# Agenda

**PLANNING COMMISSION REGULAR DOCKET**
**TUESDAY, April 9, 2019 at 5:30 P.M.**
**CITY COUNCIL CHAMBERS**

**I. Commission Pre-Meeting (Agenda discussion(s))**
*Beginning:* 4:30 p.m.
*Location:* City Hall, 2nd Floor, NDS Conference

**II. Commission Regular Meeting**
*Beginning*: 5:30 p.m.
*Location*: City Hall, 2nd Floor, Council Chambers

**A. COMMISSIONERS' REPORTS**
**B. UNIVERSITY REPORT**
**C. CHAIR'S REPORT**
**D. DEPARTMENT OF NDS**
**E. MATTERS TO BE PRESENTED BY THE PUBLIC NOT ON THE FORMAL AGENDA**
**F. CONSENT AGENDA**
(Items removed from the consent agenda will be considered at the end of the regular agenda)

1. Minutes – March 12, 2019 – Pre- meeting and Regular meeting
2. Minutes – March 5, 2019 – Special Meeting

**III. JOINT MEETING OF COMMISSION/ COUNCIL**
*Beginning:* 6:00 p.m.
*Continuing:* until all public hearings are completed
*Format:* (i) Staff Report, (ii) Applicant, (iii) Hearing

1. **SP18-00009 - Belleview Subdivision Utility Facility (Sanitary Pump Station)** – Landowners Core Azalea LLC and Azalea Cottages LLC, are requesting a Special Use Permit (SUP) pursuant to City Code Sec. 34-420, to allow construction of a Utility Facility (Sanitary Sewer Pumping Station) to serve the following properties: Tax Map and Parcel (TMP) No. 20-121, TMP 20-125, TMP 20-126, TMP 20-129, TMP 20-142, TMP 20-144, TMP 20-145, TMP 20-147, and TMP 20-148 (collectively, "Subject Property"). The Subject Properties are zoned R-1S (Residential Small Lot) and have frontage on Belleview Street, currently an unimproved platted street, as well as an unimproved alley, and are directly accessible by a stub out on Azalea Drive. The Subject Property includes approximately 6.80 acres and Landowners propose to construct up to 49 single-family dwelling units within the Subject Property (density of approximately 7.20 dwelling units per acre (DUA). The topography of the site does not allow for standard gravity-fed sewer service. The Comprehensive Land Use Map for this area calls for Low Density Residential (15 DUA or less). Information pertaining to request may be viewed online at http://www.charlottesville.org/departments-and-services/departments-h-z/neighborhood-development-services or obtained from the Department of Neighborhood Development Services, 2nd Floor of City Hall, 610 East Main Street. Persons interested in this SUP application may contact NDS Planner Matt Alfele by e-mail (alfelem@charlottesville.org ) or by telephone (434-970-3636).

2. **ZM18-00003 - Flint Hill PUD** - Deferred by applicant until at least May 2019

**IV. COMMISSION'S ACTION ITEMS**
*Continuing:* until all action items are concluded

## V. FUTURE MEETING SCHEDULE/ADJOURN

| | | |
|---|---|---|
| Tuesday, April 23, 2019 – 5:00PM | Work Session | |
| Tuesday, May 14, 2019 – 4:30 PM | Pre- Meeting | |
| Tuesday, May 14, 2019 – 5:30 PM | Regular Meeting | SUP – 1617 Emmet<br>Critical Slope – 915 6th Street SE<br>Rezoning – 750 Hinton Avenue<br>PUD - Flint Hill |

**Anticipated Items on Future Agendas**

Zoning Text Amendments –Off-street parking facilities requirements along streets designated as "framework streets" (initiated May 8, 2018), Site Plan Requirements
SUP –MACAA (1021 Park Street), 167 Chancellor
Subdivision – David Terrace

**Persons with Disabilities may request reasonable accommodations by contacting ada@charlottesville.org or (434)970-3182**

**PLEASE NOTE: THIS AGENDA IS SUBJECT TO CHANGE PRIOR TO THE MEETING.**
**PLEASE NOTE: We are including suggested time frames on Agenda items. These times are subject to change at any time during the meeting.**

**LIST OF SITE PLANS AND SUBDIVISIONS APPROVED ADMINISTRATIVELY**
**3/1/2019 TO 3/31/2019**

1. **Preliminary Site Plans**
    - **a.** 631 Rose Hill Drive - March 2019
2. **Final Site Plans**
    - **a.** CRHA South First Street Phase I (900-1000 1St Street S) – March 14, 2019
    - **b.** Carlton View II Apartments (1333 Carlton Ave) – March 27, 2019
3. **Site Plan Amendments**
    a. William Taylor Plaza Phase I – Parking area redline – March 6, 2019
4. **Subdivision**
    a. 900-1000 First Street S, CRHA (TMP 26-115) – March 12, 2019
    b. 201 Montebello Circle (TMPs 16-17 & 16-18) - March 27, 2019

Minutes

# PLANNING COMMISSION REGULAR DOCKET
# March 12, 2019 – 5:30 P.M.
# CITY COUNCIL CHAMBERS
# NDS Conference Room

## I. COMMISSION PRE-MEETING (Agenda discussion(s))

***Beginning:*** **4:30 pm**
***Location*****:** City Hall, 2nd Floor, NDS Conference Room
**Members Present**: Vice Chairman Hosea Mitchell, Commissioners Jody Lahendro, Lyle Solla-Yates, Gary Heaton, and Rory Stolzenberg
**Staff Present**: Missy Creasy, Lisa Robertson, Kari Spitler, Brian Haluska, and Alex Ikefuna

Commissioner Mitchell called the meeting to order at 5pm. He noted that he would be chairing the meeting this evening as Ms. Green is ill. He provided a review of the agenda and asked Commissioners if they had any questions.

Commissioner Solla-Yates asked about the number of units' SUP condition provided for the Lyman Street application. Mr. Haluska clarified that the condition supported the request provided by the applicant. After additional questions, it was determined that alternate wording of the condition would clarify that 3 single family detached dwellings would be allowable which would not prevent any other by right allowances for those sites. Commissioner Mitchell asked for clarification on the set back modifications and that information was provided.

Ms. Creasy provided background on the CDBG/HOME budget and included an explanation of the request to flip the priority neighborhood years for Belmont and Ridge Street for cost affective development of the selected Belmont project.

Commissioner Lahendro mentioned that the Tree Commission was planning to have Development review staff attend the next meeting to discuss tree preservation in the construction process.

## II. COMMISSION REGULAR MEETING

***Beginning:*** **5:30 pm**
*Location*: City Hall, 2nd Floor, NDS Conference
**Members Present**: Vice Chairman Hosea Mitchell, Commissioners Jody Lahendro, Lyle Solla-Yates, Gary Heaton, Rory Stolzenberg and Mr. Bill Palmer

*Chairman Green was not present; Vice Chairman Mitchell conducted the meeting in her absence.*

### A. COMMISSIONER'S REPORTS

**Commissioner Lahendro**: Attended a Tree Commission meeting on March 5. The City will celebrate Arbor Day on Friday, April 26 where there will be a ceremony at Market Street Park by a large basswood tree on the protected list. The Tree Commission would like to understand NDS' site review process to understand how existing trees are identified for preservation and how they are protected during construction. This is a result of recent projects where trees were removed when they were supposed to be protected. Two vacancies are open to applicants from CDBG neighborhoods, which are Star Hill, Belmont, 10th & Page, Rose Hill, Ridge Street, and Fifeville. The BAR meeting on February 20 was canceled due to weather and will take place tomorrow evening at 5:30 pm.

**Commissioner Solla-Yates:** The HAC's Policy Subcommittee met to discuss a joint meeting with City Council to discuss best ways to manage the meeting, procedural issues, and how best to present the material. The material itself has a tool that has different interventions for addressing the housing crisis. There was interesting public feedback regarding whether members on the committee had a personal stake. The meeting went well and Council seemed interested in the tool. The City Manager stated that the tool should be used considering land use issues to determine if it is possible. It is a potential opportunity to integrate the housing strategy and the Comprehensive Plan.

**Commissioner Heaton:** Attended a stakeholders meeting and a public meeting regarding the planning of Unity Day. Notes that he will be on that committee going forward and they meet every other week.

**Commissioner Stolzenberg:** Attended a PLACE Committee meeting on February 14 where BPAC's memo regarding the Standards in Designs manual was discussed. There were concerns about the manual's minimum block length and instead suggest a maximum block length to create a better connected street grid. The new long range planner position was also discussed and there will be a steering committee guiding the consultants. The job offer should be posted by now and they are currently drafting the RFP for the consultants with input from PLACE and others. He also attended a human transit workshop, where many City and County officials were able to lay out a transit system in a grid city and determine how to do better in the future. It was a great workshop that gave great perspective on the important issues of coverage vs. service and frequency that are important in planning transit.

B. **UNIVERSITY REPORT**

**Bill Palmer:** Attended the human transit workshop as well. At the latest Board of Visitors meeting held in February they agreed to name the new residence hall on Brandon Ave "Bond House" in commemoration of Julian Bond, a former UVA professor and civil rights icon. The building has 311 beds and should be open in the fall semester for upperclassmen undergrad students. They approved the concept site and design guidelines to continue planning for a University Hotel and Conference Center in the Emmet/Ivy area. It is estimated to be about 220,000 sq. ft., which is 225 guestrooms and 25,000 sq. ft. of conference space. It fits nicely with the masterplan that has been developed and it will be about a $105 million project that will likely be done in partnership with a third party developer. Two committees have been convened by President Ryan and they presented reports to the BOV. The Emmet/Ivy final report was set up to provide a blueprint of what UVA stakeholders see as the best uses, activities, and programs for the area. They recommended the site be prioritized for things like a center for the arts, an academic hub focused on interdisciplinary research, and the data sciences school that was recently announced. They also want democracy focused academics and recommended focusing a lot of development on the eastern end. The western end will be seen as a later stage of development. The Community Working Group has been working to identify issues between UVA and the Charlottesville community. Based on focus groups and surveys, they identified the top four issues to be jobs and wages, affordable and workforce housing, public and equitable healthcare, and youth education issues. A good start of actions related to the study is that UVA will be raising their minimum wage to $15.

C. **CHAIR'S REPORT**

**Vice Chairman Mitchell:** The skate park is now open. There will be a Grand Opening on April 21st and hopefully Tony Hawk will attend. On February 28, he participated in the Fontaine Streetscape meeting with Mr. Lahendro. The committee and neighborhood would like to have buffered bike lanes along Fontaine, to make it more pedestrian friendly by having crosswalks with beacons, and to have sidewalks covering the area to provide a buffer for pedestrians. The neighborhood is willing to sacrifice parking to make it more pedestrian and biking friendly. The parking doesn't do much good for the people in the neighborhood, as it is usually consumed by UVA

employees. The businesses would like us to do something about the parking because it is difficult for patrons to get in and out, especially during lunch. There is also a fire station nearby and we need to be sure we don't do anything to significantly obstruct their ability to get in and out.

**Commissioner Lahendro**: It's easier to get all that people desire at the west end of Fontaine since there is a wider right-of-way in that area. The sacrifice is some tree planting areas to accommodate it and the buffer between the bike lane and the street. It's great that we might get large canopy size trees on the western end of Fontaine.

**D. DEPARTMENT OF NDS**

**Missy Creasy:** There will not be a work session on the fourth Tuesday of this month and the next regular meeting will be on April 9th. NDS is still in the recruitment process for the Grants and ADA Coordinator positions. The April work session will be focused on the Standards and Designs manual, as Council postponed approving the funding for it until last week.

**E. MATTERS TO BE PRESENTED BY THE PUBLIC NOT ON THE FORMAL AGENDA**

None.

**F. CONSENT AGENDA**

(Items removed from the consent agenda will be considered at the end of the regular agenda)

1. Minutes – February 12, 2019 – Pre- meeting and Regular meeting
2. Minutes – January 22, 2019 – Work Session

**Commissioner Solla-Yates moves to approve the consent agenda as presented. Seconded by Commissioner Stolzenberg. Motion is approved 5-0.**

**III. JOINT MEETING OF COMMISSION/COUNCIL**

*Beginning*: 6:00 pm
*Continuing*: until all public hearings are completed
*Format:* (i) Staff Report, (ii) Applicant, (iii) Hearing

**1. ZM18-00004 - (Lyman Street) (Lyman Street Residences)**

BKKW LLC (landowner) by its member Bruce Wardell, has submitted a rezoning petition for property identified on City Tax Map 58 as Parcels 289.2 and 358E ("Subject Property"). The rezoning petition proposes a change in zoning classification of the Subject Property, from the R-1 (low-density residential) on Parcel 289.2 to R-2 (two-family residential), and from Belmont Cottages Planned Unit Development on Parcel 358E to R-2 Residential. The Subject Property has approximately 145 feet of frontage on Lyman Street, and the total combined acreage of the Subject Property is approximately 0.2 acre (approximately 8,712 SF). Within the Belmont Cottages PUD, Parcel 358E was to be used for open space. Current zoning of Parcel 289.2 would allow that parcel to be used for one (1) single-family dwelling. The proposed rezoning would also allow one (1) single-family dwelling to be constructed on each parcel, or would allow additional unit(s) to be developed with a special use permit for infill development (see related application SP18-00011). The Land Use Plan within the City's Comprehensive Plan projects that the Subject Property would be developed for Business and Technology uses. The Comprehensive Plan also indicates that residential density greater than 15 units per acre would be appropriate in this location.

**Vice-Chairman Mitchell**: Notes that the rezoning application must be approved to then move on to approve the SUP. However, if the rezoning is not approved, the Commission should still make recommendations to Council regarding what the SUP should look like.

**Staff Report, Brian Haluska:** Both the rezoning and SUP application are related to development of two parcels on Lyman Street. There was a request for a rezoning of these properties in 2013 to rezone to Downtown extended, which was denied by Council unanimously. The applicant is now requesting to rezone the properties to R2 zoning in order to have two R2 lots. Under by-right conditions, these two lots would not be conforming to current zoning, but the subdivision and zoning ordinance allows a boundary line between two non-conforming lots to be shifted. They could move the lot line to be perpendicular to Lyman Street and the zoning administrator would then have the authority to grant adjusted setbacks to permit the development of a single family residence on the properties. The R1 piece is listed as such because at one point it was un-zoned and the default in the code is to zone it as R1. Removal of this from the PUD for Belmont Lofts does not make that PUD non-conforming or impact the amount of recreational or aesthetic open space that they have. Staff recommends approval of the rezoning to R2. The second application is for an Infill Special Use Permit. Infill SUPs were created as a substitute for smaller sites close to the City's center to allow additional density on the sites through the modification of the lot requirements in R1, R1S, and R2 zones. This is essentially a request to modify the lot conditions, whether it be the minimum frontage on a publically accepted street, minimum setbacks, or minimum lot size. It does allow for a certain amount of modification to the number of lots allowed and this applicant has enough for 3. Staff finds that the application is in keeping with the greater goals of the Comprehensive Plan and the Infill SUP process. It was initially proposed as one large live-work permit and this application shows 3 houses that reflect the character of the area. It frames Lyman Street better than the current vacant land, and the current zoning of the land doesn't lend itself to much development at all. There was a question regarding ADUs and the application was advertised with 3 single family residential units. In our ordinance, a single family residential unit in these zones can contain an ADU as long as they meet the guidelines in the zoning ordinance. With that in mind, staff recommends approval with conditions.

**COMMISSIONER QUESTIONS**

**Commissioner Solla Yates:** Down the road if an ADU were permitted, would there be any concern?

**Mr. Haluska:** Given the requirements of an ADU in the current zoning ordinance, it is unlikely. The main concern here is that the configuration of Lyman Street is challenging for cars. It's narrow and the turns are blind, so there might be a potentially dangerous situation if there were on-street parking on the north side. Provided that they can accommodate the extra parking space required under the code, it wouldn't be a problem.

**Vice Chairman Mitchell**: For the public's clarification, what is an ADU?

**Mr. Haluska**: It is an accessory dwelling unit, which would be another unit in the building that is smaller and limited to 2 unrelated persons. The size limitation is based on the overall size of the project. The vast majority of the City permits these uses.

**Commissioner Stolzenberg**: With regards to parking requirements for ADUs, it's laid out so the driveways go all the way to the back and there is a fully paved area there. Is there a requirement that both spots would need to be separately accessible for the off-street parking, or does the driveway count as multiple off-street parking spots?

**Mr. Haluska**: If they meet the dimensions of that on a single family, you would be capable of stacking cars in that situation. You can't stack in parking lots and have it count for two. The zoning administrator knows more about

this and could clarify further. This would probably be at the discretion of each individual owner, so it could be dealt with by getting a permit.

**Applicant- Bruce Wardell, BKKW, LLC:** The rezoning application was a very simple calculation in that the two lots in their configuration in R1 zoning would be unbuildable due to the size and the setbacks. This led to rezoning them to R2, which would provide the ability to build two units with a reconfigured site plan, but still the setbacks wouldn't work. An Infill SUP would allow the property to be configured specific to this site. The way the site is being developed would allow the density to be increased by 1 unit. In R1 and R2 districts, the assumption is that the owners would have the option to add an interior accessory unit that would be about 700 sq. ft. on the lower level below the ground level. The reason for the setback is because during the development of Belmont Lofts, the developer installed a new City waterline that connected the lofts to the main waterline, so 80% of the front parcel is occupied by a waterline. When the easement is set, it would eliminate the whole front parcel. We've put bio-filters on it for storm water runoff and water quantity and quality. We do not anticipate any parking on the north side. Each unit is a two bedroom unit, which requires one space, and we've provided 3 spaces on the site development if ADUs are desired in the future. There will also be space for bike storage. Staff has been extremely helpful and we met with the Belmont Neighborhood Association in December 2018 and sent out 117 invitations for a neighborhood meeting, for which 7 or 8 people attended. We discussed their desires and changed some things after hearing their responses.

**COMMISSIONER QUESTIONS**

**Commissioner Lahendro**: The renderings show a sidewalk in front of the houses along the street, but it isn't shown on the site plan. What is the intention for that?

**Mr. Wardell**: The assumption was that it would be required to have a sidewalk, however it doesn't go to another sidewalk on either end. There was a discussion with the neighborhood regarding its value. We'd have to ask for a waiver to not have the sidewalk there and we'd rather have more planting on that side, but it could be put in.

**Commissioner Lahendro**: Would a sidewalk on that side of the road only serve 3 residents?

**Mr. Wardell**: Yes. It goes into the Belmont Lofts and into an unclaimed alley on the other side.

**Commissioner Lahendro**: Does staff feel that there is a community need for a sidewalk?

**Mr. Haluska**: As the applicant notes, it is a requirement unless it is waived, which is usually dealt with in the site plan process. There was some interest from the public to not have it since there is a sidewalk on the other side, but ultimately it would be reviewed by staff to determine if it should be waived or not.

**Mr. Wardell**: We are happy to include a sidewalk if necessary.

**Commissioner Lahendro**: It wouldn't be wise to waste a resource. We can trust staff and the community to decide whether or not it is needed there and if it makes sense.

**Commissioner Stolzenberg**: The land was purchased in advance of the previous application. Was it assessed at $194,300?

**Mr. Wardell**: No, both parcels together were most recently assessed at $115,000.

**Commissioner Stolzenberg**: Records show that the front parcel was purchased at $32,400 in 2006 and the back parcel for $120,000 in 2012.

**Mr. Wardell**: The front parcel was purchased for $2,500 in 2006 and the back parcel was purchased for $120,000 in 2008. The most recent appraisal was $115,000 for both parcels when the loan was renewed.

**Commissioner Heaton**: Was the back parcel previously owned by the railroad?

**Mr. Wardell**: It was originally owned by the railroad. When CEDA purchased the land, the transfer between CSX and CEDA inadvertently left out this strip of land.

**Vice Chairman Mitchell**: Shares that he lives in Belmont Lofts, which is adjacent to the property being discussed. After advising legal counsel regarding this, it has been determined that he does not need to recuse himself due to the proximity because he has no financial interest in the project.

**PUBLIC HEARING**

**Ruth Van Riel:** Lives at 201 Douglas Ave, which is at the corner of Douglas and Lyman and notes that she has a beautiful view from Lyman over the railroad into the City. If anyone is going to build there, it should be Mr. Wardell. The design and integrity are great and what he is doing will make a perfect triangle. One sidewalk is probably enough and there should not be any parking on the north side. When turns are made onto Lyman from Douglas or Goodman, sometimes people have to stop and back up in order for others to get through. Putting more parking there would be horrific.

**Joan Schatzman:** Resides at 204 Douglas Ave and encourages City Council to accept Mr. Wardell's plan because it is a terrific idea, however there should not be another sidewalk. It would be better to have 3 accessory units with the 3 houses.

**Steve Huff:** Resides at the only residential property on Lyman Street, which is a small connecting street. This design is much more sympathetic to the residential nature of the street. It is good that it isn't a high density development because 3 buildings is about right. This will enhance the neighborhood and it is wonderful that another high density development isn't planned for the neighborhood.

**COMMISSIONER DISCUSSION**

**Commissioner Lahendro**: As much as the design and layout looks nice, it's important to remember that it doesn't necessarily mean that these will be built there, as the property could change hands. The decision to be made tonight is not for the way it looks, but rather for the rezoning of the land.

**Commissioner Stolzenberg**: It's appalling that City Council turned down the last application and that on a piece of land that is assessed at $986,000 per acre, we might put giant single family houses there. The fact that we are seeing this proposal of very large, expensive single family residences and the support that is shown from the Belmont neighborhood just shows the problem we face in trying to achieve affordable housing. Only allowing these monuments there is appalling and notes that he strongly opposes the condition to limit it to 3 homes.

**Commissioner Solla-Yates**: It's a spectacular place for housing, as it is extremely walkable. The design is lovely and it will fit in well, but it would be better if there was more housing and an affordable housing component.

**Commissioner Heaton**: Land that has previously been unused and is now being used is a step in the right direction.

**Commissioner Mitchell**: Agrees with Mr. Heaton.

**Commissioner Lahendro**: Agrees with Mr. Heaton that it would be much better to see it developed than to sit vacant. The proposed development fits in well with the existing character of the neighborhood.

**Ms. Ruth Van Riel**: Notes that she did not realize that there was a possibility for this to be rezoned and then anything could happen.

**Ms. Creasy**: Clarifies that the proposal that has come forward is for a rezoning to change both properties to one unified zoning property. The proposal for the Infill SUP has specific criteria under it, which notes 3 single family units as part of the development. If the zoning change occurs and the Infill SUP is put in place, it goes with the land. The Commission has to think about it in terms of words on a page and what is printed. In theory Mr. Wardell could choose to sell that package to someone else, who chooses to develop 3 single family homes in a way that meets the zoning criteria. The Commission likes to keep in mind that what they are providing a recommendation on is for what is specifically being asked for in the wording and what is attached to that.

**Ms. Robertson**: One condition in staff's recommendation says that the characteristics of the development will remain the same. If the wording is changed to "the use of the property shall be in accordance with the materials presented by the applicant", you can limit the use of the property to the specific development being presented here. If someone else wants to change that, they would need to go through a public process again. An SUP allows the Commission to craft conditions that allow you to get the use of the property being presented. Additionally, for condition 3 it is recommended that it says "the number of single family detached dwellings in the development shall be three" because that is the category of development it is in and each of those buildings can have an ADU.

**Vice Chairman Mitchell**: Clarifies that there will be two votes, one for the rezoning and then for the SUP. It is during the SUP vote where the Commission should stipulate these conditions.

**Commissioner Stolzenberg**: Mr. Lahendro mentioned that the proposal fits well with the character of the neighborhood, but that is rapidly changing. The house next to the one on the corner has appreciated in value from under $100,000 in 2002 to now $420,000. If we keep built form the same while the City grows in population, the character of the neighborhood will change in terms of the people that live in it. A wise person once quoted, "I'm excited when there's high density development inside the City, rather than suburban sprawl."

**Commissioner Lahendro moves to recommend approval of this application to rezone the subject properties from PUD and R-1 to R-2, on the basis that the proposal would service the interests of the general public and good zoning practice. Seconded by Commissioner Solla-Yates. Motion is approved 5-0.**

**2. SP18-00011 – (Lyman Street) (Lyman Street Residences)**

BKKW LLC (landowner) by its member Bruce Wardell has submitted an application seeking approval of a Special Use permit (SUP) proposing a specific Infill Development to be constructed on property identified on City Tax Map 58 as Parcels 289.2 and 358E ("Subject Property"), having, together, an acreage of approximately 0.2 acre

(approx. 8.712 SF) and approximately 145 feet of frontage on Lyman Street. (See related rezoning application ZM18-00004) The Infill Development SUP proposes construction of three (3) single-family dwelling units on the Subject Property (an effective density of 15.2-DUA), with building setbacks and lot area less than would be permitted by right under the R-2 zoning district classification without an SUP. The Land Use Plan within the City's Comprehensive Plan projects that the Subject Property would be developed for Business and Technology uses. The Comprehensive Plan also indicates that residential density greater than 15 units per acre would be appropriate in this location.

**Commissioner Solla-Yates:** Notes that the language suggested by Ms. Robertson makes sense.

Commissioner Solla-Yates moves to recommend approval of SP18-00011 subject to: 1. City Council approval of the request to rezone the Subject Property to R-2 Residential as submitted in application ZM18-00004. 2. The design, height, and other characteristics of the Development shall remain essentially the same, in all material aspects, as described within the application materials dated December 21, 2018 and revised February 28, 2019 submitted to the City and in connection with SP19-00011 ("Application"). Except as the design details of the development may subsequently be modified to comply with Building Code requirements. 3. The use of the property shall be in accordance with the materials submitted by the applicant, and 4. The number of single-family detached dwellings in the development shall be three (3). Seconded by Commissioner Lahendro.

**Vice Chairman Mitchell:** It was mentioned that the ADUs would be internal to the structures. Is there any objection to a friendly amendment so that the ADUs do have to be internal to the structure?

**Commissioner Stolzenberg**: Objects to the friendly amendment.

**Ms. Creasy**: The single-family dwelling that opens it up to the ADU ordinance allows for internal and exterior, but there would be no space for an exterior unit based on the conditions being adopted.

**Ms. Robertson**: The application materials do not show exterior units. If condition 2 is going to remain the same, these will be the only 3 buildings that are authorized.

**Vice Chairman Mitchell**: Withdraws the request for a friendly amendment.

**Commissioner Stolzenberg**: Would like to make an amendment to strike condition 4. Does the word "use" mean residential?

**Ms. Robertson**: If the new conditions are that the use and development have to be consistent with the materials, the materials submitted show 3 buildings. If the purpose of the amendment is to set a different possibility for the number of buildings, it would be working contrary to the other conditions. It's different if the purpose of the amendment is to get rid of it because it's already addressed in the requirement of keeping consistent materials.

**Vice Chairman Mitchell**: The Commission should vote on the current motion. If the motion does not pass, the objection by Mr. Stolzenberg can be readdressed.

**Commissioner Solla-Yates moves to recommend approval of SP18-00011 subject to: 1. City Council approval of the request to rezone the Subject Property to R-2 Residential as submitted in application ZM18-00004. 2. The design, height, and other characteristics of the Development shall remain essentially the same, in all material aspects, as described within the application materials dated December 21, 2018 and revised February 28, 2019 submitted to the City and in connection with SP19-00011 ("Application"). Except as the design details of the**

**development may subsequently be modified to comply with Building Code requirements. 3. The use of the property shall be in accordance with the materials submitted by the applicant, and 4. The number of single-family detached dwellings in the development shall be three (3). Seconded by Commissioner Lahendro. Motion is approved 4-1.**

**3. Community Development Block Grant (CDBG) and HOME Funding**

1st Year Action Plan, FY 19 20: The Planning Commission and City Council are considering projects to be undertaken in the 1st Year Action Plan of the multi-year Consolidated Plan utilizing CDBG & HOME funds for the City of Charlottesville. In Fiscal Year 19-20 it is expected that the City of Charlottesville will receive about $408,417 in Community Development Block Grant funds and about $76,000 in HOME funds from the Department of Housing and Urban Development HUD. CDBG funds will be used in the City to address neighborhood improvements in Belmont and/or Ridge Street, economic development activities and public service projects that benefit low and moderate income citizens. HOME funds will be used to support the housing needs of low and moderate-income citizens through homeowner rehabilitation.

**Staff Report, Missy Creasy**: Ms. Tierra Howard has taken the task force through most of this process and she just left the City, but she is helping us transition by working part-time. The CDBG and HOME process occurs on a cyclical basis each year. CDBG and HOME funding are HUD-based funding that focus on housing opportunities throughout the community, but they also have allowances for economic development and core social programs. This funding has been used in the past for a mix of all of those things. A certain allocation of CDBG funds are provided each year and as long as the rules are followed, the City will continue to get the funding. For the HOME funds, we work in consortium with the Planning District Commission so that funding goes to each of the localities within the planning district in order to encourage affordable housing regionally. The budget will take effect July 1 or when HUD releases the money, and everything is in place to begin that process. There are a number of different funding pots that comes from this, and the CDBG task force meets throughout the year to evaluate proposals for the funding. They then bring forth a proposal to the Planning Commission and then to Council for approval. As part of the process, some funds are given directly to a priority neighborhood. They create a task force within the neighborhood to determine how to use those funds. The neighborhoods have rotated through the process to receive funding and the Belmont neighborhood is currently the priority for the coming year. They have been meeting over the past year to get ready for the funds and one request that staff asks the Commission to recommend tonight is a change in the order. As part of how Council prioritized the neighborhoods, it was requested to alternate between Belmont and Ridge Street every other year. Belmont chose a program and if they are able to have 2 years together, the project can be addressed more cost effectively. It is requested that the Commission recommend to Council that instead of alternating those years, to instead allow 2 years for Belmont and then 2 years for Ridge Street. We will work with Ridge Street in advance, and this allows us to cost effectively spend the money without losing it. There is a budget proposal that has gone through the CDBG task force and the Priority Neighborhood task force. The economic development projects also go through the Strategic Investment Area Committee. There has been a lot of feedback from practitioners of housing, economic development, and neighborhood aspect priorities. We never know exactly how much funding we will receive, so we also ask that in the motion it be prorated by percentage of projects so that we don't have to come back for a minor adjustment.

**COMMISSIONER QUESTIONS**

**Commissioner Heaton**: Does the Ridge Street neighborhood have a project in the pipeline?

**Ms. Creasy**: They are not quite there. We are in the recruitment stage right now and the goal is to start that process this summer, which will give some time for projects to come together when the money is available.

**Commissioner Heaton**: So this isn't subjugating that neighborhood to Belmont?

**Ms. Creasy**: No. It allows Ridge Street to have time to think about what is best for them and be ready when the money becomes available. On the Belmont side and the program side in general, we're anticipating a cost savings by doing the project together as opposed to breaking it into two pieces.

**Commissioner Solla-Yates**: Is it possible to get consent from the Ridge Street neighborhood on this?

**Ms. Creasy**: It's the same amount of money, it's just the timing and Ridge Street doesn't have a committee yet.

**Commissioner Stolzenberg**: Do we have assurances that all of the money will be spent in the Franklin Street area and not in northwest Belmont?

**Ms. Creasy**: The only project that has been chosen at this point is Franklin. The cost estimates are that it will take both years' worth of money to complete that project.

**Commissioner Stolzenberg**: If the grant is prorated down, is there any risk of the programs not being able to run?

**Ms. Creasy**: That is not anticipated and the allotment is normally upward of the amount. They are minor adjustments to the numbers and we don't give anyone more than they requested as part of the process.

**Commissioner Stolzenberg**: In general, federal funding for programs like these have dropped over time. Have we seen that with these two programs? Is there any expectation that if we push Ridge Street off for a few years that the funding will drop by then?

**Ms. Creasy**: The Priority Neighborhood funding hasn't changed over time. In the past Council has chosen to keep the same amount of funding and then use the rest for other competitive projects. They could chose to do something differently, but they would likely want to make sure the monies are equal if they moved it one year.

**Commissioner Solla-Yates**: Is there a logistical issue for why we can't check with Ridge Street?

**Ms. Creasy**: Typically, a task force is set up that works through this process. We would start with the neighborhood group that currently meets. If they were to be allocated the money, they would have to rush to get to a project. That neighborhood has also been spending a lot of effort on the Cherry Ave plan. Notes that she would personally feel okay with having the 2 years because it has always been that way and typically the priority neighborhood has been for a 3 year chunk along the way. Although there have been a couple changes within the past few years, having the number of years together has been very helpful in having enough money for a substantial project. It will also take time for Ridge Street to get to the point that Belmont is already at.

**Vice Chairman Mitchell**: Notes that he has been on the CDBG task force 3 times and is confident that they have engaged the folks in Ridge Street. The fact that there is no project on tap right now suggests that they're not ready and the task force knows that they aren't ready. Typically, the applicants have to present their applications before the task force and both neighborhoods probably stood before the task force and discussed this.

**Commissioner Heaton**: The concern is that Council could become the victim of a soundbite. We need to have a high degree of confidence that that isn't the case so that if the accusation is made, they would have a strong case to back it up.

**Ms. Creasy**: When the discussion came forth originally, there was interest in providing funding to both Ridge Street and Belmont. It wasn't specified specifically how to do that and staff recommended the bulk funding because of the economies of scale. In the discussion with Council there was talk about potentially splitting it each year, but when that happens the neighborhood has to build up the funds. We have spending deadlines and if they aren't met, HUD can take the money. If we were to keep one half of the Belmont project waiting, we would have that significant amount sitting in an account for an extra year, which hurts the whole pot of money. Staff is ready to move forward with whatever decision is made, but it will be much more costly to split it up.

**Vice Chairman Mitchell**: It might be appropriate in the motion to stipulate that before Council acts on our recommendation that Council or staff check with Ridge Street to make certain that they are on board.

**PUBLIC HEARING**
None.

**COMMISSIONER DISCUSSION**

**Commissioner Lahendro**: Knowing that a significant construction project normally takes over a year, having the benefit of funding over a 2 year period makes extraordinary good sense.

**Commissioner Solla-Yates moves to recommend approval of the proposed FY 19-20 CDBG and HOME budgets to City Council as presented in this report, with the requirement that the Ridge Street neighborhood be consulted. When the actual entitlement amount is received, it is recommended that all recommendations are increased/reduced at the same pro-rated percentage of actual entitlement. No agency will increase more than their initial funding request. In addition, it is recommended that Council designate the Belmont Neighborhood as the priority neighborhood for FY19-20 to allow for cost-effective completion of the project selected and designate the Ridge Street Neighborhood for FY 20-21 and FY 21-22. Seconded by Commissioner Stolzenberg. Motion is approved 5-0.**

## IV. COMMISSION'S ACTION ITEMS

### 1. Long Range Transportation Plan – Presentation

**Applicant, Jakob zumFelde, Thomas Jefferson Planning District:** This is a follow-up to an October presentation to the Commission. The process has been going on for over a year and will be completed by May 2019. A regional Long Transportation Plan is a forward looking 25 year plan that is updated every 5 years. It is focused on understanding future transportation needs for the region and is a requirement for receiving federal transportation money. There is also a requirement for having the projects funded through the Smart Scale program. Within the past few years, Smart Scale has deemphasized the important of the LRTP. The long range transportation done before created projects so they were ready to be funded, whereas now they are ready to be applied for Smart Scale funding where they may or may not score high enough to be funded. The LRTP plans for transportation needs that are regional in scope. This plan uses a performance base approach that includes recent federal requirements and uses goals, objectives, and quantifiable performance measures to evaluate the roadway

projects in the plan. The plan includes a fiscally constrained list and an unconstrained visioning list. As part of this process, an estimate of future funding was created, although it was challenging to do given the uncertainties of Smart Scale. It was split into roadways, intersections, bike/pedestrian projects, and bridges. As for how the roadway projects were evaluated in the LRTP, in September a complete list of projects were presented and through scenario evaluation it was developed into a refined scenario. In the last month it was narrowed down into the federally required constrained list, as well as the vision list. In terms of the project lists, the constrained list of roadway projects primarily includes Hydraulic/29 area projects. The proposal is to include the remaining phases of the West Main Street project and the Hillsdale Drive to Rio project. We've been working closely with City and County staff and there are a number of regional projects on the vision list. Similarly with intersections, the constrained section focuses on the Hydraulic/29 area, with a notable list of intersections on the vision list. The bridge list is not a constrained or vision list. It is one list with the understanding that they will be evaluated and money will be put towards them as applicable and available. The bike/pedestrian list came directly from the Jefferson Area bicycle and pedestrian plan, which was recently completed and approved by the MPO and the TJPDC. There is a constrained list of projects that were identified as top priority and all projects identified in that plan were included in the vision list. It wasn't as clear to have a constrained and vision list for transit, but one of the projects here is a study for an express bus on the US 29 corridor. The timeline is to finalize the project lists and review multiple document chapters in March, and review the complete plan draft and hold a public hearing in April. In May there will be a final public hearing and we will have final plan approval by the MPO policy board.

**COMMISSIONER QUESTIONS**

**Commissioner Solla-Yates:** Looking at the draft Comprehensive Plan and looking at this, it doesn't look like there is a lot of connectivity. The Comprehensive Plan talks about bicycle and pedestrian access and new and better transit service. It doesn't talk about new vehicular lanes that aren't tolled, but that's the main thing we see here.

**Mr**. **zumFelde**: The evaluation that was part of the LRTP was largely focused on roadway and capacity, but part of the reason for that was the separate Jefferson Area Bicycle and Pedestrian Plan that involved a lot of evaluation of those types of projects that fed into the LRTP. Additionally, a number of the roadway projects are multimodal projects.

**Ms. Creasy**: Notes that a majority of the ones focused more in that area are not within the City. Since we're working with both the City and County, it's a balance of different types of projects.

**Commissioner Solla-Yates**: The bicycle and pedestrian improvements looked like a very small slice of the pie. Could you quantify this?

**Mr**. **zumFelde**: The way that the numbers were arrived at were based on funding that has been received in the past and particularly on the type of funding. Within roadways, it was estimated based on the Smart Scale projects that the region has received, regardless of whether they were capacity improvements or multimodal improvements. Within bike/ped shown here, that is for the Transportation Alternatives Program.

**Ms. Creasy**: In order for a project to be competitive, they have to have the multimodal aspect as well.

**Commissioner Heaton**: Notes that a pie chart may not be the best way to show this since you aren't talking about one piece of funding.

**Vice Chairman Mitchell**: The Dairy Road Bridge is the one bridge in the City that made the cut, as it is in poor condition. Where in the project backlog is it?

**Ms. Creasy:** The Dairy Road Bridge has been on our radar and the past City Engineer has spent a lot of time working on this. Repairs have been done to it to stabilize it for a period of time. A CIP request was put in to try to build funds for it and it didn't end up getting funded, but it is still on the radar. Including it here allows us to keep it open for funding, as it's a very costly endeavor and it is difficult to get funded. It is probably not represented in the chart because there isn't a constrained list for bridges.

**Mr**. **zumFelde**: It was challenging to create a list for bridges because some may need to be replaced and some may just need to be upgraded.

**Ms. Creasy**: This is high on the technical radar, which is why we specifically asked for CIP monies to bring it along. Even though the proposal doesn't have it funded for this current CIP, we will continue to move forward with it because it is a priority and there will be a point in time where it has to occur. Rest assured, there was interim work done on the bridge last year and it is safe to drive on.

**Commissioner Solla-Yates**: There are concerns about the political realities of what is being proposed, as West Main has had a hard time getting funded. Of what the City is proposing, do we have a shot at Smart Scale?

**Ms. Creasy**: That's one of the few projects that scored very highly.

**Mr**. **zumFelde**: Speaking specifically to the most recent Smart Scale application, it was funded for West Main. It was the only application in the MPO area that was funded.

**Ms. Creasy**: Notes that what was requested was a part of it and it's coming from different sources, which allowed it to be competitive.

**Commissioner Lahendro**: Regarding the pending Comprehensive Plan, there is a future land use plan that has a large transit nodes component associated with high density developments. At what point does this transit plan become interested in what the future land use plan is proposing? When will they work together and be more than just a conceptual vision plan in the City?

**Mr**. **zumFelde**: One of the things that informs the evaluation for LRTPs in general is the projected population and employment numbers for 2045 by transportation analysis zones within the region. Two years ago when the process started, we worked with the City to identify where growth was going to happen over the next 25 years to help come up with the distribution of population within the City. Similarly, we did this with County staff. City staff looked at how growth was distributed by looking at Comprehensive Plans and planning efforts.

**Ms. Creasy**: We were given the top number from Weldon Cooper and we had to work within the parameters of the data that we had. We took what was currently pending, currently approved but not build, and currently under review and allocated that in the numbers. From there, we worked through the areas where there was potential for growth. The number that they have as a top number may not be where the community necessarily lands and we will take the next map into account for the next round.

**Commissioner Lahendro**: How do you get from population concentrations to a transportation plan?

**Mr**. **zumFelde**: One of the first steps of this plan was to look at the results of the model that use these population projections and if we don't build any new roads or add any new transit service, what will people be doing in terms of travel. It helps determine who will be using the bus, who will be driving on roads, and where there will be congestion. The tools are getting better at determining how transit fits in with roadway capacity but for this model, transit was included but it wasn't perfect. Once the deficiencies are identified where a road may not have the capacity to serve the number of vehicles that the model suggests will be there, we look at possible roadway

projects to increase capacity or possible transit projects to increase the number of people able to travel on the existing roadway.

**Commissioner Lahendro**: Hopefully it doesn't lead to the presumption that it's going to be done with cars. There are more ways to solve congestion than adding another traffic lane.

**Ms. Creasy**: From a City standpoint, we don't have that ability in most places anyway and we have to look at it much more creatively than the County does because we don't have the space to work with. Trying to accommodate that is the only route we can go in the future.

**Commissioner Solla-Yates**: We should be reflecting the constraints we have in the documents we put out because what we see now is not constrained in that way.

**Ms. Creasy**: West Main is on there and there have been significant efforts from a larger community at Hydraulic and 29 where we anticipate changes, which takes into account multimodal efforts. It is a mix, but regardless there is no space to stretch and add more lanes, so we are forced to find other ways to get from one place to another.

**Commissioner Lahendro**: Hopefully the advantage of having a regional Planning Commission looking at this will be that the County doesn't build a 6 lane highway coming up to the City limits and then have it stop. It's good that we're working together on this.

## V. Adjournment

**7:40 pm – Commissioner Solla-Yates moves to adjourn until the second Tuesday in April 2019.**

# Planning Commission Work Session
## March 5, 2019 5:00 - 7:00 p.m.
## NDS Conference Room

**Members Present**: Chairman Lisa Green, Commissioners Jody Lahendro, Lyle Solla-Yates, Hosea Mitchell, and Gary Heaton

**Members Absent:** Commissioners Taneia Dowell and Rory Stolzenberg

**Staff Present:** Missy Creasy, Alex Ikefuna, Carrie Rainey, Joey Winter, and Kari Spitler

Chairman Green called the meeting to order at 5:00 pm.

### 1. Major Subdivision – 900-1000 1st Street (CRHA)

**Chairman Green**: Reminds the Commission that this is an application for approval of a subdivision and the site plan is not being reviewed at this point. The Standard of Review is a ministerial function. The Commission has no discretion so the only thing that should be reviewed is whether or not the subdivision complies with the requirements of the City's subdivision ordinance. If it is in compliance, it must be approved. If it is denied, the Commission must provide the deficiencies and make reference to the specific code sections and requirements. In addition, an explanation of what modifications or corrections the applicant would need to make in order to be compliant will be necessary.

**Commissioner Mitchell:** Why is the Planning Commission tasked with approving ministerial reviews and why can't it be delegated to staff?

**Ms. Creasy**: State code requires that major subdivisions be reviewed by the Planning Commission. It can be considered a major subdivision for two reasons: the number of lots, which is not a factor in this case, and the extension of public utilities, which this project does have.

**Chairman Green**: Notes that this is not a public hearing, but any comments can be made at the end of the meeting. In the summary, it mentions section 29.3 being reviewed. Is it actually code section 29.2 that we should be reviewing?

**Ms. Rainey**: That is correct.

**Commissioner Heaton:** Are all of them R3s?

**Ms. Rainey**: The main portion on the western side are R3, but there is a segment of R1 across the street. However, the phase 1 development is solely on the R3 property.

**Chairman Green**: Could staff provide a quick rundown of the project and make note of the critical slope waiver that was approved by City Council last night to include any conditions that were outlined?

**Ms. Rainey**: Regarding the plat itself, there will be no creation of new streets, however there are extensions of public utilities into the site, which makes it a major subdivision. They are subdividing the main parcel into two parcels and approximately 3 acres will be the phase 1 development. There are no new parks or school lands being created, however a public pedestrian egress and ingress easement is provided in the subdivision plat to memorialize along the trail and provide a future connection to the bridge if it is built later across Pollocks Branch. The critical slopes were approved by City Council with conditions. It was passed with the conditions that the Commission recommended with one change to item 5, which added that it will pertain to the "approved" site plan since there have been several modifications to it and the Commission saw an earlier draft that was not approved. The site plan is continuing to go through administrative review and typically will not go before the Planning Commission unless called forth by a member or the director. The most recent submission came before staff yesterday and it is close to completion.

**Commissioner Mitchell**: Has public works weighed in on the extension of the utilities?

**Ms. Rainey**: They have and the easements as shown in the plat are acceptable to them. They are just working through some of the smaller details of the actual design, which won't impact the easements.

**Commissioner Solla-Yates**: Can you explain the process of having 4 applications?

**Ms. Rainey**: The subdivision plat has gone through four rounds of staff review in order to address deficiencies before coming before the Planning Commission.

**Chairman Green**: Where are we with the subdivision right now?

**Ms. Rainey**: The subdivision plat complies with all of the zoning regulations for the R3 zoning district and they have shown the requirements for the R1 single family zoned parcel as well. The water protection standards and the storm water management plan are being addressed through the final site plan, which will need to be approved before the final site plan can be approved along with the erosion and sediment control measures. There are some open space easements on the plat that relate to the storm water management plan, which were acceptable to the engineering department moving forward with the plat. There have been no public comments received so far related to the plat.

**Chairman Green**: Does this plat cover what was discussed at the Planning Commission meeting with regards to egress, pedestrian access and how the building will be constructed? Are all of those things still in place?

**Ms. Rainey**: The plat does the show the pedestrian access easement specifically. The sequencing of construction would be shown through the site plan, along with the other conditions placed on the critical slopes waiver.

**Commissioner Solla-Yates**: Can you talk about the parking? 83 spaces seems like a lot of parking.

**Ms. Rainey:** The most recent site plan has a slight modification to the required number of spaces. They are now proposing 62 units, which requires 80 parking spaces based on the bedroom count. They have

83 parking spaces shown, which is slightly more than the minimum requirement, but previously they were required to have 83 spaces based on the bedroom count they had.

**Commissioner Solla-Yates**: Piedmont did a similar project but were given a parking modified zoning amendment to offer more homes and less parking. Why are they being treated differently?

**Ms. Rainey:** They have not requested a modification to that requirement.

**Chairman Green:** Before making comments on the site plan, it is necessary to first make a determination on the subdivision.

**Commissioner Mitchell**: What is the date of the plat we are approving?

**Ms. Rainey**: It is the February 21st plat.

**Commissioner Mitchell moves to approve the final subdivision plat dated February 21, 2019 for Tax Map 26 Parcel 115. Seconded by Commissioner Solla-Yates. Motion is approved 5-0.**

**Chairman Green**: What are the next steps for phase 1 of the site plan?

**Ms. Rainey**: The next step for staff is to review the site plan submitted yesterday and get comments to applicant by the end of the week. If there are any remaining comments to be turned around, a resubmission will be sent in fairly quickly in order to meet the March 13 funding application deadline. In addition, staff is working to wrap up the bond estimate amount so they can be posted, as well as items such as the storm water management agreement. This will get signed and recorded prior to site plan approval.

**Chairman Green**: Is it appropriate for the Commission to see the site plan to address any concerns?

**Ms. Creasy:** Yes, that would be fine. The parking concern is tricky because they meet the requirement and there is nothing in the site plan regulations that prevent it.

**Commissioner Mitchell**: Notes that he doesn't want to slow this project down and doesn't see any value in reviewing the site plan.

**Commissioner Lahendro**: In one public comment there was confusion about whether the development would be just for seniors. NDS responded saying that as far as they know, it is for everyone.

**Ms. Creasy**: The gentleman referenced an article or had heard that residents of Crescent Hall would be relocated here, but that wasn't part of the application. Everyone has the opportunity to live there.

**Commissioner Solla-Yates**: City staff proactively produced a zoning amendment to extend the parking modified zone for the Piedmont project to pursue the public good. Why doesn't that apply in this case?

**Mr. Ikefuna**: PHA requested to do that in that instance.

**Ms. Creasy**: This project has been on an accelerated process and fitting something like that in would be time consuming. The applicant is moving forward with a by-right application.

**Mr. Ikefuna**: The applicant was given the opportunity to have more tenants and reduce parking but they didn't want to.

**Ms. Robertson**: PHA and the City had been working on the master plan for that project for several years and as they got further into the design work, they realized in order to provide the streets reflected in the master plan something had to change. They actively requested the City to apply the modified parking zone to the project so they could provide all of the things requested in the master plan. They are two different projects and this one has been put together on an accelerated schedule under by-right ordinances of the City. The applicant has indicated that it was very important to have a by-right application reviewed and approved before their deadline to apply for funding.

**Applicant, Ashley Davies**: Notes that they have been working towards a deadline of next Thursday for two tax credit submissions. Everything it is coming together for the Crescent Hall renovation and the phase 1 work for South 1st Street. In terms of the parking, as we move forward with the master planning process after the application is submitted, we will dig in with the residents and the neighborhood on the rest of the site. With any affordable housing, there should be a way to offer a parking modified zone. It would be a nice option and provide flexibility as updates to the zoning district are being considered.

**Chairman Green**: Is it possible that although some of the parking may appear overbuilt, some of it will be used on phase 2 so you wouldn't need as much parking at that point?

**Ms. Davies**: It could be. We want to do parking studies of existing units and see what the use patterns are and extrapolate that across the site. We want to ensure that there is adequate parking but we don't want an over-parked site.

**Emily Dreyfus**: Regarding the senior housing question, the engineers and redevelopment committee have determined that Crescent Halls could be renovated with residents in place. Some residents noted that they wanted to stay in one place, so that is the plan at this point.

**Ms. Davies:** Right now contractors are being interviewed and several of them have experience doing this type of building renovations to ensure it is as painless as possible.

**2. Public Comment**

None.

**Adjournment: 5:25 pm.**

# CITY OF CHARLOTTESVILLE

**DEPARTMENT OF NEIGHBORHOOD DEVELOPMENT SERVICES**
**STAFF REPORT**

# APPLICATION FOR A SPECIAL USE PERMIT

# JOINT CITY COUNCIL AND PLANNING COMMISSION PUBLIC HEARING

## DATE OF HEARING: April 9, 2019
## APPLICATION NUMBER: SP18-00009

**Project Planner:** Matthew Alfele, AICP
**Date of Staff Report:** March 22, 2019
**Applicant:** Core Azalea, LLC
**Applicant's Representative**: Justin Shimp with Shimp Engineering, P.C.
**Current Property Owner:** Core Azalea, LLC

**Application Information**

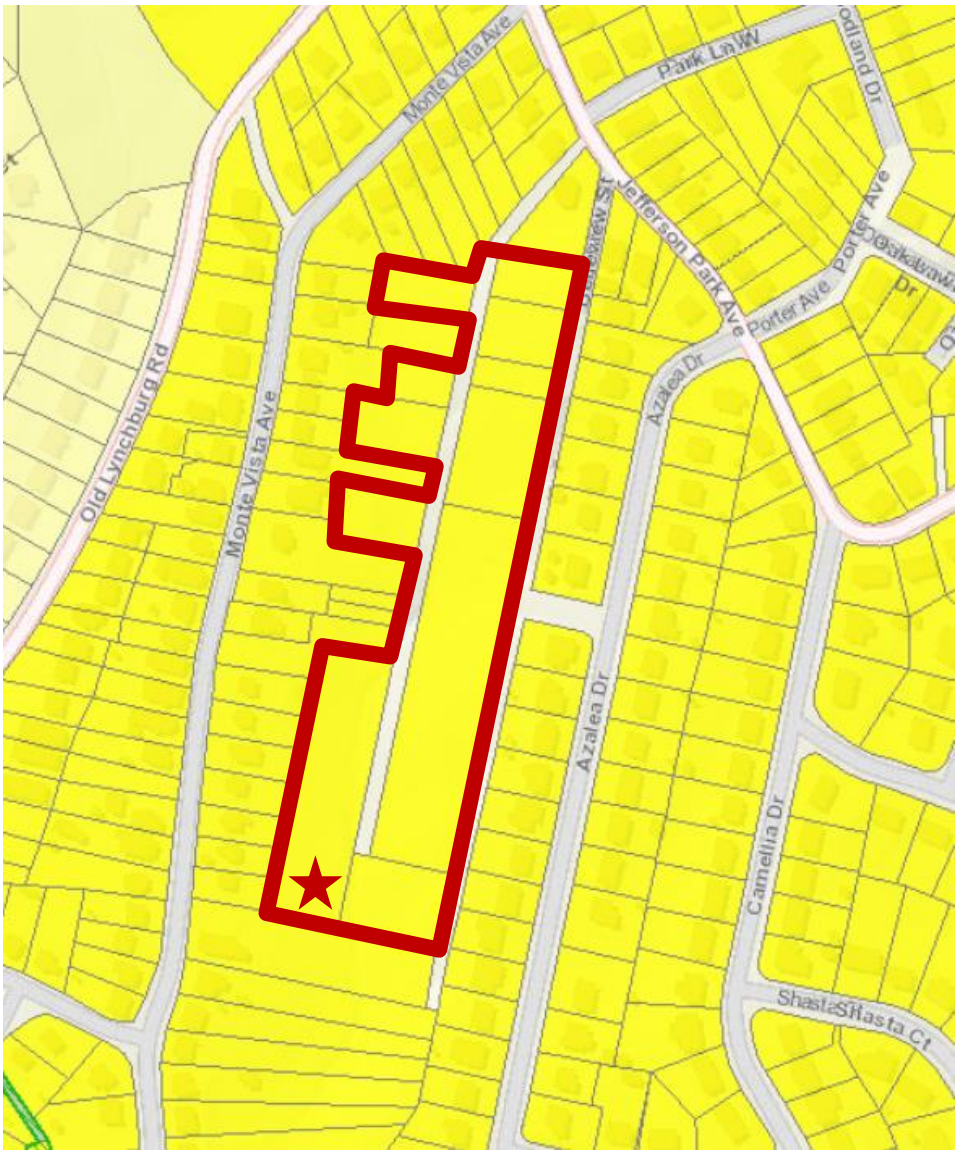
**Property Street Address:** The lots are unaddressed with frontage on Belleview Street (an unimproved platted street) and an unnamed alley (unimproved platted alley). Access to the lots is through an unimproved stub out off Azalea Drive.
**Tax Map/Parcel #:** Tax Map and Parcel (TMP) No. 20-121, TMP 20-125, TMP 20-126, TMP 20-129, TMP 20-142, TMP 20-144, TMP 20-145, TMP 20-147, and TMP 20-148 (Subject Property)
**Total Square Footage/ Acreage Site:** Approx. 6.80 acres (296,208 square feet)
**Comprehensive Plan (General Land Use Plan):** Low Density Residential
**Current Zoning Classification:** R-1S
**Tax Status:** Parcel is up to date on payment of taxes
**Completeness:** The application generally contains all of the information required by Zoning Ordinance (Z.O.) Secs. 34-41(d), and 34-158(a) and (b).

**Applicant's Request (Summary)**

Justin Shimp, representing the land owner (Core Azalea, LLC), has submitted a special use application (SUP) for the Subject Property for a Utility Facility (Sanitary Sewer Pumping

Station) pursuant to City Code Sec. 34-420. This application is being requested to facilitate a private Sanitary Sewer Pumping Station that would support the sanitary needs for a by-right residential development of up to 49 single-family dwellings. The applicant is requesting the pump station as the topography of the development site such that it is not possible to extend a main line sewer within a public street and serve by a gravity feed system every portion of the buildings to be constructed within this development. The Sanitary Sewer Pumping Station would be located at the southernmost end of the development (Lot 1) and provided service to the lots running north along a new road called Azalea Forest Drive. The private sanitary system would tie into the City's public system on Monte Vista Avenue by a private sanitary easement through 242 Monte Vista Avenue **(Attachment F).**

**Vicinity and Zoning Map**



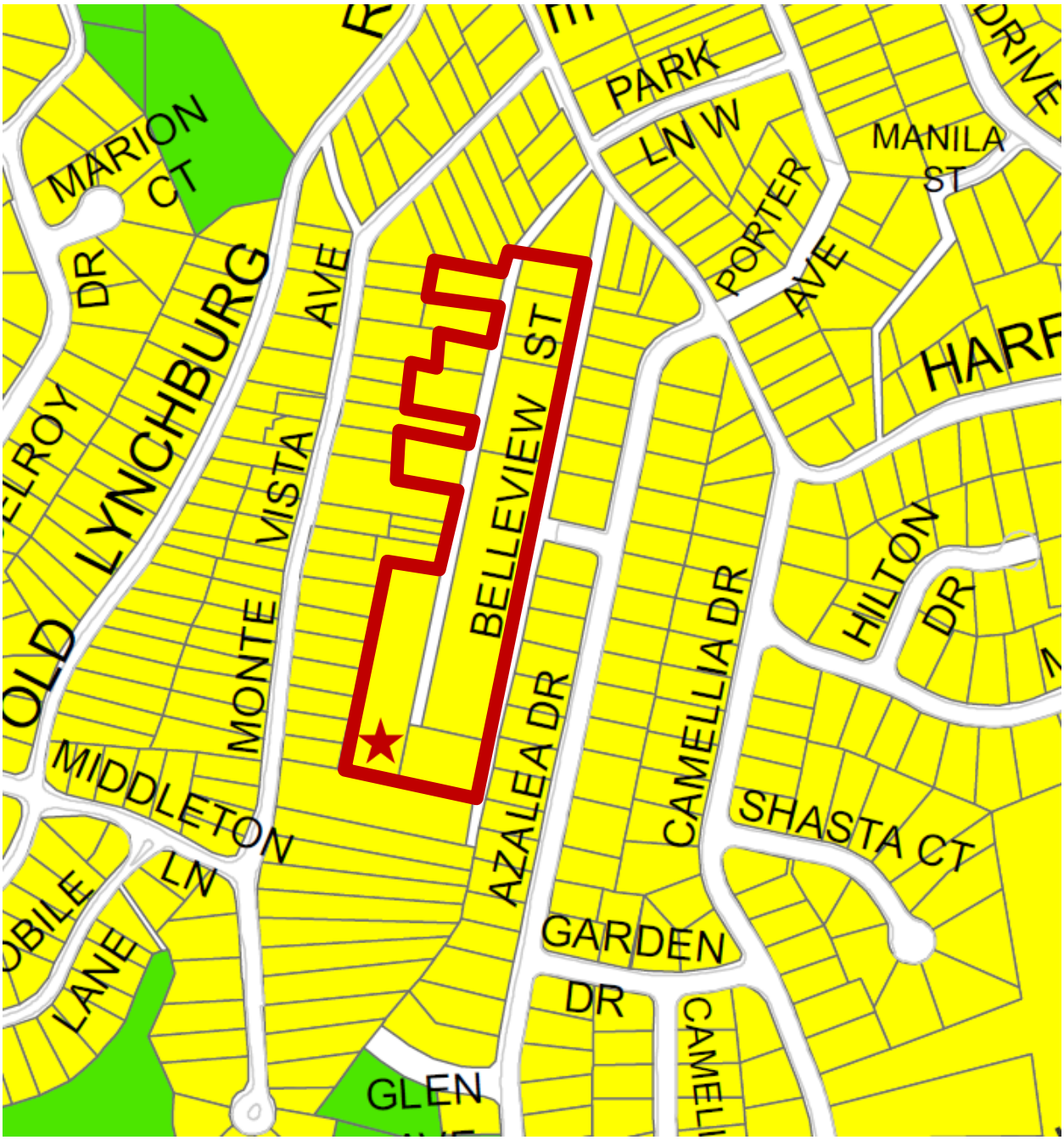
**Light Yellow:** (R-1) Residential, **Dark Yellow:** (R-1S) Residential

★ Location of Sanitary Pump Station

**2018 Aerial**


★ Location of Sanitary Pump Station

**2013 Comprehensive Plan Land Use Map**




**Yellow:** Low Density Residential, **Green:** Park or Preserved Open Space

★ Location of Sanitary Pump Station

**Standard of Review**

City Council may grant an applicant a special permit or special use permit, giving consideration to a number of factors set forth within Zoning Ordinance Sec. 34-157. If Council finds that a proposed use or development will have potentially adverse impacts, and if Council identifies development conditions that could satisfactorily mitigate such impacts, then Council may set forth reasonable conditions within its SUP approval. The role of the Planning Commission is to make an advisory recommendation to the City Council, as to

(i) whether or not Council should approve a proposed SUP and if so,
(ii) whether there are any reasonable development conditions that could mitigate potentially adverse impacts of the propose use or development.

Section 34-157 of the City's Zoning Ordinance lists a number of factors that Council will consider in making a decision on a proposed SUP. Following below is staff's analysis of those factors, based on the information provided by the applicant.

**34-157(1) whether the proposed use or development will be harmonious with existing patterns of use and development within the neighborhood.**

The properties immediately surrounding the subject property are described as:

| Direction | Zoning District | Current Use |
|---|---|---|
| East | R-1S | Residential Dwellings |
| South | R-1S | Residential Dwellings |
| West | R-1S | Residential Dwellings |
| North | R-1S | Future Residential Dwellings |

The uses surrounding the subject property are mostly detached single family dwellings. Some of the surrounding properties are legal nonconforming (duplexes) or have legal accessory dwelling units. In addition, Azalea Park and the Fry's Spring Beach Club are in close proximity to the proposed pump station.

**Staff Analysis:** Per Sec. 34-420 Utility Facilities are permitted in residentially zoned districts through approval of a SUP. Sec. 34-1200 defines Utility Facilities as:

*Utility facilities* means and refers to the following: sewage treatment plants, sewer pumping stations, water treatment plants, water pumping stations, gas regulator facilities, gas distribution facilities, incinerators and electric power transformer substations, and utility transmission line alignments and towers owned by public service corporations but which are not governed by city franchise arrangements.

The site plan **(Attachment F)** and application materials **(Attachment A - G)** propose a below ground Sanitary Sewer Pumping Station located on Lot 1 of a by-right single family detached dwelling unit development. In addition to the belowground portion, a generator on a five (5) feet by four (4) feet concrete pad and a five (5) feet by three (3) feet, by five (5) feet shed inclosing the entrance to the pump will be located aboveground. A sixty inch 60 (five (5) feet) fence will enclose the complete facility and will be located at the southern end of a residential lot (Lot 1 on the proposed site plan). The Sanitary Sewer Pumping Station will be within a private sanitary easement and maintained by an HOA. The Sanitary Sewer Pumping Station will be accessible for maintenance by a utility maintenance access road, and easement, running through Lot 1.

**34-157(2) whether the proposed use or development and associated public facilities will substantially conform to the city's comprehensive plan.**
The applicant's own analysis of the development's consistency with the Comprehensive Plan, as required by Z.O. Sec. 34-41(d)(2), is attached **(Attachment B)**

Typically this section would outline specific areas of the Comprehensive Plan for which the proposed use may or may not be in compliance. The 2013 Comprehensive Plan lacks detailed information related to a private Sanitary Sewer Pumping Station as a use. Below is one section to consider in making a recommendation to City Council:

**A. Community Facilities**
**Goal 6 Wastewater Infrastructure**
Improve wastewater infrastructure to provide effective and efficient sanitary sewer services to residents, to accommodate the zoned and projected densities and uses in the City and to protect public health and environment quality.

> **6.2:** Emphasize the annual maintenance of wastewater facilities and continue to identify and complete improvement projects that could include increasing the size of pipes to enlarge the system's capacity, relocating main lines that were built on private property or building new main lines to extend the system.

Comprehensive Plan
The 2013 General Land Use Plan Map calls for the subject properties to be Low Density Residential. Low Density Residential, as described within the Land Use Map, includes all land occupied by single or two-family type housing. The density in these areas by-right should be no greater than 15 dwelling units per acre.

**Staff Analysis:** As noted above, the 2013 Comprehensive Plan provides little guidance related to private Sanitary Sewer Pumping Station. The installation of a Sanitary Sewer

Pumping Station on the Subject Property would not change the land use designation as the primary use of the property would be a single family detached dwelling and staff finds the Subject Property would still be compliant with the 2013 General Land Use Plan Map.

**34-157(3) whether proposed use or development of any buildings or structures will comply with all applicable building code regulations.**

Based on the information contained within the application **(Attachments A - G)** the proposed development would likely comply with applicable building code regulations. However, final determinations cannot be made prior to having the details required for building permit approvals.

**34-157(4) whether the proposed use or development will have any potentially adverse impacts on the surrounding neighborhood, or the community in general; and if so, whether there are any reasonable conditions of approval that would satisfactorily mitigate such impacts. Potential adverse impacts to be considered include, but are not necessarily limited to, the following:**

a) **Traffic or parking congestion**

The pump station will be accessible for maintenance by a small access road and easement on Lot 1.

**Staff Analysis:** No traffic or parking issue will be related to the use of private Sanitary Sewer Pumping Station. Staff recommends that access to the pump station should be maintained at all times. Staff is concerned that additional infrastructure is being proposed near the pump station, a BMP with an outflow pipe. Staff recommends the road be relocated or constructed in a way that the outflow pipe from the BMP is not damaged. Staff also recommends that parking be prohibited at the entrance to the access road.

b) **Noise, lights, dust, odor, fumes, vibration, and other factors which adversely affect the natural environment**

The proposed development could result in an increase in noise, odor, and vibration if not operated properly by the HOA. The applicant's own analysis address these issues **(Attachment B).**

**Staff Analysis:** If properly installed and maintained by the HOA, the Sanitary Sewer Pumping Station would have minimal impacts related to noise, lights, dust, odor, fumes, vibrations, and other factors. Staff has contacted municipalities around the state to determine the most common impacts related to sanitary pump stations. In the communities staff talked to (Chesterfield County, Greene County and Nelson

County) odor was the most common issue. It should be noted that the systems in other communities are larger and run by the local government. Chesterfield County does have two private Sanitary Sewer Pumping Station, but they serve large commercial and retail development. Larger pump stations that are not properly maintained could produce above normal noise and odor. Nelson County adds a chemical to their pump stations in the summer to eliminate sewer odor. Proper maintenance is the key to a successfully pump station. Sanitary pump stations that are not properly maintained can produce problems related to noise (loud generators), odor (improper venting or release of sewer fumes), and environment impacts (cracks or leaking storage belowground).

**Light:** No lighting is proposed with the pump station.

**Dust:** No dust will be produced.

**Odor and Noise:** As noted in the SUP application the proposed Sanitary Sewer Pumping Station has the potential to create odor, and noise impacts for adjacent properties. Through the use of charcoal filters on vents, the odor impact can be reduced. The addition of chemicals can also aide in reducing odors. Furthermore, a station of this size usually has little noise impact during normal operations, however the backup generator (in the event of a power outage) will increase the noise when in use. Also, an audio and visual alarm should be provided at the station in the event of an emergency condition. When these alarms go off, there will be an audible and visual impact.

**Vibrations:** With any type of Sanitary Sewer Pumping Station a small amount of vibration could occur, but would be negligible to the surrounding homes. The pumps will be located underground and any vibration they produce should be contained.

**Visibility.** The only portion of the pump station above ground will be a small generator and shed. The generator and shed will be screened by a five foot (5) fence and landscaping. Staff recommends requiring the fence and providing an S-2 level of screening.

**Operation**: Staff finds that a successful private sanitary pump station needs to be well funded, and maintained on a regular basis. To insure the pump station will not impact the surrounding environment, staff would like maintenance records provided on a yearly basis. Staff would also like documentation provided annually that the HOA is properly funding the operation and maintenance of the pump station

**c) Displacement of existing residents or businesses**

The subject property is currently vacant.

**d) Discouragement of economic development activities that may provide desirable employment or enlarge the tax base**

As noted above, the subject property is vacant and any use has the potential to add to the City's tax base.

**e) Undue density of population or intensity of use in relation to the community facilities existing or available**

The City's Comprehensive Plan identifies community facilities as fire protection, police enforcement, and emergency response services; public utilities and infrastructure; and public parks and recreation opportunities.

**Staff Analysis:** the request for a SUP has no residential component and would not increase undue density on the subject property above the by-right use. The sanitary pump station could impact community facilities as it relates to utilities and infrastructure. The City's Department of Utilities reviewed the application and provided the following comments:

1. The Department of Utilities has reviewed the SUP application including the Preliminary Engineering Report (PER) for the proposed Sanitary Sewer Pumping Station and believes that a private sanitary sewer lift station (a/k/a "Pumping Station") safely and reliably provide sanitary sewer service for the proposed development. According to Utilities Engineers, it is not possible to extend a main line sewer within a public street and serve by a gravity feed system every portion of the buildings within this proposed development. Therefore, a private main/ collector system is permitted under the City's Utilities Code.

   Sec. 31-107 of the City's Utilities Code states that, "Before a private sewer collector system may be connected with the city sewerage system…the size, location and construction shall be inspected and approved by the director of [utilities]". The Department of Utilities will provide technical comments on the PER itself that will need to be addressed prior to approval of the Preliminary Site Plan and prior to construction of dwelling units within the development to be served by this system. Utilities will require certified plans and profile designs to be provided.

2. To the best of staff's knowledge, there are no sanitary sewer pump stations in the City (public or private) of a nature and size similar to what is proposed. The City-owned sanitary sewer system is a gravity system, therefore the City does not own or maintain any sewer pump stations. In light of this, the City will not take it over for maintenance.

3. Within the City's utilities code, the options for a private main/ system or a private main that crosses adjacent private property and provides gravity service, or an alternative plan using a sewage pumping system. See City Code §31-112(b). In this case, that translates into two possibilities: (i) a private gravity-fed system that would run south toward Azalea Park for 600-700 feet, which would require crossing 10-15 private properties outside the proposed development, or (ii) a sewage pumping system connected to the City's public system (i.e., a public main within Monte Vista Avenue) by a private main approximately 150-200 feet in length, across one property located outside the development. In the circumstances of this particular location, there is no clear indication that one private option or the other is clearly better overall for the public health and safety.

**f) Reduction in the availability of affordable housing in the neighborhood**

The subject property is vacant and the SUP does not include a residential component.

**Staff Analysis:** Sec. 34-12 requires onsite affordable dwelling units for residential projects that are approved through a rezoning or special use permit that exceeds 1.0 FAR (Floor Area Ratio). This application is for the construction and operation of a private Sanitary Sewer Pumping Station with no residential component. The Sanitary Sewer Pumping Station would serve a planned residential development that is by-right with no request for increased density.

**g) Impact on school population and facilities**

The subject property is vacant and the SUP does not include a residential component.

**h) Destruction of or encroachment upon conservation or historic districts**

The subject property is not within or encroach upon any design control district.

**i) Conformity with federal, state and local laws, as demonstrated and certified by the applicant**

Based on the information contained within the application **(Attachment A - G),** the proposed development would likely comply with applicable federal and state laws. As to local ordinances (zoning, water protection, etc.), it generally appears that this project, as detailed in the application, can be accommodated on this site in compliance with applicable local ordinances; however, final determinations cannot be made prior to receipt of a final site plan submission for the proposed

development In a preliminary review of the site plan that accompanies this application, staff has found that the Sanitary Sewer Pumping Station and generator will need to be shifted to comply with

> Sec. 34-1105(b)(2) *Shall not be nearer than five (5) feet to any side or rear lot line. However, when a garage situated within a required rear yard is entered from an alley, the garage shall not be nearer than ten (10) feet to the property line adjacent to the alley.*

The structures will need to be shifted approximately two feet to comply. This is not intended to be a full list of site plan requirements and a full review at final site plan submission will generate additional comments; however, staff believes the proposed use can be accommodated on this site with a few adjustments during the final site plan review process.

**j) Massing and scale of project**

The application materials **(Attachment A - G)** give a description of what the shed and generator would look like. It also indicates on the site plan that the shed enclosing the entrance to the pump station would be five (5) feet by three (3) feet by five (5) feet. This is smaller than most accessory buildings in residential neighborhoods.

**Staff Analysis:** The massing and footprint are consistent with accessory buildings found within the R-1 and R-1S residential districts.

**34-157(5) whether the proposed use or development will be in harmony with the purposes of the specific zoning district in which it will be placed;**

| | |
|---|---|
| **1949** | A-1 Residence |
| **1958** | R-2 Residential |
| **1976** | R-2 Residential |
| **1991** | R-2 Residential |
| **2003** | R-1S Residential |
| **Current** | R-1S Residential |

According to Z.O. Sec. 34-350(a)(2) R-1S zoning districts are established to provide and protect quiet, low-density residential areas wherein the predominant pattern of residential development is the single-family dwelling and R-1(S) ("small lot"), consisting of low-density residential areas characterized by small-lot development;

Staff Analysis: Staff finds that with proper conditions the use would be harmonious with the R-1S zoning district.

**34-157(6) whether the proposed use or development will meet applicable general and specific standards set forth within the zoning ordinance, subdivision regulations, or other city ordinances or regulations; and**

Based on the information contained within the application and site plan **(Attachment F),** the proposed Sanitary Sewer Pumping Station can be constructed and operated in compliance with applicable local ordinances, subject to verification via review of certified plans and profile designs, and details within a final site plan submission for the development.

**34-157(7) when the property that is the subject of the application for a special use permit is within a design control district, city council shall refer the application to the BAR or ERB, as may be applicable, for recommendations as to whether the proposed use will have an adverse impact on the district, and for recommendations as to reasonable conditions which, if imposed, that would mitigate any such impacts. The BAR or ERB, as applicable, shall return a written report of its recommendations to the city council.**

The subject property is not located in a design control district.

**Public Comments Received**

Community Meeting Required by Z.O. Sec. 34-41(c)(2)

On December 12, 2018 the applicant held a community meeting at Cherry Avenue Christian Church as part of the monthly Fry's Spring Neighborhood Association meeting. The applicant gave an overview of the project and how the pump station would work. The community voiced the following questions and concerns with the proposed Sanitary Sewer Pumping Station:

- Would the pump station be noisy?
- Would any smell be detectable?
- What kind of structure would house the pumps and operating equipment?
- What would happen if the power went out?
- Will it be screen from view?
- Have other communities used this type of system?
- Who will be responsible for maintaining it?

On December 11, 2018 the Planning Commission held a preliminary discussion on the SUP application and voiced the following concerns:

- What other places have something like this and how have they worked?
- What will you see above the ground?
- How will the HOA easements work?
- Are there other options than an HOA running the pump station?

- Could the City charge the home owners if it had to take over the pump station?
- What would it take for the subdivision to have a gravity fed sewer system?

As of the date of this report (March 22, 2019), staff has received five emails related to the SUP application and three phone calls. The following concerns were expressed **(Attachment H):**

- Where is the pump station going to be?
- How much noise and light pollution will be expected?
- What will be done to prevent any type of degradation to the land because is sloped?
- What impact will the construction of the pump station have on our property?
- The sewer system is already overloaded and will this affect future taxes? A residential neighborhood is no place for sewage treatment plant.
- Removal of trees for the pump station and surrounding development is not appropriate.
- The development will displace wildlife and impact the environment.
- Smells and odor
- Underground environmental issues.

Any emails received after this report was prepared will be forwarded to Planning Commission and City Council.

**Staff Recommendation**

Staff recommends the Planning Commission focus on the following items during review:

- Under Sec. 34-420 utility facilities are allowed in R-1S Zoning Districts, with a special use permit. Is this location suitable per the regulations listed in this report for this use?
- Potential Adverse Impacts a sanitary pump station could have on the surrounding residential neighborhood and what, if any, conditions could mitigate them.

**Staff Summary**

**34-157(1) whether the proposed use or development will be harmonious with existing patterns of use and development within the neighborhood.**

Yes. The proposed use, with conditions, would be harmonious with existing patterns.

**34-157(2) whether the proposed use or development and associated public facilities will substantially conform to the city's comprehensive plan.**

The proposed development and associated public facilities generally conform to the City's Comp Plan.

**34-157(3) whether proposed use or development of any buildings or structures will comply with all applicable building code regulations.**
Yes, based on preliminary information provided in connection with this application; however, this is not a determination, because the City is not yet reviewing specific plans, profiles, designs, etc. This is just a confirmation that this type of system is authorized under our local codes and the state building and health codes, if designed, operated and maintained properly.

**34-157(4) whether the proposed use or development will have any potentially adverse impacts on the surrounding neighborhood, or the community in general; and if so, whether there are any reasonable conditions of approval that would satisfactorily mitigate such impacts. Potential adverse impacts to be considered include, but are not necessarily limited to, the following:**
The proposed use could have potential adverse impacts on the surrounding neighborhood such as noise and odor if not properly maintained, but could be acceptable with reasonable conditions.

**34-157(5) whether the proposed use or development will be in harmony with the purposes of the specific zoning district in which it will be placed;**
Yes.

**34-157(6) whether the proposed use or development will meet applicable general and specific standards set forth within the zoning ordinance, subdivision regulations, or other city ordinances or regulations; and**
Yes.

**34-157(7) when the property that is the subject of the application for a special use permit is within a design control district, city council shall refer the application to the BAR or ERB, as may be applicable, for recommendations as to whether the proposed use will have an adverse impact on the district, and for recommendations as to reasonable conditions which, if imposed, that would mitigate any such impacts. The BAR or ERB, as applicable, shall return a written report of its recommendations to the city council.**
Not Applicable.

**Recommended Conditions**
Staff recommends that the request for a Special Use Permit authorizing a Utility Facility (Sanitary Sewer Pumping Station) could be approved, subject to reasonable conditions and safeguards, as follows:

The Utility Facility ("Sanitary Sewer Pumping Station") to be approved by this SUP would consist only of (i) a below-ground Sanitary Sewer Pumping Station to be located on "Lot 1" of the proposed common plan of development referred to as "Belleview Cottages", which is a 41-lot single-family detached dwelling unit development, (ii) an above-ground generator on a five (5) feet by four (4) feet concrete pad; (iii) an above-ground shed, five (5) feet by three (3) feet, by five (5) feet in dimension, enclosing the entrance to the pump; (iv) a fence enclosing all of these components of the utility facility, not less than five (5) feet tall; and (v) a private sewer main connecting the Sanitary Sewer Pumping Station to the public sanitary sewer main in Monte Vista Avenue. Any of the above-referenced dimensions may be changed by not more than ten percent (10%), if necessary for compliance with state or local laws, ordinances, regulations, or legal requirements, or for the proper operation of the Sanitary Sewer Pumping Station. . Staff believes that the following conditions of approval are necessary in order to mitigate potential adverse land-use impacts of the Sanitary Sewer Pumping Station:

1. **Operation and Maintenance**—the owner(s) of land within the common plan of development referred to at the time of this SUP application as the "Belleview Cottages" development shall be responsible for constructing, operating and maintaining the Sanitary Sewer Pumping Station, through actions of a homeowners' association (HOA) or otherwise. A maintenance agreement shall be recorded in the land records imposing this obligation. Annual inspections shall be conducted of the Sanitary Sewer Pumping Station and all of its components, and a copy of a written annual inspection report shall be provided to the City's Director of Utilities by the inspector within thirty (30) days after the inspection is conducted. If an HOA will be the entity responsible for operation and maintenance of the facility, then the Secretary of the HOA shall also maintain a complete (ongoing) historical record of all inspections, maintenance, repairs and replacement(s) performed.

2. **Access Road**--The Sanitary Sewer Pumping Station shall be accessed from within the residential development, by a road that is constructed and maintained in a manner to accommodate large utility repair vehicles ("Access Road"), and this Access Road shall be constructed within a recorded easement across "Lot 1". . No parking of vehicles shall be allowed in any location that would block the entrance to the Access Road, or that would block the ability of emergency vehicles or maintenance vehicles to get to the Sanitary Sewer Pumping Station. The owners of all lots within the development to be served by the Sanitary Sewer Pumping Station shall be responsible for the costs of constructing and maintaining the Access Road, through actions of a homeowners' association, or otherwise. A maintenance agreement shall be recorded in the land records imposing this obligation.

3. **Location of SWM Facilities--**Stormwater management facilities (including, without limitation, any outfall pipe), and stormwater best management practices (BMPs), shall be sited and constructed so that they are entirely outside the Access Road easement area.

4. **Screening of "Lot 1"--**In addition to the 5 foot fence enclosing the components of the Sanitary Sewer Pumping Station, landscape plantings shall be installed around the perimeter of "Lot 1", of the S-2 type referenced in City Code §34-871.

## Suggested Motions

1. I move to recommend that City Council should approve **SP18-00009,** subject to the reasonable conditions recommended by staff within the staff report prepared for this April 9, 2019 planning commission meeting.

2. I move to recommend that City Council should approve **SP18-00009,** subject to the following reasonable conditions:
   a. _____
   b. _____
   c. _____
   d. _____
   e. _____
   f. _____
   g. _____
   h. _____

**OR,**

3. I move to recommend that City Council should deny approval of **SP18-00009.**

## Attachments

- **A.** Application Dated October 15, 2018
- **B.** Project Narrative Dated October 23, 2018
- **C.** Supplemental Information Dated February 12, 2019
- **D.** Sewer Basin Dated February 12, 2019
- **E.** Sanitary Sewer Survey Dated February 12, 2019
- **F.** Preliminary Site Plan Dated January 19, 2018 and a Revision Date of January 10, 2019
- **G.** Updated Preliminary Engineering Report Dated February 11, 2019 and a Revision Date of March 11, 2019
- **H.** Emails from concerned residents received prior to this report.

Attachment A

# City of Charlottesville

## Application for Special Use Permit

**Project Name:** Belleview Pump Station

Address of Property: _____

Tax Map and Parcel Number(s): _____

**Current Zoning District Classification:** R1-S

**Comprehensive Plan Land Use Designation:** Residential

**Is this an amendment to an existing SUP?** NO

**If "yes", provide the SUP #:** _____

**Applicant:** Core Azalea LLC

**Address:** 600 E. Water St. Suite H Cville VA 22902

**Phone:** 434 466 6566 **Email:** andrew@corecville.com

**Applicant's Role in the Development (check one):**

☑ Owner ☐ Owner's Agent ☐ Designer ☑ Contract Purchaser

**Owner of Record:** Core Azalea LLC & Azalea Cottages LLC

**Address:** 600 E. Water Sto Suite H Cville VA 22902

**Phone:** 434 466 6566 **Email:** andrew@corecville.com

**Reason for Special Use Permit:**

☐ Additional height: _____ feet

☐ Additional residential density: _____ units, or _____ units per acre

☐ Authorize specific land use (identify) _____

☑ Other purpose(s) (specify City Code section): _____

**(1) Applicant's and (2) Owner's Signatures**

**(1) Signature** _____ **Print** Andrew Baldwin **Date** 10/17/18

Applicant's (Circle One): (LLC Member) LLC Manager Corporate Officer (specify) _____

Other (specify): _____

**(2) Signature** _____ **Print** Rick Boyer **Date** _____

Owner's (Circle One): (LLC Member) LLC Manager Corporate Officer (specify) _____

Other (specify): _____



SP18-0009

Attachment A

# City of Charlottesville

## Application for Special Use Permit

**Project Name:** Belleview Pump Station

Address of Property: _____

Tax Map and Parcel Number(s): _____

**Current Zoning District Classification:** R1-S

**Comprehensive Plan Land Use Designation:** Residential

**Is this an amendment to an existing SUP?** NO

**If "yes", provide the SUP #:** _____

**Applicant:** Core Azalea LLC

**Address:** 600 E. Water St. Suite H Cville VA 22902

**Phone:** 434 466 6566 **Email:** andrew@coreville.com

**Applicant's Role in the Development (check one):**

☑ Owner ☐ Owner's Agent ☐ Designer ☑ Contract Purchaser

**Owner of Record:** Core Azalea LLC & Azalea Cottages LLC

**Address:** 600 E. Water Str Suite H Cville VA 22902

**Phone:** 434 466 6566 **Email:** andrew@coreville.com

**Reason for Special Use Permit:**

☐ Additional height: _____ feet

☐ Additional residential density: _____ units, or _____ units per acre

☐ Authorize specific land use (identify) _____

☑ Other purpose(s) (specify City Code section): _____

**(1) Applicant's and (2) Owner's Signatures**

(1) Signature _____ Print Andrew Baldwin Date 10/17/18

Applicant's (Circle One): (LLC Member) LLC Manager Corporate Officer (specify) _____

Other (specify): _____

(2) Signature _____ Print Rick Boyor Date 10-18-18

Owner's (Circle One): (LLC Member) LLC Manager Corporate Officer (specify) _____

Other (specify): _____

Attachment A

# City of Charlottesville

## Pre-Application Meeting Verification

**Project Name:** Belleview Pump Station

**Pre-Application Meeting Date:** 10/15/2018

**Applicant's Representative:** Andrew Baldwin / Justin Shimp

**Planner:** Matt Alfele

**Other City Officials in Attendance:**

Roy Nester
Hugh Blake

**The following items will be required supplemental information for this application and must be submitted with the completed application package:**

1. HOA Doc
2. Examples of other Pump Stations
3. Preliminary Engineering Report (PER)
4. Downstream System Doc.
5. Cook & Roy's comments from the August 7, 2018 Comment letter.

**Planner Signature:**

Attachment A

# City of Charlottesville

## Application Checklist

**Project Name:** Belleview Pump Station

**I certify that the following documentation is ATTACHED to this application:**

- [x] 34-158(a)(1): a site plan (ref. City Code 34-802(generally); 34-1083(communications facilities)
- [x] 34-158(a)(3): Low-impact development (LID) methods worksheet (required for developments that include non-residential uses, and developments proposing 3 or more SFDs or TFDs)
- [NA] ~~34-158(a)(4): a building massing diagram, and building elevations (required for applications proposing alteration of a building height or footprint, or construction of any new building(s))~~
- [NA] ~~34-158(a)(5) and 34-12: affordable housing data. (i) how many (if any) existing dwelling units on the property are an "affordable dwelling unit" by the city's definitions? (ii) Will existing affordable units, or equivalent affordable units, remain following the development? (iii) What is the GFA of the project? GFA of residential uses? GFA of non-residential uses?~~
- [x] 34-157(a)(1) Graphic materials that illustrate the context of the project, and a narrative statement as to compatibility with existing patterns of use and development
- [x] 34-157(a)(2) Narrative statement: applicant's analysis of conformity with the Comprehensive Plan
- [x] 34-157(a)(3) Narrative statement: compliance with applicable USBC provisions
- [x] 34-157(a)(4) Narrative statement identifying and discussing any potential adverse impacts, as well as any measures included within the development plan, to mitigate those impacts
- [x] 34-158(a)(6): other pertinent information (narrative, illustrative, etc.)
- [x] All items noted on the Pre-Application Meeting Verification.

**Applicant** Core Azulea LLC

**Signature** _____ **Print** Andrew Baldwin **Date** 10/17/18

**By Its:** Owner/Member

(For entities, specify: Officer, Member, Manager, Trustee, etc.)

Attachment A

# City of Charlottesville

## Community Meeting

**Project Name:** Belleview Pump Station

Section 34-41(c)(2) of the Code of the City of Charlottesville (adopted _____, 2015) requires applicants seeking rezonings and special use permits to hold a community meeting. The purpose of a community meeting is to provide citizens an opportunity to receive information about a proposed development, about applicable zoning procedures, about applicable provisions of the comprehensive plan, and to give citizens an opportunity to ask questions. **No application for a rezoning shall be placed on any agenda for a public hearing, until the required community meeting has been held and the director of neighborhood development services determines that the application is ready for final review through the formal public hearing process.**

By signing this document, the applicant acknowledges that it is responsible for the following, in connection to the community meeting required for this project:

1. Following consultation with the city, the applicant will establish a date, time and location for the community meeting. The applicant is responsible for reserving the location, and for all related costs.
2. The applicant will mail, by U.S. mail, first-class, postage pre-paid, a notice of the community meeting to a list of addresses provided by the City. The notice will be mailed at least 14 calendar days prior to the date of the community meeting. The applicant is responsible for the cost of the mailing. At least 7 calendar days prior to the meeting, the applicant will provide the city with an affidavit confirming that the mailing was timely completed.
3. The applicant will attend the community meeting and present the details of the proposed application. If the applicant is a business or other legal entity (as opposed to an individual) then the meeting shall be attended by a corporate officer, an LLC member or manager, or another individual who can speak for the entity that is the applicant. Additionally, the meeting shall be attended by any design professional or consultant who has prepared plans or drawings submitted with the application. The applicant shall be prepared to explain all of the details of the proposed development, and to answer questions from citizens.
4. Depending on the nature and complexity of the application, the City may designate a planner to attend the community meeting. Regardless of whether a planner attends, the City will provide the applicant with guidelines, procedures, materials and recommended topics for the applicant's use in conducting the community meeting.
5. On the date of the meeting, the applicant shall make records of attendance and shall also document that the meeting occurred through photographs, video, or other evidence satisfactory to the City. Records of attendance may include using the mailing list referred to in #1 as a sign-in sheet (requesting attendees to check off their name(s)) and may include a supplemental attendance sheet. The City will provide a format acceptable for use as the supplemental attendance sheet.

**Applicant:** Core Azalea LLC

**By:** Andrew Baldwin

**Signature** _____ **Print** Andrew Baldwin **Date** 10/17/14

**Its:** Owner / Manager (Officer, Member, Trustee, etc.)

Attachment A

# City of Charlottesville

## Owner's Authorizations

**(Not Required)**

### Right of Entry- Property Owner Permission

I, the undersigned, hereby grant the City of Charlottesville, its employees and officials, the right to enter the property that is the subject of this application, for the purpose of gathering information for the review of this Special Use Permit application.

**Owner:** Core Azalea LLC **Date** 10/15/18

**By (sign name):** _____ **Print Name:** Andrew Baldwin: owner manager

**Owner's: LLC Member** **LLC Manager** **Corporate Officer (specify):** _____

**Other (specific):** _____

### Owner's Agent

I, the undersigned, hereby certify that I have authorized the following named individual or entity to serve as my lawful agent, for the purpose of making application for this special use permit, and for all related purposes, including, without limitation: to make decisions and representations that will be binding upon my property and upon me, my successors and assigns.

**Name of Individual Agent:** Andrew Baldwin

**Name of Corporate or other legal entity authorized to serve as agent:** Core Azalea LLC

**Owner:** Core Azalea LLC & Azalea Cottages LLC **Date:** 10/17/18

**By (sign name):** _____ **Print Name:** Andrew Baldwin

**Circle one:** Rick Beyer

**Owner's: LLC Member** **LLC Manager** **Corporate Officer (specify):** _____

**Other (specific):** _____

Attachment A

# City of Charlottesville

## Owner's Authorizations

**(Not Required)**

### Right of Entry- Property Owner Permission

I, the undersigned, hereby grant the City of Charlottesville, its employees and officials, the right to enter the property that is the subject of this application, for the purpose of gathering information for the review of this Special Use Permit application.

**Owner:** Core Azalea LLC **Date** 10/15/18

**By (sign name):** _____ **Print Name:** Andrew Baldwin: owner manager

**Owner's: LLC Member** **LLC Manager** **Corporate Officer (specify):** _____

**Other (specific):** _____

### Owner's Agent

I, the undersigned, hereby certify that I have authorized the following named individual or entity to serve as my lawful agent, for the purpose of making application for this special use permit, and for all related purposes, including, without limitation: to make decisions and representations that will be binding upon my property and upon me, my successors and assigns.

**Name of Individual Agent:** Andrew Baldwin

**Name of Corporate or other legal entity authorized to serve as agent:** Core Azalea LLC

**Owner:** Core Azalea LLC & Azalea Cottages LLC **Date:** 10/17/18

**By (sign name):** _____ **Print Name:** Andrew Baldwin

**Circle one:** _____ Rick Beyer

**Owner's: LLC Member** **LLC Manager** **Corporate Officer (specify):** _____

**Other (specific):** _____

Attachment A

# City of Charlottesville

## Disclosure of Equitable Ownership

Section 34-8 of the Code of the City of Charlottesville requires that an applicant for a special use permit make complete disclosure of the equitable ownership "real parties in interest") of the real estate to be affected. Following below I have provided the names and addresses of each of the real parties in interest, including, without limitation: each stockholder or a corporation; each of the individual officers and directors of a corporation; each of the individual members of an LLC (limited liability companies, professional limited liability companies): the trustees and beneficiaries of a trust, etc. Where multiple corporations, companies or trusts are involved, identify real parties in interest for each entity listed.

**Name** Core Azalea LLC **Address** 600 E. Water St. Suite H Charlottesville VA 22902

**Name** Azalea Cottages LLC **Address** _____

**Name** _____ **Address** _____

**Name** _____ **Address** _____

**Attach additional sheets as needed.**

**Note:** The requirement of listing names of stockholders does not apply to a corporation whose stock is traded on a national or local stock exchange and which corporation has more than five hundred (500) shareholders.

**Applicant:** Core Azalea LLC

**By:**

**Signature** _____ **Print** Andrew Baldwin **Date** 10/17/16

**Its:** Owner/Manager (Officer, Member, Trustee, etc.)

Attachment A

# City of Charlottesville

## Disclosure of Equitable Ownership

Section 34-8 of the Code of the City of Charlottesville requires that an applicant for a special use permit make complete disclosure of the equitable ownership "real parties in interest") of the real estate to be affected. Following below I have provided the names and addresses of each of the real parties in interest, including, without limitation: each stockholder or a corporation; each of the individual officers and directors of a corporation; each of the individual members of an LLC (limited liability companies, professional limited liability companies): the trustees and beneficiaries of a trust, etc. Where multiple corporations, companies or trusts are involved, identify real parties in interest for each entity listed.

**Name** Core Azalea LLC **Address** 600 E. Water St. Suite H Co'ville VA 22902

**Name** Azalea Cottages LLC **Address** _____

**Name** _____ **Address** _____

**Name** _____ **Address** _____

**Attach additional sheets as needed.**

**Note:** The requirement of listing names of stockholders does not apply to a corporation whose stock is traded on a national or local stock exchange and which corporation has more than five hundred (500) shareholders.

**Applicant:** Core Azalea LLC

**By:**

**Signature** _____ **Print** Andrew Baldwin **Date** 10/17/16

Its: Owner/Manager (Officer, Member, Trustee, etc.)

Attachment A

# City of Charlottesville

## Fee Schedule

**Project Name:** Belleview Pump Station

| Application Type | Quantity | Fee | Subtotal |
|---|---|---|---|
| Special Use Permit (Residential) | 1 | $ 1,500 | 1500 |
| Special Use Permit (Mixed Use/Non-Residential) | | $ 1,800 | |
| Mailing Costs per letter | | $1 per letter | |
| Newspaper Notice | | Payment Due Upon Invoice | |
| **TOTAL** | | | 1500 |

**Office Use Only**

**Amount Received:**_____ **Date Paid**_____ **Received By:** _____

**Amount Received:**_____ **Date Paid**_____ **Received By:** _____

**Amount Received:**_____ **Date Paid**_____ **Received By:** _____

**Amount Received:**_____ **Date Paid**_____ **Received By:** _____

Attachment A

# City of Charlottesville

## LID Checklist

**Project Name:** Belleview Pump Station

| LID Measure | LID Checklist Points | Points |
|---|---|---|
| **Compensatory Plantings** (see City buffer mitigation manual). 90% of restorable stream buffers restored. | 5 points or 1 point for each 18% of the total acreage | 0 |
| **Pervious pavers** for parking and driveways with stone reservoir for storage of 0.5 inches of rainfall per impervious drainage area. Surface area must be >1,000 ft.$^2$ or ≥ 50% of the total parking and driveway surface area. | 7 points or 1 point for each 7% of parking and driveway surface area. | 0 |
| **Shared parking** (must have legally binding agreement) that eliminates >30% of on-site parking required. | 5 points or 1 point for each 6% of parking surface eliminated. | 0 |
| **Impervious Disconnection**. Follow design manual specifications to ensure adequate capture of roof runoff (e.g. cisterns, dry wells, rain gardens) | 8 points | 0 |
| **Bioretention**. Percent of site treated must exceed 80%. Biofilter surface area must be ≥ 5% of impervious drainage area. | 8 points or 1 point for each 10% of site treated. | 0 |
| **Rain gardens.** All lots, rain garden surface area for each lot ≥ 200 ft.$^2$. | 8 points or 1 point for each 10% of lots treated. | 0 |
| **Designed/constructed swales.** Percent of site treated must exceed 80%, achieve non-erosive velocities, and able to convey peak discharge from 10 year storm. | 8 points or 1 point for each 10% of site treated. | 0 |
| **Manufactured sand filters, filter vaults** (must provide filtering rather than just hydrodynamic). Percent of site treated must exceed 80%. Sizing and volume for water quality treatment based on manufacturer's criteria. | 8 points or 1 point for each 10% of site treated. | 0 |
| **Green rooftop** to treat ≥ 50% of roof area | 8 points | 0 |
| **Other LID practices** as approved by NDS Engineer. | TBD, not to exceed 8 points | 0 |
| **Off-site contribution** to project in City's water quality management plan. This measure to be considered when on site constraints (space, environmentally sensitive areas, hazards) limit application of LID measures. Requires pre-approval by NDS Director. | 5 points | 0 |
| | **Total Points** | 0 |

**Applicant's Signature**

**Signature** _____ **Print** Andrew Baldwin **Date** 10/17/14

Attachment B

SHIMP ENGINEERING P.C.

PROJECT MANAGEMENT
CIVIL ENGINEERING
LAND PLANNING

October 23, 2018

Matthew Alfele
Neighborhood Development Services
610 East Market Street
Charlottesville, VA 22902

**Regarding:** **Belleview Pump Station Special Use Permit Request**
**Project Narrative**

## Project Proposal

Core Azalea, LLC, the contract purchaser and developer of TMP 20-121, TMP 20-125, TMP 20-126, TMP 20-129, TMP 20-142, TMP 20-144, TMP 20-145, TMP 20-147, & TMP 20-148 requests a Special Use Permit in accordance with Sec. 34-158 of Charlottesville Code to allow the construction and operation of a privately owned pump station to serve the proposed infill development on the subject property. The pump station will serve up to 49 proposed new single-family homes. The pump station will be privately owned by the Belleview Street HOA, and will be professionally designed and maintained.

| Acreage | Comp Plan Designation | Existing Zoning | Proposed Use |
|---|---|---|---|
| Total Parcel Area: 6.80 Ac<br>Pump Station will be built in a 0.31 Ac residential lot to serve the subdivision. | Low Density Residential | R-1S | Pump Station Operation within a Residential Lot |

## Existing Conditions:

The property is currently a vacant residential lot that was platted as part of the Monte Vista Neighborhood in the Fry's Spring area of Charlottesville. The property has never been developed but is bordered by the built-out single-family residential neighborhood along Monte Vista Avenue and Azalea Drive. This neighborhood is just north of Azalea Park and Moores Creek.

The proposed sanitary connection will be made to the sewer main under Monte Vista Ave. The system appears to be currently intact and joins to a large sanitary interceptor line roughly 1600 lf downstream of the connection.

Currently, the Monte Vista Ave sanitary sewer branch serves an estimated 107 single-family homes.

## Consistency with Comprehensive Plan:

The proposed pump station is consistent with the use shown on the 2013 adopted Comprehensive Plan map which shows this parcel as low density residential. To achieve a low-density residential development on this property, a sanitary sewer connection must be made. The developer has unsuccessfully reached out to neighboring property owners to obtain an easement for a standard gravity sewer connection along the back of their lots. This leaves the remaining option for connection via a pump station. Due to these conditions, the listed use of the Comprehensive Plan cannot be practicably achieved without a pump station.

Attachment B

**Compliance with USBC Provisions:**

The proposed pump station is new construction and will comply with all USBC provisions.

**Site Plan Narrative:**

The proposed pump station will be built in the back of residential Lot 1 (See Sheet C6 of the attached Site Plan). The pump station will be built in an easement and is located 80' from the nearest proposed home and 130' from the nearest neighboring existing home.

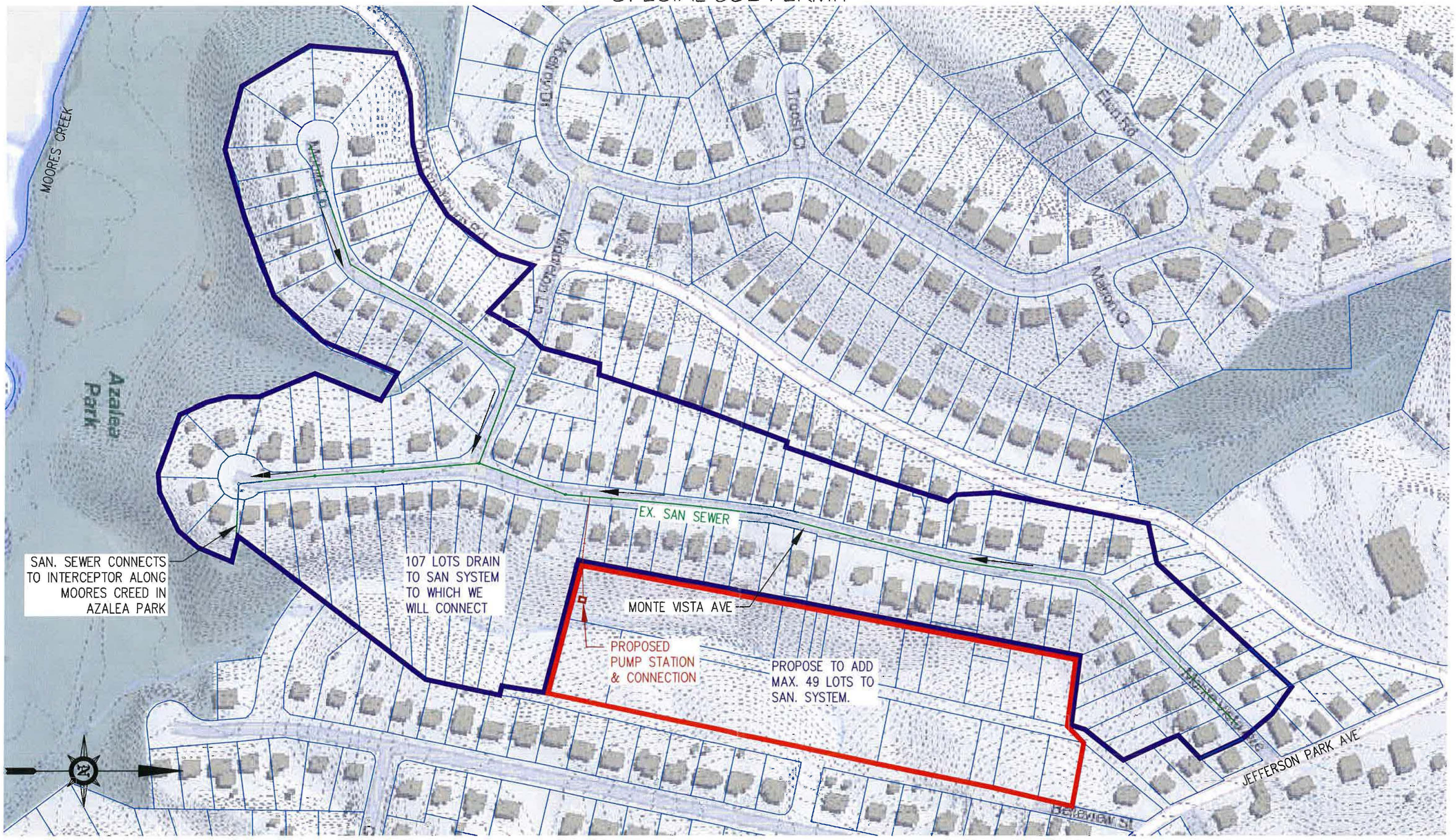
**Potential Adverse Impacts and Mitigation**

If properly designed, constructed, and operated, there will be no adverse impact to neighboring properties from this pump station operation. The system will comply with all applicable DEQ and VA Department of Health ordinances to endure the protection of the public. This system will be designed and operated so that potential adverse impact is eliminated. See below for the design choices ensuring this goal.

- The pump station will be installed underground.
  - Underground installation will remove noise when the pump operates
  - Underground installation will remove odors from the station – similar to sanitary manholes, residents and neighbors would have to stand on top of the pump station sump to detect unpleasant scents from the pump.
- The pump will be on a designed cycled operation.
  - Pumps are designed to cycle several times a day, limiting the time for potential noise from operation
  - Cycles will be designed to ensure that the station does not fill up with effluent
- The pump station will be electric and include a backup generator supplied by City of Charlottesville Natural Gas
  - Electric pumps are quiet and have many optimized designs
  - In the case of a power outage, City Natural Gas is a reliable source operated independently of the electric power
  - The backup generator will ensure that even in extreme operating conditions the effluent will be safely and reliable routed to the sanitary sewers
- The pump station will be screened from public view with fencing and landscaping
  - The portion of the station that will be visible from the surface is the backup generator. This will be further screened with a fence and shrubs.
  - Screening will further reduce noise and odors from the station.
  - Screening will blend the pump station into the standard residential features of the surrounding neighborhood
- The pump station will be placed in an easement owned by the HOA with direct access for timely maintenance response.
  - A maintenance agreement will be recorded with the easement dedication ensuring proper operation and maintenance are legally binding.
  - The pump station will and will be professionally maintained by a company such as Petrus Environmental. The owner has retained an attorney to draft a long-term contract for a professional maintenance company which will ensure proper operation of the pump station and guarantee timely solutions to any maintenance issues associated with the pump station.
  - The owner is also including funding allocation in the HOA bylaw documents, including contingency funds for station failure.

Attachment B

# SANITARY DRAINAGE EXHIBIT FOR BELLEVIEW ST. PUMP STATION SPECIAL USE PERMIT




200 0 200 400 600

SCALE: 1"=200'

IMAGERY AND DATA FROM THE CITY OF CHARLOTTESVILLE GIS


*SHIMP ENGINEERING, P.C.*

*ENGINEERING - LAND PLANNING - PROJECT MANAGEMENT*

201 E MAIN ST, STE M
CHARLOTTESVILLE, VA 22902

PHONE: (434) 227-5140
JUSTIN@SHIMP-ENGINEERING.COM

Attachment C

SHIMP ENGINEERING P.C.

PROJECT MANAGEMENT
CIVIL ENGINEERING
LAND PLANNING

February 12, 2019

Matthew Alfele
Neighborhood Development Services
610 East Market Street
Charlottesville, VA 22902

**Regarding:** **Belleview Pump Station Special Use Permit Request**
**Supplemental Information Transmittal Letter**

Dear Matt,

Attached is a list of supplemental items requested for the Belleview Pump Station Special Use Permit. 3 physical copies of the listed attachments and 5 copies of the updated subdivision plan layout will be provided. Digital copies of all info will be emailed to alfelem@charlottesville.org.

- Pre Application Meeting – Fulfilled Oct. 15, 2018
- Application Form - Fulfilled Oct. 23, 2018
- Site Plan - Fulfilled Oct. 15, 2018. New partial site plan included for Utilities.
- Preliminary Discussion with Planning Commission – Fulfilled Dec. 11, 2018
  - Additional items requested:
    1. *Other examples of pump stations*: **See below. Attachment 2.**
    2. *Elevations/what is visible:* **See Below. Attachment 2.**
    3. *HOA easements*: **See below**. **Attachment 1.**
    4. *Other options*: **There are no other obvious sanitary sewer options since homeowners refuse to grant easements. Homeowners are opposed to construction on their property.**
    5. *Can the city charge homeowners if it takes over the pump station?* **Pump station maintenance budget already included in HOA bylaws**. **State of VA can likely enforce bylaws are met.**
    6. *What would it take for the subdivision to have a gravity fed sewer system?* **All 11 downstream property owners to grant a 20' sewer easement in their wooded back yards.**
    7. *PC would like to have someone from utilities at the public hearing:* **OK, please notify Roy Nester.**
- Community meeting - Fulfilled Dec. 12, 2018
- *HOA Docs*: **HOA Docs Attached. Attachment 1.**
- *Examples of Other Pump Stations*: **Examples Attached. Attachment 2.**
- *Preliminary Engineering Report*: **PER Attached. Attachment 3.**
- *Downstream System Documentation*: **Survey Attached, within Attachment 3**
- *Address Roy Moore's Site Plan comments*: **Comment Response Attached, Attachment 4**
- Elevations and architectural drawings of the pump station enclosure: **Pictures attached. Attachment 2.**

If you have any questions, please contact me at keane@shimp-engineering.com and include Justin at justin@shimp-engineering.com. I can also be reached at 434-299-9843.

Best regards,

Keane Rucker, E.I.T.

Shimp Engineering, P.C.

# Attachment 1: HOA Documents

**DRAFT**

**DECLARATION OF COVENANTS AND RESTRICTIONS**

**OF**

**BELLEVIEW**

Prepared by: James M. Bowling, IV

Return To:

Tax Map Parcel No.: 20; Parcels 142-148

THIS DECLARATION, made this _____th day of _____, 20_____, by CORE AZALEA, LLC, a Virginia limited liability company, hereinafter referred to as the "Declarant."

**WITNESSETH:**

WHEREAS, Declarant is the owner of certain real estate lying and being situate in the City of Charlottesville, Virginia, containing _____ acres, (hereinafter referred to as the "Property") being the property conveyed to the Declarant by deed of Azalea Cottages, LLC, dated the _____ day of _____, 20_____ and recorded in the Clerk's Office of the City of Charlottesville, Virginia as Instrument No. 201800001514; and,

WHEREAS, the Declarant has caused the subject property to be divided into 41 lots (hereinafter referred to as the "Lots"), as shown and described on preliminary subdivision plans for Belleview Street, made by Shimp Engineering, PC, dated January 19, 2018, to be recorded in the aforesaid Clerk's Office in Instrument No. _____ (the "Plans"); and,

WHEREAS, the Declarant desires to subject the Lots shown on the aforesaid plat of "Belleview" to the following covenants and restrictions for the benefit and complement of all of the Lots and of the future owners of the Lots;

NOW, THEREFORE, the Declarant hereby declares that all of the Lots of Belleview, being Lots _____ through _____, together with the Common Maintenance Facilities, shown on the attached Plans, shall be held, transferred, sold, conveyed and occupied subject to the covenants, restrictions, easements and charges hereinafter set forth which are hereby imposed to enhance and protect the value and desirability of the Lots and shall inure to the benefit of each owner thereof and shall transfer with land, if sold.

**Article One**

**Definitions**

*Section 1.01.* "Declaration" shall mean and refer to the covenants, restrictions, easements, conditions, reservations and charges and all other provisions set forth in this document, as the same may, from time to time, be amended or supplemented.

*Section 1.02.* "Declarant" shall mean and refer to Core Azalea, LLC, and any successor or assignee of it as developer.

*Section 1.03.* "Owner" shall mean and refer to the record owner, whether one or more persons or entities, including Declarant, of the fee simple title to any Lot subject to this Declaration, including contract seller, but excluding those having an interest merely as security for the performance of an obligation. Owner shall not mean and refer to the mortgagee unless and until the mortgagee has acquired title pursuant to foreclosure or any proceeding in lieu of foreclosure. In the case where a Lot is held by one or more persons for life with the remainder to another or others,

the term “Owner” shall mean and refer only to such life tenant or tenants until such time as the remainderman or remaindermen shall come into the use, possession and enjoyment of such Lot.

*Section 1.04*. “The Association” shall refer to the Belleview Owner’s Association, a non-stock nonprofit Virginia membership corporation.

*Section 1.05*. “Common Maintenance Facilities” shall mean and refer to the pump station, storm drainage facilities, being the area identified on the aforesaid Plans as pump station and storm drainage facilities, retaining walls and sewer lines.

**Article Two**

**Road**

*Section 2.01*. It is intended that the roads in Belleview will be dedicated to the City of Charlottesville and maintained by the City of Charlottesville. All Owners in the subdivision agree to cooperate with and execute whatever documents may be necessary or appropriate, now and in the future, to insure the road is taken into the City system. Each Owner shall be responsible for damage done to the road during the construction of improvements on the Owner’s Lot by his or her contractor or subcontractors.

**Article Three**

**Subdivision Control Committee**

*Section 3.01*. The operation and organization of the Subdivision Control Committee shall be in accordance with the provisions of the Bylaws of the Association.

*Section 3.02.* The Committee shall regulate the external design, appearance and use of the Lots and the improvements thereon in such a manner as to preserve and enhance values, to maintain a harmonious relationship among structures and the natural vegetation and topography, and to conserve existing natural amenities.

*Section 3.03.* No improvements, alterations, repairs, excavations, changes in grade, major landscaping or other work which in any way alters the exteriors of any Lot or the improvements located thereon from a natural or improved state existing on the date such property was first conveyed by the Declarant to an Owner shall be made or done until the plans, specifications, working drawings, and proposals for the same showing the kind, nature, shape, type, materials, colors and location thereof shall have been submitted to and approved in writing by the Committee pursuant to this Article. No building, fence, wall, residence or other structure shall be commenced without the prior written approval of the Committee.

*Section 3.04*. In the event the Committee fails to approve, modify or disapprove in writing a request for approval as required herein within twenty-one (21) days after the plans, specifications, or other appropriate materials have been submitted in writing to it, approval will be deemed granted.

*Section 3.05*. In the event the appropriate equitable or legal action together with a lis pendens has not been commenced within ninety (90) days after the issuance of a certificate of occupancy or, if no building permit was required by local ordinances, the completion of any improvements or alterations, it shall be conclusively presumed that such construction, alterations or improvements are approved by the Committee.

**Article Four**

**Assessments on Lots**

*Section 4.01*. The Association may impose general and special assessments from time to time as are determined by the Association as necessary for the payment of costs and attorney's fees anticipated or incurred for the enforcement of this Declaration, or for the maintenance of the Common Maintenance Facilities.

*Section 4.02.* Declarant for each Lot owned hereby covenants, and each Owner of any Lot by acceptance of the deed therefore, whether or not it shall be so expressed in any such deed or other conveyance, is deemed to covenant and agree to pay equally with the other Owners the cost of special assessments as provided for herein.

*Section 4.03*. In the event any Owner shall fail to contribute his or her pro rata share of assessments, the Association may after 15 days written notice, bring an action at law against the non-contributing Owner and/or may record in the Country County Circuit Court Clerk's Office a notice of lien against the non-contributing Owner for his or her portion of the assessments that are due, which filing shall create a continuing lien against the non-contributing Owner's parcel, the amount of which shall include interest at the legal rate of judgments then prevailing, plus any costs of collection including reasonable attorney's fees. A notice of lien may be bonded off as in *Va. Code Ann. § 43-70 et seq.* or any amendments thereto, or a motion to quash may be brought in the appropriate court.

*Section 4.04.* The lien for assessments shall be subordinate to the lien of any mortgage or deed of trust.

**Article Five**

**Common Maintenance Facilities**

*Section 5.01*. The Declarant intends to convey the Common Maintenance Facilities (the pump station, the sewer lines, the retaining walls and the storm drainage facilities), to the Association for the benefit of the Association. The Association shall be responsible for the maintenance and operation of the Common Maintenance Facilities for the benefit of the owners of lots, and the Association from time to time may establish written policies, rules and regulations concerning the right of Owners of the Lots to use the Common maintenance facilities.

*Section 5.02*. The Declarant intends to construct certain storm retention facilities, as shown on the Plans and dedicate these facilities to the Association for maintenance, repair and replacement. The storm drainage facilities will be subject to a standard City of Charlottesville maintenance agreement, providing for maintenance by the Association, by the Declarant, it's successor and assigns.

*Section 5.03*. The Declarant intends to construct retaining walls located on Lot 14 and between Lots 18 and 19, as shown on the Plans, for the benefit of these and other lots and the Association. The Association will be responsible for all maintenance, repair and replacement of these retaining walls.

*Section 5.04*. The Declarant intends to construct sewer lines to serve the owners of lots in Belleview, and dedicate these lines to the Association for maintenance, repair and replacement. All sewer laterals extending from the sewer lines to the individual lots shall be the responsibility of the individual lot owner, not the Association.

*Section 5.05*. The Declarant intends to construct the Belleview pump station to provide private sewer service for the lot owners in Belleview. The sewer pump station shall be maintained at all times as follows:

a) Maintenance of the pump station shall be performed by a licensed, insured, professional engineer.
b) The pump station shall be equipped with a remote electronic monitoring system capable of sending data to remote operators. A licensed waste water operator shall check electronic data/interface weekly with this data.
c) The pump station shall be physically inspected by maintenance operators every month, who shall inspect the pumps, floats, wet well valves, impellers, alarm systems, back up generators, oil levels and if there is any evidence of clogging or build up. The operator shall remain on site for at least one full pump cycle. The operator shall clean pumps and floats as needed. Pumps shall be turned off during any cleaning and

replacement measures. The operator shall remedy any items necessary during the visit, or schedule to replace any necessary items at the earliest time available.

d) A minimum full cleaning of the wet well and pump system shall be mandated. A sewer truck or equivalent shall be utilized to remove debris buildup. Pumps shall be tested after cleaning.
e) The Association shall budget for replacement of boat pumps every ten (10) years. The Association shall obtain a backup pump after five (5) years.
f) Operation and maintenance manuals for the pump station shall be prepared for the Association.
g) The Association shall include maintenance and a replacement fund as part of the Association's fees to the lot owners. The Association shall finalize a replacement and maintenance budget based on like-cycle estimates provided by a licensed, professional engineer.
h) These pump station maintenance guidelines do not preclude good maintenance practices. The operator may prepare standard operating procedures for maintenance as needed.
i) Any spare parts required for the first two years of operation of the pump station shall be held on site, before the pump is brought online.

*Section 5.06*. The City of Charlottesville and its representatives may enter upon the Common Maintenance Facilities from time to time for the purposes of inspection for the sole purpose of enforcing the provisions of this declaration and applicable provisions of the City of Charlottesville Code, and any subsequent amendments thereto.

## Article Six

## Owners' Association

*Section 6.01.* The Association shall, in addition to other duties, such as levying assessments, and regulating the external design, appearance and use of the Lots, easements and improvements thereon, hold title to and maintain the Common Maintenance Facilities. The owner of each lot shall automatically become a member of the Association upon the recordation of the deed conveying to the Owner an interest in any of the Lots. By the recordation and acceptance of such conveyance the Owner agrees to be bound by the Articles of Incorporation and the Bylaws of the Association, including the payment of any charge or levy as may properly be made by the Association.

*Section 6.02*. All Owners shall be entitled to one vote for each Lot owned by the Owner. In the event more than one person or entity holds an interest in any Lot, all such persons or entities shall be Owners, and the vote for such Lot shall be exercised as they may determine among themselves, but in no event, shall more than one vote be cast with respect to any such Lot. The vote of one of the co-owners of a Lot, in person or by proxy, shall bind all Owners of the Lot, and the Association may rely conclusively on the representation, whether oral or written, of such co-owner that he or she has the authority to vote for the other co-owners of the Lot.

*Section 6.03*. The quorum required for any action which is subject to the vote of the Owners shall be by a simple majority of the Owners.

*Section 6.04.* In addition to the powers and duties of the Association set forth in this Declaration, such powers and duties may also be set forth in the Articles of Incorporation and Bylaws of the Association, as the same may be amended from time to time.

*Section 6.05*. The Board of Directions of the Association shall be elected by the Owners as set forth in the Bylaws of the Association.

*Section 6.06.* The Board of Directors shall have all of the powers and duties necessary for the administration of the affairs of the Association, and may take any such action on behalf of the Association unless such action is required to be exercised or done by the Owners.

**Article Seven**

**Easements**

*Section 7.01*. Declarant reserves unto itself, its successors and assigns, perpetual and alienable easements and rights of way ten (10) feet in width (which may be granted, vacated, revised and/or relocated) on, above, through, over, under and across that portion of the property immediately within and along (1) the entire boundary of the Property and all parcels or tracts of land adjoining the Property and all streets or roads adjoining the Property; (2) the boundary lines of the Lots and Common Area adjoining the Road within the Property; (3) the rear lines of all Lots; and (4) the boundary lines of the Common Maintenance Facilities, for the purposes of constructing, installing, operating, inspecting, maintaining, repairing, modifying, replacing, removing and extending the following: electric, telephone and cable poles, wires, cables, conduits, pipes, ditches, and other suitable equipment for the conveyance of water, telephone, electricity, cable, communications and other utilities and public conveniences, and sewage, and for storm and surface water drainage and management, together with the right of ingress and egress to all such facilities and easements for the construction and maintenance thereof.

*Section 7.02.* The easements provided in this Article shall include the right to cut any trees, brush and shrubbery to make any grading of soil and take other similar action reasonably necessary to provide economical and safe utility installation and drainage facilities.

*Section 7.03.* The rights herein reserved may be exercised by the licensee of Declarant but shall not be deemed to impose any obligation upon Declarant to provide or maintain or be responsible for any lapse or temporary interruption of any utility or drainage service.

*Section 7.04*. Any damage to property resulting from the use of the easements hereby reserved shall be promptly repaired at the expense of the party that caused the damage. In addition, any damage caused by an Owner, his or her agent, or any party which whom the Owner has contracted, to Country Estates roads, culverts and/or ditches shall be promptly repaired by the responsible Owner.

**Article Eight**

**Specific Restrictions**

*Section 8.01*. All Lots shall be used for residential purposes and customary recreation and accessory uses and purposes incidental thereto. The use of a portion of a dwelling on a Lot as a home office by the Owner or Tenant thereof, if permitted by the City of Charlottesville Zoning Ordinance, shall be considered a residential use, provided that the use of the Lot does not create undue customer, client or delivery traffic to and from the Lot. The provisions of this paragraph shall not prohibit any builders permitted by the Declarant from using any house as a model home.

*Section 8.02.* No exterior antennae of any kind or satellite dishes of more than three (3) feet in diameter shall be erected or placed on any Lot without the prior written approval of the Committee.

*Section 8.03.* No Owner's trucks larger than a pickup truck, shall be parked on Country Estates roads or in any private driveways which are visible from the roads or other residences for more than 24 hours.

*Section 8.04.* Foundations on all structures shall consist of brick, stone veneer, stucco, parged block or stamped concrete basement walls.

*Section 8.05.* Roofing materials on all structures shall consist of composite fiberglass shingles, architectural fiberglass shingles, wood shakes, tin, copper or slate, both natural and synthetic.

*Section 8.06.* No Lot shall be further subdivided or separated into smaller lots by an Owner other than the Declarant without written consent of the Declarant, its successors and assigns, and no portion less than all of any such Lot shall be conveyed or transferred by an Owner other than the Declarant; provided, however, that this shall not prohibit

deeds of correction, deeds to resolve boundary lines disputes and similar corrective instruments. No Lot shall be used as a roadway, right of way or easement for access to any property lying outside the boundaries of the Property.

*Section 8.07.* The keeping of livestock (the meaning of which shall be given its common meaning to include, but not be limited to, cattle, goats, sheep, horses, swine, llamas, alpacas, emus, poultry and buffalo) is prohibited in the Lots.

*Section 8.08.* No nuisance shall be maintained on any Parcel; no noxious or offensive activity shall be permitted on any Parcel.

*Section 8.09.* Trash or garbage must be kept in appropriate containers.

## Article Nine

## Building Setback Lines

*Section 9.01*. The setback requirements and lines shown on the attached subdivision plat are set forth solely for informational purposes to show the setback requirements imposed by the ordinances of the City of Charlottesville in effect as of the date of the approval of the subdivision plat, and are not restrictive covenants running with the land.

*Section 9.02*. Relief from any violation of such setback requirements and lines may be effectively and conclusively obtained by a variance or variances of the City Board of Zoning Appeals or any successor body, and shall not require the consent or approval of any other Owner.

## Article Ten

## General Provisions

*Section 10.01.* Invalidation of any one of these covenants or restrictions by judgment or court order shall not affect any other provisions which shall remain in full force and effect.

*Section 10.02.* The Association and any Owner shall have the right to enforce, by any proceeding, all restrictions, conditions, covenants, reservations, liens and charges now or hereafter imposed by the provisions of this Declaration. If, in any litigation for the enforcement of these covenants, conditions and restrictions, any Owner bringing such suit prevails, such Owner shall be entitled to be reimbursed for reasonable attorney's fees incurred in seeking such enforcement. Failure to enforce any covenant or restriction herein contained shall in no event be deemed a waiver of the right to enforce such covenant or restriction thereafter.

*Section 10.03*. Unless otherwise specified herein, the above covenants and restrictions shall be binding upon all Lot Owners, their heirs, successors and assigns, shall inure to the benefit of all other Lot Owners. This Declaration shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia.

*Section 10.04*. This Declaration may be amended in whole or in part by a recorded instrument bearing the signatures of the Owners of record, of sixty-seven percent of the Lots.

WITNESS the following signature and seal:

CORE AZALEA, LLC

By: _____ (SEAL)

Andrew Baldwin
Managing Member

**[*Notary Acknowledgment*]**

COMMONWEALTH OF VIRGINIA
COUNTY/CITY OF_____, to wit:

The foregoing instrument was acknowledged before me this ____ day of _____, 20____ by Andrew Baldwin, Managing Member of Core Azalea, LLC.

_____
Notary Public

My Commission Expires: _____
I.D. No._____

# Attachment 2: Pump Station Examples/Pictures

Attachment C

SHIMP ENGINEERING P.C.

PROJECT MANAGEMENT
CIVIL ENGINEERING
LAND PLANNING

February 12, 2019

Matt Alfele
Neighborhood Development Services
610 East Market Street
Charlottesville, VA 22902

**Regarding:** **Belleview St**
**Pump Station Examples and Photos**

Pump stations are a common component of many sanitary sewer collection systems. Many smaller systems utilize a system of small pumps to navigate difficult terrain or minimize the required depth of sewer line installs. One local example is the Nelson County Service Authority which operates a sewer collection system at Wintergreen Resort. The sewer system includes a total of 2,236 customers, and approximately 1,100 separate connections. That system includes 26 separate pump stations with an average of 42 connection per pump station. Some are larger and collect effluent from several pumps, but most are in the same range as the proposed system for the Belleview St. Subdivision Plan. The systems are a mix of above ground pumps and submersible duplex pumps, some of which have been in service since the 70's.

I have spoken with George Miller, the Executive Director of the Authority. Mr. Miller reported that, with proper inspections and maintenance, the pump stations have had minimal issues in his 20 plus years at the Nelson County Service Authority.

As seen in the Nelson County example, an entire system of pumps can successfully serve a mountainside resort and has done so for the past 40 or so years. Large neighborhoods including Lake Monticello locally also use a significant number of pump stations.

The pump station for this site will be a submersible duplex grinder pump station, and the only visible portion from the surface will be the manhole lid to the wet well, the shed containing the control panel, and the backup generator. Example photographs are shown below. Should you have any additional questions about the proposed pump station please do not hesitate to contact me.

Sincerely,

Justin Shimp, P.E.
434-953-6116

*Figure 1: Wet Well Locking Manhole Lid*


*Figure 2: Pump Station Pad w. Unenclosed Control Panel*

*Figure 3: Shed Option to House Control Panel*

*Figure 4: Shed Option to House Control Panel*

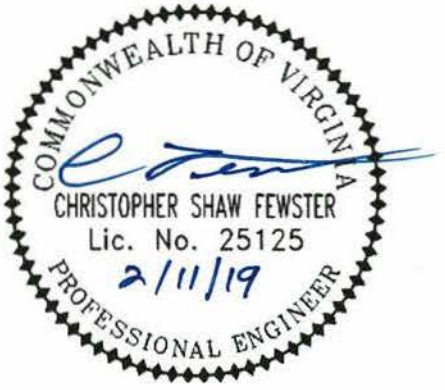
*Figure 5: Generator example*

# Attachment 3: Preliminary Engineering Report

Attachment C

# PRELIMINARY ENGINEERING REPORT
# FOR
# BELLEVIEW STREET SEWER PUMP STATION
# CHARLOTTESVILLE, VA
# JN 1021
# FEBRUARY 11, 2019


Prepared For
Justin Shimp, PE
Shimp Engineering, PC
201 East Main St., Suite M
Charlottesville, VA 22902
justin@shimp-engineering.com
434-227-5140



Prepared By
Christopher S Fewster, PE
Blue Ridge Engineering & Construction Services, LLC
406 Wild Cherry Rd.
Pilot, VA 24138
cfewster@blueridgeecs.com
540-392-4144

In Conjunction With
Mathew G. Gross, PE
Hurt & Proffitt, Inc.
1861 Pratt Dr, Suite 1100
Blacksburg, VA 24060
mgross@handp.com
540-552-5592

Attachment C

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Attachment C

## I. PROJECT BACKGROUND

### Purpose of the Study

Core Real Estate is in the process of beginning the development of a tract of land in the City of Charlottesville. As a requirement for the project, the City requires that the developer have a Preliminary Engineering Report prepared that looks at their sewer system alternatives and the capacities of the existing sewer system basin that would serve the proposed development. The developer's engineer, Shimp Engineering, has contracted with Hurt & Proffitt to develop the Preliminary Engineering Report. Hurt & Proffitt has subcontracted the flow monitoring and the preparation of the report to Blue Ridge Engineering & Construction Services.

As part of the capacity analysis, the City requires a 30 day flow monitoring period to be performed. The flow analysis shall determine existing flows within the sewer basin and demonstrate that the proposed improvements do not exceed the capacity of the existing sewer system. The proposed wastewater flows for the system shall be based on the City requirements and the Sewage Collection and Treatment (SCAT) regulations.

### Proposed Development

The proposed development is referred to as Belleview Street subdivision and the project will consist of approximately 40 single family homes based on the engineering plans dated January 1, 2018, but the system is being sized to allow for up to 50 single family homes being developed in the area that could be served by the sewer system. This will allow for some additional growth from undeveloped lots in the sewer basin.

The Belleview Street subdivision is located between two sewer sheds and the property could drain by gravity sewer mains to the Rivanna Water & Sewer Authority interceptor located nearby. In order to flow by gravity, the developer has contacted the adjacent property owners downstream where a sewer main would need to be constructed in attempt to obtain easements for the sewer main. There are 10 parcels where easements would be necessary for the development of the sewer main. The developer has indicated that they have not been able to obtain the easements, and therefore a sewage pump station is needed for the project. A copy of a sample letter regarding the easement request is included in Appendix A.

Per local requirements and the SCAT regulations, the peak design capacity for the system shall be 2.5 times the average design flow. For single family homes the design flow is 400 gpd per home. Using 50 homes as the basis of the pump station sizing, the anticipated flow generated by the subdivision is

Average Design Flow = 50 homes x 400 gpd/home = 20,000 gpd
Peak Design Flow = 2.5 x Average Design Flow = 2.5 x 20,000 gpd = 50,000 gpd (35 gpm)

A gravity sewer service from the site is not available. The system will require a pump station, and the minimum pump rate must exceed 35 gpm to allow for the Peak Design Flow. Given the pump station will be handling raw sewage, the pumps and force main must be capable of passing 2 inch solids, and therefore the minimum force main size should be 3 inch. In order to achieve a 2 foot per second scour velocity in the force main, a minimum pump rate of 45 gpm must be used. Therefore, it is recommended that the minimum pump rate for the proposed sewage pump station be 50 gpm. In lieu of using an influent trash basket and handling the waste onsite, submersible grinder pumps should be used.

## II. FLOW DATA ANALYSIS

### General

In order to develop a model to assess the capacity of the existing sewer system, Hurt & Proffitt performed a field survey of the existing sanitary sewer from the manhole upstream of the proposed Belleview St. tie in down to the Rivanna River Water & Sewer Authority interceptor. The inverts of each manhole along the alignment were surveyed and the pipe sizes were confirmed as well. A copy of the survey is included in Appendix B.

Using the GIS base mapping received from the City, a sewer basin map was developed and is included in Appendix C. In order to develop a basin wide flow monitoring plan, the basin was divided into three sub basins for flow monitoring. Manholes 18-023 (red), 18-026 (green) and 18-031 (blue) were selected as the locations for flow monitoring. See map in Appendix C for color coded sub basins. In each sub basin, the number of homes in each sub basin was determined and also any potential for undeveloped lots was also included in the home count. The total number of homes was determined as follows

| Sub-basin | No. Homes |
|---|---|
| 18-023 | 158 |
| 18-026 | 46 |
| 18-031 | 136 |
| Belleview | 50 |
| Total | 390 |

### Design Flow

As noted previously, 50 single family homes are being used as the basis of design for the Belleview St. sewer pump station. This would equate to a average design flow of 20,000 gpd and using a 2.5 peak factor, the peak design flow would be 50,000 gpd (35 gpm). Using a 3 inch force main to allow for passing solids and in order to achieve minimum scour velocity, a pump rate of 50 gpm is recommended. For each of the sub basins, the average design and peak design flow rates are calculated in Appendix D using 400 gpd per home and a 2.5 peak factor. The calculated peak design flows are used in the subsequent sewer model calculations. The calculated peak design flow for the

sewer system is 271 gpm. The flows within the 18-031 (blue) basin which would serve Belleview St are divided out among the manholes along the sewer alignment based on the house counts. Flows from 18-023 and 18-026 sub basins are plugged into the model at manhole 18-024.The sewer model is developed in a spreadsheet in Appendix D.
The peak flows and capacities in each reach (manhole to manhole) are calculated, and a percent of capacity is given for each segment. The total calculated flow in the system is just under 293 gpm at the point of tie in with the Rivanna Water & Sewer Authority. Two reaches within the system were identified, segment 18-033 to 18-032 and 18-024 to RWSA tie in. The percent of capacity for segment 18-033 to 18-032 is 37.7% and 18-024 to RWSA tie in is 34.7%. Both of these segments are well below capacity using the peak design flow criteria calculated in accordance with the City and SCAT regulations.

**Flow Metered Data using Sub-Basin Peaks**

Based on flow data obtained from the meters between January 25 and February 8, 2019, an evaluation of the sewer capacities was done based on the instantaneous peaks within each sub basin. Additional meter data is being collected and will be used to update the sewer flow data in the PER when it is available. Summaries of the flow metering data are included in Appendix E. Sewer modeling calculations are included in Appendix D.

Based on the flow meter data, the instantaneous peaks (maximum in a 5 minute period) were determined for each sub basin, and the instantaneous peak flow per home was determined. The data is presented below:

| Sub Basin | Peak (gpm) | Homes | Peak (gpm per home) |
|---|---|---|---|
| 18-023 | 98 | 158 | 0.6 |
| 18-026 | 45.8 | 46 | 1.0 |
| 18-031 | 103.4 | 136 | 0.8 |
| Belleview | 50 | 50 | 1.0 (pumped flow) |

Using the instantaneous peak flow per home of 0.8 gpm for the 18-031 sub basin serving Belleview St, the flows are calculated for each segment and input into the calculation sheet in Appendix D. The instantaneous peak from sub basins 18-023 and 18-026 are then input at the final manhole 18-024. The instantaneous peak flows and capacities in each reach (manhole to manhole) are calculated, and a percent of capacity is given for each segment. The total calculated flow in the system is just approximately 308 gpm at the point of tie in with the Rivanna Water & Sewer Authority. Two reaches within the system were identified, segment 18-033 to 18-032 and 18-024 to RWSA tie in. The percent of capacity for segment 18-033 to 18-032 is 41.2% and 18-024 to RWSA tie in is 36.5%. All locations are well within their capacity.

**Flow Metered Data using Basin Wide Peak**

Similar to the evaluation of the instantaneous peaks within each sub basin, an analysis was performed using the highest instantaneous peak per home to evaluate impacts on the sewer

system. The highest instantaneous peak per home was measured in sub basin 18-026 to be 1.0 gpm per home. Using 1.0 gpm per home as the basis of the instantaneous peak, the following data was used in the analysis:

| Sub Basin | Peak (gpm per home) | Homes | Peak (gpm) |
|---|---|---|---|
| 18-023 | 1.0 | 158 | 158 |
| 18-026 | 1.0 | 46 | 46 |
| 18-031 | 1.0 | 136 | 136 |
| Belleview | 1.0 | 50 | 50 (pumped flow) |

Using the instantaneous peak flow per home of 1.0 gpm for the 18-031 sub basin serving Belleview St, the flows are calculated for each segment and input into the calculation sheet in Appendix D. The instantaneous peak from sub basins 18-023 and 18-026 are then input at the final manhole 18-024. The instantaneous peak flows and capacities in each reach (manhole to manhole) are calculated, and a percent of capacity is given for each segment. The total calculated flow in the system is just approximately 397 gpm at the point of tie in with the Rivanna Water & Sewer Authority. Two reaches within the system were identified, segment 18-033 to 18-032 and 18-024 to RWSA tie in. The percent of capacity for segment 18-033 to 18-032 is 48.3% and 18-024 to RWSA tie in is 47.0%. All locations are well within their capacity.

## III. PUMP STATION CONSIDERATIONS

### General

The City's Department of Public Works has indicated that it will not assume responsibility for the proposed Belleview St. sewer pump station. Therefore, the pump station will need to be operated and maintained by a contracted third party. This is generally done by setting up a Homeowners Association (HOA) that assumes responsibility for the long term operation and maintenance (O&M) of the pump station by contracting the O&M to a third party licensed wastewater operator. This is done to ensure that the system is properly operated and maintained over time.

### Operation & Maintenance

The developer will need to contract with a licensed local wastewater operator for the operations and maintenance of the pump station. In general, a pump station does not require extensive monitoring on a regular basis. It is anticipated that the pump station should be checked at a minimum on a monthly basis by the licensed operator. The operator shall ensure that all equipment is in working order during each site visit. The operator shall also be responsible for maintaining a record of the system operations.

Prior to the placing the pump station into service, the developer should receive an operation and maintenance manual from the engineer that thoroughly describes the necessary operations and

maintenance of the designed pump station. Any changes or modifications to the O&M Manual shall be done by the preparation of a Standard Operating Procedure (SOP).

**Design**

The following is a list of several items that should be considered during the design of the sewer pump station:

1. Reliability Classification – Due to the proximity of the pump station to other housing units and the risk of a potential sewer overflow, the pump station should be considered as Class 1 reliability. Therefore a standby generator and automatic transfer switch should be provided.

2. Pump Selection – The developer has asked that the pump station be located below grade without the benefit of an above ground structure. Given the nature of the wastewater and the O&M requirements, it is recommended that submersible grinder pumps be used for the pumps. A mechanical hoist should be provided for removal of the pumps. Ornamental shrub and landscaping can be used for visual screening of the control panel and generator.

3. Odors – Concern has been expressed about potential odors at the pump station. Odors typically occur as a result of the wastewater going anaerobic, and this can be prevented by installing a small air pump and diffuser to aerate the wetwell. A carbon filter can also be installed on the vent pipe too.

4. Control Monitoring – All sewage pump stations are required to have a local audio/visual alarm to notify someone of a potential problem. Given that the pump station is located in a residential community and the facility is not inspected on a daily basis, the pump station have a remote monitoring control system that will allow the operator to log into the system remotely and check the status of the system at any time. The control system will also notify the operator immediately if there is a pump failure or high water alarm at the pump station.

## IV. CONCLUSIONS & RECOMMENDATIONS

**Conclusions**

The following conclusions can be made based on the flow monitoring and preliminary engineering performed under this study:

1. Based on 50 homes being served by the pump station, the average daily design flow for the Belleview St subdivision is 20,000 gpd with a peak design flow of 50,000 gpd.

2. Using local requirements and SCAT regulations, the peak design flow, including Belleview St, in the system based on the number of homes, including vacant lots, is approximately 293 gpm,

which equates to approximately 38% of capacity for line 18-033 to 18-032 and 35% capacity for line 18-024 to RWSA tie in manhole.

3. Using instantaneous peak flows, 5 minute intervals, from each sub basin, the measured peak flow in the system, including Belleview St, is approximately 308 gpm, which equates to approximately 41% of capacity for line 18-033 to 18-032 and 37% capacity for line 18-024 to RWSA tie in manhole.

4. Using the highest instantaneous peak flow, 5 minute intervals, from the overall basin, the measured peak flow in the system, including Belleview St, is approximately 397 gpm, which equates to approximately 48% of capacity for line 18-033 to 18-032 and 47% capacity for line 18-024 to RWSA tie in manhole.

**Recommendations**

The following recommendations are made for the Belleview St sewer system:

1. The pump station should be sized for 50 gpm with a 3 inch force main.

2. The pump station should be equipped with an emergency standby generator and automatic transfer switch.

3. The pump station control system should allow for remote real time monitoring of the pump station and provide notification to the operator of any alarm conditions.

# Appendix A
# Sample Easement Documentation

CORE
REAL ESTATE

Mr. & Mrs. Michael & Janet Farruggio,

316 Monte Vista Ave,

Charlottesville, VA 22903

CORE Azalea, LLC – Andrew Baldwin is gauging your interest in providing him a 10-20ft sewer easement along the back of your property line. At this point, he is willing to offer $2,500 for the easement. Please see exhibit A for more information.

Please respond YES or NO through e-mail to Andrew@corecville.com, or by calling his cellphone at (434) 466-6566. Responding YES or NO at this time is not binding, and this letter is in no shape or form a contractual document; we simply want to see what interest there may be in allowing the proposed sewer easement.

Thank you for your time and consideration,

CORE Azalea, LLC.

Andrew Baldwin – President

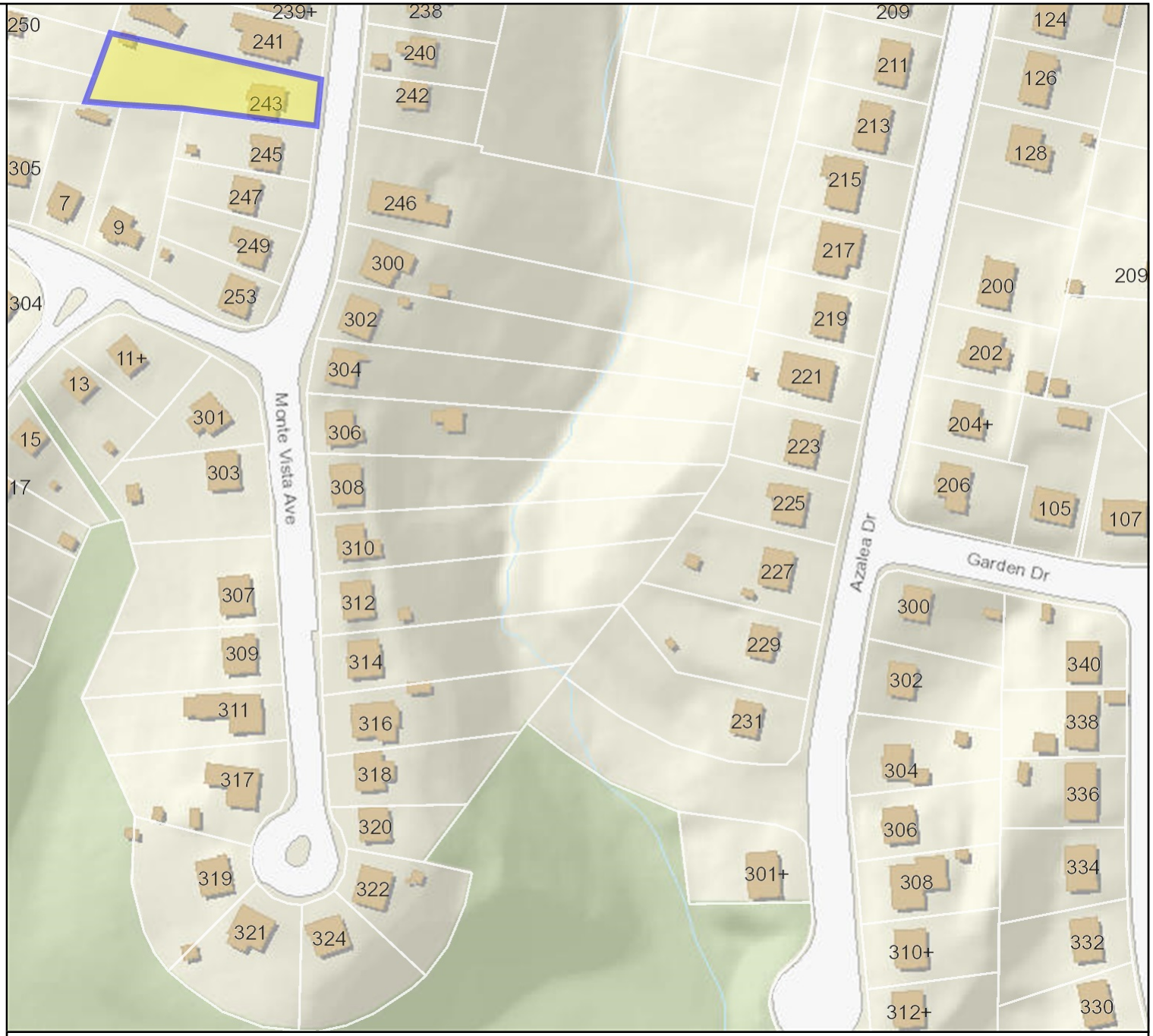
_____

_____ _____

Charlottesville GIS Viewer

## Legend

- Parcels
- Addresses
- City Limits




N
W E
S

Feet
0 50 100 150 200

**Title: Monte Vista Ave** **Date: 10/25/2018**

*DISCLAIMER:This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records,information, and data obtained from various sources, and Charlottesville is not responsible for its accuracy or how current it may be.*

# Appendix B
# Sanitary Sewer Survey

NORTH

RIVANNA WATER & SEWER AUTHORITY
SANITARY MH
TOP 391.41'
INV IN 380.5'(18–024)
INV IN 381.0'(24")
INV OUT 379.5'

24" TC
SS
SS
SS
24" TC
SS

SS
SS
10" PVC
455.65'
SS
SS

MH 18–023
(APPROX. LOCATION)
NOT SURVEYED
TOP 390.21
INV 386.21

18–023
SS
SS

MH 18–024
TOP 392.35'
INV IN 384.0'(18–025)
INV IN 383.9'(18–028)
INV OUT 383.8'

MH 18–025
TOP 393.39'
INV IN 385.2'(18–026)
INV IN 385.1'(10")
INV OUT 385.0'

MH 18–026
TOP 393.50'
INV IN 388.0'(6")
INV IN 387.0'(8")
INV OUT 386.9'

MH 18–028
TOP 395.36'
INV IN 387.2'
INV OUT 386.9'

10" PVC
18–026
8" PVC
6" TC
10" PVC
11.66'
8" PVC–15.85'
18–025
18–024
8" PVC
41.57'
18–028
8" PVC
SS
105.82'
18–031

4" PVC (b)
4" PVC (a)

MH 18–031
TOP 408.26'
INV IN 405.5'(4"a)
INV IN 406.1(4" b)
INV IN 400.0'(18–032)
INV OUT 399.9'

8" PVC
SS
112.59'
18–032
6" CI

MH 18–032
TOP 407.75'
INV IN 405.4'(6")
INV IN 401.2'(18–033)
INV OUT 401.1'

8" PVC
SS
12.45'
18–033

MH 18–033
TOP 405.75'
INV IN 402.0'
INV OUT 401.9'

8" PVC
131.01'
SS
18–034
4" CI

MH 18–034
TOP 409.22'
INV IN 403.8'(6")
INV IN 403.8'(8")
INV IN 406.7'(4")
INV IN 403.6'(18–035)
INV OUT 403.5'

8" PVC
SS

6" PVC

8" PVC
SS
162.20'
18–035

MH 18–035
TOP 419.72'
INV IN 412.0'
INV OUT 411.9'

8" PVC
SS
99.71'
18–036
8" TC

MH 18–036
TOP 431.75'
INV IN 426.5'(8")
INV IN 425.9'(18–039)
INV OUT 425.8'

8" PVC
82.94'
18–039

MH 18–039
TOP 435.50'
INV IN 429.7'(8")
INV IN 429.7'(18–046)
INV OUT 429.6'

8" PVC
SS
230.12'
18–046
6" UNKNOWN

MH 18–046
TOP 447.07'
INV IN 440.9'(6")
INV IN 440.8'(18–047)
INV OUT 440.7'

8" PVC
SS
18–047

MH 18–047
TOP 455.59'
INV IN 449.0'
INV OUT 448.9'

8" PVC

18–XXX METER LOCATION

50 25 0 50 100
GRAPHIC SCALE IN FEET


HURT & PROFFITT
2524 LANGHORNE ROAD
LYNCHBURG VA 24501
800.242.4906 TOLL FREE
434.847.7796 MAIN
434.847.0047 FAX
ENGINEERING • SURVEYING • LAND DEVELOPMENT • ENVIRONMENTAL
GEOTECHNICAL • CONSTRUCTION TESTING & INSPECTION • CULTURAL RESOURCES


# SANITARY SEWER SURVEY
FOR
# BELLVIEW SEWER PUMP STATION
CHARLOTTESVILLE, VA

| | |
|---|---|
| PROJECT NO. | 20180922 |
| G.L. NO. | |
| FILE NO. | |
| DATE: | |
| DRAWN BY: | |
| CHECKED BY: | |

SHEET NO.

Feb 08, 2019 - 1:53pm Z:\2018\20180922\Survey\Topo Bellview Wastewater.dwg

# Appendix C
# Sewer Basin

N

PROPOSED BELLIVIEW SUBDIVISION

PROPOSED PUMP STATION

FORCE MAIN CONNECTION

SURVEYED ALIGNMENT

18-031

18-026

18-023

RIVANNA WATER & SEWER AUTHORITY CONNECTION

LEGEND:

18-XXX METER LOCATION

0 250 500

SCALE IN FEET

# SEWER BASIN
# BELLIVIEW SEWER PUMP STATION
# PRELIMINARY ENGINEERING REPORT

HURT & PROFFITT

| | | | | | | | | | | | | | | |
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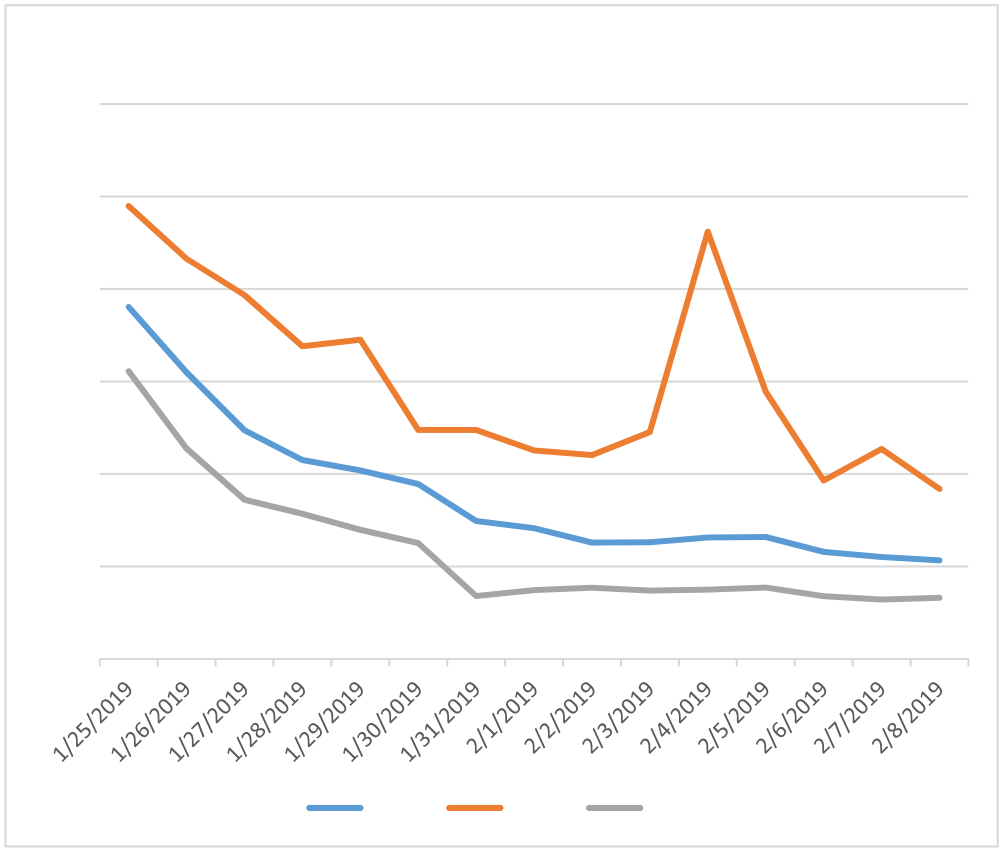
# SANITARY SEWER COMPUTATIONS

**Project:** Belleview Sewer PER - Sewer Model

**J.N.:** 1021.0 **Date:** 2/10/2019 **Calculated by:** Chris Fewster

| Reference Descriptors | | Total Flow | | | Invert Elevations | | Length of Pipe | Diameter of Pipe | Slope | Manning's Pipe Capacity | Manning's Pipe Capacity | Manning's Pipe Capacity | Percent of Capacity | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| From Point | To Point | Increm. (gpm) | Accumulated (gpm) | (cfs) | Upper (feet) | Lower (feet) | (feet) | (inches) | (ft/ft) | (cfs) | (mgd) | (gpm) | % | |
| | | | | | | | | | 0.0000 | | | | | Flow = 1.0 gpm Peak Flow entire sewer basin |
| 18-047 | Tie In | 39.00 | 39.00 | 0.086 | 448.90 | 442.20 | 308.00 | 8 | 0.0218 | 1.79 | 1.1550 | 802.1 | 4.9% | 39 homes |
| Tie In | 18-046 | 50.00 | 89.00 | 0.196 | 442.20 | 440.80 | 64.00 | 8 | 0.0219 | 1.79 | 1.1583 | 804.3 | 11.1% | Belleview PS (50 gpm for 3" FM scour velocity) |
| 18-046 | 18-039 | 13.00 | 102.00 | 0.224 | 440.70 | 429.70 | 227.00 | 8 | 0.0485 | 2.67 | 1.7239 | 1,197.2 | 8.5% | 13 homes |
| 18-039 | 18-036 | 24.00 | 126.00 | 0.277 | 429.60 | 425.90 | 96.00 | 8 | 0.0385 | 2.38 | 1.5374 | 1,067.7 | 11.8% | 24 homes |
| 18-036 | 18-035 | 22.00 | 148.00 | 0.326 | 425.80 | 412.00 | 120.00 | 8 | 0.1150 | 4.11 | 2.6557 | 1,844.2 | 8.0% | 22 homes |
| 18-035 | 18-034 | 4.00 | 152.00 | 0.334 | 411.90 | 403.60 | 190.00 | 8 | 0.0437 | 2.53 | 1.6368 | 1,136.7 | 13.4% | 4 homes |
| 18-034 | 18-033 | 37.00 | 189.00 | 0.416 | 403.50 | 402.00 | 152.00 | 8 | 0.0099 | 1.20 | 0.7780 | 540.2 | 35.0% | 37 homes |
| 18-033 | 18-032 | 1.00 | 190.00 | 0.418 | 401.90 | 401.20 | 134.00 | 8 | 0.0052 | 0.88 | 0.5660 | 393.1 | 48.3% | 1 home |
| 18-032 | 18-031 | 1.00 | 191.00 | 0.420 | 401.10 | 400.00 | 135.00 | 8 | 0.0081 | 1.09 | 0.7069 | 490.9 | 38.9% | 1 home |
| 18-031 | 18-028 | 2.00 | 193.00 | 0.425 | 399.90 | 387.20 | 145.00 | 8 | 0.0876 | 3.59 | 2.3176 | 1,609.5 | 12.0% | 2 homes |
| 18.028 | 18-024 | --- | 193.00 | 0.425 | 386.90 | 383.90 | 40.00 | 8 | 0.0750 | 3.32 | 2.1447 | 1,489.3 | 13.0% | |
| 18-024 | RWA MH | 204.00 | 397.00 | 0.873 | 383.80 | 380.50 | 450.00 | 10 | 0.0073 | 1.88 | 1.2159 | 844.4 | 47.0% | sub-basins 18-023 (158 homes) & 18-026 (46 homes) |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |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1/30/2019
1/31/2019
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2/5/2019
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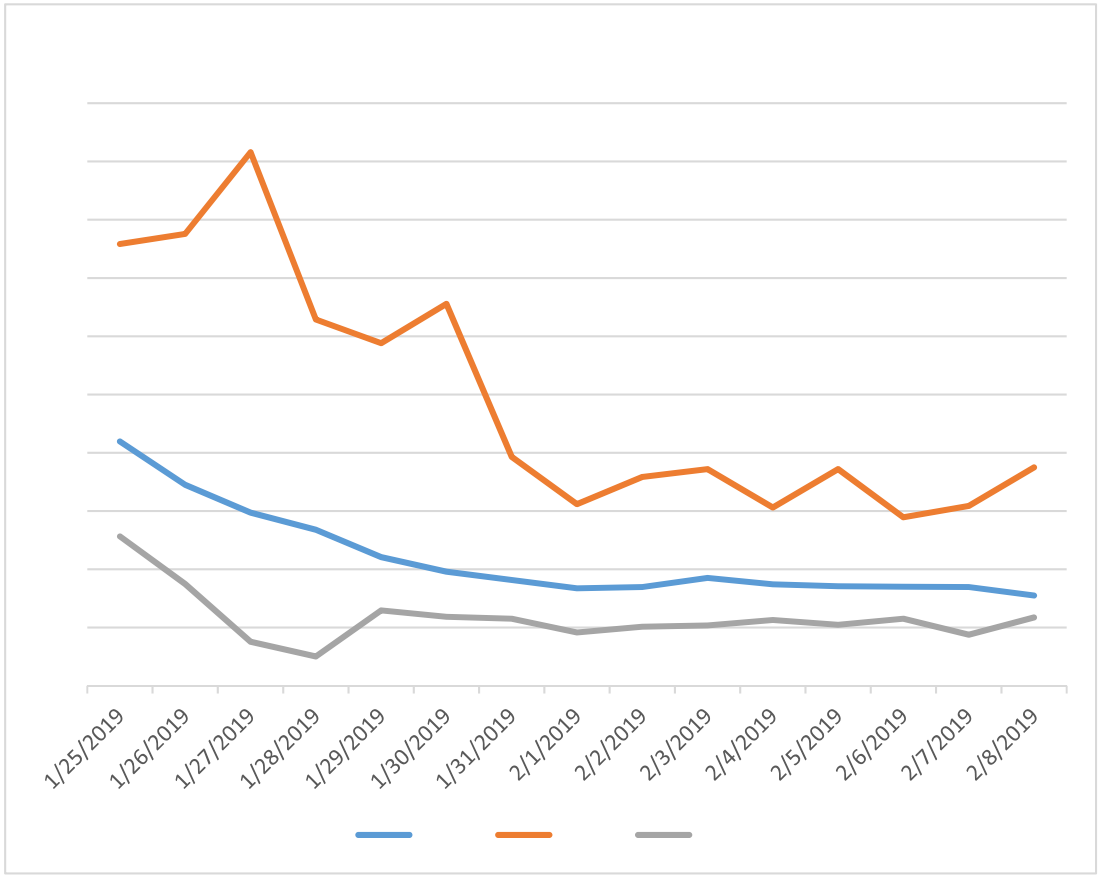
2/7/2019
2/8/2019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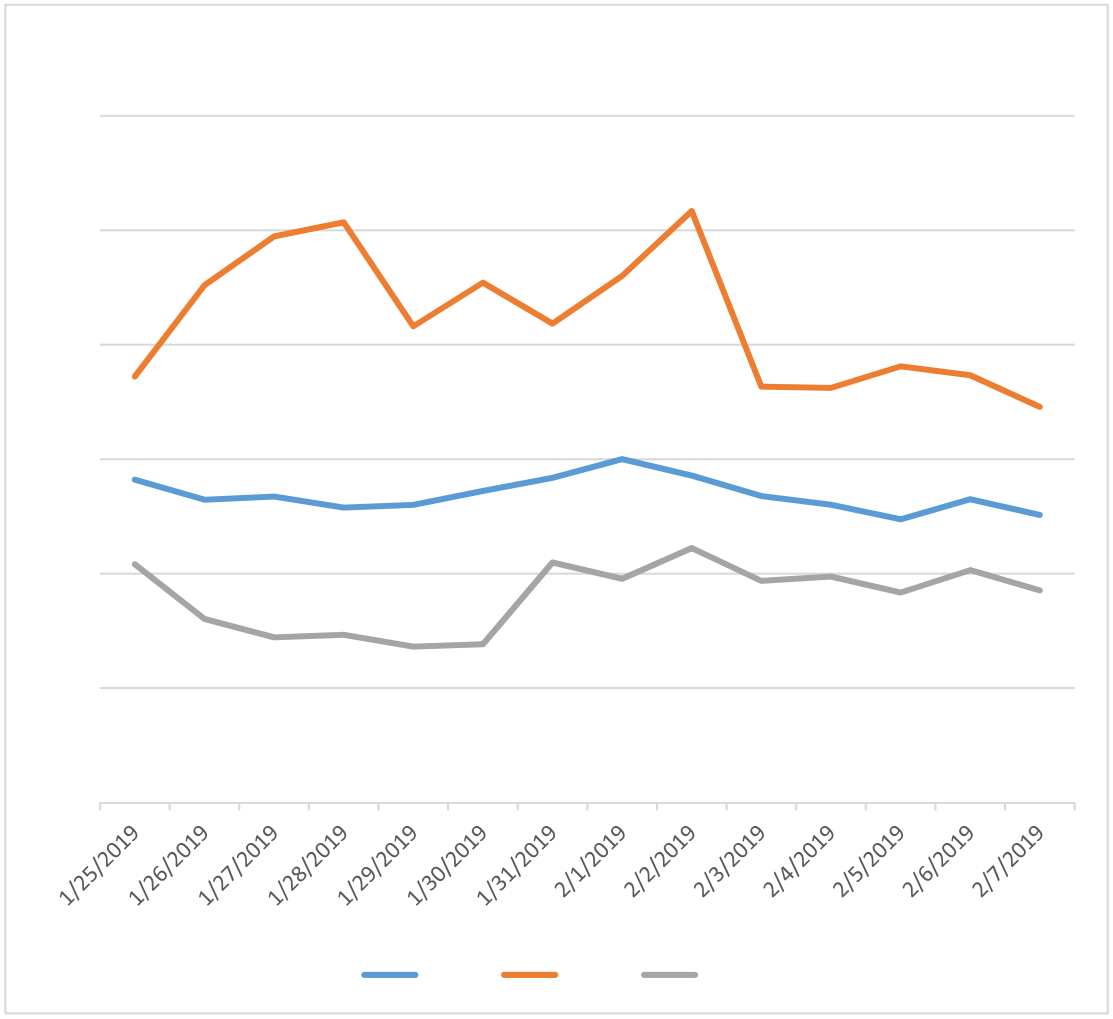
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2/7/2019

SHIMP ENGINEERING P.C.

PROJECT MANAGEMENT
CIVIL ENGINEERING
LAND PLANNING

February 12, 2019

Roy Nester
Neighborhood Development Services
610 East Market Street
Charlottesville, VA 22902

**Regarding:** **Belleview St**
**Preliminary Wet Well Design**

Dear Roy,

Attached is the preliminary design for the wet well based on the PER results. In summary, the wet well shall be a 10' deep, 60" diameter watertight precast manhole with (2) 5 horsepower submersible grinder pumps. Per advice from Chris Fewster, PE, who prepared the PER, this basic design will be able to handle any common residential waste that could enter the sanitary system, including fabrics. A final pump design will be included with the final subdivision plans. (2) Prints and a digital (PDF) copy of design dated 02/12/2019 are included with this letter. If you have any questions please do not hesitate to contact me at keane@shimp-engineering.com , Justin at Justin@shimp-engineering.com , or by phone at 434-299-9843.

Best Regards,

Keane Rucker, E.I.T.
Shimp Engineering, P.C.

**PRELIMINARY PUMP STATION HEAD ANALYSIS**

**Belleview Street Pump Station** **JN 1021**

| | | |
|---|---|---|
| Suction water surface elevation | 402.00 | feet |
| Discharge water surface elevation | 442.00 | feet |
| Static head | 40.0 | feet |

**Pipe Information**

| | |
|---|---|
| Pipe 1 | 3" force main |
| Pipe 2 | |
| Pipe 3 | |
| Pipe 4 | |
| Pipe 5 | |
| Pipe 6 | |

| | Pipe 1 | Pipe 2 | Pipe 3 | Pipe 4 | Pipe 5 | Pipe 6 |
|---|---|---|---|---|---|---|
| Pipe length (feet) | 230 | 0 | 0 | 0 | 0 | 0 |
| Pipe diameter (inches) | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Pipe C-factor | 120 | 120 | 120 | 120 | 120 | 120 |
| Portion of Flow | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 |
| Cross-sectional area (feet) | 0.049 | | | | | |
| Hydraulic radius | 0.063 | | | | | |

**Number of fittings for each pipe**

| | Pipe 1 | Pipe 2 | Pipe 3 | Pipe 4 | Pipe 5 | Pipe 6 |
|---|---|---|---|---|---|---|
| Gate Valve | | | | | | |
| Plug Valve (99% open) | 1 | | | | | |
| Butterfly Valve | | | | | | |
| Swing Check Valve | 1 | | | | | |
| 90° Bend | 2 | | | | | |
| 45° Bend | | | | | | |
| 22.5° Bend | | | | | | |
| 11.25° Bend | | | | | | |
| Tee (through) | | | | | | |
| Tee (side out) | 1 | | | | | |
| Cross (through) | | | | | | |
| Cross (side out) | | | | | | |
| Reducer/Increaser | | | | | | |
| Discharge to air | 1 | | | | | |
| Sum of losses in fittings | 6.66 | | | | | |
| Other miscellaneous losses | | | | | | |
| Sum of minor losses (K) | 6.66 | | | | | |

| | | |
|---|---|---|
| Minimum flow for results | 0 | gpm |
| Flow Increment | 5 | gpm |

**PRELIMINARY PUMP STATION HEAD ANALYSIS**

**Belleview Street Pump Station** **JN 1021**

**Head Loss Calculations**

| Flow (gpm) | Pipe 1 Loss (feet) | Pipe 2 Loss (feet) | Pipe 3 Loss (feet) | Pipe 4 Loss (feet) | Pipe 5 Loss (feet) | Pipe 6 Loss (feet) | TDH Full Length (feet) |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40.00 |
| 5 | 0.04 | 0 | 0 | 0 | 0 | 0 | 40.04 |
| 10 | 0.14 | 0 | 0 | 0 | 0 | 0 | 40.14 |
| 15 | 0.29 | 0 | 0 | 0 | 0 | 0 | 40.29 |
| 20 | 0.50 | 0 | 0 | 0 | 0 | 0 | 40.50 |
| 25 | 0.76 | 0 | 0 | 0 | 0 | 0 | 40.76 |
| 30 | 1.07 | 0 | 0 | 0 | 0 | 0 | 41.07 |
| 35 | 1.43 | 0 | 0 | 0 | 0 | 0 | 41.43 |
| 40 | 1.83 | 0 | 0 | 0 | 0 | 0 | 41.83 |
| 45 | 2.29 | 0 | 0 | 0 | 0 | 0 | 42.29 |
| | | | | | | | |
| 55 | 3.34 | 0 | 0 | 0 | 0 | 0 | 43.34 |
| 60 | 3.93 | 0 | 0 | 0 | 0 | 0 | 43.93 |
| 65 | 4.57 | 0 | 0 | 0 | 0 | 0 | 44.57 |
| 70 | 5.25 | 0 | 0 | 0 | 0 | 0 | 45.25 |
| 75 | 5.98 | 0 | 0 | 0 | 0 | 0 | 45.98 |
| 80 | 6.75 | 0 | 0 | 0 | 0 | 0 | 46.75 |
| 85 | 7.56 | 0 | 0 | 0 | 0 | 0 | 47.56 |
| 90 | 8.42 | 0 | 0 | 0 | 0 | 0 | 48.42 |
| 95 | 9.33 | 0 | 0 | 0 | 0 | 0 | 49.33 |
| 100 | 10.27 | 0 | 0 | 0 | 0 | 0 | 50.27 |

**Velocity Calculations**

| Flow (gpm) | Pipe 1 Velocity (fps) | Pipe 2 Velocity (fps) | Pipe 3 Velocity (fps) | Pipe 4 Velocity (fps) | Pipe 5 Velocity (fps) | Pipe 6 Velocity (fps) |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0.23 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0.45 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0.68 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0.91 | 0 | 0 | 0 | 0 | 0 |
| 25 | 1.13 | 0 | 0 | 0 | 0 | 0 |
| 30 | 1.36 | 0 | 0 | 0 | 0 | 0 |
| 35 | 1.59 | 0 | 0 | 0 | 0 | 0 |
| 40 | 1.82 | 0 | 0 | 0 | 0 | 0 |
| 45 | 2.04 | 0 | 0 | 0 | 0 | 0 |
| 50 | 2.27 | 0 | 0 | 0 | 0 | 0 |
| 55 | 2.50 | 0 | 0 | 0 | 0 | 0 |
| 60 | 2.72 | 0 | 0 | 0 | 0 | 0 |
| 65 | 2.95 | 0 | 0 | 0 | 0 | 0 |
| 70 | 3.18 | 0 | 0 | 0 | 0 | 0 |
| 75 | 3.40 | 0 | 0 | 0 | 0 | 0 |
| 80 | 3.63 | 0 | 0 | 0 | 0 | 0 |
| 85 | 3.86 | 0 | 0 | 0 | 0 | 0 |
| 90 | 4.08 | 0 | 0 | 0 | 0 | 0 |
| 95 | 4.31 | 0 | 0 | 0 | 0 | 0 |
| 100 | 4.54 | 0 | 0 | 0 | 0 | 0 |

**PRELIMINARY PUMP STATION HEAD ANALYSIS**

**Belleview Street Pump Station**

**Pump Selection**

Pump 1 Description: Pump 2 Description: Pump 3 Description:

| Flow (gpm) | Pump 1 Characteristics TDH (ft) | Pump 2 Characteristics TDH (ft) | Pump 3 Characteristics TDH (ft) |
|---|---|---|---|
| 0 | 52.00 | | |
| 5 | 51.00 | | |
| 10 | 50.50 | | |
| 15 | 50.50 | | |
| 20 | 50.00 | | |
| 25 | 50.00 | | |
| 30 | 50.00 | | |
| 35 | 49.50 | | |
| 40 | 49.00 | | |
| 45 | 48.50 | | |
| 50 | 48.00 | | |
| 55 | 47.50 | | |
| 60 | 47.00 | | |
| 65 | 46.00 | | |
| 70 | 45.00 | | |
| 75 | 43.00 | | |
| 80 | 41.00 | | |
| 85 | 40.00 | | |
| 90 | 38.00 | | |
| 95 | 37.00 | | |
| 100 | 36.00 | 300.00 | 310.00 |

USE : residential

**Wet Well**

Wet Well Diameter 5.00 ft
Wet Well Height 10.00 ft

Pump Rate 50.00 gpm

Min active wet well volume :

1) Min of 1minute pump rate time 50 gallons

2) 10 minutes pump cycle time ( 3 cycles/hr/pump ) 125 gallons

Dimensions of sloped portion around base of wet well (ft) :

height = 1.00 width = 1.00

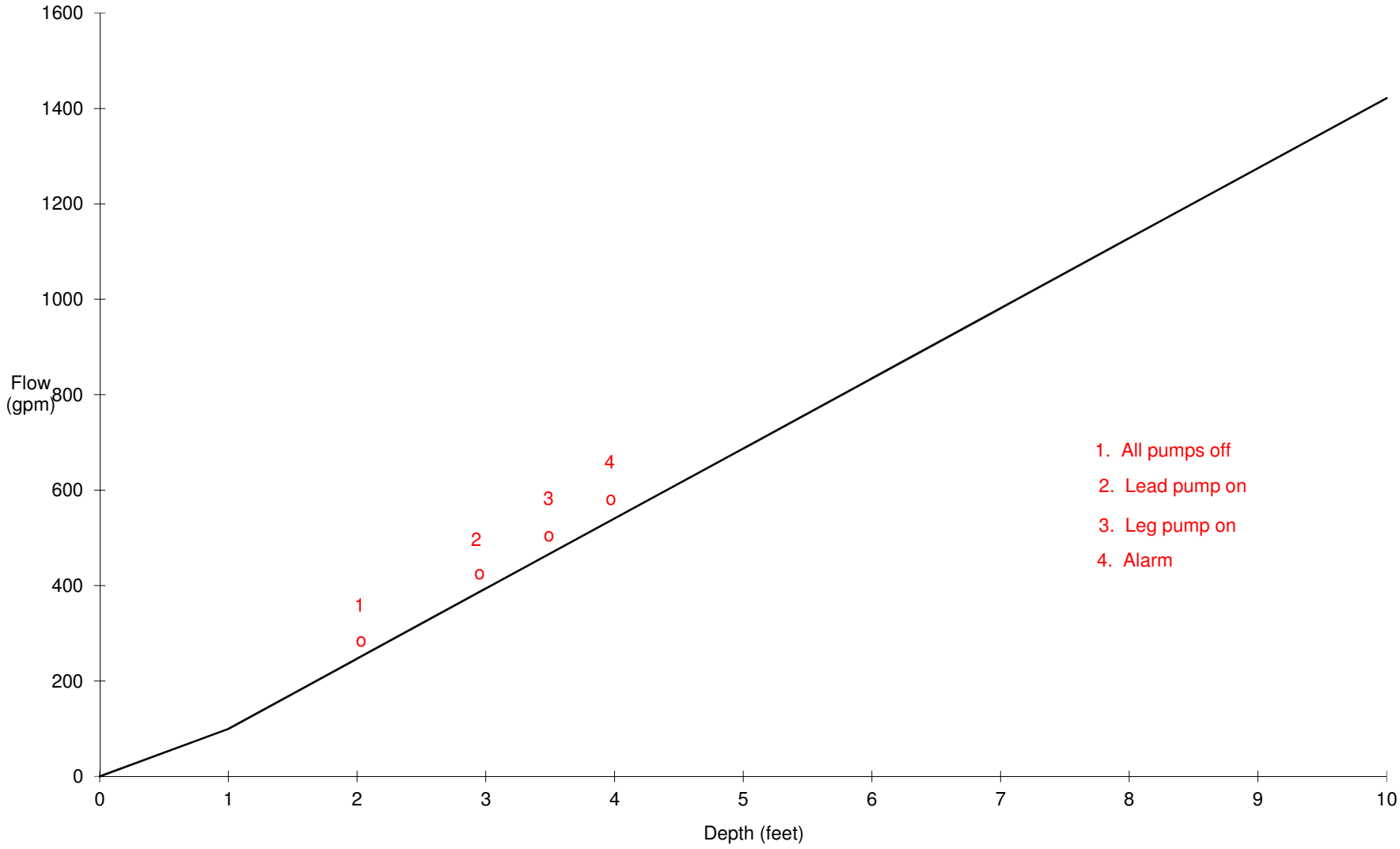
Volume per foot of depth of wet well :

| Depth (ft) | Volume (gal) |
|---|---|
| 0 | 0 |
| 1 | 100 |
| 2 | 247 |
| 3 | 394 |
| 4 | 540 |
| 5 | 687 |
| 6 | 834 |
| 7 | 981 |
| 8 | 1128 |
| 9 | 1275 |
| 10 | 1422 |

Pump settings :

1) Bottom of wet well at 401.00 ft
2) All pumps off at 403.00 ft
3) Lead pump on at 404.00 ft
4) Lag pump on at 405.00 ft
5) Alarm at 406.00 ft

**WET WELL**
**FLOW - DEPTH RELATIONSHIP**



# Attachment 4: Utilities Comment Response

SHIMP ENGINEERING P.C.

PROJECT MANAGEMENT
CIVIL ENGINEERING
LAND PLANNING

February 12, 2019

Roy Nester
Neighborhood Development Services
610 East Market Street
Charlottesville, VA 22902

**Regarding:** **Belleview St**
**City of Charlottesville Utilities Comment Response**

Dear Roy,

We have reviewed the comments dated August 1, 2018 from the city and have amended the plans for this site. Our comment response is as follows.

**GENERAL**

1. A PER for the proposed pump station has been included. Please note that we are still monitoring the downstream sanitary sewer flows, this additional data (as well as any calculation changes the data produces) will be delivered upon completion.
2. Comment noted. Profiles with all main crossings shall be shown on upcoming full preliminary subdivision plan resubmittal, after this SUP submittal.
3. Comment noted, see comment 2 above.
4. Comment noted.
5. After deed research and multiple conversations with the City and developer attorneys for this project, it has been concluded that both unnamed 20' "paper" street and 30' Belleview St are both existing legal streets. These will both be kept as City ROW, however only the paper street will be improved to meet current city standards. No private infrastructure (excepting the 3 necessary private sewer crossings) shall be in these ROW's. Refer to updated subdivision plan layout.
6. Gilbert Station LLC has agreed to the ROW dedication as well as a utility easement. Water & Sewer service lines now shown.

**STORM**

7. Easement where storm drain leaves ROW is labelled as private.

**WATER**

8. Plan view provided. Profile shall be included with full preliminary subdivision plan resubmittal, after this SUP submittal.
9. Comment noted, see Note 8 above.

**SEWER**

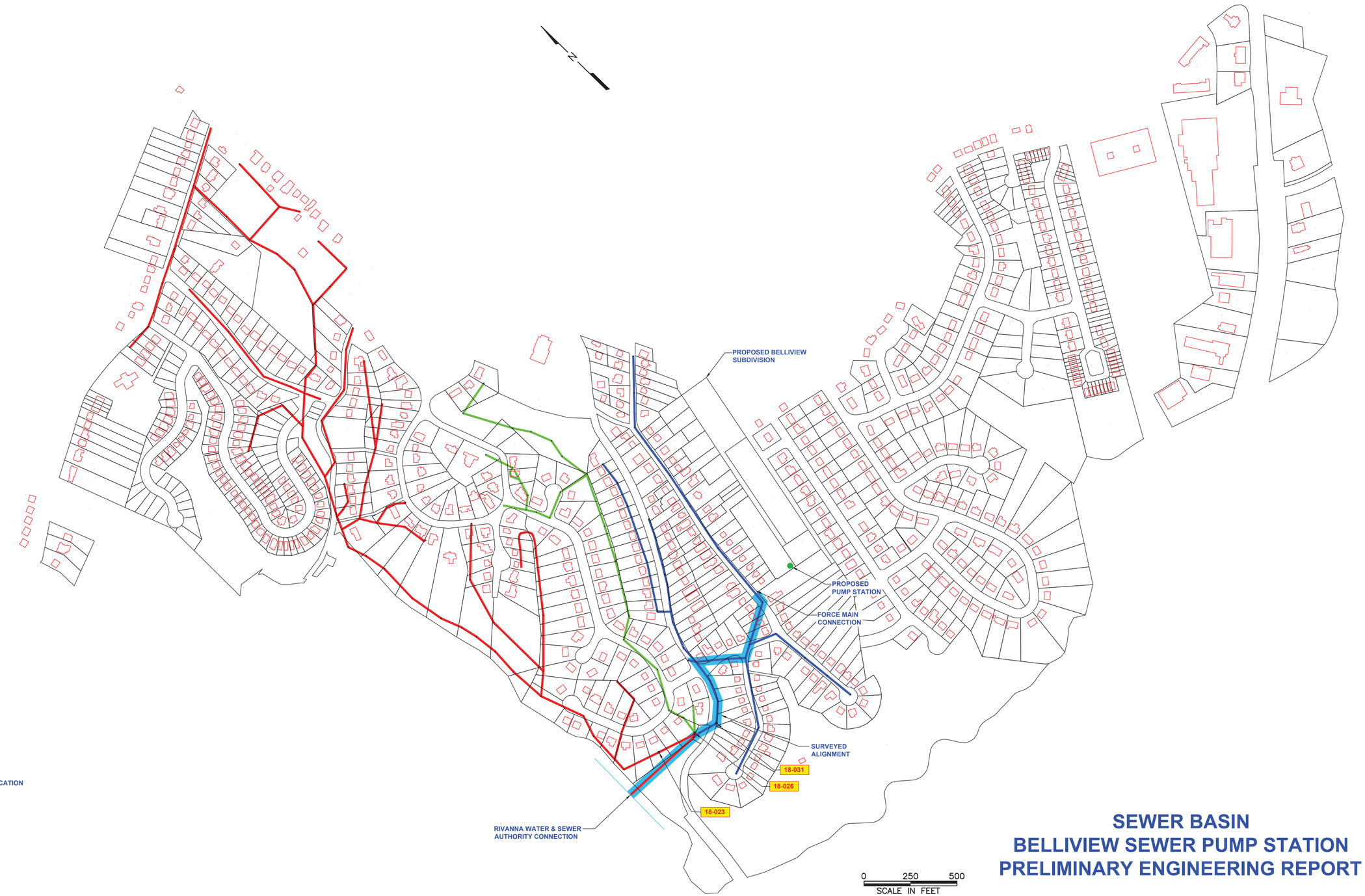
10. Noted.
    a. Preliminary pump sizing shown.
    b. Preliminary pump model shown.
    c. Preliminary alarm system shown.
    d. Prelim wet well shall be a 10' deep watertight 60" precast manhole. With a max effluent depth of 8' (2' of freeboard), this supplies a volume of 117.8 cf (1128 gallons) – almost 10x the design cycle volume of 125 gal. Hurt & Profitt has been contracted to complete the full design of the pump station, but these prelim calcs have allowed us to design the site based on these dimensions. See attached letter for Pump Station Design.
11. Noted.
    a. Forcemain removed from ROW,
    b. Noted.
    c. Noted, this has been specified.
12. Noted. See PER.
13. Sanitary layout has been revised, acute angles have been removed.
14. Sewer service locations have been provided for all 6 potential lots.

(2) Prints and a digital (PDF) copy of site plan with revision date 02/10/2019 showing these changes are included with this letter. If you have any questions please do not hesitate to contact me at keane@shimp-engineering.com , Justin at Justin@shimp-engineering.com , or by phone at 434-299-9843.

Best Regards,

Keane Rucker, E.I.T.

Shimp Engineering, P.C.




# SEWER BASIN
# BELLIVIEW SEWER PUMP STATION
# PRELIMINARY ENGINEERING REPORT

HURT & PROFFITT

Attachment E

NORTH

RIVANNA WATER & SEWER AUTHORITY
SANITARY MH
TOP 391.41'
INV IN 380.5'(18–024)
INV IN 381.0'(24")
INV OUT 379.5'

24" TC
24" SS
SS
SS
SS
SS
SS
24" TC
24" SS

10" PVC
SS
455.65'

MH 18–023
(APPROX. LOCATION)
NOT SURVEYED
TOP 390.21
INV 386.21

18–023

SS
SS
10" PVC
11.66'

MH 18–024
TOP 392.35'
INV IN 384.0'(18–025)
INV IN 383.9'(18–028)
INV OUT 383.8'

MH 18–025
TOP 393.39'
INV IN 385.2'(18–026)
INV IN 385.1'(10")
INV OUT 385.0'

MH 18–026
TOP 393.50'
INV IN 388.0'(6")
INV IN 387.0'(8")
INV OUT 386.9'

MH 18–028
TOP 395.36'
INV IN 387.2'
INV OUT 386.9'

18–026
8" PVC
6" TC
8" PVC–15.85'
18–025
18–024
8" PVC
41.57'
18–028
8" PVC
SS
105.82'
18–031

4" PVC (b)
4" PVC (a)

MH 18–031
TOP 408.26'
INV IN 405.5'(4"a)
INV IN 406.1(4" b)
INV IN 400.0'(18–032)
INV OUT 399.9'

8" PVC
SS
112.59'
18–032
6" CI

MH 18–032
TOP 407.75'
INV IN 405.4'(6")
INV IN 401.2'(18–033)
INV OUT 401.1'

8" PVC
SS
12.45'
18–033

MH 18–033
TOP 405.75'
INV IN 402.0'
INV OUT 401.9'

8" PVC
SS
131.01'
18–034

4" CI

MH 18–034
TOP 409.22'
INV IN 403.8'(6")
INV IN 403.8'(8")
INV IN 406.7'(4")
INV IN 403.6'(18–035)
INV OUT 403.5'

8" PVC
SS

6" PVC

8" PVC
SS
162.20'
18–035

MH 18–035
TOP 419.72'
INV IN 412.0'
INV OUT 411.9'

8" PVC
SS
99.71'
18–036
8" TC

MH 18–036
TOP 431.75'
INV IN 426.5'(8")
INV IN 425.9'(18–039)
INV OUT 425.8'

8" PVC
SS
82.94'
18–039

MH 18–039
TOP 435.50'
INV IN 429.7'(8")
INV IN 429.7'(18–046)
INV OUT 429.6'

8" PVC
SS
230.12'
18–046
6" UNKNOWN

MH 18–046
TOP 447.07'
INV IN 440.9'(6")
INV IN 440.8'(18–047)
INV OUT 440.7'

8" PVC
18–047

MH 18–047
TOP 455.59'
INV IN 449.0'
INV OUT 448.9'

18–XXX METER LOCATION

50 25 0 50 100
GRAPHIC SCALE IN FEET


HURT & PROFFITT
2524 LANGHORNE ROAD
LYNCHBURG VA 24501
800.242.4906 TOLL FREE
434.847.7796 MAIN
434.847.0047 FAX
ENGINEERING • SURVEYING • LAND DEVELOPMENT • ENVIRONMENTAL
GEOTECHNICAL • CONSTRUCTION TESTING & INSPECTION • CULTURAL RESOURCES


# SANITARY SEWER SURVEY
FOR
# BELLVIEW SEWER PUMP STATION
CHARLOTTESVILLE, VA

| | |
|---|---|
| PROJECT NO. | 20180922 |
| G.L. NO. | |
| FILE NO. | |
| DATE: | |
| DRAWN BY: | |
| CHECKED BY: | |

SHEET NO.

Feb 08, 2019 - 1:53pm Z:\2018\20180922\Survey\Topo Bellview Wastewater.dwg

# PRELIMINARY SITE PLAN FOR
# BELLEVIEW STREET
## TAX MAP 20 PARCEL 142-148
## CITY OF CHARLOTTESVILLE, VIRGINIA

### LEGEND

| EXIST | NEW | DESCRIPTION |
|---|---|---|
| 16$^{5}$ TC | x 12$^{3}$ TC | TOP OF CURB ELEVATION |
| 16$^{5}$ | x 12$^{3}$ | SPOT ELEVATION |
| 16$^{5}$ TW | x 12$^{3}$ TW | TOP OF WALL ELEVATION |
| 16$^{5}$ BW | x 12$^{3}$ BW | BOTTOM OF WALL ELEVATION |
| | | BENCHMARK |
| | | STORM SEWER |
| | | ROOF DRAIN |
| | | SEWER LINE |
| | | WATER LINE |
| | | GAS LINE |
| | | OVERHEAD ELECTRIC WIRE |
| | | UNDERGROUND ELECTRIC |
| | | OVERHEAD TELEPHONE LINE |
| | | UNDERGROUND TELEPHONE LINE |
| | | PROPERTY LINE |
| | | ADJACENT PROPERTY LINE |
| | | VACATED PROPERTY LINE |
| | | BUILDING SETBACK |
| | | DRAIN INLET (DI) |
| | | SANITARY MANHOLE |
| | | PLUG |
| | | WATER VALVE & BOX |
| | | FIRE HYDRANT |
| | | WATER METER |
| | | LIGHT POLE |
| | | UTILITY POLE |
| | | SANITARY EASEMENT |
| | | GRADING EASEMENT |
| | | DRAINAGE EASEMENT |
| | | UTILITY EASEMENT |
| | | WATER EASEMENT |
| | | ACCESS EASEMENT |
| | | STORM DRAINAGE EASEMENT |
| | | TREE LINE |
| | | FENCE |
| | | STREAM |
| 312 | 12 | INTERVAL CONTOUR |
| 300 | 00 | INDEX CONTOUR |
| CG-2 | CG-2 | STANDARD 6" CURB |
| CG-6 | CG-6 | COMBINATION 6" CURB & GUTTER |
| | | CONCRETE PAVEMENT / SIDEWALK |
| | | RIPRAP |
| | | ASPHALT |
| | | GRASS |
| | | EC-2 MATTING |
| | | EC-3 MATTING |
| | | WETLAND |
| (10) | (10) | PARKING COUNT |
| | | CROSSWALK |
| | | HANDICAP ACCESSIBLE AISLE |
| | | CG-12 |
| | | HANDICAP PARKING |

NOTE:
1. THE SIZE OF THE SYMBOLS MAY VARY FROM WHAT IS SHOWN.

### VICINITY MAP SCALE: 1"=2,000'


IMAGE PROVIDED BY GOOGLE MAPS

### SHEET INDEX


C1 - COVER SHEET
C2 - EXISTING CONDITIONS - LOTS
C3 - EXISTING CONDITIONS - TOPOGRAPHY
C4 - BOUNDARY LINE ADJUSTMENT PLAN
C5 - SUBDIVISION LAYOUT PLAN
C6 - LAYOUT & UTILITY PLAN
C7 - LAYOUT & UTILITY PLAN
C8 - GRADING PLAN
C9 - GRADING PLAN
~~C10 - ROAD PLAN~~
~~C11 - ROAD PLAN~~
~~C12 - LANDSCAPING PLAN~~
~~C13 - SITE DETAILS~~
~~C14 - STORM SEWER PROFILES~~
~~C15 - BMP DETAILS & PROFILES~~
~~C16 - SANITARY SEWER PROFILES~~


### NOTES

1. All excavation for underground pipe installation must comply with OSHA Standards for the Construction Industry (29 CFR Part 1926).
2. The location of existing utilities across or along the line of the proposed work are not necessarily shown on the plans and where shown based on "MISS UTILITY" markings and are only approximately correct. The contractor shall locate all underground lines and structures as necessary.
3. The contractor shall verify the locations of all boundaries, buildings, existing elevations, vegetation and other pertinent site elements. Contractor shall immediately report any discrepancies to the engineer of record.
4. The contractor shall be responsible for notifying "MISS UTILITY" – 1-800-552-7001.
5. Any damage to existing utilities caused by the contractor or its subcontractors shall be the contractor's sole responsibility to repair. This expense is the contractor's responsibility.
6. All paving, drainage related materials and construction methods shall conform to current specifications and standards of the City of Charlottesville unless otherwise noted.
7. An erosion and sediment control plan is required with this site plan.
8. All slopes and disturbed areas are to be fertilized, seeded and mulched. The maximum allowable slope is 2:1. Where it is reasonably obtainable, lesser slopes of 3:1 or better are to be achieved.
9. Paved, rip-rap or stabilization mat lined ditch may be required when in the opinion of the Engineer it is deemed necessary in order to stabilize a drainage channel.
10. All traffic control signs shall conform to the 2011 Virginia Supplement to the 2009 Manual on Uniform Control Devices.
11. Unless otherwise noted all concrete pipe shall be reinforced concrete pipe – Class III.
12. All material inside concrete forms shall be clean and free of all rocks and other loose debris. Sub-base material shall be compacted by mechanical means. Remove all standing water from area inside forms.
13. Concrete and asphalt shall not be placed unless the air temperature is at least 40 degrees in the shade and rising. Material shall not be placed on frozen subgrade.
14. All existing curbs, curb and gutters and sidewalks to be removed shall be taken out to the nearest joint.
15. Existing asphalt pavement shall be saw cut and removed as per VDOT Road and Bridge Specifications 2016. Removal shall be done in such a manner as to not tear, bulge or displace adjacent pavement. Edges shall be clean and vertical. All cuts shall be parallel or perpendicular to the direction of traffic.
16. The contractor shall exercise care to provide positive drainage to the storm inlets or other acceptable drainage paths in all locations.
17. Contact information for any necessary inspections with City:
    E&S inspector, NDS- 970-3182 (for the E&S inspections)
    Project Inspectors, NDS-970-3182 (for other construction items like sidewalk, pavement patches, road, storm sewer etc)
    Water and Sanitary Sewer-Public Works 970-3800
    Street cut, Public Works 970-3800
    Other public ROW issues-City Engineer 970-3182.
18. Any sidewalk and/or curb damage identified in the site vicinity due to project construction activities as determined by City inspector shall be repaired at the contractor's expense.
19. A temporary street closure permit is required for closure of sidewalks, parking spaces and roadways and is subject to approval by the City Traffic Engineer.

### PROPERTY INFORMATION

OWNER: AZALEA COTTAGES, LLC
660 HUNTERS PL. STE. 101
CHARLOTTESVILLE, VA 22911

DEVELOPER: CORE REAL ESTATE
600 WATER STREET EAST
CHARLOTTESVILLE, VA 22902

LEGAL REFERENCE: INSTR. 2010:193
INSTR. 2009: 193
DB 855 PG 769
DB 309 PG 284

### ZONING

Zoned R-1S

### SETBACKS

Front: 25'
Side: 5',
Rear: 25'
Corner: 20'

### PARCEL AREA SUMMARY

AREA OF DEVELOPMENT 6.80 AC
DISTURBED AREA: 7.50 AC

### LAND USE SCHEDULE

| EXISTING | AREA | % |
|---|---|---|
| Building | 0 Ac. | 0% |
| Pavement | 0 Ac. | 0% |
| Sidewalk | 0 Ac. | 0% |
| Impervious Area | 0 Ac. | 0% |
| Pervious Area | 6.80 Ac. | 100% |
| Total= | 296,345 sf | (6.80 Ac.) |

| PROPOSED | AREA | % |
|---|---|---|
| Building | 61,746 SF | 00.0% |
| Driveway | 16,768 SF | 12.1% |
| Road/SW | 47,767 SF | 5.2% |
| Impervious Area | 126,191 SF | 42.6% |
| Pervious Area | 170,154 SF | 57.4% |
| Total= | 296,345 SF | (6.80 Ac.) |

### EXISTING USE

81 Vacant Lots of Record

### PROPOSED USE

This development will occur following a boundary line adjustment (BLA) for the existing 81 lots on the parcels owned by Azalea Cottages, LLC. This BLA will create new lots that are more conforming than the existing lots per Sec. 34-1145 (b). The new lots will have more total area and more frontage width. After the approval of this BLA, Lot A (see Plan Sheet C4) will be used for a Public ROW dedication, upon which the street and ROW regulations will apply to this Lot A.

Of the remaining lots from the BLA, 36 will be developed as Single Family Residential Lots. 3 Lots will be dedicated as Open Space to be owned and maintained by the HOA. This development will be served by a Public Street with on-street parking on one side.

Proposed Gross Residential Density:
36 Units/6.80 Acres = 5.29 Units Per Acre

### HOA & MAINTENANCE NOTES

Prior to final plan approval, an HOA shall be formed in accordance with the Virginia Property Owners' Association Act.
All private easements shown on plan shall be owned by the HOA. HOA will own and maintain private sanitary sewer, BMP's, ditches, and retaining walls on plan.

### ELECTRIC / TELEPHONE / CABLE TV

If feasible, all new service lines for electricity, telephone and cable TV are to be installed underground. Care is to be taken to assure their location does not conflict with any other aspects of the proposed site plan.

### WATER & SANITARY SERVICES

All materials used for water and sanitary sewer service lines are to comply with requirements as outlined in both the BOCA Code and the regulations used by the Department of Public Works for the City of Charlottesville. Water demand will be served with public infrastructure. Sanitary effluent will be collected with a private system and connected to public sewer. A Certificate to Construct (CTC) shall be received from DEQ and submitted to the City prior to beginning any water or sewer construction on this project. A Certificate to Operate (CTO) shall be received from DEQ and submitted to the City prior to requesting any water meters on this project. Private sewer mains and manholes shall be inspected and tested by the city prior to requesting any water meters on this project.

Water Demand: Estimated 4,800 gph max, 7,200 gph peak.
Sewer Demand: Estimated 16,000 gpd avg, 40,000 gpd peak.

Water & Sewer Demand assumes 40 total single-family homes, allowing for 4 additional future connections beyond what is shown on these plans.

### SOIL TESTING REQUIREMENTS

Prior to constructions of City roads CBR testing of soil needs to be conducted by third party tester for City review.

### ITE TRIP GENERATION

Proposed use: Single family detached dwellings, ITE code 210.
Subdivision: 36 dwellings, projected AADT = 360 trips/day
Peak Hour = 47 Trips

### LIGHTING

Street lighting will not be provided.

### FLOOD ZONE

According to the FEMA Flood Insurance Rate Map, effective date February 4, 2005 (Community Panel 51003C0269D), this property does not lie within a Zone A 100-year flood plain.

### CITY PERMITS

1. The contractor shall be responsible for obtaining a street cut permit from the City.
2. A Temporary Street Closure Permit is required for closure of sidewalks, parking spaces and roadways and is subject to approval by the City Traffic Engineer. The contractor contact information will be provided with the final plans.

### BMP INFORMATION

Type of BMP's:
1. Underground Detention
Includes (3) 110 LF 120" CMP Pipes.
2. Biofiltration Basin

BMP's shall be owned and maintained by the Belleview St. HOA.
The BMP's capture runoff from 21.85 acres and drains into Moores Creek via intermittent stream.

### SOURCE OF BOUNDARY & TOPO

Boundary information from a field survey by:
Chambers Land Surveying
13652 James Madison Hwy,
Palmyra, VA 22963

Topographic field survey completed on 05/24/2018 by:
Roudabush, Gale, & Associates
914 Monticello Road
Charlottesville, VA 22902
Storm drain inlet locations verified by Shimp Engineering, Inc. on 06/12/18 during a site visit.

Benchmark: Drop Inlet at #2744 McElroy Drive.
Elevation=394.94

### BUILDING HEIGHT

Maximum: 35' By Right

### FIRE MARSHALL'S NOTES

SITE PLAN:
1. IFC 505-The building street number to be plainly visible from the street for emergency responders.
2. VSFPC 507.5.4-Fire hydrants, fire pump test header, fire department connections or fire suppression system control valves shall remain clear and unobstructed by landscaping, parking or other objects.
3. VSFPC 503.2.1-Overhead wiring or other obstructions shall be higher than 13 feet 6 inches.
4. VSFPC 3312.1-An approved water supply for fire protection shall be made available as soon as combustible material arrives on the site. Fire hydrants shall be installed and useable prior to the start of any building construction.
5. All pavement shall be capable of supporting fire apparatus weighing 85,000 lbs.
6. Required vehicle access for fire fighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads, capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available.

CONSTRUCTION & DEMOLITION:
1. IFC 1404.1 – Smoking to be allowed in only designated spaces with proper receptacles.
2. IFC 1404.2 – Waste disposal of combustible debris shall be removed from the building at the end of each workday.
3. IFC 1410.1-Access to the building during demolition and construction shall be maintained.
4. IFC 1404.6 – Operations involving the use of cutting and welding shall be done in accordance with Chapter 26, of the International Fire Code, addressing welding and hotwork operations.
5. IFC 1414.1-Fire extinguishers shall be provided with not less than one approved portable fire extinguisher at each stairway on all floor levels where combustible materials have accumulated.
6. Required vehicle access for fire fighting shall be provided to all construction or demolition sites. Vehicle access shall be provided to within 100 feet of temporary or permanent fire department connections, if any.

### CRITICAL SLOPES

Steep Slopes above 25% grade within the site are shown with a hatch.
Steep Slopes do not meet the City definitions of Critical Slopes.

### SUBDIVISION AND ROAD NOTES

1. All proposed lots contain a building site (shown on sheet C3) that complies with City of Charlottesville Building Codes.
2. This site contains no known places of burial.
3. This site does not lie within an agricultural-forestral district.
4. This site does not contain stream buffers.
5. Proposed Road name: Belleview Ave.
6. Roads shall be publicly owned and maintained .
7. Design Speed Limit: 25 mph w. 3% estimated truck traffic.
8. All signs and pavement markings shall conform with the MUTCD 2009 Guidelines.

### WATERS OF THE U.S.A. NOTES

1. Stream determination for the property: NAO 2018-00379 – March 5, 2018 made by the US Army Corps of Engineers.
2. 299 linear feet of the stream shall be disturbed under a Nationwide 18 Permit.
3. No wetlands have been observed on this site.
4. Proposed development shall comply with all local, commonwealth, and federal mandates.

### APPROVALS:

DIRECTOR OF NEIGHBORHOOD DEVELOPMENT SERVICES DATE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COMMONWEALTH OF VIRGINIA
JUSTIN M. SHIMP
Lic. No. 45183
PROFESSIONAL ENGINEER

COVER SHEET

| Rev # | Date | Description |
|---|---|---|
| 1 | 06/18/2018 | City Comments |
| 2 | 07/13/2018 | Bid Set Updates |
| 3 | 10/22/2018 | City Comments |

PRELIMINARY SUBDIVISION PLANS FOR:
BELLEVIEW ST.
CITY OF CHARLOTTESVILLE, VIRGINIA

Date 01/19/2018
Scale
Sheet No. C1 OF 16
File No. 17.052

Monte Vista Avenue (30' ROW)

TM 20-140 | TM 20-139 | TM 20-138 | TM 20-137 | TM 20-136 | TM 20-135 | TM 20-134 | TM 20-133 | TM 20-132 | TM 20-131 | TM 20-130 | TM 20-128 | TM 20-127 | TM 20-126.1 | TM 20-126.2 | TM 20-124 | TM 20-123 | TM 20-120 | TM 20-119 | TM 20-118.1 | TM 20-118 | TM 20-117

TM 20-142
AZALEA COTTAGES LLC
1.24 ACRES
BLOCK 3
LOTS 73-90

Block 3

73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90

TM 20-129
AZALEA COTTAGES LLC
0.298 ACRES
BLOCK 3
LOTS 98-101

98 99 100 101

TM 20-126
AZALEA COTTAGES LLC
0.321 ACRES
BLOCK 3
LOTS 104-107

104 105 106 107

TM 20-125
RL BEYER CONSTRUCTION INC
0.121 ACRES
BLOCK 3
PT. LOTS 108-110

108 109 110

TM 20-122
GILBERT STATION LLC
0.241 ACRES
LOTS 111-113

111 112 113

TM 20-121
AZALEA COTTAGES LLC
0.258 ACRES
LOTS 114-116

114 115 116

20' Paper Street

TM 20-141

1 2 3 4 5

TM 20-143
AZALEA COTTAGES LLC
0.488 ACRES
BLOCK 4
LOTS 1-5

6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29

TM 20-144
AZALEA COTTAGES LLC
1.56 ACRE PORTION
BLOCK 4
LOTS 6-29

30 31 32 33 34 35 36 37

TM 20-145
AZALEA COTTAGES LLC
0.689 ACRES
BLOCK 4
LOTS 30-37

38 39

TM 20-146
GILBERT STATION LLC
0.170 ACRES

40 41 42 43

TM 20-147
AZALEA COTTAGES LLC
0.344 ACRES
LOTS 40-43

44 45 46

TM 20-148
AZALEA COTTAGES LLC
0.244 ACRES
LOTS 44-46

20' Paper Street

TM 20-150

Belleview St. (30' ROW)

TM 20-257 | TM 20-258 | TM 20-156 | TM 20-155 | TM 20-154 | TM 20-153 | TM 20-152 | TM 20-151 | TM 20-45 | TM 20-45.1 | TM 20-46 | TM 20-47 | TM 20-48 | TM 20-49 | TM 20-50 | TM 20-53 | TM 20-52

Azalea Drive (50' ROW)

40 0 40 80 120
Scale: 1"=40'


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PROFESSIONAL ENGINEER

PRELIMINARY

EXISTING CONDITIONS - LOTS

| Rev # | Date | Description |
|---|---|---|
| 1 | 06/18/2018 | City Comments |
| 2 | 07/13/2018 | Bid Set Updates |
| 3 | 11/22/2018 | City Comments |

PRELIMINARY SUBDIVISION PLANS FOR:

# BELLEVIEW ST.

CITY OF CHARLOTTESVILLE, VIRGINIA

Date
01/19/2018

Scale
1"=40'

Sheet No.
C2 0F16

File No.
17.052

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Monte Vista Avenue (30' ROW)

SAN. MH
RIM=455.67
I.O.=449.07

SLOPES >25% PORTION EXCEEDS 6000 SF, THEREFORE ARE DEFINED AS CRITICAL.

LIMITS OF DISTURBANCE

24" W.O. T.R.

9" Mon. T.R.

12" Mon.* T.R.

6" Dbl. Pop.T.R.

17" Oak T.R.

18" W.O. T.R.

22" Oak T.R.

48" Pop T.R.

16" Pop T.R.

24" Pop T.R.

INTERMITTENT STREAM BEGINS PER USACE DETERMINATION NAO 2018-00379 ON MARCH 5, 2018

SLOPES >25% SLOPES ARE NOT CRITICAL BECAUSE THEY ARE LESS THAN 20' HORIZONTAL LENGTH.

NOTE: TREES IN BOLD TO BE REMOVED.

EDGE OF PAVEMENT

CMP
RIM=436.39

ST GRATE
I.U.=443.43
I.O.=443.45

SAN. MH
I.O.=442.22

EX. GAS MAIN

8" TERRA COTTA SAN.

EX. 6" WL

Azalea Drive (50' ROW)

40 0 40 80 120
Scale: 1"=40'

EXISTING CONDITIONS - TOPOGRAPHY

| Rev # | Date | Description |
|---|---|---|
| 1 | 06/18/2018 | City Comments |
| 2 | 07/13/2018 | Bid Set Updates |
| 3 | 10/22/2018 | City Comments |

PRELIMINARY SUBDIVISION PLANS FOR:

# BELLEVIEW ST.

CITY OF CHARLOTTESVILLE, VIRGINIA

COMMONWEALTH OF VIRGINIA
JUSTIN M. SHIMP
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PROFESSIONAL ENGINEER

FOR REVIEW

Date 01/19/2018
Scale 1"=40'
Sheet No. C3 0F16
File No. 17.052

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PHONE: (434) 227-5140
JUSTIN@SHIMP-ENGINEERING.COM

MONTE VISTA AVE

| | | |
|---|---|---|
| 1 | 13337 SF LOT | |
| 2 | 6596 SF LOT | |
| 3 | 5345 SF LOT | |
| 4 | 5928 SF LOT | |
| 5 | 5176 SF LOT | |
| 6 | 3107 SF LOT | |
| 7 | 3107 SF LOT | |
| 8 | 3107 SF LOT | |
| 9 | 3107 SF LOT | |
| 10 | 3109 SF LOT | |
| 11 | 7296 SF LOT | |
| 12 | 7418 SF LOT | |
| 13 | 6505 SF LOT | |
| 14 | 6805 SF LOT | |
| 15 | 6116 SF LOT | |
| 16 | 5900 SF LOT | |
| 17 | 5728 SF LOT | |
| 18 | 5994 SF LOT | |
| 19 | 5655 SF LOT | |
| 20 | 5617 SF LOT | |
| 21 | 5600 SF LOT | |
| 22 | 6426 SF LOT | |
| 23 | 5869 SF LOT | |
| 24 | 5882 SF LOT | |
| 25 | 5898 SF LOT | |
| 26 | 5909 SF LOT | |
| 27 | 5928 SF LOT | |
| 28 | 5949 SF LOT | |
| 29 | 5583 SF LOT | |
| 30 | 5599 SF LOT | |
| 31 | 5611 SF LOT | |
| 32 | 5586 SF LOT | |
| 33 | 5548 SF LOT | |
| 34 | 5509 SF LOT | |
| 35 | 5470 SF LOT | |
| 36 | 5432 SF LOT | |
| 37 | 5392 SF LOT | |
| 38 | 6231 SF LOT | |
| 39 | 6359 SF LOT | |
| 40 | 9105 SF LOT | |

LOTS 6-10 ARE EX. LOTS 86-90. THESE LOTS SHALL NOT BE ADJUSTED.

EX. 20' ST TO REMAIN

EX. 20' ST TO BE EXPANDED

EX. 20' ST TO BE EXPANDED

BL TO BE ADJUSTED (TYP.)

BL TO BE MOVED

BL TO BE MOVED

NEW BL

NEW BL

NEW BL

EX. 30' STREET TO REMAIN

EX. 30' STREET TO REMAIN

AZALEA DR

N

40 0 40 80 120
Scale: 1"=40'

PRELIMINARY

COMMONWEALTH OF VIRGINIA
JUSTIN M. SHIMP
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BOUNDARY LINE ADJUSTMENT PLAN

| Rev # | Date | Description |
|---|---|---|
| 1 | 06/18/2018 | City Comments |
| 2 | 07/13/2018 | Bid Set Updates |
| 3 | 10/22/2018 | City Comments |

PRELIMINARY SUBDIVISION PLANS FOR:

# BELLEVIEW ST.

CITY OF CHARLOTTESVILLE, VIRGINIA

Date 01/19/2018
Scale 1"=40'
Sheet No. C4 OF 16
File No. 17.052

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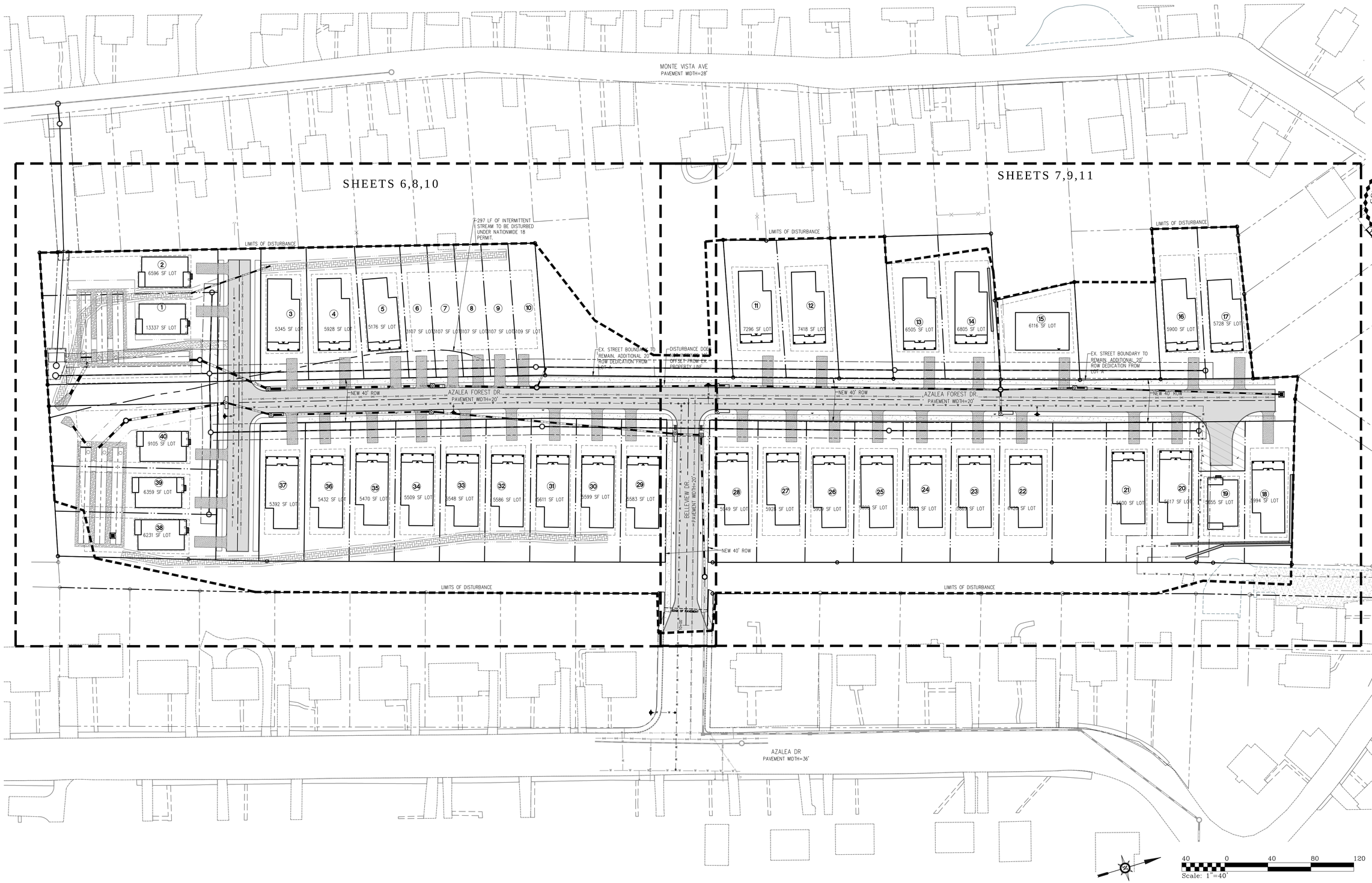


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SUBDIVISION OVERVIEW

| Rev # | Date | Description |
|---|---|---|
| 1 | 06/18/2018 | City Comments |
| 2 | 07/13/2018 | Bid Set Updates |
| 3 | 10/22/2018 | City Comments |

PRELIMINARY SUBDIVISION PLANS FOR:

# BELLEVIEW ST.

CITY OF CHARLOTTESVILLE, VIRGINIA

Date 01/19/2018
Scale 1"=40'
Sheet No. C5 OF 16
File No. 17.052

Per the Virginia Department of Health Waterworks Regulations (Part II, Article 3, Section 12 VAC 5-590 through 630), all buildings that have the possibility of contaminating the potable water distribution system (hospitals, industrial sites, breweries, etc.) shall have a backflow prevention device installed within the facility. This device shall meet specifications of the Virginia Uniform Statewide Building Code, shall be tested in regular intervals as required, and test results shall be submitted to the Regulatory Compliance Administrator in the Department of Utilities.

All buildings that may produce wastes containing more than one hundred (100) parts per million of fats, oil, or grease shall install a grease trap. The grease trap shall meet specifications of the Virginia Uniform Statewide Building Code, maintain records of cleaning and maintenance, and be inspected on regular intervals by the Regulatory Compliance Administrator in the Department of Utilities.

Please contact the Regulatory Compliance Administrator at 970-3032 with any questions regarding the grease trap or backflow prevention devices.


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FOR REVIEW

SUBDIVISION LAYOUT & UTILITY PLAN

| Rev # | Date | Description |
|---|---|---|
| 1 | 06/18/2018 | City Comments |
| 2 | 07/13/2018 | Bicycle Updates |
| 3 | 10/22/2018 | City Comments |

PRELIMINARY SUBDIVISION PLANS FOR:

# BELLEVIEW ST.

CITY OF CHARLOTTESVILLE, VIRGINIA

| | |
|---|---|
| Date | 01/19/2018 |
| Scale | 1"=20' |
| Sheet No. | C6 OF 16 |
| File No. | 17.052 |

Scale: 1"=20'

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FOR REVIEW

SUBDIVISION LAYOUT & UTILITY PLAN

| Rev # | Date | Description |
|---|---|---|
| 1 | 06/18/2018 | City Comments |
| 2 | 07/13/2018 | Bid Set Updates |
| 3 | 10/22/2018 | City Comments |

PRELIMINARY SUBDIVISION PLANS FOR:

# BELLEVIEW ST.

CITY OF CHARLOTTESVILLE, VIRGINIA

Date: 01/19/2018
Scale: 1"=20'
Sheet No.: C7 OF 16
File No.: 17.052

Scale: 1"=20'

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COMMONWEALTH OF VIRGINIA
JUSTIN M. SHIMP
Lic. No. 45183
PROFESSIONAL ENGINEER

FOR REVIEW

SUBDIVISION
GRADING PLAN

| Rev # | Date | Description |
|---|---|---|
| 1 | 06/18/2018 | City Comments |
| 2 | 07/13/2018 | Bid Set Updates |
| 3 | 10/22/2018 | City Comments |

PRELIMINARY SUBDIVISION PLANS FOR:

# BELLEVIEW ST.

CITY OF CHARLOTTESVILLE, VIRGINIA

Date
01/19/2018

Scale
1"=20'

Sheet No.
C8 OF 16

File No.
17.052

Scale: 1"=20'

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COMMONWEALTH OF VIRGINIA
JUSTIN M. SHIMP
Lic. No. 45183
PROFESSIONAL ENGINEER
FOR REVIEW

SUBDIVISION
GRADING PLAN

| Rev # | Date | Description |
|---|---|---|
| 1 | 06/18/2018 | City Comments |
| 2 | 07/13/2018 | Bid Set Updates |
| 3 | 10/22/2018 | City Comments |

PRELIMINARY SUBDIVISION PLANS FOR:

# BELLEVIEW ST.

CITY OF CHARLOTTESVILLE, VIRGINIA

Date
01/19/2018

Scale
1"=20'

Sheet No.
C9 0F16

File No.
17.052

Scale: 1"=20'

Attachment G

# PRELIMINARY ENGINEERING REPORT
# FOR
# BELLEVIEW STREET SEWER PUMP STATION
# CHARLOTTESVILLE, VA
# JN 1021
# FEBRUARY 11, 2019
# *REVISED MARCH 11, 2019*


Prepared For
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Shimp Engineering, PC
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540-392-4144

In Conjunction With
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Hurt & Proffitt, Inc.
1861 Pratt Dr, Suite 1100
Blacksburg, VA 24060
mgross@handp.com
540-552-5592

Attachment G

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Attachment G

# I. PROJECT BACKGROUND

## Purpose of the Study

Core Real Estate is in the process of beginning the development of a tract of land in the City of Charlottesville. As a requirement for the project, the City requires that the developer have a Preliminary Engineering Report prepared that looks at their sewer system alternatives and the capacities of the existing sewer system basin that would serve the proposed development. The developer's engineer, Shimp Engineering, has contracted with Hurt & Proffitt to develop the Preliminary Engineering Report. Hurt & Proffitt has subcontracted the flow monitoring and the preparation of the report to Blue Ridge Engineering & Construction Services.

As part of the capacity analysis, the City requires a 30 day flow monitoring period to be performed. The flow analysis shall determine existing flows within the sewer basin and demonstrate that the proposed improvements do not exceed the capacity of the existing sewer system. The proposed wastewater flows for the system shall be based on the City requirements and the Sewage Collection and Treatment (SCAT) regulations.

## Proposed Development

The proposed development is referred to as Belleview Street subdivision and the project will consist of approximately 40 single family homes based on the engineering plans dated January 1, 2018, but the system is being sized to allow for up to 50 single family homes being developed in the area that could be served by the sewer system. This will allow for some additional growth from undeveloped lots in the sewer basin.

The Belleview Street subdivision is located between two sewer sheds and the property could drain by gravity sewer mains to the Rivanna Water & Sewer Authority interceptor located nearby. In order to flow by gravity, the developer has contacted the adjacent property owners downstream where a sewer main would need to be constructed in attempt to obtain easements for the sewer main. There are 10 parcels where easements would be necessary for the development of the sewer main. The developer has indicated that they have not been able to obtain the easements, and therefore a sewage pump station is needed for the project. A copy of a sample letter regarding the easement request is included in Appendix A.

Per local requirements and the SCAT regulations, the peak design capacity for the system shall be 2.5 times the average design flow. For single family homes the design flow is 400 gpd per home. Using 50 homes as the basis of the pump station sizing, the anticipated flow generated by the subdivision is

Average Design Flow = 50 homes x 400 gpd/home = 20,000 gpd
Peak Design Flow = 2.5 x Average Design Flow = 2.5 x 20,000 gpd = 50,000 gpd (35 gpm)

A gravity sewer service from the site is not available. The system will require a pump station, and the minimum pump rate must exceed 35 gpm to allow for the Peak Design Flow. Given the pump station will be handling raw sewage, the pumps and force main must be capable of passing 2 inch solids, and therefore the minimum force main size should be 3 inch. In order to achieve a 2 foot per second scour velocity in the force main, a minimum pump rate of 45 gpm must be used. Therefore, it is recommended that the minimum pump rate for the proposed sewage pump station be 50 gpm. In lieu of using an influent trash basket and handling the waste onsite, submersible grinder pumps should be used.

## II. FLOW DATA ANALYSIS

### General

In order to develop a model to assess the capacity of the existing sewer system, Hurt & Proffitt performed a field survey of the existing sanitary sewer from the manhole upstream of the proposed Belleview St. tie in down to the Rivanna River Water & Sewer Authority interceptor. The inverts of each manhole along the alignment were surveyed and the pipe sizes were confirmed as well. A copy of the survey is included in Appendix B.

Using the GIS base mapping received from the City, a sewer basin map was developed and is included in Appendix C. In order to develop a basin wide flow monitoring plan, the basin was divided into three sub basins for flow monitoring. Manholes 18-023 (red), 18-026 (green) and 18-031 (blue) were selected as the locations for flow monitoring. See map in Appendix C for color coded sub basins. In each sub basin, the number of homes in each sub basin was determined and also any potential for undeveloped lots was also included in the home count. The total number of homes was determined as follows

| Sub-basin | No. Homes |
|---|---|
| 18-023 | 158 |
| 18-026 | 46 |
| 18-031 | 136 |
| Belleview | 50 |
| Total | 390 |

### Design Flow

As noted previously, 50 single family homes are being used as the basis of design for the Belleview St. sewer pump station. This would equate to a average design flow of 20,000 gpd and using a 2.5 peak factor, the peak design flow would be 50,000 gpd (35 gpm). Using a 3 inch force main to allow for passing solids and in order to achieve minimum scour velocity, a pump rate of 50 gpm is recommended. For each of the sub basins, the average design and peak design flow rates are calculated in Appendix D using 400 gpd per home and a 2.5 peak factor. The calculated peak design flows are used in the subsequent sewer model calculations. The calculated peak design flow for the

sewer system is 271 gpm. The flows within the 18-031 (blue) basin which would serve Belleview St are divided out among the manholes along the sewer alignment based on the house counts. Flows from 18-023 and 18-026 sub basins are plugged into the model at manhole 18-024.The sewer model is developed in a spreadsheet in Appendix D.

The peak flows and capacities in each reach (manhole to manhole) are calculated, and a percent of capacity is given for each segment. The total calculated flow in the system is just under 293 gpm at the point of tie in with the Rivanna Water & Sewer Authority. Two reaches within the system were identified, segment 18-033 to 18-032 and 18-024 to RWSA tie in. The percent of capacity for segment 18-033 to 18-032 is 37.7% and 18-024 to RWSA tie in is 34.7%. Both of these segments are well below capacity using the peak design flow criteria calculated in accordance with the City and SCAT regulations.

**Flow Metered Data using Sub-Basin Peaks**

Based on flow data obtained from the meters between January 25 and February 8, 2019, an evaluation of the sewer capacities was done based on the instantaneous peaks within each sub basin. Additional meter data is being collected and will be used to update the sewer flow data in the PER when it is available. Summaries of the flow metering data are included in Appendix E. Sewer modeling calculations are included in Appendix D.

Based on the flow meter data, the instantaneous peaks (maximum in a 5 minute period) were determined for each sub basin, and the instantaneous peak flow per home was determined. The data is presented below:

| Sub Basin | Peak (gpm) | Homes | Peak (gpm per home) |
|---|---|---|---|
| 18-023 | 98 | 158 | 0.6 |
| 18-026 | 45.8 | 46 | 1.0 |
| 18-031 | 103.4 | 136 | 0.8 |
| Belleview | 50 | 50 | 1.0 (pumped flow) |

Using the instantaneous peak flow per home of 0.8 gpm for the 18-031 sub basin serving Belleview St, the flows are calculated for each segment and input into the calculation sheet in Appendix D. The instantaneous peak from sub basins 18-023 and 18-026 are then input at the final manhole 18-024. The instantaneous peak flows and capacities in each reach (manhole to manhole) are calculated, and a percent of capacity is given for each segment. The total calculated flow in the system is just approximately 308 gpm at the point of tie in with the Rivanna Water & Sewer Authority. Two reaches within the system were identified, segment 18-033 to 18-032 and 18-024 to RWSA tie in. The percent of capacity for segment 18-033 to 18-032 is 41.2% and 18-024 to RWSA tie in is 36.5%. All locations are well within their capacity.

**Flow Metered Data using Basin Wide Peak**

Similar to the evaluation of the instantaneous peaks within each sub basin, an analysis was performed using the highest instantaneous peak per home to evaluate impacts on the sewer system. The highest instantaneous peak per home was measured in sub basin 18-026 to be 1.0 gpm per home. Using 1.0 gpm per home as the basis of the instantaneous peak, the following data was used in the analysis:

| Sub Basin | Peak (gpm per home) | Homes | Peak (gpm) |
|---|---|---|---|
| 18-023 | 1.0 | 158 | 158 |
| 18-026 | 1.0 | 46 | 46 |
| 18-031 | 1.0 | 136 | 136 |
| Belleview | 1.0 | 50 | 50 (pumped flow) |

Using the instantaneous peak flow per home of 1.0 gpm for the 18-031 sub basin serving Belleview St, the flows are calculated for each segment and input into the calculation sheet in Appendix D. The instantaneous peak from sub basins 18-023 and 18-026 are then input at the final manhole 18-024. The instantaneous peak flows and capacities in each reach (manhole to manhole) are calculated, and a percent of capacity is given for each segment. The total calculated flow in the system is just approximately 397 gpm at the point of tie in with the Rivanna Water & Sewer Authority. Two reaches within the system were identified, segment 18-033 to 18-032 and 18-024 to RWSA tie in. The percent of capacity for segment 18-033 to 18-032 is 48.3% and 18-024 to RWSA tie in is 47.0%. All locations are well within their capacity.

**Flow Metered Data with Peak Rain Event**

During the final week of flow metering, a significant rain event occurred over a several day period which resulted in a large increase in peak flow in the 18-023 sub-basin. During the initial flow monitoring, the peak flow in this basin had been measured at approximately 100 gpm, but the rain event increased the peak flow to approximately 280 gpm. The rain event did not impact the other basins to the same extent and their peak flows did not change during the rain event. For modeling purposes, the increased peak flow in sub-basin 18-023 was used in the analysis of that sub-basin, and a 1.0 gpm peak per home was applied to the remainder of the sewer shed, and the following data was used in the analysis:

| Sub Basin | Peak (gpm per home) | Homes | Peak (gpm) |
|---|---|---|---|
| 18-023 | 1.0 | 158 | 158 |
| 18-026 | 1.0 | 46 | 46 |
| 18-031 | 1.8 | 136 | 284 |
| Belleview | 1.0 | 50 | 50 (pumped flow) |

The flows are calculated for each segment and input into the calculation sheet in Appendix D. The instantaneous peak from sub basins 18-023 and 18-026 are then input at the final manhole 18-024. The instantaneous peak flows and capacities in each reach (manhole to manhole) are calculated,

and a percent of capacity is given for each segment. The total calculated flow in the system is just approximately 523 gpm at the point of tie in with the Rivanna Water & Sewer Authority. Two reaches within the system were identified, segment 18-033 to 18-032 and 18-024 to RWSA tie in. The percent of capacity for segment 18-033 to 18-032 is 48.3% and 18-024 to RWSA tie in is 61.9%. All locations are well within their capacity.

## III. PUMP STATION CONSIDERATIONS

### General

The City's Department of Public Works has indicated that it will not assume responsibility for the proposed Belleview St. sewer pump station. Therefore, the pump station will need to be operated and maintained by a contracted third party. This is generally done by setting up a Homeowners Association (HOA) that assumes responsibility for the long term operation and maintenance (O&M) of the pump station by contracting the O&M to a third party licensed wastewater operator. This is done to ensure that the system is properly operated and maintained over time.

### Operation & Maintenance

The developer will need to contract with a licensed local wastewater operator for the operations and maintenance of the pump station. In general, a pump station does not require extensive monitoring on a regular basis. It is anticipated that the pump station should be checked at a minimum on a monthly basis by the licensed operator. The operator shall ensure that all equipment is in working order during each site visit. The operator shall also be responsible for maintaining a record of the system operations.

Prior to the placing the pump station into service, the developer should receive an operation and maintenance manual from the engineer that thoroughly describes the necessary operations and maintenance of the designed pump station. Any changes or modifications to the O&M Manual shall be done by the preparation of a Standard Operating Procedure (SOP).

### Design

The following is a list of several items that should be considered during the design of the sewer pump station:

1. Reliability Classification – Due to the proximity of the pump station to other housing units and the risk of a potential sewer overflow, the pump station should be considered as Class 1 reliability. Therefore a standby generator and automatic transfer switch should be provided.

2. Pump Selection – The developer has asked that the pump station be located below grade without the benefit of an above ground structure. Given the nature of the wastewater and the O&M requirements, it is recommended that submersible grinder pumps be used for the

pumps. A mechanical hoist should be provided for removal of the pumps. Ornamental shrub and landscaping can be used for visual screening of the control panel and generator. Preliminary pump sizing calculation and catalog cut for pump are included in Appendix F. These will need to be finalized at time of actual design.

3. Odors – Concern has been expressed about potential odors at the pump station. Odors typically occur as a result of the wastewater going anaerobic, and this can be prevented by installing a small air pump and diffuser to aerate the wetwell. A carbon filter can also be installed on the vent pipe too.

4. Control Monitoring – All sewage pump stations are required to have a local audio/visual alarm to notify someone of a potential problem. Given that the pump station is located in a residential community and the facility is not inspected on a daily basis, the pump station have a remote monitoring control system that will allow the operator to log into the system remotely and check the status of the system at any time. The control system will also notify the operator immediately if there is a pump failure or high water alarm at the pump station.

## IV. CONCLUSIONS & RECOMMENDATIONS

### Conclusions

The following conclusions can be made based on the flow monitoring and preliminary engineering performed under this study:

1. Based on 50 homes being served by the pump station, the average daily design flow for the Belleview St subdivision is 20,000 gpd with a peak design flow of 50,000 gpd.

2. Using local requirements and SCAT regulations, the peak design flow, including Belleview St, in the system based on the number of homes, including vacant lots, is approximately 293 gpm, which equates to approximately 38% of capacity for line 18-033 to 18-032 and 35% capacity for line 18-024 to RWSA tie in manhole.

3. Using instantaneous peak flows, 5 minute intervals, from each sub basin, the measured peak flow in the system, including Belleview St, is approximately 308 gpm, which equates to approximately 41% of capacity for line 18-033 to 18-032 and 37% capacity for line 18-024 to RWSA tie in manhole.

4. Using the highest instantaneous peak flow through February 8th, 5 minute intervals, from the overall basin, the measured peak flow in the system, including Belleview St, is approximately 397 gpm, which equates to approximately 48% of capacity for line 18-033 to 18-032 and 47% capacity for line 18-024 to RWSA tie in manhole.

5. As noted the rain event that occurred at the end of February created a significantly higher peak flow in sub-basin 18-023, approximately 280 gpm. The flows in the other sub-basins increased during the rain event, but they did not increase beyond previously recorded peaks. For the final analysis, the peak rain event flow was applied to its sub-basin and a uniform 1.0 gpem per home peak was applied elsewhere. This created a peak flow of approximately 523 gpm, which equates to approximately 48% of capacity for line 18-033 to 18-032 and 62% capacity for line 18-024 to RWSA tie in manhole.

**Recommendations**

The following recommendations are made for the Belleview St sewer system:

1. The pump station should be sized for 50 gpm with a 3 inch force main.

2. The pump station should be equipped with an emergency standby generator and automatic transfer switch.

3. The pump station control system should allow for remote real time monitoring of the pump station and provide notification to the operator of any alarm conditions.

Attachment G

# Appendix A
# Sample Easement Documentation

Attachment G

CORE
REAL ESTATE

Mr. & Mrs. Michael & Janet Farruggio,

316 Monte Vista Ave,

Charlottesville, VA 22903

CORE Azalea, LLC – Andrew Baldwin is gauging your interest in providing him a 10-20ft sewer easement along the back of your property line. At this point, he is willing to offer $2,500 for the easement. Please see exhibit A for more information.

Please respond YES or NO through e-mail to Andrew@corecville.com, or by calling his cellphone at (434) 466-6566. Responding YES or NO at this time is not binding, and this letter is in no shape or form a contractual document; we simply want to see what interest there may be in allowing the proposed sewer easement.

Thank you for your time and consideration,

CORE Azalea, LLC.

Andrew Baldwin – President

# Charlottesville GIS Viewer

## Legend

- Parcels
- Addresses
- City Limits


**Title: Monte Vista Ave**

**Date: 10/25/2018**

Feet

0 50 100 150 200

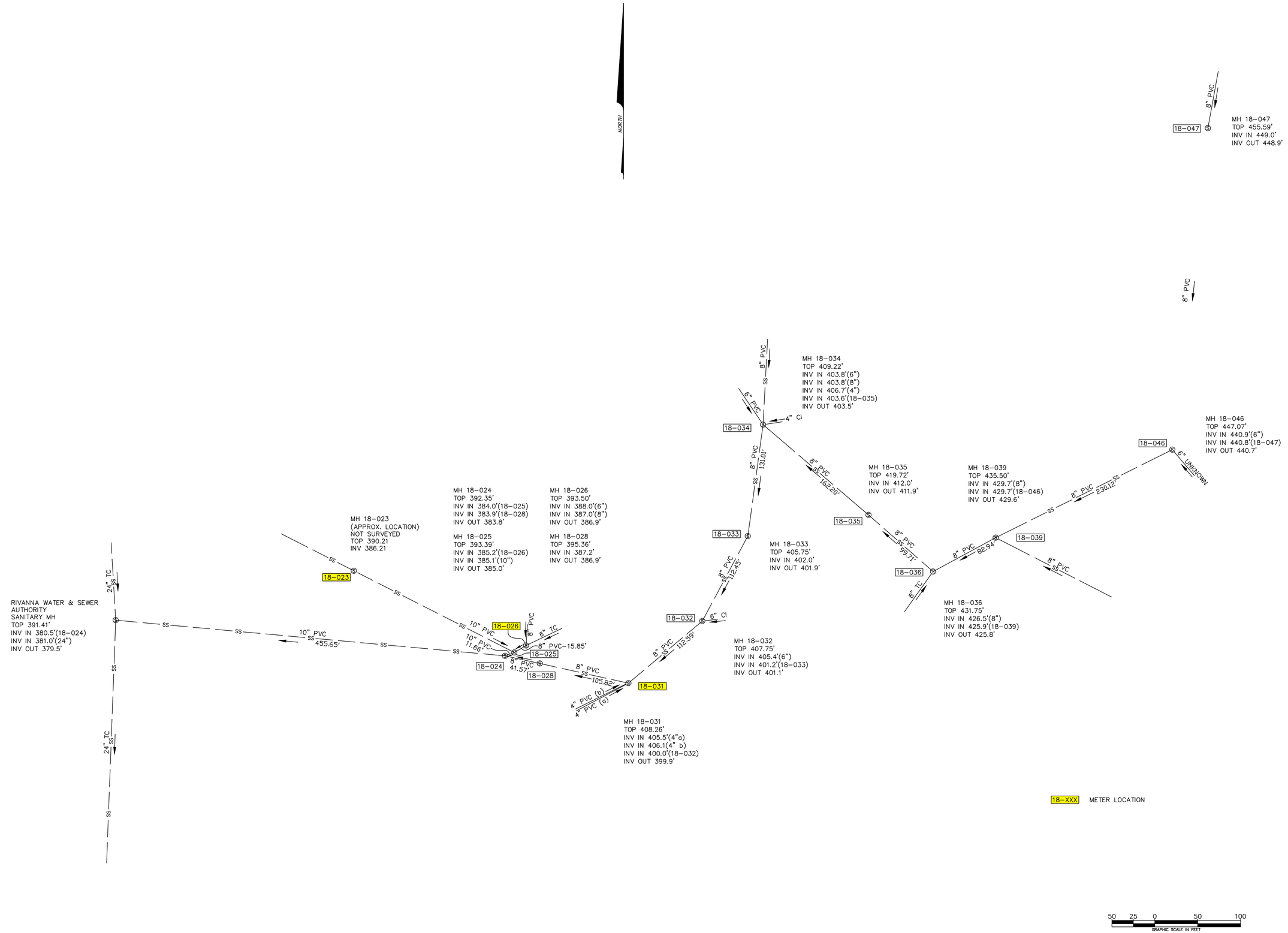
*DISCLAIMER: This drawing is neither a legally recorded map nor a survey and is not intended to be used as such. The information displayed is a compilation of records, information, and data obtained from various sources, and Charlottesville is not responsible for its accuracy or how current it may be.*

Attachment G

Attachment G

# Appendix B
# Sanitary Sewer Survey

Attachment G





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GEOTECHNICAL • CONSTRUCTION TESTING & INSPECTION • CULTURAL RESOURCES


# SANITARY SEWER SURVEY
FOR
# BELLVIEW SEWER PUMP STATION
CHARLOTTESVILLE, VA

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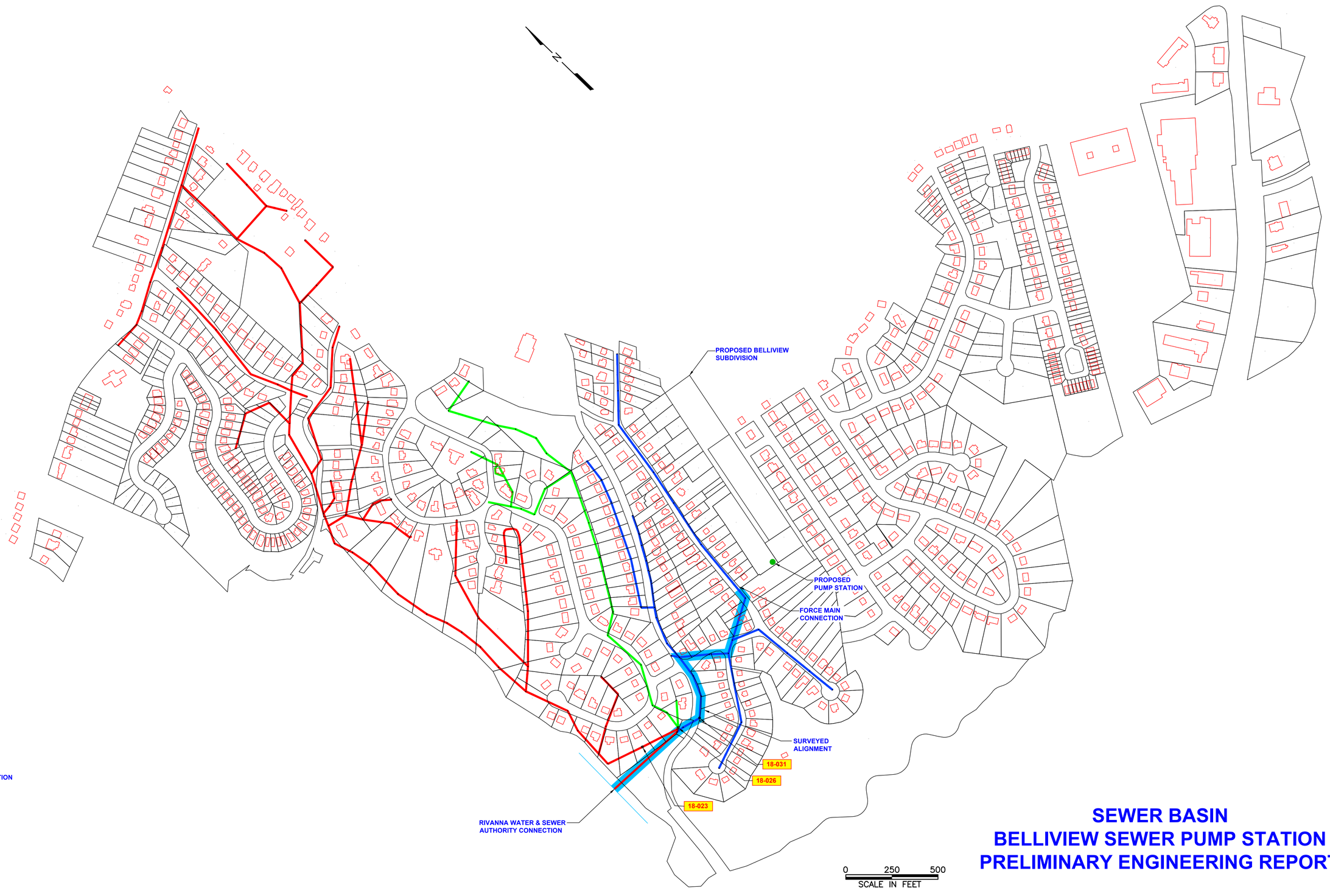
|---|---|
| PROJECT NO. | 20180922 |
| G.L. NO. | |
| FILE NO. | |
| DATE: | |
| DRAWN BY: | |
| CHECKED BY: | |

SHEET NO.

Feb 08, 2019 - 1:53pm Z:\2018\20180922\Survey\Topo Bellview Wastewater.dwg

Attachment G

# Appendix C
# Sewer Basin




# SEWER BASIN
# BELLIVIEW SEWER PUMP STATION
# PRELIMINARY ENGINEERING REPORT

HURT & PROFFITT

Attachment G

# Appendix D
# Flow Calculations

Attachment G

**Belleview Sewer Pump Station PER**
**Projected Flow Rate**

| | | |
|---|---|---|
| Number of Homes | 50 | |
| Design Flow per Home | 400 | gpd |
| Total Estimated Design Flow | 20,000 | gpd |
| Peak Factor | 2.5 | |
| Peak Flow | 50,000 | gpd |
| | 35 | gpm |
| Minimum recommended force main size | | 3 in |
| Minimum pump rate for scour velocity | | 45 gpm |
| Recommended pump rate | | 50 gpm |

Attachment G

**Belleview Sewer Pump Station PER**
**Non-metered Flow Estimates**

1. Flow Based on Number of Homes @ 400 gpd/home w/ 2.5 Peak Factor

| | Homes | Average (gpd) | Peak (gpd) | Peak (gpm) |
|---|---|---|---|---|
| 18-023 | 158 | 63,200 | 158,000 | 110 |
| 18-026 | 46 | 18,400 | 46,000 | 32 |
| 18-031 | 136 | 54,400 | 136,000 | 94 |
| Belleview | 50 | 20,000 | 50,000 | 35 |
| Total | 390 | 156,000 | 390,000 | 271 |

Project: Belleview Sewer PER - Sewer Model

J.N.: 1021.0 Date: 2/10/2019 Calculated by: Chris Fewster

| Reference Descriptors From Point | To Point | Total Flow Increm. (gpm) | Accumulated (gpm) | (cfs) | Invert Elevations Upper (feet) | Lower (feet) | Length of Pipe (feet) | Diameter of Pipe (inches) | Slope (ft/ft) | Manning's Pipe Capacity (cfs) | Manning's Pipe Capacity (mgd) | Manning's Pipe Capacity (gpm) | Percent of Capacity % | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 0.0000 | | | | | Flow = 400 gpd/home x 2.5 peak factor |
| 18-047 | Tie In | 27.30 | 27.30 | 0.060 | 448.90 | 442.20 | 308.00 | 8 | 0.0218 | 1.79 | 1.1550 | 802.1 | 3.4% | 39 homes |
| Tie In | 18-046 | 50.00 | 77.30 | 0.170 | 442.20 | 440.80 | 64.00 | 8 | 0.0219 | 1.79 | 1.1583 | 804.3 | 9.6% | Belleview PS (50 gpm for 3" FM scour velocity) |
| 18-046 | 18-039 | 9.10 | 86.40 | 0.190 | 440.70 | 429.70 | 227.00 | 8 | 0.0485 | 2.67 | 1.7239 | 1,197.2 | 7.2% | 13 homes |
| 18-039 | 18-036 | 16.80 | 103.20 | 0.227 | 429.60 | 425.90 | 96.00 | 8 | 0.0385 | 2.38 | 1.5374 | 1,067.7 | 9.7% | 24 homes |
| 18-036 | 18-035 | 15.40 | 118.60 | 0.261 | 425.80 | 412.00 | 120.00 | 8 | 0.1150 | 4.11 | 2.6557 | 1,844.2 | 6.4% | 22 homes |
| 18-035 | 18-034 | 2.80 | 121.40 | 0.267 | 411.90 | 403.60 | 190.00 | 8 | 0.0437 | 2.53 | 1.6368 | 1,136.7 | 10.7% | 4 homes |
| 18-034 | 18-033 | 25.90 | 147.30 | 0.324 | 403.50 | 402.00 | 152.00 | 8 | 0.0099 | 1.20 | 0.7780 | 540.2 | 27.3% | 37 homes |
| 18-033 | 18-032 | 0.70 | 148.00 | 0.326 | 401.90 | 401.20 | 134.00 | 8 | 0.0052 | 0.88 | 0.5660 | 393.1 | 37.7% | 1 home |
| 18-032 | 18-031 | 0.70 | 148.70 | 0.327 | 401.10 | 400.00 | 135.00 | 8 | 0.0081 | 1.09 | 0.7069 | 490.9 | 30.3% | 1 home |
| 18-031 | 18-028 | 1.40 | 150.10 | 0.330 | 399.90 | 387.20 | 145.00 | 8 | 0.0876 | 3.59 | 2.3176 | 1,609.5 | 9.3% | 2 homes |
| 18.028 | 18-024 | --- | 150.10 | 0.330 | 386.90 | 383.90 | 40.00 | 8 | 0.0750 | 3.32 | 2.1447 | 1,489.3 | 10.1% | |
| 18-024 | RWA MH | 142.80 | 292.90 | 0.644 | 383.80 | 380.50 | 450.00 | 10 | 0.0073 | 1.88 | 1.2159 | 844.4 | 34.7% | sub-basins 18-023 (158 homes) & 18-026 (46 homes) |
| | | | | | | | | | | | | | | |
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Attachment G

# SANITARY SEWER COMPUTATIONS

**Project:** Belleview Sewer PER - Sewer Model

**J.N.:** 1021.0 **Date:** 2/10/2019 **Calculated by:** Chris Fewster

| Reference Descriptors From Point | To Point | Total Flow Increm. (gpm) | Accumulated (gpm) | (cfs) | Invert Elevations Upper (feet) | Lower (feet) | Length of Pipe (feet) | Diameter of Pipe (inches) | Slope (ft/ft) | Manning's Pipe Capacity (cfs) | Manning's Pipe Capacity (mgd) | Manning's Pipe Capacity (gpm) | Percent of Capacity % | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | Flow = 0.8 gpm Peak Flow in sub basin 18-031 |
| 18-047 | Tie In | 31.20 | 31.20 | 0.069 | 448.90 | 442.20 | 308.00 | 8 | 0.0218 | 1.79 | 1.1550 | 802.1 | 3.9% | 39 homes |
| Tie In | 18-046 | 50.00 | 81.20 | 0.179 | 442.20 | 440.80 | 64.00 | 8 | 0.0219 | 1.79 | 1.1583 | 804.3 | 10.1% | Belleview PS (50 gpm for 3" FM scour velocity) |
| 18-046 | 18-039 | 10.40 | 91.60 | 0.202 | 440.70 | 429.70 | 227.00 | 8 | 0.0485 | 2.67 | 1.7239 | 1,197.2 | 7.7% | 13 homes |
| 18-039 | 18-036 | 19.20 | 110.80 | 0.244 | 429.60 | 425.90 | 96.00 | 8 | 0.0385 | 2.38 | 1.5374 | 1,067.7 | 10.4% | 24 homes |
| 18-036 | 18-035 | 17.60 | 128.40 | 0.282 | 425.80 | 412.00 | 120.00 | 8 | 0.1150 | 4.11 | 2.6557 | 1,844.2 | 7.0% | 22 homes |
| 18-035 | 18-034 | 3.20 | 131.60 | 0.290 | 411.90 | 403.60 | 190.00 | 8 | 0.0437 | 2.53 | 1.6368 | 1,136.7 | 11.6% | 4 homes |
| 18-034 | 18-033 | 29.60 | 161.20 | 0.355 | 403.50 | 402.00 | 152.00 | 8 | 0.0099 | 1.20 | 0.7780 | 540.2 | 29.8% | 37 homes |
| 18-033 | 18-032 | 0.80 | 162.00 | 0.356 | 401.90 | 401.20 | 134.00 | 8 | 0.0052 | 0.88 | 0.5660 | 393.1 | 41.2% | 1 home |
| 18-032 | 18-031 | 0.80 | 162.80 | 0.358 | 401.10 | 400.00 | 135.00 | 8 | 0.0081 | 1.09 | 0.7069 | 490.9 | 33.2% | 1 home |
| 18-031 | 18-028 | 1.60 | 164.40 | 0.362 | 399.90 | 387.20 | 145.00 | 8 | 0.0876 | 3.59 | 2.3176 | 1,609.5 | 10.2% | 2 homes |
| 18.028 | 18-024 | --- | 164.40 | 0.362 | 386.90 | 383.90 | 40.00 | 8 | 0.0750 | 3.32 | 2.1447 | 1,489.3 | 11.0% | |
| 18-024 | RWA MH | 143.80 | 308.20 | 0.678 | 383.80 | 380.50 | 450.00 | 10 | 0.0073 | 1.88 | 1.2159 | 844.4 | 36.5% | sub-basins 18-023 (98.0) & 18-026 (45.8) |
| | | | | | | | | | | | | | | |
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Attachment G

# SANITARY SEWER COMPUTATIONS

Project: Belleview Sewer PER - Sewer Model

J.N.: 1021.0 Date: 2/10/2019 Calculated by: Chris Fewster

| Reference Descriptors From Point | To Point | Total Flow Increm. (gpm) | Accumulated (gpm) | (cfs) | Invert Elevations Upper (feet) | Lower (feet) | Length of Pipe (feet) | Diameter of Pipe (inches) | Slope (ft/ft) | Manning's Pipe Capacity (cfs) | Manning's Pipe Capacity (mgd) | Manning's Pipe Capacity (gpm) | Percent of Capacity % | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 0.0000 | | | | | Flow = 1.0 gpm Peak Flow entire sewer basin |
| 18-047 | Tie In | 39.00 | 39.00 | 0.086 | 448.90 | 442.20 | 308.00 | 8 | 0.0218 | 1.79 | 1.1550 | 802.1 | 4.9% | 39 homes |
| Tie In | 18-046 | 50.00 | 89.00 | 0.196 | 442.20 | 440.80 | 64.00 | 8 | 0.0219 | 1.79 | 1.1583 | 804.3 | 11.1% | Belleview PS (50 gpm for 3" FM scour velocity) |
| 18-046 | 18-039 | 13.00 | 102.00 | 0.224 | 440.70 | 429.70 | 227.00 | 8 | 0.0485 | 2.67 | 1.7239 | 1,197.2 | 8.5% | 13 homes |
| 18-039 | 18-036 | 24.00 | 126.00 | 0.277 | 429.60 | 425.90 | 96.00 | 8 | 0.0385 | 2.38 | 1.5374 | 1,067.7 | 11.8% | 24 homes |
| 18-036 | 18-035 | 22.00 | 148.00 | 0.326 | 425.80 | 412.00 | 120.00 | 8 | 0.1150 | 4.11 | 2.6557 | 1,844.2 | 8.0% | 22 homes |
| 18-035 | 18-034 | 4.00 | 152.00 | 0.334 | 411.90 | 403.60 | 190.00 | 8 | 0.0437 | 2.53 | 1.6368 | 1,136.7 | 13.4% | 4 homes |
| 18-034 | 18-033 | 37.00 | 189.00 | 0.416 | 403.50 | 402.00 | 152.00 | 8 | 0.0099 | 1.20 | 0.7780 | 540.2 | 35.0% | 37 homes |
| 18-033 | 18-032 | 1.00 | 190.00 | 0.418 | 401.90 | 401.20 | 134.00 | 8 | 0.0052 | 0.88 | 0.5660 | 393.1 | 48.3% | 1 home |
| 18-032 | 18-031 | 1.00 | 191.00 | 0.420 | 401.10 | 400.00 | 135.00 | 8 | 0.0081 | 1.09 | 0.7069 | 490.9 | 38.9% | 1 home |
| 18-031 | 18-028 | 2.00 | 193.00 | 0.425 | 399.90 | 387.20 | 145.00 | 8 | 0.0876 | 3.59 | 2.3176 | 1,609.5 | 12.0% | 2 homes |
| 18.028 | 18-024 | --- | 193.00 | 0.425 | 386.90 | 383.90 | 40.00 | 8 | 0.0750 | 3.32 | 2.1447 | 1,489.3 | 13.0% | |
| 18-024 | RWA MH | 204.00 | 397.00 | 0.873 | 383.80 | 380.50 | 450.00 | 10 | 0.0073 | 1.88 | 1.2159 | 844.4 | 47.0% | sub-basins 18-023 (158 homes) & 18-026 (46 homes) |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |
| | | --- | --- | --- | | | | | --- | --- | --- | --- | | |

Attachment G

# SANITARY SEWER COMPUTATIONS

**Project:** Belleview Sewer PER - Sewer Model

**J.N.:** 1021.0 **Date:** 3/8/2019 **Calculated by:** Chris Fewster

| Reference Descriptors From Point | To Point | Total Flow Increm. (gpm) | Accumulated (gpm) | (cfs) | Invert Elevations Upper (feet) | Lower (feet) | Length of Pipe (feet) | Diameter of Pipe (inches) | Slope (ft/ft) | Manning's Pipe Capacity (cfs) | Manning's Pipe Capacity (mgd) | Manning's Pipe Capacity (gpm) | Percent of Capacity % | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 0.0000 | | | | | Flow = 1.0 gpm Peak Flow plus Peak Rain Event 18-023 sub-basin |
| 18-047 | Tie In | 39.00 | 39.00 | 0.086 | 448.90 | 442.20 | 308.00 | 8 | 0.0218 | 1.79 | 1.1550 | 802.1 | 4.9% | 39 homes |
| Tie In | 18-046 | 50.00 | 89.00 | 0.196 | 442.20 | 440.80 | 64.00 | 8 | 0.0219 | 1.79 | 1.1583 | 804.3 | 11.1% | Belleview PS (50 gpm for 3" FM scour velocity) |
| 18-046 | 18-039 | 13.00 | 102.00 | 0.224 | 440.70 | 429.70 | 227.00 | 8 | 0.0485 | 2.67 | 1.7239 | 1,197.2 | 8.5% | 13 homes |
| 18-039 | 18-036 | 24.00 | 126.00 | 0.277 | 429.60 | 425.90 | 96.00 | 8 | 0.0385 | 2.38 | 1.5374 | 1,067.7 | 11.8% | 24 homes |
| 18-036 | 18-035 | 22.00 | 148.00 | 0.326 | 425.80 | 412.00 | 120.00 | 8 | 0.1150 | 4.11 | 2.6557 | 1,844.2 | 8.0% | 22 homes |
| 18-035 | 18-034 | 4.00 | 152.00 | 0.334 | 411.90 | 403.60 | 190.00 | 8 | 0.0437 | 2.53 | 1.6368 | 1,136.7 | 13.4% | 4 homes |
| 18-034 | 18-033 | 37.00 | 189.00 | 0.416 | 403.50 | 402.00 | 152.00 | 8 | 0.0099 | 1.20 | 0.7780 | 540.2 | 35.0% | 37 homes |
| 18-033 | 18-032 | 1.00 | 190.00 | 0.418 | 401.90 | 401.20 | 134.00 | 8 | 0.0052 | 0.88 | 0.5660 | 393.1 | 48.3% | 1 home |
| 18-032 | 18-031 | 1.00 | 191.00 | 0.420 | 401.10 | 400.00 | 135.00 | 8 | 0.0081 | 1.09 | 0.7069 | 490.9 | 38.9% | 1 home |
| 18-031 | 18-028 | 2.00 | 193.00 | 0.425 | 399.90 | 387.20 | 145.00 | 8 | 0.0876 | 3.59 | 2.3176 | 1,609.5 | 12.0% | 2 homes |
| 18-028 | 18-024 | — | 193.00 | 0.425 | 386.90 | 383.90 | 40.00 | 8 | 0.0750 | 3.32 | 2.1447 | 1,489.3 | 13.0% | |
| 18-024 | RWA MH | 330.00 | 523.00 | 1.151 | 383.80 | 380.50 | 450.00 | 10 | 0.0073 | 1.88 | 1.2159 | 844.4 | 61.9% | sub-basins 18-023 (158 homes @1.8 gpm) & 18-026 (46 homes @1 gpm) |
| | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | |
| | | — | — | — | | | | | — | — | — | — | | |
| | | — | — | — | | | | | — | — | — | — | | |
| | | — | — | — | | | | | — | — | — | — | | |
| | | — | — | — | | | | | — | — | — | — | | |
| | | — | — | — | | | | | — | — | — | — | | |
| | | — | — | — | | | | | — | — | — | — | | |
| | | — | — | — | | | | | — | — | — | — | | |
| | | — | — | — | | | | | — | — | — | — | | |

Attachment G

Attachment G

# Appendix E
# Flow Meter Data Summary
# (detailed meter data provided electronically)

Attachment G

**Site** **18-023**

| Date | Average (gpm) | Maximum (gpm) | Minimum (gpm) |
|---|---|---|---|
| 1/25/2019 | 76.1 | 98.0 | 62.2 |
| 1/26/2019 | 62.0 | 86.5 | 45.5 |
| 1/27/2019 | 49.5 | 78.7 | 34.4 |
| 1/28/2019 | 43.0 | 67.6 | 31.4 |
| 1/29/2019 | 40.8 | 69.0 | 27.9 |
| 1/30/2019 | 37.8 | 49.5 | 25.0 |
| 1/31/2019 | 29.8 | 49.5 | 13.6 |
| 2/1/2019 | 28.3 | 45.1 | 14.9 |
| 2/2/2019 | 25.2 | 44.1 | 15.4 |
| 2/3/2019 | 25.2 | 49.0 | 14.8 |
| 2/4/2019 | 26.3 | 92.4 | 15.0 |
| 2/5/2019 | 26.4 | 57.8 | 15.4 |
| 2/6/2019 | 23.2 | 38.6 | 13.5 |
| 2/7/2019 | 22.0 | 45.4 | 12.8 |
| 2/8/2019 | 21.3 | 36.8 | 13.2 |
| 2/9/2019 | 20.9 | 36.5 | 11.4 |
| 2/10/2019 | 22.6 | 43.5 | 10.7 |
| 2/11/2019 | 23.8 | 40.0 | 11.8 |
| 2/12/2019 | 53.7 | 89.6 | 17.5 |
| 2/13/2019 | 43.0 | 79.6 | 23.8 |
| 2/14/2019 | 24.2 | 38.5 | 14.6 |
| 2/15/2019 | 24.3 | 41.2 | 12.5 |
| 2/16/2019 | 20.8 | 35.3 | 12.6 |
| 2/17/2019 | 30.0 | 106.5 | 9.8 |
| 2/18/2019 | 52.1 | 82.3 | 31.4 |
| 2/19/2019 | 31.3 | 52.8 | 23.2 |
| 2/20/2019 | 56.2 | 163.7 | 20.1 |
| 2/21/2019 | 136.7 | 221.2 | 86.1 |
| 2/22/2019 | 85.3 | 132.0 | 59.8 |
| 2/23/2019 | 79.6 | 117.6 | 55.0 |
| 2/24/2019 | 190.1 | 279.8 | 78.1 |
| 2/25/2019 | 83.7 | 120.0 | 56.8 |
| 2/26/2019 | 53.8 | 78.2 | 37.5 |
| 2/27/2019 | 37.2 | 57.1 | 27.6 |
| Average | 47.2 | 80.1 | 28.1 |
| Maximum | | 279.8 | |
| Minimum | | | 9.8 |

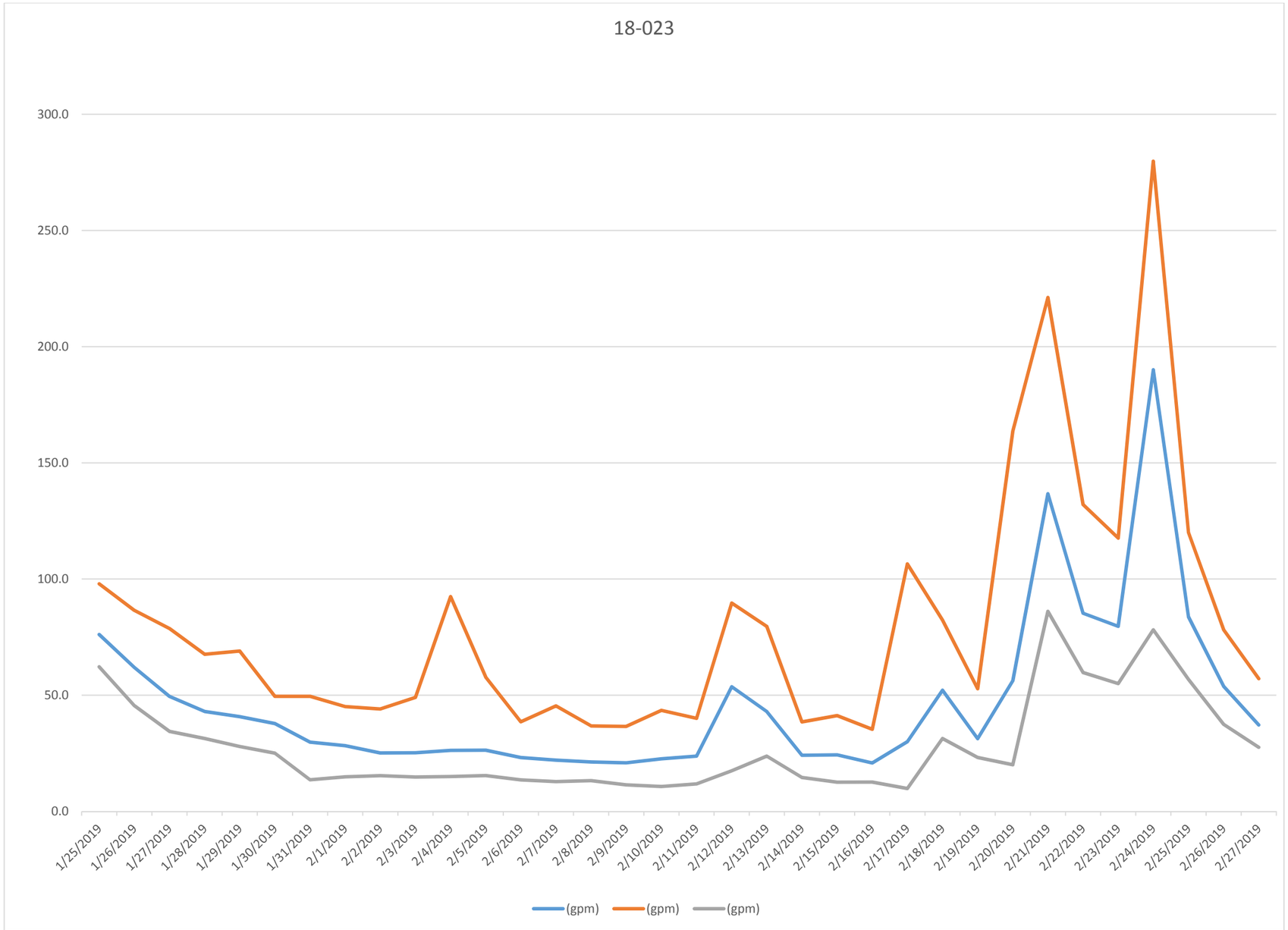
Approximate Number of Homes 158

Flow per Home

0.3 0.5 0.2

Max Peak Flow per Home

| | | |
|---|---|---|
| Maximum | 279.8 | gpm |
| Peak Flow | 1.8 | gpm per home |



# Attachment G

**Site** **18-026**

| Date | Average (gpm) | Maximum (gpm) | Minimum (gpm) |
|---|---|---|---|
| 1/25/2019 | 21.0 | 37.9 | 12.8 |
| 1/26/2019 | 17.3 | 38.8 | 8.7 |
| 1/27/2019 | 14.9 | 45.8 | 3.8 |
| 1/28/2019 | 13.4 | 31.4 | 2.5 |
| 1/29/2019 | 11.0 | 29.4 | 6.5 |
| 1/30/2019 | 9.8 | 32.8 | 5.9 |
| 1/31/2019 | 9.1 | 19.7 | 5.8 |
| 2/1/2019 | 8.4 | 15.6 | 4.6 |
| 2/2/2019 | 8.5 | 17.9 | 5.1 |
| 2/3/2019 | 9.3 | 18.6 | 5.2 |
| 2/4/2019 | 8.7 | 15.3 | 5.7 |
| 2/5/2019 | 8.5 | 18.6 | 5.2 |
| 2/6/2019 | 8.5 | 14.5 | 5.8 |
| 2/7/2019 | 8.5 | 15.4 | 4.4 |
| 2/8/2019 | 8.5 | 18.7 | 5.9 |
| 2/9/2019 | 8.9 | 14.8 | 5.7 |
| 2/10/2019 | 8.9 | 18.0 | 5.5 |
| 2/11/2019 | 9.7 | 16.7 | 5.7 |
| 2/12/2019 | 11.5 | 21.4 | 7.1 |
| 2/13/2019 | 9.8 | 17.6 | 5.2 |
| 2/14/2019 | 7.1 | 19.9 | 2.1 |
| 2/15/2019 | 6.8 | 16.0 | 2.5 |
| 2/16/2019 | 10.4 | 19.2 | 1.7 |
| 2/17/2019 | 12.1 | 44.3 | 1.3 |
| 2/18/2019 | 19.2 | 33.2 | 1.3 |
| 2/19/2019 | 13.9 | 29.7 | 10.4 |
| 2/20/2019 | 19.7 | 42.0 | 9.7 |
| 2/21/2019 | 27.8 | 42.5 | 19.9 |
| 2/22/2019 | 18.3 | 28.5 | 13.4 |
| 2/23/2019 | 17.3 | 30.5 | 12.4 |
| 2/24/2019 | 27.6 | 41.3 | 14.7 |
| 2/25/2019 | 16.9 | 27.8 | 11.6 |
| 2/26/2019 | 14.2 | 35.2 | 10.7 |
| 2/27/2019 | 13.5 | 23.6 | 9.2 |
| Average | 12.9 | 26.2 | 7.0 |
| Maximum | | 45.8 | |
| Minimum | | | 1.3 |

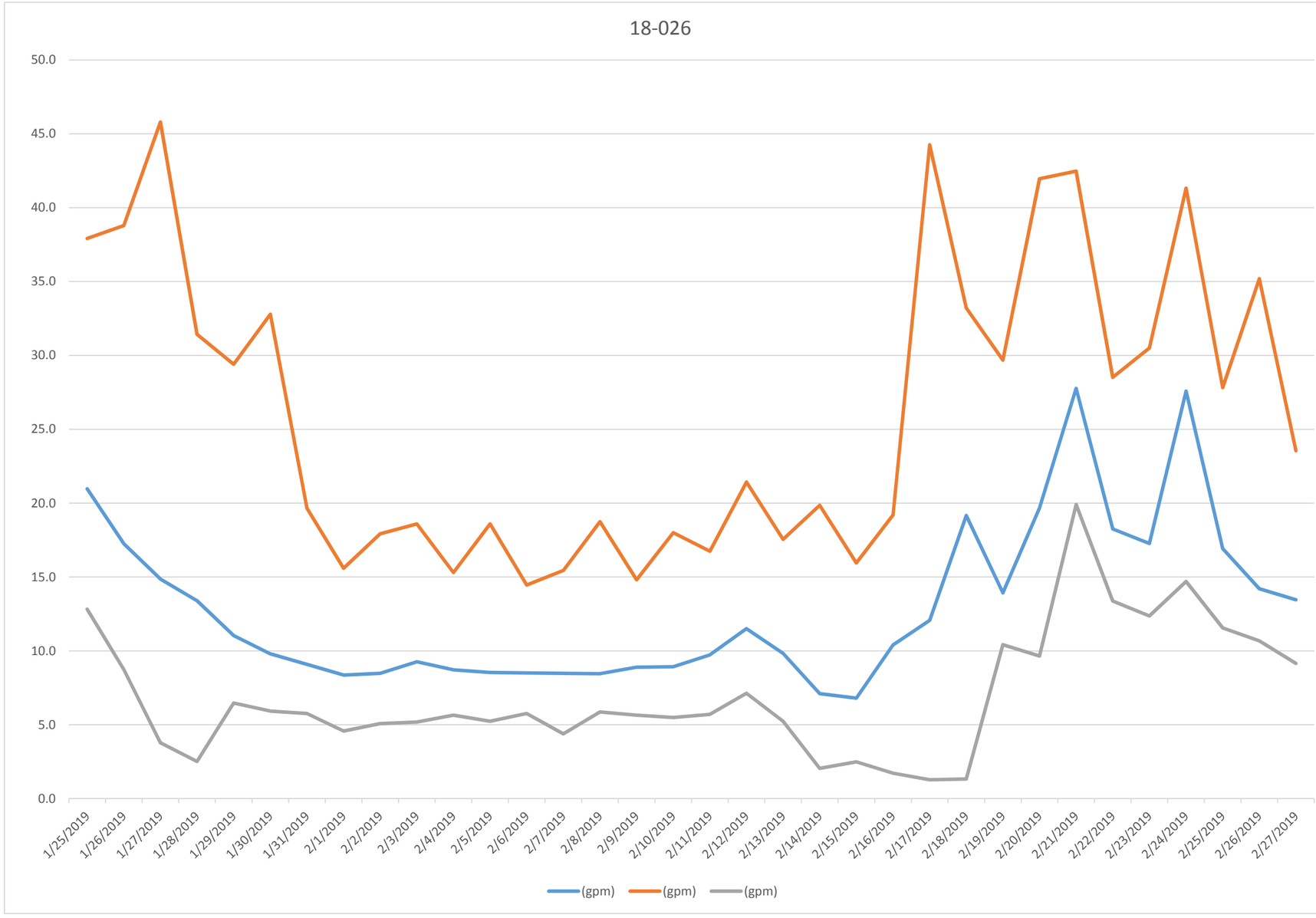
Approximate Number of Homes 46

Flow per Home

| | | |
|---|---|---|
| 0.3 | 0.6 | 0.2 |

Max Peak Flow per Home

| | | |
|---|---|---|
| Maximum | 45.8 | gpm |
| Peak Flow | 1.0 | gpm per home |



Attachment G

**Site** **18-031**

| Date | Average (gpm) | Maximum (gpm) | Minimum (gpm) |
|---|---|---|---|
| 1/25/2019 | 56.4 | 74.4 | 41.6 |
| 1/26/2019 | 52.9 | 90.4 | 32.1 |
| 1/27/2019 | 53.5 | 98.9 | 28.9 |
| 1/28/2019 | 51.6 | 101.4 | 29.3 |
| 1/29/2019 | 52.0 | 83.2 | 27.2 |
| 1/30/2019 | 54.5 | 90.9 | 27.7 |
| 1/31/2019 | 56.8 | 83.7 | 42.0 |
| 2/1/2019 | 60.0 | 92.0 | 39.1 |
| 2/2/2019 | 57.1 | 103.4 | 44.5 |
| 2/3/2019 | 53.6 | 72.7 | 38.7 |
| 2/4/2019 | 52.0 | 72.5 | 39.5 |
| 2/5/2019 | 49.5 | 76.2 | 36.7 |
| 2/6/2019 | 53.0 | 74.7 | 40.6 |
| 2/7/2019 | 50.3 | 69.2 | 37.1 |
| 2/8/2019 | | | |
| 2/9/2019 | | | |
| 2/10/2019 | | | |
| 2/11/2019 | | | |
| 2/12/2019 | | | |
| 2/13/2019 | | | |
| 2/14/2019 | | | |
| 2/15/2019 | | | |
| 2/16/2019 | | | |
| 2/17/2019 | | | |
| 2/18/2019 | | | |
| 2/19/2019 | | | |
| 2/20/2019 | 52.1 | 98.8 | 28.7 |
| 2/21/2019 | 56.2 | 76.6 | 43.4 |
| 2/22/2019 | 43.2 | 59.3 | 35.2 |
| 2/23/2019 | 43.1 | 73.2 | 31.4 |
| 2/24/2019 | 56.1 | 82.4 | 37.1 |
| 2/25/2019 | 40.7 | 56.1 | 32.1 |
| 2/26/2019 | 37.4 | 47.1 | 31.9 |
| 2/27/2019 | 36.7 | 54.9 | 28.9 |
| Average | 50.8 | 78.7 | 35.2 |
| Maximum | | 103.4 | |
| Minimum | | | 27.2 |

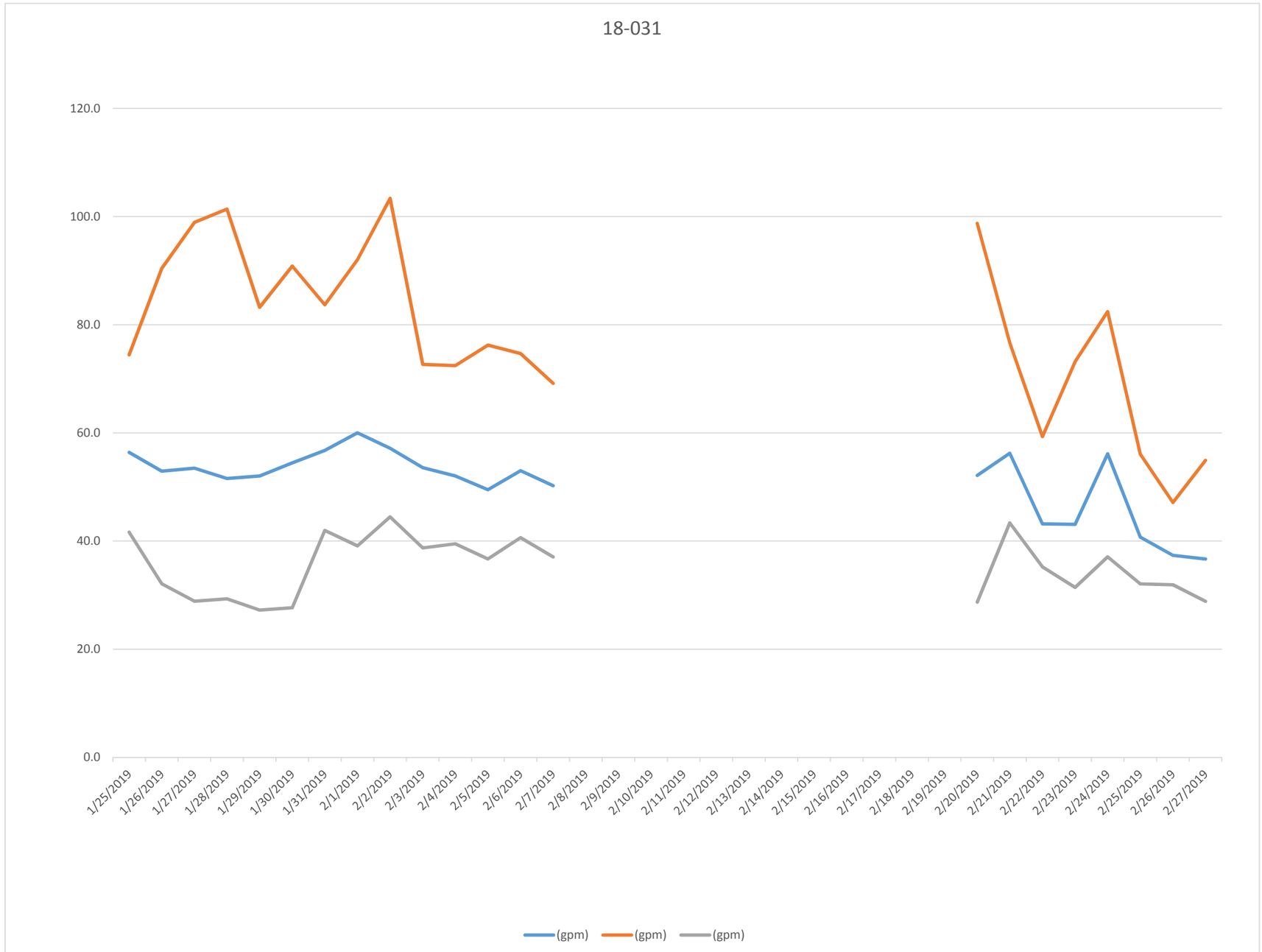
Approximate Number of Homes 136

Flow per Home

| | | |
|---|---|---|
| 0.4 | 0.6 | 0.3 |

Max Peak Flow per Home

| | | |
|---|---|---|
| Maximum | 103.4 | gpm |
| Peak Flow | 0.8 | gpm per home |



Attachment G

# Appendix F
# Preliminary Pump Station Information

Attachment G



**PRELIMINARY PUMP STATION HEAD ANALYSIS**
**Belleview Street Pump Station** **JN 1021**

| | |
|---|---|
| Suction water surface elevation | 402.00 feet |
| Discharge water surface elevation | 442.00 feet |
| Static head | 40.0 feet |

**Pipe Information**

| | |
|---|---|
| Pipe 1 | 3" force main |
| Pipe 2 | |
| Pipe 3 | |
| Pipe 4 | |
| Pipe 5 | |
| Pipe 6 | |

| | Pipe 1 | Pipe 2 | Pipe 3 | Pipe 4 | Pipe 5 | Pipe 6 |
|---|---|---|---|---|---|---|
| Pipe length (feet) | 225 | 0 | 0 | 0 | 0 | 0 |
| Pipe diameter (inches) | 3.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Pipe C-factor | 120 | 120 | 120 | 120 | 120 | 120 |
| Portion of Flow | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 | 0.00 |
| Cross-sectional area (feet) | 0.049 | | | | | |
| Hydraulic radius | 0.063 | | | | | |

**Number of fittings for each pipe**

| | Pipe 1 | Pipe 2 | Pipe 3 | Pipe 4 | Pipe 5 | Pipe 6 |
|---|---|---|---|---|---|---|
| Gate Valve | | | | | | |
| Plug Valve (99% open) | 1 | | | | | |
| Butterfly Valve | | | | | | |
| Swing Check Valve | 1 | | | | | |
| 90° Bend | 2 | | | | | |
| 45° Bend | | | | | | |
| 22.5° Bend | | | | | | |
| 11.25° Bend | | | | | | |
| Tee (through) | | | | | | |
| Tee (side out) | 1 | | | | | |
| Cross (through) | | | | | | |
| Cross (side out) | | | | | | |
| Reducer/Increaser | | | | | | |
| Discharge to air | 1 | | | | | |
| Sum of losses in fittings | 6.66 | | | | | |
| Other miscellaneous losses | | | | | | |
| Sum of minor losses (K) | 6.66 | | | | | |

| | |
|---|---|
| Minimum flow for results | 0 gpm |
| Flow Increment | 5 gpm |

**PRELIMINARY PUMP STATION HEAD ANALYSIS**

**Belleview Street Pump Station** **JN 1021**

**Head Loss Calculations**

| Flow (gpm) | Pipe 1 Loss (feet) | Pipe 2 Loss (feet) | Pipe 3 Loss (feet) | Pipe 4 Loss (feet) | Pipe 5 Loss (feet) | Pipe 6 Loss (feet) | TDH Full Length (feet) |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40.00 |
| 5 | 0.04 | 0 | 0 | 0 | 0 | 0 | 40.04 |
| 10 | 0.13 | 0 | 0 | 0 | 0 | 0 | 40.13 |
| 15 | 0.29 | 0 | 0 | 0 | 0 | 0 | 40.29 |
| 20 | 0.49 | 0 | 0 | 0 | 0 | 0 | 40.49 |
| 25 | 0.74 | 0 | 0 | 0 | 0 | 0 | 40.74 |
| 30 | 1.05 | 0 | 0 | 0 | 0 | 0 | 41.05 |
| 35 | 1.40 | 0 | 0 | 0 | 0 | 0 | 41.40 |
| 40 | 1.80 | 0 | 0 | 0 | 0 | 0 | 41.80 |
| 45 | 2.25 | 0 | 0 | 0 | 0 | 0 | 42.25 |
| 50 | 2.74 | 0 | 0 | 0 | 0 | 0 | 42.74 |
| 55 | 3.28 | 0 | 0 | 0 | 0 | 0 | 43.28 |
| 60 | 3.86 | 0 | 0 | 0 | 0 | 0 | 43.86 |
| 65 | 4.49 | 0 | 0 | 0 | 0 | 0 | 44.49 |
| 70 | 5.16 | 0 | 0 | 0 | 0 | 0 | 45.16 |
| 75 | 5.87 | 0 | 0 | 0 | 0 | 0 | 45.87 |
| 80 | 6.63 | 0 | 0 | 0 | 0 | 0 | 46.63 |
| 85 | 7.43 | 0 | 0 | 0 | 0 | 0 | 47.43 |
| 90 | 8.28 | 0 | 0 | 0 | 0 | 0 | 48.28 |
| 95 | 9.17 | 0 | 0 | 0 | 0 | 0 | 49.17 |
| 100 | 10.09 | 0 | 0 | 0 | 0 | 0 | 50.09 |

**Velocity Calculations**

| Flow (gpm) | Pipe 1 Velocity (fps) | Pipe 2 Velocity (fps) | Pipe 3 Velocity (fps) | Pipe 4 Velocity (fps) | Pipe 5 Velocity (fps) | Pipe 6 Velocity (fps) |
|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0.23 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0.45 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0.68 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0.91 | 0 | 0 | 0 | 0 | 0 |
| 25 | 1.13 | 0 | 0 | 0 | 0 | 0 |
| 30 | 1.36 | 0 | 0 | 0 | 0 | 0 |
| 35 | 1.59 | 0 | 0 | 0 | 0 | 0 |
| 40 | 1.82 | 0 | 0 | 0 | 0 | 0 |
| 45 | 2.04 | 0 | 0 | 0 | 0 | 0 |
| 50 | 2.27 | 0 | 0 | 0 | 0 | 0 |
| 55 | 2.50 | 0 | 0 | 0 | 0 | 0 |
| 60 | 2.72 | 0 | 0 | 0 | 0 | 0 |
| 65 | 2.95 | 0 | 0 | 0 | 0 | 0 |
| 70 | 3.18 | 0 | 0 | 0 | 0 | 0 |
| 75 | 3.40 | 0 | 0 | 0 | 0 | 0 |
| 80 | 3.63 | 0 | 0 | 0 | 0 | 0 |
| 85 | 3.86 | 0 | 0 | 0 | 0 | 0 |
| 90 | 4.08 | 0 | 0 | 0 | 0 | 0 |
| 95 | 4.31 | 0 | 0 | 0 | 0 | 0 |
| 100 | 4.54 | 0 | 0 | 0 | 0 | 0 |

**PRELIMINARY PUMP STATION HEAD ANALYSIS**
**Belleview Street Pump Station**

**JN 1021**

| | | |
|---|---|---|
| Wet Well Diameter | 5.00 | ft |
| Wet Well Height | 10.00 | ft |
| Pump Rate | 50.00 | gpm |

Min active wet well volume :

1) Min of 1minute pump rate time — 50 gallons

2) 10 minutes pump cycle time ( 3 cycles/hr/pump ) — 125 gallons

Dimensions of sloped portion around base of wet well (ft) :

height = 1.00 width = 1.00

Volume per foot of depth of wet well :

| Depth (ft) | Volume (gal) |
|---|---|
| 0 | 0 |
| 1 | 100 |
| 2 | 247 |
| 3 | 394 |
| 4 | 540 |
| 5 | 687 |
| 6 | 834 |
| 7 | 981 |
| 8 | 1128 |
| 9 | 1275 |
| 10 | 1422 |

Pump settings :

| | | |
|---|---|---|
| 1) Bottom of wet well at | 400.00 | ft |
| 2) All pumps off at | 402.00 | ft |
| 3) Lead pump on at | 403.00 | ft (typical pump cycle volume = 150 gal) |
| 4) Lag pump on at | 404.00 | ft |
| 5) Alarm at | 405.00 | ft |

# BARNES®

Attachment G

www.cranepumps.com

## Series 3XSCM
18 Frame Driver

***X-Pruf® Solids Handling Submersible Pumps***

## Specifications:

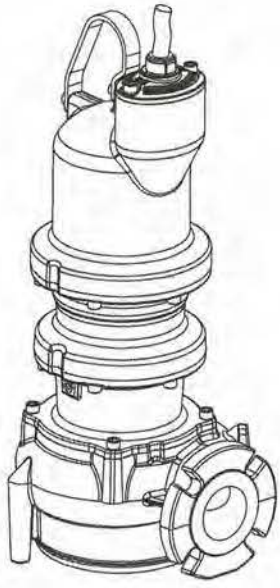
| | |
|---|---|
| **DISCHARGE** | 3", 125 lb. Horizontal Flange<br>Slotted to accommodate 80mm ISO Flanges |
| **LIQUID TEMPERATURE** | 104°F (40°C) Continuous |
| **VOLUTE** | Cast Iron ASTM A-48 Class 30 |
| **STRIKER PLATE** | 440C Stainless Steel Heat Treated to 53-60 HRC<br>Hole Pattern to Accomodate 4" 125 # Flange |
| **WEAR RING** | C954 Lead-Free Bronze |
| **MOTOR HOUSING** | Cast Iron ASTM A-48 Class 30 |
| **SEAL PLATE** | Cast Iron ASTM A-48 Class 30 |
| **IMPELLER:** | |
| *Design* | Enclosed Monovane, With Pump Out Vanes on Back Side. Dynamically Balanced ISO G6.3 |
| *Material* | Ductile Iron ASTM A-536, 65-45-12 |
| **SLICING BLADE** | 440C Stainless Steel Heat Treated to 53-60 HRC |
| **SHAFT** | 416 Stainless Steel |
| **"O" RINGS** | Buna-N |
| **HARDWARE** | 300 Series Stainless Steel |
| **LIFTING BAIL** | 300 Series Stainless Steel |
| **PAINT** | Epoxy Dupont Corlar® Amine Epoxy, Two Coats |
| **SEAL:** *Design* | Tandem Mechanical, Oil Filled Reservoir. |
| *Material: Inboard* | Rotating Faces - Carbon<br>Stationary Faces - Ceramic |
| *Material: Outboard* | Rotating Faces - Silicon Carbide<br>Stationary Faces - Silicon Carbide<br>Elastomer - Buna-N<br>Hardware - 300 Series Stainless |
| **CORD ENTRY** | Custom Molded, Quick Connected for Sealing and Strain Relief |
| **POWER CORD** | CSA Certified Submersible Power Cable 2000V - Ordered Separately |
| **SPEED** | 1750 RPM (Nominal) |
| **UPPER BEARING:** | |
| *Design* | Single Row, Ball, Oil Lubricated |
| *Load* | Radial |
| **LOWER BEARING:** | |
| *Design* | Double Row, Ball, Oil Lubricated |
| *Load* | Radial & Thrust |
| **MOTOR:** *Design* | NEMA B - Three Phase Torque Curve<br>Oil-Filled, Squirrel Cage Induction, Inverter Duty rated per NEMA MG1 |
| *Insulation* | Class H Varnish & Magnet Wire |
| **THREE PHASE** | Requires overload protection to be included in control panel. |
| **MOISTURE SENSOR** | Normally Open (N/O). Requires Relay in Control Panel |
| **TEMPERATURE SENSOR** | Three Normally Closed (N/C). To be wired in series with control circuit. |
| **OPTIONAL EQUIPMENT** | White Iron Impeller, Seal Material, Impeller Trims, Cord Length |
| **MARKINGS** | CSA, CE |
| **WEIGHT** | 252 lbs (115 Kg) |
| **NOISE EMISSION MAX** | In-Air 65 dB-A |
| **SUBMERGENCE** | Max Depth 66ft (20m) |

| | |
|---|---|
| **RECOMMENDED:** | |
| *Accessories* | Break Away Fitting (BAF)<br>Control Panel<br>Pump Monitor Relay<br>Leg Kit |

C SP US
LR16567

SWPA MEMBER

HYDRAULIC INSTITUTE PROUD MEMBER



# SITHE

**Series: 3XSCM**
**3 - 7.5HP, 1750RPM, 60Hz**

**Explosion Proof, Class I, Division 1, Groups C & D, T4**

Sample Specifications: Section 0.2B Page G.

This product may be covered by one or more of the following patents and other patent(s) pending: US Patent 7,931,473, NZ DSN NO. 424412, NZ DSN NO. 424413, AUS DSN NO. 201812608, AUS DSN NO. 201812609 EU Design Reg. 005293040-0001

**DESCRIPTION:**

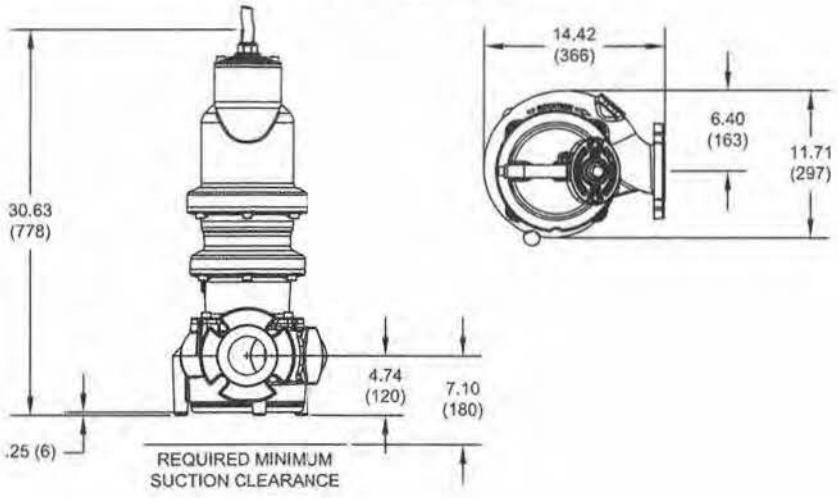
SUBMERSIBLE CHOPPER PUMP DESIGNED FOR RAW SEWAGE APPLICATIONS.

**WARNING:**
CANCER AND REPRODUCTIVE HARM - WWW.P65WARNINGS.CA.GOV

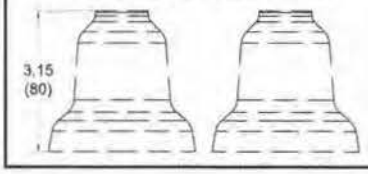
## *X-Pruf® Solids Handling Submersible Pumps*

### 18 Frame Driver

inches (mm)




Optional Leg Kit - p/n 125506




**IMPORTANT !**

1.) MOISTURE AND TEMPERATURE SENSORS MUST BE CONNECTED TO VALIDATE THE CSA LISTING.
2.) A SPECIAL MOISTURE SENSOR RELAY IS REQUIRED IN THE CONTROL PANEL FOR PROPER OPERATION OF THE MOISTURE SENSORS. CONTACT BARNES PUMPS FOR INFORMATION CONCERNING MOISTURE SENSING RELAYS FOR CUSTOMER SUPPLIED CONTROL PANELS.
3.) THESE PUMPS ARE CSA LISTED FOR PUMPING WATER AND WASTEWATER. **DO NOT USE TO PUMP FLAMMABLE LIQUIDS.** NOT SUITABLE FOR ENVIRONMENTS CONTAINING GASOLINE OR HEXANE.
4.) INSTALLATIONS SUCH AS DECORATIVE FOUNTAINS OR WATER FEATURES PROVIDED FOR VISUAL ENJOYMENT MUST BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE ANSI/NFPA 70 AND/OR THE AUTHORITY HAVING JURISDICTION. THIS PUMP IS NOT INTENDED FOR USE IN SWIMMING POOLS, RECREATIONAL WATER PARKS, OR INSTALLATIONS IN WHICH HUMAN CONTACT WITH PUMPED MEDIA IS A COMMON OCCURRENCE.

| MODEL NO | HP | VOLT | PH | Hz | RPM (Nom) | NEMA START CODE | FULL LOAD AMPS | SERVICE FACTOR | SERVICE FACTOR AMPS | LOCKED ROTOR AMPS | DRIVER FRAME | CORD P/N ▲ | CORD SIZE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3XSCMPA30N4 | 3 | 208 | 3 | 60 | 1750 | K | 9.7 | 1.2 | 11.4 | 58.2 / 65.8 | 18 | 125496 | 12/4 - 18/4 |
| | | 230 | | | | | 9.2 | 1.2 | 10.6 | | | | |
| | | 460 | | | | | 4.6 | 1.2 | 5.3 | 32.9 | 18 | 125497 | |
| 3XSCMPA3054 | 3 | 575 | 3 | 60 | 1750 | N | 4.5 | 1.2 | 4.9 | 37.0 | 18 | 125497 | 12/4 - 18/4 |
| 3XSCMPA50N4 | 5 | 208 | 3 | 60 | 1750 | J | 15.8 | 1.2 | 18.7 | 82.4 / 92.4 | 18 | 125496 | 12/4 - 18/4 |
| | | 230 | | | | | 15.0 | 1.2 | 17.2 | | | | |
| | | 460 | | | | | 7.5 | 1.2 | 8.6 | 46.2 | 18 | 125497 | |
| 3XSCMPA5054 | 5 | 575 | 3 | 60 | 1750 | J | 6.0 | 1.2 | 6.9 | 37.0 | 18 | 125497 | 12/4 - 18/4 |
| 3XSCMPA75N4 | 7.5 | 208 | 3 | 60 | 1750 | H | 23.8 | 1.2 | 28.5 | 105.9 / 123.6 | 18 | 125496 | 12/4 - 18/4 |
| | | 230 | | | | | 23.7 | 1.2 | 27.2 | | | | |
| | | 460 | | | | | 11.9 | 1.2 | 13.6 | 61.8 | 18 | 125497 | |
| 3XSCMPA7554 | 7.5 | 575 | 3 | 60 | 1750 | H | 9.5 | 1.2 | 10.9 | 49.4 | 18 | 125497 | 12/4 - 18/4 |

**IMPORTANT !**
Moisture and Temperature sensor leads are integral to power cord.
Pump rated for operation at ± 10% voltage at motor.
▲ Cord Suffix: XC - 30 Feet, XF - 50 Feet, XJ - 75 Feet, or XL - 100 Feet.
▲ Cord sold separately.

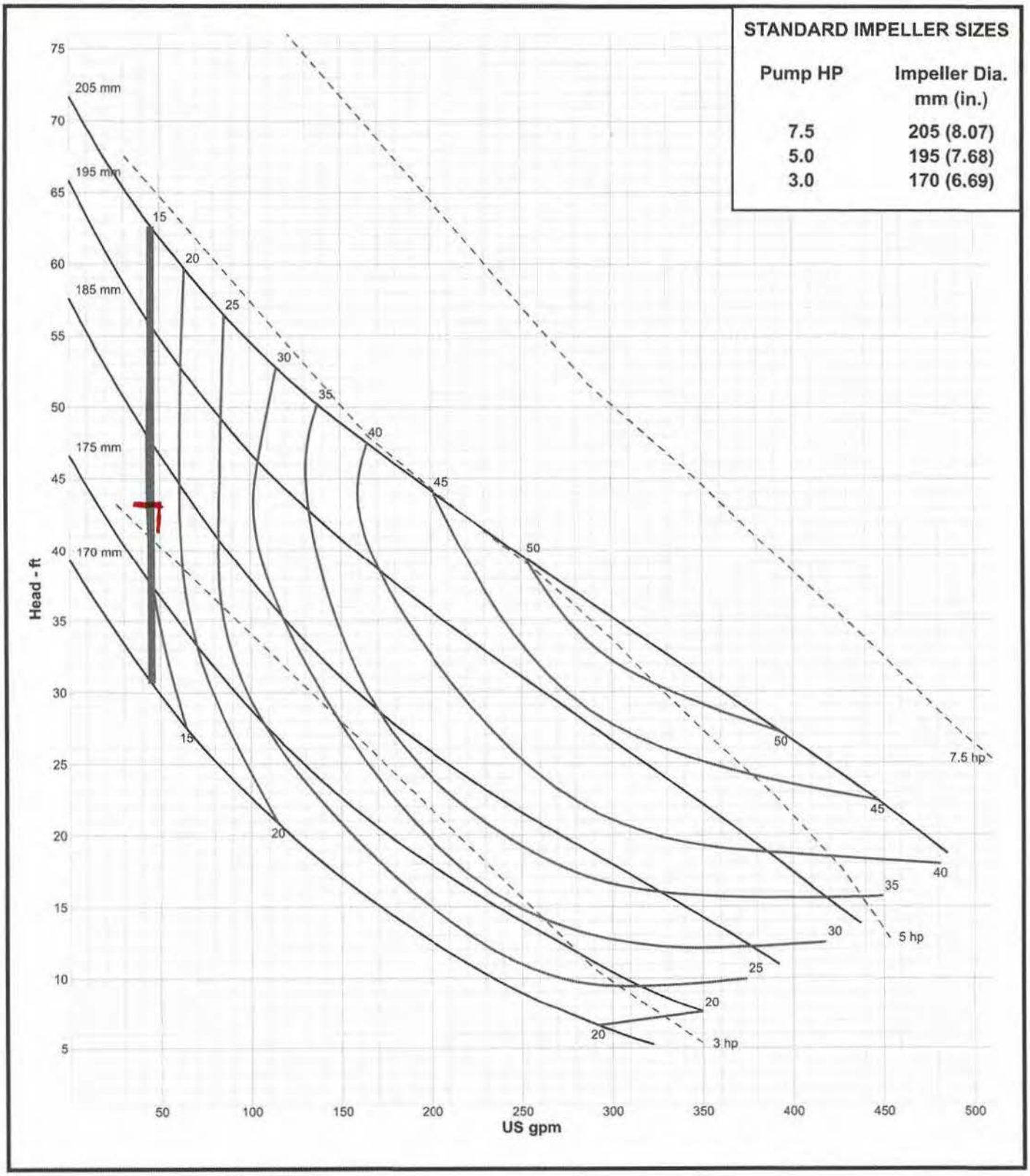
# Series 3XSCMPA

Attachment G

Performance Curve
3 - 7.5HP, 1750RPM, 60Hz

BARNES®
www.cranepumps.com

## *X-Pruf® Solids Handling Submersible Pumps*






CRANE®
A Crane Co. Company

PUMPS & SYSTEMS


USA: (937) 778-8947 • Canada: (905) 457-6223 • International: (937) 615-3598

Attachment H

## Alfele, Matthew

**From:** Esau, Sharon Ann (sae) <sae@virginia.edu>
**Sent:** Tuesday, November 6, 2018 8:44 AM
**To:** Alfele, Matthew
**Subject:** Belleview Construction Project

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

Are you people out of your minds! We do not need more subdivisions that do not contribute to the infrastructure. The sewer system is already overloaded to the extent that several houses on McElroy Drive had the sewerage backing up into our homes during the July rainstorm resullting in tens of thousands of dollars in damage and significant loss of our homes value. (Which no doubt will NOT be reflected in our next tax bill). Now you want to put a sewage treatment plant in our neighborhood?? Give us a break!

Sharon Esau
Charlottesville Homeowner

Attachment H

**Alfele, Matthew**

**From:** jesse harper <jesseharpermusic@gmail.com>
**Sent:** Friday, March 29, 2019 11:53 AM
**To:** Alfele, Matthew
**Subject:** Belleview?Azalea cottages and Pump Station

Hi Matt,

thanks for getting back to me yesterday. Jess Wenger will be sending you an email shortly with a summary of her findings regarding these sanitary pump stations -

I have just spoken again this morning with a Principle Plant Operator from Chesterfield County Utilities. He has been employed by the utility in wasterwater management for 37 years. He expressed that he would like his name kept private but was happy to answer my questions. He said that they have 32 such pump stations in Chesterfield and the chief complaints are 1. Smell and 2. Noise.
he told me that- they have to treat the Hydrogen Sulfide and other organic byproducts that cause sewer smell with chemicals in order to mitigate the odor. Mostly they use bleach but there are other varieties of chemicals that are scented (orange blossom or other floral varieties) but he said that all pumps have to be vented and regardless of their attempts to mask the smell - it's sewer gas and it stinks and never really goes away... it's just something they have to manage.

regarding the noise- he said that generators are generally noisy and they get complaints about that- no real solution he could offer.

He said that they have had failures - both with pumps and generators/backup generators. Several of them have been pretty awful - he cited an issue with a line connected to a pump station in the Brandermill in which the line was crushed. He also noted that they don't have HOA owned pump stations that he is aware of. Chesterfield Co. runs and maintains their pump stations and they can be monitored directly from principle plants which helps them catch problems more quickly.

I also found this document (a little bit older 2006) that deals with potential problems and solutions of pumping stations- it might be helpful for the city to review.
https://www.dewberry.com/docs/default-source/documents/Wastewater_Pump_Station_Design_Problems_and_Solutions.pdf?sfvrsn=1161e0f7_0

Thanks so much.

Jesse Harper
540-223-2318

Attachment H

## Alfele, Matthew

**From:** Alfele, Matthew
**Sent:** Monday, November 19, 2018 3:49 PM
**To:** 'Michael Kidd'
**Subject:** RE: Belleview questions
**Attachments:** SUP Site Plan_10_2018.pdf

Thank you for the email Michael. See my comments below. If you have any additional questions or need clarification please let me know.

Matt Alfele, AICP
City Planner
City of Charlottesville
Department of Neighborhood Development Services
City Hall – 610 East Market Street
P.O. Box 911
Charlottesville, VA 22902
Ph 434.970.3636 FAX 434.970.3359
alfelem@charlottesville.org

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**From:** Michael Kidd <orangefordays@icloud.com>
**Sent:** Monday, November 19, 2018 8:59 AM
**To:** Alfele, Matthew <alfelem@charlottesville.org>
**Subject:** Belleview questions

Hi Matt,

I'm Michael Kidd and I own my home at 107 Camellia Drive. Your Oct. 26th letter to Azalea Gardens residents on the Belleview subdivision raised a few questions for me--

1) The letter says "The Comprehensive Land Use Map for this area calls for Low Density Residential". I'm not a city planner by any means, so I'm going to need your help to understand if 49 single-family homes on 6.80 acres is low or high density. It feels high, but, again, it may not be. If it is high density, is the applicant asking for an exception to Use, and if so, what's the City's stance on this?
Low density, as defined in the City's Comprehensive plan, is no greater than 15 dwelling units per acres. For this lot size the max number of dwelling units you could do would be 102 single family homes. Other factors would come into play too as for "new" lots you need a minimum 6,000 square feet and 50 feet of road frontage. If this was not an already platted subdivision, you could realistically do 30 to 50 homes. This proposal is also a little different in the fact that the "use" of single family homes is by-right not what the SUP is asking for. The SUP that is being requested is for the pump station. If the applicant were to tie into the City's gravity sewer system, no SUP would be requested.
2) I have no idea of the scale of a sanitary pump station. Size of building? Exterior lights? Noise? Where will this be located on the plat? Lots of questions on this one. We already have experienced increased noise and light pollution in our neighborhood because of increased commercial and residential development, as well as increased traffic on neighboring 5th St Extd and I-64.

# Attachment H

I have attached the site plan that was submitted with the applicant. Once the application is complete (the City is still waiting on the applicant to submit additional documents) the full applicant will be sent out to the neighborhood. The letter you received was to inform the neighborhood that the City has received and application. Nothing about the completeness or quality of the application has be determined. The pump station is being proposed at the southern end of the development, and the City will need additional information related to lights, noise, smell….

3) I've got a lot of concerns about JPA, as it currently is, being to handle the increased vehicular and pedestrian traffic from 49 new residences. The stretch of JPA between the Beach Club and the JPA/Harris/Camellia intersection is already narrow and only has sidewalks on one side, and those sidewalks are the narrow, one-at-a-time variety. Also, the increased traffic on this stretch of JPA and also on Harris Rd created by 5th Street Station aka "Wegmans" has yet to be dealt with by the City. With Starbucks and other businesses coming to 5th St Extd, it's a problem that will increase exponentially in the next year, and again I'm concerned that this isn't a priority for the City in terms of neighboring residential areas. Is there currently any plan to address the increased vehicular and pedestrian traffic on JPA and Harris as a result of these 49 new residences?

These are valid concerns, but not ones that are connected to this SUP. The residential component of the propose is by-right, it is only the sanitary system that would require a SUP.

Thanks for helping me understand all this. I'm not opposed to growth in my neighborhood, and I certainly don't want my questions to reflect that. I'm glad to see commercial and residential growth when it's properly planned.

Thanks,
Michael
434-882-1661

Attachment H

## Alfele, Matthew

**From:** Pam Adams <pamadams7@gmail.com>
**Sent:** Tuesday, December 4, 2018 1:45 PM
**To:** keane@shimp-engineering.com
**Cc:** Alfele, Matthew; Jason Bishop; Andrew Baldwin
**Subject:** Pump Station for Belleview Residences

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

We received your letter concerning SUP for sanitary pump station to service 49 single-family homes in a by-right residential development of Belleview. It is our understanding that the by-right was not granted and, therefore, it would necessitate that you conform to all current city, etc. codes in the areas of development (lot size, road standards, etc.)

Further, it is our understanding that a minimal building lot in the city, in this case, is 6,000 sq. ft. (50 ft. x 120 ft.) Using simple math, it appears that:

- Acre = 43,560 sq. ft.
- Your total parcel area = 6.80 acres
- 6.80 acres x 43,560 sq. ft. = 296,208 sq. ft.
- 49 dwellings x 6,000 sq. ft. = 294,000 sq. ft.

That leaves 2,208 sq. ft. for:

1. Road, bike lanes (say, 30 ft. x 1,000 ft.) or 30,00 sq. ft. (These sizes are our assumptions not having an updated plan.)
2. Sanitary pump station .31 acres as stated in your letter or approximately 13,500 sq. ft.)
3. Storm water collection facility, which as we recall, looked sizable on early plans (Say another .30 acres or 13,000 sq. ft.)

These 3 items equal 56,500 sq. ft. or 1.3 acres. Obviously, larger than 2,208 sq. ft.
We are curious as to how you arrived at your numbers and would appreciate an explanation.

We are also opposed to the entire development for a host of reasons, like wetlands, streams, old growth forest, all of which will be destroyed to accommodate however many giant houses totally out of character with the rest of the neighborhood.

We believe this piece of land could be put to much better use as a publicly owned, unique sanctuary for all to use.

Sincerely,
Reginald & Pamela Adams
222 Monte Vista Avenue

Attachment H

**Alfele, Matthew**

**From:** Pam Adams <pamadams7@gmail.com>
**Sent:** Friday, November 16, 2018 2:41 PM
**To:** Alfele, Matthew; Ronayne, Michael P.; Riddervold, Kristel; Elliott, Susan; Stephens, Melissa
**Cc:** Jason Bishop
**Subject:** Belleview Development Environmental Concerns

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

To: City Planners

We are Monte Vista Avenue residents with an extended lot, that is, from street to stream. This letter is to voice our strenuous opposition to the plans of Azalea Cottages, aka Belleview. It seems simply that the proposed plan (Core-Azalea LLC) is in every way contradictory to the City's state codes, plans, and goals.

"Code Section 34-866 - Preservation of existing landscape features contains a provision that can allow for the Director of Neighborhood Development Services to make an assessment to determine if "the [existing landscape] features contribute significantly to the character of the neighborhood and/or are unique in character, and that the preservation of such features is necessary to satisfy the purpose of intent of the section."

Our neighbor group agrees with the explicit assessment of the Environmental Sustainability Division that the removal of this tree canopy is in conflict with the stated city goals, and the effects of removing this canopy is exacerbated by the site topography and the presence of a stream on the proposed site. Can the trees be cut without a full permit to develop?

The 6.8 acres, so stated, is a mature woodland, wetland, watershed, and wildlife habitat with 6-8 poplars having a 48" plus diameter. Dozens more (including oaks) are 28" plus; also this area is home to native beech, maple, holly, Mayapple, fern, etc.

Where is the stream going, if it is not piped? All the water from Azalea Avenue storm drains (a bad design as is), the proposed road, houses, and hardscape would create a flash flood in even a moderate rain. There would not be a single original tree standing to accommodate a road constructed to code and 49 single-family houses (low density as zoned?), not to mention the latter wasteland it would create during construction, blasting, and bulldozing. All this would be a mistake and menace to the entire Fry's Spring Neighborhood for years to come.

We suggest using the unique character of this small tract, not as a development totally out of character with its neighborhood, but as a wild area within the City limits, accessible to all. We believe that is what a "World Class City" would do.

Sincerely,
Reginald & Pamela Adams
222 Monte Vista Avenue
Charlottesville, VA 22903