

**BOARD OF THE METROPOLITAN SEWERAGE DISTRICT**  
**October 17, 2018**

**1. Call to Order and Roll Call:**

The regular monthly meeting of the Metropolitan Sewerage District Board was held in the Boardroom of MSD's Administration building at 2:08 pm Wednesday, October 17, 2018. Chairman VeHaun presided with the following members present: Ashley, Bryson, Holland, Kelly, Manheimer, Pelly, Pressley, Watts, Whitesides and Wisler. Root was absent.

Others present were: Thomas E. Hartye, PE, General Manager; William Clarke, General Counsel; Forrest Westall with McGill Associates; Jon Lapsley with CDM Smith; Joseph Martin, with Woodfin Sanitary Water and Sewer District; Ed Bradford, Scott Powell, Pam Thomas, Jim Hemphill, Angel Banks, Ken Stines, Hunter Carson, Mike Stamey, Roger Edwards and Pam Nolan, MSD.

**2. Inquiry as to Conflict of Interest:**

Mr. VeHaun asked if there were any conflicts of interest with the agenda items. No conflicts were reported.

**3. Approval of Minutes of the September 19, 2018 Board Meeting:**

Mr. VeHaun asked if there were any changes to the Minutes of the September 19, 2018 Board Meeting. Mr. Pelly moved for approval of the minutes as presented. Mr. Watts seconded the motion. Voice vote in favor of the motion was unanimous.

**4. Discussion and Adjustment of Agenda:**

None.

**5. Informal Discussion and Public Comment:**

Mr. VeHaun welcomed Jon Lapsley with CDM Smith and Joe Martin with Woodfin Sanitary Water & Sewer District. There was no public comment.

**6. Report of General Manager:**

Mr. Hartye reported that attached is a letter of appreciation from the NCWaterWARN regarding the services of MSD's John Gosnell at the State Emergency Operations Center during Hurricane Florence. In addition, Ken Stines, as MSD's representative and a Regional Coordinator, has been very instrumental in keeping this emergency response organization strong and relevant.

Mr. Hartye reported that attached is a recap of the Town Branch sewer main failure spill response by MSD. MSD's emergency response and clean up went above and beyond what any other utility would have which is why the French Broad River was back to normal the next day. Thanks to Ken Stines, Mike Stamey, Jason Capizzi and RL Haynes who all lead the effort of more than 30 personnel working 12 plus hour days for several days, right through the weekend.

Mr. Hartye reported that attached is a list of accomplishments by department for the 2018 Fiscal year. He stated that he wanted to highlight just a few of many. The Engineering Division administered over \$28 million in projects with in-house personnel which amounts to about 129 projects over the 10-year CIP. They administered the construction phase of the Plant Headworks project which is anticipated to be complete by the end of this winter. They managed and completed the design of the High Rate Primary Treatment which is included in today's agenda. They designed, drafted and administered formal contracts for 19 capital projects and 45 in-house projects for System Services Construction. The Construction Administration group provided inspection services for 16 Collection System CIP projects, 10 Water Reclamation Facility projects and 73 Planning & Development related sewer extensions. One of the bigger inspection projects to note includes the South French Broad Interceptor lining project. In-House Construction rehabilitated 20,151 LF of main sewer line, handled all emergency responses, cleared 42,500 LF of sewer line right of way and utilized Trenchless Technologies for over 8,200 LF of mainline repairs. They also completed 508 emergency and scheduled construction repairs. The Finance Division received a credit upgrade from Moody's Investor Service from Aa1 to Aaa. They received the GFOA "Excellence in Financial Reporting" award for the Comprehensive Annual Financial Report and GFOA "Distinguished Budget" award for the FY 18 Budget Document. System Services cleaned over 200 miles (1,052,000 LF) of pipeline with in-house crews, CCTV'd over 295,000 LF of sewer lines and achieved a 31-minute average response time during working hours and nights and weekends. Human Resources continued with on-site Mission Hospital staff, treating chronic conditions using the Asheville Project; implemented the Arc Flash glove program and began the "Smith System" defensive driving program. The IT Division expanded Cityworks report library for multiple divisions, upgraded to the latest Navision accounting software and replaced all the cameras on campus.

Mr. Hartye reported that the MSD/United Way Golf Tournament will be held on October 25<sup>th</sup> at 9 am at the Black Mountain Golf Course. The October Right of Way Committee meeting has been cancelled. The next Right of Way Committee meeting will be held on November 28<sup>th</sup> at 9 am. The next regular Board Meeting will be held on November 21<sup>st</sup> at 2 pm.

**7. Consolidated Motion Agenda:**

**a. Consideration of Bids: Plant High Rate Primary Treatment Project:**

Mr. Hartye reported that right now MSD is in the midst of the Plant Headworks Project which consists of the new bar screens, fine screens, grit-removal and surge system. The Plant High Rate Primary Treatment Project will add a new chemically enhanced primary treatment facility to further remove BOD and solids. This project will help with future regulations and extend the life of the existing RBC's for another 5-10 years. The contract was advertised and four bids were received on September 13, 2018 as follows: Adams-Robinson Enterprises, Inc. in the amount of \$21,224,000.00, Wharton-Smith, Inc. in the amount of \$17,480,008.00, Judy Construction Co. in the amount of \$15,302,000.00 and Shook Construction Co. in the amount of \$15,071,000.00.

The apparent low bidder is Shook Construction Co. with a bid amount of \$15,071,000.00. Shook has not worked on previous District projects; therefore, Staff and CDM Smith checked references. The responses were positive regarding their performance and work. There were some difficulties that were worked out and owners stated that they would employ Shook again. The Construction Budget for this project is \$15,090,000.00 over three fiscal years. A Capital Project Ordinance for this project is included in this agenda item. This ordinance authorizes funding over multiple fiscal years in the amount of \$15,715,575.00. This amount includes the contract cost, the construction administration cost which will be discussed in the next item and other estimated expenditures as shown on the FY18-19 project budget. Staff recommends award of this contract to Shook Construction Co. in the amount of \$15,071,000.00, and the approval of the attached Capital Project Ordinance, subject to review and approval by District Counsel.

**b. Consideration of Construction Administration Contract: Plant High Rate Primary Treatment Project:**

Mr. Hartye reported that CDM Smith is the District's consulting engineer for this project. They were awarded the design contract at the August 17, 2016 regular board meeting and have performed well. MSD's construction staff are experienced and will perform most of the daily on-site inspection work; however, CDM Smith will still be needed to perform specialized tasks and services. Given their performance and experience with this project, CDM Smith is the most qualified consultant to perform the construction administration services. Staff has negotiated CDM Smith's original fee down to \$624,656.00 for these services over the estimated 22-month construction period. This fee equates to 4.1% of the construction contract and Staff believes this is a fair price. The construction administration budget for this project totals \$603,000.00 over three fiscal years. Expenditures will begin this fiscal year and end in FY20-21 upon project completion. The Capital Project Ordinance in the previous agenda item will authorize project expenditures over multiple years. Staff recommends award of the Construction Administration Contract to CDM Smith in the amount of \$624,656.00, subject to review and approval by District Counsel.

**c. Consideration of Bids: South French Broad Interceptor Lining Project, Phase III:**

Mr. Hartye reported that this project is located within the Biltmore Estate along the 36-inch interceptor. This major line serves southern portions of the District's service area including Cane Creek Water & Sewer District in northern Henderson County as well as Arden and other areas in the south. This project is comprised of lining the interceptor with Cured-in-Place-Pipe (CIPP), which will further extend the future service life of this existing line. The existing concrete line is in good structural condition but has suffered some degradation of the inner surface due to hydrogen sulfide. MSD will be designing and constructing another relief interceptor parallel to this line in the future and have been working with the Estate on that project. The sections to be lined under this contract total 5,111 LF. MSD Staff continue to work closely with Biltmore

Estate staff to schedule this work during the slower winter season. The contract was advertised and five bids were received on October 4, 2018 as follows: Am-Liner East, Inc. in the amount of \$1,471,108.00, Insituform Technologies, LLC in the amount of \$1,125,267.00, IPR Southeast, LLC in the amount of \$1,084,778.00, SAK Construction, LLC in the amount of \$1,055,648.00 and Granite Inliner, LLC in the amount of \$1,044,679.00. The apparent low bidder is Granite Inliner, LLC with a bid amount of \$1,044,679.00. Granite is one of the nation's largest CIPP contractors; however, they have not previously performed work for MSD. Staff therefore checked references, and all were positive, stating that they would work with Granite again. The FY18-19 Construction Budget for this project is \$1,071,000.00. Staff recommends award of this contract to Granite Inliner, LLC in the amount of \$1,044,679.00, subject to review and approval by District Counsel.

**d. Consideration of Developer Constructed Sewer Systems: Baldwin Road; New Homes @ North Main; Peregrine's Ridge; Swannanoa Valley Christian Ministry Apartments:**

Mr. Hartye reported that the Baldwin Road project consisted of extending approximately 1740 linear feet of 8-inch public gravity sewer to serve the 62 unit residential townhome development.

Mr. Hartye reported that the New Homes @ North Main project is located off North Main Street in the Town of Weaverville and included extending approximately 1,742 linear feet of 8-inch public gravity sewer to serve the 46 unit single family residential development.

Mr. Hartye reported that the Peregrine's Ridge Court project is located off Southcliff Parkway in Buncombe County and included extending approximately 632 linear feet of 8-inch public gravity sewer to serve the 14 unit single family residential development.

Mr. Hartye reported that the Swannanoa Valley Christian Ministry Apartments project is located off Montreat Road in the Town of Black Mountain. This project included extending approximately 194 linear feet of 8-inch public gravity sewer to serve the 10 unit affordable housing development. The estimated cost of this sewer construction is \$14,300.00. This project also qualifies for the District's Cost Recovery Reimbursement for the lesser of the construction cost or five years' estimated revenue. The estimated revenue for five years is \$12,307.00. Staff recommends acceptance of this system and to authorize the General Manager to disburse \$12,307.00 to Swannanoa Valley Christian Ministry Inc.

Staff recommends acceptance of the aforementioned developer constructed sewer systems. All MSD requirements have been met.

**e. Cash Commitment/Investment Report Month ended August, 2018:**

Mr. Powell reported that Page 58 presents the makeup of the District's Investment Portfolio. There has not been a significant change in the makeup of the portfolio from the prior month. Page 59 is the MSD's Investment Manager's report for the month of August. The weighted average maturity of the investment portfolio is 119 days. The yield to maturity is 2.04%. Page 60 presents the analysis of the District's Cash Receipts. Monthly and YTD Industrial and Facility and Tap fees are considered reasonable based on historical trends and timing of cash receipts. Page 61 presents the District's analysis of expenditures. Monthly and YTD expenditures are considered reasonable based on timing and historical trends. Page 62 presents the District's Variable Debt Service report. The 2008 A Series is performing at budgeted expectations. As of the end of September the issue has saved the District customers approximately \$5.6 million in debt service since April, 2008.

With no further discussion, Mr. VeHaun called for a motion to approve the Consolidated Motion Agenda. Mr. Kelly moved. Mr. Watts seconded the motion. Roll call vote was as follows: 11 ayes; 0 Nays.

**9. Old Business:**

At 2:28 pm, Mr. Watts moved the Board go into closed session to discuss a possible settlement in the condemnation of MSD vs. Russel Cate. Mr. Pelly seconded the motion. Voice vote in favor of the motion was unanimous. Mr. Bradford, Ms. Banks, Mr. Stamey and Ms. Nolan were also present for the discussion.

At 2:32 pm, the Board went back into open session.

Mr. Watts made the motion to accept Counsel's recommendation to settle the pending condemnation of MSD vs. Russel Cate in the amount of \$30,500.00. Ms. Wisler seconded the motion. Voice vote in favor of the motion was unanimous.

**10. New Business:**

None

**11. Adjournment:**

With no further business, Mr. VeHaun called for adjournment at 2:34 pm.

  
Jackie W. Bryson, Secretary/Treasurer

# MSD

## Regular Board Meeting

Metropolitan Sewerage District  
of Buncombe County, NC

### AGENDA FOR 10/17/18

✓	Agenda Item	Presenter	Time	
	Call to Order and Roll Call	VeHaun	2:00	
	01. Inquiry as to Conflict of Interest	VeHaun	2:10	
	02. <a href="#">Approval of Minutes of the September 19, 2018 Board Meeting</a>	VeHaun	2:15	
	04. Discussion and Adjustment of Agenda	VeHaun	2:20	
	05. Informal Discussion and Public Comment	VeHaun	2:25	
	06. <a href="#">Report of General Manager</a>	Hartye	2:30	
	07. Consolidated Motion Agenda	Hartye	2:40	
	a. Consideration of Bids: <a href="#">Plant High Rate Primary Treatment Project</a>	Hartye		
	b. Consideration of Construction Administration Contract: <a href="#">Plant High Rate Primary Treatment Project</a>			
	c. Consideration of Bids: <a href="#">South French Broad Interceptor Lining Project – Phase III</a>	Hartye		
	d. Consideration of Developer Constructed Sewer Systems: <a href="#">Baldwin Road; New Homes at North Main; Peregrine’s Ridge; Swannanoa Valley Christian Ministry Apartments</a>	Hartye		
	e. <a href="#">Cash Commitment Investment Report-Month ended August, 2018</a>	Powell		
	09. Old Business:	VeHaun	3:00	
	10. New Business:	VeHaun	3:05	
	11. Adjournment: (Next Meeting 11/21/18)	VeHaun	3:10	
	<a href="#">STATUS REPORTS</a>			

**BOARD OF THE METROPOLITAN SEWERAGE DISTRICT**  
**September 19, 2018**

**1. Call to Order and Roll Call:**

The regular monthly meeting of the Metropolitan Sewerage District Board was held in the Boardroom of MSD's Administration building at 2:00 pm Wednesday, July 18, 2018. Chairman VeHaun presided with the following members present: Bryson, Holland, Kelly, Manheimer, Pelly, Pressley, Root, Watts, Whitesides and Wisler. Ashley was absent.

Others present were: Thomas E. Hartye, PE, General Manager; William Clarke, General Counsel; Rachel McGraw Burgess with Woodfin Sanitary Water and Sewer District; Ed Bradford, Scott Powell, Hunter Carson, Angel Banks, Ken Stines, Peter Weed, Mike Stamey, Jim Hemphill and Pam Nolan, MSD.

**2. Inquiry as to Conflict of Interest:**

Mr. VeHaun asked if there were any conflicts of interest with the agenda items. No conflicts were reported.

**3. Approval of Minutes of the August 15, 2018 Board Meeting:**

Mr. VeHaun asked if there were any changes to the Minutes of the August 15, 2018 Board Meeting. Mr. Watts moved for approval of the minutes as presented. Mr. Pressley seconded the motion. Voice vote in favor of the motion was unanimous.

**4. Discussion and Adjustment of Agenda:**

None.

**5. Informal Discussion and Public Comment:**

Mr. VeHaun welcomed Rachel McGraw Burgess with Woodfin Sanitary Water & Sewer District. There was no public comment.

**6. Report of General Manager:**

Mr. Hartye reported that the attached budget recap is provided to the Board every year as an aid to answer questions of those you represent. Those questions are mostly financial, benefit or bill related and most of the details are in this recap.

Mr. Hartye reported that MSD received the Platinum 6 Peak Performance Award from NACWA for six years of consistent compliance at the Water Reclamation Facility. Thanks to all of the operations and maintenance personnel at the treatment plant.

Mr. Hartye reported that attached is an email, originally sent to the COA, from Jim Parker and Jane Ykoyana expressing their appreciation for Mickey Roberts assistance.

Mr. Hartye reported that attached is a transcript of a call from Barbara Storer of West Point Drive in Asheville expressing her appreciation for McKinley Hensley and crew, Carl Ellington, Josh Matthews, Brandon Flynn, Wayne Rice, Pete Cole and Robert Honeycutt.

Mr. Hartye reported that the September Right of Way Committee meeting was cancelled. The next Right of Way Committee meeting will be held on October 24<sup>th</sup> at 9 am. The next regular Board Meeting will be held on October 17<sup>th</sup> at 2 pm. The Employee Picnic will be held tomorrow behind the Maintenance Facility.

**7. Consolidated Motion Agenda:**

**a. Consideration of Bids: Four Inch Main–Dry Ridge Road Sanitary Sewer Rehabilitation Project:**

Mr. Hartye reported that this project is located in North Asheville, above Beaver Lake, and consists of replacing problematic four-inch Orangeburg line. When Orangeburg line is encountered in the MSD system, it is automatically placed on the CIP for replacement. It is comprised of 907 LF of 8-inch DIP. The contract was informally advertised and three bids were received on August 30, 2018 as follows: Thomas Construction Company in the amount of \$479,500.00, Terry Brothers Construction Company in the amount of \$317,264.50 and Buckeye Bridge, LLC in the amount of \$282,853.90.00. The apparent low bidder is Buckeye Bridge, LLC with a bid amount of \$282,853.90. Buckeye Bridge has completed numerous MSD sewer rehabilitation projects and their work quality has been excellent on those projects. The FY18-19 Construction Budget for this project is \$320,000.00. Staff recommends award of this contract to Buckeye Bridge, LLC in the amount of \$320,000.00, subject to review and approval by District Counsel.

**b. Consideration of Bids: Intermediate Clarifier Slide Gate Replacement:**

Mr. Hartye reported that this project is located at the plant and the slide gates are located within the clarifier which help isolate cells and perform maintenance. The existing slide gates are the original units, approximately 29 years old, and in need of replacement. The contract was informally advertised and two bids were received on August 30, 2018 as follows: JS Haren Company in the amount of \$157,000.00 and NHM Constructors, LLC in the amount of \$154,300.00. The apparent low bidder is NHM Constructors, LLC with a bid amount of \$154,300.00. NHM has completed several projects at the treatment plant and they are currently working on the Headworks project. Their work quality and performance has been excellent on these projects. The FY18-19 Construction Budget for this project is \$243,000.00 which includes \$160,000.00 for the Slide Gates and \$74,000.00 for additional work which will be performed by plant staff. Staff recommends award of this contract to NHM Constructors, LLC in the amount of \$154,300.00, subject to review and approval by District Counsel.



**c. Consideration of Developer Constructed Sewer Systems: Hampton Inn; Greenwood Park; Lake Louise; Long Shoals Apartments; The Ramble, Block F; Skyland Exchange; The Terraces @ Reynolds Mountain Phase I:**

Mr. Hartye reported that the Hampton Inn project consisted of relocating approximately 287 linear feet of 8-inch public gravity sewer along with abandoning 265 linear feet to accommodate the commercial development.

Mr. Hartye reported that the Greenwood Park project included extending approximately 335 linear feet of 8-inch public gravity sewer to serve the 8 units of this phase of the single family residential development.

Mr. Hartye reported that the Lake Louise project is located off Lakeshore Drive in the Town of Weaverville and included extending approximately 335 linear feet of 8-inch public gravity sewer to serve the 14 unit residential development.

Mr. Hartye reported that the Long Shoals Apartments project is located off Long Shoals Road and included extending approximately 959 linear feet of 8-inch public gravity sewer to serve the 475 unit apartment complex.

Mr. Hartye reported that the Ramble, Block F Phase 1 project included extending approximately 3,838 linear feet of 8-inch public gravity sewer to serve the 24 unit residential development.

Mr. Hartye reported that the Skyland Exchange project is located off Long Shoals Road in the City of Asheville. This project included replacing 773 linear feet of 8-inch public gravity sewer, extending approximately 544 linear feet of 8-inch public gravity sewer and abandoning approximately 645 linear feet of public gravity sewer to serve the 292 unit apartment complex.

Mr. Hartye reported that the Terraces at Reynolds Mountain, Phase 1 is located in the Town of Woodfin and included extending approximately 293 linear feet of 8-inch public gravity sewer to serve the 16 townhomes for this phase of the residential development.

Staff recommends acceptance of the aforementioned developer constructed sewer systems. All MSD requirements have been met.

**d. Cash Commitment/Investment Report Month ended July, 2018:**

Mr. Powell reported that Page 39 presents the makeup of the District's Investment Portfolio. There has been an approximately \$6 million decrease from the previous months report due to the District making its July 1 debt service payment. Page 40 is the MSD's Investment Manager's report for the month of July. The weighted average maturity of the investment portfolio is 122 days. The yield to maturity is 2.03%. Page 41 presents the analysis of the District's Cash Receipts. Monthly domestic sewer revenue is considered reasonable based on historical trends. Monthly and YTD industrial sewer revenue as well as facility

and tap fees are considered reasonable based on historical trends. Page 42 presents the District's analysis of expenditures. Monthly and YTD expenditures are considered reasonable based upon historic trends. Page 43 presents the District's Variable Debt Service report. The 2008 A Series is performing better than budgeted expectations. As of the end of August the issue has saved the District customers approximately \$5.6 million in debt service since April, 2008.

With no further discussion, Mr. VeHaun called for a motion to approve the Consolidated Motion Agenda. Mr. Watts moved. Ms. Wisler seconded the motion. Roll call vote was as follows: 11 ayes; 0 Nays.

**9. Old Business:**

None

**10. New Business:**

None

**11. Adjournment:**

With no further business, Mr. VeHaun called for adjournment at 2:15 pm.

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Jackie W. Bryson, Secretary/Treasurer



## MEMORANDUM

TO: MSD Board  
FROM: Thomas E. Hartye, P.E., General Manager  
DATE: October 11, 2018  
SUBJECT: Report from the General Manager

- Kudos

Attached is a letter of appreciation from the NCWaterWARN regarding the services of MSD's John Gosnell at the State Emergency Operations Center during Hurricane Florence. In addition, Ken Stines as MSD's representative and a Regional Coordinator has been very instrumental keeping this emergency response organization strong and relevant.

- Town Branch Spill Response

Attached is recap of the Town Branch sewer main failure spill response by MSD. MSD's emergency response and cleanup went above and beyond what any other utility would have, which is why the French Broad River was back to normal by Saturday morning (the next day). Thanks to Ken Stines, Mike Stamey, Jason Capizzi and RL Haynes who lead the effort of more than 30 personnel working 12 + hour days right through the weekend.

- FY 2018 Accomplishments

Attached is a list of accomplishments by department for the 2018 Fiscal Year. I will go over some highlights at the meeting.

- Board/Committee Meetings/Events

The MSD/United Way Golf Tournament will be held on October 25<sup>th</sup> at 9am at the Black Mountain Golf Course. The October Right of Way Committee Meeting has been cancelled. The next Right of Way Committee meeting will be held at 9 am on November 28<sup>th</sup>. The next Regular Board Meeting will be held on November 21<sup>st</sup> at 2 pm.



*City of Raleigh*  
*North Carolina*

Kenneth Waldroup  
Assistant Public Utilities Director  
City of Raleigh Public Utilities  
Chair-NCWaterWARN  
PO Box 590  
Raleigh, NC 27602

September 20<sup>th</sup>, 2018

Tom Hartye  
General Manager  
Metropolitan Sewerage District of Buncombe County  
2028 Riverside Dr.  
Asheville, NC 28804

Dear Mr. Hartye,

On behalf of NCWaterWARN and water/wastewater utilities across the state, we want to extend our sincere gratitude for the services of John Gosnell at the State Emergency Operations Center.

John was truly invaluable, as he linked neighbors in need with aid providers and educated state and federal partners as a North Carolina drinking water professional. We could not have met the needs of our members without his calm and thoughtful participation. We are also indebted to Mr. Ken Stines, who has been a steady hand in our industry for so many years. NCWaterWARN would not exist without the tireless service of people like Ken and our other Regional Coordinators.

This was an unusual event, where our peers in the Asheville Region were best positioned to answer the call as others, closer to the coast, prepared for the worst. Because the event is not over, we encourage our sponsors to remain vigilant.

It is our hope that the Metropolitan Sewerage District of Buncombe County never finds itself in a situation where they need aid, but if so, you have our promise of support. Along with the City of Asheville, you have set the standard for professionalism, responsiveness and generosity. Again, our thanks and appreciation.

Sincerely,

A handwritten signature in black ink, appearing to read "Ken Waldroup". The signature is fluid and cursive, with the first name "Ken" and last name "Waldroup" clearly distinguishable.

Kenneth R. Waldroup, PE  
Assistant Public Utilities Director

CC:

John Gosnell

Ken Stines

Robert Massengill

## Recap of Town Branch Sewer Main Failure Spill Response by MSD

Town Branch (formerly Nasty Branch) runs diagonally (NE/SW) through the central portion of the City of Asheville. It is primarily a storm conveyance (much of which is culvert) with very little flow during dry weather and an immense amount of flow during rain events. Because of these large rain flow events the creek banks in the natural areas are very high and steep. MSD has a 21" Interceptor that parallels the stream that carries the sanitary sewerage for the same area. This is an old line originally built in the 1920's and unfortunately buildings have been built over and immediately adjacent to the line in some areas. Much erosion has occurred on the stream banks as storm intensities and development have increased which peel away the embankments that cover the sanitary main. Other agencies and owners attempt to slow the erosion by placing large chunks of concrete.

On Friday September 21<sup>st</sup> at approximately 1pm, MSD received an sewerage odor call and went to investigate. Immediately adjacent to the building at 7 McDowell St. the embankment had been eroded by the previous storm and a concrete slab had fallen on the 21" Interceptor which was leaking into the creek. MSD construction and maintenance crews worked into the night setting up emergency pumps and trying to isolate the leak. By 8 pm the leaking sewer was isolated and the sewage was being pumped around the affected area back into the sewer.

MSD notified the area health departments and the regional office of NC Division of Water Quality. The Buncombe County Health Department issued a stream advisory for the French Broad River from Amboy Rd. To the Madison County line.

In addition, a dam across Town Branch was also constructed by MSD crews Friday afternoon and evening just upstream of where the creek reaches the French Broad River. Another set of pumps were conveying the entire stream flow into the MSD sewer as well.

The leak was stopped and the creek was also isolated from the French Broad River.

The next morning (Saturday) both construction crews and maintenance crews began working the situation.

Construction crews began repairing sections of the 21" Interceptor while Maintenance crews CCTV'd the main to determine what further measures were needed to ensure the viability of the interceptor. Other maintenance crews began cleaning the creek by both flushing with potable water and sweeping the entire bottom of sewage solids and then using smaller pumps at various work locations to pump all the swept, now suspended solids into nearby manholes.

MSD staff also began collecting water samples from the French Broad River upstream and downstream of Town Branch creek, which were brought to a certified lab for biological testing. Unfortunately, biological tests take 48 hours to conduct and yield results, so it would be Monday before the test results were available.

MSD crews continued sweeping, washing and pumping the entire .9 miles of Town Branch creek for the next 4 days.

The Test results for previous Saturday morning were received on Monday which showed that the French Broad River was already at that time back to “normal” (background levels).

During a conference call with MSD, NC Division of Water Quality(NCDWQ), and Buncombe County Health Department the results were shared but the NCDWQ representative advised the Health Department to keep the advisory in place despite the test results out an abundance of caution. MSD suggested qualifying the advisory to Town Branch since the French Broad had been back to normal for the last 3 days. To no avail.

Another conference call was held Tuesday as well, after receiving the test results for Sunday, which yielded similar background levels in the French Broad River. MSD was just finishing up the cleaning of the Thompson Branch creek as well. The Buncombe Health Department decided to lift the advisory for the French Broad River.

It must be noted that MSD’s emergency response and cleanup went above and beyond what any other utility would have, which is why the French Broad River was back to normal by Saturday morning (the next day).

I would like to recognize and commend Ken Stines, Mike Stamey, Jason Capizzi and RL Haynes who lead the effort of more than 30 personnel working 12 + hour days right through the weekend.



# Metropolitan Sewerage District of Buncombe County

## Accomplishments for Fiscal Year 2018

### Engineering Division

- Administered a Capital Improvement Program budget of \$28.3 Million with in-house personnel.
- Managed 129 projects/line items within the capital program. These projects range from preliminary design, to active construction, to recently completed.
- Managed the planning process for adding new extensions to the collection system by new development.
- 49,918 Linear Feet (LF) of collection system lines were rehabilitated during FY18, using a combination of in-house forces and contracted work.
- Administered the construction phase of the \$12.0 million Plant Headworks project. Construction began in Spring 2017, and full completion is expected by Spring 2019.
- Managed and completed the design phase of the High Rate Primary Treatment. Construction is expected to begin in Winter 2019, with completion expected in Fall 2020.
- Completed the multi-year phased rehabilitation of the plant's Influent Pump Station. All three main influent pumps have now been replaced, including replacement/relocation of the adjustable frequency drives for the pumps.
- Acquired formal recorded easements across 64 properties. Negotiated settlement on one condemnation action, saving further expenses of trial.
- Designed, drafted, and administered formal contracts for 19 capital projects and designed 45 in-house projects for System Services Construction.
- Actively pursued project coordination with local municipalities. Ongoing coordination is accomplished by participation in various local committees and sharing project information with other utilities.
- Serve as MSD's representative on the City's Technical Review Committee (TRC).

### Construction Division

#### Construction Administration

- The Construction Administration group provided inspection services for sixteen (16) Collection System CIP projects; ten (10) Water Reclamation Facility related projects, and seventy three (73) Planning and Development related sewer extensions.
- Total CIP Rehabilitation footage inspected for the year was 28,165 LF.
- Inspected 28,830 LF of private development sewer for the year.
- Inspection projects of note include South French Broad Interceptor lining, Commerce Street sewer rehabilitation, Plant Headworks Improvement Projects, and several upgrade projects at MSD pump station sites.



### In-House Construction

- Rehabilitated 20,151 LF of main sewer line with in-house construction crews.
- Utilized Trenchless Technologies for over 8,200 LF of mainline rehabilitation and 885 LF of service line installation. Through these efforts approximately 5,600 LF of existing asphalt surfaces were maintained.
- Installed 351 sewer service taps during the year to serve new business and residential customers.
- Completed 323 manhole repairs.
- Cleared over 42,500 LF of sewer line Right-of-Way.
- Completed 508 emergency and scheduled construction repairs. This resulted in 14,413 LF of pipeline point repairs.
- Completed over 1,160 total work order requests during the year.
- Coordinated (3) joint venture projects with the other agencies to facilitate overall cost savings and/or other benefits for both agencies.
- Continued annual paving contract with the City of Asheville Street Department to expedite economical, efficient repairs and restoration to City streets affected by MSD construction and repair work.
- Performed a timely rehabilitation/relocation project for 414 LF of 8-inch mainline sewer main on Nebraska Street in West Asheville. This work was undertaken to avoid a potential emergency in an area where a new structure was recently constructed that damaged the existing sewer main.
- Performed emergency stream bank restoration and creek crossing repair projects at 4 locations during FY 17-18. These activities protected the environment and our sewer lines from harm.
- Special training activities for the year included a NC DOT Flagger Supervisor Class with 8 Construction employees being certified, 4 employees attended a NC School of Government Construction Contract Seminar, presented a paper at the NC AWWA WEA Spring Symposium on MSD'S in-house pipe bursting/reaming construction program, and 5 construction employees advanced with their North Carolina Wastewater Collections Grade 1-4 certifications.

### Finance Division

- The District received a credit upgrade from Moody's Investor Service from Aa1 to Aaa
- Received the GFOA "Excellence in Financial Reporting" award for the Comprehensive Annual Financial Report (CAFR) for FY ending June 30, 2017.
- Received the GFOA "Distinguished Budget" award for the Budget Document prepared for FY ending June 30, 2018.
- Assisted Human Resources in ongoing changes in the District's self-insurance plan to achieve ongoing financial sustainability.

## Planning and Development Statistics

	<u>FY16</u>	<u>FY17</u>	<u>FY18</u>
Sewer Service Applications Approved	1,377	1,631	1,443
Allocation, Facility and Tap Fees	\$6,357,554	\$7,009,590	\$5,395,984
Affordable Housing Rebates	\$31,200	\$3,660	\$5,490
Plans Reviewed	69	76	78
Permits Issued	43	46	37
Systems Transferred	26	44	34
Systems Transferred - Value	\$2,415,453	\$3,513,683	\$3,241,420
Systems Transferred - Linear Feet	43,616	32,945	39,888
TRC Projects	63	50	59
Minor Subdivision Plats Approved	210	200	214

## System Services Maintenance Division

- Cleaned over 200 miles (1,052,000 LF) of pipeline with in-house crews.
- CCTV'd over 56 miles (295,000 LF) of sanitary sewer lines.
- Mechanically rodded over 14 miles (72,000 LF) of pipeline for root removal.
- Achieved an average 31 minute response time during working hours, nights, and weekends.
- Performed over 20 miles (107,900 LF) of acoustic inspection on the Collection System.
- Smoke tested over 7 miles (35,500 LF) of Collection System. Continuing to decrease I & I along with assisting Engineering in flow monitoring studies.
- Inspected over 132 miles (700,000 LF) of High Priority/Creek Crossings.
- Continue public awareness education/FOG by handing out information packets to all customer service calls. Increase awareness of problem with disposable wipes through public education.
- Cleaned all lines in (10) ten basins throughout the District.
- Assisted Marshall and Mars Hill with mutual aid.
- Inspected all MSD installed backflow preventers.
- 13 MSD employees along with 7 outside attendees completed a two-day Qualified Work Zone Supervisor Course and passed the required test.
- John Gosnell and Mickey Roberts completed the Apprentice level of the Academy classes and were in the first graduating class.
- Upgraded Reems Creek pump station from Fairbanks-Morse to Flygt Concertor.
- Upgraded Weaverville #1 & 2 and Erwin Hills motor control cabinet and SCADA panels. Installed soft starts for the pumps.

- Installed one new pump and one newly rebuilt pump at Ridgefield #2.
- Switched Haywood Church and Salem Acres pump stations over from Hydromatic pumps to Keen Slicer Pumps.
- Performed Arc Flash study on all pump stations.
- Overhead crane system installed at pump shop.
- New backflow preventer and seal water system installed at Carrier Bridge.
- New heating system installed at Avery Creek pump station – Mitsubishi mini split heat pump.
- New Arc Flash panel for Lake Julian pump station.
- New Blue Star Gen sets for Weaverville #1 & 2 pump stations and Leicester Village. Gen sets included Generator and Transfer switches.
- Installed new Channel Monster Grinders with electric motors at Carrier Bridge.
- Installed Franklin Miller Dimminutor at Carrier Bridge.
- Load tested Lake Julian, Avery Creek, Erwin Hills, Ridgefield #1, and Clayton Road generators.
- Purchased new Channel Monster grinder for Weaverville #1.
- Purchased new 100 HP pumps at Weaverville #1.

## Human Resources

- Re-emphasized Sexual Harassment policy & procedure
- Coordinated “Lunch with the Boss” program
- Employees utilizing lower cost generic drugs at 86% rate
- Coordinated retirement and replacement activities for 7 people
- Identified, provided training & activities, and promoted employees as part of the Succession Plan
- Continued on-site Mission Hospital staff treating chronic conditions using the Asheville Project model
- Provided educational and financial trainings for employees (Social Security options, 401k/457, Medicare, etc.)
- Continued Employee Relations/ Wellness activities: Healthy Cooking with Comedy, Solar Eclipse event, continued publishing of monthly Wellness newsletter, provided on-site massage therapist, coordinated retirement events
- Work with Employee Advisory Committee & Wellness Committees to improve benefits programs

## Environmental Health & Safety

- Upgraded ISO program to 2015 standards
- Continuing to work with crews in developing practical techniques to improve trench & end wall safety; fall protection systems;
- Implemented Arc Flash glove program
- Began “Smith System” defensive driving program
- Implemented silica exposure control methods
- Extended gas monitoring program to WRF operations
- Continue to provide standard trainings: Blood Borne Pathogens, confined space, etc.
- Coordinated a variety of Safety Training programs: trenching, saw usage, rigging, PPE, gas monitor use, traffic flagger, confined space, lockout/ tag out

- Implemented new safety glasses program
- Coordinated blood drives on site

## Information Technology Division

- Expanded Cityworks report library for multiple divisions, increased SQL automation processes and numerous software customizations for MSD.
- Configured Cityworks platform for WRF Maintenance department including preventive maintenance.
- Upgraded to the latest Navision accounting software allowing for web access and electronic employee paystubs.
- MSD Fueling Station Replacement/Overhaul/Upgrade – new digital pumps and software enabled with employee/car fobs for fuel tracking.
- Camera System Replacement/Overhaul/Upgrade to include new NVR, improved cameras, and more locations across MSD campus.
- Increased wired and wireless network coverage through MSD buildings, which included the replacement of many older network switches.
- Produced a GIS layer capturing changes in parcel ownership and boundaries for assistance in tracking right-of-way transfers
- Production of basin address maps to help notify property owners when MSD is performing work in the area.
- Facilitated assignment of e911 addresses to multiple pump stations and MSD structures.
- Improvements to grease trap layer to allow inclusion into Cityworks system.
- Plant facility structure and asset mapping for inclusion into Cityworks system.
- Expanded mobile application support to include SL-RAT and high-accuracy GPS mapping.
- Ability to access record drawings over mobile devices.
- Production of oil and grease trap businesses feature layers. These layers depict the location of businesses likely to use motor oil and have active grease traps.
- Addition of Environmental Protection Agency and North Carolina Department of the Environment and Natural Resources contamination layers to GIS mapping system – used to alert MSD crews of potential for hazardous chemical exposure.
- Conversion from GraniteXP CCTV inspection software to Granite.NET CCTV inspection software.
- Production of a brewery flow map – used to estimate arrival times and paths of large flows of industrial sewage specific to brewing.
- Introduction of a COGO (coordinate geometry) plat verification tool to internal website.
- Unmapped lines layer – collection of billed addresses with no visible infrastructure in the vicinity. This layer was used as part of our map accuracy improvement process to find unmapped infrastructure.

# Metropolitan Sewerage District of Buncombe County

## BOARD ACTION ITEM

**BOARD MEETING DATE:** October 17, 2018

**SUBMITTED BY:** Tom Hartye, P.E. - General Manager

**REVIEWED BY:** Billy Clarke, Esq. - District Counsel

**PREPARED BY:** Scott Powell, CLGFO - Director of Finance  
Ed Bradford, P.E. - Director of Engineering  
Hunter Carson, P.E. - Project Manager

**SUBJECT:** Consideration of Bids: Plant High Rate Primary Treatment Project, MSD Project No. 2015054

**BACKGROUND:** The Plant High Rate Primary Treatment Project is the mid-term recommendation of the Plant Facility Plan. The plant does not currently have any primary treatment after the initial screening and grit removal processes.

This project will add a new chemically enhanced primary treatment facility, immediately after the headworks process and before the Rotating Biological Contactors (RBC's). This type of process is required due to the restrictive site conditions at the plant.

Construction of the first project, Plant Headworks, is well underway with full completion expected by Spring 2019. It consists of new bar screens, fine screens, a vortex grit-removal system, and a surge system for handling high flows during storm events. Construction of this project is expected to take 22 months, with completion in late 2020.

These two new projects will significantly improve the treatment process within the plant, and will prepare the plant for future regulations. Further, it is expected that the improved treatment will help the RBC's to perform better and will help to extend their useful life.

The contract was advertised and four bids were received on September 13, 2018 in the following amounts:

<u>Contractor</u>	<u>Bid Amount</u>
1) Adams-Robinson Enterprises, Inc.	\$21,224,000.00
2) Wharton-Smith, Inc.	\$17,480,008.00
3) Judy Construction Co.	\$15,302,000.00
<b>4) Shook Construction Co.</b>	<b>\$15,071,000.00</b>

The apparent low bidder is Shook Construction Co. with a bid amount of \$15,071,000.00. Shook has not worked on previous District projects; therefore, staff and CDM Smith (the consulting engineer for the project) checked references.

The responses were positive with regard to Shook's performance and work quality. There were some difficulties, however, with project management. These management issues were corrected by Shook, and the projects were completed to the satisfaction of the owners. Owners stated that they would employ Shook again.

A Capital Project Ordinance for this project is included in this agenda item. This is needed due to the significant expenditures for this project, which will span multiple fiscal years.

Please refer to the attached documentation for further details.

**METROPOLITAN SEWERAGE DISTRICT OF  
BUNCOMBE COUNTY, NORTH CAROLINA**

**PLANT HIGH RATE PRIMARY TREATMENT IMPROVEMENTS  
PROJECT NO. 2015054**

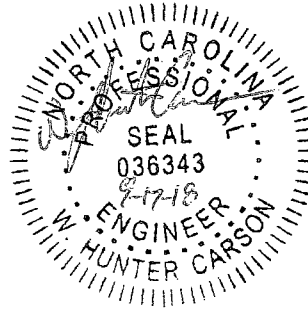
**BID TABULATION  
September 13, 2018**

BIDDER	BID BOND	BID FORMS	TOTAL BID AMOUNT
Adams Robinson Enterprises, Inc. Dayton, OH	5%	Yes	\$21,224,000.00
Wharton-Smith, Inc. Sanford, FL	5%	Yes	\$17,480,008.00
Judy Construction Company Cynthiana, KY	5%	Yes	\$15,302,000.00
<b>Shook Constructon Company Apex, NC</b>	<b>5%</b>	<b>Yes</b>	<b>\$15,071,000.00</b>

**APPARENT LOW BIDDER**



W. Hunter Carson, P.E.  
Project Manager  
Metropolitan Sewerage District of  
Buncombe County, North Carolina



This is to certify that the bids tabulated herein were publicly opened and read aloud at 2:00 p.m. on the 13th day of September, 2018, in the W.H. Mull Building at the Metropolitan Sewerage District of Buncombe County, Asheville, North Carolina, and that said bids were accompanied by acceptable bidders bonds in the amount of 5% of the bid.

## **PLANT HIGH RATE PRIMARY TREATMENT CAPITAL PROJECT ORDINANCE**

**BE IT ORDAINED** by the Board of the Metropolitan Sewerage District of Buncombe County, North Carolina, that pursuant to Section 13.2 of Chapter 159 of the General Statutes of North Carolina, the following Plant High Rate Primary Treatment Capital Project Ordinance is hereby adopted:

Section 1. The project authorized is the construction of plant high rate primary treatment process to be financed in whole or in part by appropriated net position.

Section 2. The following amounts are appropriated for the project:

**Capital Expenditures** \$ 15,715,575

Section 3. The following revenues are anticipated to be available to provide for these expenditures:

**Transfer from General Fund** \$ 15,715,575

Section 4. The Finance Officer is hereby directed to maintain within the Construction Fund sufficient specified detailed accounting records to satisfy all financial reporting requirements.

Section 5. Funds may be advanced from the Operations and Maintenance fund if necessary for the purpose of making payments as due.

Section 6. The Finance Officer is directed to include a detailed analysis of past and future costs and revenues on this capital project in every budget submission made to this Board.

Section 7. Copies of this Plant High Rate Primary Treatment Project Ordinance shall be furnished to the Secretary of the Governing Board, and to the Finance Officer for direction carrying out this project.

**ADOPTED** this Seventeenth day of October, 2018.

**ATTEST: BOARD OF THE METROPOLITAN SEWERAGE DISTRICT OF BUNCOMBE  
COUNTY, NORTH CAROLINA**

\_\_\_\_\_  
M. Jerry VeHaun, Chairman

\_\_\_\_\_  
Jackie W. Bryson Secretary/Treasurer

**APPROVED AS TO FORM:**

\_\_\_\_\_  
William Clarke, Legal Counsel  
Metropolitan Sewerage District  
of Buncombe County, NC



**FISCAL IMPACT:** The construction budget for this project totals \$15,090,000.00 over three fiscal years. Expenditures will begin this fiscal year, and end in FY20-21 upon project completion.

The Capital Project Ordinance will authorize funding over multiple fiscal years. The amount of \$15,715,575 includes the contract cost, the construction administration cost, and other estimated expenditures as shown on the FY18-19 project budget.

**STAFF RECOMMENDATION:** Staff recommends award of this contract to Shook Construction Co. in the amount of \$15,071,000.00 and the approval of the attached Capital Project Ordinance, subject to review and approval by District Counsel.



4600 Park Road, Suite 240  
Charlotte, North Carolina 28211  
tel: 704 342-4546

October 2, 2018

Mr. W. Hunter Carson, P.E.  
Project Manager  
Metropolitan Sewerage District of Buncombe County  
2028 Riverside Drive  
Asheville, North Carolina 28804

Subject: Metropolitan Sewerage District (MSD) of Buncombe County  
High Rate Primary Treatment Improvements Project (MSD Project No. 2015054)  
Recommendation of Award

Dear Hunter:

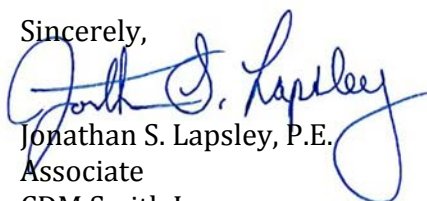
CDM Smith has completed our review of the bids received on September 13, 2018 for the High Rate Primary Treatment Improvements Project. MSD has completed the certified bid tabulation which CDM Smith has reviewed. No mathematical errors were identified in the review of the bids. CDM Smith reviewed the bid submission from Shook Construction Company, Inc. as the apparent low bidder and found it to be in compliance with the bid requirements including licensure, qualifications/references and bid security.

CDM Smith and MSD made several reference calls to other municipal utility owners and consulting engineers in North Carolina, Ohio, and Kentucky regarding Shook's performance as the contractor on similar sized construction projects. In general, the responses were positive with respect to Shook's performance. Several instances of difficulties with project management were identified from the references, however these issues were corrected by Shook and the projects completed satisfactorily for the owner.

In that Shook Construction Company, Inc. submitted the lowest total bid and is considered a responsible bidder, we recommend award to Shook Construction Company, Inc. in the amount of \$15,071,000.00 pending contract procurement compliance review by MSD staff.

Thank you for the opportunity to serve MSD and your customers. We look forward to working with you and Shook Construction Company, Inc. during the construction phase of this important project.

Sincerely,



Jonathan S. Lapsley, P.E.  
Associate  
CDM Smith Inc.

cc: Project File



# **Plant High Rate Primary Treatment**

## **MSD Project No. 2015054**

### **Reference Check for Shook Construction**

**October 2018**

#### **City of Gastonia, NC**

##### **Two Rivers Water Treatment Facility (2018) - \$15.9M**

Ed Cross (Water Treatment Division Manager) stated that the Two Rivers WTF Upgrade was a Construction Manager at Risk (CMR) delivery method and Shook Construction was one of many sub-contractors on the job. Shook was the "Primary Equipment Provider", responsible for \$15.9M of the \$65M facility upgrade. Shook provided and installed low-pressure submersible membranes, pumps, stainless steel piping, valving, tankage, etc. Mr. Cross said that Shook's portion of the project was very complicated and required close tolerances. Shook completed their tasks "seamlessly" and Mr. Cross was very pleased with their quality of work. There were no major change orders and Shook performed their tasks on schedule. Wayne Harper was the superintendent on the project (*the same superintendent being proposed for MSD's HRPT project*). This was the first project that Shook performed for the City of Gastonia and Mr. Cross would recommend them for future work.

#### **City of Roxboro, NC**

##### **Roxboro Water Treatment Plant Improvements (2014) - \$3.2M**

Tommy Warren (Assistant City Manager) stated that Shook constructed a 4mgd MIEX (organic carbon removal) system consisting of concrete tankage, metal building, and equipment. Mr. Warren was pleased with the quality of work, but said that early on in the project, they had issues arise due to poor management on Shook's part. He mentioned that change order pricing was "too high" and "more than they [Shook] were entitled to". Shook replaced the project manager and the project was completed successfully without further problems. Riley Tolen was the PM and Wayne Harper was the superintendent and both "did a great job" according to Mr. Warren. He would have "no problem hiring them back".

#### **Craven County, NC**

##### **Craven County Potable Water Supply & Treatment Facilities (2017) - \$24.8M**

This project was separated into three "Divisions", and McKim & Creed designed all three. Division 1 consisted of a new WTP, while Divisions 2 and 3 were raw water supply wells and offsite piping, respectively. Jason Savage (PM for McKim & Creed, Inc.) participated heavily in administering construction of all three Divisions and stated that they did experience some problems during construction. Due to unknown conditions pertaining to raw water quality, well installation was delayed approximately 6 months and there was a great deal of "finger pointing" between Shook and their sub-contractors. Mr. Savage felt there was a lack of coordination on Shook's part and that the "subcontractors could have been better-managed". Midway through construction, Shook's PM was promoted and was replaced with a newly-hired PM. The project went south due to very poor project management. The initial PM had to be reinstated, along with a second PM from Shook's Ohio office. From that point forward, the

project was successful and was driven to completion. Mr. Savage stated that all work self-performed by Shook (concrete, piping, equipment installation, etc) was of excellent quality. He went on to say that Wayne Harper performed well as the superintendent and "really knows his stuff. He's been in the business a long time and has a lot of experience." While the project was not completed on schedule, Mr. Savage said that it was completed under budget.

**Metropolitan Sewerage District of Buncombe County, North Carolina**  
**CAPITAL IMPROVEMENT PROGRAM**

**BUDGET DATA SHEET - FY 2018 - 2019**

<b>PROJECT:</b>	<b>Plant High Rate Primary Treatment</b>	<b>LOCATION:</b>	<b>MSD-Treatment Plant</b>
<b>TYPE:</b>	<b>Treatment Plant</b>	<b>PIPE RATING:</b>	<b>N/A</b>
<b>PROJECT NO.</b>	<b>2015054</b>	<b>TOTAL LF:</b>	<b>0</b>
<b>PROJECT BUDGET:</b>	<b>\$16,950,595.00</b>	<b>PROJECT ORIGIN:</b>	<b>Facilities Plan Update - HDR</b>

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/17	EST. COST JAN - JUNE 2018	EST. BUDGET FY 18-19
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN	\$3,000.00	\$3,000.00		
55330 - DESIGN	\$1,224,171.00	\$704,829.00	\$467,342.00	\$52,000.00
55340 - PERMITS				
55350 - SPECIAL STUDIES	\$7,219.00	\$7,219.00		
55360 - EASEMENT PLATS				
55370 - LEGAL FEES	\$630.00	\$630.00		
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION				
55400 - APPRAISAL				
55410 - CONDEMNATION				
55420 - CONSTRUCTION	\$15,090,000.00			\$3,320,000.00
55430 - CONST. CONTRACT ADM.	\$603,000.00			\$133,000.00
55440 - TESTING	\$22,575.00	\$2,575.00		\$4,500.00
55450 - SURVEY - ASBUILT				
<b>TOTAL AMOUNT</b>	<b>\$16,950,595.00</b>	<b>\$718,253.00</b>	<b>\$467,342.00</b>	<b>\$3,509,500.00</b>

<b>ENGINEER:</b>	CDM	HC	<b>ESTIMATED BUDGETS - FY 20 - 28</b>	
<b>R.O.W. ACQUISITION:</b>	N/A	# PLATS: [ 0 ]	FY 19-20	\$10,527,000.00
<b>CONTRACTOR:</b>			FY 20-21	\$1,728,500.00
<b>CONSTRUCTION ADM.:</b>	TBD		FY 21-22	\$0.00
<b>INSPECTION:</b>	TBD		FY 22-23	\$0.00
			FY 23-24	\$0.00
			FY 24-25	\$0.00
			FY 25-26	\$0.00
			FY 26-27	\$0.00
			FY 27-28	\$0.00

**PROJECT DESCRIPTION:** This project is a recommendation from the Facilities Plan Update, a WRF master planning document completed by HDR in April 2015. High rate primary treatment will improve water quality ahead of the RBC's thereby extending their useful life and improving treatment efficiency.

**SPECIAL PROJECT NOTES:**



RIVERSIDE DR



**Plant High Rate Primary Treatment  
Project No. 2015054**

NOT TO SCALE



**METROPOLITAN SEWERAGE DISTRICT**  
of  
BUNCOMBE COUNTY, NORTH CAROLINA

**Budget Map**

# Metropolitan Sewerage District of Buncombe County

## BOARD ACTION ITEM

**BOARD MEETING DATE:** October 17, 2018

**SUBMITTED BY:** Tom Hartye, P.E. - General Manager

**PREPARED BY:** Ed Bradford, P.E. - Director of Engineering  
Hunter Carson, P.E. - Project Manager

**SUBJECT:** Consideration of Construction Administration Contract: Plant High Rate Primary Treatment Project, MSD Project No. 2015054

**BACKGROUND:** CDM Smith is the District's consulting engineer for the Plant High Rate Primary Treatment Project. They were awarded the design contract at the August 17, 2016 regular board meeting, and have performed well.

The project is now ready for the construction phase. District construction staff are experienced and will perform most of the daily on-site inspection work; however, CDM Smith will still be needed to perform specialized tasks and services. These include review/approval of all construction submittals; attendance at monthly progress meetings; periodic site inspections; technical assistance with all RFIs, Change Orders, and WCDs; and producing complete record drawings after project completion.

Given their performance and experience with this project, CDM Smith is the most qualified consultant to perform the construction administration services. Staff has negotiated CDM Smith's original fee to \$624,656.00 for these services over the estimated 22-month construction period. This fee equates to 4.1% of the construction contract. Staff believes this is a fair price.

Please refer to the attached documentation for further details.

**FISCAL IMPACT:** The construction administration budget for this project totals \$603,000.00 over three fiscal years. Expenditures will begin this fiscal year, and end in FY20-21 upon project completion.

The Capital Project Ordinance in the previous agenda item will authorize project expenditures over multiple fiscal years. The Construction Administration budget will be adjusted for the overage during the FY19-20 budget cycle.

**STAFF RECOMMENDATION:** Staff recommends award of the Construction Administration Contract to CDM Smith in the amount of \$624,656.00, subject to review and approval by District Counsel.

## Interoffice Memorandum

**TO:** Tom Hartye, General Manager

**FROM:** Ed Bradford, Director of Engineering  
Hunter Carson, Assistant Director of Engineering

**DATE:** October 5, 2018

**RE:** Plant High Rate Primary Treatment Project – CDM Smith Construction Administration Services Contract, MSD Project No. 2015054

Having bid the Plant High Rate Primary Treatment project on September 13, 2018, CDM Smith has completed all tasks associated with the engineering design services contract awarded to them in August 2016. As the Plant High Rate Primary Treatment project moves towards the construction phase, MSD staff requested that CDM Smith provide a scope and fee for Construction Administration services. Services include attendance at monthly progress meetings, periodic site inspection (MSD Staff will perform full-time inspection), submittal review, technical assistance with RFIs, Change Orders, and WCDs, assistance with equipment startup and optimization, and development of record drawings. Given CDM's design history and experience with this project, as well as their detailed knowledge of the French Broad River WRF, CDM Smith is the most qualified consultant to perform Construction Administration tasks for this project.

CDM Smith submitted a lump sum fee of \$624,656.00 for CA Services over the estimated 22 month construction period. This fee equates to 4.1% of the construction contract which MSD Staff believes is a fair price. A breakdown of this fee, as well as full description of tasks included can be reviewed in the attached Construction Phase Services Scope.

The total project budget for CA Services is \$603,000.00, with \$133,000.00 allotted for Fiscal Year 2018-19 and the remainder in Fiscal Years 2019-20 and 2020-21.

Staff recommends that this contract be awarded to CDM Smith in the amount of \$624,656.00, subject to MSD Counsel's review and approval.



EXHIBIT A  
TO AGREEMENT BETWEEN OWNER AND ENGINEER  
For  
CONSTRUCTION PHASE SERVICES  
SCOPE, ASSUMPTIONS, SCHEDULE, AND PAYMENT AND COMPENSATION

This is an exhibit attached to and made a part of the Agreement dated, \_\_\_\_\_ 2018, between Metropolitan Sewerage District (MSD) of Buncombe County (OWNER) and CDM Smith Inc. (ENGINEER) for professional services. ENGINEER will provide construction administration, periodic inspections, startup assistance, and training services during the construction phase of the **High Rate Primary Treatment Project (Project)**.

**PROJECT DESCRIPTION AND OBJECTIVES**

The OWNER owns and operates a 40 mgd water reclamation facility located along the French Broad River. Major processes at the plant include: Screening, Grit and Grease Removal, Biological Treatment via seven-stage Rotating Biological Contactors (RBC), Intermediate Clarification, Cloth Media Filtration, Disinfection, Gravity Thickening, Belt Filter Press Dewatering, and Sewage Sludge Incineration (SSI).

The OWNER completed a Facilities Plan in April 2015 which included recommendations for a new high rate primary clarification system (HRC) to be implemented downstream of a new fine screening and grit removal facility (currently under construction by others). This Project consists of a new HRC system which will remove influent organic load (e.g. BOD<sub>5</sub> and Total Suspended Solids (TSS) to reduce the applied loading to the existing RBC system to improve treatability and enhance the ability for nitrification. The proposed HRC system will consist of two (2) 42-mgd trains for a combined total capacity of 84-mgd with a future hydraulic capacity of 100 mgd and generally includes coagulation tanks, flocculation tanks and clarifier for each train along with appropriate ballast recovery systems, and polymer, microsand and coagulant storage and feed systems. The proposed location of the HRC system will be in the same general location as the existing Primary Microscreen building which will be demolished to make space for the HRC facility. The project also includes the replacement of two (2) dewatered cake feed pumps for the fluidized bed incinerator. The ENGINEER completed the preliminary design, final design, permitting, and bidding of this Project under a previous Agreement.

**SCOPE OF WORK**

Basic Services to be provided by the ENGINEER under this Agreement for construction phase services shall be limited to the following:

- Task 600 – Construction Contract Administration
- Task 700 – Operations and Maintenance Startup Assistance

The detailed scope of services for the basic services included under this Agreement for Tasks 600 through 700 follows:

### **Task 600 Construction Contract Administration**

The ENGINEER shall provide Contract Construction Administration services for the construction PROJECT over an estimated 22-month construction period beginning from the construction contract Notice-to-Proceed (NTP) date and ending at Final Construction Completion or Acceptance. Resident Project Representative (RPR) Services will be provided by the OWNER. Third-party special inspection services to meet building code requirements, including materials testing services, will be provided by the OWNER. This Agreement would need to be amended to provide additional compensation should the construction period last longer than 22-months.

For the purposes of Task 600, "Work" means the entire completed construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction, and furnishing, installing, and incorporating all materials and equipment into such construction, all as required by the Contract Documents.

- 601 ENGINEER shall consult with and advise OWNER as set forth herein. Instructions to the Contractor(s) shall be issued through OWNER. ENGINEER shall attend monthly progress meetings. The progress meeting will be run by the ENGINEER who will prepare the agendas and minutes of the monthly construction progress meetings including the development of the agenda and meeting minutes. A total of 20 monthly progress meetings to Final Completion (FC) are budgeted as well as one (1) preconstruction meeting.
- 602 ENGINEER shall make visits to the site at intervals appropriate to the stage of construction, or otherwise agreed to by ENGINEER in writing, to observe as an experienced and qualified design professional the progress and quality of the Work and to determine if the Work is proceeding in accordance with the Contract Documents. ENGINEER's observation of the Work shall not be intended to involve work beyond the responsibility specifically assigned to ENGINEER in this Agreement and the Contract Documents. On the basis of periodic site observations, ENGINEER shall keep the OWNER informed of the progress and quality of the Work and shall alert the OWNER to defects and deficiencies in the Work of the Contractor. ENGINEER shall not have control or charge of and shall not be responsible for construction means, methods, techniques, sequences, or procedures of construction selected by Contractor or for safety and environmental programs and precautions incidental to the Work. ENGINEER shall not be responsible for the failure of the Contractor, its Subcontractors, or any other persons performing any of the Work to comply with laws, rules, regulations, ordinances, code, or orders, or for failure of any of them to carry out the Work in accordance with the Contract Documents except as otherwise expressly provided herein.

The purpose of ENGINEER's visits to the site will be to enable ENGINEER to better carry out the duties and responsibilities assigned to and undertaken by ENGINEER during the Construction Phase, and, in addition, by the exercise of ENGINEER's efforts as an experienced and qualified design professional, to provide for OWNER a greater degree of confidence that the completed work of Contractor will conform to the Contract Documents, and that the integrity of the design concept of the completed PROJECT as a functioning

whole as indicated in the Contract Documents has been implemented and preserved by Contractor.

During such visits and on the basis of such observations, ENGINEER shall have authority to disapprove of or reject Contractor's work while it is in progress, if ENGINEER believes that such work will not produce a completed Project that conforms generally to the Contract Documents or that it will prejudice the integrity of the design concept of the completed Project as a functioning whole as indicated in the Contract Documents.

The ENGINEER will oversee the factory testing of the instrumentation and control system components at the integrators facility in Charlotte, NC to verify performance of the equipment and controls system prior to shipment to the site. The ENGINEER will also participate in coordination meetings with Kruger for the ActiFlo control system programming and development (1 meeting assumed in person at the Kruger facility in Cary, NC) and with Schwing for the dewatered cake pump control system programming and development (1 meeting assumed via conference call).

The ENGINEER has assumed a total of 28 site visits during the 22-month construction period to be performed by various discipline engineers (electrical, structural, automation, and HVAC/Plumbing) along with general site visits by the construction administration team for the purposes of observing the construction work for compliance with the Contract Documents. The following visits are assumed

- 3 Electrical Engineer Site Visits (2 during construction and 1 for final punchlist inspection)
- 2 Architectural Visits (1 during construction and 1 for final punchlist inspection)
- 2 HVAC/Plumbing Visits (1 during construction and 1 for final punchlist inspection)
- 9 Structural Visits (8 during the construction and 1 for final punchlist inspection)
- 2 Instrumentation/Automation Visits (1 during construction and 1 at startup for functional demonstration testing)
- 10 Visits from the Construction Coordinator during construction at separate times from the monthly progress meetings

603 ENGINEER shall review and approve or take other appropriate action with respect to Shop Drawings, samples, Requests for Information (RFI) and other data which Contractor is required to submit, but only for conformance with the design concept of the completed project as a functioning whole as indicated in the Contract Documents and in compliance with the information given in the Contract Documents. Such reviews or other action shall not include means, methods, techniques, sequences, or procedures of construction or safety programs and precautions incident thereto.

ENGINEER will review the vendor and manufacturers' service manuals. The review will assure that proper operations, preventive maintenance, repair procedures and applicable service information are provided for all specified equipment. The submitted manuals will be compared to the specification section "Operations and Maintenance Data" to ensure that the submittals are sufficient in content, and quantity to enable staff training and consultation after startup.

- 604 ENGINEER shall issue necessary clarifications and interpretations of the Contract Documents, as appropriate to the orderly completion of the work. Such clarifications and interpretations will be consistent with the intent of and reasonably inferable from the Contract Documents. ENGINEER may issue Field Orders authorizing minor variations from the requirements of the Contract Documents.
- 605 ENGINEER shall review and recommend Change Orders and Work Change Directives to OWNER as appropriate to be prepared and issued by the OWNER.
- 606 ENGINEER shall render the initial decisions on all claims of OWNER and Contractor relating to the acceptability of the work or the interpretation of the requirements of the technical and design related portions of the Contract Documents pertaining to the execution and progress of the work. In rendering such decisions, ENGINEER shall be fair and not show partiality to OWNER or Contractor and shall not be liable in connection with any decision rendered in good faith in such capacity. OWNER shall be responsible for interpretation of the requirements of Divisions 00 and 01 of the Contract Documents.
- 607 ENGINEER shall evaluate and determine the acceptability of substitute or or-equal materials and equipment proposed by Contractor. However, services in revising Drawings and Specifications occasioned by the acceptance of substitute materials or equipment other than or-equal items and services after the award of the Construction Contract in evaluating and determining the acceptability of a substitute which is appropriate for the Project or an excessive number of substitutes will only be performed pursuant to an amendment to this Agreement for additional compensation.
- 608 ENGINEER shall make recommendations to OWNER regarding the advisability of requiring special inspections or testing of the Work and have authority to receive and review all certificates of inspections, testing, and approvals required by laws, rules, regulations, ordinances, codes, orders, or the Contract Documents to determine generally that their content complies with the requirements of, and the results certified indicate compliance with, the Contract Documents. The special inspections company will be hired by the OWNER.
- 609 Following notice from Contractor that Contractor considers the entire work ready for its intended use, ENGINEER and OWNER, accompanied by Contractor, shall conduct an inspection to determine if the work is substantially complete. If, after considering any objections of OWNER, ENGINEER considers the work substantially complete ENGINEER shall deliver a certificate of Substantial Completion to OWNER and Contractor.
- 610 ENGINEER shall conduct a final inspection to determine if the completed work of Contractor is acceptable so that ENGINEER may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, ENGINEER shall indicate that the work is acceptable to the best of ENGINEER's knowledge, information, and belief and based on the extent of the services performed and furnished by ENGINEER under this Agreement.
- 611 ENGINEER shall prepare a set of reproducible record prints of Record Drawings showing those changes made during the construction process based on the marked-up prints, shop drawings, drawings, and other data furnished by the Contractor to ENGINEER. The record prints shall also incorporate the OWNER's Representative's observation of changes made during construction. These record drawings shall be prepared on reproducible hard copies

and on disk (in the latest version of AutoCAD or such version as the parties agree) for delivery to the OWNER.

- 612 ENGINEER shall prepare a conformed set of Contract Documents for use during the construction phase of the project. These documents will include revisions to the bid documents defined by addenda during the bidding phase and will include the project specifications manual with fully executed copies of agreements for the project.
- 613 ENGINEER shall perform project management duties under this task to include internal project management functions, invoicing, progress reporting on work completed and tracking of ENGINEER's scope, schedule and budget.

### **Task 700 Operations and Maintenance Startup Assistance**

- 701 ENGINEER will provide operational services shall include start-up assistance, operational assistance, and performance test oversight for the new facilities. During the construction phase, ENGINEER will provide an O&M Specialist to assist with the equipment and process check-out, demonstration testing, and process control system testing and demonstration. It is assumed the OWNER will oversee training provided by vendors and will oversee the loop/point to point check out of the instrumentation and controls system with the integrator. The various vendors for the equipment will provide training, troubleshooting and lead the startup activities at the site.

ENGINEER will review the contractor's start-up plan that will include a schedule for process start-up, commissioning activities, performance testing, and initial system operations. The start-up plan will provide a sequenced schedule of start-up events, a process schematic, a list of equipment necessary for start-up, sample operating log sheets and checklists for the process start-up phase. During start-up, ENGINEER will provide on-site assistance of an O&M specialist who will assist operating staff through the facility commissioning phase. O&M Specialist will provide the following during this task:

- On-site assistance for an assumed 8 working days during startup, performance testing and optimization of the system (1 person).
- The Construction Coordinator will participate in 4 working days of startup activities in coordination with the Contractor and O&M specialist.
- Assist plant staff in preparation of equipment systems for initial operation
- Recommend process control adjustments
- Monitor and recommend process optimization adjustments
- Prepare sample process equipment status log sheets
- Provide informal hands-on guidance to plant staff

### **ASSUMPTIONS**

The above scope and proposed fee for providing services is based on the following assumptions:

- The ENGINEER has assumed that up to approximately 175 initial shop drawings and O&M submittals will be required for the project and 50 RFIs.

- A total of 28 site visits are included in addition to the monthly progress meetings. To be provided by various discipline engineers and the construction coordinator.
- OWNER will provide special inspections and materials testing services required by the building code and Contract Documents.
- OWNER will provide Resident Project Representative (RPR) services for the PROJECT.
- Factory witness testing of the instrumentation and controls system is assumed to require a total of 2 working days over two visits to the integrators facility. ENGINEER will participate remotely for required instrumentation and controls workshops related to SCADA graphics, data management, and field coordination for testing by the integrator.
- The ENGINEER services are assumed to be during a 22-month total construction period.

**SCHEDULE**

The proposed schedule for implementing the improvements follows:

- Construction Administration services will be provided from approximately one month prior to Notice to Proceed (NTP) with construction and over an assumed 22-month total construction duration from NTP to Final Completion and readiness for Final Payment.
- Startup and training services will be provided based on the Contractor’s schedule and are assumed to take place within the final 120 days of the construction duration.

**PAYMENT AND COMPENSATION**

For the services described above, OWNER agrees to pay ENGINEER a lump sum fee of \$624,656.00. The estimated schedule of values associated with each task is shown in Table 1 below. These values do not represent upper limits for each task. Monthly invoices will be submitted for payment based on the ENGINEER’s estimate of the percentage of work completed during that month for each Task, with the balance due upon completion of the work.

<b>Table 1 – Proposed Services Fees</b>	<b>Value, (\$)</b>
<b>Task 600 – Construction Contract Administration</b>	\$593,036.00
<b>Task 700 – Operations and Maintenance Startup Assistance</b>	\$31,620.00
<b>Total Lump Sum</b>	<b>\$624,656.00</b>

Task	Description	LABOR CATEGORY																	Total Hours	Labor Cost	Outside Professionals	Other Direct Costs	TOTAL TASK BUDGET
		Officer Technical Review	Senior Project Manager	Senior Technical Specialist	Lead Design Engineer	Senior Professional	Electrical Engineer	Structural Engineer	Instrumentation Engineer	Architect	HVAC/Plumbing	Designer Drafter	Professional II	Professional I	Cost Estimator	O&M Specialist	Construction Coordinator	Administrative					
	Rate Schedule (\$/hr)	250	215	240	240	175	150	150	150	150	150	120	135	115	135	165	150	95					
	<b>Total Project</b>	<b>60</b>	<b>454</b>	<b>92</b>	<b>15</b>	<b>40</b>	<b>341</b>	<b>578</b>	<b>397</b>	<b>258</b>	<b>190</b>	<b>15</b>	<b>120</b>	<b>120</b>	<b>0</b>	<b>132</b>	<b>667</b>	<b>157</b>	<b>3636</b>	<b>\$578,435</b>	<b>\$0</b>	<b>\$46,221</b>	<b>\$624,656</b>
600	-- Construction Phase Services	60	444	76	15	40	341	578	362	258	190	15	120	120	0	60	627	157	3463	\$549,315	\$0	\$43,721	\$593,036
	--General Construction Management/Project Management	60	182											40			90	372	\$67,280			\$67,280	
	--Conform Documents for Construction		4				10	10	10	10	10						15	8	77	\$11,370			\$11,370
	--Attend Pre-Construction Meeting		12														16	4	32	\$5,360			\$5,360
	-- Submittals/O&Ms and Substitution Reviews		15	25		40	180	350	190	130	80		80	80		60	100	30	1360	\$203,475			\$203,475
	--RFIs		15	15	15		60	75	50	35	35		40				100	20	460	\$70,975			\$70,975
	--Change Management		20				15	15	15	15	15						40		135	\$21,550			\$21,550
	-- Attend Monthly Progress Meetings (Assume 20 monthly progress meetings)		160	20													160		340	\$63,200			\$63,200
	-- Coordinate and Attend Specialty Coordination Meetings and Site Visits		20	16			36	96	45	30	20						20		283	\$45,190			\$45,190
	-- I&C System Factory Testing and Acceptance Testing								24										24	\$3,600			\$3,600
	-- Construction Coordinator Site Visits																112		112	\$16,800			\$16,800
	-- Record Drawings		4				32	24	20	30	22	15					40	5	192	\$28,335			\$28,335
	-- Punchlist and Closeout		12				8	8	8	8	8						24		76	\$12,180			\$12,180
700	-- Startup and Operational Assistance	0	10	16	0	0	0	0	35	0	0	0	0	0	0	72	40	0	173	\$29,120	\$0	\$2,500	\$31,620
	-- Startup Assistance/Performance Testing Oversight		10	16					35							72	40		173	\$29,120			\$29,120

**Metropolitan Sewerage District of Buncombe County, North Carolina**  
**CAPITAL IMPROVEMENT PROGRAM**

**BUDGET DATA SHEET - FY 2018 - 2019**

<b>PROJECT:</b>	<b>Plant High Rate Primary Treatment</b>	<b>LOCATION:</b>	<b>MSD-Treatment Plant</b>
<b>TYPE:</b>	<b>Treatment Plant</b>	<b>PIPE RATING:</b>	<b>N/A</b>
<b>PROJECT NO.</b>	<b>2015054</b>	<b>TOTAL LF:</b>	<b>0</b>
<b>PROJECT BUDGET:</b>	<b>\$16,950,595.00</b>	<b>PROJECT ORIGIN:</b>	<b>Facilities Plan Update - HDR</b>

DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/17	EST. COST JAN - JUNE 2018	EST. BUDGET FY 18-19
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN	\$3,000.00	\$3,000.00		
55330 - DESIGN	\$1,224,171.00	\$704,829.00	\$467,342.00	\$52,000.00
55340 - PERMITS				
55350 - SPECIAL STUDIES	\$7,219.00	\$7,219.00		
55360 - EASEMENT PLATS				
55370 - LEGAL FEES	\$630.00	\$630.00		
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION				
55400 - APPRAISAL				
55410 - CONDEMNATION				
55420 - CONSTRUCTION	\$15,090,000.00			\$3,320,000.00
55430 - CONST. CONTRACT ADM.	\$603,000.00			\$133,000.00
55440 - TESTING	\$22,575.00	\$2,575.00		\$4,500.00
55450 - SURVEY - ASBUILT				
<b>TOTAL AMOUNT</b>	<b>\$16,950,595.00</b>	<b>\$718,253.00</b>	<b>\$467,342.00</b>	<b>\$3,509,500.00</b>

<b>ENGINEER:</b>	CDM	HC	<b>ESTIMATED BUDGETS - FY 20 - 28</b>	
<b>R.O.W. ACQUISITION:</b>	N/A	# PLATS: [ 0 ]	FY 19-20	\$10,527,000.00
<b>CONTRACTOR:</b>			FY 20-21	\$1,728,500.00
<b>CONSTRUCTION ADM.:</b>	TBD		FY 21-22	\$0.00
<b>INSPECTION:</b>	TBD		FY 22-23	\$0.00
			FY 23-24	\$0.00
			FY 24-25	\$0.00
			FY 25-26	\$0.00
			FY 26-27	\$0.00
			FY 27-28	\$0.00

**PROJECT DESCRIPTION:** This project is a recommendation from the Facilities Plan Update, a WRF master planning document completed by HDR in April 2015. High rate primary treatment will improve water quality ahead of the RBC's thereby extending their useful life and improving treatment efficiency.

**SPECIAL PROJECT NOTES:**





**Plant High Rate Primary Treatment  
Project No. 2015054**

NOT TO SCALE



**METROPOLITAN SEWERAGE DISTRICT**  
of  
BUNCOMBE COUNTY, NORTH CAROLINA

**Budget Map**

# Metropolitan Sewerage District of Buncombe County

## BOARD ACTION ITEM

**BOARD MEETING DATE:** October 17, 2018

**SUBMITTED BY:** Tom Hartye, P.E. - General Manager

**PREPARED BY:** Ed Bradford, P.E. - Director of Engineering  
Hunter Carson, P.E. - Project Manager

**SUBJECT:** Consideration of Bids: South French Broad Interceptor Lining - Phase III, MSD Project No. 2011033

**BACKGROUND:** This project is located within the Biltmore Estate, along the main 36-inch interceptor. This major line serves large portions of the District's southern service area, including the Cane Creek Water & Sewer District in northern Henderson County.

This project is comprised of lining the interceptor with Cured-in-Place-Pipe (CIPP), which will further extend the future service life of this line. The existing concrete line is in good structural condition, but has suffered some degradation of the inner surface due to hydrogen sulfide. The CIPP process will provide an integral structural liner which is inert and impervious to the hydrogen sulfide present within the line.

It is important to note that this interceptor is planned to remain in-service. Capacity needs will be addressed by adding a parallel "relief" line - the planning for which has been underway. For these reasons, it is important to protect and maintain the long-term viability of this line.

The sections to be lined under this contract total 5,111 LF. MSD staff continue to work closely with Biltmore Estate staff in order to schedule this work during Biltmore's slower winter season.

The contract was advertised and five bids were received on October 04, 2018 in the following amounts:

<u>Contractor</u>	<u>Bid Amount</u>
1) Am-Liner East, Inc.	\$1,471,108.00
2) Insituform Technologies, LLC	\$1,125,267.00
3) IPR Southeast, LLC	\$1,084,778.00
4) SAK Construction, LLC	\$1,055,648.00
5) Granite Inliner, LLC	\$1,044,679.00

The apparent low bidder is Granite Inliner, LLC, with a bid amount of \$1,044,679.00. Granite is one of the nation's largest CIPP contractors; however, they have not previously performed work for the District. Staff therefore checked references, and all were positive, stating that they would work with Granite again.

Please refer to the attached documentation for further details, including the reference check.

**FISCAL IMPACT:** The FY18-19 Construction Budget for this project is \$1,071,000.00.

**STAFF RECOMMENDATION:** Staff recommends award of this contract to Granite Inliner, LLC in the amount of \$1,044,679.00, subject to review and approval by District Counsel.

**METROPOLITAN SEWERAGE DISTRICT OF  
BUNCOMBE COUNTY, NORTH CAROLINA**

**SOUTH FRENCH BROAD INTERCEPTOR - LINING (FY 18-19)**

**Project No. 2011033**

**BID TABULATION**

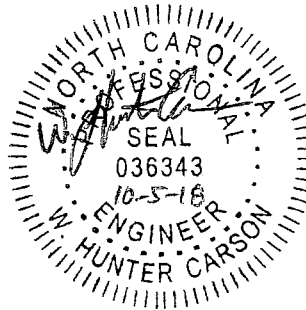
**October 4, 2018**

<b>BIDDER</b>	<b>Bid Bond</b>	<b>MBE Form</b>	<b>Bid Forms (Proposal)</b>	<b>TOTAL BID AMOUNT</b>
Am-Liner East, Inc. Berryville, VA	5%	did not submit	Yes	\$1,471,108.00
Insituform Technologies, LLC Chesterfield, MO	5%	1	Yes	\$1,125,267.00
IPR Southeast, LLC Stone Mountain, GA	5%	1	Yes	\$1,084,778.00
SAK Construction, LLC O'Fallon, MO	5%	1	Yes	\$1,055,648.00
<b>Granite Inliner, LLC Gastonia, NC</b>	<b>5%</b>	<b>1</b>	<b>Yes</b>	<b>\$1,044,679.00</b>

**APPARENT LOW BIDDER**



William Hunter Carson, P.E.  
Project Engineer  
Metropolitan Sewerage District of  
Buncombe County, North Carolina



This is to certify that the bids tabulated herein were publicly opened and read aloud at 2:00 p.m. on the 4th day of October, 2018, in the W.H. Mull Building at the Metropolitan Sewerage District of Buncombe County, Asheville, North Carolina, and that said bids were accompanied by acceptable bidders bonds in the amount of 5% of the bid.

# Interoffice Memorandum

**TO:** Tom Hartye, General Manager

**FROM:** Ed Bradford, Director of Engineering  
Hunter Carson, Asst. Director of Engineering

**DATE:** October 8, 2018

**RE:** South French Broad Interceptor Lining Ph. III Sewer Rehabilitation;  
MSD Project No. 2011033

The South French Broad Interceptor Lining project is located on the Biltmore Estate in Asheville. A 36-inch sewer interceptor runs through the Estate, adjacent to the French Broad River for approximately 22,000 linear feet. The interceptor conveys an average daily flow of 5.5 MGD of wastewater from South Asheville and northern Henderson County to MSD's Carrier Bridge Pump Station.

The interceptor, installed in 1966 is believed to be a major source of inflow & infiltration (I&I) into MSD's collection system. Leaking pipe joints (confirmed via CCTV), and the development of sinkholes over the line provide evidence of joint failure. The reinforced concrete pipe (RCP) also shows signs of hydrogen sulfide (H<sub>2</sub>S) degradation with exposed aggregate being visible in portions of the pipe above normal operating water levels. Exposed reinforcing steel is also visible in locations with elevated levels of H<sub>2</sub>S. Continuous exposure to H<sub>2</sub>S will attack and thin the concrete pipe wall, compromise the pipe's structural integrity, and ultimately lead to failure.

Cured-in-place-pipe (CIPP) lining is the preferred rehab method for combatting I&I and chemical corrosion. The end-product is a new, corrosion-resistant, seamless pipe that is structurally capable of functioning in the absence of its surrounding host pipe. A CIPP liner system seals the entire pipe segment, eliminating I&I from joints and pipe holes/fractures, and has a 50-year life expectancy. Longevity and preservation of this line is critical since the 36-inch interceptor will remain in service indefinitely.

The South French Broad Interceptor Lining project began in FY16-17 and is being phased over four years. In the last two years, approximately 12,826 linear feet of 36-inch interceptor have been successfully lined. Approximately 5,111 linear feet will be lined this fiscal year and the remaining 3,976 linear in FY19-20. In addition to rehabilitation of the interceptor pipe, all manholes are being rehabilitated using a non-cementitious, corrosion-resistant liner system. Seventeen (17) manholes will be lined as part of the FY18-19 project. Also included in this year's project is the installation of a new manhole that will aid in bypassing efforts during the final phase of lining in FY19-20.

On October 4, 2018, five (5) sealed bids were received at 2:00 pm. Results were as follows:

<u>Contractor</u>	<u>Bid Amount</u>
1) Am-Liner East, Inc.	\$1,471,108.00
2) Insituform Technologies, LLC	\$1,125,267.00
3) IPR Southeast, LLC	\$1,084,778.00
4) SAK Construction, LLC	\$1,055,648.00
<b>5) Granite Inliner, LLC</b>	<b>\$1,044,679.00</b>

The apparent low bidder is Granite Inliner, LLC with a bid amount of \$1,044,679.00. The FY18-19 construction budget for this project is \$1,071,000.00. Since Granite Inliner (formerly Layne Inliner) has not performed work for the District in recent past, references were checked to

confirm quality of work, experience and reputation of project management, timeliness of project completion, and to confirm that work was performed within budget. Three references were contacted and all provided positive feedback. Granite Inliner is one of the nation's largest CIPP providers and has installed over 30 million LF of CIPP for the rehabilitation of wastewater collection lines.

Staff recommends award of this contract to Granite Inliner, LLC contingent upon review and approval by District Counsel.

## South French Broad Interceptor – Lining (FY 18-19)

MSD Project No. 2011033

Reference Check for Granite Inliner (formerly Layne Inliner, LLC)

October 2018

### **Town of Cary, NC**

**Sewer Rehabilitation (\$9.88M)**

**93,700 LF of 6" – 48" CIPP (Completed 2017)**

Lynn Brilz, P.E. (Town of Cary Senior Engineer) stated that the work referenced above was split between two CIPP lining projects. In addition to these, Granite/Layne Inliner has performed a substantial amount of work for the Town. Mr. Brilz stated that "Layne has always been very responsive and stands behind their work." The Town of Cary has had very few problems with Layne over the years, but when problems have arisen, Layne has accepted responsibility. The most recent work completed in Cary included lining of 30" through 48" diameter interceptor sewers and there were no quality issues. Mr. Brilz has had a good working relationship with Lee Orr (Granite Charlotte Branch Manager) and said he's always been very accommodating. Mr. Brilz would recommend Granite Inliner.

### **City of Charlotte, NC**

**Stormwater Maintenance (\$2.02M)**

**9,300 LF of 12" – 48" CIPP (Ongoing)**

Mark Braswell (City of Charlotte Stormwater Services) has utilized Granite/Layne Inliner on a number of stormwater rehabilitation projects over the years ranging in size from 12" to 48" diameter. Mr. Braswell stated that he uses Granite as frequently as twice per month for various repairs. He said that "they always show up when they say they will and are flexible to accommodate our schedule." Most of Charlotte's stormwater repair work is completed in the dry so generally no bypass pumping is required. Mr. Braswell stated that Granite does not nickel and dime the City if changes are necessary and have always provided fair pricing. He has worked directly with Cody Beal (Granite PM) and Paul Cross (Granite Superintendent), two members being proposed for the SFB Lining project, and said they are exceptional. Mr. Braswell would recommend Granite Inliner.

### **City of Rocky Mount, NC**

**Sanitary Sewer Rehabilitation (\$1.40M)**

**1,980 LF of 54" CIPP (Completed 2018)**

Michael Stickley, P.E. (Project Manager for Jacobs Engineering) stated that Layne Inliner did great work under freezing temperatures in January 2018. The CIPP liner was fit properly and there were minimal wrinkles. The 1,980 L.F. 54" interceptor lining project took only 2 weeks to install and was completed under budget. Mr. Stickley said he was very satisfied with Layne and would work with them again.

**Metropolitan Sewerage District of Buncombe County, North Carolina  
CAPITAL IMPROVEMENT PROGRAM**

**BUDGET DATA SHEET - FY 2018 - 2019**

<b>PROJECT:</b>	<b>South French Broad Int. - Lining</b>	<b>LOCATION:</b>	<b>Biltmore Estate</b>
<b>TYPE:</b>	<b>Interceptor</b>	<b>PIPE RATING:</b>	<b>8</b>
<b>PROJECT NO.</b>	<b>2011033</b>	<b>TOTAL LF:</b>	<b>21,913</b>
<b>PROJECT BUDGET:</b>	<b>\$4,855,416.00</b>	<b>PROJECT ORIGIN:</b>	<b>Line Condition, Inflow &amp; Infiltration</b>

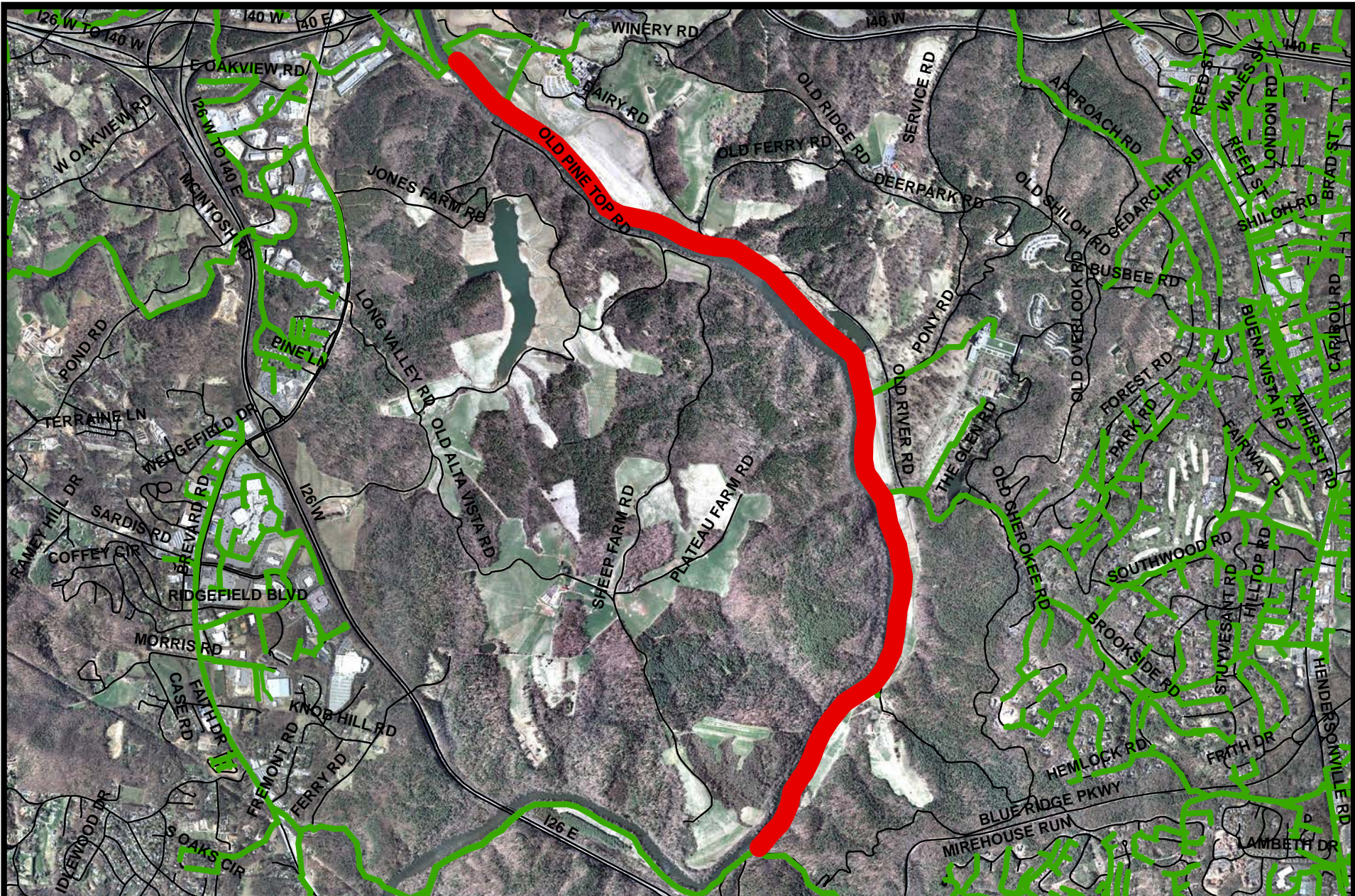
DESCRIPTION	ESTIMATED PROJECT COST	TOTAL EXPENDS THRU 12/31/17	EST. COST JAN - JUNE 2018	BUDGET FY 18-19
55310 - PRELIM. ENGINEERING				
55320 - SURVEY - DESIGN				
55330 - DESIGN				
55340 - PERMITS				
55350 - SPECIAL STUDIES				
55360 - EASEMENT PLATS				
55370 - LEGAL FEES	\$360.00	\$360.00		
55380 - ACQUISITION SERVICES				
55390 - COMPENSATION				
55400 - APPRAISAL				
55410 - CONDEMNATION				
55420 - CONSTRUCTION	\$4,847,450.00	\$1,639,745.00	\$1,342,705.00	\$1,071,000.00
55430 - CONST. CONTRACT ADM.				
55440 - TESTING	\$7,606.00	\$1,266.00	\$2,340.00	\$2,000.00
55450 - SURVEY - ASBUILT				
<b>TOTAL AMOUNT</b>	<b>\$4,855,416.00</b>	<b>\$1,641,371.00</b>	<b>\$1,345,045.00</b>	<b>\$1,073,000.00</b>

5.111

<b>ENGINEER:</b>	MSD	HC	<b>ESTIMATED BUDGETS - FY 20 - 28</b>	
<b>R.O.W. ACQUISITION:</b>	N/A	# PLATS: [ 0 ]	<b>FY 19-20</b>	\$796,000.00
<b>CONTRACTOR:</b>			<b>FY 20-21</b>	\$0.00
<b>CONSTRUCTION ADM:</b>	MSD		<b>FY 21-22</b>	\$0.00
<b>INSPECTION:</b>	MSD		<b>FY 22-23</b>	\$0.00
			<b>FY 23-24</b>	\$0.00
			<b>FY 24-25</b>	\$0.00
			<b>FY 25-26</b>	\$0.00
			<b>FY 26-27</b>	\$0.00
			<b>FY 27-28</b>	\$0.00

**SPECIAL PROJECT NOTES:** 6,195LF in FY 16-17; 6,631LF in FY 17-18; 5,111LF in FY 18-19; 3,976LF in FY 19-20. Pricing includes manhole rehab.





**South French Broad Interceptor Lining  
Project No. 2011033**

NOT TO SCALE



**METROPOLITAN SEWERAGE DISTRICT**  
of  
BUNCOMBE COUNTY, NORTH CAROLINA

**Budget Map**

# Metropolitan Sewerage District of Buncombe County

## Board Action Item

**BOARD MEETING DATE:** October 17, 2018

**SUBMITTED BY:** Tom Hartye, P.E., General Manager

**REVIEWED BY:** Ed Bradford, P.E., Engineering Director

**PREPARED BY:** Kevin Johnson, P.E., Planning and Development Manager

**SUBJECT:** Acceptance of Developer Constructed Sewer System for the Baldwin Road Subdivision Sewer Extension, MSD Project No. 2017138

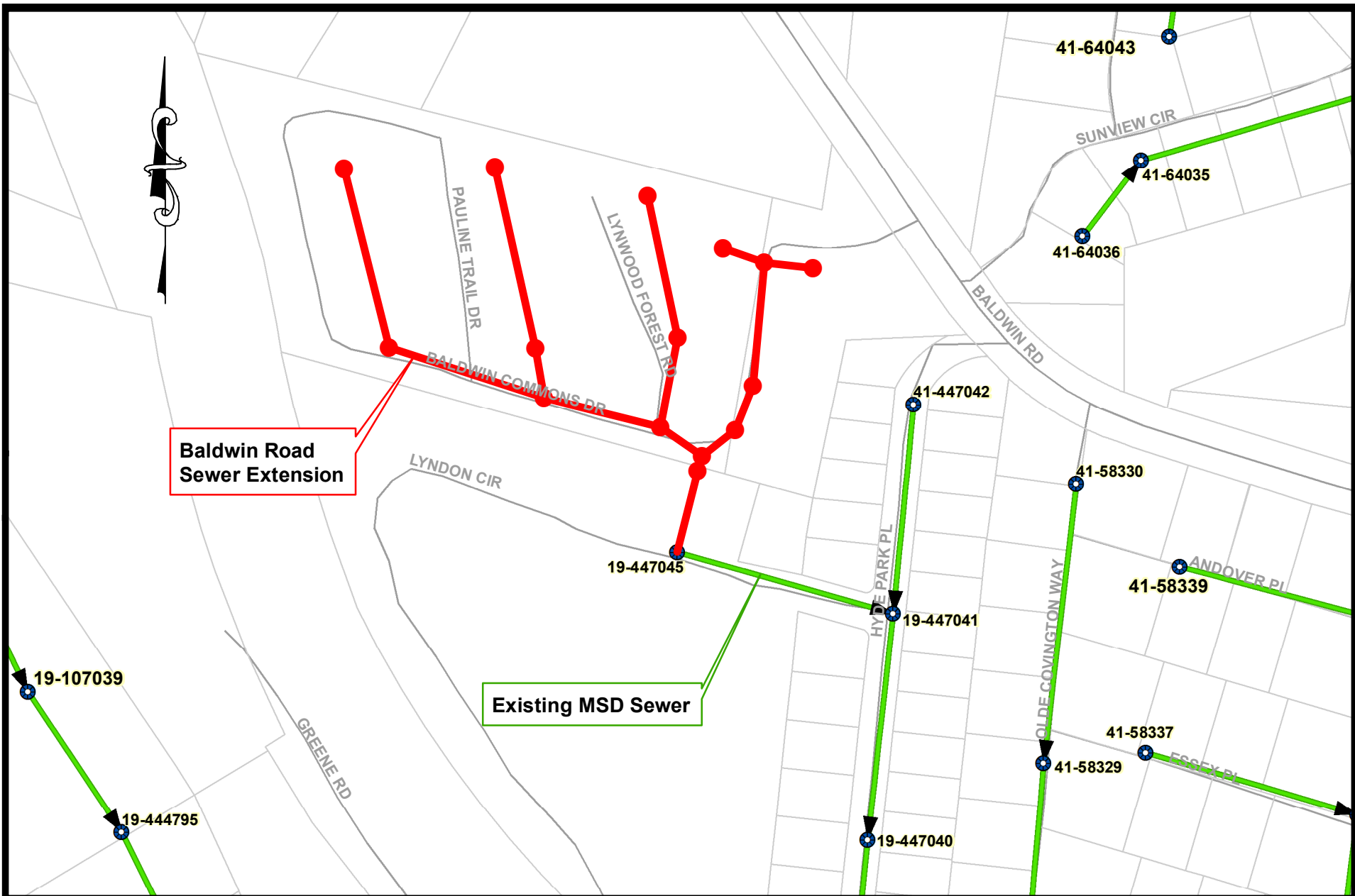
**BACKGROUND:** This project is located inside the District boundary off Baldwin Road in Buncombe County. The developer of the project is Ken Jackson of Jackson Residential Partners, LLC.

The project included extending approximately 1,740 linear feet of 8-inch public gravity sewer to serve the sixty-two (62) unit residential townhome development.

A wastewater allocation was issued in the amount of 13,600 GPD for the project. The estimated cost of the sewer construction is \$197,891.00.

All MSD requirements have been met.

**STAFF RECOMMENDATION:** Staff recommends acceptance of this developer constructed sewer system.



**MSD**  
Engineering Division

**Baldwin Road Sewer Extension  
MSD Project # 2017138**

Metropolitan Sewerage District of Buncombe County

9/17/18

# Metropolitan Sewerage District of Buncombe County

## Board Action Item

**BOARD MEETING DATE:** October 17, 2018

**SUBMITTED BY:** Tom Hartye, P.E., General Manager

**REVIEWED BY:** Ed Bradford, P.E., Engineering Director

**PREPARED BY:** Kevin Johnson, P.E., Planning and Development Manager

**SUBJECT:** Acceptance of Developer Constructed Sewer System for the New Homes at North Main Sewer Extension, MSD Project No. 2016052

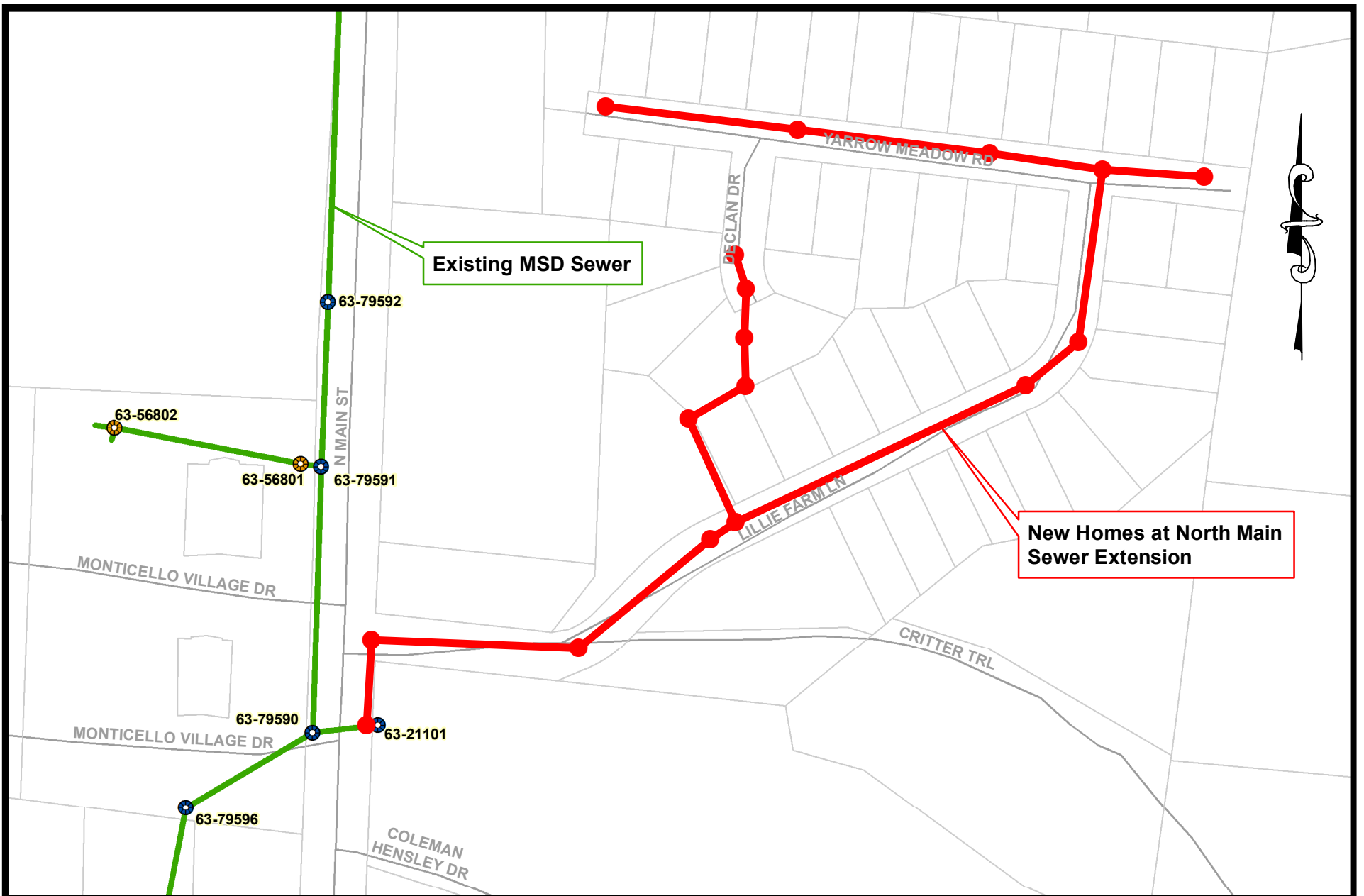
**BACKGROUND:** This project is located inside the District boundary off North Main Street in the Town of Weaverville. The developer of the project is Joe Quinlan of Mountain Housing Opportunities, Inc.

The project included extending approximately 1,742 linear feet of 8-inch public gravity sewer to serve the forty-six (46) unit single family residential development.

A wastewater allocation was issued in the amount of 10,800 GPD for the project. The estimated cost of the sewer construction is \$161,000.00.

All MSD requirements have been met.

**STAFF RECOMMENDATION:** Staff recommends acceptance of this developer constructed sewer system.



**MSD**  
Engineering Division

**New Homes at North Main Sewer Extension**  
**MSD Project # 2016052**  
Metropolitan Sewerage District of Buncombe County

9/26/18

# Metropolitan Sewerage District of Buncombe County

## Board Action Item

**BOARD MEETING DATE:** October 17, 2018

**SUBMITTED BY:** Tom Hartye, P.E., General Manager

**REVIEWED BY:** Ed Bradford, P.E., Engineering Director

**PREPARED BY:** Kevin Johnson, P.E., Planning and Development Manager

**SUBJECT:** Acceptance of Developer Constructed Sewer System for the Peregrine's Ridge Court Sewer Extension, MSD Project No. 2006160

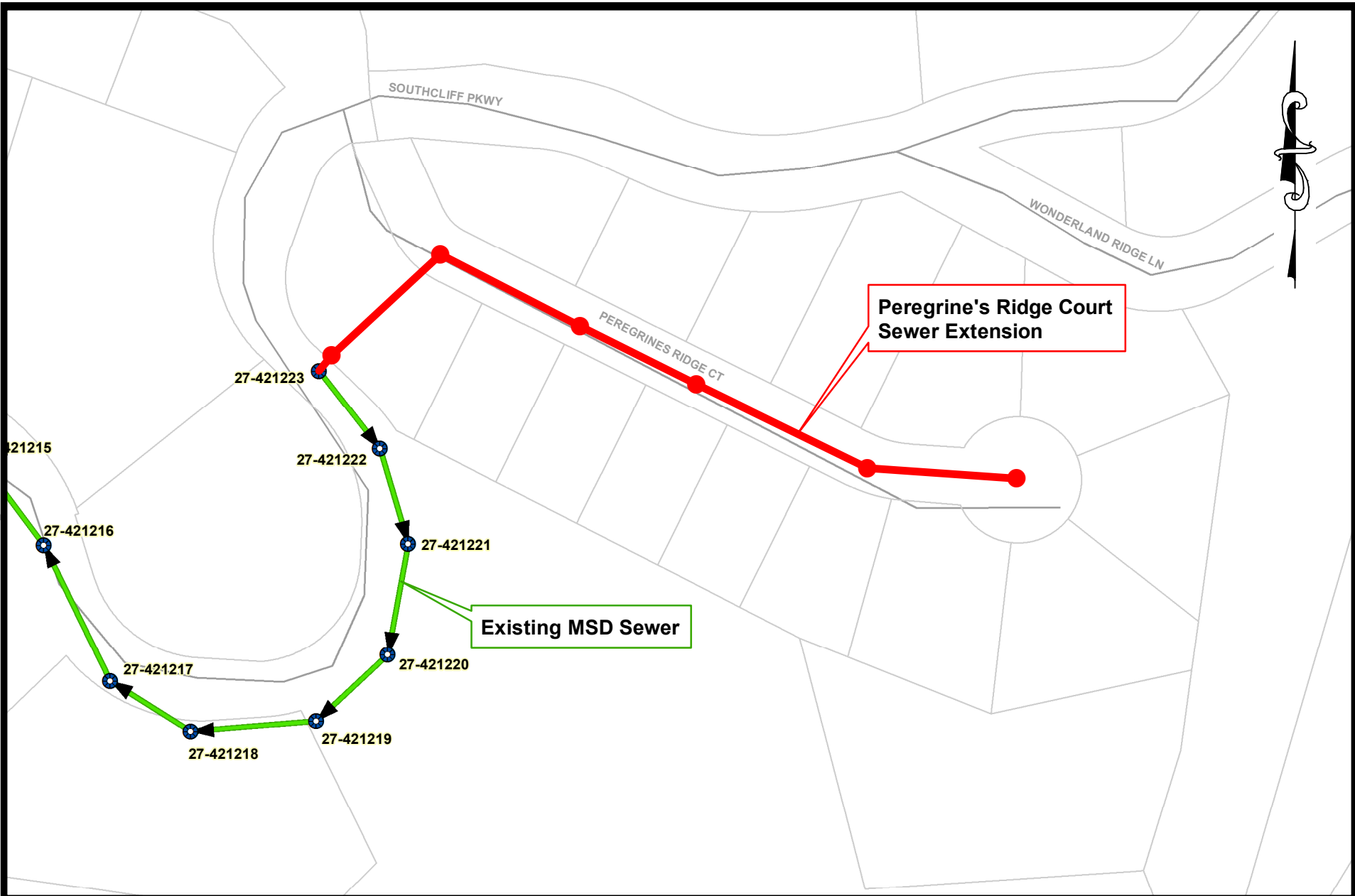
**BACKGROUND:** This project is located inside the District boundary off Southcliff Parkway in Buncombe County. The developer of the project is Brett Peterson of Mountain Real Estate Capital, LLC.

The project included extending approximately 632 linear feet of 8-inch public gravity sewer to serve the fourteen (14) unit single family residential development.

A wastewater allocation was issued in the amount of 5,600 GPD for the project. The estimated cost of the sewer construction is \$90,234.27.

All MSD requirements have been met.

**STAFF RECOMMENDATION:** Staff recommends acceptance of this developer constructed sewer system.



**MSD**  
Engineering Division

**Peregrine's Ridge Court Sewer Extension  
MSD Project # 2006160**

Metropolitan Sewerage District of Buncombe County

10/02/18

# Metropolitan Sewerage District of Buncombe County

## Board Action Item

**BOARD MEETING DATE:** October 17, 2018

**SUBMITTED BY:** Tom Hartye, P.E., General Manager

**REVIEWED BY:** Ed Bradford, P.E., Engineering Director

**PREPARED BY:** Kevin Johnson, P.E., Planning and Development Manager

**SUBJECT:** Acceptance of Developer Constructed Sewer System for the Swannanoa Valley Christian Ministry Apartments Sewer Extension, MSD Project No. 2017043

**BACKGROUND:** This project is located inside the District boundary off Montreat Road in the Town of Black Mountain. The developer of the project is Cheryl Wilson of Swannanoa Valley Christian Ministry, Inc.

The project included extending approximately 194 linear feet of 8-inch public gravity sewer to serve the ten (10) unit affordable housing development.

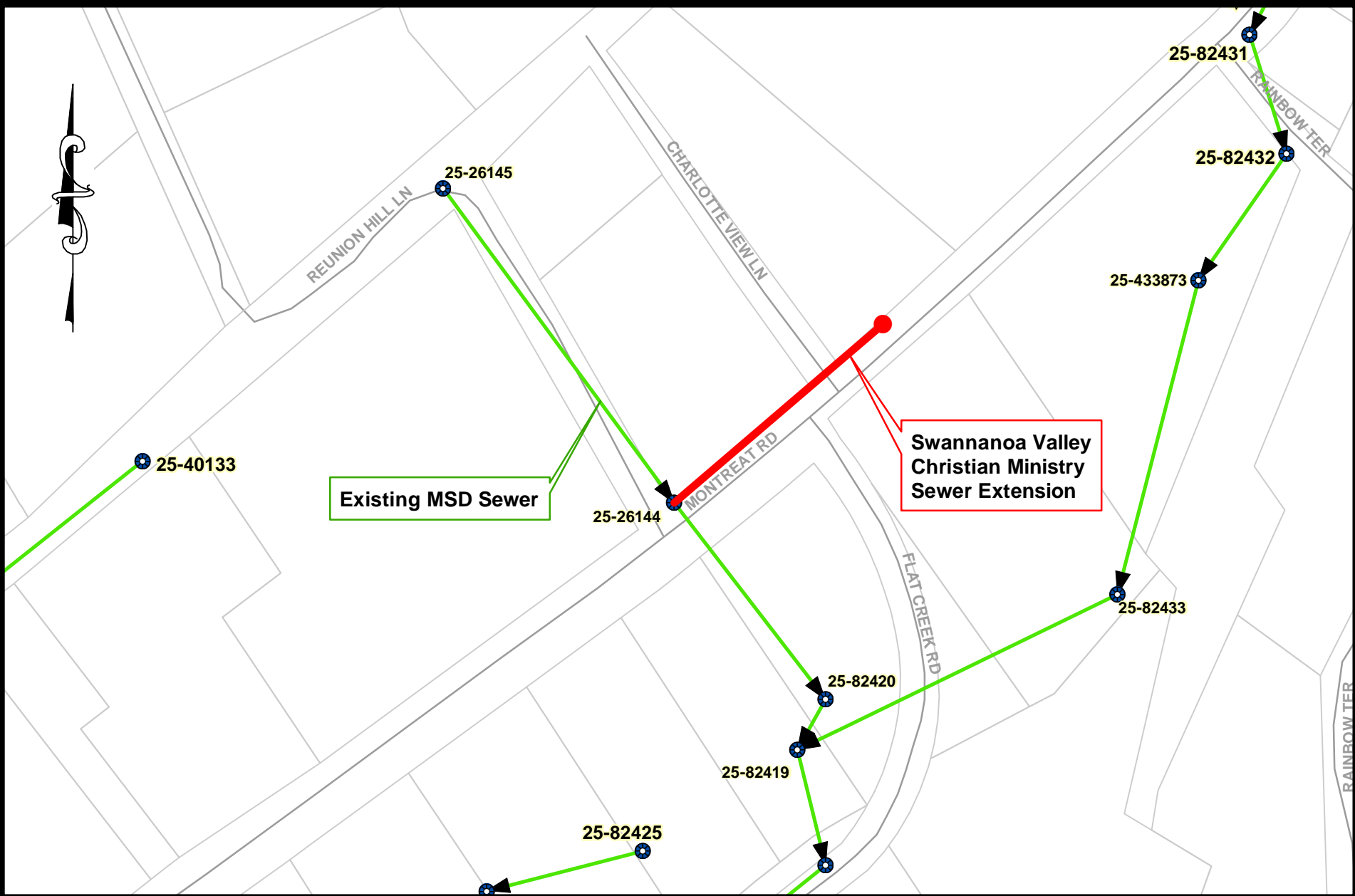
A wastewater allocation was issued in the amount of 1,200 GPD for the project. The estimated cost of the sewer construction is \$14,300.00.

This project also qualifies for the District's Cost Recovery Reimbursement for the lesser of the construction of the sewer extension or five years' estimated revenue. The estimated revenue is \$12,307.00.

All MSD requirements have been met.

**STAFF RECOMMENDATION:** Staff recommends acceptance of this developer constructed sewer system and to authorize the General Manager to disburse \$12,307.00 to Swannanoa Valley Christian Ministry, Inc.





Existing MSD Sewer

Swannanoa Valley  
Christian Ministry  
Sewer Extension



**MSD**  
Engineering Division

## Swannanoa Valley Christian Ministry Sewer Extension MSD Project # 2017043

Metropolitan Sewerage District of Buncombe County

10/02/18

## Swannanoa Valley - Cost Recovery

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total - (5 Year Only)
<b>Wastewater Treatment</b>	\$211	\$215	\$219	\$224	\$228	\$233	\$237	\$242	\$247	\$252	
<b>Collection System PM</b>	\$41	\$42	\$43	\$44	\$44	\$45	\$46	\$47	\$48	\$49	
<b>Total O &amp; M Costs</b>	\$252	\$257	\$262	\$267	\$273	\$278	\$284	\$289	\$295	\$301	\$ 1,310
					\$1,310						
<b>Sewer Line Participation</b>	\$12,307										
<b>Depreciation</b>	\$155	\$155	\$155	\$155	\$155	\$155	\$155	\$155	\$155	\$155	\$776
<b>Total Capital Costs</b>	\$12,463	\$155	\$155	\$155	\$155	\$155	\$155	\$155	\$155	\$155	
					\$776						
<b>Sewer Use Revenue</b>	\$2,766	\$2,821	\$2,878	\$2,935	\$2,994	\$3,054	\$3,115	\$3,177	\$3,241	\$3,305	\$14,394
<b>Total Costs</b>	\$12,714	\$412	\$417	\$422	\$428	\$433	\$439	\$444	\$450	\$456	
<b>Net Revenue</b>	-\$9,949	\$2,409	\$2,460	\$2,513	\$2,566	\$2,621	\$2,676	\$2,733	\$2,790	\$2,849	\$12,307
					\$14,394						

	Five Year Revenue		Five Year Depreciation		Five Year O&M Costs		Total Cost Share
<b>Total Cost Share:</b>	\$14,394	-	\$776	-	\$1,310	=	<b>\$12,307</b>

State of North Carolina  
County of Buncombe

Cost Recovery Agreement  
Wastewater/Sewer Extension  
Swannanoa Valley Christian  
Ministry Apartments MSD Project  
Number 2017043  
Affordable Housing Project

This Agreement made this 24<sup>th</sup> day of October, 2018, by and between the Metropolitan Sewerage District of Buncombe County, North Carolina, (hereinafter "District" or "MSD") a body corporate and politic with an office and place of business at 2028 Riverside Drive, Woodfin, in Buncombe County, North Carolina, and Swannanoa Valley Christian Ministry, Inc., a corporation with an office and place of business at 101 N. Ridgeway Avenue, Black Mountain, NC 28711, Buncombe County, North Carolina;

**Whereas**, the District, in October, 2001, adopted a Cost Recovery Policy wherein the District would participate in the extension of wastewater service based on the expected fees to be generated from new development served by the extension;

**Whereas**, Swannanoa Valley Christian Ministry, Inc. petitioned the District to recover a portion of the cost of extending sewer service to a project known as Swannanoa Valley Christian Ministry Apartments located along Montreat Road in the Town of Black Mountain being more particularly described in a deed recorded in Deed Book 5687, Page 662 through 664, and Plat Book 184 Page 91.

**Whereas**, Swannanoa Valley Christian Ministry, Inc. has provided certain financial information to the District prior to the execution of this Agreement;

**Whereas**, projected revenues from Swannanoa Valley Christian Ministry Apartments, over a period of five years, less the cost of operation and maintenance, are \$12,307.00.

**Whereas**, the actual cost of the sewer system for this project was \$14,300.00.

**Whereas**, the District Board has considered the petition to participate in the Cost Recovery Program, and the District Board has approved this project for participation, subject to compliance with all District requirements;

**Whereas**, the estimated cost of the off-site sewer and revenue projections for this project are attached hereto and incorporated herein by reference;

**Whereas**, Swannanoa Valley Christian Ministry, Inc. has conveyed the sewer extension and the sewer system serving Swannanoa Valley Christian Ministry Apartments;

It is Now Therefore Agreed as follows:

Receipt of satisfactory documentation from Swannanoa Valley Christian Ministry, Inc. Opportunities evidencing the cost of the sewer system to be \$14,300.00 is acceptable. The District will reimburse Swannanoa Valley Christian Ministry, Inc. in the amount of \$12,307.00.

Swannanoa Valley Christian Ministry, Inc. has conveyed the off-site sewer system for Swannanoa Valley Christian Ministry Apartments together with easements therefore (the "Sewer System") to MSD. The conveyance of the Sewer System has been made by instrument duly recorded and satisfactory to MSD or its counsel. MSD is under no obligation to accept any extension, on site or off site, until all requirements of its Bond Order or applicable law have been met. Any obligation of MSD to reimburse Swannanoa Valley Christian Ministry, Inc. shall be subject to conveyance of the Sewer System to MSD and acceptance by the MSD Board in accordance with Section 714 of the MSD Bond Order.

Swannanoa Valley Christian Ministry, Inc. acknowledges and agrees that MSD's reimbursement is based on the fact that MSD expects to recover the reimbursement from sewer service charges and maintenance fees to be paid by residents in the ten (10) new apartments. Swannanoa Valley Christian Ministry, Inc. agrees that, if sewer service charges and maintenance fees from the ten (10) apartments over a five year period, beginning with the date of reimbursement, do not equal or exceed amounts reimbursed pursuant to this Agreement, then Swannanoa Valley Christian Ministry, Inc. shall pay back to MSD any difference.

For purposes of this Agreement, sewer service charges and maintenance fees shall mean only those fees paid for monthly sewer service and shall not include any facility fee or connection fee charged by the District.

While it is District policy to require that a developer purchase a letter of credit or other appropriate security to ensure the commitment to repay any reimbursement not covered by sewer service charges and maintenance fees, the District, in light of the relatively small amount of reimbursement for this project, the expected recovery over a five year period and the personal guarantee of Swannanoa Valley Christian Ministry, Inc., has determined to waive the security requirement in this case.

This Agreement shall be governed by and under the laws of the State of North Carolina. Any action arising hereunder must be brought in the General Court of Justice for the 28<sup>th</sup> Judicial District of North Carolina, and Swannanoa Valley Christian Ministry, Inc. hereby consent to the jurisdiction of such Court.

This Agreement represents the entire agreement between the parties.

SWANNANOVA VALLEY CHRISTIAN MINISTRY, INC.

By Cheryl Wilson (SEAL)  
Cheryl Wilson, Executive Director

METROPOLITAN SEWERAGE DISTRICT

By \_\_\_\_\_ (SEAL)  
Thomas E. Hartye, General Manager

# Metropolitan Sewerage District of Buncombe County

## BOARD INFORMATIONAL ITEM

**Meeting Date:** October 17, 2018  
**Submitted By:** Thomas E. Hartye, PE., General Manager  
**Prepared By:** W. Scott Powell, CLGFO, Director of Finance  
                     Cheryl Rice, Accounting Manager  
**Subject:** Cash Commitment/Investment Report-Month Ended August 31, 2018

### Background

Each month, staff presents to the Board an investment report for all monies in bank accounts and specific investment instruments. The total investments as of August 31, 2018 were \$71,826,989. The detailed listing of accounts is available upon request. The average rate of return for all investments is 1.477%. These investments comply with North Carolina General Statutes, Board written investment policies, and the District's Bond Order.

The attached investment report represents cash and cash equivalents as of August 31, 2018 do not reflect contractual commitments or encumbrances against said funds. Shown below are the total investments as of August 31, 2018 reduced by contractual commitments, bond funds, and District reserve funds. The balance available for future capital outlay is \$22,221,273.

Total Cash & Investments as of 08/31/2018		71,826,989
Less:		
Budgeted Commitments (Required to pay remaining FY19 budgeted expenditures from unrestricted cash)		
Construction Funds	(20,812,449)	
Operations & Maintenance Fund	(14,254,592)	
		(35,067,041)
Bond Restricted Funds		
Bond Service (Funds held by trustee):		
Funds in Principal & Interest Accounts	(57,787)	
FY19 Principal & Interest Due	(9,218,142)	
		(9,275,929)
District Reserve Funds		
Fleet Replacement	(518,822)	
Pump Replacement	(149,916)	
WWTP Replacement	(311,227)	
Maintenance Reserve	(976,331)	
		(1,956,296)
District Insurance Funds		
General Liability	(393)	
Worker's Compensation	(228,267)	
Post-Retirement Benefit	(1,702,651)	
Self-Funded Employee Medical	(1,375,139)	
		(3,306,450)
Designated for Capital Outlay		22,221,273

Meeting Date: October 17, 2018

Subject: Cash Commitment/Investment Report-Month Ended August 31, 2018

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### Staff Recommendation

None - Information Only.

#### Action Taken

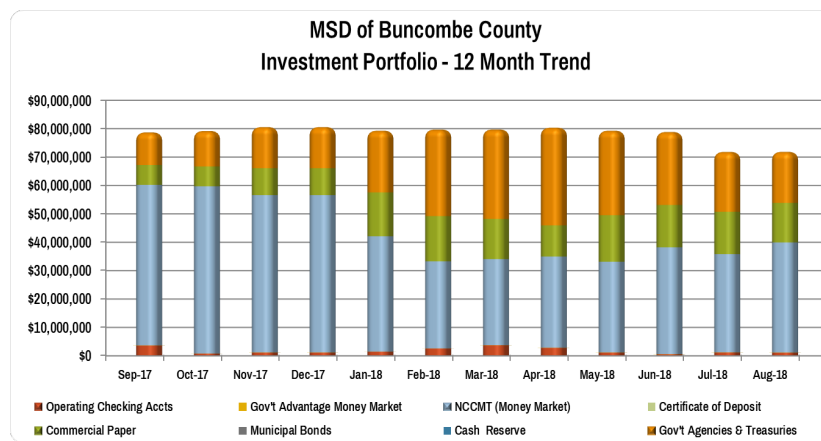
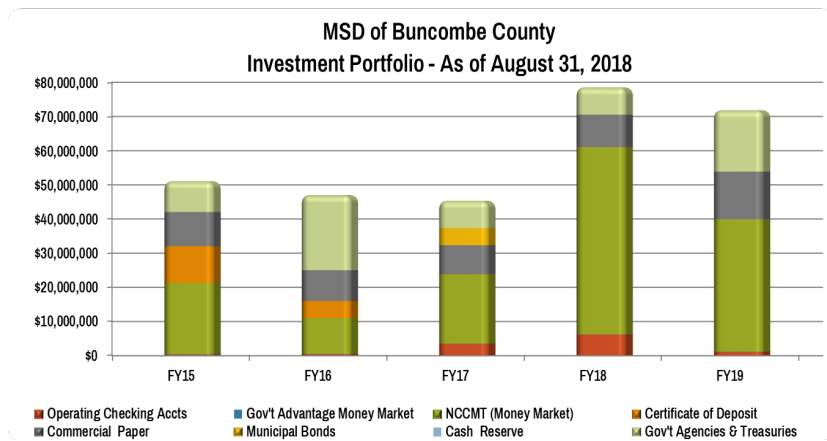
Motion by: \_\_\_\_\_ to  Approve  Disapprove  
Second by: \_\_\_\_\_  Table  Send to Committee  
Other: \_\_\_\_\_  
Follow-up required: \_\_\_\_\_  
Person responsible: \_\_\_\_\_ Deadline: \_\_\_\_\_

## Metropolitan Sewerage District of Buncombe County Investment Portfolio

Held with Bond Trustee  
Held by MSD

	Operating Checking Accounts	Gov't Advantage Money Market	NCCMT (Money Market)	Certificate of Deposit	Commercial Paper	Municipal Bonds	Cash Reserve	Gov't Agencies & Treasuries	Total
	\$ -	\$ -	\$ 1,131,840	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,131,840
	1,110,329	46,679	37,644,523	-	13,920,674	-	-	17,972,944	70,695,149
	\$ 1,110,329	\$ 46,679	\$ 38,776,363	\$ -	\$ 13,920,674	\$ -	\$ -	\$ 17,972,944	\$ 71,826,989

Investment Policy Asset Allocation	Maximum Percent	Actual Percent	
U.S. Government Treasuries, Agencies and Instrumentalities	100%	25.02%	No significant changes in the investment portfolio as to makeup or total amount.
Bankers' Acceptances	20%	0.00%	
Certificates of Deposit	100%	0.00%	The District 's YTM of 2.04% is exceeding the YTM benchmark of the NCCMT Government Portfolio.
Commercial Paper	20%	19.38%	
Municipal Bonds	100%	0.00%	
North Carolina Capital Management Trust	100%	53.99%	
Checking Accounts:	100%		All funds invested in CD's, operating checking accounts, Gov't Advantage money market are fully collateralized with the State Treasurer.
Operating Checking Accounts		1.55%	
Gov't Advantage Money Market		0.06%	



Meeting Date: October 17, 2018

Subject: Cash Commitment/Investment Report-Month Ended August 31, 2018

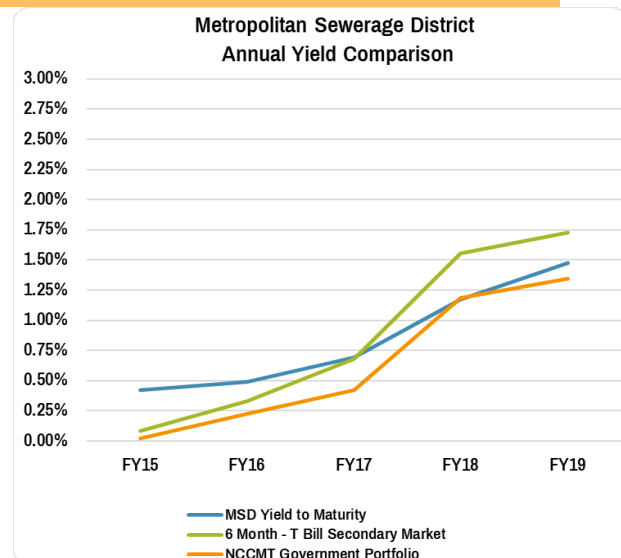
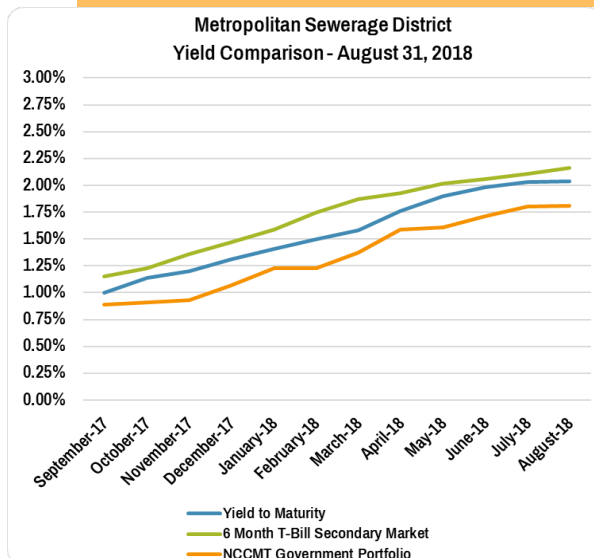
Page 4

**Metropolitan Sewerage District  
INVESTMENT MANAGERS' REPORT  
At August 31, 2018**

<b>Summary of Asset Transactions</b>			
	Original Cost	Market	Interest Receivable
Beginning Balance	\$ 66,926,446	\$ 66,914,463	\$ 93,038
Capital Contributed (Withdrawn)	(26,602)	(26,602)	
Realized Income	81,474	81,474	(25,068)
Unrealized/Accrued Income		61,363	26,735
Ending Balance	<u>\$ 66,981,318</u>	<u>\$ 67,030,698</u>	<u>\$ 94,705</u>

<b>Value and Income by Maturity</b>			
	Original Cost	Income	
Cash Equivalents <91 Days	\$ 49,008,374	\$	105,730
Securities/CD's 91 to 365 Days	12,472,944	\$	26,909
Securities/CD's > 1 Year	5,500,000	\$	11,866
	<u>\$ 66,981,318</u>	<u>\$</u>	<u>144,504</u>

<b>Month End Portfolio Information</b>	
Weighted Average Maturity	119
Yield to Maturity	2.04%
6 Month T-Bill Secondary Market	2.16%
NCCMT Government Portfolio	1.81%



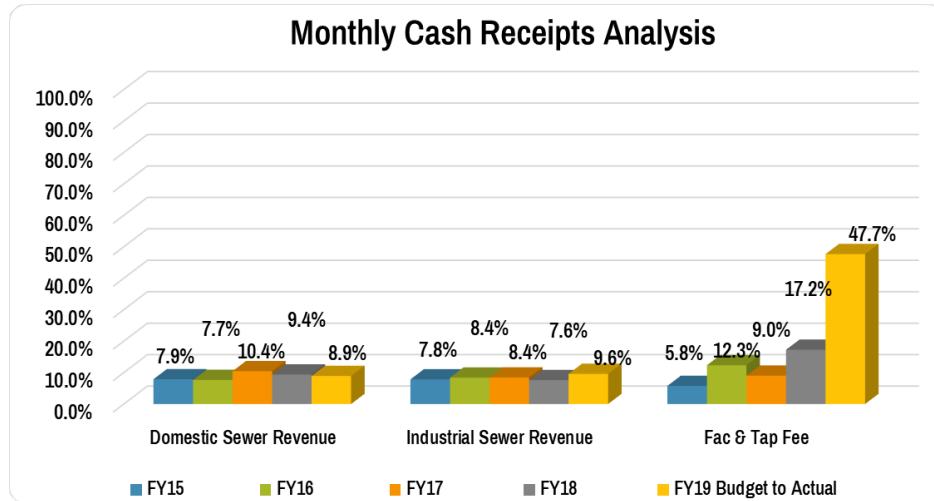


Meeting Date: October 17, 2018

Subject: Cash Commitment/Investment Report-Month Ended August 31, 2018

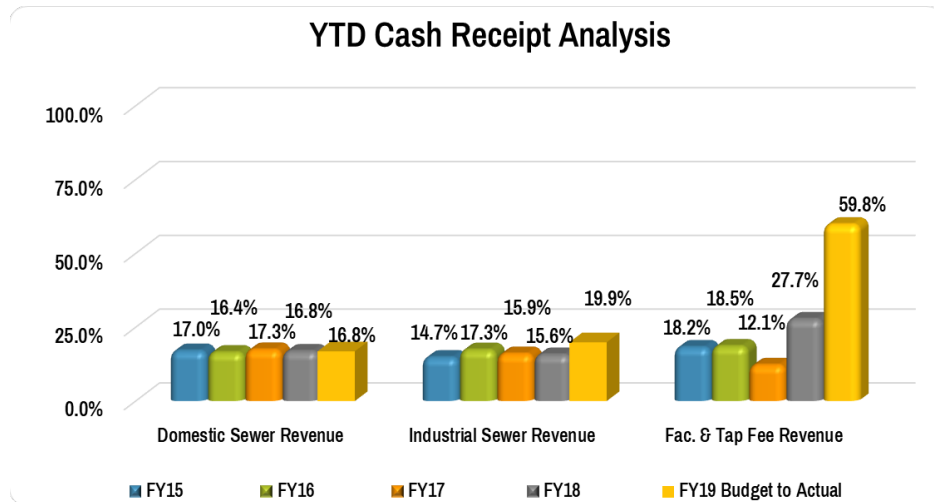
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Metropolitan Sewerage District  
ANALYSIS OF CASH RECEIPTS  
As of August 31, 2018



**Monthly Cash Receipts Analysis:**

- Monthly domestic sewer revenue is considered reasonable based on timing of cash receipts in their respective fiscal periods.
- Monthly industrial sewer revenue is reasonable based on historical trends.
- Due to the unpredictable nature of facility and tap fee revenue, staff considers facility and tap fee revenue reasonable.



**YTD Actual Revenue Analysis:**

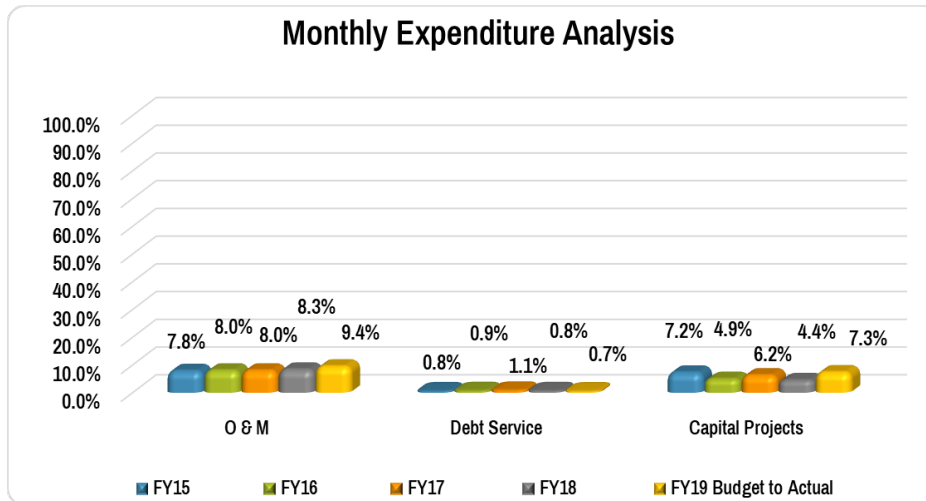
- YTD domestic sewer revenue is considered reasonable based on historical trends.
- YTD industrial sewer revenue is reasonable based on historical trends.
- Due to the unpredictable nature of facility and tap fee revenue, staff considers facility and tap fee revenue reasonable.

Meeting Date: October 17, 2018

Subject: Cash Commitment/Investment Report-Month Ended August 31, 2018

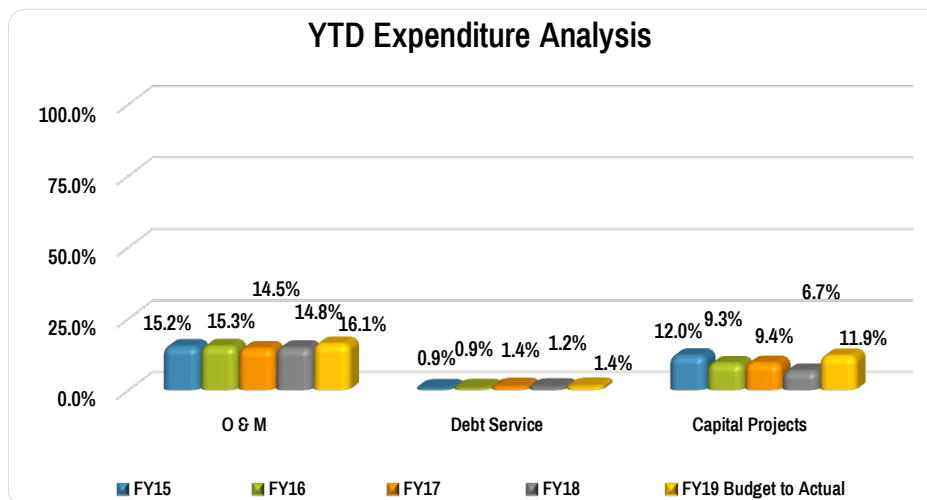
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Metropolitan Sewerage District  
ANALYSIS OF EXPENDITURES  
As of August 31, 2018



**Monthly Expenditure Analysis:**

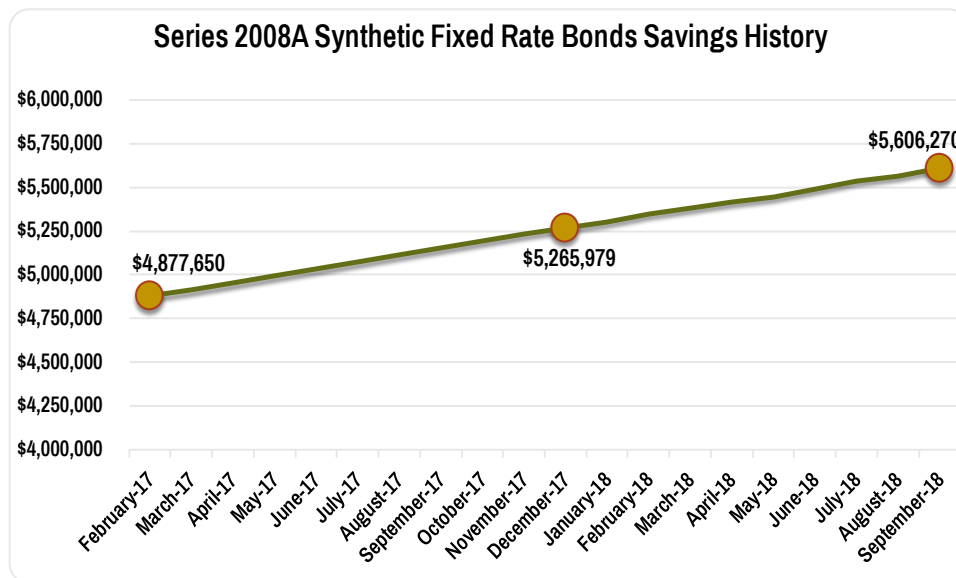
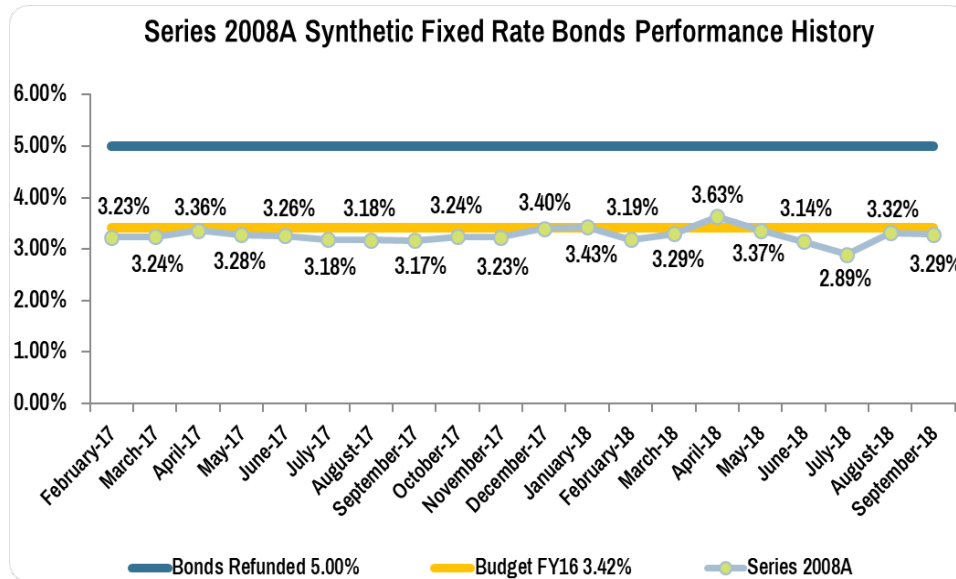
- ▶ Monthly O&M expenditures are considered reasonable based on historical trends and timing of expenditures in the current year.
- ▶ Due to the nature of the variable rate bond market, monthly expenditures can vary year to year. Based on current variable interest rates, monthly debt service expenditures are considered reasonable.
- ▶ Due to nature and timing of capital projects, monthly expenditures can vary from year to year. Based on the current outstanding capital projects, monthly capital project expenditures are considered reasonable.



**YTD Expenditure Analysis:**

- ▶ YTD O&M expenditures are considered reasonable based on historical trends.
- ▶ Due to the nature of the variable rate bond market, YTD expenditures can vary year to year. Based on current variable interest rates, YTD debt service expenditures are considered reasonable.
- ▶ Due to nature and timing of capital projects, YTD expenditures can vary from year to year. Based on the current outstanding capital projects, YTD capital project expenditures are considered reasonable.

Metropolitan Sewerage District  
**VARIABLE DEBT SERVICE REPORT**  
 As of September 30, 2018



**Series 2008A:**

- \* Savings to date on the Series 2008A Synthetic Fixed Rate Bonds is \$5,606,270 as compared to 4/1/2008 fixed rate of 4.85%.
- \* Assuming that the rate on the Series 2008A Bonds continues at the current all-in rate of 3.9475%, MSD will achieve cash savings of \$4,670,000 over the life of the bonds.
- \* MSD would pay \$2,300,872 to terminate the existing Bank of America Swap Agreement.

# **STATUS REPORTS**

### MSD System Services In-House Construction

**FY 18-19**

PROJECT NAME	LOCATION	ZIP CODE	ESTIMATED FOOTAGE	ESTIMATED PROJECT DATES	WO#	CREW	COMPLETION DATE	ACTUAL FOOTAGE	NOTES
Emergency Weaverville #2 FM Repair Section 1	Woodfin	28804	60	7/10/2018	254177	631	7/10/2018	61	Complete
West Skyland Circle Sewer Rehabilitation	Woodfin	28804	520	6/18/18 - 7/20/18	246546	631	7/11/2018	515	Complete
Waynesville Avenue Sewer Rehab Ph. 2	Asheville	28806	400	6/15/18 - 7/15/18	253710	674	7/16/2018	372	Complete
Williamette Circle Sanitary Sewer Rehabilitation	Weaverville	28787	183	7/12/18 - 7/18/18	233748	631	7/18/2018	185	Complete
Emergency Weaverville #2 FM Repair Section 2	Woodfin	28804	330	8/4/18-8/5/18	254896	674	8/5/2018	321	Complete
3 Cliffridge Parkway Emergency Replacement	Avery's Creek	28704	80	8/7/2018	477071	608	8/7/2018	80	Complete
56 Fairway Drive Sewer Rehabilitation	Asheville	28805	451	7/17/18 - 8/31/18	240884	674	8/13/2018	452	Complete
Livingston Street at Erskine Sewer Rehabilitation	Asheville	28801	710	7/19/18 - 8/31/18	247502	631	8/15/2018	720	Complete
Myrtle Street Sewer Rehabilitation	Arden	28704	410	8/14/18 - 8/29/18	251129	674	8/29/2018	372	Complete
105 Midland Ave Sewer Rehabilitation	Black Mountain	28711	810	8/16/18 - 9/28/18	242836	631	9/12/2018	825	Complete
12 Melody Lane Sewer Replacement	Asheville	28803	215	9-24-18 - 9-26-18	256028	631	9/26/2018	216	Complete
110 Beaver Drive	Woodfin	28804	425	9/3/18-9/28/18	210211	674			Work 95% complete
14 Shiloh Road Sewer Replacement	Asheville	28803	145	10/1/18 - 10/7/18	256024	631			Work beginning 10/1/18
51 Hillcrest Road Sewer Replacement	Woodfin	28804	1320	10/7/18 - 11/7/18	255110	631			Ready for construction
Kanawha Drive GSR	Montreat	28757	495	FY 18-19	255722	674			Ready for construction
70 Hampton Street Sewer Replacement	Asheville	28803	273	FY 18-19	256291	TBA			Ready for construction
Laurel Road Phase 2B	Arden	28704	1078	FY 18-19	250366	TBA			Ready for construction
Vandalia Ave Sewer Rehabilitation	Asheville	28806	1325	FY 18-19	248041	TBA			Ready for construction
500 Laurel Avenue Sewer Rehabilitation	Black Mountain	28711	230	FY 18-19	247281	TBA			Ready for construction
77 Dellwood Street Sewer Rehabilitation	Asheville	28804	200	FY 18-19	237568	TBA			Ready for construction
106 Seventh St Sewer Rehabilitation	Black Mountain	28711	200	FY 18-19	225198	TBA			Ready for construction
Old Patton Cove Road @ US 70 Hwy	Swannanoa	28778	1021	FY 18-19	255611	TBA			Ready for construction
Saint Johns Street Force Main Replacement	Arden	28704	1040	FY 18-19	238516	TBA			Ready for construction
Old Patton Cove Road @ Reese Drive	Swannanoa	28778	376	FY 18-19	255612	TBA			Ready for construction
26 Wilshire Drive Sewer Rehabilitation	West Asheville	28806	1478	FY 18-19	235158	TBA			in ROW
Bell Rd at New Haw Creek Rd Sewer Rehabilitation	Asheville	28805	725	FY 18-19	248044	TBA			in ROW
149 State Street Sewer Rehabilitation	Asheville	28806	265	FY 18-19	237791	TBA			In ROW
Waynensville Avenue at Brownwood	Asheville	28806	370	FY 18-19	247283	TBA			In Design
350 Old Haw Creek Road Sewer Rehabilitation	Asheville	28805	1537	FY 18-19	47802	TBA			In Design
12 Mayflower Drive Sewer Rehabilitation	Asheville	28804	350	FY 18-19	247347	TBA			In Desin
15 New Jersey Sewer Rehabilitation	Asheville	28806	250	FY 18-19	238782	TBA			In Design
44 Dogwood Grove Sewer Rehabilitation	Asheville	28805	525	FY 18-19	248033	TBA			In Design
28 Roebing Circle	Asheville	28803	600	FY 18-19	TBA	TBA			Preliminary Engineering
Beardon Ave at Cumberland Ave	Asheville	28801	425	FY 18-19	247286	TBA			Preliminary Engineering
Barnard Avenue at Lookout Sewer Rehabilitation	Asheville	28804	200	FY 18-19	236089	TBA			Preliminary Engineering
55 Congress Street Sewer Rehabilitation	Asheville	28801	823	FY 18-19	247631	TBA			Preliminary Engineering
East Grovestone Quarry Sewer Rehabilitation	Black Mountain	28711	780	FY 18-19	213459	TBA			Preliminary Engineering



## CONSTRUCTION TOTALS BY DATE COMPLETED - Monthly

From 7/1/2018 to 8/31/2018

	Dig Ups	Emergency Dig Ups	Dig Up ML Ftg	Dig Up SL Ftg	Manhole Repairs	Taps Installed	ROW Ftg	IRS Rehab Ftg *	Const Rehab Ftg *	D-R Rehab Ftg *	Manhole Installs	Bursting Rehab Ftg *	Total Rehab Ftg *
July 2018	28	8	328	986	23	34	4,335	0	321	660	19	412	1393
August 2018	25	8	104	1,234	24	41	17,210	0	677	968	12	576	2221
<b>Grand Totals</b>	<b>53</b>	<b>16</b>	<b>432</b>	<b>2,220</b>	<b>47</b>	<b>75</b>	<b>21,545</b>	<b>0</b>	<b>998</b>	<b>1628</b>	<b>31</b>	<b>988</b>	<b>3614</b>

\* Used to calculate Total Rehab Footage



## PIPELINE MAINTENANCE TOTALS BY DATE COMPLETED - Monthly

July 01, 2018 to August 31, 2018

	Main Line Wash Footage	Service Line Wash Footage	Rod Line Footage	Cleaned Footage	CCTV Footage	Smoke Footage	SL-RAT Footage
<b>2018</b>							
<b>July</b>	78,545	1,208	693	79,238	23,634	0	1,683
<b>August</b>	67,431	1,082	1,765	69,196	35,905	35,328	23,056
<b>Grand Total:</b>	<b>145,976</b>	<b>2,290</b>	<b>2,458</b>	<b>148,434</b>	<b>59,539</b>	<b>35,328</b>	<b>24,739</b>
<b>Avg Per Month:</b>	<b>72,988</b>	<b>1,145</b>	<b>1,229</b>	<b>74,217</b>	<b>29,770</b>	<b>17,664</b>	<b>12,370</b>



## CUSTOMER SERVICE REQUESTS

### Monthly - All Crews

CREW	MONTH	JOBS	AVERAGE RESPONSE TIME	AVERAGE TIME SPENT
<b>DAY 1ST RESPONDER</b>				
	July, 2018	97	20	35
	August, 2018	127	28	30
		<b>224</b>	<b>24</b>	<b>32</b>
<b>NIGHT 1ST RESPONDER</b>				
	July, 2018	11	17	25
	August, 2018	19	15	23
		<b>30</b>	<b>15</b>	<b>24</b>
<b>ON-CALL CREW *</b>				
	July, 2018	44	46	54
	August, 2018	37	41	40
		<b>81</b>	<b>44</b>	<b>47</b>
<b>Grand Totals:</b>		<b>335</b>	<b>28</b>	<b>35</b>

\* On-Call Crew Hours: 8:00pm-7:30am Monday-Friday, Weekends, and Holidays



## *Right of Way Section 1st Quarter Summary Open Projects*

<i>Project</i>	<i>Total ROW Budget</i>	<i>Total Expends to Date</i>	<i>Comment</i>
15 Dew Waite Road SSR	\$16,588		Await legal documents; anticipate by 11/1/18.
26 Wilshire Drive Sewer Rehabilitation	\$29,150		Intro letters out 9/11/18.
Asheville Country Club GSR	\$111,637	\$111,637	Project 100% complete with 100% of Total Budget expended to date. One condemnation filed with judgment pending.
Christian Creek Interceptor	\$100,477	\$19,583	Access 44% complete with 19% of Total Budget expended to date.
Long Shoals Road @ Allen Avenue GSR	\$25,300	\$13,068	Access 83% complete with 52% of Total Budget expended to date.
Nebraska Street Emergency Relocation	\$40,703	\$40,703	Project 100% complete with 100% of Total Budget expended. One condemnation filed with judgment pending. This was an emergency project built in-house by SS.
Old Haw Creek @ Greenbriar Road GSR	\$61,332	\$44,210	Project 100% complete with 72% of Total Budget expended and no condemnations.
Old West Chapel Road GSR	\$57,048	\$38,096	Project 100% complete with 67% of Total Budget expended and no condemnations.

## Planning & Development Project Status Report

Active Construction Projects Sorted by Work Location and Project Number

October 5, 2018

#	Project Name	Project Number	Work Location	Zip Code	Units	LF	Pre-Construction Conference Date	Comments
1	Dillingham Woods	2014048	Asheville	28805	22	375	3/4/2015	Testing
2	First Baptist Relocation	2015032	Asheville	28801	Comm.	333	7/21/2015	Final Inspection complete, awaiting close-out docs
3	8 Sulphur Springs Road	2015116	Asheville	28806	6	80	11/22/2016	Final Inspection complete, awaiting close-out docs
4	Atkins Street	2016009	Asheville	28803	45	903	1/20/2017	Final Inspection complete, awaiting close-out docs
5	Towne Place Suites	2016012	Asheville	28801	83	342	9/11/2018	Pre-con held, construction not yet started
6	Hounds Ear (Mears Ave Cottages)	2016123	Asheville	28806	18	402	8/18/2017	Pre-con held, construction not yet started
7	Lausch Subdivision	2016153	Asheville	28805	4	248	5/16/2017	Relocation of portion of line
8	The Peaks Shopping Center	2016175	Asheville	28805	4	850	5/11/2018	Waiting on final inspection
9	Hawthorne at Mills Gap	2016222	Asheville	28803	272	442	10/3/2017	Waiting on final inspection
10	Ashecroft	2016229	Asheville	28806	40	2,450	2/20/2018	Phase 1 - testing / Phase 2 - Installing
11	Grindstaff Subdivision	2016246	Asheville	28805	4	132	6/23/2017	Final Inspection complete, awaiting close-out docs
12	Ontecora	2017002	Asheville	28803	6	417	7/18/2017	Waiting on final inspection
13	Gerber Road Storage	2017049	Asheville	28803	Comm.	156	2/9/2018	Waiting on final inspection
14	RADTIP	2017052	Asheville	28801	0	919	2/13/2018	Installing
15	Panda Express	2017080	Asheville	28805	Comm.	100	9/8/2017	Waiting on final inspection
16	Rock Hill Road	2017096	Asheville	28803	15	990	7/24/2018	Pre-con held, construction not yet started
17	605 Fairview Road	2017103	Asheville	28803	10	380	5/18/2018	Installing
18	Beachum's Curve	2017105	Asheville	28806	34	908	7/17/2018	Installing
19	42 Old County Home Road	2017109	Asheville	28805	5	198	3/29/2018	Final Inspection complete, awaiting close-out docs
20	Villa Heights	2017118	Asheville	28806	8	540	2/20/2018	Pre-con held, construction not yet started
21	McCormick Place	2017150	Asheville	28801	17	210	8/3/2018	Waiting on final inspection
22	Westover Hills	2017177	Asheville	28801	1	105	10/6/2017	Final Inspection complete, awaiting close-out docs
23	Cisco Road	2017220	Asheville	28805	7	170	9/25/2018	Pre-con held, construction not yet started
24	US 74 Commercial Development	2018010	Asheville	28803	4	265	5/25/2018	Pre-con held, construction not yet started
25	Sunrise Drive Homes	2018046	Asheville	28806	5	220	7/20/2018	Waiting on final inspection
26	Alice Place Subdivision	2018066	Asheville	28803	19	480	6/19/2018	Waiting on final inspection
27	Ingles Smokey Park Highway	2018074	Asheville	28806	1	1,289	4/11/2014	Installing
28	West Keesler Avenue	2007176	Black Mountain	28711	6	410	11/15/2016	Final Inspection complete, awaiting close-out docs
29	808 Montreat Road	2015126	Black Mountain	28711	4	371	4/18/2017	Final Inspection complete, awaiting close-out docs
30	Tudor Croft (aka Roberts Farm) Ph.2	2016170	Black Mountain	28711	46	1,320	1/3/2017	Phase 2A inspected, waiting on closeout docs
31	Cherokee Trail	2017065	Black Mountain	28711	4	90	8/18/2017	Final Inspection complete, awaiting close-out docs
32	Sweet Birch Lane	2017111	Black Mountain	28711	65	780	9/28/2018	Installing
33	Chapman's Cove	2017227	Black Mountain	28711	10	430	9/21/2018	Installing
34	Hyde Park Phase 2	2013058	Buncombe Co.	28704	14	500	12/3/2013	Waiting on final inspection
35	Creekside Cottages	2014095	Buncombe Co.	28704	7	504	3/12/2015	Waiting on final inspection
36	Avondale Subdivision	2015052	Buncombe Co.	28803	4	215	4/7/2017	Final Inspection complete, awaiting close-out docs
37	Bee Tree Village	2015158	Buncombe Co.	28778	26	1,118	3/17/2017	Waiting on final inspection
38	Newbridge Pkwy Apts. Phase II	2016013	Buncombe Co.	28804	154	1,368	10/27/2017	Final Inspection complete, awaiting close-out docs
39	Weatherwood Subdivision	2016034	Buncombe Co.	28704	19	785	7/21/2017	Final Inspection complete, awaiting close-out docs
40	Perry Lane Apartments	2016075	Buncombe Co.	28704	120	710	11/7/2017	Waiting on final inspection
41	The Preserve at Avery's Creek	2016089	Buncombe Co.	28704	141	4,000	6/16/2017	Waiting on final inspection
42	NCDOT I-5504 NC 191/I-26 Interchange	2016132	Buncombe Co.	28806	0	355	10/23/2017	Installing
43	New Salem Heights	2016192	Buncombe Co.	28778	25	816	2/13/2018	Waiting on final inspection
44	Villas of Avery Creek	2017068	Buncombe Co.	28704	270	3,170	9/18/2018	Pre-con held, construction not yet started
45	Curry Court - Habitat	2017086	Buncombe Co.	28715	12	557	4/13/2018	Waiting on final inspection
46	240 Old Farm School Road	2017112	Buncombe Co.	28805	4	340	2/9/2018	Final Inspection complete, awaiting close-out docs
47	Rosscraggon Road Subdivision	2018048	Buncombe Co.	28704	4	370	4/20/2018	Waiting on final inspection
48	Upper Grassy Branch Road	2018087	Buncombe Co.	28805	6	250	8/31/2018	Installing
49	New Riparian	2018156	Buncombe Co.	28778	5	275	9/28/2018	Pre-con held, construction not yet started
50	Starview Heights	2016184	Weaverville	28787	16	Private	1/12/2018	Final Inspection complete, awaiting close-out docs
51	Wheeler Road	2017019	Weaverville	28787	72	1,535	3/28/2018	Waiting on final inspection
52	44 Central Ave	2017107	Weaverville	28787	7	275	10/27/2017	Final Inspection complete, awaiting close-out docs
53	Maple Trace Phase 2	2017160	Weaverville	28787	37	2,560	3/27/2018	Waiting on final inspection
54	Crest Mountain Phase 3B	2013041	Woodfin	28806	69	1,329	10/15/2013	Punchlist pending, awaiting closeout documents
55	Reese & Jan Lasher (High Hopes)	2015152	Woodfin	28806	14	320	4/26/2016	Final Inspection complete, awaiting close-out docs
56	Ventana Phase 2A	2016059	Woodfin	28806	8	900	2/17/2017	Final Inspection complete, awaiting close-out docs
57	Olivette Development-Phase 1 Gravity	2016065	Woodfin	28804	356	1,155	3/29/2018	Installing
58	Olivette Pump Station/Force Main	2016213	Woodfin	28804	356	1,740	2/27/2018	Pump station not started, Pilot bore under river
59	Ricky Robinson Property	2017088	Woodfin	28804	1	385	7/31/2018	Installing
60	Apple Lane	2017130	Woodfin	28804	4	60	8/31/2018	Pre-con held, construction not yet started
61	88 North Merrimon Avenue	2017196	Woodfin	28804	Comm.	455	5/11/2018	Waiting on final inspection
62	Greenwood Fields Phase 2	2018006	Woodfin	28804	158	2,200	3/9/2018	Final Inspection complete, awaiting close-out docs
			<b>TOTAL</b>		2,652	45,177		

**CAPITAL IMPROVEMENT PROGRAM**

**STATUS REPORT SUMMARY**

**October 10, 2018**

PROJECT	LOCATION OF PROJECT	CONTRACTOR	AWARD DATE	NOTICE TO PROCEED	ESTIMATED COMPLETION DATE	*CONTRACT AMOUNT	*COMPLETION STATUS (WORK)	COMMENTS
DRY RIDGE ROAD (4-INCH MAIN)	Asheville 28804	Buckeye Bridge	9/19/2018	TBD	TBD	\$282,853.90	0%	Contracts have been received. A preconstruction meeting is being scheduled.
ELKWOOD AVENUE	Woodfin	Thomas Construction Company	9/20/2017	11/6/2017	11/1/2018	\$1,226,672.00	95%	Mainline installation is complete. Final inspection partially complete. Working on services and restoration.
HENDERSONVILLE ROAD @ ROSSCRAGGON DRIVE, PHASE 2	Arden	Terry Brothers Construction Company	1/17/2018	4/16/2018	10/15/2018	\$1,249,473.60	98%	Mainline installation is complete. Final inspection has been conducted. Working on punchlist items.
HILL STREET	Asheville 28801	Terry Brothers Construction Company	7/18/2018	8/1/2018	11/28/2018	\$654,969.00	95%	Mainline installation is complete. Working on restoration.
MEMORY LANE	Asheville 28805	Terry Brothers Construction Company	6/13/2018	10/1/2018	1/29/2019	\$626,774.80	5%	Work has begun.
MOUNTAIN VIEW ROAD	Asheville 28805	Thomas Construction Company	2/21/2018	4/2/2018	11/1/2018	\$490,112.00	98%	Asphalt milling and overlay just completed. Final inspection to be scheduled.
SCHOOL ROAD @ CRANFORD ROAD	Asheville 28806	Fuller & Company Construction	4/18/2018	5/29/2018	11/1/2018	\$137,935.79	95%	Working on restoration.
SHEPPARD DRIVE	Asheville 28806	Fuller & Company Construction	4/18/2018	5/29/2018	11/1/2018	\$161,850.24	95%	Working on restoration.
SUTTON AVENUE	Black Mountain	Terry Brothers Construction Company	11/15/2017	1/15/2018	9/21/2018	\$1,085,186.28	100%	Final inspection completed 9/7/18. Project is complete and in close out.
WRF - INTERMEDIATE CLARIFIER SLIDE GATES REPLACEMENT	Woodfin	NHM Constructors	9/19/2018	TBD	TBD	\$154,300.00	0%	Contracts are being executed.
WRF - PLANT HEADWORKS IMPROVEMENTS	Woodfin	Judy Construction Company	1/18/2017	4/3/2017	2/25/2019	\$9,310,761.47	80%	Building framework and equipment on top of Fine Grit Facility are in place. Electrical work underway. Decking, steps and corrosion coatings being installed. Electrical Gear delivery is 4-5 weeks ahead of schedule.

**\*Updated to reflect approved Change Orders and Time Extensions**