

**MEETING AGENDA  
MOUNTAIN BROOK CITY COUNCIL**

**CITY HALL COUNCIL CHAMBER  
56 CHURCH STREET  
MOUNTAIN BROOK, AL 35213**

**AUGUST 10, 2015, 7:00 P.M.**

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1. Request for funding by Dr. Richard Craig of the Jefferson-Blount-St. Clair Mental Health Authority
2. Proclamation declaring the month of September 2015 as Ovarian and Gynecologic Cancer Awareness Month.
3. Approval of the minutes of the July 27, 2015 regular meeting of the City Council.
4. Consideration: Resolution appointing Susan Elliott to The Emmet O'Neal Library Board, to serve without compensation through September 30, 2019.
5. Consideration: Resolution declaring certain property either abandoned/unclaimed or surplus and authorizing its destruction and/or sale at public Internet auction.
6. Consideration: Resolution awarding the bid for the LED Lighting Project and authorizing the execution of a contract for same.
7. Consideration: Ordinance authorizing the placement of one (1) stop sign on Brookwood Road at its intersection with Crosshill Road and provide for punishment for violations thereof.
8. Announcement: The next regular meeting of the City Council is August 24, 2015, at 7:00 p.m. in the Council Chamber of City Hall located at 56 Church Street, Mountain Brook, AL 35213.
9. Comments from residents.
10. Adjourn.

**JEFFERSON - BLOUNT - ST. CLAIR MENTAL HEALTH AUTHORITY**

940 Montclair Road Suite 200 Birmingham, Alabama 35213 www.jbsmha.com  
Telephone: (205) 595-4555 Voice Mail: (205) 380-6460 Fax: (205) 592-3539 TDD: 1-800-545-1833 ext. 516

**Executive Committee of the Board**

Cathy Irvin  
President  
  
Lamar Kelly  
Secretary  
  
Scotty Colson  
Member-At-Large

Margie Sanford  
First Vice-President  
  
J. Marvin Thornton  
Treasurer  
  
Marianne Sharbel  
Member-At-Large

Lois Scott  
Second Vice-President  
  
Donna Burgess  
Asst. Secretary / Treasurer  
  
Cindy Smith  
Member-At-Large

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June 24, 2015

Mr. Steven Boone, City Manager  
City of Mountain Brook  
P O Box 130009  
Mountain Brook, AL 35213

Dear Mr. Boone:

Please find enclosed our budget request for fiscal year 2016 outlining the funding needs of the agencies and programs for whom the Jefferson-Blount-St. Clair Mental Health Authority is requesting local funding. Please distribute this information to Mayor Oden and the Mountain Brook City Council members for their review and consideration.

We are looking forward to presenting our budget request to the Mountain Brook City Council members at an upcoming council meeting. Please contact Sophia Holloway or myself at 595-4555 if you will need any additional information prior to the meeting.

Please contact me if you have any questions. Thank you for your assistance.

Sincerely,



James A. Crego  
Controller/Associate Director

cc: Marianne Sharbel, Mountain Brook appointee to JBS board  
Jansen Voss, Mountain Brook appointee to JBS board  
Bradley Cain, Mountain Brook appointee to JBS board

Enclosure

## JEFFERSON - BLOUNT - ST. CLAIR MENTAL HEALTH AUTHORITY

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Member-At-Large

Cindy Smith  
Member-At-Large

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June 24, 2015

The Honorable Mayor, Lawrence T. Oden  
City of Mountain Brook  
P O Box 13009  
Mountain Brook, AL 35213

Honorable Mayor Oden:

Enclosed please find our budget request for Fiscal Year 2016, outlining the funding needs of the agencies and programs for whom the Jefferson-Blount-St. Clair Mental Health Authority is requesting local funding. Please note that the total amount of local support needed from all of the region's local governments is \$947,361. The appropriation desired from the City of Mountain Brook is **\$2,100**.

Your contributions in the past have made a tremendous difference in the lives of the clients we serve. In combination with state, federal, and other local allocations, your funds have provided the following to 12 Mountain Brook residents in the past year:

- Medications and outpatient therapy for citizens with mental illness,
- A place to live and receive treatment for community members with mental illness,
- In-home therapy to prevent at-risk youth from being removed from their homes.

Local funds are one of the most important resources to our system of care because they provide flexibility in their use. This flexibility allows our system to fill gaps in funding sometimes left as a result of designated state and federal funding of services. These funds also provide matching funds so that we can draw down federal funds. Without the support of the City of Mountain Brook, our system would not be able to provide many of the services so crucial to the mental health needs of our community.

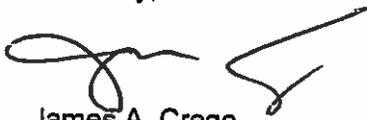
For the upcoming fiscal year, we are asking the City of Mountain Brook to consider appropriating our agency **\$2,100**. This amount is equal to a level funding request for fiscal year 2016.

This agency has a long tradition of serving persons with the most serious mental illnesses who have little or no health care funding, and who depend upon us for their mental health care. We serve a high percentage of persons below the poverty level, a high percentage of minorities, and thousands of people who cannot access services any other way. Our system served over 12,000 of these clients last fiscal year.

Enclosed is a description of all the services provided for by local funds. You can see that none of these services are "luxury" items, but are services that recipients vitally need to return to and remain as functioning members of our community.

On behalf of the clients we serve, we would like to thank you for your careful consideration of this request and for your past and continued support of our clients and programs.

Sincerely,

A handwritten signature in black ink, appearing to read 'James A. Crego', with a long, sweeping horizontal stroke extending to the right.

James A. Crego  
Controller/Associate Director

Enc: Description of Local Services  
History of Clients Served and Funding

**JEFFERSON-BLOUNT-ST. CLAIR  
MENTAL HEALTH AUTHORITY**

**Description of Local Services and Projected Funding Levels**

**EASTSIDE MENTAL HEALTH CENTER INPATIENT SERVICES** - \$120,000: This funding is to assist Eastside Mental Health Center in providing for inpatient psychiatric treatment for persons in crisis and who are uninsured.

**WESTERN MENTAL HEALTH CENTER INPATIENT SERVICES AND GENERAL OPERATIONS** - \$155,556: This funding is to assist Western Mental Health Center in providing for inpatient psychiatric treatment for persons in crisis and who are uninsured, and in providing outpatient services to maintain persons with mental illness in the community.

**UAB COMMUNITY PSYCHIATRY PROGRAM** - \$120,000: This funding is to assist UAB Mental Health Center in providing for inpatient psychiatric treatment for persons in crisis and who are uninsured.

**PROGRAMS OPERATED BY THE JEFFERSON-BLOUNT-ST. CLAIR MENTAL HEALTH AUTHORITY** - \$551,805: This funding provides for the following services:

**Children Services Programs including the F.I.N.D. Project (Family Integrity Network Demonstration Project):** The F.I.N.D. program provides in-home and case management services for children at risk of being removed from their homes, and their families, to preserve the integrity of the family unit. Services also include a crisis intervention response team which provides in-home intervention and assessment to children identified as multiple needs children to prevent removal of the children from their homes.

**Family Court Liaison:** This program provides direct liaison services to emotionally/behaviorally disturbed children and their families involved with the Family Courts in Jefferson and St. Clair Counties. These employees are responsible for clinical assessment of client needs and advocating for appropriate, least restrictive alternatives. These employees work directly with the Family Court Judges, probation officers, and staff of the court in accessing and implementing mental health services.

**Children Overcoming Problems Everyday (COPE):** Child Mental Health Initiative formerly funded via a SAMHSA federal grant, this program has been sustained through the financial support of local DHR, Family Court and City and County school systems to enhance and expand child and adolescent mental health services within Jefferson County. This program has allowed us to develop new services, improve access to existing services, and improve our ability to identify children in need of our services.

**Urgent Care Clinic:** Opened in December 2013, the clinic offers a first of its kind service in the state of Alabama: a walk-in clinic for those in need of immediate psychiatric care. One of the goals of the clinic is to reduce crowding of local hospital emergency rooms. The emergency room is a much higher level of care than is needed by many psychiatric patients currently frequenting the ER. The immediate access available at the Urgent Care Clinic also will provide a bridge to those in the community waiting for an appointment at a local mental health center, but in need of services in advance of the appointment availability. Staffing includes a Psychiatrist, Master's level therapist, RN, LPN, Peer Navigators and a Case Manager.

**Mental Illness Residential Housing, Supported Housing, Apartments, and Clinical Services:** This program provides community based housing and associated therapeutic services for 322 persons with mental illness, who would otherwise be patients at state psychiatric hospitals.

**Mental Illness Day Treatment:** This program provides intensive habilitation training in economic self-sufficiency, self-care, self-direction, receptive/expressive language, learning and capacity for independent living. The focus of training is to enable the individual to reach his or her maximum potential which would allow movement to the most independent setting possible. Local funds provide match for accessing federal reimbursement.

**Mental Illness Foster Homes and Nursing Homes:** This program provides monitoring and supervision of persons placed in the 49 foster home beds and 70 nursing home beds available for the mentally ill/intellectually disabled in our three county region. Mental health services are also provided to these clients, as needed, through this program.

**Community Outreach Services Case Management:** This program provides assistance for clients to obtain housing, entitlements, and health care services, to enable them to live successfully in the community.

**Probate Court Services:** This program provides for a link between the Jefferson County and Bessemer Cut-Off Probate Courts and the community mental health system, and to assist families (petitioners) seeking commitment to state hospitals.

**Supported Living:** This program provides two Supported Living case managers who work with clients returning to independent living after being hospitalized at Bryce Hospital and then completing one of the Authority's residential programs. These clients receive case management support needed to enable them to maintain their independence in the community.

**Jefferson County Health Department Team:** The focus of the Health Department Team is to target consumers residing in Boarding Homes in an attempt to increase their quality of care. The team will work in concert with the Health Department Inspection Team to strive to decrease the number of non-permitted Boarding Homes, while increasing Boarding Home resources for the homeless population.

**Bryce Hospital Liaison:** This program provides a link between Bryce Hospital and other Department of Mental Health facilities and the community mental health programs of our region.

**Bryce Extended Care Outplacement (POP):** This person-centered outplacement program provides community based housing for individuals directly discharged from state psychiatric hospitals. In addition to other residential facilities, operations in Blount County include a 30-bed (MOM) supportive apartment complex and an around the clock awake staff. These individuals' unique behavioral needs present a challenge for traditional community settings and they set goals to enhance their quality of community living.

**Homeless Services:** This program provides case management services for homeless individuals with mental illness, to assist them in accessing housing, entitlements, and health care services. Local Funds provide match for accessing federal grant reimbursement.

**Jefferson County Sheriff's Department CSO:** This program provides mental health outreach and liaison services to the sheriff's department. Sheriff's deputies have access to a CSO 24 hours a day, seven days a week.

**Program of Assertive Community Treatment:** A team approach to care, targeting hard to reach individuals diagnosed with severe and persistent mental illness. Integrates mental health treatment, substance abuse treatment, vocational rehabilitation, case management, assistance with daily living skills and social support within a multi-disciplinary team. Emergency response is also provided by this 12 person team and a team member is available 24 hours per day, 7 days per week.

**Outpatient Commitment Team:** This program works with individuals who are undergoing evaluation for involuntary commitment or have been outpatient committed to a designated mental health facility by Jefferson County Probate Court. The program purpose is to provide less restrictive treatment options for individuals by offering court screening, in-home intervention and physician assessment and treatment services.

**Office of Deaf Services:** Provides clinical services, case management and residential services to mentally ill consumers with hearing loss. Interpreting services in mental health care settings are also provided out of this office. Staff also performs advocacy work to ensure that all persons with hearing loss receive access to culturally and linguistically appropriate services in mental health.

**Properties Management:** This category provides funds for maintenance of buildings and equipment associated with the Authority central office, Eastside Mental Health Center, the Intellectual disabilities Skills Center, the 1920 Club, mental illness residential beds, and intellectual disabilities residential beds.

**Authority Administration:** This category provides for a variety of services that are not covered through state contracts and other funding sources, such as client information system, client trust accounting, contract management, and other administrative services.

**Jefferson-Blount-St. Clair Mental Health Authority  
Projected Utilization of Local Funds  
for Fiscal Year 2016**

DESCRIPTION	AMOUNT
<b><u>Sub-Contracted Programs:</u></b>	
Eastside Mental Health Center	\$120,000
Western Mental Health Center	\$155,556
UAB Mental Health Center	\$120,000
<b><u>Authority Operated Programs:</u></b>	
Children's Programs	
Family Court Liaison	
Children Overcoming Everyday Problems (COPE)	
Urgent Care Clinic	
Mental Illness Residential	
Mental Illness Apartments	
Mental Illness Day Treatment	
Mental Illness Foster Homes and Nursing Homes	
Community Outreach Services Including Case Management/RN Services	
Probate Court Services	
Supported Living	
Jefferson County Health Department Team	
Bryce Hospital Liaison	
Bryce Extended Care Outplacement Program (POP)	
Homeless Services	
Jefferson County Sheriff's Department Community Support Officers	
Program of Assertive Community Treatment	
Outpatient Commitment Team	
Office of Deaf Services	
Properties Management	
Administration	
<b>TOTAL NEEDED FROM LOCAL GOVERNMENTS</b>	<b><u>\$947,361</u></b>
<b>TOTAL DESIRED APPROPRIATION FROM CITY OF MOUNTAIN BROOK</b>	<b><u>\$ 2,100</u></b>

JEFFERSON-BLOUNT-ST. CLAIR MENTAL HEALTH AUTHORITY  
 HISTORY OF CLIENTS SERVED AND FUNDING (LAST 10 YEARS)  
 CITY OF MOUNTAIN BROOK

	<u>MOUNTAIN BROOK APPROPRIATION</u>	<u>MOUNTAIN BROOK RESIDENTS SERVED</u>
<b>DESIRED FISCAL YEAR 2016 APPROPRIATION</b>	<b>\$ 2,100</b>	
<b>CURRENT YEAR - FISCAL YEAR 2015</b>	<b>2,100</b>	
FISCAL YEAR 2014	2,100	12
FISCAL YEAR 2013	2,100	23
FISCAL YEAR 2012	2,000	38
FISCAL YEAR 2011	2,000	77
FISCAL YEAR 2010	2,000	71
FISCAL YEAR 2009	2,000	81
FISCAL YEAR 2008	2,000	128
FISCAL YEAR 2007	1,400	114
FISCAL YEAR 2006	1,300	148

JEFFERSON-BLOUNT-ST. CLAIR MENTAL HEALTH PROVIDER NETWORK  
 UNDUPLICATED COUNT OF CLIENTS SERVED  
 FISCAL YEAR 2014 - CITY OF MOUNTAIN BROOK

	<u>MOUNTAIN BROOK</u>
UAB MENTAL HEALTH CENTER	1
EASTSIDE MENTAL HEALTH CENTER	8
WESTERN MENTAL HEALTH CENTER	0
JBS ID GROUP HOMES	0
JBS ID DAY TRAINING PROGRAM	0
JBS MI RESIDENTIAL PROGRAM	0
JBS BRYCE LIAISON	0
JBS BRYCE EXTENDED CARE OUTPLACEMENT (POP)	0
JBS MH PROBATE COURT SERVICES	0
JBS MH COMMUNITY OUTREACH SERVICES	0
JBS SUPPORTIVE LIVING	0
JBS HOMELESS SERVICES PROJECT	0
JBS IN-PATIENT HOSPITAL LIAISON	0
JBS OUTPATIENT COMMITMENT TEAM	0
JBS JEFFERSON COUNTY HEALTH DEPARTMENT TEAM	0
JBS JEFFERSON COUNTY COMMUNITY SERVICE OFFICERS	0
JBS CHILDREN'S SERVICES	3
JBS PROACT TEAM	0
JBS DEAF SERVICES	0
JBS CRISIS CENTER CASE MANAGER	0
1920 CLUB	0
<b>TOTAL CLIENTS SERVED</b>	<b>12</b>

## **PROCLAMATION**

**WHEREAS**, ovarian and gynecologic cancers are among the leading cancer killers of women in the United States, and more than 98,000 women will be diagnosed, and more than 30,000 women will die from these diseases this year; and

**WHEREAS**, the good health and well-being of women in our city and state are enhanced by increased awareness about ovarian and gynecologic cancers and their symptoms and treatments; and

**WHEREAS**, it is critical for women, physicians and all healthcare providers to recognize the risk factors and symptoms of ovarian and gynecologic cancers and to remember the importance of early detection in preventing and treating these diseases; and

**WHEREAS**, continued progress in the battle against ovarian and gynecologic cancers requires increased awareness and education, and all educators, service providers, researchers and advocacy groups are urged to work together to inform more women about ovarian and gynecologic cancers and to educate women in the City of Mountain Brook, Alabama and the State of Alabama about screening services; and

**WHEREAS**, it is also crucial that all women in the City of Mountain Brook, Alabama and the State of Alabama take an active role in learning the symptoms and risk factors associated with ovarian and gynecologic cancers, developing healthy habits, and undergoing regular medical examinations so that any occurrence of these diseases may be detected in their early and treatable stages;

**NOW, THEREFORE**, I, Lawrence T. Oden, Mayor of the City of Mountain Brook, Alabama, do hereby proclaim September 2015, as

### **OVARIAN AND GYNECOLOGIC CANCER AWARENESS MONTH**

throughout the City and encourage all residents of the City of Mountain Brook, Alabama to work together to raise awareness of ovarian and gynecologic cancers and do commend this observance to all our residents.

Given under my hand and the City of Mountain Brook, Alabama, on this 10th day of August, in the year of our Lord, 2015, and of the Independence of the United States of America, 239th.

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**Lawrence T. Oden, Mayor**

**MOUNTAIN BROOK CITY COUNCIL  
PRE-MEETING DISCUSSION  
JULY 27, 2015**

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The City Council of the City of Mountain Brook, Alabama met in public session in the Pre-council Room (A106) of City Hall at 6:15 p.m. on Monday, the 27th day of July, 2015. The Council President Pro Tempore called the meeting to order and the roll was called with the following results:

**Present:** William S. Pritchard, III, Council President Pro Tempore  
Jack D. Carl  
Lloyd C. Shelton  
Alice B. Womack  
Lawrence T. Oden, Mayor

**Absent:** Virginia C. Smith, Council President

Also present were City Attorney Whit Colvin, City Manager Sam Gaston, and City Clerk Steven Boone.

**1. AGENDA**

1. Proposed drainage study for Overbrook Road area in and around Canterbury Methodist Church – Walter Schoel of Schoel Engineering (Appendix 1).

It was the consensus of the Council members present that the study, which would only measure the estimated frequency and severity of flooding, would be of little benefit to the City. Mr. Schoel, whose firm is under contract with the City for professional services, was asked to walk the creek to identify any potential conditions that could be impeding water flow and report his findings to the City Manager.

2. First amendment to the lease with American Tower Corporation for the cell tower located at the high school athletic complex. (Resolution No. 2015-109 was added to the formal meeting agenda.)
3. Review of the formal [7 p.m.] meeting agenda.

**2. ADJOURNMENT**

There being no further issues for discussion, Council President Pro Tempore Pritchard adjourned the pre-meeting.

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City Clerk

**MINUTES OF THE REGULAR MEETING OF THE  
CITY COUNCIL OF THE CITY OF MOUNTAIN BROOK, ALABAMA  
JULY 27, 2015**

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The City Council of the City of Mountain Brook, Alabama met in public session in the City Hall Council Chamber at 7:00 p.m. on Monday, the 27th day of July, 2015. The Council President Pro Tempore called the meetings to order and the roll was called with the following results:

**Present:** William S. Pritchard, III, Council President Pro Tempore  
Jack D. Carl  
Lloyd C. Shelton  
Alice B. Womack  
Lawrence T. Oden, Mayor

**Absent:** Virginia C. Smith, Council President

Also present were City Attorney Whit Colvin, City Manager Sam Gaston, and City Clerk Steven Boone.

The City Council President Pro Tempore stated that a quorum was present and that the meeting was open for the transaction of business.

**1. RECOGNITION OF CAREY HOLLINGSWORTH (EXHIBIT 1)**

Mayor Oden read aloud and presented Resolution No. 2015-102 to Mr. Hollingsworth.

**2. CONSENT AGENDA**

Council President Pro Tempore Pritchard announced that the following matters will be considered at one time on the consent agenda provided no one in attendance objects:

Approval of the minutes of the July 13, 2015 regular meeting of the City Council.

<b>2015-102</b>	Expression gratitude to Carey Hollingsworth for his service on the Parks and Recreation Board	Exhibit 1
<b>2015-103</b>	Appoint Jorja White to The Jefferson County Intellectual and Developmental Disabilities Authority	Exhibit 2, Appendix 1
<b>2015-104</b>	Appoint Helen McTyeire Drennen to the Mountain Brook Park and Recreation Board, to serve without compensation, with the term of office to end July 27, 2020	Exhibit 3, Appendix 2
<b>2015-105</b>	Authorize the City Clerk on behalf of the Mountain Brook municipal court to issue notice to Judicial Correction Services, Inc. (JCS) of the City's intent to cancel its contract (Resolution No. 2003-164)	Exhibit 4, Appendix 3
<b>2015-106</b>	Declare certain equipment and furniture surplus and authorizing its sale by way of public Internet auction	Exhibit 5
<b>2015-107</b>	Recommend to the ABC Board the issuance of a license to Kessler Collection Management, LLC, doing business as the Grand Bohemian Hotel Mountain Brook located in Mountain Brook Village, Mountain Brook, AL 35223	Exhibit 6, Appendix 4

- |                 |   |                          |
|-----------------|---|--------------------------|
| <b>2015-108</b> | Authorize the execution of an encroachment agreement between the City and W. Banks Petrey and Bragan D. Petrey of 12 Norman Drive, Mountain Brook, AL 35213   | Exhibit 7,<br>Appendix 5 |
| <b>2015-109</b> | Authorize the execution of the First Amendment to the Tower Site Sublease Agreement between the City and American Tower Asset Sub, LLC, with respect to the wireless communication tower located at Liberty Parkway (Athletic Complex behind gymnastics building) | Exhibit 8,<br>Appendix 6 |

Thereupon, the foregoing minutes and resolutions were introduced by Council President Pro Tempore Pritchard and their immediate adoption was moved by Council member Shelton. The minutes and resolutions were then considered by the City Council. Council member Womack seconded the motion to adopt the foregoing minutes and resolutions. Then, upon the question being put and the roll called, the vote was recorded as follows:

Ayes: William S. Pritchard, III, Council President Pro Tempore  
Jack D. Carl  
Lloyd C. Shelton  
Alice B. Womack

Nays: None

Council President Pro Tempore Pritchard thereupon declared that said minutes and Resolution Nos. 2015-102 through 2015-109 are adopted by a vote of 4—0.

**3. CONSIDERATION: ORDINANCE AUTHORIZING THE PLACEMENT OF TWO (2) STOP SIGNS ON BROOKWOOD ROAD AT ITS INTERSECTION WITH CROSSHILL ROAD AND PROVIDE FOR PUNISHMENT FOR VIOLATIONS THEREOF (EXHIBIT 9, APPENDIX 7)**

The proposed ordinance was introduced in writing by Council President Pro Tempore Pritchard who then invited Mr. Richard Caudle with Skipper Consulting, Inc. forward to describe the proposal (Exhibit 9, Appendix 7). Upon conclusion of Mr. Caudle's comments and explanation, Mr. Pritchard invited comments from proponents of the proposed stop signs. There being no one to speak in favor, comments were invited from those who opposed the proposal.

Ms. Lorelle Baddley of 3569 Brookwood Road:

- If implemented, she believes her driveway will effectively become a 4-way stop for about twenty minutes in the morning
- Presently, the only motorists she must make eye contact with before proceeding are those coming down Crosshill Road to Brookwood Road
- Perceives this proposal will could make the intersection less safe
- Does not understand the necessity of this proposal considering the limited time spans in the morning and evening when cars que to make their maneuvers
- Can recall only one or two accidents at this intersection in the 14 years she has resided here

Mr. Pritchard explained that the City obtained an APPLE Grant (Resolution No. 2014-099) to study various intersections throughout the City. The City Council solicited input from the community in order to identify the intersections to be studied through this grant. This intersection was selected for study based on comments and feedback from the community.

Mr. John Baddley of 3569 Brookwood Road:

- Complained that the high school kids frequently do not stop for the existing stop signs and is concerned that these new signs will be no different
- Suggested that law enforcement efforts be increased at this intersection

Mr. Sean Hannon of 3613 Brookwood Road:

- The congestion at this intersection occurs only for a short time in the morning and evening
- The area residents are very familiar with the flow and congestion
- The distance between the two stop signs on Brookwood Road will be very short (165 feet from center to center per Mr. Caudle) and the section of road between the two stop signs is a straight shot
- Would prefer speed bumps to stop signs

Mr. Caudle:

- The only sight distance issue observed is for those motorists turning left from Brookwood Road onto Crosshill Road toward the high school
- If the Council wishes to omit the proposed stop sign on Brookwood Road southbound, then he recommends that he take another look to determine the exact nature of the sight distance issues

There being no further comments or discussion, Council President Pro Tempore Pritchard called for a motion regarding the proposed ordinance. There being none, Mr. Pritchard announced that in deference to the concerns raised and comments made, the matter will be continued pending further study and analysis by Mr. Caudle. It is expected that the matter may be considered by the City Council again on August 10, 2015 at 7 p.m.

#### 4. OTHER BUSINESS

Mr. James Lott, representing Canterbury United Methodist, stated that he was in attendance to hear the discussion regarding the proposed drainage study for Overbrook Road area in and around Canterbury Methodist Church [that was discussed at the 6:15 p.m. pre-meeting]. Council President Pro-Tempore Pritchard explained that this matter was discussed previously and updated Mr. Lott about that earlier discussion.

#### 5. ANNOUNCEMENTS REGARDING THE NEXT REGULAR MEETING OF THE CITY COUNCIL

Council President Pro Tempore Pritchard announced that the next meeting of the Mountain Brook City Council will be held on Monday, August 10, 2015 at 7:00 p.m. in the Council Chamber of City Hall located at 56 Church Street, Mountain Brook, AL 35213. Please visit the City's web site ([www.mtnbrook.org](http://www.mtnbrook.org)) for more information.

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City Clerk

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#### EXHIBIT 1

#### RESOLUTION NO. 2015-102

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**WHEREAS**, Carey Hollingsworth served with dedicated distinction on the Mountain Brook Parks and Recreation Board from October 22, 2004 through July 14, 2015 and has served as Chairman since March, 2006; and

**WHEREAS**, Carey Hollingsworth's background, leadership and knowledge have proven to be invaluable by providing input and guidance to the Mountain Brook Parks and Recreation Department for future planning for numerous projects, including: construction of a new Parks and Recreation building; renovation of a portion of the playground at Overton Park to create Cam's Corner; installation of water fountains at Mountain Brook Elementary playing field and Jemison Park and future fountains at Overton Park and Jemison Nature Trail; public restrooms at Overton Park and Brookwood Forest Elementary and future restrooms at Crestline Elementary and Mountain Brook Elementary; and upgrading the trash receptacles and park signs throughout the parks; and

**RESOLUTION NO. 2015-111**

**BE IT RESOLVED** by the City Council of the City of Mountain Brook, Alabama, that Susan Elliott is hereby appointed to The Emmet O'Neal Library Board, to serve without compensation, her term to end September 30, 2019.

**ADOPTED:** This 10th day of August, 2015.

\_\_\_\_\_  
Council President

**APPROVED:** This 10th day of August, 2015.

\_\_\_\_\_  
Mayor

**CERTIFICATION**

I, Steven Boone, City Clerk of the City of Mountain Brook, Alabama hereby certify the above to be a true and correct copy of a resolution adopted by the City Council of the City of Mountain Brook at its regular meeting held on August 10, 2015, as same appears in the minutes of record of said meeting.

\_\_\_\_\_  
City Clerk

Susan Sipple Elliott  
3895 Glencoe Drive  
Mountain Brook, Alabama 35213  
205.870.3311  
205.602.2835

Education Mary Baldwin College 1985-1989  
Staunton, VA BA English  
Virginia Program at Oxford, Summer 1987  
May term study of Italian Renaissance Art, Italy 1988

Experience University of Alabama at Birmingham MA Art History Dec 1993  
Curatorial Assistant-Curator of Paintings, Sculpture and Works on Paper,  
1300 to the present. Birmingham Museum of Art. 1994-1999

Editor at Large, Portico Magazine  
Contributing Editor, Flower Magazine 2012- present

Cochairwoman Antiques at the Gardens 2010  
Helped raise \$300,000 for Birmingham Botanical Gardens

Friends of the Emmet O'Neal Library, year round book sale volunteer,  
2010-present  
President Friends of the Emmet O'Neal Library 2013-2014

Junior Warden, Senior Warden, Cathedral Church of the Advent  
2013-Janurary 2015

Interests Reading, Horseback riding, Gardening, Walking, Travel

**RESOLUTION NO. 2015-112**

**WHEREAS**, the City of Mountain Brook, Alabama, has certain items of personal property which are no longer needed for public or municipal purposes; and

**WHEREAS**, Section 11-43-56 of the Alabama Code of 1975 authorizes the municipal governing body to dispose of unneeded personal property.

**NOW, THEREFORE, BE IT RESOLVED** by the City Council of the City of Mountain Brook, as follows: It is hereby established and declared that the following property: 1) items 1 through 13 below represents unclaimed or abandoned property and 2) items 14 through 20 below owned by the City of Mountain Brook, Alabama are no longer needed for public or municipal purposes and are hereby declared surplus property:

<b>Item</b>	<b>Case/Asset</b>	<b>Description</b>	<b>Model or Serial Number</b>	<b>Notes</b>
1	201400026602	Recovered Property	1-bicycle, Giant Roam3, s/n: C82J1832, Color black	Auction
2	201400026602	Recovered	1-skateboard, Adam longboard, s/n:	Auction
3	71073	UDOCS	1-table saw, Craftsman, s/n: unknown	Auction
4	71073	UDOCS	1-miter saw, Delta Shopmaster, s/n:	Auction
5	71073	UDOCS	1-staple gun, Porter Cable, s/n:	Auction
6	201500007478	Recovered Property	6-plastic ATV front body pieces, camo	Auction
7	201400011035	Recovered Property	1-soft sided cooler, 1-keychain with key	Destroy
8	201400008679	Recovered Property	Jail inmate property not picked	Destroy
9	201400002371	Recovered Property	1-backpack, Northface, containing	Destroy
10	201400000235	Criminal Mischief	3-paint cans, 1-jacket	Destroy
11	201300020725	Recovered Property	1-purse and contents	Destroy
12	201200022494	Theft of Property	Misc. clothes (7-items)	Destroy
13	201300025014	Recovered Property	1-"Fossil" brand bag containing misc	Destroy
14		City Property	1-DVD Recorder, Toshiba DR430, s/n:	Auction
15		City Property	1-DVD Recorder, Toshiba DR430, s/n:	Auction
16		City Property	1-server, unknown brand, (used as	Auction
17		City Property	1-battery backup device, APC Smart-	Auction
18		City Property	1-CCTV camera, Toshiba IK-65WDA,	Auction
19		City Property	1-cordless power drill, Ryobi HP962,	Auction
20		City Property	1-Infrared traffic control emitter,	Auction

**BE IT FURTHER RESOLVED** by the City Council of the City of Mountain Brook, Alabama, that the City Manager is hereby authorized and directed to sell said property by way of public Internet auction to the highest bidder and to otherwise dispose of such property that does not sell at said public auction.

**ADOPTED:** This 10th day of August, 2015.

\_\_\_\_\_  
Council President

**APPROVED:** This 10th day of August, 2015.

\_\_\_\_\_  
Mayor

**CERTIFICATION**

I, Steven Boone, City Clerk of the City of Mountain Brook, Alabama, hereby certify the above to be a true and correct copy of a resolution adopted by the City Council of the City of Mountain Brook at its meeting held on August 10, 2015, as same appears in the minutes of record of said meeting.

---

City Clerk

**RESOLUTION NO. 2015-113**

**BE IT RESOLVED** by the City Council of the City of Mountain Brook, Alabama that the City Council hereby awards the LED Lighting Project bid to Innovis Lighting, L.L.C. having submitted the best qualified bid.

**BE IT FURTHER RESOLVED** by the City Council of the City of Mountain Brook, Alabama that the City Council hereby authorizes the execution of a professional services contract agreement between the City and Innovis Lighting, L.L.C. subject to review and approval by the City Attorney.

**ADOPTED:** This 10th day of August, 2015.

\_\_\_\_\_  
Council President

**APPROVED:** This 10th day of August, 2015.

\_\_\_\_\_  
Mayor

**CERTIFICATION**

I, Steven Boone, City Clerk of the City of Mountain Brook, Alabama hereby certify the above to be a true and correct copy of a resolution adopted by the City Council of the City of Mountain Brook at its regular meeting held on August 10, 2015, as same appears in the minutes of record of said meeting.

\_\_\_\_\_  
City Clerk



Karen Fowler <fowlerk@mtnbrook.org>

---

## Village Lighting

1 message

---

Ronald Vaughn <vaughnr@mtnbrook.org>

Thu, Aug 6, 2015 at 8:22 AM

To: Karen Fowler <fowlerk@mtnbrook.org>

Cc: Steve Boone <boones@mtnbrook.org>, Sam Gaston <gastons@mtnbrook.org>

Karen,

Please find attached the two bid packages we received for the LED Village Lighting project. We received bids from Innovis Lighting, L.L.C. (\$195.80) and Mayer Electric Supply (\$468.75).

It is my recommendation that we award the bid to Innovis Lighting for \$195.80 per unit.

Thanks

**Ronnie Vaughn**

Public Works Director

City of Mountain Brook AL

3579 East Street

Birmingham, Alabama 35243

205.802.3865 Office

205.967.2631 Fax

vaughnr@mtnbrook.org

---

### 2 attachments

 **Village Lighting Innovis.pdf**  
5907K

 **Village Lighting Mayer.pdf**  
2099K



58 Vine Street, Suite 100  
Birmingham, AL 35213  
(205) 396-3979  
www.innovisllighting.com

April 22, 2015

Mr. Sam Gaston  
City of Mountain Brook  
Job Name: City of Mountain Brook LED retrofit  
Project Number: MI 001-2015  
Bid #: 42215.03  
Bid Date: 4/22/2015

Dear Mr. Gaston:

Thank you for the opportunity to bid on this project for the City of Mountain Brook. We are able to provide two (2) options for your consideration. Both come with a full ten year manufacturer's warranty. Both will require a test fitting of the LED into the existing acorn head to ensure fitment.

Option 1: Cree DPT Series (DPT A SB FR A 30K-UL UF) is a 3000K, 175W Mercury Vapor or 70W MH or HPS equivalent, rated and guaranteed for ten (10) years. Lead time on this module is approximately six (6) weeks. It is specifically designed to preserve the historic look of the Villages' streetscapes. Lead time is six (6) weeks once order is placed. The price per unit is \$147.40 delivered. I have attached the specification sheet to this proposal for your review.

Option 2: DECO RET -1 series (RET1-LED4050UNV) is available in 2700K, 175W Mercury Vapor/70W Metal Halide/High Pressure Sodium equivalent, and is also rated for ten (10) years with a full manufacturer's warranty. Lead time is six (6) weeks once order is placed. The price per unit is \$195.80 delivered. I have requested an updated specification sheet and will provide it to you as soon as possible.

Please feel free to contact me at (205) 401-6739 if you have any questions.

Sincerely,



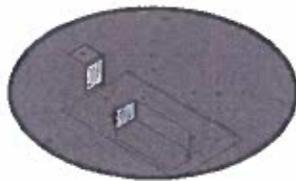
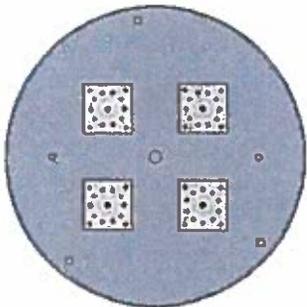
J. Randall Pitts, Jr.  
Innovis Lighting, L.L.C.



Job Information
Type:
Catalog #:
Project:
Comments:
Prepared by:



Retrofit Kit

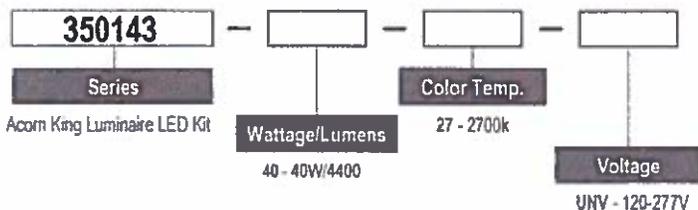


### Features and Benefits

- LED's are under driven. These chips are lm 80 qualified at 1000ma, by operating at almost half the allowed current level lowers internal operating junction temp. And extends life beyond 170 at 50k hours.
- High led count and low drive current provides increased efficacy (l/w) and reduced operating temperature, which generates a more robust, balanced and sustainable light engine.
- Type 5 round; other distributions available.
- Allows for immediate thermal transfer and dissipation, away from the LED's. Marine grade 4 anodizing provides a corrosion proof treatment to all exposed aluminum.
- Soldered power wires provides a robust electrical connection eliminating future corrosion and contact failure.
- Single polycarbonate lens with 18 culminators provide high light transmission with a contamination free assembly, seal is performed by a 100% high temp tubular silicone gasket.
- Allows for easy service and conversions.
- Best technique used for sustainable light engine control.
- Provides true power savings and line surge management.
- Best available.
- Auto sensing.
- Better thermal characteristics.
- Provides fluid control during ramp up and ramp down; 10-100% lumen output with linear wattage consumption.
- Qualified safety certified.

### ORDERING INFORMATION:

Example: (350143-40-27-UNV )



56 Church St.  
MOUNTAIN BROOK, ALABAMA 35213  
OFFICE OF PURCHASING AGENT (CITY MANAGER)

**BID COVER SHEET**

Bid Request Posted this Date: 04/08/2015 Bids to be Opened this Date and Time: 04/22/2015 @ 2:00 p.m.

To Whom It May Concern:

Bids shall be sealed and delivered to the Office of the Purchasing Agent in the City Hall, City of Mountain Brook, Alabama, prior to the above specified date and time. Bids shall be publicly opened at the date and time specified above or as soon as practicable thereafter.

To be considered by the City, a bid must comply with Alabama law, including, but not limited to, Ala. Code (1975) §§41-16-50 et seq. and 31-13-1 et seq., and provide documentation of enrollment in the E-Verify program pursuant to Ala. Code §31-13-9.

All bidders must use the bid form provided by the City for the project. This Bid Cover Sheet should be completed and submitted with the bid. Bids completed in pencil will not be accepted. Bids should be clearly marked "SEALED BID" and indicate on the outside of the envelope the project for which the bid is submitted and the date of bid opening.

The City reserves the right to require a bid bond, in which case specific information shall be provided with the request for bids.

The City reserves the right to utilize life cycle cost analysis in determining the lowest responsible bidder, in which case specific information shall be provided with the request for bids.

The City reserves the right to accept or reject any or all bids and to waive formalities.

Sam S. Gaston, City Manager and Purchasing Agent

Specifications for Project No. MI 001-2015: Village Lighting Project throughout the City of Mountain Brook- Public Works Department.

BIDDER INNOVIS LIGHTING, L.L.C. TELEPHONE (205)

ADDRESS 58 VINE STREET

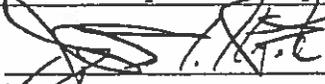
EMAIL RANDALL@INNOVISHIGHTING.COM

CITY MOUNTAIN BROOK STATE AL ZIP 35213

BID AMOUNT (AS PER SPECIFICATIONS) \$195.80

Note: MUNICIPALITIES ARE EXEMPT FROM STATE SALES TAX

This bid must be signed below by bidder's principal/officer/agent and notarized:

Auth. Signature: 	Sworn to and subscribed before me on this <u>22</u> day of <u>APRIL</u> , 20 <u>15</u>
Name: <u>J. RANDALL PITTS, JR.</u>	Notary Public My Commission Expires: 
Title: <u>MANAGING MEMBER</u>	

Project Coordinator: Ronald Vaughn (205) 802-2390 ext. 3865

**SPECIFICATIONS FOR: PROJECT NO. MI 001-2015: Village Lighting Project throughout the City of Mountain Brook, Public Works Department.**

The city of Mountain Brook, Alabama will be accepting bids for approximately 105 LED retrofit light fixtures for existing pole top acorn fixtures. The fixtures shall be Amerlux RF AVI-U-SY-27L

Or equal.

**Specifications:**

- 1 8-12" telescoping field adjustment
- 2 IP66 rated sealed LED chamber and optics
- 3 Standard 10 KV surge protection in addition to over voltage or short circuit protection
- 4 2700 Kelvin
- 5 Color is in a four (4) McAdams Ellipse quadrant
- 6 Standard 10 year/50,000 hour warranty
- 7 Anodized cast aluminum heat sink
- 8 Automatic AC incoming voltage sensing 120-277 volt 50/60 hertz
- 9 Symmetric distributions.

**GENERAL REQUIREMENTS:**

The successful bidder must obtain a city Mountain Brook business license.

**SPECIAL CONDITIONS:**

This bid shall be good for a period of 12 months from the time a purchase order is issued. The City reserves the right to increase or decrease quantities without a change in bid price. Bidder should provide a unit cost as its bid amount. Bidder shall also provide any shipping or additional cost to City of providing the fixtures. The bid amount SHOULD NOT include installation cost as installation is beyond the scope of the bid request.

## NOTICE

To: CONTRACTORS AND GRANTEES

FROM: THE CITY OF MOUNTAIN BROOK  
ATTN: STEVEN BOONE  
P. O. BOX 130009, MOUNTAIN BROOK, ALABAMA 35213-02009

RE: H.B. 56 -ALABAMA IMMIGRATION LAW COMPLIANCE

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The purpose of this Memorandum is to alert you to the Alabama Immigration Law Compliance flow-down requirements that became effective on January 1, 2012. Those are discussed herein and can be summarized as follows:

1. PROVIDE The City of Mountain Brook ("the City") documentation supporting your compliance with the immigration law by timely submitting a notarized *Affidavit of Alabama Immigration Compliance by a Business Entity/Employer/Contractor to a Political Subdivision of the State of Alabama* and an E-Verify Memorandum of Understanding;
2. PROVIDE the City a signed *Alabama Immigration Law Compliance Contract* in the attached Notice form provided;
3. PROVIDE your subcontractors notice of their compliance obligations and OBTAIN from each a notarized *Affidavit of Alabama Immigration Compliance by a Subcontractor*.

The requirements above, imposed by HB 56, are "a condition for the award of any contract, grant, or incentive by the State of Alabama, any political subdivision thereof, or any state-funded entity to a business entity or employer that employs one or more employees [working in the State of Alabama]."<sup>1</sup> As a Contractor<sup>2</sup> or a Grantee, if you believe these obligations do not apply to you, please notify the City immediately.

For your convenience, we have included for your use a sample AFFIDAVIT OF ALABAMA IMMIGRATION COMPLIANCE BY A BUSINESS ENTITY/EMPLOYER/CONTRACTOR TO A POLITICAL SUBDIVISION OF THE STATE OF ALABAMA. Please complete, notarize, and return a copy to The City of Mountain Brook along with your attached E-VERIFY MEMORANDUM OF UNDERSTANDING. See ALA. CODE § 31-13-9 (c).

You are also required to obtain from your subcontractors a notarized AFFIDAVIT OF IMMIGRATION COMPLIANCE BY A SUBCONTRACTOR. A careful review of the broad definition below of the term "Contractor" in the Act will assist you in deciding to whom to provide notice.

If you contract with more than one local government, you will only need to have one affidavit completed and notarized, and then provide a copy to the requesting governmental entities. You are required to maintain your subcontractors' affidavits at your offices. These documents will be subject to audit. You may provide a copy of this Memorandum with your notification memorandum to your subcontractors as an explanation for this mandatory requirement.

Finally, you will find a NOTICE OF ALABAMA IMMIGRATION LAW COMPLIANCE REQUIREMENTS TO ALL CONTRACTORS OF THE CITY OF MOUNTAIN BROOK, ALABAMA ("ALABAMA IMMIGRATION COMPLIANCE CONTRACT") for execution by contractors and to be returned to the City of Mountain Brook. To the extent that there is no formal written contract between a contractor and the City (e.g., where business is conducted by purchase order), this document shall serve as your Alabama Immigration Compliance Contract. Similar language shall also be included in all future contracts and agreements executed with the City of Mountain Brook.

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<sup>1</sup> ALA. CODE § 31-13-9 (a) and (b). See <http://www.ago.state.al.us/File/Immigration-AL-Law-2011-535>. The law is now codified in ALA. CODE §§ 31-13-1 to 31-13-30 as well as § 32-6-9 (the "Act").

<sup>2</sup> A Contractor is defined broadly in the Act as "A person, employer, or business entity that enters into an agreement to perform any service or work or to provide a certain product in exchange for valuable consideration. This designation shall include, but not be limited to, a general contractor, subcontractor, independent contractor, contract employee, project manager, or a recruiting or staffing entity." ALA. CODE §§ 32-13-3 (3)

**AFFIDAVIT OF ALABAMA IMMIGRATION COMPLIANCE BY A  
BUSINESS ENTITY/EMPLOYER/CONTRACTOR TO A POLITICAL SUBDIVISION  
OF THE STATE OF ALABAMA**

(To be completed as a condition for the award of any contract, grant, or incentive by the State of Alabama, any political subdivision thereof, or any state-funded entity to a business entity)

City of Mountain Brook, Alabama

FORM FOR SECTIONS 9 (a) and (b) BEASON-HAMMON ALABAMA TAXPAYER AND CITIZEN PROTECTION ACT;  
CODE OF ALABAMA, SECTIONS 31-13-9 (a) and (b)

State of ALABAMA

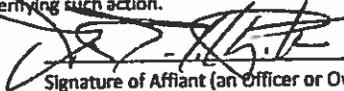
County of JEFFERSON

Before me, a notary public, personally appeared J. RANDALL PITS, JR (print name) who, being duly sworn, says as follows:

As a condition for the award of any contract, grant, or incentive by the State of Alabama, any political subdivision thereof, or any state-funded entity to a business entity or employer that employs one or more employees, I hereby attest that in my capacity as MANAGING MEMBER (state position) for INNOVUS LIGHTING, L.L.C. (state business entity/employer/contractor name) that said business entity/employer/contractor shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien.

I further attest that said business entity/employer/contractor is enrolled in the E-Verify program. (ATTACH A COPY OF YOUR ORGANIZATION'S E-VERIFY MEMORANDUM OF UNDERSTANDING TO DOCUMENT THAT THE BUSINESS ENTITY/EMPLOYER/CONTRACTOR IS ENROLLED IN THE E-VERIFY PROGRAM.)

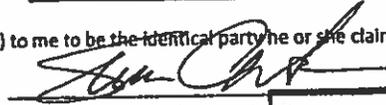
I further attest that all sub-contractors in my employment are duly enrolled in the E-Verify program and upon request can produce the appropriate forms verifying such action.

  
Signature of Affiant (an Officer or Owner of Contractor)

PENDING  
E-Verify User Identification Number

Sworn to and subscribed before me this 22 day of APRIL, 2015

I certify that the affiant is known (or made known) to me to be the identical party he or she claims to be.

  
Signature and Seal of Notary Public

My Commission Expires: \_\_\_\_\_

[Seal]

**SUNEE CATES**

**Notary Public, Alabama State at Large**  
**My Commission Expires Jan. 30, 2017**

**NOTICE OF ALABAMA IMMIGRATION LAW COMPLIANCE REQUIREMENTS TO ALL  
CONTRACTORS OF THE CITY OF MOUNTAIN BROOK, ALABAMA  
("ALABAMA IMMIGRATION COMPLIANCE CONTRACT")**

As a Contractor, as defined in the Act, to THE CITY OF MOUNTAIN BROOK, ALABAMA ("the City"), it is critical to your relationship (future or continuing) with the City that you comply with the Immigration Reform and Control Act of 1986, as amended by the Immigration Act of 1990, and the Beason-Hammon Alabama Taxpayer and Citizen Protection Act. Accordingly, please provide your Affidavit of Immigration Compliance with attached E-Verify Memorandum of Understanding, as requested in the attached memorandum. If you do not believe these obligations apply to you, please notify the City immediately.

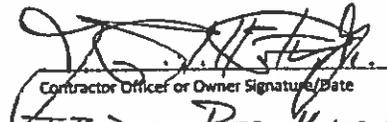
Effective January 1, 2012, every contract entered into by the City a contractor will contain the following clause or one substantially similar:

Alabama Immigration Law Compliance Contract: Contractor agrees that it will fully comply with the Immigration Reform and Control Act of 1986, as amended by the Immigration Act of 1990, and the Beason-Hammon Alabama Taxpayer and Citizen Protection Act, which makes it unlawful for an employer in Alabama to knowingly hire or continue to employ an alien who is or has become unauthorized with respect to such employment or to fail to comply with the I-9 requirements or fails to use E-Verify to verify the eligibility to legally work in the United States for all of its new hires who are employed to work in the State of Alabama. Without limiting the foregoing, Contractor shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien, and shall have an officer or other managerial employee who is personally familiar with the Contractor's hiring practices to execute an affidavit to this effect on the form supplied by the Board and return the same to the City. Contractor shall also enroll in the E-Verify Program prior to performing any work, or continuing to perform any ongoing work, and shall remain enrolled throughout the entire course of its performance hereunder, and shall attach to its affidavit the E-Verify Program for Employment Verification and Memorandum of Understanding and such other documentation as the Board may require to confirm Contractor's enrollment in the E-Verify Program. Contractor agrees not to knowingly allow any of its subcontractors, or any other party with whom it has a contract, to employ in the State of Alabama any illegal or undocumented aliens to perform any work in connection with the Project, and shall include in all of its contracts a provision substantially similar to this paragraph. If Contractor receives actual knowledge of the unauthorized status of one of its employees in the State of Alabama, it will remove that employee from the project, jobsite or premises of the City and shall comply with the Immigration Reform and Control Act of 1986, as amended by the Immigration Act of 1990, and the Beason-Hammon Alabama Taxpayer and Citizen Protection Act. Contractor shall require each of its subcontractors, or other parties with whom it has a contract, to act in a similar fashion. If Contractor violates any term of this provision, this Agreement will be subject to immediate termination by the City. To the fullest extent permitted by law, Contractor shall defend, indemnify and hold harmless the City from any and all losses, consequential damages, expenses (including, but not limited to, attorneys' fees), claims, suits, liabilities, fines, penalties, and any other costs arising out of or in any way related to Contractor's failure to fulfill its obligations contained in this paragraph.

Incorporated  
into contract  
addendum.

To the extent that there is no formal written contract between the City and the Contractor (e.g., where business is conducted by purchase order), this document shall serve as the Alabama Immigration Compliance Contract.

Alabama Immigration Law Compliance Contract Notice Acknowledged and Agreed by Contractor whose name appears below:

  
Contractor Officer or Owner Signature/Date 4/22/2015  
T. Randall Pitts, Manager, KNOX'S LIGHTING  
Print Name/Title/Company

Please execute and return to THE CITY OF MOUNTAIN BROOK, ALABAMA within the next 10 days.

**AFFIDAVIT OF ALABAMA IMMIGRATION COMPLIANCE BY A  
SUBCONTRACTOR TO A POLITICAL SUBDIVISION  
OF THE STATE OF ALABAMA**

(To be completed as a condition for the award of any [sub]contract, grant, or incentive by the State of Alabama, any political subdivision thereof, or any state-funded entity to a business entity. TO BE RETURNED TO THE CONTRACTOR OR GRANTEE OF THE CITY OF MOUNTAIN BROOK, ALABAMA)

City of Mountain Brook, Alabama

FORM FOR SECTIONS 9 (a) and (b) BEASON-HAMMON ALABAMA TAXPAYER AND CITIZEN PROTECTION ACT;  
CODE OF ALABAMA, SECTIONS 31-13-9 (a) and (b)

State of ALABAMA

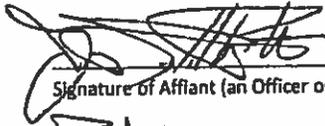
County of JEFFERSON

Before me, a notary public, personally appeared J. Ronald Pines, Jr. (print name) who, being duly sworn, says as follows:

As a condition for the award of any [sub]contract, [sub]grant, or incentive by the State of Alabama, any political subdivision thereof, or any state-funded entity to a business entity or employer that employs one or more employees, I hereby attest that in my capacity as MANAGING MEMBER (state position) for INNOVIS LIGHTING, L.L.C. (state business entity/employer/contractor name) that said business entity/employer/[sub]contractor shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien.

I further attest that said business entity/employer/contractor is enrolled in the E-Verify program. (ATTACH A COPY OF YOUR ORGANIZATION'S E-VERIFY MEMORANDUM OF UNDERSTANDING TO DOCUMENT THAT THE BUSINESS ENTITY/EMPLOYER/[SUB]CONTRACTOR IS ENROLLED IN THE E-VERIFY PROGRAM.)

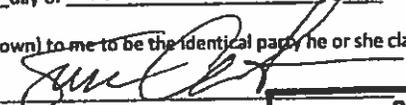
I further attest that all sub-contractors in my employment are duly enrolled in the E-Verify program and upon request can produce the appropriate forms verifying such action.

  
\_\_\_\_\_  
Signature of Affiant (an Officer or Owner of [Sub]Contractor)

PENDING  
\_\_\_\_\_  
E-Verify User Identification Number

Sworn to and subscribed before me this 22 day of APRIL 2015

I certify that the affiant is known (or made known) to me to be the identical party he or she claims to be.

  
\_\_\_\_\_  
Signature and Seal of Notary Public  
My Commission Expires: \_\_\_\_\_

**SUNEE CATES**  
**Notary Public, Alabama State at Large**  
**My Commission Expires Jan. 30, 2017**

[Seal]

ADDENDUM TO AGREEMENT BETWEEN  
THE CITY OF MOUNTAIN BROOK AND  
XXXXXXXXXXXXXXXXXXXX, INC.  
DATED           , 2015

THIS ADDENDUM ("the/this Addendum") to the principal agreement between the City of Mountain Brook, Alabama ("the City") and XXXXXXXXXXXXXXXXXXXX, INC. ("the Contractor") dated XXXXX, 2015.

This Addendum is a part of the principal agreement, but supersedes and controls any conflicting or inconsistent terms or provisions in the principal agreement, particularly to the extent the conflicting or inconsistent terms or provisions purport either to (a) confer greater rights or remedies on the Contractor than are provided herein or under otherwise applicable law, or to (b) reduce, restrict, or eliminate rights or remedies that would be available to the City under otherwise applicable law. The addendum shall remain in full force and effect with respect to any amendment, extension, or supplement of or to the principal agreement, whether or not expressly acknowledged or incorporated therein. No agent, employee, or representative of the City is authorized to waive, modify, or suspend the operation of the Addendum or any of its terms or provisions without express approval of the Mountain Brook City Council.

1. **Definitions.** For purposes of this Addendum, the terms below have the following meanings:
  - A. "The City" refers to and includes the City of Mountain Brook, Alabama, and its constituent departments, boards, and agencies.
  - B. "The (this) Agreement" refers to the principal contract, agreement, proposal, quotation, or other document that sets forth the basic terms and conditions under which the Contractor is engaged to provide goods, materials, or services to the City, including the payment or other consideration to be provided by the City in exchange therefore.
  - C. "The Contractor" refers to the person, firm, or other legal entity that enters into an agreement with the City to provide goods, materials, or services to the City, and includes vendors and suppliers providing goods, materials, and services to the City with or without a formal contract as well as the Contractor's vendors, suppliers, and subcontractors.
  
2. **Arbitration; Mediation; Alternate Dispute Resolution.** The City agrees to arbitrate disputes or to engage in alternate dispute resolution (ADR) if arbitration or ADR is required by the agreement as a means of resolving disagreements arising thereunder or is a precondition to the pursuit of other legal

available under such arbitration rules or processes do not afford the Contractor greater relief (e.g., attorney's fees, damages, etc.) than would be available under otherwise applicable law, (2) the venue for the arbitration or mediation proceeding is in Jefferson County, Alabama, and (3) the costs of such proceedings (including the fees of the arbitrator or mediator) are divided evenly between the parties.

3. **Attorney's Fees; Court Costs; Litigation Expenses.** The City shall not be liable for attorney's fees, court costs, litigation expenses, and like charges except and to the extent such fees, costs, and charges would be assessed against the City under applicable law in the absence of any contractual provision imposing or assigning liability therefore.
4. **Late Payment Charges; Fees; Interest.** The City shall not be liable for any late payment charges, interest, or fees on any delinquent bill for goods, materials, or services at a rate higher than two-thirds of one percent per month (eight percent per annum), but bills rendered to the City shall not be considered delinquent any earlier than thirty (30) days after rendition of a complete and accurate bill by the Contractor. Contested bills shall not be subject to late payment charges pending resolution of the dispute.
5. **Indemnification; Hold-Harmless; Release; Waiver; Limitations of Liability or Remedies.** The City shall not and does not indemnify, hold harmless, or release the Contractor or any other person, firm, or legal entity for, from, or with respect to any claim, cause of action, cost, charge, fee, expense, or liability whatsoever arising out of or relating to the subject matter of the agreement or the performance or nonperformance thereof; nor shall or does the City waive its right to assert or pursue any remedy or claim for relief of any kind that it may have against the Contractor or any other person, firm, or entity for any actual or alleged default or other breach of legal duty on the part of the Contractor or any person, firm, or entity in privity therewith or acting on Contractor's behalf. Any limitation or restriction regarding the type, nature, form, amount, or extent of any right, remedy, relief, or recovery that would otherwise be available to the City is expressly disavowed, excluded from the terms of the agreement, and void.
6. **Choice of Law; Choice of Venue or Forum.** The meaning, legal effect, and enforcement of terms and provisions of the agreement and the resolution of any disputes arising thereunder or relating thereto shall be governed by the laws of the State of Alabama except to the extent otherwise required by applicable conflict-of-law principles. The venue of any suit, action, or legal proceeding brought to enforce or secure relief by reason of any asserted breach of duty arising out of or relating to the performance or nonperformance of the agreement shall be Jefferson

applicable principles of law.

7. **Construction of Addendum.** Nothing in this Addendum shall be construed to create or impose any duty or liability on the City, to create a right or remedy in favor of the Contractor against the City, or to restrict or abrogate any right or remedy that is available to the City against the Contractor or any other person, firm, or entity under either the principal agreement or as a matter of law.
8. **Alabama Immigration Law Compliance Contract.** Contractor agrees that it will fully comply with the Immigration Reform and Control Act of 1986, as amended by the Immigration Act of 1990, and the Beason-Hammon Alabama Taxpayer and Citizen Protection Act, which makes it unlawful for an employer in Alabama to knowingly hire or continue to employ an alien who is or has become unauthorized with respect to such employment or to fail to comply with the 1-9 requirements or fails to use E-Verify to verify the eligibility to legally work in the United States for all of its new hires who are employed to work in the State of Alabama. Without limiting the foregoing, Contractor shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien, and shall have an officer or other managerial employee who is personally familiar with the Contractor's hiring practices to execute an affidavit to this effect on the form supplied by the Board and return the same to the City. Contractor shall also enroll in the E-Verify Program prior to performing any work, or continuing to perform any ongoing work, and shall remain enrolled throughout the entire course of its performance hereunder, and shall attach to its affidavit the E-Verify Program for Employment Verification and Memorandum of Understanding and such other documentation as the Board may require to confirm Contractor's enrollment in the E-Verify Program. Contractor agrees not to knowingly allow any of its subcontractors, or any other party with whom it has a contract, to employ in the State of Alabama any illegal or undocumented aliens to perform any work in connection with the Project, and shall include in all of its contracts a provision substantially similar to this paragraph.

If Contractor receives actual knowledge of the unauthorized status of one of its employees in the State of Alabama, it will remove that employee from the project, jobsite or premises of the City and shall comply with the Immigration Reform and Control Act of 1986, as amended by the Immigration Act of 1990, and the Beason-Hammon Alabama Taxpayer and Citizen Protection Act. Contractor shall require each of its subcontractors, or other parties with whom it has a contract, to act in a similar fashion. If Contractor violates any term of this provision, this Agreement will be subject to

permitted by law, Contractor shall defend, indemnify and hold harmless the City from any and all losses, consequential damages, expenses (including, but not limited to, attorneys' fees), claims, suits, liabilities, fines, penalties, and any other costs arising out of or in any way related to Contractor's failure to fulfill its obligations contained in this paragraph.

DATED this XXXXXXXXXXXX, 2015.

XXXXXXXXXXXXXXXXXXXXX, INC.  
Alabama

City of Mountain Brook,

By:  4/22/2015  
FEL INNOVIS LIGHTING LLC

By:

Its: MANAGING MEMBER

Its:

**Request for Taxpayer  
 Identification Number and Certification**

Give form to the requester. Do not send to the IRS.

Print or type  
 See Specific Instructions on page 2.

Name **WINNIS LIGHTING L.L.C.**  
 Business name, if different from above

Check appropriate box:  Individual Sole proprietor  Corporation  Partnership  Other  Exempt from backup withholding

Address (number, street, and apt. or suite no.) **58 VINE STREET**  
 City, state, and ZIP code **MOUNTAIN BROOK AL 35213**

Requester's name and address (optional)  
**City of Mountain Brook  
 P. O. Box 130009  
 Mountain Brook, AL 35213-0009**

List account number(s) here (optional)

**Part I Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 2. For other entities, it is your employer identification number (EIN). If you do not have a number, see How to get a TIN on page 2.

Social security number  
 | | | | | | | | | |

Employer identification number  
**416516124131572**

Note: If the account is in more than one name, see the chart on page 2 for guidelines on whose number to enter.

**Part II Certification**

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
- I am a U.S. person (including a U.S. resident alien).

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign this Certification, but you must provide your correct TIN. (See the instructions on page 2.)

Sign here Signature of U.S. person

*[Handwritten Signature]*

Date **4/22/2015**

**Purpose of Form**

A person who is required to file an information return with the IRS must get your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to give your correct TIN to the person requesting it (the requester) and, when applicable, to:

- Certify the TIN you are giving is correct (or you are waiting for a number to be issued).
- Certify you are not subject to backup withholding, or
- Claim exemption from backup withholding if you are a U.S. exempt payee.

If you are a foreign person, use the appropriate Form W-8. See Pub. 515, *Withholding of Tax on Nonresidents Aliens and Foreign Entities*.

Note: If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**What is backup withholding?** Persons making certain payments to you must under certain conditions withhold and pay to the IRS 30% of such payments after December 31, 2001 (25% after December 31, 2003). This is called "backup withholding." Payments that may be subject to backup withholding include interest, dividends, broker and barter exchange transactions, rents, royalties, nonemployee pay, and certain payments from fishing boat operators. Real estate transactions are not subject to backup withholding.

You will not be subject to backup withholding on payments you receive if you give the requester your correct TIN, make the proper certifications, and report all your taxable interest and dividends on your tax return.

Payments you receive will be subject to backup withholding if:

- You do not furnish your TIN to the requester, or
- You do not certify your TIN when required (see the Part II instructions on page 2 for details), or
- The IRS tells the requester that you furnished an incorrect TIN, or
- The IRS tells you that you are subject to backup withholding because you did not report all your interest and dividends on your tax return (for reportable interest and dividends only), or

5. You do not certify to the requester that you are not subject to backup withholding under 4 above (for reportable interest and dividend accounts opened after 1983 only).

Certain payees and payments are exempt from backup withholding. See the instructions on page 2 and the separate instructions for the Requester of Form W-9.

**Penalties**

**Failure to furnish TIN.** If you fail to furnish your correct TIN to a requester, you are subject to a penalty of \$50 for each such failure unless your failure is due to reasonable cause and not to willful neglect.

**Civil penalty for false information with respect to withholding.** If you make a false statement with no reasonable basis that results in no backup withholding, you are subject to a \$500 penalty.

**Criminal penalty for falsifying information.** Willfully falsifying certifications or affirmations may subject you to criminal penalties including fines and/or imprisonment.

**Misuse of TINs.** If the requester discloses or uses TINs in violation of Federal law, the requester may be subject to civil and criminal penalties.

### Specific Instructions

**Name.** If you are an individual, you must generally enter the name shown on your social security card. However, if you have changed your last name, for instance, due to marriage without informing the Social Security Administration of the name change, enter your first name, the last name shown on your social security card, and your new last name.

If the account is in joint names, list first and then circle the name of the person or entity whose number you enter in Part I of the form.

**Sole proprietor.** Enter your individual name as shown on your social security card on the "Name" line. You may enter your business, trade, or "doing business as (DBA)" name on the "Business name" line.

**Limited liability company (LLC).** If you are a single-member LLC (including a foreign LLC with a domestic owner) that is disregarded as an entity separate from its owner under Treasury regulations section 301.7701-3, enter the owner's name on the "Name" line. Enter the LLC's name on the "Business name" line.

**Other entities.** Enter your business name as shown on required Federal tax documents on the "Name" line. This name should match the name shown on the charter or other legal document creating the entity. You may enter any business, trade, or DBA name on the "Business name" line.

**Exempt from backup withholding.** If you are exempt, enter your name as described above, then check the "Exempt from backup withholding" box in the line following the business name, sign and date the form.

Individuals (including sole proprietors) are not exempt from backup withholding. Corporations are exempt from backup withholding for certain payments, such as interest and dividends. For more information on exempt payees, see the instructions for the Requester of Form W-9.

If you are a nonresident alien or a foreign entity not subject to backup withholding, give the requester the appropriate completed Form W-8.

**Note:** If you are exempt from backup withholding, you should still complete this form to avoid possible erroneous backup withholding.

### Part I—Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box.

If you are a resident alien and you do not have and are not eligible to get an SSN, your TIN is your IRS individual taxpayer identification number (ITIN). Enter it in the social security number box. If you do not have an ITIN, see How to get a TIN below.

If you are a sole proprietor and you have an EIN, you may enter either your SSN or EIN. However, the IRS prefers that you use your SSN.

If you are an LLC that is disregarded as an entity separate from its owner (see *Limited liability company (LLC)* above), and are owned by an individual, enter your SSN (or "pre-LLC" EIN, if desired). If the owner of a disregarded LLC is a corporation, partnership, etc., enter the owner's EIN.

**Note:** See the chart on this page for further clarification of name and TIN combinations.

**How to get a TIN.** If you do not have a TIN, apply for one immediately. To apply for an SSN, get Form SS-5, Application for a Social Security Card, from your local Social Security Administration office. Get Form W-7,

Application for IRS Individual Taxpayer Identification Number, to apply for an ITIN, or Form SS-4, Application for Employer Identification Number, to apply for an EIN. You can get Forms W-7 and SS-4 from the IRS by calling 1-800-TAX-FORM (1-800-829-3676) or from the IRS Web Site at [www.irs.gov](http://www.irs.gov).

If you are asked to complete Form W-9 but do not have a TIN, write "Applied For" in the space for the TIN, sign and date the form, and give it to the requester. For interest and dividend payments, and certain payments made with respect to readily tradable instruments, generally you will have 60 days to get a TIN and give it to the requester before you are subject to backup withholding on payments. The 60-day rule does not apply to other types of payments. You will be subject to backup withholding on all such payments until you provide your TIN to the requester.

**Note:** Writing "Applied For" means that you have already applied for a TIN or that you intend to apply for one soon.

**Caution:** A disregarded domestic entity that has a foreign owner must use the appropriate Form W-8.

### Part II—Certification

To establish to the withholding agent that you are a U.S. person, or resident alien, sign Form W-9. You may be requested to sign by the withholding agent even if items 1, 3, and 5 below indicate otherwise.

For a joint account, only the person whose TIN is shown in Part I should sign (when required). Exempt recipients, see *Exempt from backup withholding* above.

**Signature requirements.** Complete the certification as indicated in 1 through 5 below.

1. Interest, dividend, and barter exchange accounts opened before 1984 and broker accounts considered active during 1983. You must give your correct TIN, but you do not have to sign the certification.

2. Interest, dividend, broker, and barter exchange accounts opened after 1983 and broker accounts considered inactive during 1983. You must sign the certification or backup withholding will apply. If you are subject to backup withholding and you are merely providing your correct TIN to the requester, you must cross out item 2 in the certification before signing the form.

3. Real estate transactions. You must sign the certification. You may cross out item 2 of the certification.

4. Other payments. You must give your correct TIN, but you do not have to sign the certification unless you have been notified that you have previously given an incorrect TIN. "Other payments" include payments made in the course of the requester's trade or business for rents, royalties, goods (other than bills for merchandise), medical and health care services (including payments to corporations), payments to a nonemployee for services, payments to certain fishing boat crew members and fishermen, and gross proceeds paid to attorneys (including payments to corporations).

5. Mortgage interest paid by you, acquisition or abandonment of secured property, cancellation of debt, qualified tuition program payments (under section 529), IRA or Archer MSA contributions or distributions, and pension distributions. You must give your correct TIN, but you do not have to sign the certification.

### Privacy Act Notice

Section 6109 of the Internal Revenue Code requires you to give your correct TIN to persons who must file information returns with the IRS to report interest, dividends, and certain other income paid to you, mortgage interest you paid, the acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA or Archer MSA. The IRS uses the numbers for identification purposes and to help verify the accuracy of your tax return. The IRS may also provide this information to the Department of Justice for civil and criminal litigation, and to cities, states, and the District of Columbia to carry out their tax laws.

You must provide your TIN whether or not you are required to file a tax return. Payors must generally withhold 30% of taxable interest, dividend, and certain other payments to a payee who does not give a TIN to a payer. Certain penalties may also apply.

### What Name and Number To Give the Requester

For this type of account:	Give name and SSN of:
1. Individual	The individual
2. Two or more individuals (joint account)	The actual owner of the account or, if combined funds, the first individual on the account <sup>1</sup> The minor <sup>2</sup>
3. Custodian account of a minor (Uniform Gift to Minors Act)	The grantor-trustee <sup>3</sup>
4. a. The usual revocable savings trust (grantor is also trustee) b. So-called trust account that is not a legal or valid trust under state law	The actual owner <sup>3</sup>
5. Sole proprietorship	The owner <sup>3</sup>
For this type of account:	Give name and EIN of:
6. Sole proprietorship	The owner <sup>3</sup>
7. A valid trust, estate, or pension trust	Legal entity <sup>4</sup>
8. Corporate	The corporation
9. Association, club, religious, charitable, educational, or other tax-exempt organization	The organization
10. Partnership	The partnership
11. A broker or registered nominee	The broker or nominee
12. Account with the Department of Agriculture in the name of a public entity (such as a state or local government, school district, or prison) that receives agricultural program payments	The public entity

<sup>1</sup> List first and circle the name of the person whose number you furnish. If only one person on a joint account has an SSN, that person's number must be furnished.

<sup>2</sup> Circle the minor's name and furnish the minor's SSN.

<sup>3</sup> You must show your individual name, but you may also enter your business or "DBA" name. You may use either your SSN or EIN (if you have one).

<sup>4</sup> List first and circle the name of the legal trust, estate, or pension trust. (Do not furnish the TIN of the personal representative or trustee unless the legal entity itself is not designated in the account title.)

**Note:** If no name is circled when more than one name is listed, the number will be considered to be that of the first name listed.

# Limited LED Product and Driver

Deco Lighting warrants that the LED electronics and components of its properly installed LED Product will be free from defects in material and workmanship for a period of ten (10) years.

This warranty is limited to the repair and replacement of parts and the necessary labor and services required to repair the LED Product, as provided below. Defects in material or workmanship do not include improper installation or operation, alterations, power surges or overheating due to external conditions.

THIS LIMITED WARRANTY IS THE EXCLUSIVE WARRANTY PROVIDED BY DECO LIGHTING. DECO LIGHTING MAKES NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AND THERE IS EXPRESSLY EXCLUDED ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

## Warranty Activation

This limited warranty is automatically activated upon Deco Lighting receiving a completed warranty registration form within thirty (30) days after installation of the LED Product or ninety (90) days after shipment of the LED Product, whichever is sooner. Upon receipt of a timely submitted and completed warranty registration form, Deco Lighting will forward an acknowledgment for each registration along with a reference number for future correspondence related to that LED Product.

## Service Claims

Service claims can be made by contacting Deco Lighting's Customer Service by calling: 1-800-613-DECO between 8:00 AM and 5:00 PM pacific standard time (USA) to initiate the process for problem resolution under this limited warranty. Deco Lighting may elect to inspect the product on the customer's premises, or issue an RM number so that the product may be returned to the factory for testing. RM numbers will only be issued to the direct purchaser of the LED Product from Deco Lighting. The following information is required to obtain a RM number:

- Company name and address and contact person.
- Deco Lighting part number, date code, quantity and description of the problem.

All product warranty returns, repairs, replacements or credits are handled between Deco Lighting and the direct purchaser. Attach a brief written description of the problem to the product or packing list along with the RM number that was issued. Return the product, freight prepaid, to: Deco Lighting RMA Dept. 2917 Vail Ave. Commerce, CA 90040

## Labor Options

No labor allowance is made for repair or replacement of any LED Product except during the limited warranty period. Deco Lighting provides the following two labor options for service under this limited warranty, which Deco Lighting has the exclusive right to select in its sole discretion:

1. Deco Lighting will contact a service provider and coordinate the removal, repair, and/or replacement of a defective LED Product, at no cost to the user of LED Product; or
2. Deco Lighting will reimburse the direct purchaser of the LED Product the reasonable, customary, and necessary costs for removing and replacing the LED Product. However, Deco Lighting shall not be responsible for reimbursing for any such costs that are not pre-approved, in writing, by Deco Lighting prior to those costs being incurred.

CITY OF MOUNTAIN BROOK  
56 Church St.  
MOUNTAIN BROOK, ALABAMA 35213  
OFFICE OF PURCHASING AGENT (CITY MANAGER)

BID COVER SHEET

Bid Request Posted this Date: 04/08/2015 Bids to be Opened this Date and Time: 04/22/2015 @ 2:00 p.m.

To Whom It May Concern:

Bids shall be sealed and delivered to the Office of the Purchasing Agent in the City Hall, City of Mountain Brook, Alabama, prior to the above specified date and time. Bids shall be publicly opened at the date and time specified above or as soon as practicable thereafter.

To be considered by the City, a bid must comply with Alabama law, including, but not limited to, Ala. Code (1975) §§41-16-50 et seq. and 31-13-1 et seq., and provide documentation of enrollment in the E-Verify program pursuant to Ala. Code §31-13-9.

All bidders must use the bid form provided by the City for the project. This Bid Cover Sheet should be completed and submitted with the bid. Bids completed in pencil will not be accepted. Bids should be clearly marked "SEALED BID" and indicate on the outside of the envelope the project for which the bid is submitted and the date of bid opening.

The City reserves the right to require a bid bond, in which case specific information shall be provided with the request for bids.

The City reserves the right to utilize life cycle cost analysis in determining the lowest responsible bidder, in which case specific information shall be provided with the request for bids.

The City reserves the right to accept or reject any or all bids and to waive formalities.  
Sam S. Gaston  
Sam S. Gaston, City Manager and Purchasing Agent

Specifications for Project No. MI 001-2015: Village Lighting Project throughout the City of Mountain Brook- Public Works Department.

BIDDER Mayer Electric Supply TELEPHONE (205) 583-3500

ADDRESS 3405 4th Ave South B.

EMAIL jburkes@mayerelectric.com

CITY Birmingham STATE Al ZIP 35222

BID AMOUNT PER UNIT (AS PER SPECIFICATIONS) \$ 468.<sup>75</sup>

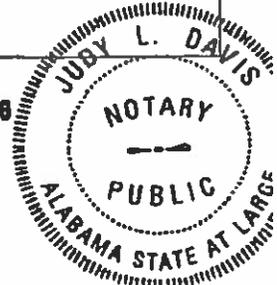
Note: MUNICIPALITIES ARE EXEMPT FROM STATE SALES TAX

This bid must be signed below by bidder's principal/officer/agent and notarized:

Auth. Signature: <u>Chas A. Collet Jr</u>	Sworn to and subscribed before me on this
Name: <u>Charles A Collet Jr</u>	<u>21<sup>st</sup></u> day of <u>April</u> , 2015.
Title: <u>EVP/COO</u>	<u>July L Davis</u>
	Notary Public
	My Commission
	Expires:

Project Coordinator: Ronald Vaughn (205) 802-2390 ext. 3865

MY COMMISSION EXPIRES JANUARY 25, 2016



**SPECIFICATIONS FOR: PROJECT NO. MI 001-2015: Village Lighting Project throughout the City of Mountain Brook, Public Works Department.**

The City of Mountain Brook, Alabama will be accepting bids for approximately 105 LED retrofit light fixtures for existing pole top acorn fixtures. The fixtures shall be

Amerlux RF AVI-U-SY-27L

*or equal.*

**Specifications:**

- 1 8-12" telescoping field adjustment
- 2 IP66 rated sealed LED chamber and optics
- 3 Standard 10 KV surge protection in addition to over voltage or short circuit protection
- 4 2700 Kelvin
- 5 Color is in a four (4) McAdams Ellipse quadrant
- 6 Standard 10 year/50,000 hour warranty
- 7 Anodized cast aluminum heat sink
- 8 Automatic AC incoming voltage sensing 120-277 volt 50/60 hertz
- 9 Symmetric distributions.

**GENERAL REQUIREMENTS:**

The successful bidder must obtain a city of Mountain Brook business license.

**SPECIAL CONDITIONS:**

This bid shall be good for a period of 12 months from the time a purchase order is issued. The City reserves the right to increase or decrease quantities without a change in bid price. Bidder should provide a unit cost as its bid amount. Bidder shall also provide any shipping or additional cost to City of providing the fixtures. The bid amount SHOULD NOT include installation cost as installation is beyond the scope of the bid request.

# AVISTA LED Light Engine

U.7.11.14

**APPLICATION:**

LED light engine for use in post top mount area and pedestrian environments. Designed for new fixtures or existing as a retrofit.

**INSTALLATION:**

Height adjustable light engine - Can be field adjusted to optimal performance. LED retrofit kit mounts to many existing luminaires.

**ELECTRICAL:**

- Automatic AC incoming voltage sensing 120-277
- Over voltage and short circuit protection
- 10kv surge protector

**CONSTRUCTION:**

- Anodized Aluminum Heat Sink
- IP66 Rated
- Cast aluminum filter plate provided
- Sealed LED chamber and optics

**DISTRIBUTION:**

- SY** - Symmetric
- AS** - Asymmetric

**EFFICACY:**

Up to 100 lumens/ watt

**NOMINAL INPUT POWER:**

41W, 60W

**CCT:**

3000K, 4000K, 5000K

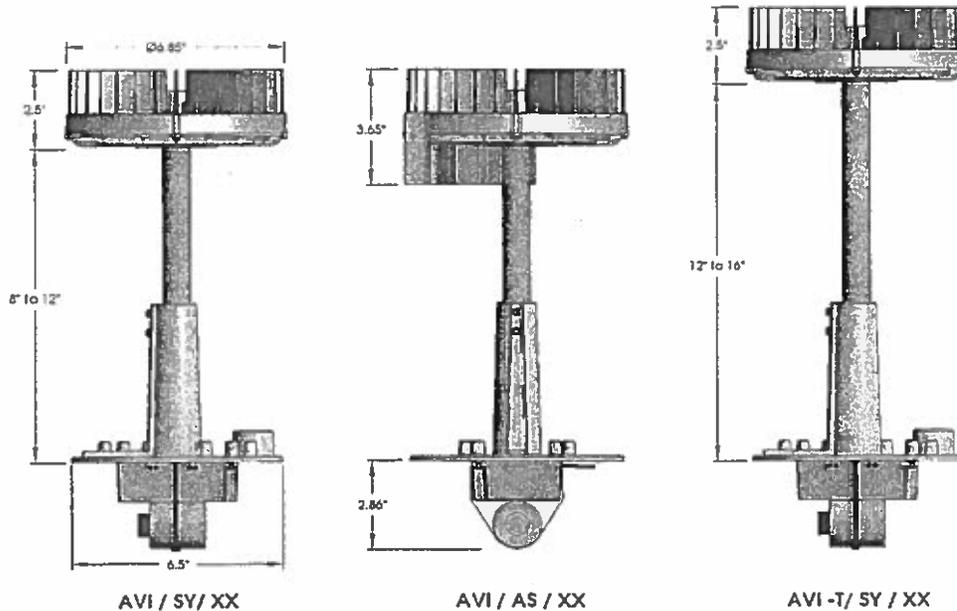
**LIFE:**

50,000+ hours

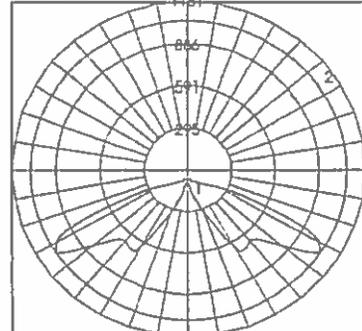


PROJECT:

TYPE:

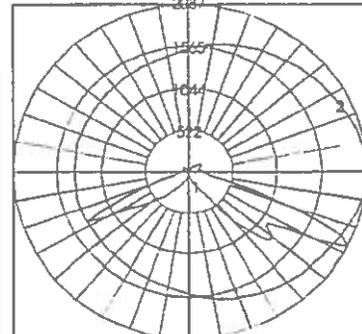


**SY POLAR GRAPH**



Maximum Candela=1181 Located At Horizontal Angle=0 Vertical Angle=0  
# 1 - Vertical Plane Through Horizontal Angles 0 - 180 (through Max. Cd)  
# 2 - Horizontal Cone Through Vertical Angle (0) (through Max. Cd)

**AS POLAR GRAPH**



Maximum Candela=2087 Located At Horizontal Angle=3 Vertical Angle=23  
# 1 - Vertical Plane Through Horizontal Angles 0 - 180 (through Max. Cd)  
# 2 - Horizontal Cone Through Vertical Angle (2.3) (through Max. Cd)

**Ordering Information**

Model	Light Distribution	Code	CCT	CRI	Approx. Lumens Delivered	Nominal Input Power	
AVI AVI-T	SY (Symmetric)	3H	3,000K	80	4,450 lm	60W	
		4H	4,000K	80	5,100 lm		
		5H	5,000K	80	5,870 lm		
	AS (Asymmetric)	3H	3,000K	80	4,410 lm		41W
		4H	4,000K	80	5,050 lm		
		5H	5,000K	80	5,810 lm		
	SY	3L	3,000K	80	2,940 lm	41W	
		4L	4,000K	80	3,460 lm		
		5L	5,000K	80	4,070 lm		
	AS	3L	2700k	80	2,910 lm		
4L		4,000K	80	3,420 lm			
5L		5,000K	80	4,030 lm			



**Part String**

Example: AVI / SY / 3H

## NOTICE

To: CONTRACTORS AND GRANTEES

FROM: THE CITY OF MOUNTAIN BROOK  
ATTN: STEVEN BOONE  
P. O. BOX 130009, MOUNTAIN BROOK, ALABAMA 35213-0209

RE: H.B. 56 -ALABAMA IMMIGRATION LAW COMPLIANCE

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The purpose of this Memorandum is to alert you to the Alabama Immigration Law Compliance flow-down requirements that became effective on January 1, 2012. Those are discussed herein and can be summarized as follows:

1. PROVIDE The City of Mountain Brook ("the City") documentation supporting your compliance with the immigration law by timely submitting a notarized *Affidavit of Alabama Immigration Compliance by a Business Entity/Employer/Contractor to a Political Subdivision of the State of Alabama* and an E-Verify Memorandum of Understanding;
2. PROVIDE the City a signed *Alabama Immigration Law Compliance Contract* in the attached Notice form provided;
3. PROVIDE your subcontractors notice of their compliance obligations and OBTAIN from each a notarized *Affidavit of Alabama Immigration Compliance by a Subcontractor*.

The requirements above, imposed by HB 56, are "a condition for the award of any contract, grant, or incentive by the State of Alabama, any political subdivision thereof, or any state-funded entity to a business entity or employer that employs one or more employees [working in the State of Alabama]."<sup>1</sup> As a Contractor<sup>2</sup> or a Grantee, if you believe these obligations do not apply to you, please notify the City immediately.

For your convenience, we have included for your use a sample AFFIDAVIT OF ALABAMA IMMIGRATION COMPLIANCE BY A BUSINESS ENTITY/EMPLOYER/CONTRACTOR TO A POLITICAL SUBDIVISION OF THE STATE OF ALABAMA. Please complete, notarize, and return a copy to The City of Mountain Brook along with your attached E-VERIFY MEMORANDUM OF UNDERSTANDING. See ALA. CODE § 31-13-9 (c).

You are also required to obtain from your subcontractors a notarized AFFIDAVIT OF IMMIGRATION COMPLIANCE BY A SUBCONTRACTOR. A careful review of the broad definition below of the term "Contractor" in the Act will assist you in deciding to whom to provide notice.

If you contract with more than one local government, you will only need to have one affidavit completed and notarized, and then provide a copy to the requesting governmental entities. You are required to maintain your subcontractors' affidavits at your offices. These documents will be subject to audit. You may provide a copy of this Memorandum with your notification memorandum to your subcontractors as an explanation for this mandatory requirement.

Finally, you will find a NOTICE OF ALABAMA IMMIGRATION LAW COMPLIANCE REQUIREMENTS TO ALL CONTRACTORS OF THE CITY OF MOUNTAIN BROOK, ALABAMA ("ALABAMA IMMIGRATION COMPLIANCE CONTRACT") for execution by contractors and to be returned to the City of Mountain Brook. To the extent that there is no formal written contract between a contractor and the City (e.g., where business is conducted by purchase order), this document shall serve as your Alabama Immigration Compliance Contract. Similar language shall also be included in all future contracts and agreements executed with the City of Mountain Brook.

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<sup>1</sup> ALA. CODE § 31-13-9 (a) and (b). See <http://www.legis.state.al.us/File-Immigration-Al-Law-2011-535>. The law is now codified in ALA. CODE §§ 31-13-1 to 31-13-30 as well as § 32-6-9 (the "Act").

<sup>2</sup> A Contractor is defined broadly in the Act as "A person, employer, or business entity that enters into an agreement to perform any service or work or to provide a certain product in exchange for valuable consideration. This designation shall include, but not be limited to, a general contractor, subcontractor, independent contractor, contract employee, project manager, or a recruiting or staffing entity." ALA. CODE §§ 32-13-3 (3).

**NOTICE OF ALABAMA IMMIGRATION LAW COMPLIANCE REQUIREMENTS TO ALL  
CONTRACTORS OF THE CITY OF MOUNTAIN BROOK, ALABAMA  
("ALABAMA IMMIGRATION COMPLIANCE CONTRACT")**

As a Contractor, as defined in the Act, to THE CITY OF MOUNTAIN BROOK, ALABAMA ("the City"), it is critical to your relationship (future or continuing) with the City that you comply with the Immigration Reform and Control Act of 1986, as amended by the Immigration Act of 1990, and the Beason-Hammon Alabama Taxpayer and Citizen Protection Act. Accordingly, please provide your Affidavit of Immigration Compliance with attached E-Verify Memorandum of Understanding, as requested in the attached memorandum. If you do not believe these obligations apply to you, please notify the City immediately.

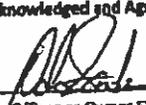
Effective January 1, 2012, every contract entered into by the City a contractor will contain the following clause or one substantially similar:

Alabama Immigration Law Compliance Contract: Contractor agrees that it will fully comply with the Immigration Reform and Control Act of 1986, as amended by the Immigration Act of 1990, and the Beason-Hammon Alabama Taxpayer and Citizen Protection Act, which makes it unlawful for an employer in Alabama to knowingly hire or continue to employ an alien who is or has become unauthorized with respect to such employment or to fail to comply with the I-9 requirements or fails to use E-Verify to verify the eligibility to legally work in the United States for all of its new hires who are employed to work in the State of Alabama. Without limiting the foregoing, Contractor shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien, and shall have an officer or other managerial employee who is personally familiar with the Contractor's hiring practices to execute an affidavit to this effect on the form supplied by the Board and return the same to the City. Contractor shall also enroll in the E-Verify Program prior to performing any work, or continuing to perform any ongoing work, and shall remain enrolled throughout the entire course of its performance hereunder, and shall attach to its affidavit the E-Verify Program for Employment Verification and Memorandum of Understanding and such other documentation as the Board may require to confirm Contractor's enrollment in the E-Verify Program. Contractor agrees not to knowingly allow any of its subcontractors, or any other party with whom it has a contract, to employ in the State of Alabama any illegal or undocumented aliens to perform any work in connection with the Project, and shall include in all of its contracts a provision substantially similar to this paragraph. If Contractor receives actual knowledge of the unauthorized status of one of its employees in the State of Alabama, it will remove that employee from the project, jobsite or premises of the City and shall comply with the Immigration Reform and Control Act of 1986, as amended by the Immigration Act of 1990, and the Beason-Hammon Alabama Taxpayer and Citizen Protection Act. Contractor shall require each of its subcontractors, or other parties with whom it has a contract, to act in a similar fashion. If Contractor violates any term of this provision, this Agreement will be subject to immediate termination by the City. To the fullest extent permitted by law, Contractor shall defend, indemnify and hold harmless the City from any and all losses, consequential damages, expenses (including, but not limited to, attorneys' fees), claims, suits, liabilities, fines, penalties, and any other costs arising out of or in any way related to Contractor's failure to fulfill its obligations contained in this paragraph.

Incorporated  
into contract  
addendum.

To the extent that there is no formal written contract between the City and the Contractor (e.g., where business is conducted by purchase order), this document shall serve as the Alabama Immigration Compliance Contract.

Alabama Immigration Law Compliance Contract Notice Acknowledged and Agreed by Contractor whose name appears below:

  
\_\_\_\_\_  
Contractor Officer or Owner Signature/Date

Dale Sanders / Vice President / Mayer Electric  
\_\_\_\_\_  
Print Name/Title/Company

Please execute and return to THE CITY OF MOUNTAIN BROOK, ALABAMA within the next 10 days.

**AFFIDAVIT OF ALABAMA IMMIGRATION COMPLIANCE BY A  
BUSINESS ENTITY/EMPLOYER/CONTRACTOR TO A POLITICAL SUBDIVISION  
OF THE STATE OF ALABAMA**

(To be completed as a condition for the award of any contract, grant, or incentive by the State of Alabama, any political subdivision thereof, or any state-funded entity to a business entity.)

City of Mountain Brook, Alabama

FORM FOR SECTIONS 9 (a) and (b) BEASON-HAMMON ALABAMA TAXPAYER AND CITIZEN PROTECTION ACT;  
CODE OF ALABAMA, SECTIONS 31-13-9 (a) and (b)

State of ALABAMA

County of JEFFERSON

Before me, a notary public, personally appeared Bryan C CHARVIE (print name) who, being duly sworn, says as follows:

As a condition for the award of any contract, grant, or incentive by the State of Alabama, any political subdivision thereof, or any state-funded entity to a business entity or employer that employs one or more employees, I hereby attest that in my capacity as DIRECTOR OF TAX MGMT (state position) for MAYN ELECTRIC SUPPLY CO INC (state business entity/employer/contractor name) that said business entity/employer/contractor shall not knowingly employ, hire for employment, or continue to employ an unauthorized alien.

I further attest that said business entity/employer/contractor is enrolled in the E-Verify program. (ATTACH A COPY OF YOUR ORGANIZATION'S E-VERIFY MEMORANDUM OF UNDERSTANDING TO DOCUMENT THAT THE BUSINESS ENTITY/EMPLOYER/CONTRACTOR IS ENROLLED IN THE E-VERIFY PROGRAM.)

I further attest that all sub-contractors in my employment are duly enrolled in the E-Verify program and upon request can produce the appropriate forms verifying such action.

Bryan C Charvie  
Signature of Affiant (an Officer or Owner of Contractor)

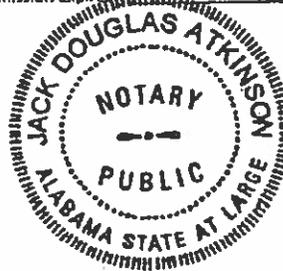
154164  
E-Verify User Identification Number

Sworn to and subscribed before me this 21 day of April, 2015

I certify that the affiant is known (or made known) to me to be the identical party he or she claims to be.

Jack D Atkinson  
Signature and Seal of Notary Public  
My Commission Expires: 2-6-2018

(Seal)



**ORDINANCE NO. 1937**

**AN ORDINANCE TO PROVIDE FOR STOP SIGN ON BROOKWOOD ROAD  
AT ITS INTERSECTION WITH CROSSHILL ROAD AND  
TO PROVIDE FOR PUNISHMENT THEREOF**

**BE IT ORDAINED** by the City Council of the City of Mountain Brook, Alabama, as follows:

**Section 1.** It shall be unlawful for the driver of any vehicle to cause or allow such vehicle traveling in a southerly direction along Brookwood Road to enter its intersection with Crosshill Road when there is standing at such intersection a "Stop" sign facing in the direction of such driver without having first brought such vehicle to a complete stop within ten (10) feet of said intersection.

**Section 2.** Any person violating the provisions of this ordinance shall be punished by a fine not to exceed \$500.00, or by imprisonment not to exceed 180 days, or both.

**Section 3.** All ordinances or portions of ordinances conflicting with this ordinance are hereby repealed.

**Section 4.** If a court or competent authority finds that any provision of this ordinance is invalid, illegal, or unenforceable, that provision or part-provision shall, to the extent required, be deemed to be deleted, and the validity and enforceability of the other provisions of this ordinance shall not be affected.

**Section 5.** This ordinance shall become effective when published as required by law.

**ADOPTED:** This 10th day of August, 2015.

\_\_\_\_\_  
Council President

**APPROVED:** This 10th day of August, 2015.

\_\_\_\_\_  
Mayor

## CERTIFICATION

I, Steven Boone, City Clerk of the City of Mountain Brook, Alabama, hereby certify the above to be a true and correct copy of an ordinance adopted by the City Council of the City of Mountain Brook, Alabama, at its meeting held on this 10th day of August, 2015, as same appears in the minutes of record of said meeting, and published by posting copies thereof on August \_\_\_\_\_, 2015, at the following public places, which copies remained posted for five (5) days as required by law.

City Hall, 56 Church Street  
Gilchrist Pharmacy, 2850 Cahaba Road

Overton Park, 3020 Overton Road  
The Invitation Place, 3150 Overton Road

\_\_\_\_\_  
City Clerk

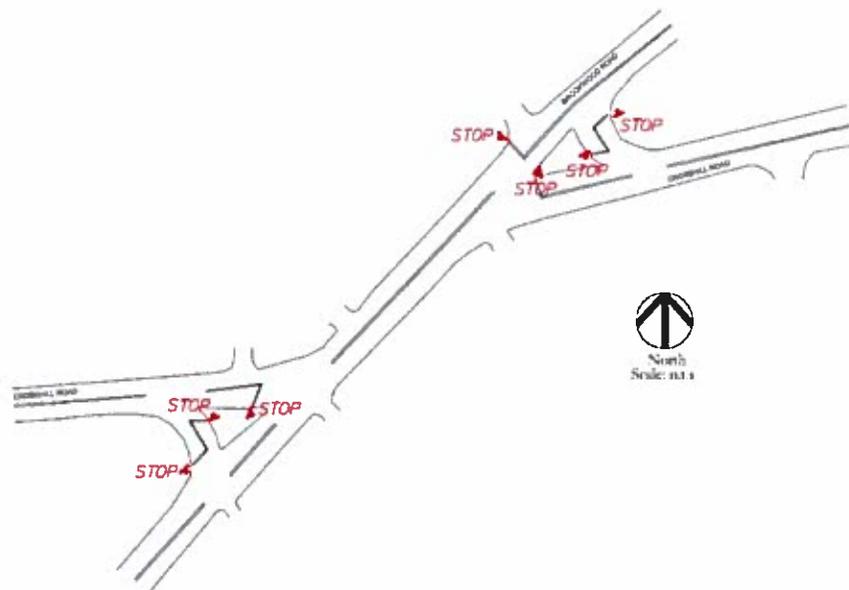
## **Brookwood Road at Crosshill Road**

The intersection of Overbrook Road at Crosshill Road was examined to determine the scope of both non-widening and widening projects which could alleviate existing traffic congestion experienced at the intersection. The general study area for the analysis is shown in Figure 1.



*Figure 1. Site Location Map*

In the vicinity of the intersection, Brookwood Road is a two lane roadway with a posted speed limit of 30 miles per hour. Crosshill Road is a two lane roadway with no posted speed limit. The configuration of the intersection is an offset intersection, forming two traffic triangles on Brookwood Road, separated by approximately 165 feet. The configuration of the intersection of Brookwood Road at Crosshill Road and the current location of stop signs is shown in Figure 2.



*Figure 2. Existing Traffic Control*

**Existing Intersection Turning Movement Traffic Counts**

An existing intersection turning movement traffic count was performed at the intersection of Brookwood Road at Crosshill Road on Wednesday to Thursday, March 11 to 12, 2015, during the hours of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m., by Traffic Data, LLC on behalf of Skipper Consulting, Inc. The traffic count data is included in Appendix A. Peak hour turning movement traffic volumes are illustrated in Figure 3.

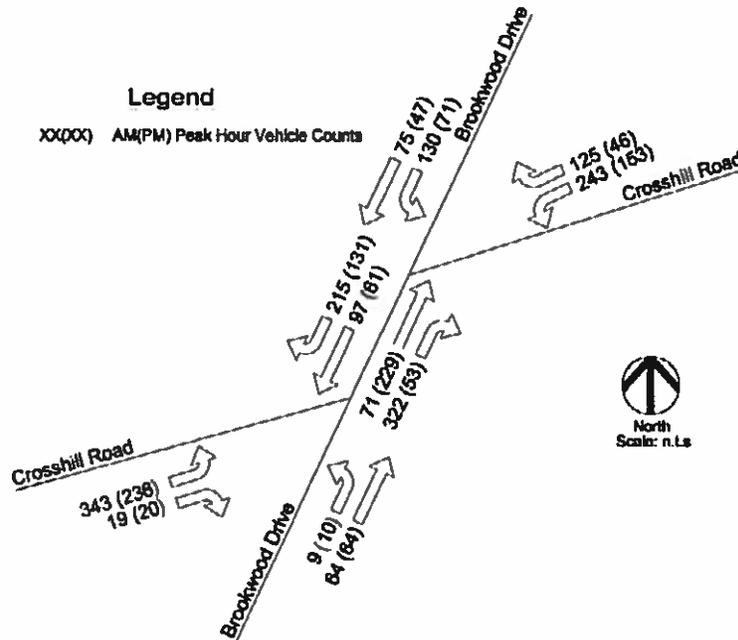


Figure 3. Existing Intersection Turning Movement Traffic Counts

**Existing Intersection Capacity Analysis and Queue Calculations**

Existing a.m. and p.m. peak hour intersection capacity analyses and queue calculations were performed for the intersection of Brookwood Road at Crosshill Road using the methods of analysis contained in the *Highway Capacity Manual*, published by the Transportation Research Board. Capacities are expressed as levels of service, and range from a level of service "A" (highest quality of service) to a level of service "F" (jammed conditions). As a general rule, operation at a level of service "C" or better is desirable, with a level of service "D" considered acceptable during the peak hours of traffic flow. The results of the intersection capacity analyses and queue calculations are included in Appendix B and are summarized in Table 1.

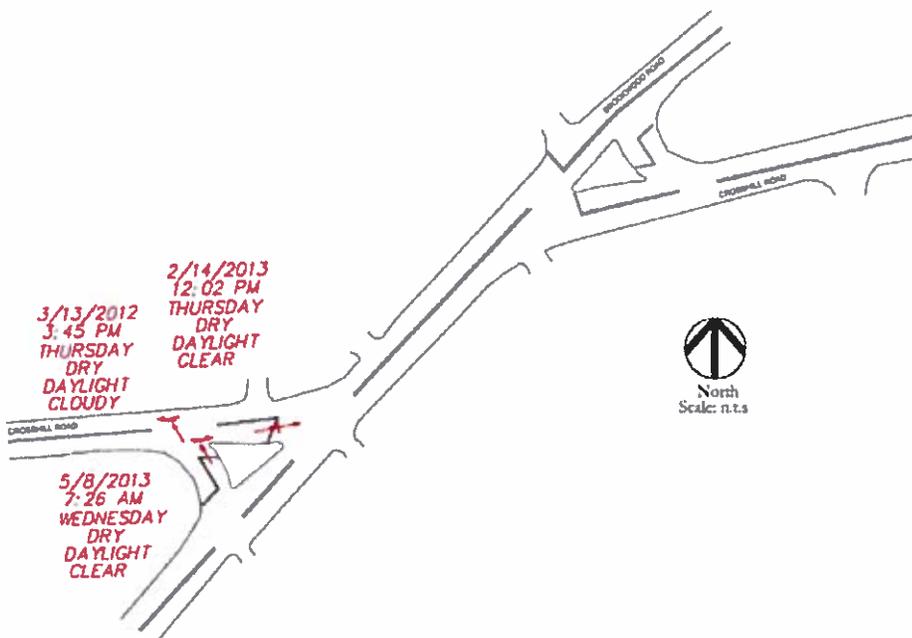
**Table 1. Existing Intersection Capacity Analysis and Queue Calculations**

Intersection	Approach	Movement	AM Peak			PM Peak		
			LOS	Delay	Queue	LOS	Delay	Queue
Brookwood Road at Crosshill Road (North)	Crosshill Road Westbound	Left	F	52	395'	B	14	100'
		Right	C	17		A	5	
	Brookwood Road Northbound	Through	A	7	20'	A	3	0'
		Right	A	5		A	3	
	Brookwood Road Southbound	Left	F	109	55'	A	9	65'
		Through	F	66	480'	A	10	70'
	Overall intersection			D	34		A	8
Brookwood Road at Crosshill Road (South)	Crosshill Road Eastbound	Left	D	33	380'	A	12	105'
		Right	B	15		A	7	
	Brookwood Road Northbound	Left	A	6	30'	A	6	25'
		Through	A	4		A	2	
	Brookwood Road Southbound	Through	A	3	0'	A	4	0'
		Right	A	4		A	3	
	Overall Intersection			C	18		A	7

Note: Delay is expressed in average seconds per vehicle

**Crash History**

Crash information for the intersection of Brookwood Road at Crosshill Road was provided by the City of Mountain Brook Police Department for 2012, 2013, and 2014. During the period, there were three crashes related to the intersection of Brookwood Road at Crosshill Road. One crash was a rear-end crash on Crosshill Road eastbound. Two crashes were right angle crashes, with one of the crashes occurring on Crosshill Road eastbound and the other crash on Crosshill Road westbound. A crash diagram is provided in Figure 4.

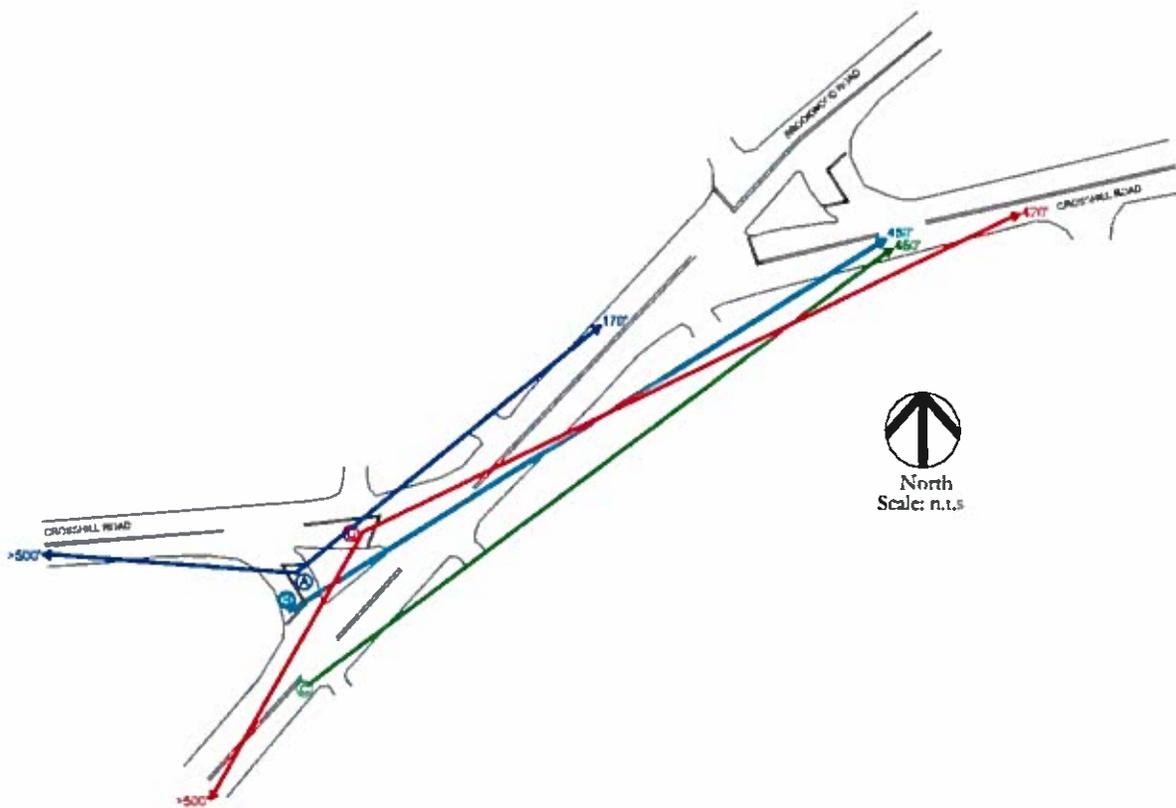


**Figure 4. Crash History**

**Sight Distance**

Sight distance measurements were made for all movements at each of the intersection for all movements where sight distance of approaching vehicles is required in order to make the desired movement. The minimum required sight distance according to the AASHTO Policy on the Geometric Design of Highways and Streets (Green Book) is 335 feet, based on the posted speed limit of 30 miles per hour on Brookwood Road. The sight distance measurements are shown in Figure 5 and Figure 6.

The only location where sight distance is limited below minimum requirements is for traffic entering the southern intersection of Crosshill Road looking to the right (Point "A"), where the sight distance is limited to 170 feet. In the narrative for the crash which occurred at this intersection on March 13, 2012, the driver of the vehicle entering Crosshill Road stated that she did not see the vehicle approaching from Brookwood Road.



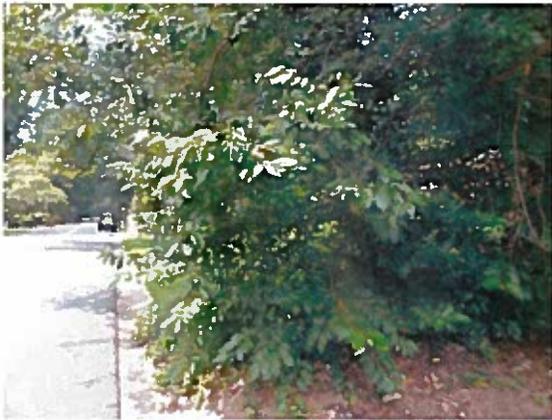
*Figure 5. Sight Distance Measurements Crosshill Road (South)*



Figure 6. Sight Distance Measurements Crosshill Road (North)

Additional field work was undertaken to determine the cause for the limitation of the sight distance looking to the right from Point "A" on Figure 5. The sight distance limitation is caused by numerous objects, including landscaping on either side of the driveway of 3329 Brookwood Road, a tree in the front yard of 3329 Brookwood Road, and undergrowth at the northern edge of the property line of 3329 Brookwood Road. Pictures depicting the sight distance restrictions are given below. All of these obstructions would need to be removed in order to have adequate sight distance from Point "A" for at least 335 feet, which is approximately the location of the existing stop sign on Brookwood Road southbound at the northern intersection of Crosshill Road.





## **Observations**

Observations of traffic flow at the intersection of Brookwood Road at Crosshill Road were performed on Tuesday, May 12 and Wednesday May 13, 2015 by Skipper Consulting, Inc. Observations were conducted from 7:15 to 8:00 a.m., 2:30 to 3:20 p.m., and 4:45 to 5:30 p.m. The findings of the observations are discussed below.

### **AM Peak Period Observations**

- While traffic flow was constant, the eastbound left queue from Crosshill Road onto Brookwood Road caused congestion and delay for the eastbound right and northbound left movements from 7:37 a.m. to 7:53 a.m. This problem persisted 4 other times during the study period.
- Similarly, the westbound left queue from Crosshill Road onto Brookwood Road caused congestion and delay for the westbound right and southbound left movements during the study period. However, the problem was minimal in comparison to the eastbound movement as it only persisted 2 times during the study period.

#### Afternoon School Peak Period Observations

- The eastbound left queue from Crosshill Road onto Brookwood Road did not cause any congestion or delay during the study period.
- The westbound left queue from Crosshill Road onto Brookwood Road caused congestion and delay for the westbound right and southbound left movements multiple times during the study period. However, no instance where movements were blocked lasted longer than 1 minute.

#### PM Peak Period Observations

- The eastbound left queue from Crosshill Road onto Brookwood Road caused congestion and delay for the eastbound right and northbound left movements from 4:11 p.m. to 4:30 p.m. This problem persisted 5 other times during the study period lasting less than 1 minute each time.
- Similarly, the westbound left queue from Crosshill Road onto Brookwood Road caused congestion and delay for the westbound right and southbound left movements 6 times during the study period.

### Alternative Improvements

#### Alternative 1 – Install Additional Stop Signs

In order to correct deficiencies shown to exist in intersection capacity, sight distance, and based on observations, three additional stop signs could be installed on Brookwood Road. The locations of the proposed stop signs are shown in Figure 7. Capacity and queue analyses were performed to determine the traffic operation of the proposed alternative. The results of these analyses are shown in Table 2 and are included in Appendix C.

While the analyses show that installation of additional stop signs results in overall improvements in delay and level of service, the queue on Brookwood Road northbound approaching the northern intersection of Crosshill Road is significantly greater than the available stacking room between the two triangles. Therefore, installation of the proposed stop sign on Brookwood Road northbound at the northern intersection of Crosshill Road would not be advisable.

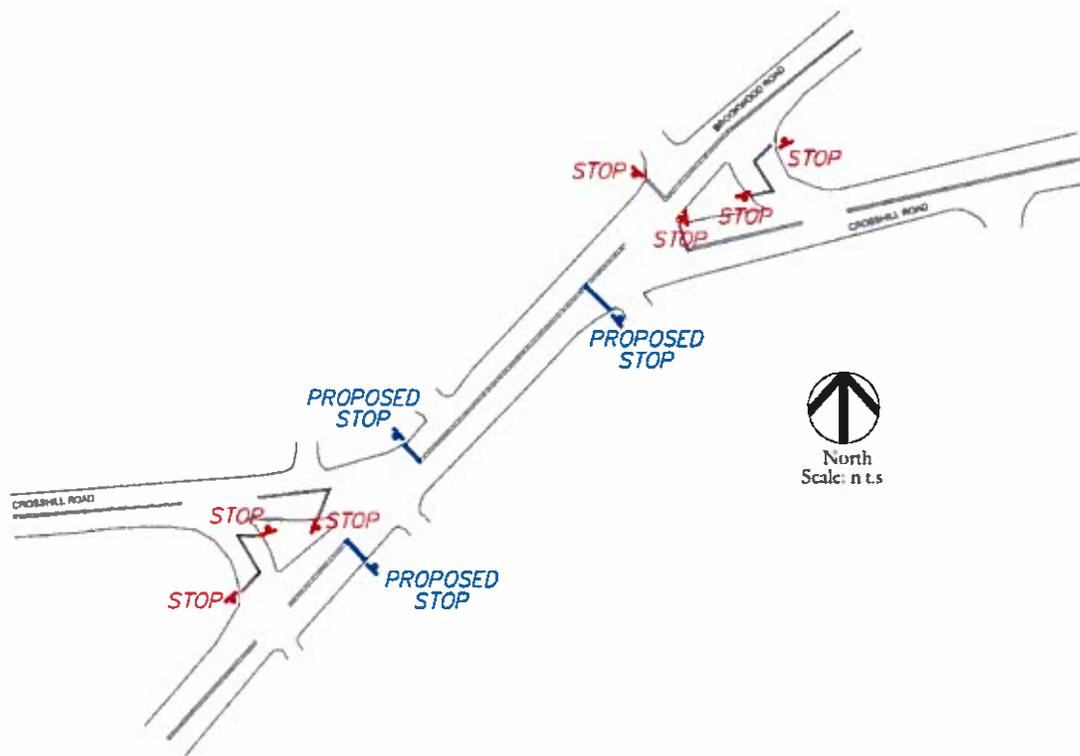


Figure 7. Improvement Alternative 1 (All-Way Stop)

Table 2. Intersection Capacity Analysis and Queue Calculations – Alternative 1

Intersection	Approach	Movement	AM Peak			PM Peak		
			LOS	Delay	Queue	LOS	Delay	Queue
Brookwood Road at Crosshill Road (North)	Crosshill Road Westbound	Left	C	18	120'	B	12	85'
		Right	A	9		A	5	
	Brookwood Road Northbound	Through	D	28	440'	B	12	105'
		Right	D	28		A	8	
	Brookwood Road Southbound	Left	B	14	65'	A	8	60'
		Through	B	12	110'	A	9	70'
Overall intersection			C	20		A	10	
Brookwood Road at Crosshill Road (South)	Crosshill Road Eastbound	Left	C	23	150'	B	11	100'
		Right	B	13		A	7	
	Brookwood Road Northbound	Left	A	9	70'	A	9	55'
		Through	B	12		A	8	
	Brookwood Road Southbound	Through	A	8	105'	A	7	90'
		Right	A	9		A	7	
Overall Intersection			C	16		A	9	

Note: Delay is expressed in average seconds per vehicle

In response to concerns of local residents, additional analyses were performed to determine the impacts of installation of only one of the two proposed stop signs at the southern intersection of Brookwood Road at Crosshill Road. Two additional sub-alternatives were developed and analyzed:

Sub-Alternate 1A – installation of a stop sign on only Brookwood Road northbound (results are tabulated in Table 3 and are included in Appendix D)

Sub-alternate 1B – installation of a stop sign on only Brookwood Road southbound (results are tabulated in Table 4 and are included in Appendix E)

**Table 3. Intersection Capacity Analysis and Queue Calculations – Sub-Alternate 1A**

Intersection	Approach	Movement	AM Peak			PM Peak		
			LOS	Delay	Queue	LOS	Delay	Queue
Brookwood Road at Crosshill Road (North)	Crosshill Road Westbound	Left	D	52	395'	B	15	105'
		Right	B	17		A	5	
	Brookwood Road Northbound	Through	A	8	15'	A	4	0'
		Right	A	6		A	3	
	Brookwood Road Southbound	Left	F	113	55'	A	10	65'
		Through	E	68	495'	A	10	80'
Overall intersection			D	36		A	8	
Brookwood Road at Crosshill Road (South)	Crosshill Road Eastbound	Left	C	30	335'	B	12	100'
		Right	B	14		A	7	
	Brookwood Road Northbound	Left	A	9	75'	B	11	55'
		Through	B	13		A	8	
	Brookwood Road Southbound	Through	A	4	0'	A	3	0'
		Right	A	3		A	3	
Overall Intersection			B	17		A	7	

Note: Delay is expressed in average seconds per vehicle

**Table 4. Intersection Capacity Analysis and Queue Calculations – Sub-Alternate 1B**

Intersection	Approach	Movement	AM Peak			PM Peak		
			LOS	Delay	Queue	LOS	Delay	Queue
Brookwood Road at Crosshill Road (North)	Crosshill Road Westbound	Left	D	48	350'	B	15	105'
		Right	B	15		A	5	
	Brookwood Road Northbound	Through	A	7	10'	A	3	0'
		Right	A	5		A	3	
	Brookwood Road Southbound	Left	E	77	60'	A	9	65'
		Through	D	45	390'	A	10	70'
Overall intersection			C	28		A	8	
Brookwood Road at Crosshill Road (South)	Crosshill Road Eastbound	Left	C	25	275'	B	11	100'
		Right	B	13		A	7	
	Brookwood Road Northbound	Left	A	4	30'	A	6	20'
		Through	A	4		A	1	
	Brookwood Road Southbound	Through	A	8	110'	A	7	85'
		Right	A	8		A	6	
Overall Intersection			B	16		A	8	

Note: Delay is expressed in average seconds per vehicle

As shown in Tables 3 and 4, neither Sub-Alternate 1A or Sub-Alternate 1B completely addresses the queue on Crosshill Road eastbound at Brookwood Road during the a.m. peak period. Both sub-alternates decrease the queue, with Sub-Alternate 1B having the best overall impact on the queue (approximately 30% reduction). It should be noted that the stop sign which would be installed under Sub-Alternate 1B would also correct the one existing sight distance limitation.

### Alternative 2 – Traffic Signalization

A second alternative for correction of capacity and sight distance deficiencies at the intersection of Brookwood Road at Crosshill Road would be the installation of a traffic signal. In order to determine if this would be a viable alternative, a traffic signal warrant analysis was performed for the intersection using the methodology included in the 2009 *Manual on Uniform Traffic Control Devices*, published by the Federal Highway Administration. Approach traffic counts for the intersection are included in Appendix F. The results of the warrant analysis are included in Appendix G. The results of the traffic signal warrant study show that the existing traffic volumes at the intersection of Brookwood Road at Crosshill Road do not meet either the eight hour volume warrants or four hour volume warrant. Therefore, signalization of the intersection is not advised.

### Recommended Improvements

The analyses presented in this report indicate that there are three primary deficiencies with the intersection of Brookwood Road at Crosshill Road to be addressed. These deficiencies are:

- The limited sight distance looking to the right from the left turn from Brookwood Road northbound onto Crosshill Road westbound (southern intersection)
- The excessive queue during the a.m. peak period on Crosshill Road westbound turning left onto Brookwood Road southbound (northern intersection)
- The excessive queue during the a.m. peak period on Crosshill Road eastbound turning left onto Brookwood Road northbound (southern intersection)

The research performed during this study effort has shown that the sight distance limitation looking to the right from the left turn from Brookwood Road northbound onto Crosshill Road westbound (southern intersection) is a safety concern. Within the last three years, there has been crash where this sight distance limitation may have been a contributing factor. This sight distance limitation can be corrected in two reasonable ways:

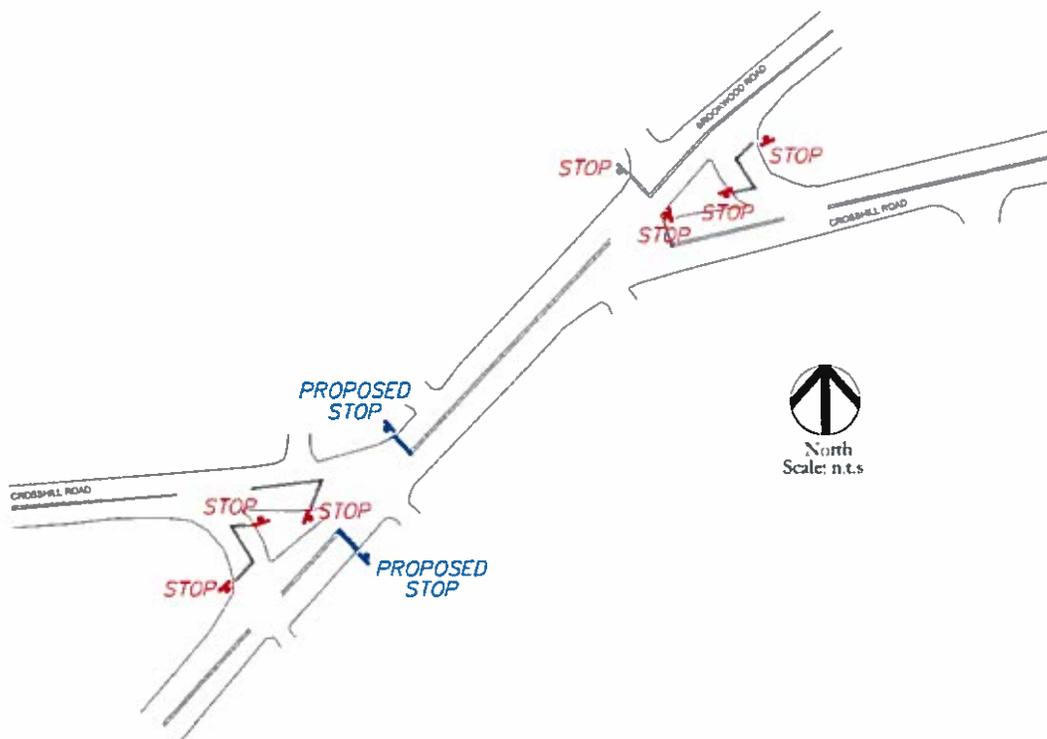
1. removal of existing landscaping, undergrowth, and one tree along the property frontage of 3329 Brookwood Road; or
2. installation of a stop sign on Brookwood Road southbound at the intersection of Crosshill Road (southern intersection)

The excessive queue on Crosshill Road westbound (northern intersection) can only be corrected by installation of a stop sign on Brookwood Road northbound or traffic signalization. This report has demonstrated that neither of these options would be acceptable.

The excessive queue on Crosshill Road eastbound (southern intersection) can only be corrected to an acceptable level by installation of two stop signs on Brookwood Road or a traffic signal. This report has already shown that traffic signalization is not warranted. Installation of only one stop sign will not produce the same level of result as installation of two stop signs.

Based on the analyses of the alternative improvements, it is recommended that two stop signs be installed at the intersection of Brookwood Road at Crosshill Road. The locations of the proposed stop signs are shown in Figure 8. The stop sign on Brookwood Road southbound is needed to correct the sight distance deficiency and reduce the queue on Crosshill Road eastbound. The stop sign on Brookwood Road northbound is needed only to reduce the queue on Crosshill Road eastbound.

The stop sign on Brookwood Road northbound could be eliminated from consideration if the City deems that the moderate improvement in queue on Crosshill Road eastbound is acceptable. The stop sign on Brookwood Road southbound could likewise be eliminated provided that other measures are employed to establish adequate sight distance.



**Figure 8. Recommended Improvements**

**Operational Analysis of Recommended Improvements**

Capacity and queue analyses were performed to determine the traffic operation of the recommended improvements. The results of these analyses are shown in Table 5 and are included in Appendix H.

*Table 3. Intersection Capacity Analysis and Queue Calculations – Recommended Improvements*

Intersection	Approach	Movement	AM Peak			PM Peak		
			LOS	Delay	Queue	LOS	Delay	Queue
Brookwood Road at Crosshill Road (North)	Crosshill Road Westbound	Left	F	58	550'	B	15	105'
		Right	C	23		A	5	
	Brookwood Road Northbound	Through	A	8	15'	A	4	0'
		Right	A	5		A	3	
	Brookwood Road Southbound	Left	F	137	55'	A	10	65'
		Through	F	91	605'	A	10	80'
Overall intersection			E	42		A	8	
Brookwood Road at Crosshill Road (South)	Crosshill Road Eastbound	Left	C	23	245'	B	11	95'
		Right	B	13		A	7	
	Brookwood Road Northbound	Left	A	9	75'	A	9	55'
		Through	B	12		A	8	
	Brookwood Road Southbound	Through	A	8	90'	A	7	85'
		Right	A	8		A	6	
Overall Intersection			C	16		A	9	

Note: Delay is expressed in average seconds per vehicle

**Cost Estimates**

The cost estimate for implementation of the recommended improvements is as follows:

Two STOP signs on U-channel posts	\$ 600.00
45 linear feet of 2' white stop line	\$ 600.00
Total	\$1,200.00

**Funding Sources**

The recommended improvements should be installed by City forces.

## **Appendix A**

# **Existing Intersection Turning Movement Traffic Counts**

### TRAFFIC DATA, LLC

1409 Turnham Lane  
 Birmingham, AL 35216  
 205-824-0125

Mountain Brook, AL

File Name : mountainbrook02  
 Site Code : 00000000  
 Start Date : 03/11/2015  
 Page No : 1

Groups Printed- Unshifted

Start Time	BROOKWOOD RD Southbound		CROSSHILL RD Westbound		BROOKWOOD RD Northbound		Int. Total
	Left	Thru	Left	Right	Thru	Right	
04:00 PM	12	11	22	8	9	27	89
04:15 PM	14	8	27	7	15	37	108
04:30 PM	20	13	29	15	14	44	135
04:45 PM	25	18	35	10	9	51	148
Total	71	48	113	40	47	159	478
05:00 PM	11	10	31	14	17	58	139
05:15 PM	20	10	47	11	11	60	159
05:30 PM	16	9	40	11	16	62	163
05:45 PM	23	12	28	22	11	47	143
Total	69	41	146	58	55	225	594
07:00 AM	17	13	39	13	5	42	129
07:15 AM	19	7	69	41	18	72	226
07:30 AM	44	22	78	49	31	120	344
07:45 AM	50	33	57	22	17	88	267
Total	130	75	243	125	71	322	956
08:00 AM	6	18	39	8	7	24	100
08:15 AM	9	8	38	11	3	19	86
08:30 AM	13	14	38	8	5	13	91
08:45 AM	8	16	21	5	4	18	72
Total	36	52	138	32	19	74	349
Grand Total	308	216	638	255	192	780	2387
Apprch %	58.8	41.4	71.4	28.6	19.8	80.2	
Total %	12.8	9.0	26.7	10.7	8.0	32.7	

Start Time	BROOKWOOD RD Southbound			CROSSHILL RD Westbound			BROOKWOOD RD Northbound			App. Total	Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1											
Intersection	04:45 PM										
Volume	71	47	118	153	46	199	63	228	282	0	599
Percent	60.2	39.8		76.9	23.1		18.8	81.2			
05:15 Volume	20	10	30	47	11	58	11	60	71	0	159
Peak Factor										0.942	
High Int.	04:45 PM			05:15 PM			05:30 PM			3:45:00 PM	
Volume	26	18	43	47	11	58	16	62	78		
Peak Factor	0.686			0.858			0.904				
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1											
By Approach	04:30 PM			05:00 PM			04:45 PM			04:00 PM	
Volume	76	51	127	146	58	204	53	229	282	0	
Percent	59.8	40.2		71.6	28.4		18.8	81.2			
High Int.	04:45 PM			05:15 PM			05:30 PM				
Volume	25	18	43	47	11	58	16	62	78		
Peak Factor	0.738			0.879			0.904				

**TRAFFIC DATA, LLC**  
 1409 Turnham Lane  
 Birmingham, AL 35216  
 205-824-0125

File Name : mountainbrook02  
 Site Code : 00000000  
 Start Date : 03/11/2015  
 Page No : 2

Start Time	BROOKWOOD RD Southbound			CROSSHILL RD Westbound			BROOKWOOD RD Northbound			App. Total	Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total		
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
Intersection	07:00 AM										
Volume	130	75	205	243	125	368	71	322	393	0	986
Percent	63.4	36.6		66.0	34.0		18.1	81.9			
07:30 Volume	44	22	66	78	49	127	31	120	151	0	344
Peak Factor	0.702										
High Int.	07:45 AM			07:30 AM			07:30 AM				
Volume	50	33	83	78	49	127	31	120	151		
Peak Factor	0.617			0.724			0.651				
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
By Approach	07:00 AM										
Volume	130	75	205	243	125	368	71	322	393	0	
Percent	63.4	36.6		66.0	34.0		18.1	81.9			
High Int.	07:45 AM			07:30 AM			07:30 AM				
Volume	50	33	83	78	49	127	31	120	151	-	-
Peak Factor	0.617			0.724			0.651				

### TRAFFIC DATA, LLC

1409 Turnham Lane  
Birmingham, AL 35216  
205-824-0125

Mountain Brook, AL

File Name : mountainbrook01  
Site Code : 00000000  
Start Date : 03/11/2015  
Page No : 1

Groups Printed- Unshifted

Start Time	BROOKWOOD RD Southbound		BROOKWOOD RD Northbound			CROSSHILL RD Eastbound		Int. Total
	Thru	Right	Left	Thru	Left	Right		
04:00 PM	12	21	3	18	30	3	85	
04:15 PM	10	23	2	15	40	7	97	
04:30 PM	16	26	4	21	37	4	108	
04:45 PM	20	30	4	13	55	4	128	
Total	58	100	13	65	162	18	416	
05:00 PM	15	28	1	21	60	7	120	
05:15 PM	13	41	1	13	67	4	139	
05:30 PM	13	34	4	17	64	5	137	
05:45 PM	16	28	0	15	46	2	107	
Total	57	129	6	66	227	18	503	
07:00 AM	18	33	0	5	41	2	99	
07:15 AM	13	64	1	18	72	2	170	
07:30 AM	28	67	5	27	131	5	263	
07:45 AM	38	51	3	14	99	10	215	
Total	97	215	9	64	343	19	747	
08:00 AM	27	32	1	7	23	2	92	
08:15 AM	17	28	2	5	17	2	71	
08:30 AM	28	27	0	5	12	3	75	
08:45 AM	18	22	1	3	19	2	65	
Total	90	109	4	20	71	9	303	
Grand Total	302	553	32	215	803	64	1869	
Apprch %	35.3	64.7	13.0	87.0	92.6	7.4		
Total %	15.3	28.1	1.8	10.9	40.8	3.3		

Start Time	BROOKWOOD RD Southbound			App. Total	BROOKWOOD RD Northbound			App. Total	CROSSHILL RD Eastbound			Int. Total
	Thru	Right	App. Total		Left	Thru	App. Total		Left	Right	App. Total	
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1												
Intersection 04:45 PM												
Volume	81	131	192	0	10	64	74	236	20	256	522	
Percent	31.8	68.2		0	13.5	86.5		92.2	7.8		139	
05:15 Volume	13	41	54	0	1	13	14	67	4	71		
Peak Factor											0.939	
High Int. 05:15 PM												
Volume	13	41	54	0	1	21	22	67	4	71		
Peak Factor			0.889				0.841			0.901		
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1												
By Approach 04:45 PM												
Volume	81	131	192	04:00 PM	0	11	70	81	04:45 PM	236	20	256
Percent	31.8	68.2				13.6	86.4			92.2	7.8	
High Int.	05:15 PM					04:30 PM			05:15 PM			
Volume	13	41	54			4	21	25	67	4	71	
Peak Factor			0.889					0.810			0.901	

**TRAFFIC DATA, LLC**  
 1409 Turnham Lane  
 Birmingham, AL 35216  
 205-824-0125

File Name : mountainbrook01  
 Site Code : 00000000  
 Start Date : 03/11/2015  
 Page No : 2

Start Time	BROOKWOOD RD Southbound			App. Total	BROOKWOOD RD Northbound			CROSSHILL RD Eastbound			Int. Total
	Thru	Right	App. Total		Left	Thru	App. Total	Left	Right	App. Total	
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
Intersection	07:00 AM										
Volume	97	215	312	0	9	84	73	343	19	362	747
Percent	31.1	68.9			12.3	87.7		94.8	5.2		
07:30 Volume	28	67	95	0	5	27	32	131	5	136	263
Peak Factor	0.710										
High Int.	07:30 AM				07:30 AM			07:30 AM			
Volume	28	67	95	0	5	27	32	131	5	136	
Peak Factor	0.821				0.570			0.665			
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1											
By Approach	07:15 AM			07:00 AM	07:15 AM			07:00 AM			
Volume	108	214	320	0	10	86	78	343	19	362	
Percent	33.1	66.9			13.2	86.8		94.8	5.2		
High Int.	07:30 AM				07:30 AM			07:30 AM			
Volume	28	67	95	-	5	27	32	131	6	136	
Peak Factor	0.842				0.594			0.665			

## **Appendix B**

# **Existing Intersection Capacity and Queue Analysis Worksheets**

1: Crosshill Road WB & Brookwood Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	51.5	17.2	7.3	5.0	108.6	65.8	34.4

2: Crosshill Road EB & Brookwood Road Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Delay / Veh (s)	33.2	14.6	5.8	3.5	3.4	3.5	18.0

Total Network Performance

Delay / Veh (s)	55.0
-----------------	------

Intersection: 1: Crosshill Road WB & Brookwood Road

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	507	22	56	503
Average Queue (ft)	204	4	55	246
95th Queue (ft)	396	19	56	478
Link Distance (ft)	2693	1591		2765
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			30	
Storage Blk Time (%)			0.89	0.13
Queuing Penalty (veh)			108	28

Intersection: 2: Crosshill Road EB & Brookwood Road

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	457	32
Average Queue (ft)	226	7
95th Queue (ft)	382	29
Link Distance (ft)	2848	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		30
Storage Blk Time (%)		0.01
Queuing Penalty (veh)		1

Network Summary

Network wide Queuing Penalty: 136

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1: Crosshill Road WB & Brookwood Road Performance by movement

---

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	14.4	5.0	3.3	3.2	9.0	9.7	7.6

---

2: Crosshill Road EB & Brookwood Road Performance by movement

---

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Delay / Veh (s)	12.0	7.4	6.6	1.6	3.5	2.7	6.8

---

Total Network Performance

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Delay / Veh (s)	18.7
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---

Intersection: 1: Crosshill Road WB & Brookwood Road

Movement	WB	SB	SB
Directions Served	LR	L	T
Maximum Queue (ft)	113	55	99
Average Queue (ft)	63	42	39
95th Queue (ft)	98	64	71
Link Distance (ft)	2693		2765
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		30	
Storage Blk Time (%)		0.11	0.06
Queuing Penalty (veh)		7	6

Intersection: 2: Crosshill Road EB & Brookwood Road

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	113	32
Average Queue (ft)	66	5
95th Queue (ft)	105	24
Link Distance (ft)	2848	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		30
Storage Blk Time (%)		0.00
Queuing Penalty (veh)		0

Network Summary

Network wide Queuing Penalty: 14

## **Appendix C**

# **Intersection Capacity and Queue Analysis Worksheets Alternative 1 – Additional Stop Signs**

1: Crosshill Road WB & Brookwood Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	17.8	9.0	27.9	27.8	13.9	12.1	20.4

2: Crosshill Road EB & Brookwood Road Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Delay / Veh (s)	23.2	13.1	8.7	11.5	7.8	8.6	15.8

Total Network Performance

Delay / Veh (s)	39.5
-----------------	------

Intersection: 1: Crosshill Road WB & Brookwood Road

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	140	595	56	136
Average Queue (ft)	82	225	52	61
95th Queue (ft)	118	439	64	109
Link Distance (ft)	2693	1591		2765
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			30	
Storage Blk Time (%)			0.26	0.11
Queuing Penalty (veh)			31	24

Intersection: 2: Crosshill Road EB & Brookwood Road

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	309	55	76	138
Average Queue (ft)	149	14	47	68
95th Queue (ft)	237	47	72	107
Link Distance (ft)	2848		3458	1591
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		30		
Storage Blk Time (%)		0.02	0.14	
Queuing Penalty (veh)		2	2	

Network Summary

Network wide Queuing Penalty: 59

1: Crosshill Road WB & Brookwood Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	11.9	5.0	11.5	8.3	7.9	9.2	10.2

2: Crosshill Road EB & Brookwood Road Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Delay / Veh (s)	11.0	7.4	9.0	7.9	7.1	6.8	8.7

Total Network Performance

Delay / Veh (s)	23.0
-----------------	------

Intersection: 1: Crosshill Road WB & Brookwood Road

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	100	114	55	99
Average Queue (ft)	58	66	39	38
95th Queue (ft)	87	104	61	69
Link Distance (ft)	2693	1591		2765
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			30	
Storage Blk Time (%)			0.08	0.05
Queuing Penalty (veh)			6	5

Intersection: 2: Crosshill Road EB & Brookwood Road

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	113	55	55	100
Average Queue (ft)	63	14	35	60
95th Queue (ft)	99	44	54	88
Link Distance (ft)	2848		3458	1591
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		30		
Storage Blk Time (%)		0.01	0.05	
Queuing Penalty (veh)		1	1	

Network Summary

Network wide Queuing Penalty: 12

## **Appendix D**

# **Intersection Capacity and Queue Analysis Worksheets Sub-Alternate 1A**

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1: Crosshill Road WB & Brookwood Road Performance by movement

---

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	52.2	17.4	7.8	5.6	113.4	67.5	35.6

---

2: Crosshill Road EB & Brookwood Road Performance by movement

---

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Delay / Veh (s)	30.2	14.2	9.2	12.5	3.5	3.1	17.4

---

Total Network Performance

---

Delay / Veh (s)								55.7
-----------------	--	--	--	--	--	--	--	------

---

**Intersection: 1: Crosshill Road WB & Brookwood Road**

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	464	32	56	519
Average Queue (ft)	204	3	55	256
95th Queue (ft)	396	17	56	497
Link Distance (ft)	2693	1591		2765
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			30	
Storage Blk Time (%)			0.91	0.14
Queuing Penalty (veh)			110	29

**Intersection: 2: Crosshill Road EB & Brookwood Road**

Movement	EB	NB	NB
Directions Served	LR	L	T
Maximum Queue (ft)	368	55	77
Average Queue (ft)	201	15	48
95th Queue (ft)	336	48	74
Link Distance (ft)	2848		3458
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		30	
Storage Blk Time (%)		0.02	0.17
Queuing Penalty (veh)		2	3

**Network Summary**

Network wide Queuing Penalty: 144

---

1: Crosshill Road WB & Brookwood Road Performance by movement

---

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	14.7	5.0	3.7	3.4	10.4	10.1	8.1

---

2: Crosshill Road EB & Brookwood Road Performance by movement

---

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Delay / Veh (s)	11.5	7.4	11.1	8.1	3.4	2.6	7.3

---

Total Network Performance

---

Delay / Veh (s)	19.5						
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Intersection: 1: Crosshill Road WB & Brookwood Road

Movement	WB	SB	SB
Directions Served	LR	L	T
Maximum Queue (ft)	138	55	118
Average Queue (ft)	65	41	40
95th Queue (ft)	104	64	79
Link Distance (ft)	2693		2765
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		30	
Storage Blk Time (%)		0.12	0.06
Queuing Penalty (veh)		8	6

Intersection: 2: Crosshill Road EB & Brookwood Road

Movement	EB	NB	NB
Directions Served	LR	L	T
Maximum Queue (ft)	108	55	55
Average Queue (ft)	64	15	35
95th Queue (ft)	99	46	54
Link Distance (ft)	2848		3458
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		30	
Storage Blk Time (%)		0.02	0.06
Queuing Penalty (veh)		1	1

Network Summary

Network wide Queuing Penalty: 17

## **Appendix E**

# **Intersection Capacity and Queue Analysis Worksheets Sub-Alternate 1B**

1: Crosshill Road WB & Brookwood Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	48.4	14.6	7.2	5.0	77.1	44.6	27.9

2: Crosshill Road EB & Brookwood Road Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Delay / Veh (s)	24.9	13.1	4.4	3.6	8.0	8.2	15.7

Total Network Performance

Delay / Veh (s)	47.1
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**Intersection: 1: Crosshill Road WB & Brookwood Road**

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	356	22	56	424
Average Queue (ft)	188	2	54	200
95th Queue (ft)	348	12	61	389
Link Distance (ft)	2693	1591		2765
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			30	
Storage Blk Time (%)			0.84	0.13
Queuing Penalty (veh)			101	28

**Intersection: 2: Crosshill Road EB & Brookwood Road**

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (ft)	386	32	156
Average Queue (ft)	165	8	67
95th Queue (ft)	277	31	108
Link Distance (ft)	2848		1591
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		30	
Storage Blk Time (%)		0.00	
Queuing Penalty (veh)		0	

**Network Summary**

Network wide Queuing Penalty: 130

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1: Crosshill Road WB & Brookwood Road Performance by movement

---

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	14.8	5.0	3.3	3.1	9.0	9.8	7.7

---

2: Crosshill Road EB & Brookwood Road Performance by movement

---

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Delay / Veh (s)	11.2	7.4	5.7	1.7	7.1	6.3	8.0

---

Total Network Performance

---

Delay / Veh (s)	19.9
-----------------	------

**Intersection: 1: Crosshill Road WB & Brookwood Road**

Movement	WB	SB	SB
Directions Served	LR	L	T
Maximum Queue (ft)	138	55	99
Average Queue (ft)	66	42	39
95th Queue (ft)	105	64	71
Link Distance (ft)	2693		2765
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		30	
Storage Blk Time (%)		0.11	0.06
Queuing Penalty (veh)		7	6

**Intersection: 2: Crosshill Road EB & Brookwood Road**

Movement	EB	NB	SB
Directions Served	LR	L	TR
Maximum Queue (ft)	113	32	100
Average Queue (ft)	63	4	55
95th Queue (ft)	99	21	84
Link Distance (ft)	2848		1591
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		30	
Storage Blk Time (%)		0.00	
Queuing Penalty (veh)		0	

**Network Summary**

Network wide Queuing Penalty: 14

## **Appendix F**

### **Existing Intersection Approach Traffic Counts**

TRAFFIC DATA, LLC  
1409 Turnham Lane, Birmingham, AL 35216  
205-824-0125

Location: : CROSSHILL RD west of BROOKWOOD RD  
City, State: : MOUNTAIN BROOK, AL

Date: 3/11/2015  
Wednesday

24 Hour Volume													
Begin	EB	WB	Combined	Begin	EB	WB	Combined						
11:00 AM	12	60	19	72	31	132	11:00 PM	3	6	0	2	3	8
11:15 AM	14		15		29		11:15 PM	1		1		2	
11:30 AM	17		26		43		11:30 PM	1		0		1	
11:45 AM	17		12		29		11:45 PM	1		1		2	
12:00 PM	23	77	11	68	34	145	3/12/2015 12:00 AM	1	2	1	4	2	6
12:15 PM	12		12		24		12:15 AM	1		1		2	
12:30 PM	17		25		42		12:30 AM	0		0		0	
12:45 PM	25		20		45		12:45 AM	0		2		2	
1:00 PM	19	85	13	60	32	145	1:00 AM	0	0	0	0	0	0
1:15 PM	21		12		33		1:15 AM	0		0		0	
1:30 PM	23		26		49		1:30 AM	0		0		0	
1:45 PM	22		9		31		1:45 AM	0		0		0	
2:00 PM	18	90	15	156	33	246	2:00 AM	2	2	0	2	2	4
2:15 PM	30		19		49		2:15 AM	0		1		1	
2:30 PM	12		80		92		2:30 AM	0		0		0	
2:45 PM	30		42		72		2:45 AM	0		1		1	
3:00 PM	27	172	39	183	66	355	3:00 AM	0	0	0	0	0	0
3:15 PM	54		39		93		3:15 AM	0		0		0	
3:30 PM	56		79		135		3:30 AM	0		0		0	
3:45 PM	35		26		61		3:45 AM	0		0		0	
4:00 PM	32	165	25	108	57	273	4:00 AM	0	0	1	2	1	2
4:15 PM	45		23		68		4:15 AM	0		0		0	
4:30 PM	39		28		67		4:30 AM	0		0		0	
4:45 PM	49		22		81		4:45 AM	0		1		1	
5:00 PM	55	219	21	120	76	339	5:00 AM	0	2	3	17	3	19
5:15 PM	61		38		99		5:15 AM	1		7		8	
5:30 PM	58		17		95		5:30 AM	1		3		4	
5:45 PM	45		24		69		5:45 AM	0		4		4	
6:00 PM	43	138	22	97	65	235	6:00 AM	1	30	3	43	4	73
6:15 PM	32		28		60		6:15 AM	3		6		9	
6:30 PM	36		16		52		6:30 AM	8		15		23	
6:45 PM	27		31		58		6:45 AM	18		19		37	
7:00 PM	38	106	16	74	54	180	7:00 AM	45	320	33	204	78	524
7:15 PM	28		29		57		7:15 AM	72		56		128	
7:30 PM	13		16		29		7:30 AM	109		67		176	
7:45 PM	27		13		40		7:45 AM	94		48		142	
8:00 PM	14	62	6	40	20	102	8:00 AM	24	78	32	109	56	187
8:15 PM	15		16		31		8:15 AM	19		28		47	
8:30 PM	11		8		19		8:30 AM	14		25		39	
8:45 PM	22		10		32		8:45 AM	21		24		45	
9:00 PM	11	31	6	13	17	44	9:00 AM	8	48	19	77	27	125
9:15 PM	6		4		10		9:15 AM	16		21		37	
9:30 PM	8		2		10		9:30 AM	12		14		26	
9:45 PM	6		1		7		9:45 AM	12		23		35	
10:00 PM	6	13	5	6	11	19	10:00 AM	13	57	15	62	28	119
10:15 PM	4		0		4		10:15 AM	21		13		34	
10:30 PM	0		0		0		10:30 AM	8		17		25	
10:45 PM	3		1		4		10:45 AM	15		17		32	
24 Hour Volume		EB 1763 (53.7%)		WB 1519 (46.3%)		Combined 3282							

Count	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	EB	WB	Combined	EB	WB	Combined
	599	592	1191	1164	927	2091
	50.3 %	49.7 %		55.7 %	44.3 %	
Peak Hour	7:00 AM	7:00 AM	7:00 AM	4:45 PM	2:30 PM	2:45 PM
Volume	320	204	524	223	200	366
Factor	0.73	0.76	0.74	0.91	0.63	0.68

TRAFFIC DATA, LLC  
1409 Turnham Lane, Birmingham, AL 35216  
205-824-0125

Location: : CROSSHILL RD east of BROOKWOOD RD  
City, State: : MOUNTAIN BROOK, AL

Date: 3/11/2015  
Wednesday

24 Hour Volume													
24 Hour Volume						3/12/2015							
Begin	EB	WB	Combined		Begin	EB	WB	Combined					
11:00 AM	17	77	25	100	42	177	11:00 PM	3	9	0	3	3	12
11:15 AM	20		19		39		11:15 PM	3		0		3	
11:30 AM	22		31		53		11:30 PM	1		2		3	
11:45 AM	18		25		43		11:45 PM	2		1		3	
12:00 PM	32	107	13	100	45	207	12:00 AM	1	3	2	5	3	8
12:15 PM	23		23		46		12:15 AM	1		1		2	
12:30 PM	20		34		54		12:30 AM	1		0		1	
12:45 PM	32		30		62		12:45 AM	0		2		2	
1:00 PM	28	115	22	101	50	216	1:00 AM	0	0	0	0	0	0
1:15 PM	33		25		58		1:15 AM	0		0		0	
1:30 PM	29		37		66		1:30 AM	0		0		0	
1:45 PM	25		17		42		1:45 AM	0		0		0	
2:00 PM	28	117	23	240	51	357	2:00 AM	2	3	0	3	2	6
2:15 PM	33		31		64		2:15 AM	0		1		1	
2:30 PM	19		122		141		2:30 AM	0		0		0	
2:45 PM	37		64		101		2:45 AM	1		2		3	
3:00 PM	76	245	48	252	124	497	3:00 AM	0	0	0	0	0	0
3:15 PM	64		63		127		3:15 AM	0		0		0	
3:30 PM	62		96		158		3:30 AM	0		0		0	
3:45 PM	43		45		88		3:45 AM	0		0		0	
4:00 PM	44	230	37	153	81	383	4:00 AM	0	0	1	3	1	3
4:15 PM	53		34		87		4:15 AM	0		0		0	
4:30 PM	64		41		105		4:30 AM	0		0		0	
4:45 PM	69		41		110		4:45 AM	0		2		2	
5:00 PM	67	291	41	194	108	485	5:00 AM	1	2	3	20	4	22
5:15 PM	78		58		136		5:15 AM	0		8		8	
5:30 PM	72		44		116		5:30 AM	1		4		5	
5:45 PM	74		51		125		5:45 AM	0		5		5	
6:00 PM	46	191	33	142	79	333	6:00 AM	1	36	4	61	5	97
6:15 PM	52		33		85		6:15 AM	6		9		15	
6:30 PM	52		27		79		6:30 AM	8		21		29	
6:45 PM	41		49		90		6:45 AM	21		27		48	
7:00 PM	48	151	28	105	76	256	7:00 AM	55	419	47	341	102	760
7:15 PM	41		33		74		7:15 AM	83		100		183	
7:30 PM	30		22		52		7:30 AM	143		121		264	
7:45 PM	32		22		54		7:45 AM	138		73		211	
8:00 PM	22	97	12	69	34	166	8:00 AM	32	106	49	169	81	275
8:15 PM	25		31		56		8:15 AM	26		47		73	
8:30 PM	17		14		31		8:30 AM	23		45		68	
8:45 PM	33		12		45		8:45 AM	25		28		53	
9:00 PM	19	51	10	26	29	77	9:00 AM	17	73	29	103	46	176
9:15 PM	11		8		19		9:15 AM	21		30		51	
9:30 PM	14		6		20		9:30 AM	17		15		32	
9:45 PM	7		2		9		9:45 AM	18		29		47	
10:00 PM	11	26	5	9	16	35	10:00 AM	13	73	22	96	35	169
10:15 PM	6		1		7		10:15 AM	21		21		42	
10:30 PM	3		0		3		10:30 AM	17		29		46	
10:45 PM	6		3		9		10:45 AM	22		24		46	
<b>24 Hour Volume</b>			<b>EB</b>	<b>WB</b>	<b>Combined</b>		<b>Combined</b>						
			2422 (51.3%)		2295 (48.7%)		4717						

Count	12:00 AM - 12:00 PM			12:00 PM - 12:00 AM		
	EB	WB	Combined	EB	WB	Combined
	792	901	1693	1630	1394	3024
	46.8 %	53.2 %		53.9 %	46.1 %	
<b>Peak Hour</b>	7:00 AM	7:15 AM	7:00 AM	5:00 PM	2:30 PM	2:45 PM
Volume	419	343	760	291	297	510
Factor	0.73	0.71	0.72	0.93	0.61	0.81

**TRAFFIC DATA, LLC**  
 1409 Turnham Lane, Birmingham, AL 35216  
 205-824-0125

Location: : BROOKWOOD RD south of CROSSHILL RD  
 City, State: : MOUNTAIN BROOK, AL  
 Speed Limit: : 30 mph

Date: 3/11/2015  
 Wednesday

24 Hour Volume						24 Hour Volume							
Begin	NB	SB	Combined	Begin	NB	SB	Combined	Begin	NB	SB	Combined		
11:00 AM	10	44	8	49	18	93	11:00 PM	1	5	0	2	1	7
11:15 AM	14		11		25		11:15 PM	1		0		1	
11:30 AM	11		13		24		11:30 PM	2		2		4	
11:45 AM	9		17		26		11:45 PM	1		0		1	
12:00 PM	12	46	8	53	20	99	12:00 AM	1	2	0	1	1	3
12:15 PM	7		12		19		12:15 AM	0		1		1	
12:30 PM	13		14		27		12:30 AM	1		0		1	
12:45 PM	14		19		33		12:45 AM	0		0		0	
1:00 PM	25	83	11	46	36	129	1:00 AM	0	0	0	1	0	1
1:15 PM	17		11		28		1:15 AM	0		0		0	
1:30 PM	19		13		32		1:30 AM	0		0		0	
1:45 PM	22		11		33		1:45 AM	0		1		1	
2:00 PM	16	69	7	42	23	111	2:00 AM	0	0	0	2	0	2
2:15 PM	16		13		29		2:15 AM	0		1		1	
2:30 PM	20		13		33		2:30 AM	0		1		1	
2:45 PM	17		9		26		2:45 AM	0		0		0	
3:00 PM	25	83	13	107	58	190	3:00 AM	0	0	0	0	0	0
3:15 PM	17		29		46		3:15 AM	0		0		0	
3:30 PM	22		29		51		3:30 AM	0		0		0	
3:45 PM	19		16		35		3:45 AM	0		0		0	
4:00 PM	20	76	13	75	33	151	4:00 AM	0	0	0	1	0	1
4:15 PM	17		17		34		4:15 AM	0		1		1	
4:30 PM	21		21		42		4:30 AM	0		0		0	
4:45 PM	18		24		42		4:45 AM	0		0		0	
5:00 PM	23	75	21	71	44	146	5:00 AM	0	2	0	4	0	6
5:15 PM	13		16		29		5:15 AM	1		2		3	
5:30 PM	24		17		41		5:30 AM	1		0		1	
5:45 PM	15		17		32		5:45 AM	0		2		2	
6:00 PM	22	64	19	55	41	119	6:00 AM	1	14	3	24	4	38
6:15 PM	9		14		23		6:15 AM	6		5		11	
6:30 PM	22		11		33		6:30 AM	4		10		14	
6:45 PM	11		11		22		6:45 AM	3		6		9	
7:00 PM	16	46	10	32	26	78	7:00 AM	5	75	20	112	25	187
7:15 PM	13		7		20		7:15 AM	19		16		35	
7:30 PM	10		9		19		7:30 AM	34		30		64	
7:45 PM	7		6		13		7:45 AM	17		46		63	
8:00 PM	10	35	7	16	17	51	8:00 AM	8	25	26	91	34	116
8:15 PM	9		1		10		8:15 AM	7		17		24	
8:30 PM	5		3		8		8:30 AM	6		29		35	
8:45 PM	11		5		16		8:45 AM	4		19		23	
9:00 PM	8	20	7	10	15	30	9:00 AM	15	38	26	79	41	117
9:15 PM	6		2		8		9:15 AM	10		16		26	
9:30 PM	5		1		6		9:30 AM	8		19		27	
9:45 PM	1		0		1		9:45 AM	5		18		23	
10:00 PM	3	9	1	6	4	15	10:00 AM	5	40	12	54	17	94
10:15 PM	1		1		2		10:15 AM	14		13		27	
10:30 PM	1		3		4		10:30 AM	8		14		22	
10:45 PM	4		1		5		10:45 AM	13		15		28	
<b>24 Hour Volume</b>			<b>NB</b>	<b>SB</b>	<b>Combined</b>		<b>24 Hour Volume</b>			<b>NB</b>	<b>SB</b>	<b>Combined</b>	
			851 (47.7%)	933 (52.3%)	1784					611	515	1126	

**12:00 AM - 12:00 PM**

**12:00 PM - 12:00 AM**

Count	NB	SB	Combined	NB	SB	Combined
	240	418	658	611	515	1126
	36.5 %	63.5 %		54.3 %	45.7 %	
<b>Peak Hour</b>	7:15 AM	7:30 AM	7:15 AM	1:00 PM	3:00 PM	3:00 PM
<b>Volume</b>	78	119	196	83	107	190
<b>Factor</b>	0.57	0.65	0.77	0.83	0.81	0.82

## **Appendix G**

# **Traffic Signal Warrant Analysis Worksheet**

# Brookwood Road at Crosshill Road

## Existing Traffic Volumes

### Signal Warrants - Summary

#### Major Street Approaches

**Eastbound: Crosshill Road**  
 Number of Lanes: 1  
 85% Speed < 40 MPH.  
 Total Approach Volume: 1,763

**Westbound: Crosshill Road**  
 Number of Lanes: 1  
 85% Speed < 40 MPH.  
 Total Approach Volume: 2,295

#### Minor Street Approaches

**Northbound: Brookwood Road**  
 Number of Lanes: 1  
 Total Approach Volume: 851

**Southbound: Brookwood Road**  
 Number of Lanes: 1  
 Total Approach Volume: 933

#### Warrant Summary (Urban values apply.)

<b>Warrant 1 - Eight Hour Vehicular Volumes</b> .....	<b>Not Satisfied</b>
<b>Warrant 1A - Minimum Vehicular Volume</b> .....	<b>Not Satisfied</b>
Required volumes reached for 0 hours, 8 are needed	
<b>Warrant 1B - Interruption of Continuous Traffic</b> .....	<b>Not Satisfied</b>
Required volumes reached for 0 hours, 8 are needed	
<b>Warrant 1 A&amp;B - Combination of Warrants</b> .....	<b>Not Satisfied</b>
Required volumes reached for 0 hours, 8 are needed	
<b>Warrant 2 - Four Hour Volumes</b> .....	<b>Not Satisfied</b>
Number of hours (0) volumes exceed minimum < minimum required (4).	
<b>Warrant 3 - Peak Hour</b> .....	Not Evaluated
<b>Warrant 3A - Peak Hour Delay</b> .....	Not Evaluated
<b>Warrant 3B - Peak Hour Volumes</b> .....	Not Evaluated
<b>Warrant 4 - Pedestrian Volumes</b> .....	Not Evaluated
<b>Warrant 5 - School Crossing</b> .....	Not Evaluated
<b>Warrant 6 - Coordinated Signal System</b> .....	Not Evaluated
<b>Warrant 7 - Crash Experience</b> .....	Not Evaluated
<b>Warrant 8 - Roadway Network</b> .....	Not Evaluated
<b>Warrant 9 - Intersection Near a Grade Crossing</b> .....	Not Evaluated

## **Appendix H**

# **Intersection Capacity and Queue Analysis Worksheets Recommended Improvements**

1: Crosshill Road WB & Brookwood Road Performance by movement

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	57.7	22.5	7.7	5.4	136.8	90.7	42.0

2: Crosshill Road EB & Brookwood Road Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Delay / Veh (s)	23.4	13.2	8.8	11.7	7.5	7.9	15.9

Total Network Performance

Delay / Veh (s)	60.7
-----------------	------

Intersection: 1: Crosshill Road WB & Brookwood Road

Movement	WB	NB	SB	SB
Directions Served	LR	TR	L	T
Maximum Queue (ft)	874	22	56	608
Average Queue (ft)	226	4	55	311
95th Queue (ft)	552	17	56	605
Link Distance (ft)	2693	1591		2765
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)			30	
Storage Blk Time (%)			0.92	0.14
Queuing Penalty (veh)			111	29

Intersection: 2: Crosshill Road EB & Brookwood Road

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	309	55	92	97
Average Queue (ft)	150	14	48	65
95th Queue (ft)	247	47	75	88
Link Distance (ft)	2848		3458	1591
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		30		
Storage Blk Time (%)		0.02	0.15	
Queuing Penalty (veh)		2	2	

Network Summary

Network wide Queuing Penalty: 144

---

1: Crosshill Road WB & Brookwood Road Performance by movement

---

Movement	WBL	WBR	NBT	NBR	SBL	SBT	All
Delay / Veh (s)	14.6	5.0	3.7	3.4	10.4	10.0	8.1

---

2: Crosshill Road EB & Brookwood Road Performance by movement

---

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Delay / Veh (s)	11.0	7.4	8.7	7.9	7.2	6.4	8.7

---

Total Network Performance

---

Delay / Veh (s)	20.7
-----------------	------

Intersection: 1: Crosshill Road WB & Brookwood Road

Movement	WB	SB	SB
Directions Served	LR	L	T
Maximum Queue (ft)	138	55	118
Average Queue (ft)	66	41	40
95th Queue (ft)	105	64	79
Link Distance (ft)	2693		2765
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		30	
Storage Blk Time (%)		0.12	0.06
Queuing Penalty (veh)		8	6

Intersection: 2: Crosshill Road EB & Brookwood Road

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	109	55	55	100
Average Queue (ft)	63	14	35	56
95th Queue (ft)	96	44	54	86
Link Distance (ft)	2848		3458	1591
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		30		
Storage Blk Time (%)		0.01	0.05	
Queuing Penalty (veh)		1	1	

Network Summary

Network wide Queuing Penalty: 16