



# FEASIBILITY STUDY – BA 358

## ENGINEERING DEPARTMENT

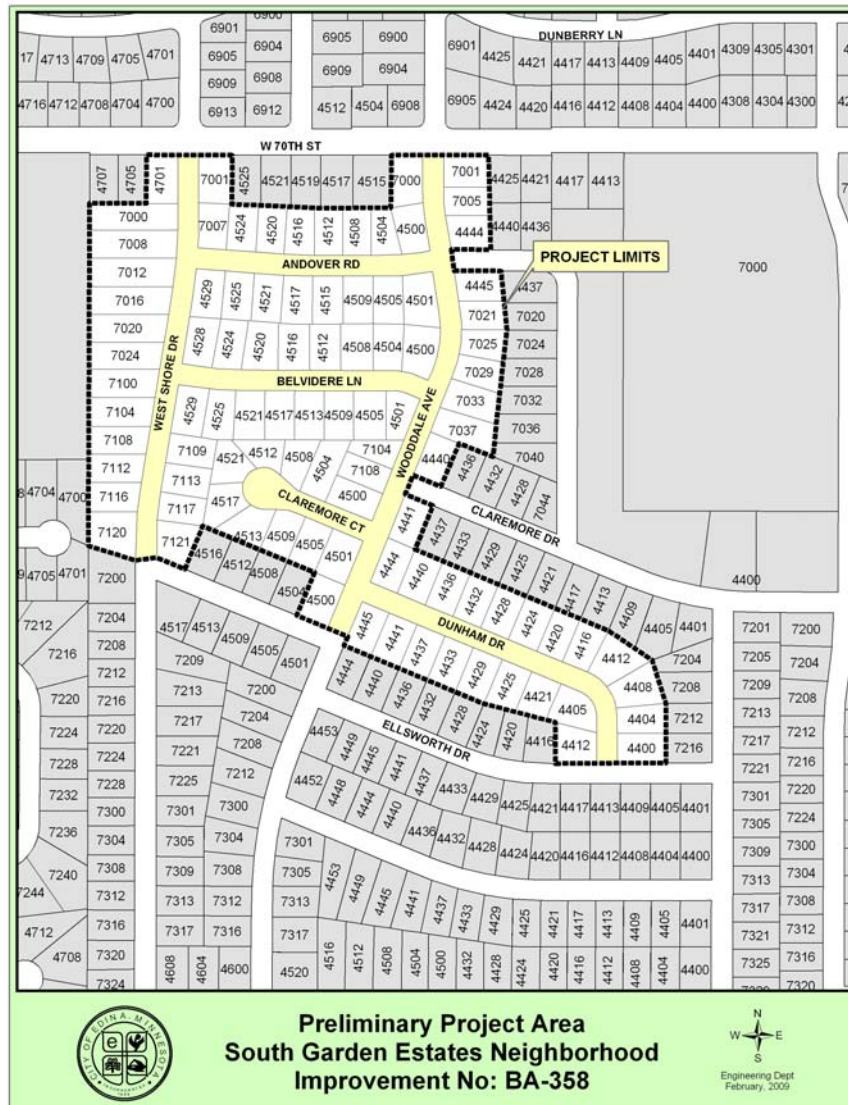
### CITY OF EDINA

#### STREET AND UTILITY IMPROVEMENTS

#### SOUTH GARDEN ESTATES NIEGHBORHOOD

#### MARCH 17, 2009

**LOCATION:** The South Garden Estates Neighborhood Road and Utility Improvement Project includes West Shore Drive, Claremore Court, Belvidere Lane, Andover Road, Wooddale Avenue and Dunham Drive. The South Garden Estates area is made up of three different plats, South Garden Estates, South Garden Estates 2<sup>nd</sup> Addition and South Garden Estates 3<sup>rd</sup> Addition. (See Figure 1)



**Figure 1. Project Area Map**

**INITIATION & ISSUES:** The South Garden Estates Neighborhood project was initiated by the Engineering Department as part of the City's street reconstruction program and Capital Improvement Program to update aging infrastructure and address several issues including drainage problems, sanitary sewer problems and watermain improvements and upgrades.

The following are existing features and resident comments that present issues in determining the feasibility of the project and are addressed in this report:

- Limited concrete curb and gutter
- Center island entrances
- Surface rainwater drainage and storm sewer issues
- Poor condition of existing pavement
- Existing landscaping, retaining walls, driveways, etc.
- Sump pump discharging directly onto street
- Existing mature trees
- Cost of project

**EXISTING CONDITIONS:** The roadways and utilities in this neighborhood were originally constructed in the 1950's. The roadway widths vary in this neighborhood ranging from 28-ft to 31-ft with limited concrete curb and gutter on the southern portion of Wooddale Avenue and no existing sidewalks. The pavement condition varies throughout the neighborhood and is in poor condition (see Photos 1 & 2).



**Photo 1. Existing Pavement Condition**



**Photo 2. Existing Pavement Condition**

The average Pavement Condition Index for the City of Edina is 75 and the average PCI for South Garden Estates Neighborhood is 48. Examples of the raveling and alligator cracking can be seen in photos 1 & 2. The City of Edina recently hired a consultant to evaluate all bituminous roadways within the City. The streets were graded based on a number of conditions such as sagging, alligator cracking, raveling and potholes. Streets are rated on a scale from 0 to 100; with 0 begin extremely poor and 100 representing a brand new road surface. It is the City's practice to complete a total reconstruction of the streets when the Pavement Condition Index (PCI) is less than 45, a Mill and Overlay project when the PCI is between 45 and 65, and Seal Coats for PCI greater than 65 and less than 95.

Street grades vary widely throughout the area with some areas and intersections that are relatively flat. There are areas with existing storm sewer catch basins to collect water from the neighboring streets and within the project limits. There are plans on upgrading the storm sewer to help control water runoff.

The pavement throughout these streets appears to be near the end of its useful life; meaning that overlaying or seal coating the pavement is no longer feasible.

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Watermain breaks and water service breaks have not been reported with much frequency. All the sanitary sewer mains were inspected using a televising system and it has been discovered that settlements, cracks and deformities have occurred in the sanitary lines necessitating sanitary sewer spot repairs.

Some property owners have landscaping items within the City right-of-way. These landscaping items are prohibited from being placed in the boulevard in accordance with Edina City Code 1200.02. Other typical items exist adjacent to the roadway such as retaining walls, concrete driveways, shrubs, trees and fences.

Most of the private utilities in this neighborhood are overhead (with the exception of the gas lines). Street lighting consists of standard "cobra head" lights mounted on wood poles that are typically located at the intersections.

**RESIDENT INVOLVEMENT:**

A pavement rehabilitation open house was held on October 9, 2008. 2009 and 2010 neighborhoods were invited to learn about the City neighborhood roadway reconstruction program. City staff then kicked off the project by sending out an informational newsletter and questionnaire to the 96 residents of the neighborhood on December 9, 2008, to inform them of the project. Fifty-five of the questionnaires were returned, for a 57% return rate. The two key issues that were addressed in this survey was the type of lighting (basic or decorative) to the neighborhood, and installation of new concrete sidewalks. The results to the survey can be seen below in Figure 2.

**SOUTH GARDEN ESTATES NEIGHBORHOOD - Survey Results from December 9, 2008 Questionnaire Sheet**

Total Surveyed	Surveys Returned	Change Existing Lighting		Prefer New Sidewalk	
		Yes	No	Yes	No
96	55	13	38	6	46
<b>% of Returned Surveys</b>	<b>57%</b>	<b>24% *</b>	<b>69% *</b>	<b>11% *</b>	<b>84% *</b>

\* Percentages are based on responses of returned surveys and may not equal 100% if survey questions were not answered on questionnaire.

**Figure 2. Survey Results from December 9, 2008 Questionnaire**

A neighborhood informational meeting was held on February 9, 2009, to provide information, gather data and answer questions the homeowners had relating to the project. Thirty-six residents attended this meeting, representing 29 households. Input from this meeting and comments received

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throughout the planning of this project have been included in this report as attachments.

**PROPOSED  
IMPROVEMENTS:**

The South Garden Estates Neighborhood project involves the following proposed improvements:

- Center island entrances at West Shore Drive and Wooddale Avenue at 70<sup>th</sup> Street West, see photos 3 & 4 for examples.
- Removal of the bituminous roadway throughout the neighborhood and replacement with new aggregate base material and bituminous pavement.
- Construct new concrete curb and gutter throughout the entire neighborhood.
- Upgrades and improvements to the storm sewer system including additional catch basins and stormwater treatment structures.
- Upgrading fire hydrants to City standards.
- Sanitary sewer and spot repair throughout the neighborhood.
- Installing sump pump drains where needed.

Staff has received a petition from the neighborhood to have the center island entrances removed from the project, see attachment I & J. The resident costs to install the islands, including landscaping but not curb and gutter (funded from Utility fund) is \$7,900 per island. The resident cost to pave this area of roadway is \$1,200. Therefore the additional cost to install the islands is \$13,400 or \$146 per REU.

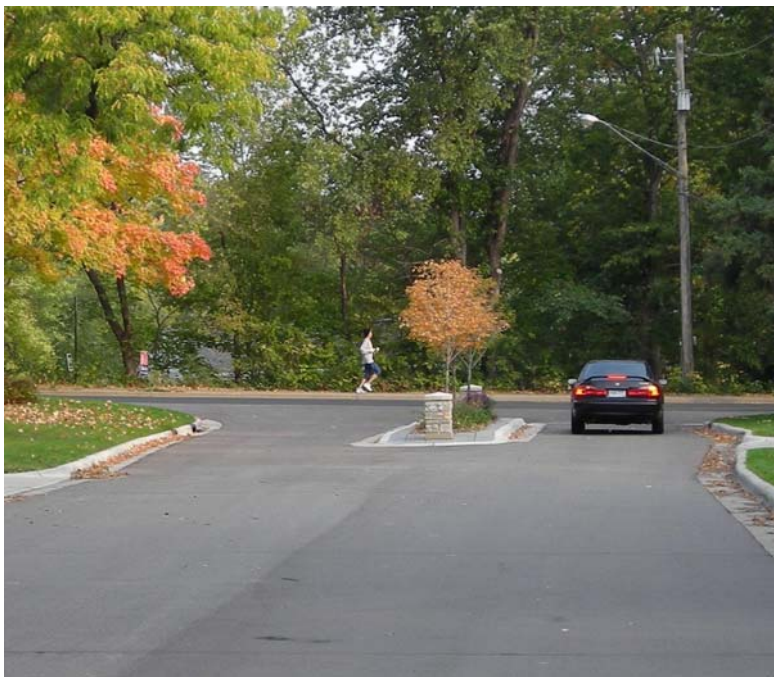
The proposed design acknowledges and addresses as many comments and concerns by residents of the neighborhood as possible while still maintaining the desired minimum standards of the engineering and public works staff.

Utility improvements include upgrading hydrants with the City's new standard hydrant; sanitary sewer upgrades and improvements; revising the storm sewer to accommodate the new concrete curb and gutter and correct the existing storm sewer problems at certain locations; and installing sump drains where needed to allow the property owners to connect their sump pump discharges directly into the storm sewer system.

Other utility activities may include replacement of gas mains along the street which is determined and coordinated by CenterPoint Energy, the local gas utility company.

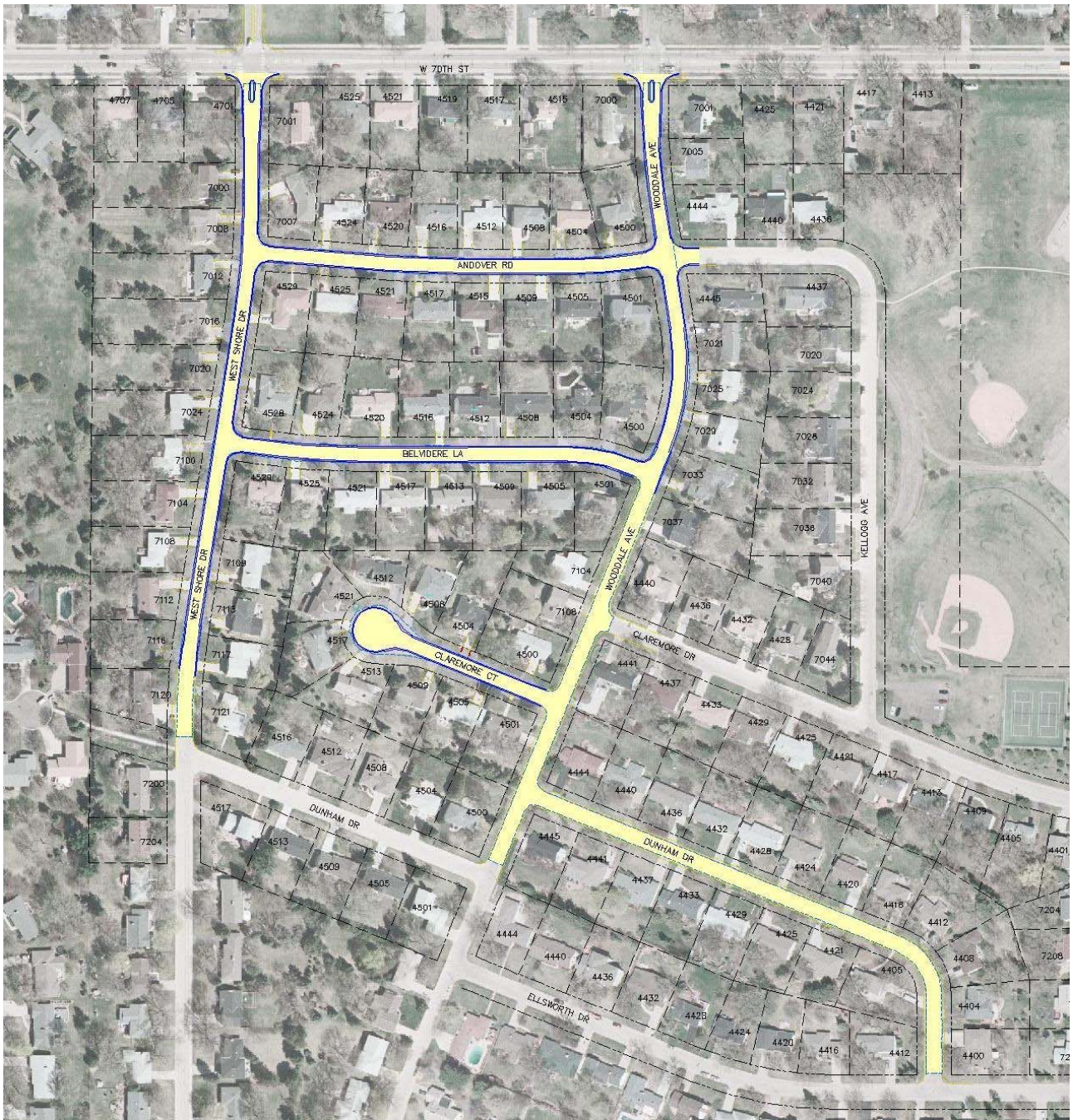


**Photo 3. Island Entrance at 69<sup>th</sup> Street West and Valley View Road**



**Photo 4. Island Entrance at Brittany Road and 66<sup>th</sup> Street West**

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**Figure 3. Proposed Project Layout**

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**RIGHT-OF-WAY  
 & EASEMENTS:**

The right-of-way in the South Garden Estates Neighborhood is 60 feet wide. All proposed improvements stay within this right-of-way and no additional easement requirements are anticipated.

**PROJECT COSTS:**

The total estimated project cost is \$1,280,500.00 (see Table 1). The total cost includes indirect costs of 15% for engineering and clerical costs and 7.5% for first year finance costs. Funding for the entire project will be from a combination of special assessment and utility funds. The estimated roadway construction cost is \$815,500.00 and will be 100 percent funded by special assessments. The new concrete curb and gutter is included under the storm sewer fund not under the roadway special assessment. Utility improvements and repairs amount to \$465,000.00 and will be funded through the respective utility fund.

<b>Item</b>	<b>Amount</b>	<b>Total Cost</b>
<b>Roadway:</b>	\$815,500.00	
<b>Roadway Total:</b>		<b>\$ 815,500.00</b>
<b>Utilities:</b>		
Storm Sewer	\$325,000.00	
Watermain	\$70,000.00	
Sanitary Sewer	\$70,000.00	
<b>Utility Total:</b>		<b>\$ 465,000.00</b>
<b>Total Project:</b>		<b>\$ 1,280,500.00</b>

**Table 1. Estimated Project Costs**

**ASSESSMENTS:**

An approximate special assessment of \$9,000.00 per residential equivalent unit will be levied against residents adjacent to the neighborhood's roadways. The justification for assessments is attributed to properties receiving benefit of the new roadway and is established in accordance with the City's Special Assessment Policy dated August 16, 2005. The assessable lot is based on a detached single family home (see Figure 4).

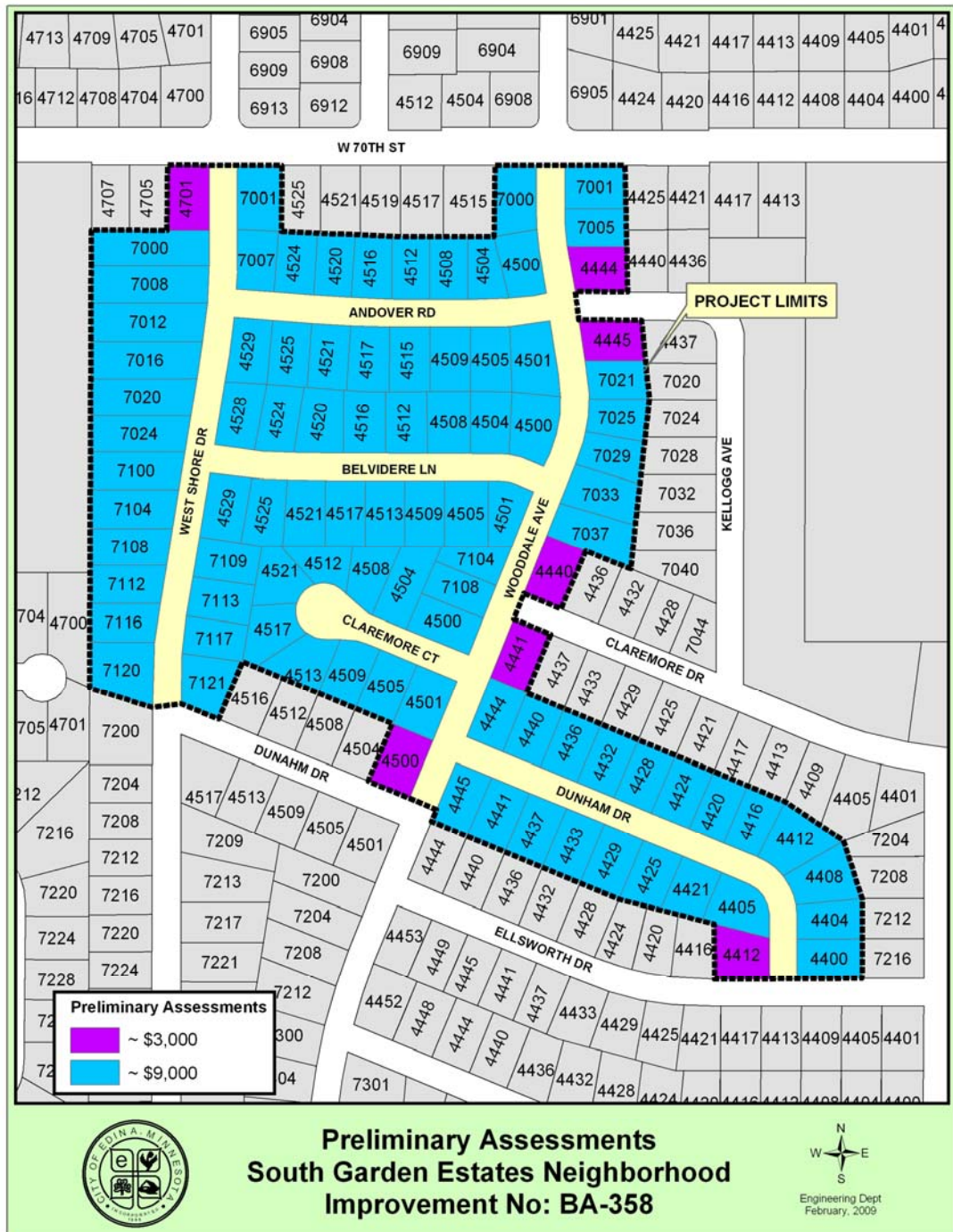


Figure 4. Preliminary Assessment Map

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**PROJECT SCHEDULE:** The following schedule is feasible from an Engineering standpoint:

Pavement rehabilitation Open House.....	October 9, 2008
Informational Meeting/Open House .....	February 9, 2009
Council Orders Public Hearing .....	February 17, 2009
Receive Feasibility Report.....	March 17, 2009
Public Hearing .....	March 17, 2009
Bid Opening .....	April 2008
Award Contract .....	May 2009
Begin Construction .....	Spring/Summer 2009
Complete Construction .....	Fall 2009
Final Assessment Hearing.....	Fall 2010

**FEASIBILITY:** Staff believes the construction of this project is necessary, cost effective and feasible to improve the road and utility infrastructure in the South Garden Estates Neighborhood.

- ATTACHMENTS:**
- A. 2009 and 2010 Street Reconstruction Letter
  - B. 2009 and 2010 Attendance List
  - C. Informational Newsletter
  - D. Property Owners Questionnaire
  - E. Questionnaire Results
  - F. Open House Letter
  - G. Informational Meeting Attendance List and Comments
  - H. Project comments and Letters Received
  - I. Median Petition received by Engineering Department
  - J. Median Petition Results Graphic
  - K. Information Meeting PowerPoint Presentation
  - L. Recommendation to Set Public Hearing
  - M. Public Hearing Notices, Certificate of Mailing and List of Labels
  - N. Preliminary Assessment Roll