

# Street and Roadway Inventory and Condition Assessment

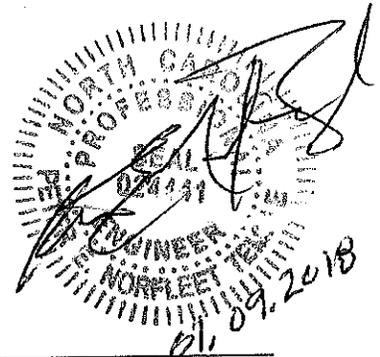
Prepared for:

**Town of Benson**

**Revised: January 9, 2018**

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*Date*

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## **1.0 Introduction**

The Town of Benson has contracted Enoch Engineers, PA to conduct an inventory of the physical characteristics of the streets owned and maintained by the Town of Benson. The inventory covers the following items:

- Block Number
- Length
- Width
- Pavement Type
- Curb and Gutter
- Sidewalk Location

## **2.0 Project Execution**

Given the amount of information required, a spreadsheet was created to streamline and document the items listed above. The spreadsheet lists each street with individual homogenous street segments identified and described. Homogenous street segments are usually identified between intersections. In a few instances, short streets were considered entirely even if they had an intersection. In the case of North Johnson St., a segment stretches past an intersection as the parameters did not change until a new segment was identified due to newer pavement and smaller width.

To facilitate a systematic approach to the assessment process, the Town of Benson was divided up into six color-coded regions, as indicated in the spreadsheet. The Gray Region is the subdivision located along US-301 N. beginning with Wilson Creek Drive. The Orange Region is East of I-95. The Pink Region is North of E. Main St. and East of the Railroad. The Blue Region is North of W. Main Street and West of the Railroad. The Yellow Region is South of E. Main Street and East of the Railroad. And finally, the Green Region is South of W. Main St. and West of the Railroad.

Each street was assessed by on-site evaluation. The length of each street was measured along the centerline. The width of each street was measured from the edge of pavement to the opposite edge of pavement. Where streets intersect, the streets were measured to the centerline of the intersection in order obtain the actual length of each street. However, when a Town of Benson maintained street intersects with a street maintained by the NCDOT, the centerline was measured to the edge of pavement of the first lane of the NCDOT maintained street. For example, Fayetteville Street Segment 1 was measured from the intersection of the centerline with the centerline of E. Church St. to the edge of pavement of the first lane of E. Main St.

Sidewalks were measured from the Back of Curb to the closest edge of the sidewalk to the nearest foot. Pavement edge treatment was identified between 24" Curb and Gutter, 30" Curb and Gutter, 30" Roll Curb, 6" Curb, and Strip Paving. In a few cases, the Gutter had been paved over up to the flow line.

Pavement condition was evaluated based on the guidelines provided by the NCDOT (see below). These conditions are subjective. Some street segments contain isolated, yet severe instances of pavement distress while the distress is more evenly distributed on other segments.

### 3.0 Assessment Results

While a few street segments did not have any visible distress in the pavement, most street segments exhibited at least nominal wear. Additionally, the most severe distress was largely found in low traffic areas.

The most common distress identified was Block and Transverse Cracking. In some areas, the cracks are over an inch wide, leading to instances of Raveling where the pavement is breaking away. Patching is the next most common pavement defect. In many instances, the Patching material is in worse condition than the actual pavement.

Overall, most streets are experiencing normal weathering and distress while a few streets are suffering extreme disrepair. One enclosed spreadsheet (Appendix B) indicates the severity level of the observed pavement distress. Another enclosed spreadsheet (Appendix C) includes an individual street ranking breakdown of all of the information included in Appendix B. The ranking system is noted as follows:

Severity Level	Rank Format
1 None	1
2 Light	2-X.Y.Z
3 Light/Moderate	3-X.Y.Z
4 Moderate	4-X.Y.Z
5 Moderate/Severe	5-X.Y.Z
6 Severe	6-X.Y.Z

The street ranking in Appendix C is broken down in the following format:

# - X.Y.Z

where # = severity level (ie, "None", "Light", etc.)

X = # of 'severe' pavement distresses observed

Y = # of 'moderate' pavement distresses observed

Z = # of 'light' pavement distresses observed

### 4.0 Cost Estimates

The following cost estimate is based upon milling and resurfacing the existing streets and does not include replacement of the subgrade if it is defective. This estimate is also based on current market price and is only to be used as a reference.

The cost to mill 1.0" is approximately \$3.00 / sq. yd. 1.0" resurfacing costs approximately \$7.50 / sq. yd. Traffic control and incidentals amount to approximately \$2000 per day. The total daily cost to mill and resurface at 5000 sq. yds. per day is estimated at \$54,500.00.

This estimate also assumes continuous workflow along homogenous streets and does not allow for moving equipment across town.

Based on the length and width data collected, there are approximately 394,150 sq. yds. of street in Benson. At 5000 sq. yds. milled and paved per day, the estimated total cost to mill and resurface the entire town is \$4,275,513.00 at current prices. See the chart below for a tabulated illustration of the cost breakdown. See Appendix C for Individual street cost estimates, these cost estimates do not include traffic control.

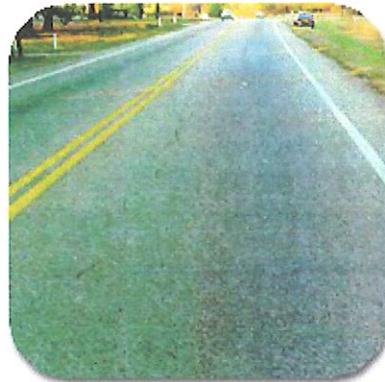
<b>Item</b>	<b>Unit Cost (\$)</b>	<b>Total Cost (\$)</b>
<i>Milling 1.0"</i>	\$3.00 /sq.yd.	\$1,182,432.00
<i>Resurfacing 1.0"</i>	\$7.50 /sq.yd.	\$2,956,081.00
<i>Traffic Control/Incidentals</i>	\$2000.00 /Day	\$137,000.00
<b>TOTAL COST</b>		<b>\$4,275,513.00</b>

**Fig. 1**

## 5.0 Appendix A - Pavement Distress

### 5.1 Alligator Cracking

*Note:* The entire lane in one direction of travel on a two-lane facility represents 50% of the section.



**Light:** Longitudinal disconnected hairline cracks about 1/8 inch wide running parallel to each other; initially may be only a single crack in the wheel path but could also look like an alligator pattern; sealant is satisfactory for sealed cracks.





**Moderate:** Longitudinal cracks in wheel path(s) forming an alligator pattern; cracks may be lightly spalled are about 1/4 inch wide.



**Severe:** Cracking has progressed so that pieces appear loose with severely spalled edges; cracks are probably 3/8 -1/2 inch wide or greater; pumping of fines through the cracks may be visible on the pavement surface; potholes may be present.

Description: Alligator cracking is a load associated structural failure. The failure can be either in the surface, base or sub base. Permanent deformation (rutting) does not have to be present for there to be alligator cracking.

Cracking first begins in the wheel path, usually as longitudinal cracking. Further stress creates an alligator pattern. If the surface is very flexible the longitudinal crack will become wider and an alligator pattern may not develop until severe distress sets in. The proper solution for both alligator and longitudinal cracking is the same since a structural failure is taking place in both cases. **Alligator cracking will also include cracking along the pavement edge.**

Each lane of a two-lane facility is to be evaluated as representing 50% of the section. For example, if there is continuous moderate alligator cracking in either one or both wheel paths of one lane only, the rater should mark 50% under moderate alligator cracking. If similar cracking had been present in the other lane, the rater would mark 100% under moderate.

For multi-lane undivided facilities the total number of lanes shall be divided into 100 to yield the percentage that each lane represents. For example, each lane of a five-lane facility would represent 20% of the section.

**Construction joints are not rated unless the pavement in that area has begun to fail or show distress.**

For multi-lane undivided facilities only the outside lane (or most distressed lane) in each direction shall be rated. These lanes will be rated together as one direction.

For sections where the alligator, longitudinal or transverse cracking has been sealed, **the rater should rate the severity of the crack, to the best of his or her ability, regardless of the sealant.** This is necessary to pick up the fact that the section may have moderate or severe cracking and not to penalize for sealing the cracks.

Sections with scattered potholes are difficult to evaluate. Potholes represent spot locations of severe cracking. If no other alligator cracking is present, then seldom do the potholes add up to 10%. So, for those sections that have about 5-10 potholes per mile with no other alligator cracking, the rater should mark 10% (01) under moderate.

**\* Important change in Alligator Cracking**

The new pavement condition survey will rate **all edge cracking as alligator cracking.**

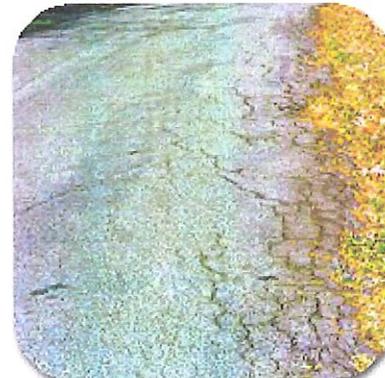
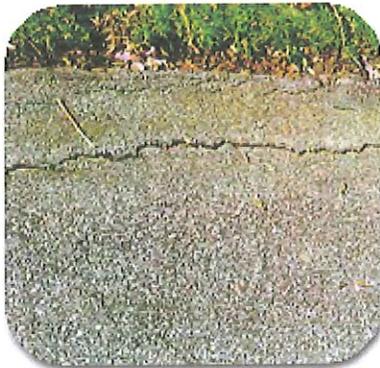
Edge cracking is alligator cracking except it is usually located within 1 - 2 feet of the edge of the pavement. Edge cracking pinpoints an edge failure rather than a lane failure, as in alligator cracking. The failure begins at the edge of the pavement and progresses in towards the center of the lane.

It is important to note edge cracking as it is an indicator that the edge may need strengthening either by PM patching, full-depth patching, and/or widening. Certainly, ponding of water at the pavement edge can contribute to and worsen an existing edge failure. By saturating the base, the strength at the edge is further reduced which increases the rate of deterioration of the pavement.

## ALLIGATOR CRACKING (Edge)



**Light:** Hairline cracks just beginning to show; are random with no pattern; cracks may be 1/8 inch wide.



**Moderate:** Cracks more extensive and may be forming an alligator pattern; cracks are about 1/4 inch wide may be spalled.



**Severe:** Cracks are alligatored and severely spalled; cracks usually 3/8 - 1/2 inch wide or greater; pieces may be loose and potholes may be present.

(Source: <http://www.ncdot.gov/doh/pmu/PavementInfo/pcsman/alligtor.html>)

## 5.2 Bleeding

*Note:* Each lane of a two-lane facility represents 50% of the section.



**Light:** Condition is present on 10 to 25 percent of the section.



**Moderate:** Condition is present on 26 to 50 percent of the section.



**Severe:** Condition is present on greater than 50 percent of the section.

**Description:** Bleeding is a film of bituminous material on the pavement surface which creates a shiny, reflective surface. Bleeding is caused by excess asphalt cement in the mix and /or low air void content. During hot weather the asphalt fills the voids of the mix and then expands out onto the surface of the pavement. The process is not reversible during cold weather, thus asphalt will accumulate on the surface.

No attempt has been made to define various levels of severity. Bleeding should be recognized when it is extensive enough to create a uniform coating in the wheel path(s). Each wheel path represents 25% of the section on a two-lane facility.

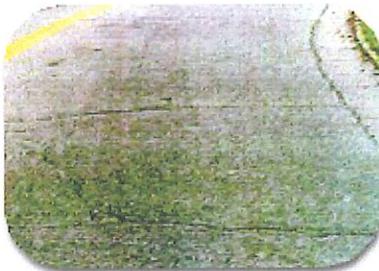
(Source: <http://www.ncdot.gov/doh/pmu/PavementInfo/pcsman/bleed.html>)

### 5.3 Block/Transverse Cracking

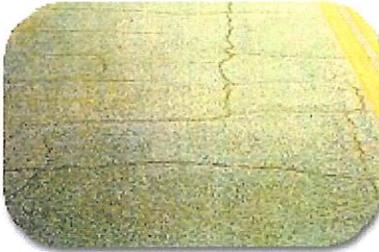
*Note:* The entire pavement surface area represents 100% of the section.



**Light:** Cracks, usually only transverse, are less than 1/4 inch wide and are not spalled; block pattern may not be visible yet; sealant is satisfactory if cracks have been sealed; transverse cracks usually 10 to 20 feet apart.



**Moderate:** Block pattern may be visible with blocks 10 square feet or greater present; cracks are 1/4 inch wide to less than 1/2 inch wide; cracks may or may not be spalled; transverse cracks usually 5 to 20 feet apart.



**Severe:** Cracks may be severely spalled with smaller blocks 2 to 10 square feet present; cracks usually about 1/2 inch wide or greater; transverse cracks may be 1 to 2 feet apart throughout portions of the surface.

**Description:** Block cracks divide the pavement up into roughly rectangular pieces. Block cracking is not load-associated. Cracks are generally caused by shrinkage of the asphalt concrete and daily temperature cycling. Wheel path loads can increase the severity of block cracking if water is allowed to penetrate into the cracks. It is therefore very important to seal these cracks to prevent water penetration into the base materials.

\* Transverse cracking also includes reflective cracking, plant mix resurfacing over concrete.

The primary causes of reflective cracking are movement of the concrete slab beneath the PM resurfacing because of thermal and moisture changes and faulting at joints. Typically, the reflective joints are bulged above the riding surface such that the vehicle is riding over small bumps.

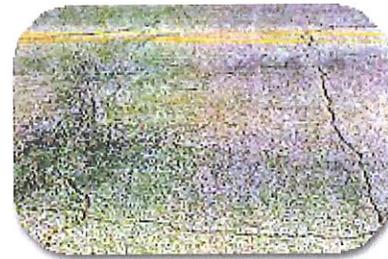
## TRANSVERSE CRACKING (REFLECTIVE)

### (Overall Condition)

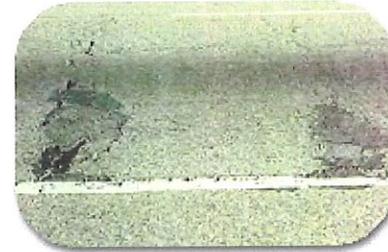
*Note:* This type distress is found only on a bituminous overlay over an existing Portland Cement Concrete pavement (reflective cracking).



**Light:** Cracks usually 1/8 to 1/4 inch wide; sealant is in satisfactory condition if present; cracks have little or no spalling; joints are usually not bumped up.



**Moderate:** Cracks are about 3/8 to 1/2 inch wide; cracks can be moderately spalled; joints may be bumped up 1/2 to 1 inch high.



**Severe:** Cracks usually greater than 1/2 inch wide; cracks are severely spalled; joint may be bumped up greater than 1 inch high.

(Source: <http://www.ncdot.gov/doh/pmu/PavementInfo/pcsman/block.html>)

## 5.4 Patching

*Note:* The entire pavement surface represents 100% of the section.



**Light:** Condition is present on 6 to 15 percent of the section.



**Moderate:** Condition is present on 16 to 30 percent of the section.



**Severe:** Condition is present on more than 30 percent of the section.

Description: Patching is defined as any surface area of the existing pavement that indicates some type of maintenance repair has taken place. These patched areas may be Plant Mix or BST skin patches, edges, overlays or full depth patches. They may be in spot locations, along one or both edges, in the wheelpaths, across the entire surface for short distances, or a combination of any of these. In-kind treatments, such as PM edges on an existing PM surface, shall be considered as patches. Crack pouring shall not be considered as a type of patching to be measured.

The quality and condition of the patch is not to be considered in evaluating patching. It does not matter if all the patches are alligator cracked, rutted or potholed. These conditions are measured in the other distresses. Patching is an indication of the amount of surface area that has received some type of maintenance repair which may or may not be holding up.

The amount of patching shall be measured as a percentage of the total surface area. Be aware that a section must have at least 6 percent of the surface area to be marked as slight. Do not assume that because there is some patching a slight condition exists. On a 1.0 mile section, 6 percent represents 0.06 mile (315 feet) of patching over the full pavement width.

(Source: <http://www.ncdot.gov/doh/pmu/PavementInfo/pcsman/patch.html>)

## 5.5 Raveling

*Note:* Sand seals are not to be marked as having any raveling.



**Light:** Aggregate loss within the pavement lanes is not great; small amounts of pitting may be detected; aggregate or binder has started to wear away.



**Moderate:** Some pitting or stripping evident; random stripping with small areas (less than one square foot) or strips of aggregate broken away.





**Severe:** Stripping very evident; aggregate accumulations may be a problem; large sections (greater than one square foot) of stripping with aggregate layer broken away.

Description: Raveling (which for our purposes also includes weathering) is the wearing away of the pavement surface caused by the dislodging of aggregate particles or loss of asphalt binder (weathering). Weathering is more common on BST or Slurry surfaces than on plant mix surfaces. Raveling indicates either a hardening or poor application of asphalt binder. Weathering is simply a hardening of the asphalt binder.

Sand seals pose a unique problem as far as raveling is concerned. Sand seals can look moderately or severely raveled within 3 months after application. Yet, the binder that was put down to seal the cracks is intact and will probably hold up for 2 to 3 years. Therefore, sand seals are not to be considered when looking at raveling.

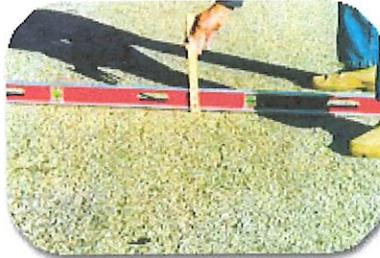
Raveling is usually found in the wheel path area and is seen as longitudinal streaks.

(Source: <http://www.ncdot.gov/doh/pmu/PavementInfo/pcsman/ravel.html>)

## 5.6 Reflective Cracking

See Transverse Cracking.

## 5.7 Rutting



**Light:** Rutting 1/4 to less than 1/2 inch deep.



**Moderate:** Rutting 1/2 to less than 1 inch deep.



**Severe:** Rutting 1 inch deep or greater.

Description: A rut is a surface depression in the wheel path(s) or at the edge of pavement. Rutting comes from a pavement deformation in any of the pavement layers or the subgrade, usually caused by consolidation or lateral movement of the materials due to

traffic loads. Movement in the mix in hot weather or inadequate compaction during construction is the main cause of rutting.

(Source: <http://www.ncdot.gov/doh/pmu/PavementInfo/pcsman/rut.html>)

## 6.0 Appendix B – Field Data Spreadsheet







## **7.0 Appendix C – Street Rankings & Cost Estimates**

**Appendix C - Street Rankings & Cost Estimates**

Street Data									
Street Name	Seg. No.	Block No.	Segment Description	Traffic Category	Segment Length (ft.)	Segment Width (EP-EP) (ft.)	Mill Cost (1" mill @ \$3.00/sy)	Resurfacing Cost (1" asphalt @ \$7.50/sy)	Rank- # of Defects
N. Ellis Dr.	1	N/A	Entire length of N. Ellis Dr.	B	350.00	20.00	\$2,333	\$5,833	6-4.1.0
N. Market St.	5	500	From E. Holmes St. to End	A	170.00	25.00	\$1,417	\$3,542	6-3.0.1
N. Hall St.	2	200	Between E. Branch St. and E. Holmes St.	A	354.00	28.00	\$3,304	\$8,260	6-2.0.0
Carolyn Dr.	2	200	Between sharp bend and N. Johnson St.	A	1084.00	30.00	\$10,840	\$27,100	6-1.0.1
N. Dunn St.	2	200	Between E. Church St. and E. Hill St.	B	365.00	30.00	\$3,650	\$9,125	6-1.0.1
Lee Rd.	1	N/A	Entire length of Lee Rd.	A	396.00	15.00	\$1,980	\$4,950	6-1.0.0
Norris St.	1	N/A	Entire length of Norris St.	B	1118.00	9.00	\$3,354	\$8,385	6-1.0.0
Hardison St.	1	N/A	Entire length of Hardison St.	B	1118.00	9.00	\$3,354	\$8,385	6-1.0.0
E. Holmes St.	5	500	Between North St. and N. Hall St.	A	350.00	30.00	\$3,500	\$8,750	5-4.1.1
W. Lambert Dr.	1	N/A	Entire length of W. Lambert Dr.	B	330.00	20.00	\$2,200	\$5,500	5-3.2.0
N. Farmer Dr.	3	300	Between W. Hill St. and W. Martin St.	A	420.00	15.00	\$2,100	\$5,250	5-3.1.1
Oak Park Dr.	1	100	Entire length of Oak Park Dr.	A	1130.00	30.00	\$11,300	\$28,250	5-2.2.1
S. Dunn St.	3	300	Between E. Harnett St. and E. Brocklyn St.	A	730.00	22.00	\$5,353	\$13,383	5-2.2.1
W. Hale St.	1	300	Entire Length of W. Hale St.	A	850.00	32.00	\$9,067	\$22,667	5-2.2.1
E. Harnett Dr.	1	100	Between SE Railroad St. and S. Market St.	B	315.00	20.00	\$2,100	\$5,250	5-2.2.0
W. Pope St.	1	1100	Entire length of W. Pope St.	A	1420.00	30.00	\$14,200	\$35,500	5-2.2.0
S. Ryals St.	4	600	From W. Riddick St. and W. Mann St.	A	360.00	32.00	\$3,840	\$9,600	5-2.0.3
N. Johnson St.	6	N/A	From E. Branch St. to dirt road	B	838.00	22.00	\$6,145	\$15,363	5-2.0.2
W. Printer Dr.	1	N/A	Entire length of W. Printer Dr.	B	330.00	18.00	\$1,980	\$4,950	5-2.0.2
S. Dunn St.	4	400	From E. Brockyn St. to End	A	250.00	22.00	\$1,833	\$4,583	5-2.0.1
E. Holmes St.	6	600	From N. Hall St. to End	A	235.00	25.00	\$1,958	\$4,896	5-1.4.0
W. Hill St.	2	200	Between N. Wall St. and N. Farmer Dr.	A	1075.00	26.00	\$9,317	\$23,292	5-1.3.2
E. Morris Ave.	2	500	Between North St. and N. Hall St.	A	340.00	30.00	\$3,400	\$8,500	5-1.3.1
N. Lee St.	5	500	From E. Holmes St. to E. Branch St.	A	330.00	24.00	\$2,640	\$6,600	5-1.2.2
Lake Shore Dr.	2	100	From drvwy to Woodside Ln.	A	710.00	30.00	\$7,100	\$17,750	5-1.2.1
Lake Shore Dr.	3	100	From Woodside Ln. to McKenna Ln.	A	1220.00	30.00	\$12,200	\$30,500	5-1.2.1
Lake Shore Dr.	1	100	Lincoln St. to the drvwy at 103 Lake Shore left aff	A	525.00	30.00	\$5,250	\$13,125	5-1.2.1
N. Farmer Dr.	1	100	Between W. Main St. and W. Church St.	B	416.00	20.00	\$2,773	\$6,933	5-1.2.1
N. Hall St.	1	300	Between End and E. Branch St.	A	630.00	28.00	\$5,880	\$14,700	5-1.2.1
N. Johnson St.	7	1400	Between N. Wall St. and New Section	A	507.00	30.00	\$5,070	\$12,675	5-1.2.1
Park Pl.	1	N/A	Entire length of Park Pl.	A	2400.00	20.00	\$16,000	\$40,000	5-1.2.1
S. Ellis Dr.	1	N/A	Entire length of S. Ellis Dr.	B	350.00	18.00	\$2,100	\$5,250	5-1.1.3
E. Branch St.	5	600	From N. Hall St. to End	A	360.00	22.00	\$2,640	\$6,600	5-1.1.2
N. Hall St.	3	100	Between E. Holmes St. and E. Morris St.	A	350.00	27.00	\$3,150	\$7,875	5-1.1.2

### Appendix C - Street Rankings & Cost Estimates

Street Data									
Street Name	Seg. No.	Block No.	Segment Description	Traffic Category	Segment Length (ft.)	Segment Width (EP-EP) (ft.)	Mill Cost (1" mill @ \$3.00/sy)	Resurfacing Cost (1" asphalt @ \$7.50/sy)	Rank- # of Defects
N. Lee St.	4	400	From E. Morgan St. to E. Holmes St.	A	360.00	30.00	\$3,600	\$9,000	5-1.1.1
Corporate Parkway	1	N/A	Entire length of Corporat Parkway	B	400.00	20.00	\$2,667	\$6,667	5-1.1.1
Meadowbrook Ct.	1	100	Entire length of Meadowbrook Ct.	A	355.00	20.00	\$2,367	\$5,917	5-1.0.3
W. Church St.	7	700	Between N. Augusta St. and NC-50	B	660.00	20.00	\$4,400	\$11,000	5-1.0.3
N. Johnson St.	8	1500	From New Section to End	A	380.00	22.00	\$2,787	\$6,967	5-1.0.2
S. Johnson St.	1	100	Entire length of S. Johnson St.	B	350.00	26.00	\$3,033	\$7,583	5-1.0.2
SW Railroad St.	1	100	Between W. Main St. and W. Parrish Dr.	B	350.00	33.00	\$3,850	\$9,625	5-1.0.2
SW Railroad St.	2	200	Between W. Parrish Dr. and W. Harnett St.	A	365.00	18.00	\$2,190	\$5,475	5-1.0.2
N. Market St.	1	100	Between E. Main St. and E. Church St.	B	350.00	38.00	\$4,433	\$11,083	5-1.0.1
S. Eastwood Dr.	1	100	Between NC 50 and Parrish Dr.	A	320.00	24.00	\$2,560	\$6,400	5-1.0.0
S. Eastwood Dr.	2	200	Between Parrish Dr. and Maplewood St	A	455.00	24.00	\$3,640	\$9,100	5-1.0.0
E. Morris Ave.	3	600	Between N. Hall St. and N. Honeycutt St.	A	970.00	30.00	\$9,700	\$24,250	4-0.4.1
Gilbert St.	2	200	Between E. Parrish Dr. and E. Harnett St.	B	375.00	26.00	\$3,250	\$8,125	4-0.4.0
W. Martin St.	1	200	Between N. Wall St. and N. Farmer Dr.	B	1300.00	30.00	\$13,000	\$32,500	4-0.4.0
Railroad Rd.	1	N/A	Entire length of Railroad Rd.	A	4224.00	20.00	\$28,160	\$70,400	4-0.3.1
E. Parrish Dr. (West of I-95)	5	500	Between S. Lee St. and S. Dunn St.	B	365.00	40.00	\$4,867	\$12,167	4-0.2.0
N. Johnson St.	4	400	From E. Morgan St. to E. Holmes St.	B	349.00	24.00	\$2,792	\$6,980	4-0.2.0
E. Branch St.	4	500	Between North St. and N. Hall St.	A	353.00	25.00	\$2,942	\$7,354	4-0.1.0
S. Eastwood Dr.	3	300	From Maplewood Dr. to Plaza Pl.	A	455.00	24.00	\$3,640	\$9,100	4-0.1.0
W. Parrish Dr.	3	300	Between S. Farmer Dr. and S. McLamb St.	B	1020.00	26.00	\$8,840	\$22,100	4-0.1.0
W. Parrish Dr.	4	400	Between S. McLamb St. and S. Lincoln St.	B	360.00	30.00	\$3,600	\$9,000	4-0.1.0
W. Parrish Dr.	5	500	Between S. Lincoln St. and S. McKinley St.	B	345.00	28.00	\$3,220	\$8,050	4-0.1.0
W. Parrish Dr.	7	700	Between S. Augusta St. and S. Pine St.	B	315.00	32.00	\$3,360	\$8,400	4-0.1.0
Holland Dr.	1	N/A	Entire length of Holland Dr.	B	450.00	9.00	\$1,350	\$3,375	4-0.1.0
Carolyn Dr.	1	100	Between N. Wall St. and the sharp bend	A	330.00	30.00	\$3,300	\$8,250	3-0.3.2
N. Farmer Dr.	2	200	Between W. Church St. and W. Hill St.	A	430.00	20.00	\$2,867	\$7,167	3-0.3.2
S. Lee St.	2	200	Between E. Parrish Dr. and E. Harnett St.	B	370.00	34.00	\$4,193	\$10,483	3-0.3.2
Coats Cir	1	100	Entire length of Coats Cir	A	972.00	20.00	\$6,480	\$16,200	3-0.3.1
E. Harnett Dr.	2	200	Between S. Market St. and S. Elm St.	B	350.00	22.00	\$2,567	\$6,417	3-0.3.1
Fayetteville St.	2	200	Between E. Church St. and E. Hill St.	B	365.00	30.00	\$3,650	\$9,125	3-0.3.1
SE Railroad St.	1	100	Between E. Main St. and E. Parrish Dr.	B	350.00	57.00	\$6,650	\$16,625	3-0.3.1
E. Holmes St.	1	100	Between N. Market St. and N. Elm St.	A	365.00	24.00	\$2,920	\$7,300	3-0.2.3
S. Farmer Dr.	2	200	Between W. Parrish Dr. and W. Harnett St.	A	365.00	16.00	\$1,947	\$4,867	3-0.2.3
S. Farmer Dr.	1	100	Between W. Main St. and W. Parrish Dr.	A	350.00	16.00	\$1,867	\$4,667	3-0.2.3
W. Riddick St.	1	200	Between S. Wall St. and S. Farmer Dr.	B	590.00	32.00	\$6,293	\$15,733	3-0.2.3

### Appendix C - Street Rankings & Cost Estimates

Street Data									
Street Name	Seg. No.	Block No.	Segment Description	Traffic Category	Segment Length (ft.)	Segment Width (EP-EP) (ft.)	Mill Cost (1" mill @ \$3.00/sy)	Resurfacing Cost (1" asphalt @ \$7.50/sy)	Rank- # of Defects
Carolyn Dr.	3	300	Between N. Johnson St. and Lee Rd.	A	333.00	30.00	\$3,330	\$8,325	3-0.2.2
E. Branch St.	1	200	Between N. Elm St. and N. Johnson St.	A	365.00	30.00	\$3,650	\$9,125	3-0.2.2
E. Holmes St.	4	400	Between N. Lee St. and North St.	A	330.00	26.00	\$2,860	\$7,150	3-0.2.2
N. Augusta St.	1	100	Between W. Main St. and W. Church St.	A	350	28	\$3,267	\$8,167	3-0.2.2
S. Lincoln St.	2	200	Between W. Parrish Dr. and W. Harnett St.	A	365.00	20.00	\$2,433	\$6,083	3-0.2.2
S. Pine St.	2	200	Between W. Parrish Dr. and W. Harnett St.	A	470.00	24.00	\$3,760	\$9,400	3-0.2.2
S. Pine St.	3	300	Between W. Harnett St. and W. Woodall St.	A	420.00	22.00	\$3,080	\$7,700	3-0.2.2
SW Railroad St.	3	300	Between W. Harnett St. and W. Brocklyn St.	A	720.00	20.00	\$4,800	\$12,000	3-0.2.2
W. Harnett St.	1	100	Between SW Railroad St. and S. Wall St.	B	355.00	30.00	\$3,550	\$8,875	3-0.2.2
E. Harnett Dr.	4	400	Between S. Lee St. and S. Dunn St.	B	380.00	22.00	\$2,787	\$6,967	3-0.2.1
E. Holmes St.	3	300	Between N. Johnson St. and N. Lee St.	A	380.00	30.00	\$3,800	\$9,500	3-0.2.1
E. Morris Ave.	1	400	Between N. Lee St. and North St.	A	535.00	30.00	\$5,350	\$13,375	3-0.2.1
N. Johnson St.	3	300	Between E. Hill St. and E. Morgan St.	B	263.00	26.00	\$2,279	\$5,698	3-0.2.1
N. Johnson St.	1	100	Between E. Main St. and E. Church St.	B	355.00	32.00	\$3,787	\$9,467	3-0.2.1
N. Johnson St.	2	200	Between E. Church St. and E. Hill St.	B	355.00	25.00	\$2,958	\$7,396	3-0.2.1
S. Pine St.	1	100	Between W. Main St. and W. Parrish Dr.	B	360.00	27.00	\$3,240	\$8,100	3-0.2.1
W. Woodall St.	3	300	Between S. Ryals St. and S. McLamb St.	A	820.00	32.00	\$8,747	\$21,867	3-0.2.1
E. Hill St.	1	100	Between NE Railroad St. and N. Market St.	A	350.00	26.00	\$3,033	\$7,583	3-0.2.0
E. Hill St.	2	200	Between N. Market St. and N. Elm St.	B	365.00	26.00	\$3,163	\$7,908	3-0.2.0
E. Hill St.	3	300	Between N. Elm St. and N. Johnson St.	B	375.00	26.00	\$3,250	\$8,125	3-0.2.0
E. Hill St.	5	500	Between N. Lee St. and N. Dunn St.	B	385.00	24.00	\$3,080	\$7,700	3-0.2.0
E. Hill St.	4	400	Between N. Johnson St. and N. Lee St.	B	385.00	26.00	\$3,337	\$8,342	3-0.2.0
S. McLamb St.	2	200	Between W. Parrish Dr. and W. Harnett St.	A	365.00	28.00	\$3,407	\$8,517	3-0.1.4
S. McLamb St.	3	300	Between W. Harnett St. and W. Woodall St.	A	365.00	30.00	\$3,650	\$9,125	3-0.1.4
S. McLamb St.	4	400	From W. Woodall St. and W. Brocklyn St.	A	340.00	24.00	\$2,720	\$6,800	3-0.1.4
Peacock Ln.	1	N/A	Between Denning and Curr-Well Ln.	B	1312.00	18.00	\$7,872	\$19,680	3-0.1.4
E. Morgan St.	3	300	Between N. Johnson St. and N. Lee St.	A	385.00	32.00	\$4,107	\$10,267	3-0.1.3
N. Elm St.	5	500	From E. Holmes St. to E. Branch St.	A	350.00	30.00	\$3,500	\$8,750	3-0.1.3
N. Lee St.	2	200	Between E. Church St. and E. Hill St.	B	365.00	34.00	\$4,137	\$10,342	3-0.1.3
N. McLamb St.	1	100	Between W. Main St. and W. Church St.	A	350.00	32.00	\$3,733	\$9,333	3-0.1.3
N. McLamb St.	2	200	From W. Church St. to W. Hill St.	A	360.00	24.00	\$2,880	\$7,200	3-0.1.3
S. Lincoln St.	1	100	Between W. Main St. and W. Parrish Dr.	A	350.00	24.00	\$2,800	\$7,000	3-0.1.3
W. Brocklyn St.	2	200	Between S. Wall St. and S. Farmer Dr.	A	590.00	30.00	\$5,900	\$14,750	3-0.1.3
E. Harnett Dr.	5	400	Between S. Dunn St. and S. George St.	B	365.00	30.00	\$3,650	\$9,125	3-0.1.2
E. Harnett Dr.	6	500	Between S. George St. and Chicopee Rd.	B	350.00	30.00	\$3,500	\$8,750	3-0.1.2

### Appendix C - Street Rankings & Cost Estimates

Street Data									
Street Name	Seg. No.	Block No.	Segment Description	Traffic Category	Segment Length (ft.)	Segment Width (EP-EP) (ft.)	Mill Cost (1" mill @ \$3.00/sy)	Resurfacing Cost (1" asphalt @ \$7.50/sy)	Rank- # of Defects
E. Morgan St.	1	100	Between N. Market St. and N. Elm St.	B	365.00	28.00	\$3,407	\$8,517	3-0.1.2
Levinson Ln.	1	100	Entire length of Levinson Ln.	A	350.00	20.00	\$2,333	\$5,833	3-0.1.2
N. Lee St.	1	100	Between E. Main St. and E. Church St.	B	350.00	34.00	\$3,967	\$9,917	3-0.1.2
North St.	2	200	Between E. Holmes St. and E. Branch St.	A	350.00	24.00	\$2,800	\$7,000	3-0.1.2
S. Farmer Dr.	4	400	From W. Woodall St. and W. Brocklyn St.	A	360.00	18.00	\$2,160	\$5,400	3-0.1.2
S. Farmer Dr.	3	300	Between W. Harnett St. and W. Woodall St.	A	365.00	18.00	\$2,190	\$5,475	3-0.1.2
S. Lee St.	4	400	Between E. Brocklyn St. and E. Mann St.	A	775.00	24.00	\$6,200	\$15,500	3-0.1.2
S. McLamb St.	5	500	From W. Brocklyn St. and S. Lincoln St.	A	400.00	24.00	\$3,200	\$8,000	3-0.1.2
SE Railroad St.	2	200	Between E. Parrish Dr. and E. Harnett St.	B	375.00	20.00	\$2,500	\$6,250	3-0.1.2
W. Brocklyn St.	4	400	Between S. McLamb St. and S. Lincoln St.	A	360.00	30.00	\$3,600	\$9,000	3-0.1.2
W. Church St.	4	400	Between N. McLamb St. and N. Lincoln St.	B	350.00	24.00	\$2,800	\$7,000	3-0.1.2
W. Church St.	1	100	Between the Railroad and N. Wall St.	B	350.00	30.00	\$3,500	\$8,750	3-0.1.2
W. Woodall St.	1	200	Between S. Wall St. and S. Farmer Dr.	A	590.00	34.00	\$6,687	\$16,717	3-0.1.2
W. Woodall St.	2	300	Between S. Farmer Dr. and S. Ryals St.	A	190.00	34.00	\$2,153	\$5,383	3-0.1.2
Woodside Ln.	1	100	Entire length of Woodside Ln	A	315.00	30.00	\$3,150	\$7,875	3-0.1.2
Westside Dr.	1	N/A	Entire length of Westside Dr.	B	701.00	20.00	\$4,673	\$11,683	3-0.1.2
E. Branch St.	3	400	Between N. Lee St. and North St.	A	346.00	24.00	\$2,768	\$6,920	3-0.1.1
E. Branch St.	2	300	Between N. Johnson St. and N. Lee St.	A	200.00	23.00	\$1,533	\$3,833	3-0.1.1
E. Church St.	1	100	Between NE Railroad St. and N. Market St.	B	350.00	30.00	\$3,500	\$8,750	3-0.1.1
E. Church St.	2	200	Between N. Market St. and N. Elm St.	B	365.00	30.00	\$3,650	\$9,125	3-0.1.1
E. Church St.	3	300	Between N. Elm St. and N. Johnson St.	B	365.00	30.00	\$3,650	\$9,125	3-0.1.1
E. Church St.	4	400	Between N. Johnson St. and N. Lee St.	B	400.00	30.00	\$4,000	\$10,000	3-0.1.1
E. Church St.	5	500	Between N. Lee St. and N. Dunn St.	B	370.00	34.00	\$4,193	\$10,483	3-0.1.1
E. Church St.	6	600	Between N. Dunn St. and N. Fayetteville St.	B	370.00	36.00	\$4,440	\$11,100	3-0.1.1
E. Dixon St.	1	N/A	Entire length of E. Dixon St.	A	300.00	22.00	\$2,200	\$5,500	3-0.1.1
E. Hill St.	6	600	Between N. Dunn St. and N. Fayetteville St.	B	365.00	22.00	\$2,677	\$6,692	3-0.1.1
E. Hill St.	7	700	Between N. Fayetteville St. and Catherine St.	A	240.00	26.00	\$2,080	\$5,200	3-0.1.1
E. Parrish Dr. (East of I-95)	1	900	Western end of E. Parrish Dr.	A	340.00	16.00	\$1,813	\$4,533	3-0.1.1
E. Parrish Dr. (West of I-95)	6	600	From S. Dunn St. to End	B	350.00	34.00	\$3,967	\$9,917	3-0.1.1
N. Johnson St.	5	500	From E. Holmes St. to E. Branch St.	B	346.00	24.00	\$2,768	\$6,920	3-0.1.1
S. McLamb St.	1	100	Between W. Main St. and W. Parrish Dr.	A	350.00	26.00	\$3,033	\$7,583	3-0.1.1
W. Brocklyn St.	1	100	Between the Railroad and S. Wall St.	B	390.00	30.00	\$3,900	\$9,750	3-0.1.1
W. Church St.	2	200	Between N. Wall St. and N. Farmer Dr.	B	835.00	30.00	\$8,350	\$20,875	3-0.1.1
W. Parrish Dr.	1	100	Between Railroad and S. Wall St.	B	390.00	42.00	\$5,460	\$13,650	3-0.1.1
W. Parrish Dr.	2	200	Between S. Wall St. and S. Farmer Dr.	B	580.00	26.00	\$5,027	\$12,567	3-0.1.1

**Appendix C - Street Rankings & Cost Estimates**

Street Data									
Street Name	Seg. No.	Block No.	Segment Description	Traffic Category	Segment Length (ft.)	Segment Width (EP-EP) (ft.)	Mill Cost (1" mill @ \$3.00/sy)	Resurfacing Cost (1" asphalt @ \$7.50/sy)	Rank- # of Defects
W. Parrish Dr.	6	600	Between S. McKinley St. and S. Augusta St.	B	355.00	28.00	\$3,313	\$8,283	3-0.1.1
Heaterstone Ct.	1	N/A	Entire length of Heaterstone Ct.	B	1063.00	17.00	\$6,024	\$15,059	3-0.1.1
E. Moore St.	1	300	Entire length of E. Moore St.	A	350.00	20.00	\$2,333	\$5,833	3-0.1.0
E. Church St.	7	700	Between N. Fayetteville St. and N. Honeycutt St.	B	220.00	36.00	\$2,640	\$6,600	2-0.1.1
E. Kennedy Cir	1	300, 400	Entire length of E. Kennedy St.	A	1100.00	24.00	\$8,800	\$22,000	2-0.0.4
E. King St.	1	200, 300	Entire length of E. King St.	A	775.00	24.00	\$6,200	\$15,500	2-0.0.4
E. Stoneybrook Ct.	1	100	Entire length of E. Stoneybrook Ct.	A	630.00	20.00	\$4,200	\$10,500	2-0.0.4
Gilbert St.	1	100	Between E. Main St. and E. Parrish Dr.	B	350.00	22.00	\$2,567	\$6,417	2-0.0.4
S. Dunn St.	1	100	Between E. Main St. and E. Parrish Dr.	B	350.00	38.00	\$4,433	\$11,083	2-0.0.4
S. Farmer Dr.	5	500	From W. Brocklyn St. and W. Riddick St.	A	365.00	14.00	\$1,703	\$4,258	2-0.0.4
S. Maynard St.	1	1600	Entire length of S. Maynard St.	A	280.00	24.00	\$2,240	\$5,600	2-0.0.4
W. Brooklyn St.	1	300	Entire Length of W. Brooklyn St.	A	560.00	20.00	\$3,733	\$9,333	2-0.0.4
Crystal Place	1	N/A	Entire length of Crystal Place	B	200.00	16.00	\$1,067	\$2,667	2-0.0.4
Wendy's Place	1	N/A	Entire length of Wendy's Place	B	500.00	20.00	\$3,333	\$8,333	2-0.0.4
E. Harnett Dr.	3	300	Between S. Elm St. and S Lee St.	B	700.00	22.00	\$5,133	\$12,833	2-0.0.3
E. Holmes St.	2	200	Between N. Elm St. and N. Johnson St.	A	365.00	30.00	\$3,650	\$9,125	2-0.0.3
E. Mann St.	2	300	Between S. Elm St. and S. Lee St.	A	720.00	20.00	\$4,800	\$12,000	2-0.0.3
E. Morgan St.	2	200	Between N. Elm St. and N. Johnson St.	A	375.00	30.00	\$3,750	\$9,375	2-0.0.3
N. Augusta St.	2	200	From W. Church St. to W. Hill St.	A	340.00	20.00	\$2,267	\$5,667	2-0.0.3
N. Lee St.	3	300	Between E. Hill St. and E. Morgan St.	A	230.00	37.00	\$2,837	\$7,092	2-0.0.3
N. McKinley St.	1	100	Between W. Main St. and W. Church St.	A	350.00	28.00	\$3,267	\$8,167	2-0.0.3
N. Ryals St.	1	N/A	Entire Length of N. Ryals St.	A	430.00	30.00	\$4,300	\$10,750	2-0.0.3
S. George St.	1	300, 400	Entire length of S. George St.	A	730.00	30.00	\$7,300	\$18,250	2-0.0.3
S. Lincoln St.	3	300	Between W. Harnett St. and W. Woodall St.	A	365.00	30.00	\$3,650	\$9,125	2-0.0.3
S. Lincoln St.	4	400	From W. Woodall St. and W. Brocklyn St.	A	340.00	30.00	\$3,400	\$8,500	2-0.0.3
Sunnybrook Cir	1	100	Entire length of Sunnybrook Cir.	A	585.00	20.00	\$3,900	\$9,750	2-0.0.3
W. Brocklyn St.	3	300	Between S. Farmer Dr. and S. Ryals St.	A	190.00	30.00	\$1,900	\$4,750	2-0.0.3
W. Church St.	3	300	Between N. Farmer Dr. and N. McLamb St.	B	775.00	34.00	\$8,783	\$21,958	2-0.0.3
W. Hill St.	1	100	Between N. Railroad St. and N. Wall St.	B	350.00	27.00	\$3,150	\$7,875	2-0.0.3
W. Mann St.	2	200	Between S. Farmer Dr. and S. Ryals St.	A	190.00	15.00	\$950	\$2,375	2-0.0.3
W. Martin St.	2	400	Between N. Farmer Dr. and N. Lincoln St.	B	980.00	30.00	\$9,800	\$24,500	2-0.0.3
W. Riddick St.	2	300	Between S. Farmer Dr. and S. Ryals St.	A	190.00	32.00	\$2,027	\$5,067	2-0.0.3
W. Woodall St.	4	400	Between S. McLamb St. and S. Lincoln St.	A	360.00	30.00	\$3,600	\$9,000	2-0.0.3
Gilbert Rd.	1	N/A	Entire length of Gilbert Rd.	A	5280.00	24.00	\$42,240	\$105,600	2-0.0.3
W. Pope St.	1	N/A	Mingo to curve	B	1215.00	30.00	\$12,150	\$30,375	2-0.0.3

### Appendix C - Street Rankings & Cost Estimates

Street Data									
Street Name	Seg. No.	Block No.	Segment Description	Traffic Category	Segment Length (ft.)	Segment Width (EP-EP) (ft.)	Mill Cost (1" mill @ \$3.00/sy)	Resurfacing Cost (1" asphalt @ \$7.50/sy)	Rank- # of Defects
Larksdale Cv.	1	100	Entire Length of Larksdale Cv.	A	1446.00	22.00	\$10,604	\$26,510	1
McKenna Ln.	1	100	Entire length of McKenna Ln	A	240.00	20.00	\$1,600	\$4,000	1
N. Elm St.	3	300	Between E. Hill St. and E. Morgan St.	B	260.00	26.00	\$2,253	\$5,633	1
N. Elm St.	1	100	Between E. Main St. and E. Church St.	B	350.00	32.00	\$3,733	\$9,333	1
N. Elm St.	2	200	Between E. Church St. and E. Hill St.	B	365.00	26.00	\$3,163	\$7,908	1
N. Market St.	3	300	Between E. Hill St. and E. Morgan St.	A	260.00	30.00	\$2,600	\$6,500	1
N. Market St.	4	400	From E. Morgan St. to E. Holmes St.	A	358.00	30.00	\$3,580	\$8,950	1
N. McKinley St.	2	200	From W. Church St. to W. Hill St.	A	350.00	24.00	\$2,800	\$7,000	1
Plaza Pl.	1	N/A	Entire length of Plaza Pl.	A	220.00	20.00	\$1,467	\$3,667	1
S. Augusta St.	2	200	From W. Parrish Dr. to End	A	180.00	28.00	\$1,680	\$4,200	1
S. Blackmon St.	1	600	Entire length of S. Blackmon St.	A	360.00	22.00	\$2,640	\$6,600	1
S. Elm St.	1	100	Between E. Main St. and E. Parrish Dr.	B	350.00	30.00	\$3,500	\$8,750	1
S. Elm St.	2	200	Between E. Parrish Dr. and E. Harnett St.	B	375.00	30.00	\$3,750	\$9,375	1
S. Elm St.	4	400	Between E. Woodall St. and E. Brocklyn St.	B	365.00	36.00	\$4,380	\$10,950	1
S. Elm St.	5	500	From E. Brocklyn St. to E. Mann St.	A	700.00	22.00	\$5,133	\$12,833	1
S. Ryals St.	3	500	From W. Brocklyn St. and W. Riddick St.	A	370.00	20.00	\$2,467	\$6,167	1
S. Ryals St.	1	300	Between W. Harnett St. and W. Woodall St.	A	365.00	22.00	\$2,677	\$6,692	1
S. Ryals St.	2	400	From W. Woodall St. and W. Brocklyn St.	A	360.00	20.00	\$2,400	\$6,000	1
S. Williams Dr.	1	1000	Entire length of S. Williams Dr.	A	300.00	20.00	\$2,000	\$5,000	1
W. Church St.	5	500	Between N. Lincoln St. and N. McKinley St.	B	340.00	30.00	\$3,400	\$8,500	1
W. Church St.	6	600	Between N. McKinley St. and N. Augusta St.	B	345.00	30.00	\$3,450	\$8,625	1
W. Hill St.	6	600	Between N. McKinley St. and N. Augusta St.	A	350.00	20.00	\$2,333	\$5,833	1
W. Mann St.	1	100	Between S. Wall St. and S. Farmer Dr.	A	590.00	15.00	\$2,950	\$7,375	1
W. Mann St.	4	400	From S. Blackmon St. to End	A	180.00	10.00	\$600	\$1,500	1
W. Mann St.	3	300	Between S. Ryals St. and S. Blackmon St.	A	360.00	20.00	\$2,400	\$6,000	1
Willa Chase Ct.	1	100	Entire Length of Willa Chase Ct.	A	1542.00	22.00	\$11,308	\$28,270	1
Spruce Dr.	1	N/A	Entire length of Spruce Dr.	B	1204.00	20.00	\$8,027	\$20,067	1