors as they're now understood to cause things like arterial hypertension, myocardial infarction, stroke, hearing impairment, lung cancer and cardiopulmonary mortality and more.



NCDOT considers traffic noise levels in excess of 67 dB to be dangerous ([NC DOT 201 Noise Manual](#)); HUD considers noise levels above 65 dB “normally unacceptable” ([HUD Noise Abatement and Control](#)); The World Health Organization considers average traffic noise above 53 dB to be unhealthy ([Environmental Noise Guidelines for the European Region](#)). [EPA](#) and [WHO](#) also have published their standards. The noise levels that Weavers Grove residents will be exposed to will exceed all of these research-based noise standards for residential land use.

Combustion-related fine particulate matter pollution is associated with cardiopulmonary and lung cancer mortality when there is long term exposure ([JAMA. 2002 Mar 6;287 \(9\):1132-41](#)), and its concentration drops rapidly with distance. The combination of noise and fine particulate matter have been shown to have negative effects on health for people of all ages, summarized in part of this [USC Infographic](#).

Chapel Hill, which boasts a large number of PhDs among its residents, has not as yet incorporated this scientific evidence into responsible policies for land use. NC DOT encourages municipalities to take this step and the NC Legislature has cleared legislative obstacles to do that.

Some communities have already adopted Noise Compatible Planning, whereby noise levels are among their criteria for approving land use proposals and development plans. These communities recognize the value of placing residential developments in zones where their health is among their primary goals.

Take [San Jose](#) for example, which considers noise levels exceeding 75 dB unacceptable for residential developments under any circumstances, and levels between 60 and 75dB to be conditionally acceptable., where the developer is required to undertake remediation steps. Furthermore, for new residential developments near freeways, air quality modeling is required as well as implementation of mitigation measures, such as moving further from the source, to minimize exposure to these toxins.

Even the real estate industry appreciates the importance of noise in their market and now promotes a service on the Realtor.com website and apps that allows homebuyers to check on environmental noise surrounding their prospective homesite.

Many of the Chandler's Green homes directly adjacent to Weavers Grove already have noise levels between 60 dB and 75 dB. The proposed Weavers Grove units placed between the power-lines and I-40 range between 55 dB and 78 dB. This issue had been discussed at length during previous application cycles over the past 17 years. Both the developer and Chandler's Green have hired separate acoustic experts to analyze the problem and propose solutions.

Once again, everyone agreed on a simple solution. It was to limit any clearing to a measured 67 dB buffer line. The current proposal for Weavers Grove removes the 67 dB line and places units in areas with noise levels above 70 dB.



A further concern is that when I-40 is widened, the NC DOT predicts that the decibel levels will increase on the Weavers Grove site by an estimated 4 dB. This increase will not be abated by efforts from any NC DOT sound walls, since the permitting for buildings on the Weavers Grove property will not have been issued in time for the Date of Public Knowledge of the widening project (March 29, 2019). To mitigate that additional 4 dB, this 67 dB line would have to be placed over 230 feet further into the development from its current location, illustrated to the left. As you can see, this shows that a significant number of the affordable homes as well as some market rate dwellings would be sitting in unhealthy zones once I-40 is widened.

Although HHOC recognized these risks in 2008, this seems to no longer be the case. In its LUPA analysis dated June 10, 2020, the Town staff also appears willing to overlook the health of the residents of Weavers Grove.

Alternative noise abatement solutions, such as sound walls and berms have been considered. The conclusion is that they will not be effective, because:

1. The abatement solution will be located too far from both the source and the receiver to create any significant insertion loss.

2. The terrain is unsuitable to sound walls and berms, because it crosses a deep depression formed from the natural drainage channel and the bed from an old pond, which is 15 ft below the highway and significantly lower than the planned buildings. (The drainage channel and associated wetlands also present environmental placement and maintenance challenges for walls and berms.)
3. The length of any berm or wall is constrained on one side by the Chandler's Green properties and on the other side by wetlands and streams. (Design guidelines require that the length of the sides need to extend an additional 4X the length of the setback from the source, in order to be effective.)
4. Once the highway widening occurs, NC DOT will place sound walls within the highway buffer along sections of Chandler's Green homes that are also predicted to experience a noticeable increase in sound due to the widening. Since there will be no sound wall provided by NC DOT along Weavers Grove, the Weavers Grove sound berm needs to be properly engineered and aligned with the adjacent DOT sound walls alongside Chandler's Green to avoid creating an even more significant noise risk to Weavers Grove residents as well as to adjacent Chandler's Green residents.

If all of these issues with the intended berm were resolved, the developer must assure the town that the noise abatement plan will achieve a specific noise standard no greater than 67dB, and be held accountable to achieve those standards. Residents of Weavers Grove and Chandler's Green deserve to live in safe communities, not exposing them to known health risks.

There are alternative site designs to deal with these risks. For example, they could include the removal of the unsafe homes from the plan, or relocate them to a safer location; decide to not clear beyond a 67dB line and place all of the homes in healthy zones of the property; relocate the affordable homes to higher, dryer ground closer to Sunrise and Ginger Road, and partner with a private developer to invest private funds in the sound abatement requirements for its market rate homes nearer the Interstate.

In an effort to achieve the much needed affordable housing in Chapel Hill, the Town Council is asked to take science into consideration, take the necessary time to consider the health risks that are associated with this plan, and insist that a successful development does not put the health of its residents at risk.

Require that Weavers Grove and Chandler's Green residents are able to enjoy neighborhoods that are safe from the scientifically proven health risks due to unsafe noise levels by:

1. *Requiring the developer to conduct a new, expert sound study in coordination with the NC DOT, projected out to include the widening of I-40 and standard projections of traffic growth*
2. *Gaining assurances that no homeowner on the property will be exposed to unsafe noise levels greater than 67dB, the NC DOT noise standard (eg., not clear beyond the 67dB level).*
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3) Storm water, drainage, and flooding risks for Chandler's Green Properties along the Southern Stream: critical concern

Issue:

About half of the storm water and all of the waste water is expected to be removed across our properties. Several of our properties along the path of the water already have severe drainage issues and occasional flooding problems that endanger the habitability of the homes. The addition of a sewer main through the wetlands and beneath streambed will create additional risks to our homeowners.

Background: T

The Weavers Grove property is "water locked." About half of the water flows north and exits through a very small (48 inch circular) culvert under I-40. The other half of the water exits through a stream across two of the Chandler's Green properties. The water then passes underneath Sweeten Creek Road and flows in a stream between our common area playground and several more of our homes. The Southern stream eventually meets up with the Northern Stream in the Springcrest neighborhood.

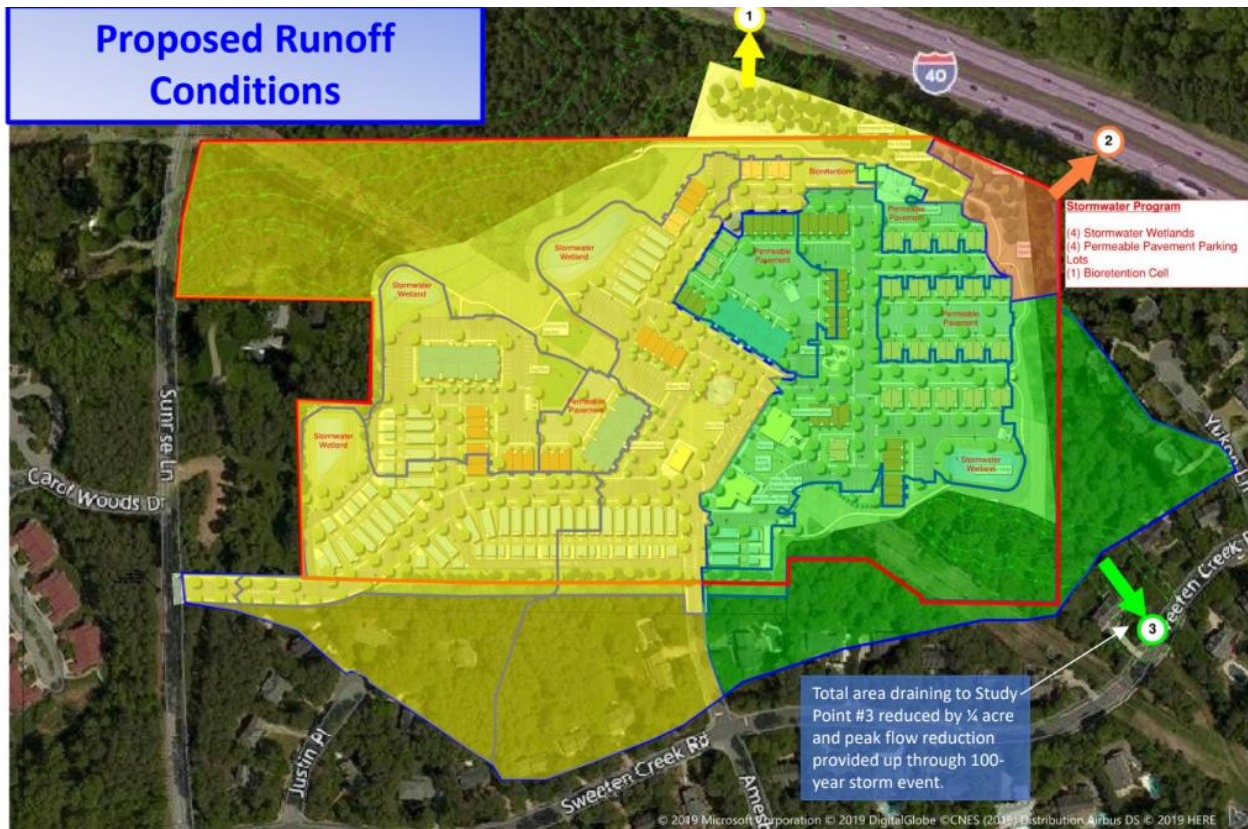
I-40 marks the northern edge of the Urban Services Boundary. There is no ability to pass any waste water under I-40, and so all of the waste water either needs to pass across the Chandler's Green properties or needs to be pumped out. The original plan between Habitat and OWASA was to pump the waste water out to Sunrise Road. This was the expectation that the Chandler's Green HOA had until the sewer lines surfaced in a drawing for the Habitat/Carol Woods project.

A commercial developer, Gary Wallace, had previously planned to develop the 7-acre Potted Plant property as a separate subdivision (completely unrelated to any planned Habitat development). In 2006, Mr. Wallace approached two of our neighbors to provide a small sewer lateral to connect a few remote houses on this 7-acre parcel. The two neighbors were told that they would each be paid \$2,000 as compensation. The consideration was never given, and unbeknownst to them the easement document they were given to sign was for a large sewer main with potentially visible raised manholes, NOT a small invisible sewer lateral. It was not until 2019 when they discovered they had been defrauded into signing a document that was different than they had intended.

All of our Chandler's Green properties are covered by a set of restrictive covenants that require HOA approval prior to the construction of any structures. No request has been made for approval of any sewer structure.

As the stream approaches the Chandler's Green properties it passes through a designated riverine wetland. The wetland area has a very high water table, as do the five adjoining Chandler's Green properties. These five homes surrounding where the stream exits all have drainage issues. Some homes have required the installation of sump pumps in the crawl space to evacuate rising water during wet periods. During major storms, flooding occurs. Occasionally, the culvert under Sweeten Creek Road reaches its capacity, and the stream between two Chandler's Green homes begins to rise rapidly.

During the 17-year course that this project has been contemplated, the Southern fork of Dry Creek has been classified several times. Each time it had been classified as a stream with an intermittent portion at the beginning near the Duke Power Tower followed by a perennial portion as it moved closer to the Chandler's Green properties. In 2015, the stream was reclassified, and this time the results were completely different. Even though 2015 was a 4 relatively wet year, the entire stream was downgraded. The previous intermittent portion became ephemeral, and the previous perennial portion became intermittent. The exact same person made the last two classifications. The experts we consulted could offer us no explanation except that it was obviously mis-classified.



The current storm water design places the detention basin on the slope above the stream, right above the wetlands. With this design, all of the upstream storm water needs to be captured by grates and channeled around the mis-classified stream to the remote basin. Given the serious issues we already have with drainage and flooding, this is probably the worst possible design they could have come up with. A BMP design would place the detention basin far closer to the upstream sources of the storm water. The Habitat design has no safety factors built in. Due to this faulty design, failures will be consequential for Chandler’s Green properties.

Protect the Weavers Grove residents and the Chandler’s Green neighbors from drainage and flooding issues:

1. *Update the stream classification on the southern stream which has expired.*
2. *Request the developer work with OWASA to come up with a plan for a sewer line that does not cross the wetlands or pass beneath the stream on the Chandler’s Green property (minimizes the effect on any RCD and complies with Jordan Lake Rules).*
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