



**5-YEAR STREET REHABILITATION &
MAINTENANCE PLAN**

2015 – 2019

ADOPTED 12/08/14

BRENTWOOD BOROUGH



Brentwood Borough Street Rehabilitation & Maintenance Plan

SUMMARY

With severely limited funding resources, it is important for the Borough to have a systematic plan for pavement rehabilitation that takes into account budget constraints, coordination with other programs and projects, and the impacts/effects of pedestrian, bus, and bicycle routes. Additionally, it is essential to change many approaches to environmental protection. One important technique to improve water quality and reducing pollutants and environmental risks as well as reduce Stormwater runoff is the use of “Green Technologies” such as pervious and permeable paving materials, the use of roadside swales, and rain gardens.

Other alternative paving systems are being evaluated for possible future use and will be discussed further with Borough Council as information becomes available.

A. STREET REHABILITATION POLICY

Section 1. General Policy

It is the policy of the Borough of Brentwood that there shall be a 5-year Street Rehabilitation Plan for the entire Borough to be adopted by the Borough Council.

The primary purpose of the street rehabilitation program is to maintain a safe surface conveyance system in the public right-of-way for vehicles, bicycles, transit and pedestrians. The right-of-way also provides ancillary functions of a water conveyance system and location of public utilities.

The Borough shall strive to identify and implement integrated solutions that address the multiple demands on the street infrastructure that are designed for safety, environmentally sustainable and economically efficient over the long run.

The Plan shall make use of all available funding and set priorities for rehabilitation of streets in accordance with their use, as follows:

- Arterials
- Collectors
- Residentials

(Within the collectors and residential street categories, bus and bicycle routes shall be given first consideration.)

To the extent practicable, these priorities shall be consistent with:

- 1) the Borough’s General Plan policy of encouraging use of forms of transportation other than automobiles,
- 2) the Regional Wet Weather Water goals regarding water quality, flooding potential and runoff control, and
- 3) the Borough’s strategic Plan Goal of Roadway Improvements.

Brentwood Borough shall maintain a rolling 5-Year Street Rehabilitation & Maintenance Plan for paving and reconstructing Borough streets. Borough staff updates the plan on an annual basis for timeline changes in coordinated projects and for addition of a new fifth year. The plan is then presented to the Department of Public Works Supervisor, Borough Manager, and Borough Engineer, which then reviews, edits, and recommends it to the Borough Council for adoption.



The 5-Year Plan is generated with the aid of a computerized Pavement Management System as well as Borough Staff, DPW Superintendent, Borough Manager, and Borough Engineer. The following criteria is used when ranking and recommending the streets

1. Street Pavement Condition
2. Type of Repair Required (Mill and Pave, Reconstruction, Rejuvenator)
3. Road Classification (e.g. arterial, collector, or residential)
4. Roadway Use (e.g. ADT Volumes, Bus Route, School Route)
5. Cost Effectiveness
6. Budget Constraints

Section 2. Criteria

The Street Rehabilitation and Repair Policy contains the basic criteria for developing the plan and includes the following:

- A. Staff Evaluation based on the following:
 - Street Pavement Condition
 - Type of Repair Required (Mill and Pave, Reconstruction, Rejuvenator)
 - Road Classification (e.g. arterial, collector, or residential)
 - Roadway Use (e.g. ADT Volumes, Bus Route, School Route)
 - Cost Effectiveness
 - Budget Constraints
- B. Coordination with other Borough Programs:
 - Sanitary Sewer
 - Storm Water System
 - Sidewalk/Curbs
 - Borough Facility Upgrades/Improvements
 - Traffic Signals and other Traffic Calming Measures
 - Park Projects
 - Street Maintenance
- C. Coordination with known utility company work:
 - Columbia Gas
 - PA American Water
 - Comcast
 - Verizon
 - New services
- D. Budget distributed accordingly:
 - Arterials – 10%
 - Collectors – 50%
 - Residentials – 25%
 - Concrete and discretionary – 15%
- E. Collector and residential streets with PAT Transit routes or School Routes given first consideration over those without such routes.
- F. Contiguous blocks rather than one block at a time as much as possible.



Section 3. Assumptions

- 1) Emergency and interim work for routine maintenance (e.g. pothole repair) will be done and funded outside this program.
- 2) Available funds for street rehabilitation include an annual budgeted transfer from the General Fund of \$700,000 to the Capital Improvement Fund, SHACOG Community Development Block Grants, and other federal, state, and local funds appropriated by the Borough Council for this purpose during the annual budget process.
- 3) Additional sources of funding other than those above may be needed to ensure acceptable levels of effort in street rehabilitation.

Section 4. Funding

All Brentwood Borough Real Estate Tax funds allocated for local streets and roads, as available and other similar funds shall be used for street rehabilitation as follows:

- 10% for Arterials
- 50% for Collectors
- 25% for Residential
- 15% for Discretionary and Demonstration Projects

The fees assessed to mitigate for excessive deterioration on and wear and tear of streets resulting from construction activities, public or private, shall be used for street rehabilitation.

To provide for maximizing the use of the limited funds available, the Program may provide for paving publicly owned unimproved streets in areas other than those zoned S1 (industrial and manufacturing) if at least 75% of the cost is borne by the adjacent property owners.

Section 5 - Specific Policy

The Street Rehabilitation Program shall be based on the following criteria, listed in order of priority:

- 1) Street rehabilitation shall be coordinated with utility, sewer, water contamination runoff issues, and other underground activities to minimize the cost and maximize the effectiveness of rehabilitation and improve the environment.
- 2) Long term cost effectiveness, long term street pavement durability and aesthetics are important for priority setting and repair methodology selection.
- 3) In order to benefit the greatest number of residents, heavy street use (as indicated by traffic counts, school routes, and PAT bus routes) shall be given great consideration.
- 4) Rehabilitation of an entire street, rather than one block at a time, shall be scheduled as much as possible.
- 5) First hand assessment of streets by the DPW Superintendent as well as computer based analysis, shall be a basis for street rehabilitation program development.



Section 6. Program and Policy Development and Updates

The 5-year Street Rehabilitation Program shall be adopted by the Borough Council and the 5-year planning process shall be adopted as a Borough policy as follows:

- 1) Each year, the 5-year program shall be reviewed and updated formally by the Borough Council, with the advice of the Department of Public Works, Borough Manager, and Borough Engineer.
- 2) On an annual basis coinciding with budget preparation, the Street Rehabilitation Policy shall be reviewed and updated formally by the Borough Council, with advice of the Department of Public Works, Borough Manager, and Borough Engineer.
- 3) Both the 5-Year Program and the Street Rehabilitation Policy shall be reviewed and updated annually to ensure that the revolving 5-Year Street Plan is consistent with the policy stated herein and for consistency with the Council Goals.





**Reverse the
asphalt age
by 4 years**

PART 2 - MAINTENANCE

Section 7. Maintenance Activities

PROGRAM CATEGORIES

Road Maintenance crews perform corrective maintenance activities on a daily basis.

These categories include, In-House Leveling Operations, Surface Treatment Program, Roadway and Bike Lane Surface Preparation and Maintenance, Weed and Brush Removal, Culvert Maintenance, and Traffic Control Maintenance.

Surface treatment contracts can turn into major construction projects. The contracts include projects such as Slurry Seals, Chip Seals, micro surfacing, asphalt concrete overlays, curb, gutter, and sidewalk repairs, ADA compliant curb ramps, Rejuvenator Method and Crack Sealing. The preventive maintenance concept is the principle that pavement life can be extended significantly through periodic seal coating, resurfacing, and patching. Brentwood Borough will focus on the Rejuvenator Method and the Crack Sealing Method initially.

Section 7.1 – Rejuvenator Method

There are numerous methods being employed for asphalt pavement preservation, including rejuvenator emulsions, asphalt emulsion fog seals, a variety of surface treatments (including slurry and micro surfacing technologies), and emerging asphalt thin overlay technologies. These methods range in cost from approximately \$0.50 to \$2.50 per square yard. To make the most of maintenance budgets, many agencies have resorted to the use of asphalt rejuvenators as an alternative to revive aging and brittle asphalt pavements. With the proven performance of asphalt rejuvenators to revive an aging pavement. This type asphalt pavement treatment has the potential to extend the life of an asphalt pavement for several years beyond the point where rehabilitation, or major reconstruction would normally be required; thus significantly decreasing the pavements annual maintenance costs.

USING REJUVENATORS – GUIDE

All rejuvenators are applied in the same way-by spraying the chemical onto the pavement surface with an asphalt distributor. However, from this point the procedures vary because of the different products and because of the different end results desired. Discussion of the use of rejuvenators can be considered in two separate categories; maintenance, and re-construction.

Maintenance can be subdivided into preventive and corrective maintenance.

Preventive maintenance should be applied to pavements at the first signs of aging of the surface course, pitting, raveling, shrinkage, and cracking.

Corrective maintenance involves reworking and salvaging existing road mixes. Using a rejuvenator in this type of maintenance can facilitate scarifying and mixing. It will aid in replasticizing old asphalt and improve its durability. This form of maintenance should be considered when the road mix surface appears weathered and crusted and cannot be restored by applying only a rejuvenator.

The second category of rejuvenator use is that of re-construction. This involves more than applying a rejuvenator emulsion onto the surface and rolling the treated pavement. Work in the category is undertaken when the pavement has outlived its life; when preventive maintenance has failed to stop the pavement deterioration; or when a HMA overlay is to be placed over the existing pavement. The overlayment may be due to a need for increased structural strength, or it may be necessitated by failure of the old surface to respond to normal maintenance.

CONCLUSION

An asphalt rejuvenator emulsion offers three beneficial reactions:

Increases penetration values and lowers the viscosity of the asphalt binder in the top portion of the pavement, which extends the pavement's life cycle.

Seals the pavement against intrusion of air and water, thereby slowing oxidation, preventing stripping and raveling and protects the pavement in-depth.

Increases the durability of the asphalt binder in the top portion of the pavement by improving the balance of chemical fractions of the asphalt binder.



Section 7.2. Crack Sealing Method

Cracks can form in asphalt or concrete pavements through various modes of distress. Regardless of how the cracks form, they must be repaired to help protect the pavement structure. If the cracks are not maintained, they can ravel and increase in size. Unsealed cracks allow water to penetrate into the structure from the pavement surface, which eventually causes potholes and further deterioration. Water intrusion is the number one enemy of pavements.

Sealing and filling asphalt concrete pavement cracks is a common road maintenance activity. Specialized materials are placed into or above cracks to prevent the intrusion of water and incompressible material into the cracks and to reinforce the adjacent pavement. Water is one of the most destructive elements to our highway systems. Water can enter the pavement through small surface cracks and penetrate the base and subgrade of our roadways. This process reduces the structural load capacity of the roadway and leads to pavement failure. During winter, water in the pavement can damage the asphalt during the freezing and thawing process. Crack sealing will help us to prevent or limit the damage caused by water infiltration.

The Brentwood Borough DPW will fill these cracks with a hot rubberized asphalt that bonds to the crack walls. Crack sealing will help us extend the life and quality of the surface condition. Crack Seal has a little expectancy of approximately 3-5 years.

CONCLUSION

Crack sealing is the single most important and cost effective maintenance option used to help protect the pavement structure. It is often placed in advance of overlays and surface treatments to improve performance. Other benefits include:

- Most cost-effective maintenance operations
- Prevents sand, stones and dirt from entering into open cracks
- Prevents water from entering and weakening the sub base and pavement
- Prevents or delays pothole formation
- Reduces pavement damage from the freeze-thaw cycle.
- Decreased exposure of highway workers to traffic
- Fewer maintenance delays for the traveling public

7.3 Chip and Seal

As a continuation for Borough road improvements Chip and Seal method was also considered.

Chip seal or Tar and Chip is a pavement surface treatment that combines one or more layer(s) of asphalt with one or more layer(s) of fine aggregate. In the United States, chip seals are typically used on rural roads carrying lower traffic volumes, and the process is often referred to as "asphaltic surface treatment". Chip sealing is cheaper than resurfacing an asphalt concrete or a Portland cement concrete pavement, but not as long-lasting.

Loose crushed stone can cause safety and environmental problems such as cracked windshields, chipped paint, loss-of-control crashes (especially for motorcyclists, bicyclists and small trucks), and deposition of foreign material into drainage courses. As cars drive over it the tires kick up this tarry substance on to the side of the car. It can only be cleaned off with a solvent remover or diesel fuel.

The rough wearing surface of the chip seal generates more roadway noise at any operating speed than does typical asphalt or concrete surfaces. This typically is not a major concern at very low operating speeds; moreover, chip seals are typically used on low volume rural and urban roadways. These sound intensities increase with higher vehicle speeds. There is a considerable range in acoustical intensities produced depending upon the specific tire tread design and its interaction with the roadway surface type.

The rough surface causes noticeable increases in vibration and rolling resistance for bicyclists, and increased tire wear in all types of tires. Based on the above findings, the Borough will not utilize Chip and Seal as one of their Roadway Maintenance procedures



7.4 Weed and Brush Removal

It is necessary to control roadside vegetation to preserve sight distance, eliminate drainage interference, prevent unsightly growth and reduce fire hazard. Vegetation control consist of mowing, weed spraying and brush cutting.

Weed spraying (**NOTE: we need a guy who can pass the test**) should be performed at the beginning of each growing season. Chemical compounds should be apply to roadside areas to control existing vegetation and retard further grow.

Brush cutting and tree removal involves the removal of larger vegetation such as brushes, limbs and small trees the can be an obstruction to the traveled vehicles and pedestrians or present potential safety hazard.

7.5 Culvert Maintenance

Drainage maintenance includes such work as necessary to maintain proper drainage adjacent to the roadway and through culverts. This work includes the cleaning and shaping of roadside ditches in conjunction with blading roadside shoulders, cleaning gutters, mechanical sweeping of areas with curb and gutter, cleaning, repairing and replacing culverts.

7.6 Traffic Control Maintenance

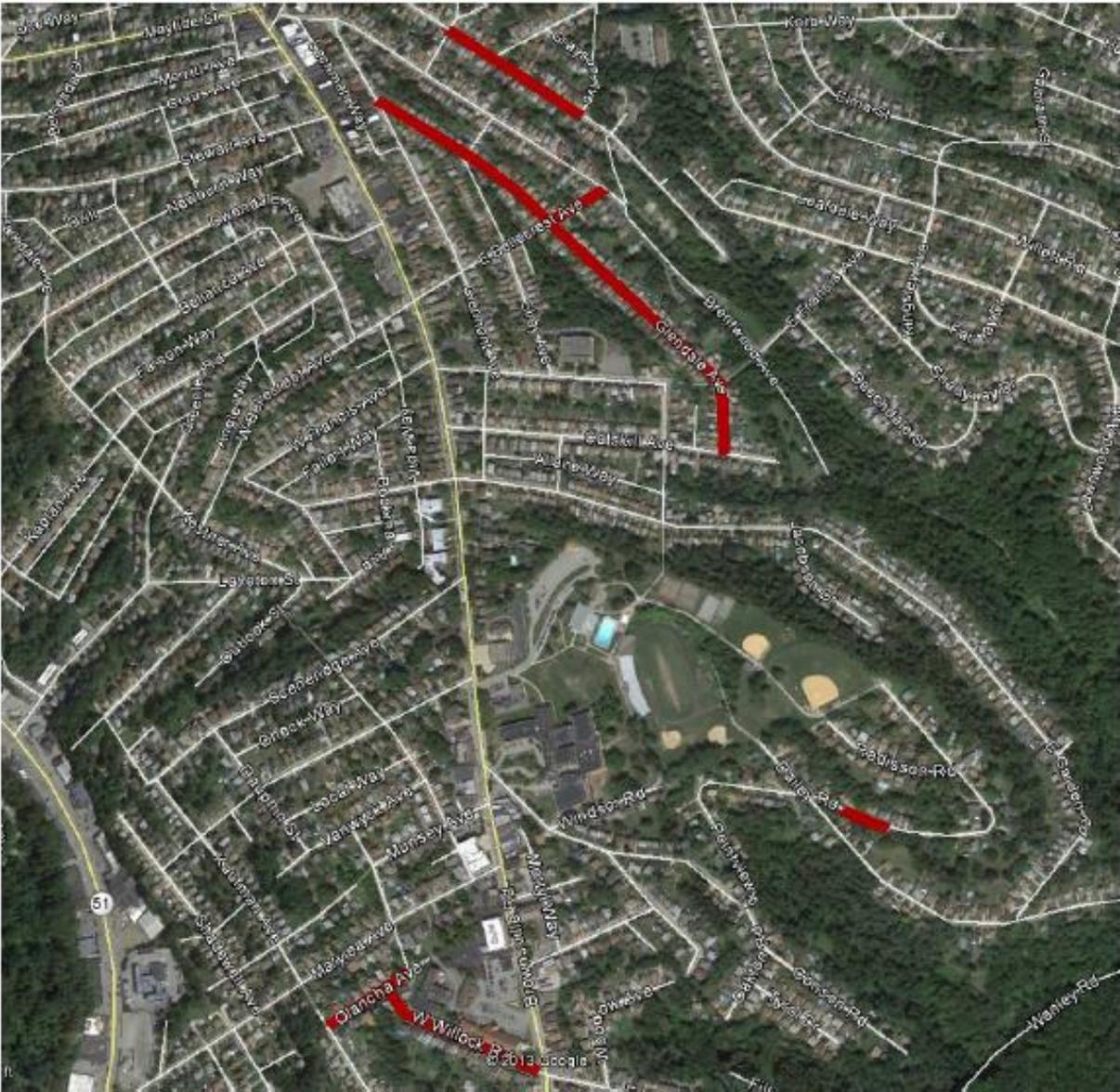
The Borough of Brentwood is responsible for maintenance of traffic signals and traffic control located within the Borough's Right of Way (ROW). Traffic signals located along RT-51, E. Willock Rd. and Willet Rd. and the respective interchanges and frontage roads are generally owned and maintained by the Allegheny County and Penn DOT.



SECTION 8

**2013-2014 Brentwood Borough
Paving & Maintenance Progress
Report**

Projects Location



Year 1
2014 Road Resurfacing Program
Brentwood Borough

Street Name	Start	End	Estimated Construction Cost	Engineering Cost	Total Cost	Work to be Completed	Surface Rating
Olancha	Kaufman	Drebert	\$ 28,747.50	\$ 6,036.98	\$ 34,784.48	Mill and Pave or Replace Conc.	3
Glendale	Catskill	Clermont	\$ 99,905.00	\$ 20,980.05	\$ 120,885.05	Mill and Pave	6
Pyramid	Waidler	Steck Way	\$ 146,600.00	\$ 30,786.00	\$ 177,386.00	New Curb Mill and Pave	6
Churchview Ave	Sankey	Waidler	\$ 15,830.00	\$ -	\$ 15,830.00	Mill and Pave Share with City	0
West Willock	Brownsville Rd	Olancha St	\$ 58,175.00	\$ 12,216.75	\$ 70,391.75	Pave Concrete	2
East Bellcrest	Glendale	Brentwood Ave.	\$ 21,925.00	\$ 4,604.25	\$ 26,529.25	Pave Brick	2
Dailey Road	Dailey Road		\$ 127,000.00	\$ 26,670.00	\$ 153,670.00	Complete Reconstruction	2
Crack Sealing			\$ 50,000.00		\$ 50,000.00		
Contingency			\$ 50,000.00		\$ 50,000.00		
Totals	Actual		\$ 598,182.50	\$ 101,294.03	\$ 699,476.53		



Although the Borough's 5-Year Street Rehabilitation and Maintenance Plan (STRMP) was not officially adopted until 2014, the Borough was committed to the improvement of its streets. In 2013 the Borough identified the repaving of Brownsville Road from Hillson Avenue to W. Brentridge and the reconstruction of Hillson Avenue from Shadewell Ave. to Dauphin St. However, due to weather and unforeseen delays in construction, these projects were carried over into the 2014 program. This section will summarize the 2014 Roadway Paving Projects.

Brentwood Borough Construction Projects Summary Hillson Avenue – Complete Reconstruction

This project involved approximately 800 square feet of subbase replacement and placement of new bituminous pavement, placing approximately 400 linear feet of curbs, and upgrading existing storm sewer. This project was issued to Morgan Excavating as lowest responsible bidder.

The total awarded contract amount - **\$141,410.00**

Anticipated construction cost - **\$137,217.37**

Below are the pictures of pre and post construction of the Hillson Avenue

Pre-construction condition



Construction Progress



Hillson Avenue Final Condition



Brownsville Road – Milling and Paving

This project involved approximately 15500 square feet placement of new bituminous pavement, replacing approximately 1500 linear feet of concrete curbs at various locations, and replacing of the sidewalk at selective locations, upgrading of existing storm sewer by adding 3 storm inlets at West Willock location. This project was issued to Morgan Excavating as lowest responsible bidder.

The total awarded contract amount - **\$513,283.75**

Anticipated construction cost - **\$ 473,791.00**

Construction Progress



Final Condition



2014 Paving Projects Completed by the Borough
Olancha Ave. – Concrete Street Overlay (from Kaufman to W. Willock)



Construction Progress



Final Condition



Glendale Ave. – Brick Street Overlay Selective Curbs Repair (from Katskill to Clermont)
Construction Progress



Final Condition



Pyramid Ave. – Mill & Pave, Selective Curb Replacement (from Waidler to Steck)
WayConstruction Progress



Final Condition



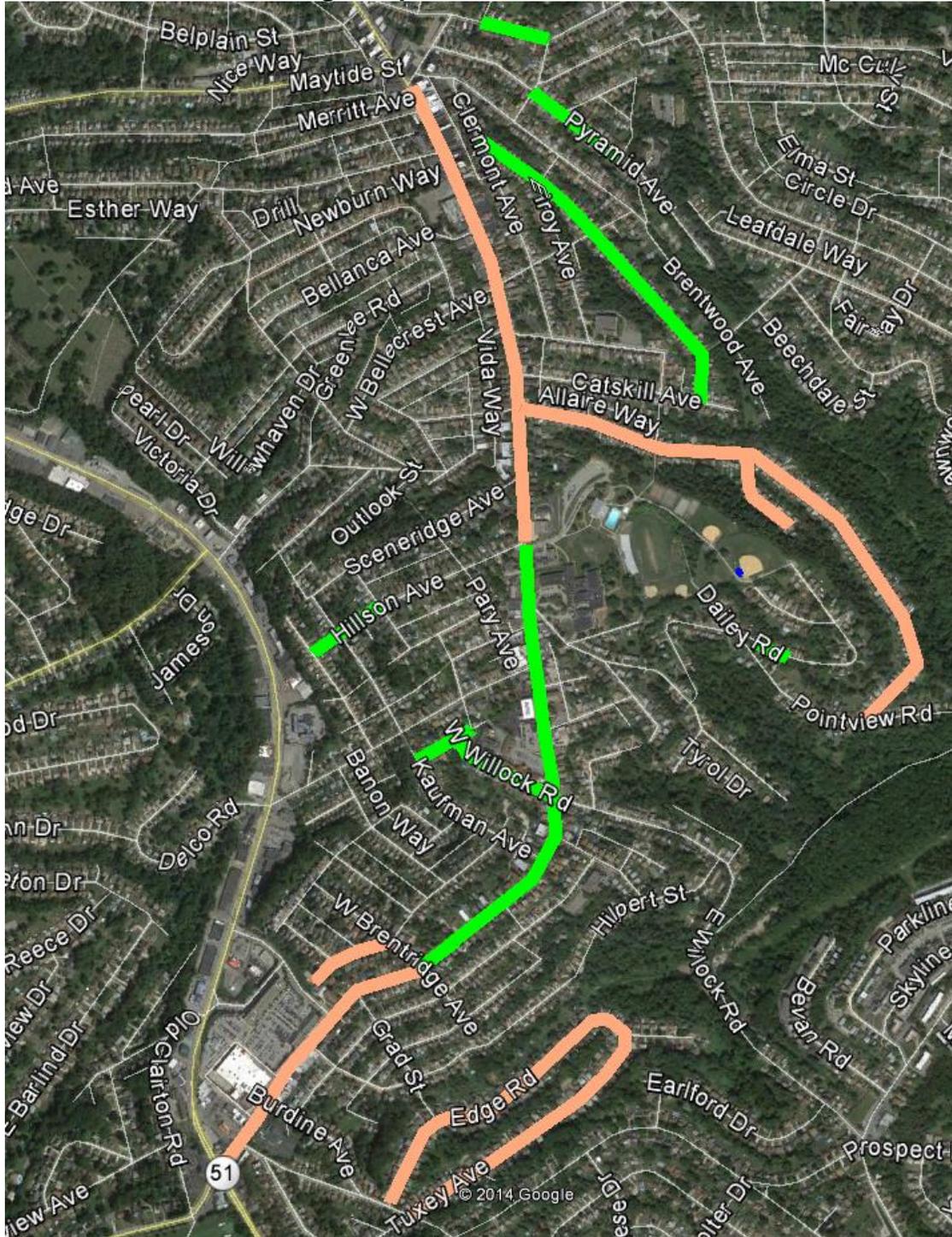
**E. Bellecrest Ave. – Brick Street Overlay (from Glendale to Brentwood)
Construction Progress**



Final Condition



Overall Brentwood Borough Map Road Maintenance and CIP Projects



-  Paved Streets by Contractor
-  Crack Sealed Streets by DPW



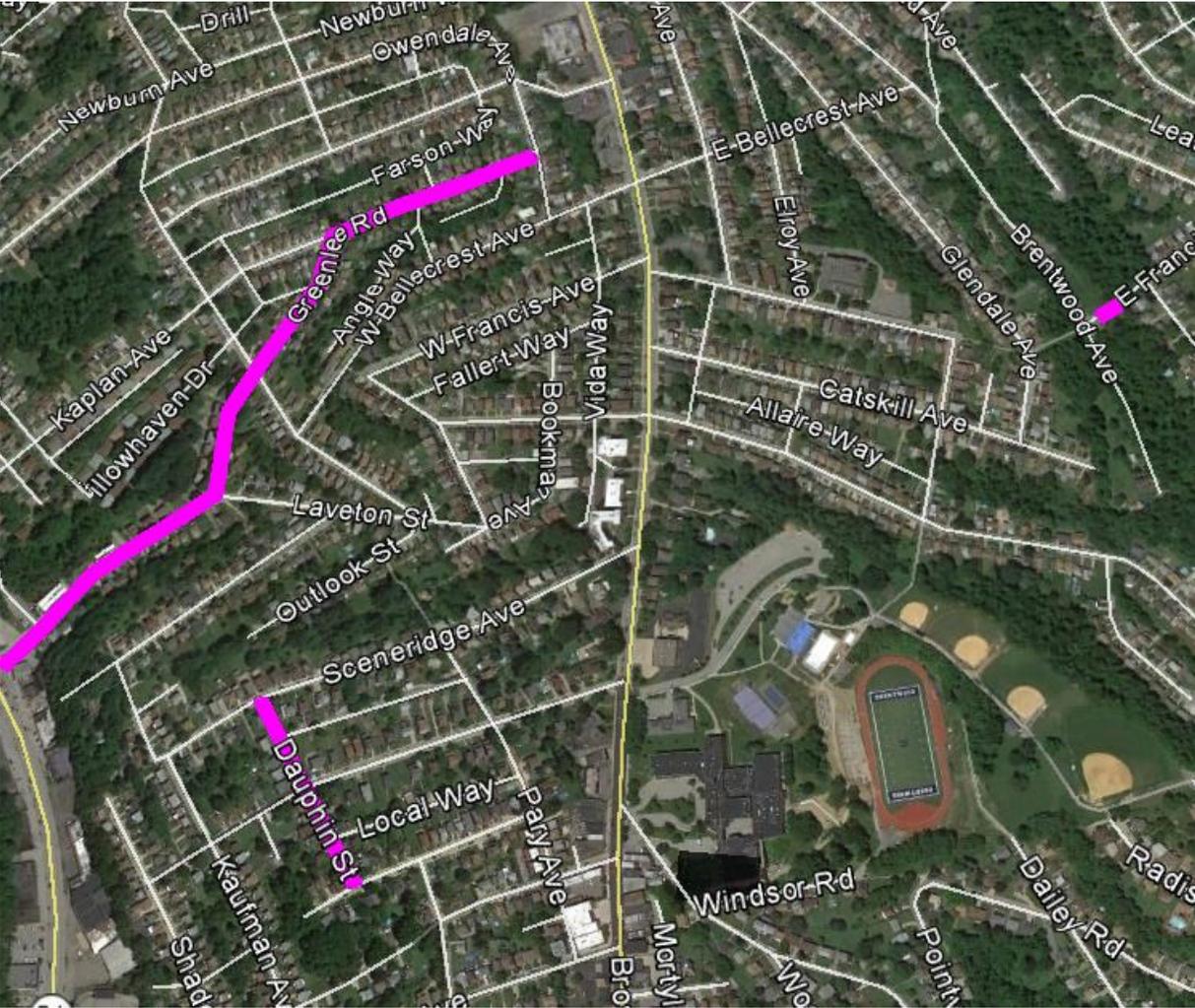
SECTION 9

2015 BRENTWOOD BOROUGH
ANTICIPATED ROAD PROJECTS



Year 2
 2015 Road Resurfacing Program
 Brentwood Borough

Street Name	Start	End	Estimated Construction Cost	Engineering Cost	Total Cost	Work to be Completed	Surface Rating
Dauphin	Van Wyck	Sceneridge	\$ 129,475.00	\$ 12,947.50	\$ 142,422.50	Complete Reconstruction	5
Greenlee	Route 51	Kestner	\$ 121,355.00	\$ 12,135.50	\$ 133,490.50	Mill and Pave	6
Greenlee	Kestner	Bremen	\$ 166,912.50	\$ 16,691.25	\$ 183,603.75	Mill and Pave	6
Efrancis Wall	0	0	\$ 50,000.00	\$ 5,000.00	\$ 55,000.00	Reconstruct Retaining Wal	0
Parking Lot	School	School	\$ 115,000.00	\$ 11,500.00	\$ 126,500.00	New Construction	0
Crack Sealing			\$ 25,000.00		\$ 10,000.00		
Contingency			\$ 50,000.00		\$ 50,000.00		
Totals			\$ 657,742.50	\$ 58,274.25	\$ 701,016.75		



SECTION 10

2016 BRENTWOOD BOROUGH
ANTICIPATED ROAD PROJECTS



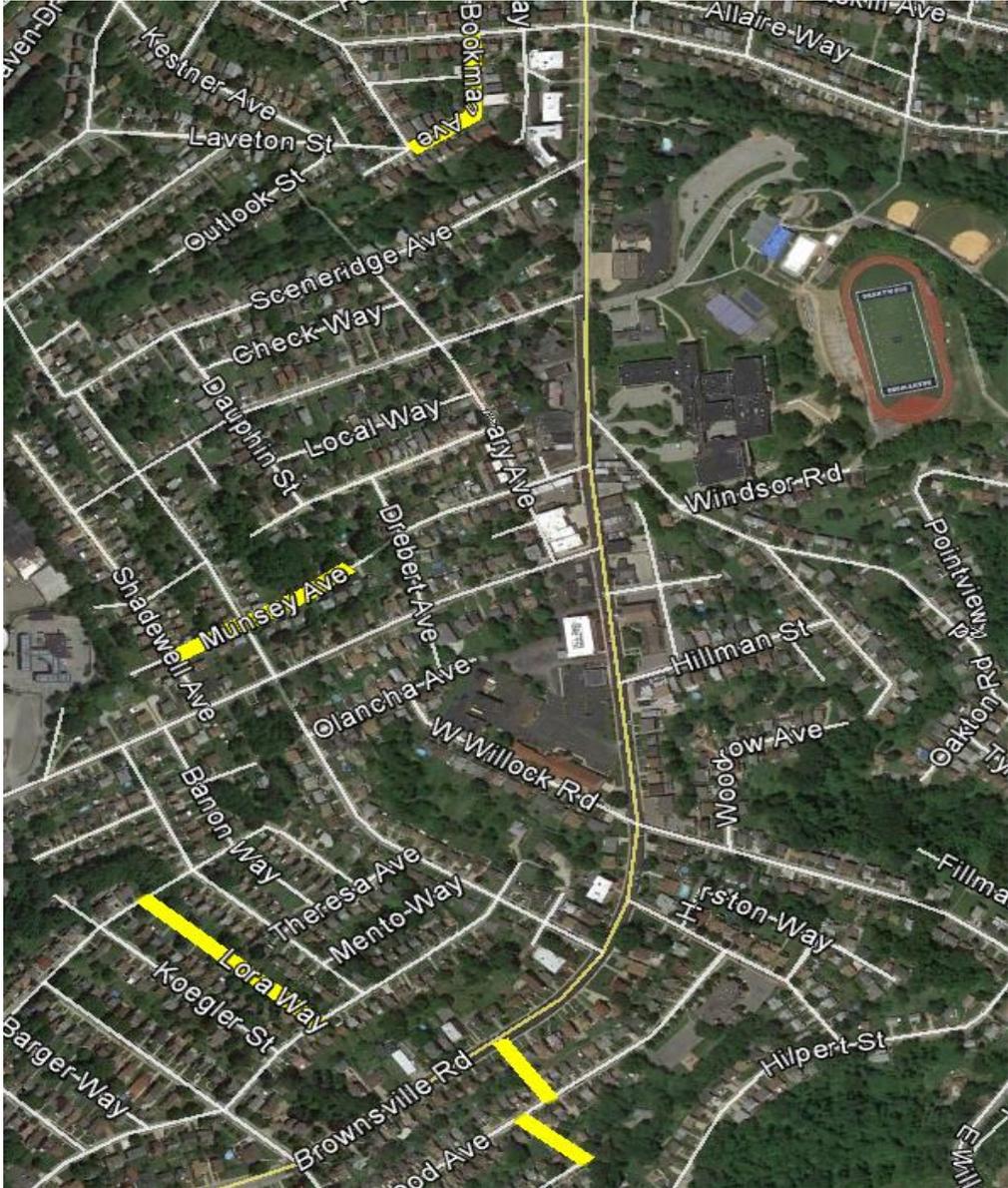
SECTION 11

2017 BRENTWOOD BOROUGH
ANTICIPATED ROAD PROJECTS



Year 4
 2016 Road Resurfacing Program
 Brentwood Borough

Street Name	Start	End	Estimated Construction Cost	Engineering Cost	Total Cost	Work to be Completed	Surface Rating
Lora Way	Lanmore	Lownview	\$ 73,807.99	\$ 9,595.04	\$ 83,403.03	Complete Reconstruction	0
Brednick	Brownsville	Dalewood	\$ 38,487.50	\$ 4,618.50	\$ 43,106.00	Complete Reconstruction	6
Brednick	Dalewood	Cloverleaf	\$ 47,525.00	\$ 5,703.00	\$ 53,228.00	Complete Reconstruction	6
Bookman	West Garden	Laveton	\$ 96,200.00	\$ 12,506.00	\$ 108,706.00	Complete Reconstruction	5
Munsey	End of steps	Kaufman	\$ 127,625.00	\$ 16,591.25	\$ 144,216.25	Complete Reconstruction	6
Crack Sealing			\$ 50,000.00		\$ 10,000.00		
Contingency			\$ 50,000.00		\$ 50,000.00		
Totals			\$ 483,645.49	\$ 49,013.79	\$ 492,659.28		



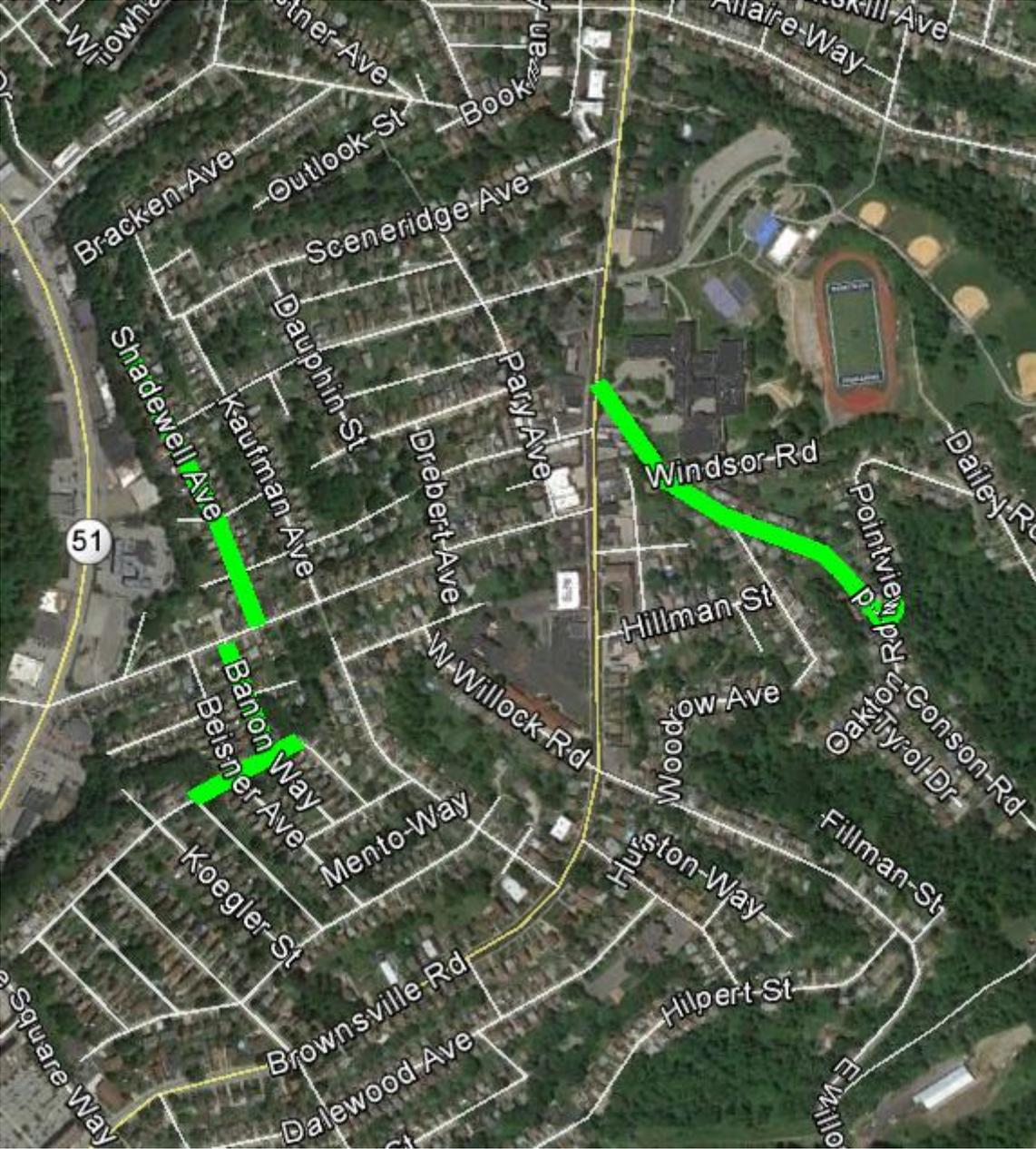
SECTION 12

2018 BRENTWOOD BOROUGH
ANTICIPATED ROAD PROJECTS



Year 5
 2016 Road Resurfacing Program
 Brentwood Borough

Street Name	Start	End	Estimated Construction Cost	Engineering Cost	Total Cost	Work to be Completed	Surface Rating
Pointview	Brownsville Rd	Oakton	\$ 55,829.00	\$ 7,257.77	\$ 63,086.77	Mill and Pave	4
Shadewell	Marylea	Sceneridge	\$ 91,509.44	\$ 12,811.32	\$ 104,320.76	Complete Reconstruction	6
Bannon	Marylea	Lanmore	\$ 102,399.34	\$ 14,335.91	\$ 116,735.24	Complete Reconstruction	7
Lanmore	Theresa	Lora Way	\$ 94,901.58	\$ 13,286.22	\$ 108,187.80	Complete Reconstruction	7
Crack Sealing			\$ 50,000.00		\$ 10,000.00		
Contingency			\$ 50,000.00		\$ 50,000.00		
Totals			\$ 444,639.35	\$ 47,691.22	\$ 452,330.57		



SECTION 13

2019 BRENTWOOD BOROUGH
ANTICIPATED ROAD PROJECTS



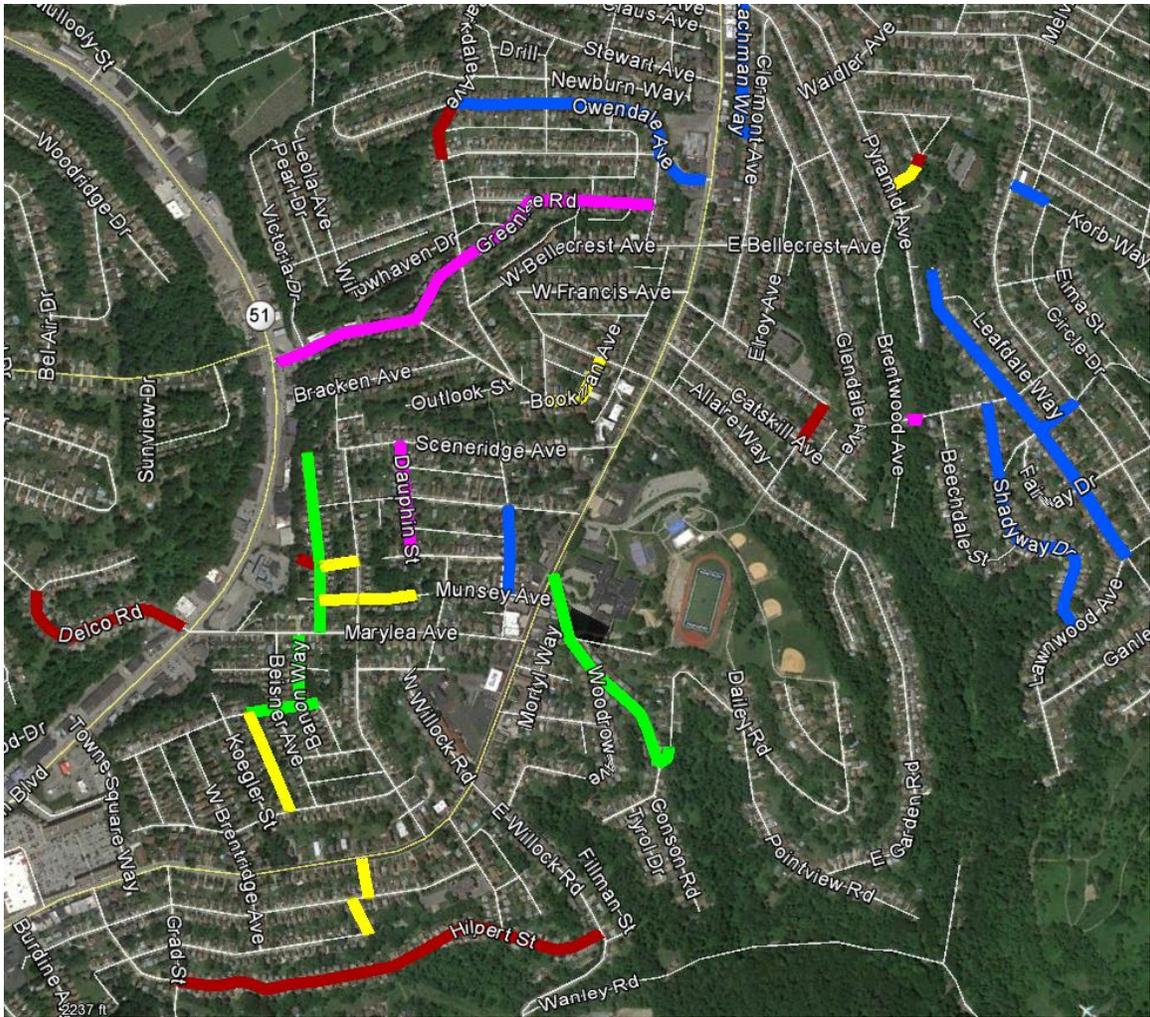
Year 6
 2019 Road Resurfacing Program
 Brentwood Borough

Street Name	Start	End	Estimated Construction Cost	Engineering Cost	Total Cost	Work to be Completed	Surface Rating
Kestner	Owendale	Bellanca	\$ 20,910.00	\$ 2,718.30	\$ 23,628.30	Pave Brick	4
Steck Way	Grayson	Pyramid	\$ 22,175.00	\$ 3,104.50	\$ 25,279.50	Mill and Pave	5
Spangler	East Francis	Catskill	\$ 20,075.00	\$ 2,810.50	\$ 22,885.50	Pave Brick	3
Van Wyck	Shadewell	Terminus	\$ 37,312.50	\$ 5,223.75	\$ 42,536.25	Complete Reconstruction	7
Delco	RT51	Dunn	\$ 63,339.99	\$ 8,867.60	\$ 72,207.58	Complete Reconstruction	6
Hilpert	E. Willock	Grad	\$ 150,876.25	\$ 21,122.68	\$ 171,998.93	Mill and Pave, Concrete Overlay	3
Crack Sealing			\$ 50,000.00		\$ 50,000.00		
Contingency			\$ 50,000.00		\$ 50,000.00		
Totals			\$ 414,688.74	\$ 43,847.32	\$ 418,536.06		



SECTION 14
OVERALL STREET REHABILITATION
PLAN AND ESTIMATED BUDGET
2015 - 2019





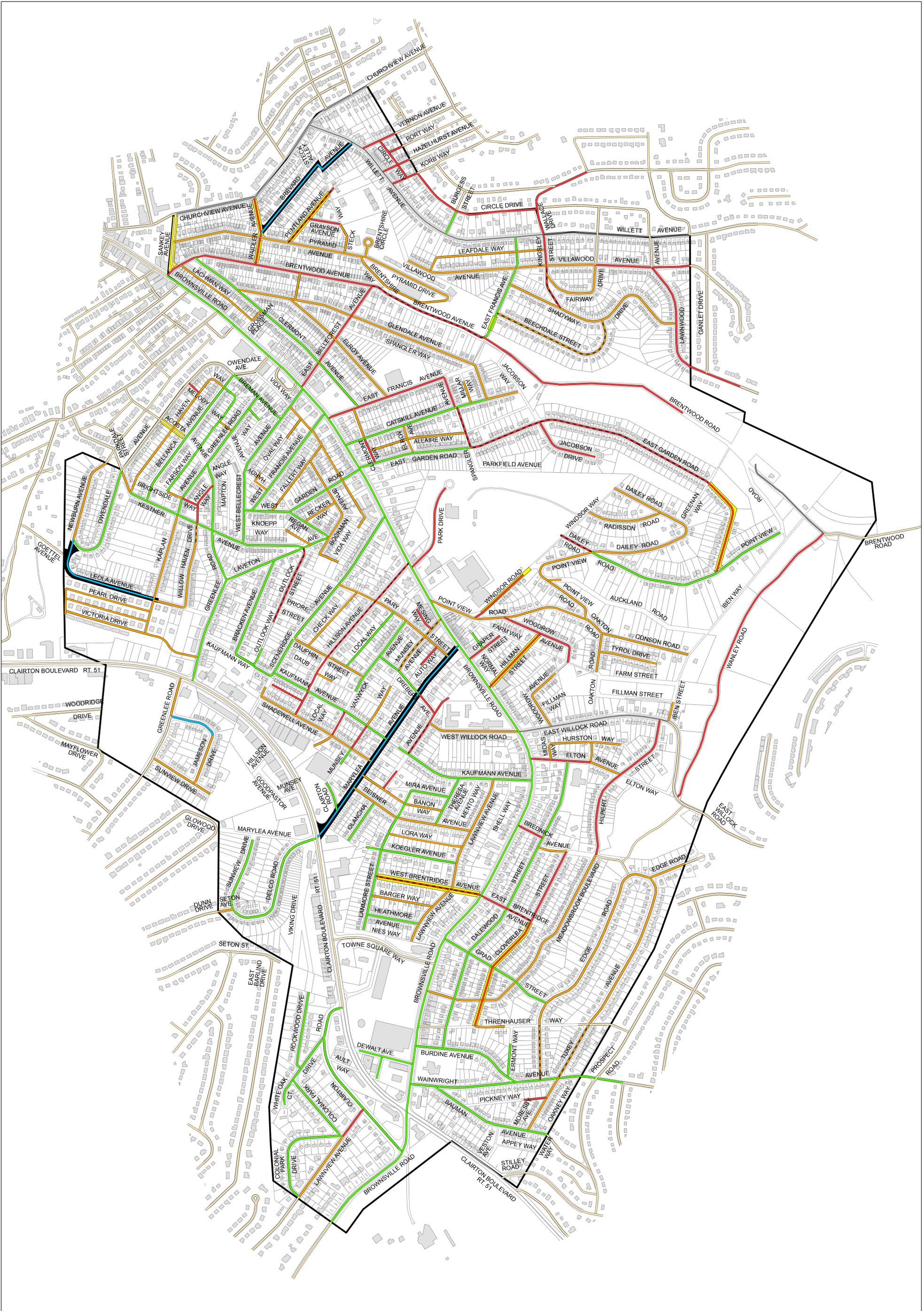
Brentwood Borough 5 Year Paving Plan Budget



Estimated Budget For Each Year

EXHIBIT 1
EXISTING BOROUGH PAVEMENT
CONDITIONS MAP
(Based on Gateway Engineer's 2007
Pavement Management Report)





Date: 7/7/2011
 Job No:
 Date Saved: 7/7/2011

Brentwood Borough

Pavement Ratings



- Pavement Ratings**
- Rating 1 - 3
 - Rating 4 - 6
 - Rating 7 - 9
 - Rating 10
 - No Rating
 - County
 - State
 - 2001 Road Program
 - 2003 Road Program
 - 2006 Road Program

400 Holiday Drive Suite 300 Pittsburgh, PA 15220
 Phone: 412-921-4030 - Fax 412-921-9960
 -Butler, PA 724-287-1055 -Washington, PA 724-229-3362
<http://www.gatewayengineers.com>

1" = 350'
 0 175 350 700 Feet

ACKNOWLEDGMENTS

The Brentwood Department of Public Works' success is dependent on the collaborative efforts of the staff, Borough elected officials, and the support of the community. Developing the 5-Year Street Rehabilitation & Maintenance Plan (STRMP) has been an exciting and challenging project, for which many people have offered their input and assistance. Special thanks to Borough Council for acknowledging that planning is critical for a sustainable community as well as providing the required funding to move forward with this plan. In addition, Public Works Superintendent, Robert Mackewich, whose 30 plus years as a Public Works employees offers the Borough the insight and knowledge on the roadways that no computer can match.

The following should be acknowledged for their contributions and many hours they have given to make the First Annual STRMP (Street Map) a meaningful planning tool:

Vitali Alexandrov – Assistant Director, Public Works

Joseph Sites, P.E. – Gateway Engineers

George Zboyovsky, PE
Borough Manager

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