



Chatham Storm Drainage Improvement Project
Public Meeting #1
July 29, 2014 – 6:00pm to 7:30pm

Attendees:

Matthew Gustis (MG) – CMSWS

Matthew Anderson (MA) – Charlotte Mecklenburg Stormwater Services (CMSWS)

Will Wilhelm (WW) – Engineering Consultant (Kimley-Horn (KH))

Stephen Thun (ST) – KH

Jake Maschoff (JM) – KH

Residents

1) Welcome & Introductions (MA)

- First public meeting for the Chatham Storm Drainage Improvement Project
 - <http://charmeck.org/stormwater/projects/pages/chatham.aspx>
- *Charlotte Mecklenburg Storm Water Services*
 - Matthew Anderson, PE, D.WRE – Project Manager
 - Contact information:
 - Phone: 704-336-7923.
 - Email: manderson@charlottenc.gov
 - Matthew Gustis, PE – City of Charlotte Engineering Team Program Manager
- *Kimley-Horn (KH) – Consultant*
 - Will Wilhelm, PE, CFM, CPESC – Senior Project Manager
 - Stephen Thun, PE – Project Manager
 - Jake Maschoff, EI – Project Engineer

2) Housekeeping items (MA)

- Reminded attendees to sign-in.
- At sign-in, the Map (with aerial) was close by for residents to place a sticker on their representative property. This provided a visual representation of those in attendance and focused discussions during the presentation of Existing Conditions results.
- Reminded attendees to fill out a Customer Service Comment Card.
- Reminded attendees to hold general questions for the question and answer period after the presentation and property specific questions until the small group discussions at the end of the meeting.

3) Outline of Meeting (MA)

- Present background information. (See #4)
- Provide a summary of the Existing Conditions analysis. (See #5)
- Discuss future project milestones. (See #6)
- Request input from property owners/residents on the Existing Conditions analysis results. (See #7)

- Obtain additional information from property owners/residents on perceived drainage issues. (See #8)

4) Background Information (MA)

- Charlotte-Mecklenburg Storm Water Services Summary
 - Stormwater Program Roots
 - Charlotte is a phase I City. Stormwater program was founded as part of NPDES.
 - Program Goals (in no particular order): Water Quality, Maintenance, Capital Improvements, and Education.
- Project Selection
 - Why are we here?
 - Requests for Service from Property Owners (311 and old 336-RAIN calls), and internal ranking efforts indicated that this watershed ranked high Citywide in terms of problems that needed to be addressed.
 - Issues The City is looking to address:
 - Historical flooding events
 - Aging drainage infrastructure
 - Inadequate Infrastructure (i.e. undersized)
 - Structural flooding
 - Road flooding
 - Erosion, blockages in streams
 - Collectively, these issues present a problem much larger than a spot repair program can manage, so an overall capital improvement project was chosen to handle many of the issues.
 - What we need from you?
 - Any feedback on our consultant's modeled results, especially if we've missed something
 - Any additional information on drainage related concerns
 - Support for the project's future phases
- Citizen Involvement (What the community can expect):
 - During the Project, the community can expect
 - Mailers Every Four Months and at Critical Stages
 - Website Updates: <http://charmec.org/stormwater>
 - Questionnaires and Property Owner Surveys
 - Public Meetings
 - Email and Phone Contact as Needed
 - Customer Service Comment Cards

5) Presentation of the Existing Conditions Analysis Results (WW)

- Our goal was to identify the following:
 - Drainage systems (pipes, inlets, and/or channels) that capture runoff from public rights-of-way and do not meet current design standards established in the Charlotte-Mecklenburg Storm Water Design Manual (CMSWDM).
 - Private systems installed by property owners (small pipes, roof drains, etc.) that were not evaluated.
 - Flooding that impacts homes or other structures, including basements or crawl spaces, secondary structures such as sheds or carports, and HVAC units.

- We identified these areas through detailed engineering analysis and reviewed resident feedback.
- Breakout Group #1:
 - Two properties were found to have building/accessory structure flooding as a result of flood plain modeling for the 100-year storm.
 - 2612 Country Club Lane (HVAC, LAG)
 - 2301 Mecklenburg Avenue (BFFE,LAG)
 - Fort Street and Brook Road
 - Significant number of undersized pipes along Brook Road (portions of this system are very old, built in the 1940s and 50s).
 - Spread (explained concept of spread) insufficiencies on side streets connecting to Brook Road (Virginia, Georgia, Florida Avenue, and Attaberry Drive)
 - Overland flow confirmed in between Brook Road and Stratford Avenue, as well as Brook Road and Fort Street.
 - Cramer Pond/Matheson Avenue/Mecklenburg Avenue/Country Club Lane
 - Privately owned pond. The pond provides a benefit to areas downstream as it reduces the peak flows downstream. In the existing condition, we did not find that the pond had a negative impact on the operational efficiency of drainage systems along Brook Road (upstream). These systems are undersized and need to be improved, but are independent of the existing pond.
 - Country Club Lane captures a lot of runoff and has an intermittent asphalt curb. In areas where there is no asphalt curb, we found that water primarily flows in the grassy areas outside of the existing road. In areas where there is a curb, we found that water flow concentrates within the existing road and can encroach on the road up to 9 feet. However, we didn't find that the road is impassable by vehicle.
 - Undersized pipe system along Matheson Avenue
 - Public system outlets onto private property at 2718 Country Club Lane.
 - This is a contributing factor to overland flooding experienced at 2331 Mecklenburg Avenue. LAG flooding confirmed.
- Breakout Group #2:
 - Insufficient pipes along Truman Road/Belvedere Avenue, which contributes to street flooding at Belvedere Avenue and Truman Road.
 - Masonic Drive overtops in the 25- through 100-year event due to an undersized culvert.
- Breakout Group #3:
 - Eight properties were found to have building/accessory structure flooding as a result of flood plain modeling for the 100-year storm.
 - 2225 Winter Street (LAG)
 - 2222 Winter Street (BFFE, HVAC, LAG)
 - 2141 Chatham Avenue (LAG,HVAC)
 - 2200 Chatham Avenue (LAG)
 - 2136 Chatham Avenue (BFFE, LAG, HVAC, SHED)
 - 2132 Chatham Avenue (SHED)
 - 2133 Club Road (DECK)
 - 2322 Club Road (SHED)

- Undersized pipe systems exist along The Plaza and Mimosa Avenue, which contribute to street flooding in these areas as well.
- There is runoff from Cochran Place and Norcross Place ponding in front of 2110 Norcross Place and flowing onto private property towards Midwood Park.
- Pipe system and channels through Midwood Park are severely undersized, which contributes to the overland flow of water through the park.
- Winter Street overtops in the 10- through 100-year event due to an undersized culvert.
- Chatham Avenue overtops in the 25- through 100-year event due to an undersized culvert.
- Pipes are undersized along Chatham Avenue and contribute to street flooding along Chatham Avenue and Belvedere Avenue.
- Inlet on Club Road is located in a sump condition (no overland relief). During the 25-year (design) event, ponding depth exceeded 0.5 feet and street flooding is likely. This flooding could impede vehicular access/crossing.
- Introduced citizen involvement figure and stated that all document input was received prior to meeting.
- Discussions were facilitated using Vicinity Map, Floodplain Map, and EC Results Map (with aerial).
- Introduced Floodplain Map that showed 100-year storm - 1 percent chance of storm occurring in any given year.

6) Future Project Milestones – Path Forward (MA)

- Planning (typically about 36 months)
 - Existing Conditions Analysis – Additional information obtained during this meeting will be considered and incorporated into the existing conditions analysis, where applicable.
 - Alternative Analysis – City and Consultant will evaluate several alternatives and options, including replacement of failing pipes, different culvert/pipe sizes shapes and materials, additional drainage infrastructure including pipes and inlets, consideration of any new alignments for pipes, or, if necessary, the addition of detention to address insufficiencies. Options will be evaluated balancing public costs, private property impacts, and public safety. We will examine other constraints, such as constructability, maintenance, and whether state and federal agencies will permit the options. After completing that work a preferred alternative will be developed and shared with the public at the next public meeting for feedback.
- Design (typically around 30 months)
 - We will design the Solutions and share the design with the public at a final public meeting.
- Permitting (typically about 6 to 9 months, but typically overlaps the design phase)
- Easement Acquisition (typically 9 to 12 months, but typically overlaps the design phase)
- Bid (typically around 5 months)
- Construction (typically around 2 years)

7) General Questions (MA/WW)

- Attendees were asked to please remember to sign-in and fill out a customer service card.
- Matthew Anderson is available to answer any future questions (email address listed above).
- At this point, the floor was open for general questions.
 - Q: When have you determined the last 100-year storm historically?
 - A: MA did not recall a recent occurrence of the 100-year storm event on record, although there has been significant flooding recorded on Winter Street. WW thought the last 100-year storm event may have been around July of 1997.
 - Q: If Cramer property (2733 Country Club Lane) is developed in the future, would the pond be removed?
 - A: MG explained that any modifications to the existing pond as part of this project will be evaluated to maintain or reduce the amount of flow released downstream. Modifications to the existing pond not associated with this project will be subject to applicable federal, state, and local ordinances. CMSWS cannot make any guarantees in regard to downstream flooding impacts except as they relate to the scope of this project.
 - Q: How large is the pond?
 - A: ST stated that the pond has a surface area of approximately 1.5 acres.
 - Q: In an area of new development within the neighborhood, a small pond was removed. Was this pond part of your model?
 - A: MA stated that the small pond was not part of the model. MA also explained that the model was used to determine the worst case scenario. In this case, not including the pond in the model would help determine the worst case scenario.

8) Small Group Breakout Sessions – Specific Property Issues / Questions (WW)

- The City and KH stayed after the meeting to answer any specific questions. If we were unable to answer specific questions, attendees were asked to provide contact information.
- At this point, facilitators broke into the following groups:
- Breakout Group #1 (MA, JM):
 - 2301 Mecklenburg Avenue
 - Q: The residents of 2301 Mecklenburg Avenue explained that their driveway is in close proximity to the stream. During their 10 years of living there, they have experienced a lot of erosion along their driveway. They also voiced concerns with flooding in their basement and lowest adjacent grade (LAG). They explained that the previous owner had to throw away carpet stored in the basement garage due to flooding. They had complaints about the culvert crossing Mecklenburg Avenue, stating that it was about half full of sediment-restricting flow, and causing water to back up. This is similar to what is shown on the floodplain exhibit.
 - A: MA and MG helped explain the floodplain exhibit and confirmed that the analysis documents the flooding.

- Q: Owners addressed concerns about the sewer line that runs close to creek. The sewer line has been backed up before and the owners are concerned with the smell and potential sewage spills.
 - A: MA stated that this problem would not be addressed with the storm water improvement unless a utility relocation was required. MG confirmed that CMSWS works closely with the Utilities Department (CMUD) and that problem would be communicated.
 - 2612 Country Club Lane
 - Q: The property owner explained that he has lived at 2612 Country Club Lane for seven years and hasn't experienced any HVAC flooding issues, even though it was shown by the model. Concern was voiced about the potential removal of Cramer Pond and the affects it would have downstream.
 - A: MG explained that any modifications to the existing pond as part of this project will be evaluated to maintain or reduce the amount of flow released downstream. Modifications to the existing pond not associated with this project will be subject to applicable federal, state, and local ordinances. CMSWS cannot make any guarantees in regard to downstream flooding impacts except as they relate to the scope of this project.
 - 2301 Mecklenburg Avenue
 - Q: A tree has fallen into the channel, blocking the creek, and the property owners are concerned this will cause blockage within the channel.
 - A: MA stated that they could voice this concern by calling 311 to have the tree removed.
 - 2612 Country Club Lane
 - Q: The property owner voiced his appreciation for the creek and was worried the stream would be replaced with rip-rap as part of the project.
 - A: MG explained how there are tight restrictions from federal and state agencies on streams and that work within the channel would be avoided and minimized per these laws and regulations.
 - 2301 Mecklenburg Avenue
 - Q: Resident communicated that the brick retaining wall along their driveway is starting to fall into creek. They are concerned if the erosion continues, there will be damage to their driveway.
 - A: MA noted the comments and confirmed that the erosion problems would be looked into as part of the alternatives analysis.
- Breakout Group #2 (WW)
 - 2311 Club Road
 - Q: The deck that is located at 2303 Club Road is located very close to the stream. The resident at 2311 Club Road voiced concerns regarding erosion that may be putting this deck at risk.
 - A: WW noted the comments and confirmed that the erosion problems would be looked into as part of the alternatives analysis.
 - 2315 Club Road
 - Q: Water from Club Road runs into yard and the yard is retaining water. The resident also confirmed street flooding on Truman and Belvedere.

- A: WW confirmed that water may be flowing down from the other side of Club Road and into the yard. This observation also confirmed the sufficiency evaluation of the system adjacent to 2315 Club Road (i.e. insufficient inlet in street).
 - 2321 Club Road
 - Q: Resident confirmed the open request and erosion observed on their property, although they didn't classify the erosion as being severe.
 - A: WW noted the comments and confirmed that the erosion problems would be looked into as part of the alternatives analysis.
 - Breakout Group #3 (ST)
 - 1726 Mecklenburg Avenue
 - Q: Houses along Thurmond Place (2201 – 2213) experience yard flooding as a result of sidewalk construction by the City approximately 8 years ago. Sidewalks prevent runoff from draining to the street. A sump pump is required at this property to remove water from crawl space. A broken clay pipe is visible at 2213 Thurmond Place.
 - A: ST explained that KH and CMSWS are aware of this issue as it was noted during review of questionnaire submitted by this address. CMSWS will evaluate the benefits of improvements in this area if it is determined that public water is contributing to the runoff in this area.
 - Q: During construction of The Park at Mattie Rose subdivision (formerly 1914 Mecklenburg Avenue), a detention pond was removed at the back of the property and was replaced with a rip-rap channel that discharges onto the baseball field in Midwood Park.
 - A: ST explained that any new construction would be governed by the Post Construction Ordinance, but recommended that the resident report any concerns by calling 311. This concern was documented and will be investigated further in the alternatives analysis.
 - 2124 Club Road
 - Q: Resident confirmed that their property does not currently experience any flooding, but expressed concern about potential flooding in the future if culverts at Winter Street and/or Chatham Avenue are replaced. Resident also asked about what stream improvements would look like.
 - A: ST explained that, if upstream culverts are replaced, it will be confirmed that flooding downstream does not increase. Further, if stream improvements are proposed, they will try to use a natural channel design as opposed to a rip-rap channel only.
 - 2137 Club Road:
 - Q: Resident noted that flooding is frequently experienced in the back yard (no structural impacts), at 2133 Club Road (deck), and at 2136 Chatham Avenue (living space). Resident emailed picture of back yard flooding to CMSWS.
 - A: ST noted that the engineering analysis has confirmed these issues and they will be evaluated as the project moves forward into alternatives analysis.
 - Q: Resident asked if CMSWS was aware of a potential project that would lower the existing sanitary sewer line on the adjacent property (2133 Club Road).

- A: ST noted that at this time, KH is not aware of any proposed improvements to the sanitary sewer in this area. Sanitary sewer improvements/relocations will not be associated with this project unless they are required to facilitate improvements to storm drainage infrastructure. KH and CMSWS will coordinate with CMUD, if appropriate, to determine if improvements in this area will impact proposed storm drainage improvements.
- 2229 Chatham Avenue:
 - Q: Resident reported that previous work had been done at the downstream end of the Chatham Avenue culvert. No additional flooding has been observed.
 - A: ST noted that this work could have been associated with the Plaza Midwood Neighborhood Improvements Project (Phase 1A).
- 2208 Winter Street:
 - Q: Resident reported that there is an exposed skewed sanitary sewer crossing at the stream on their property. Debris is frequently trapped in this area, and stream bank erosion occurs at the crossing.
 - A: ST explained that bank stabilization could be included with stream channel improvements if they are proposed in this area. ST also recommended that the citizen report this concern by calling 311.