



Opinion of Probable Cost
Princeville 53-Acre Expansion
Princeville, NC
S&ME Project No. 4305-19-035

PREPARED FOR:

**Edgecombe County
201 St. Andrew Street
Tarboro, North Carolina, 27886**

**Town of Princeville
201 South Main Street
Princeville, North Carolina, 27886**

PREPARED BY:

**S&ME, Inc.
3201 Spring Forest Road
Raleigh, NC 27616**

March 26, 2020



March 26, 2020

Town of Princeville
201 S. Main St
Princeville, NC 27886

Attention: Dr. Glenda Knight
Town Manager

via email: gknight@townofprinceville.com

Reference: **Opinion of Probable Cost**
Princeville 53-Acre Expansion
Edgecombe County, Princeville, NC
S&ME Project No. 4305-19-035

Dear Dr. Knight:

S&ME, Inc. (S&ME) appreciates the opportunity to assist Edgecombe County and the Town of Princeville with development of the newly acquired 53-acre expansion, by providing the enclosed opinion of probable cost (OPC). This OPC was performed in accordance with S&ME Proposal No. 43-1900050, dated May 2, 2019, and CO-1, dated January 15, 2020.

The enclosed OPC extends the environmental, master planning, preliminary engineering, and funding opportunity pursuits previously provided by S&ME. The enclosed report outlines the basis of an OPC based on constructing infrastructure elements of the conceptual master plan. This OPC is not based on construction-level details and drawings, or on actual bids from contractors who would perform the work.

If you have questions concerning information presented in the enclosed OPC, please contact the undersigned.

Sincerely,

S&ME, Inc.

A handwritten signature in blue ink, appearing to read 'L. Hale'.

Lawrence "Lee" Hale, P.E.
Senior Engineer (FL PE #83465)
lhale@smeinc.com

A handwritten signature in blue ink, appearing to read 'Samuel P. Watts'.

Samuel P. Watts, P.G.
Senior Project Manager
swatts@smeinc.com

Cc: Mr. Eric Evans (ericevans@edgecombeco.com), Edgecombe County Manager



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1.0 Summary

S&ME, Inc. (S&ME) appreciates the opportunity to assist Edgecombe County and the Town of Princeville with development of the newly acquired 53-acre expansion. This report extends the work already completed of master planning, preliminary engineering, and funding opportunity pursuits. This report outlines the basis of an opinion of probable cost (OPC) based on constructing infrastructure elements of the conceptual master plan. This OPC is not based on construction-level details and drawings, or on actual bids from contractors who would perform the work.

2.0 Utilities

The utilities that are being discussed here consists of the potable water, sanitary sewer, and stormwater collection systems. Each of these items consist of several components within that broad grouping. Here are a few specific items to point out:

- Water meters are included for each municipal building that has been identified.
- Force main piping length has been calculated assuming all new piping along the road to the existing Church Street lift station.
- Stormwater structures are included here, but the pond grading is included in earthwork.
- Some electric and fiber optic line items are included, but should not be considered all inclusive. Local service providers should be consulted for required installation items to be included in a separate OPC.

3.0 Site Work

Site work focuses primarily on the finish work for items such as the festival street, courtyards, walking trails, etc. Erosion and sediment controls are included here as a place holder. These costs could vary widely based on phasing, time of work, inspection costs, etc. While not all encompassing, this value serves as a preliminary placeholder for the project. A few notes to consider for site work are as follows:

- Roadway and parking lot are based on generally acceptable designs, not specific design reports.
- Many of the options, such as the Festival Street or the Main Street Village, are based on simple designs. Additional features that are added during design could add to overall cost.
- National Pollutant Discharge Elimination System (NPDES) Best Management Practices (BMPs) are assumed for single phase construction.

4.0 Earthwork

The earthwork portion of this OPC includes grading to be completed for all lots. This approach intends to make the lots within this part of the town essentially "pad ready," to encourage development and limit costs on new development. Depending on other items being completed, such as the Benefit Cost Analysis, could dictate the amount of fill that would be required. Simply raising the entire site 1' could increase the total volume of fill



needed by approximately 85,000 cubic yards. For every foot raised, that cost would increase by approximately \$647,000.00. While that cost is large, the benefits of raising the site 1' could be preferable to the risk of flooding. That risk analysis is not part of this contract.

5.0 Miscellaneous

There are certain items that may either be luxury items, or S&ME considered them to be specific items to be pointed out in different portions of the site. For instance, if the contract is phased into different pieces with different contractors, the mobilization fees would rise per instance. Gateway monuments and the dock are premium features that are ancillary to the site work. A miscellaneous line item for Parks/Open Space was incorporated to allow for additional budgets such as larger trees, playgrounds, sports courts, etc. that are not otherwise included in this OPC, including landscaping.

6.0 Offsite Improvements

Design of the 53-acre expansion is currently at a conceptual level. At this preliminary stage of design, the cost offsite improvements are guided by assumed improvements. For this estimate, the assumed roadway improvements consist of improving the roadway to add a center turn lane on Shiloh Farm Road. This turn lane is assumed to be 0.25 mile long. Due to the close proximity of the property entrance to the intersection with US Highway 64, this may not be an allowable design at this location. This determination would need to be made during the initial stages of design. Assumed South Main Street improvements consisted of adding a right turn and a median crossing to allow for access from traffic across the road.

The Church Street Lift Station improvement includes an assumed replacement of all of the pumps, piping, and electrical system of the lift station to handle the additional flow. This will be near the cost of a new lift station, but considerable savings will occur with the reuse of the existing wetwell, property, and fencing.

Due to the nature of these assumed improvements, there may be changes in design, or construction cost, as design discovery progresses from conceptual-level to construction-level detail.

Property acquisition will play a large role in the cost of this expansion. Due to the variations in real estate, the cost for the property acquisition is not included within this report.

7.0 Closing

In summary, this OPC is based on preliminary information. It is assumed that it will take two years to get sufficient design and permitting completed to receive actual bid pricing, so a two-year inflation rate of 2.50% per year (according to U.S. Labor Department data published on February 13, 2020) has been incorporated into the OPC. This inflation rate is in addition to a 15% contingency. Construction of the project in phases, or over a duration different from what has been assumed, may impact the cost.

Appendices

Appendix I – Opinion of Probable Cost Item Breakdown

Opinion of Probable Cost Item Breakdown						
Princeville 53-Acre Expansion						
S&ME Project No. 4305-19-035						
March 26, 2020						
No.	Item	Quantity	Unit Cost	Subtotal	Contingency Total	
Utilities						
1	Water Piping	8,651 LF	\$ 47.00	\$ 406,597.00	\$ 467,600.00	
2	Water Pipe Testing	8,651 LF	\$ 2.00	\$ 17,302.00	\$ 19,900.00	
3	Bore and Jack Water Piping (Shiloh Farm Rd.)	100 LF	\$ 450.00	\$ 45,000.00	\$ 51,800.00	
4	Water Air Release Valves	2 Each	\$ 4,876.00	\$ 9,752.00	\$ 11,200.00	
5	Water Taps/Connections	2 Each	\$ 5,000.00	\$ 10,000.00	\$ 11,500.00	
6	Blow Off Assembly	2 Each	\$ 10,555.00	\$ 21,110.00	\$ 24,300.00	
7	Single Service	13 Each	\$ 1,200.00	\$ 15,600.00	\$ 17,900.00	
8	Double Service	43 Each	\$ 1,500.00	\$ 64,500.00	\$ 74,200.00	
9	Fire Hydrant	13 Each	\$ 6,300.00	\$ 81,900.00	\$ 94,200.00	
10	Commercial Water Meters	9 Each	\$ 12,000.00	\$ 108,000.00	\$ 124,200.00	
11	Fire Double Detectors	9 Each	\$ 5,233.00	\$ 47,097.00	\$ 54,200.00	
12	Electrical Power Service Wire ⁵	8,651 LF	\$ 7.56	\$ 65,401.56	\$ 75,200.00	
13	Electrical Power Service ⁵	56 Assembly	\$ 2,925.55	\$ 163,830.80	\$ 188,400.00	
14	Fiber Optic Cable ⁵	8,651 LF	\$ 3.15	\$ 27,250.65	\$ 31,300.00	
15	Conduit, Open Trench ⁵	17,302 LF	\$ 8.05	\$ 139,281.10	\$ 160,200.00	
16	Gravity Sewer Piping	6,935 LF	\$ 45.00	\$ 312,075.00	\$ 358,900.00	
17	Gravity Sewer Pipe Testing	6,935 LF	\$ 2.00	\$ 13,870.00	\$ 16,000.00	
18	Gravity Sewer Manhole	28 Each	\$ 4,000.00	\$ 112,000.00	\$ 128,800.00	
19	Single Service	13 Each	\$ 2,000.00	\$ 26,000.00	\$ 29,900.00	
20	Double Service	43 Each	\$ 2,500.00	\$ 107,500.00	\$ 123,600.00	
21	2" Conduit (ITE/City Communications)	8,651 LF	\$ 5.00	\$ 43,255.00	\$ 49,700.00	
22	Lift Station	1 Each	\$ 400,000.00	\$ 400,000.00	\$ 460,000.00	
23	Force Main (FM)	9,990 LF	\$ 40.00	\$ 399,600.00	\$ 459,500.00	
24	Force Main Pipe Testing	9,990 LF	\$ 2.00	\$ 19,980.00	\$ 23,000.00	
25	FM Plug Valves	3 Each	\$ 4,037.00	\$ 12,111.00	\$ 13,900.00	
26	FM Air Release Valves	2 Each	\$ 4,876.00	\$ 9,752.00	\$ 11,200.00	
27	Sanitary Manhole Connection w/ Liner	1 Each	\$ 10,000.00	\$ 10,000.00	\$ 11,500.00	
28	Stormwater Piping	9,850 LF	\$ 41.19	\$ 405,721.50	\$ 466,600.00	
29	Testing (TV Inspection)	9,850 LF	\$ 4.15	\$ 40,877.50	\$ 47,000.00	
30	Pond Control Structure	1 Each	\$ 4,000.00	\$ 4,000.00	\$ 4,600.00	
31	Mitered End Section	4 Each	\$ 2,242.00	\$ 8,968.00	\$ 10,300.00	
32	Rip Rap	50 CY	\$ 69.00	\$ 3,450.00	\$ 4,000.00	
33	Catch Basin	37 Each	\$ 3,000.00	\$ 111,000.00	\$ 127,700.00	
34	Inlet	8 Each	\$ 1,320.67	\$ 10,565.36	\$ 12,200.00	
Site Work						
35	Silt Fence	7,172 LF	\$ 3.50	\$ 25,102.00	\$ 28,900.00	
36	Inlet Protection	45 Each	\$ 75.28	\$ 3,387.60	\$ 3,900.00	
37	Temporary Driveway	2 Each	\$ 2,500.00	\$ 5,000.00	\$ 5,800.00	
38	NPDES	1 LS	\$ 2,200.00	\$ 2,200.00	\$ 2,500.00	
39	Geo-Testing	1 LS	\$ 50,000.00	\$ 50,000.00	\$ 57,500.00	
40	Festival Street	1 LS	\$ 1,127,158.91	\$ 1,127,158.91	\$ 1,296,200.00	
41	Brick Courtyards or Pathways	1 LS	\$ 145,979.26	\$ 145,979.26	\$ 167,900.00	
	Roadways (182,283 SF)			\$ -	\$ -	
42	12" Stabilized Subgrade, 95% Comp	20,254 Sq. Yards	\$ 10.00	\$ 202,536.67	\$ 232,900.00	
43	8" Base Course	4,501 Cubic Yards	\$ 36.51	\$ 164,324.75	\$ 189,000.00	
44	2" Asphalt	20,254 Sq. Yards	\$ 9.58	\$ 194,030.13	\$ 223,100.00	
45	Striping	1 LS	\$ 10,000.00	\$ 10,000.00	\$ 11,500.00	
46	Sign Posts	75 Each	\$ 39.76	\$ 2,982.00	\$ 3,400.00	
	Parking Lots (193,179 SF)			\$ -	\$ -	
47	12" Stabilized Subgrade, 95% Comp	21,464 Sq. Yards	\$ 11.23	\$ 241,044.46	\$ 277,200.00	
48	8" Base Course	4,770 Cubic Yards	\$ 36.51	\$ 174,147.29	\$ 200,300.00	
49	1-1/2" Asphalt	21,464 Sq. Yards	\$ 7.25	\$ 155,616.42	\$ 179,000.00	
50	Handicap Ramps	86 Each	\$ 750.00	\$ 64,500.00	\$ 74,200.00	
51	Concrete Curb & Gutter	26,901 LF	\$ 30.56	\$ 822,094.56	\$ 945,400.00	
52	Parking Lights	30 Each	\$ 3,500.00	\$ 105,000.00	\$ 120,800.00	
	Walking Trails (94,391 SF)			\$ -	\$ -	
53	4" Thick Concrete Sidewalk	94,391 Sq. Ft.	\$ 5.00	\$ 471,955.00	\$ 542,700.00	
54	Town Square	1 LS	\$ 58,611.97	\$ 58,611.97	\$ 67,400.00	
55	Main Street Village	1 LS	\$ 168,669.50	\$ 168,669.50	\$ 194,000.00	
	Basketball Court (5,952 SF)			\$ -	\$ -	
56	1-1/2" Asphalt Pad	661 Sq. Yards	\$ 7.25	\$ 4,794.67	\$ 5,500.00	
57	Goal Posts	2 Each	\$ 2,724.00	\$ 5,448.00	\$ 6,300.00	
	Community Garden (31,500 SF)			\$ -	\$ -	
58	Top Soil	1,750 Cubic Yards	\$ 36.50	\$ 63,875.00	\$ 73,500.00	
59	Chain Link Fence	708 LF	\$ 11.64	\$ 8,241.12	\$ 9,500.00	
60	Water Line	100 LF	\$ 2.79	\$ 279.00	\$ 300.00	
Earth Work						
61	Soil Removal (Cut)	132,499 Cubic Yards	\$ 5.00	\$ 662,494.07	\$ 761,900.00	
62	Soil Placement (Fill)	64,533 Cubic Yards	\$ 3.48	\$ 224,576.00	\$ 258,300.00	
63	Clearing & Grubbing	61 Acres	\$ 6,736.00	\$ 410,896.00	\$ 472,500.00	
	Fine Grading			\$ -	\$ -	
64	Lots	65,448.11 Sq. Yards	\$ 1.95	\$ 127,623.82	\$ 146,800.00	
65	ROW	20,254.00 Sq. Yards	\$ 1.12	\$ 22,684.48	\$ 26,100.00	
66	Disturbed Areas	136,228.89 Sq. Yards	\$ 1.01	\$ 137,591.18	\$ 158,200.00	
67	Drainage Retention Areas	26,774.11 Sq. Yards	\$ 0.28	\$ 7,496.75	\$ 8,600.00	
	Seed & Mulch Disturbed Areas			\$ -	\$ -	
68	Lots	65,448 Sq. Yards	\$ 2.77	\$ 181,291.27	\$ 208,500.00	
69	Open Space	19,360 Sq. Yards	\$ 2.77	\$ 53,627.20	\$ 61,700.00	
70	Imported Soil (Purchased)	32,270 Cubic Yards	\$ 4.14	\$ 133,597.80	\$ 153,600.00	
Miscellaneous						
71	Dock	1 LS	\$ 30,000.00	\$ 30,000.00	\$ 34,500.00	
72	Park/Open Space	6.9 Acres	\$ 30,000.00	\$ 207,000.00	\$ 238,100.00	
73	Landscape & Irrigation	1 LS	\$ 1,000,000.00	\$ 1,000,000.00	\$ 1,150,000.00	
74	Survey Layout & Asbuilts	1 LS	\$ 25,000.00	\$ 25,000.00	\$ 28,800.00	
75	Maintenance of Traffic	1 LS	\$ 25,000.00	\$ 25,000.00	\$ 28,800.00	
76	Mobilization	1 LS	\$ 20,000.00	\$ 20,000.00	\$ 23,000.00	
77	Gateway Monuments	1 LS	\$ 50,000.00	\$ 50,000.00	\$ 57,500.00	
Offsite Improvements						
78	Church Street Lift Station Improvement	1 LS	\$ 250,000.00	\$ 250,000.00	\$ 287,500.00	
79	Shiloh Farms Roadway Improvement	0.25 Miles	\$ 2,711,719.00	\$ 677,929.75	\$ 779,600.00	
80	South Main Street (Alt. 64) Median Crossing	1 LS	\$ 351,698.00	\$ 351,698.00	\$ 404,500.00	
Construction Subtotals (Including 15% Contingency)						
				Utilities	\$ 3,764,500.00	
				Site Work	\$ 4,918,700.00	
				Earth Work	\$ 2,256,200.00	
				Miscellaneous	\$ 1,560,700.00	
				Off Site Improvements	\$ 1,471,600.00	
				Construction Subtotal :	\$ 13,971,700.00	
				Design (10% of Construction Subtotal)	\$ 1,397,170.00	
				Construction Management (15% of Construction Subtotal)	\$ 2,095,755.00	
				U.S Department of Labor Annual Inflation Rate	2.50%	
				Assumed Time to Receive Bids	2 Years	
				Opinion of Probable Cost Total :	\$ 18,348,800.00	

Notes:

- Opinion established using cost information available at the time. Materials and construction costs may increase.
- Opinion does not include legal, permitting, or administration fees.
- Opinion assumes the local POTW has adequate capacity for the project and will not need improvements or expansion.
- Property acquisition is not included due to the variation of negotiations for price.
- Electrical and Fiber opinions are intended to create a place holder and only include wire lengths mirroring water service and estimated connections. To cover full costs, local service providers should provide a quote.

Appendix II – Figures

PRINCEVILLE 53-ACRE EXPANSION

COMMERCIAL ~8.1 ACRES
MUNICIPAL ~2.8 ACRES
PARK/OPEN SPACE ~6.9 ACRES
STORMWATER/BUFFER ~8.6 ACRES

SINGLE FAMILY ~7.6 AC (61 LOTS)
TOWNHOMES ~2.5 AC (41 LOTS)
APARTMENTS ~3.79 AC (140 UNITS)



S&ME, Inc
 3201 SPRING FOREST ROAD
 RALEIGH, NC 27616

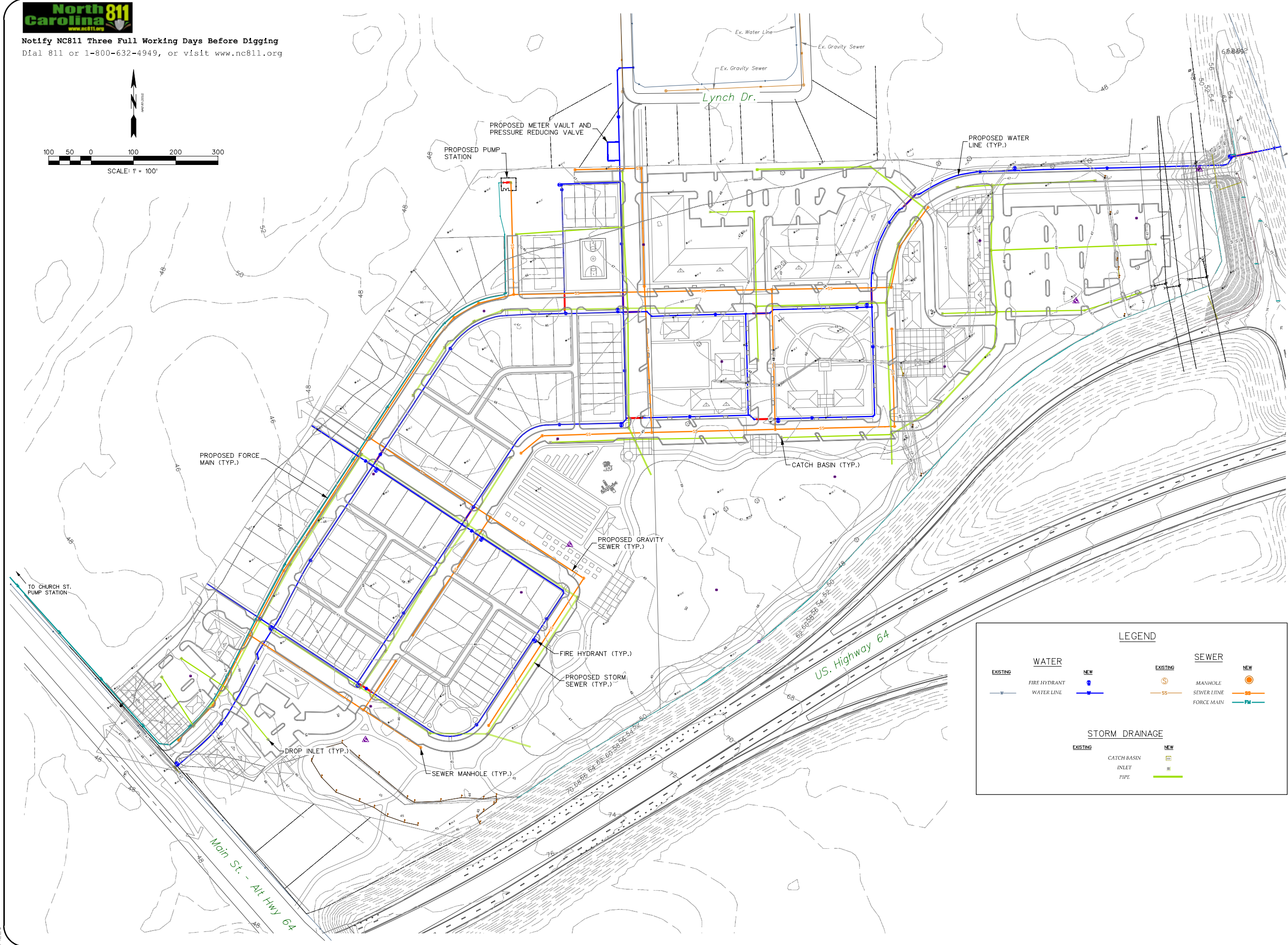
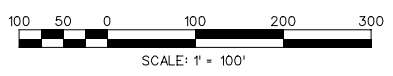
03.26.2020

PRINCEVILLE 53-ACRE EXPANSION MASTER PLAN

FIGURE 1



Notify NC811 Three Full Working Days Before Digging
Dial 811 or 1-800-632-4949, or visit www.nc811.org



LEGEND

WATER		SEWER	
EXISTING	NEW	EXISTING	NEW
FIRE HYDRANT	WATER LINE	MANHOLE	SEWER LINE
WATER LINE	WATER LINE	FORCE MAIN	FORCE MAIN
STORM DRAINAGE			
EXISTING	NEW		
CATCH BASIN	INLET		
PIPE	PIPE		

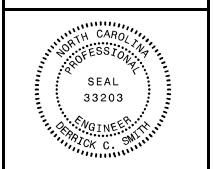
PRELIMINARY
DO NOT USE
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3201 SPRING FOREST ROAD
RALEIGH, NC 27616
T 919.872.2660
ENGINEERING FIRM
LICENSE NUMBER: F-0176
www.smeinc.com

THE WOOTEN COMPANY
301 West 14th Street, Greenville, NC 27834
252.751.0106 fax 252.751.3321
License Number: F-403



**PRELIMINARY
MASTER PLAN**
53 ACRES
PRINCEVILLE, NORTH CAROLINA



NO.	DATE	DESCRIPTION	BY	CHK	APV
1	01/20/2020	MASTER PLAN - UTILITIES	DRS	DCS	DCS

PROJECT NUMBER
430519035

DRAWING NUMBER
2

DRAWING NAME
PROPOSED UTILITIES LAYOUT

\$PLTDRVS\$
\$SCALES\$
\$USERSNAME\$
\$DATES\$
\$FILES\$

\$MODELNAME\$