Jonesborough, TN: North Lincoln Avenue Community Park Conceptual Design

Prepared for the Town of Jonesborough, TN

June 2015
PROJECT TEAM

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ACKNOWLEDGMENTS

Jonesborough Town Staff
Jonesborough Board of Mayor and Aldermen
Jonesborough Tree and Townscape Committee
DTWood Engineering, Inc.
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PART 3: APPENDIX

community design
assistance center

College of Architecture + Urban Studies
Virginia Polytechnic Institute and State University
Tennessee’s oldest town, Jonesborough, is known for its historic preservation, small-town charm, and the International Storytelling Festival. It is a popular destination for both locals and tourists. The town offers its residents a number of recreational opportunities including Wetlands Water Park, Persimmon Ridge Park, the Mary B. Martin Program for the Arts, and the Jonesborough Repertory Theatre. Another popular destination is Jonesborough’s Senior Citizen Center. The center offers “a variety of events and trips, opportunities for outreach to the community, education, socializing, health and fitness, and spiritual and vocational classes.” Although the population of Jonesborough was only 5,975 in the 2010 census, the Senior Citizen Center serves the broader Washington County area and has approximately 2,000 members. In addition, it has over 350 volunteers who help manage and operate the center.

In 2014, the Town of Jonesborough began constructing a new facility for the Senior Citizen Center in order to better meet the needs of its members. The new location is closer to the downtown area and will be more easily accessible to residents. Construction is expected to be completed in the spring of 2015. The new center neighbors the town’s municipal garage and is located in the Longview Drive/North Lincoln Street neighborhood.
Although the town has actively tried to screen the garage and its activities from the surrounding neighborhood, they feel that the construction of the new Senior Citizen Center offers an opportunity to move the municipal garage to a more appropriate location and then utilize the vacated land as an asset - a park that serves the seniors and the surrounding neighborhood.

The Town of Jonesborough requested that the Community Design Assistance Center aide in the redesign of the current municipal garage property into a neighborhood park. This park would serve the needs of the Longview Drive/North Lincoln Street neighborhood as well as the Senior Citizen Center community.
The design process began with an initial site visit to Jonesborough in November, 2014. The CDAC team walked the municipal garage site (future location of the North Lincoln Avenue Community Park) where they photographed the site and conducted a site analysis. The team also gathered information about the wants and needs of the community through a survey which was distributed to the North Lincoln Avenue neighborhood and members of the Senior Citizen Center community. The surveys were distributed both electronically through the senior center’s listserv and in hard-copy form to nearby residents and the Senior Citizen Center. The team received 150 completed surveys from the community. In addition, on December fourth, 2014, CDAC held a “Community Park Workshop” where the team gathered ideas from the community and discussed concerns for the park. More information on the survey and workshop can be found in Part 2 and the Appendix of this report. The team also received ideas and feedback from various town personnel. By gathering on-site data, documenting existing conditions, and taking soil samples, the team was able to understand the opportunities and constraints of the site. This analysis would later influence decisions in the design concepts.

The team worked closely with the community to better understand their vision for the park. After careful consideration of all factors, several preliminary conceptual design alternatives were developed. These designs were presented at a Tree and Townscape Committee meeting where they were reviewed and commented on by committee members and citizens. The design alternatives were then revised and combined into a final conceptual master plan for the project site, based on comments at the meeting.

The final master plans were presented at a Tree and Townscape Committee meeting where they voted upon on April 1, 2015 and approved by the Committee.
PART 1: FINAL DESIGNS
COMMUNITY PARK FINAL DESIGN

Final Master Plan
The North Lincoln Avenue Community Park is centralized around a lawn area where a prominent piece of sculpture or statue selected by the town can be placed. This feature serves as a focal point and landmark throughout the entire park and allows visitors to easily orientate themselves when using any of the trails or gathering places. The entry into the park is highlighted with an area for a park overlook containing rocking chairs, flowering trees, native grasses, and the park sign. In addition, a “Little Free Library” is located here. This box allows visitors to take a book after leaving one of their own, allowing neighbors to share their favorite literature and stories. Beyond the park overlook is the ADA accessible entrance into the park. All ramps, stairways, and overlooks have decorative railings for safety and support. The main vehicular access to the park includes a parking area located along Longview Drive.

Adjacent to the entry feature is a covered amphitheater with concrete terraced seating and a lawn area for placing chairs and blankets during community events.
Adjacent to the park entry is a community garden consisting of raised vegetable beds of varying heights to accommodate children, adults, and seniors, as well as compost bins, a shed with lockers and restrooms, a potting table, and seating shaded by an arbor. This area is ADA accessible with decorative angular ADA compliant compacted gravel.

A secondary entrance into the park from the parking lot steps down into a locally quarried stone terraced butterfly and bird garden. Within the terraced garden would be bird boxes, bench swings, and table seating.
COMMUNITY PARK FINAL DESIGN

From the community garden, a path leads to a large bench swing gazebo that overlooks the garden and onto the central lawn. This space provides a fun and unique gathering area for all ages.

Bench Swings

Gazebo

At the most northern portion of the site is a woodland area featuring a meditation garden. The meditation garden could be a peaceful oasis with a bubbler fountain, intimate seating, and shade loving shrubs and perennials. This garden overlooks a creek fountain reminiscent of a mountain stream and also has a view onto the central lawn and statue, all framed by a tree-lined corridor of low grasses and wildflowers.

Natural Creek

Bubbler Fountain
Also in the northern shaded edge of the park are intergenerational swings (image on pg. 15), an outdoor classroom, and natural play areas with natural features such as berms, tree stump paths, and a fossil dig sand box. The natural play area also includes a large berm with a slide built into the slope, a climbing wall area, and a bridge leading to the top of the peak.
Along the eastern portion of the site is a pavilion containing two unisex restrooms, a drinking fountain, and picnic tables, and storage closet. On the north side of the pavilion are three grills with bistro style tables and chairs. On the south and eastern sides of the pavilion are two bocce courts, three shuffleboard courts, a horse shoe pit, rocking chairs, seating with shading umbrellas, and a large seat wall with built-in storage. Along with adult games, a chalk walk could be designated along the south side of the pavilion where children could draw and play games.
Two main trails serve as the main circulation patterns within the park. The outer trail is a seven-foot wide ADA accessible path composed of decorative angular ADA accessible gravel. This trail is a more passive and tranquil path meandering through the woodland garden to the bench swing pavilion and community garden.

The inner loop is a nine-foot wide ADA accessible trail consisting of rubberized asphalt reinforced for vehicular access and serves as both an exercise trail as well as access for maintenance and emergency vehicles off of Longview Drive. The loop undulates around the lawn area and grass berms and additionally provides a circular loop for exercise that is roughly 1/10th of a mile. Along both of these trails are variations of seating areas with different configurations that promote many types of group interactions and conversations. The central lawn can also be marked off for badminton courts.

A buffer currently exists separating the park and the surrounding residents. Kudzu has unfortunately spread through this area and must be eradicated. The CDAC team proposes that the nonnative plant species within the buffer be removed and recommends supplementing with native plant material.

The final drawings are found on the following pages and include the master plan, the master plan with dimensions, several perspectives of the proposed park, and section drawings.
Community Park at the new Jonesborough Senior Citizen Center Conceptual Designs

1. Park Entrance Overlook

FINAL DESIGN CONCEPTS
Perspective 1
2 Meditation Garden
③ Community Garden
Each of the following sections is meant to illustrate the general topography across the site and some of the proposed design elements. Of particular note are two different ideas for a focal point sculpture at the center of the main lawn area.
COMMUNITY PARK FINAL DESIGN

Planting Plan
A planting plan was developed for North Lincoln Avenue Community Park. Trees and shrubs with year-round interest would be planted to give structure to the garden. Large flowering understory trees create a lush native canopy. Shrub masses are used along the periphery of the park under the canopy to create a natural park boundary. Wildflower meadows would be planted with two different types of seed mix, one for sun and another for shade.

The following pages include the planting plan and a plant palette, which includes images of the proposed plant materials.
**Perennials**

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<td>M</td>
<td>Asclepias tuberosa</td>
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<tr>
<td>LB</td>
<td>Bacopa 'Trailing Blue'</td>
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<tr>
<td>GB</td>
<td>Echinacea purpurea 'New Wine'</td>
<td>purple coneflower</td>
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<td>Geranium rogersianum</td>
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**Shrubs**

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**Seed Mix**

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### Shrubs

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### Perennials

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<td>beardtongue</td>
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<td>SG</td>
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### Seed Mix

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<tr>
<td>WD water 'Shade'</td>
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CONCLUSION

The Community Design Assistance Center worked closely with the Jonesborough community to create a design for the North Lincoln Avenue Community Park at the new senior citizen center. This park will give the town a space for community interaction and outdoor activities as well as create opportunities for increased health and education for the surrounding community and Jonesborough Senior Citizen Center. It is our hope that this work will lead to a place that the community of Jonesborough enjoys and takes pride in.
PART 2: PRELIMINARY ANALYSIS AND DESIGN
SITE INVENTORY AND ANALYSIS

During the site visits to Jonesborough, the team inventoried existing site elements and analyzed current site conditions. The inventory was predominantly based on topography, property ownership, vehicular circulation, open space areas, views, and surrounding landscape character.

The future Senior Center and community park are located along Main Street east of downtown and between Longview Drive and Lincoln Avenue. The following two pages show its location in relation to the existing Senior Center location and the downtown as well as walking distances from the peak from various locations throughout Jonesborough. Presently, the town’s municipal garage is located at this site. Lincoln Avenue is currently being used as a cut-through access road during the morning and afternoon work hours.

Pages 30 and 31 show existing conditions and a site analysis map. Along Lincoln Avenue is an existing entry into the municipal garage site. Due to a blind hill, the left turn out of this access point can be dangerous. There is a need to reconfigure or completely eliminate this left turn to create a safer exit. Longview Drive, along the eastern boundary of the site, may experience increased traffic once the Senior Center and park are developed. Careful attention may need to be taken when developing traffic ingress/egress points and crosswalk connections. Surrounding the site are the New Halifax, Main Street Village, and Pritchett neighborhoods. These neighborhoods would benefit from having connections to the new park site.

Along the southwest and southeast borders of the municipal garage site are steep slopes. Careful consideration should be taken when determining ADA access into the park site. However, this change in grade does allow for potential views down into the site. ADA access along Longview Drive may be the most promising point of entry into the proposed park.

On the western portion of the site are two existing sheds that are being used to store equipment and materials. These sheds should be removed when the municipal garage is vacated. This area was used previously as a landfill for the town, therefore, soils should be examined when determining an exact placement of the structures or letting children dig in the soil. The most suitable soils for a structure are located where the existing garage is presently.

Information was also gathered from a community survey. A summary of the survey results can be found on page 32.
A - Looking towards existing Municipal Garage

B - Entering the Municipal Garage Site from the Lincoln Avenue Direction

C - Entrance to the Municipal Garage Site from Lincoln Avenue

D - Entering the Municipal Garage Site from Lincoln Avenue Area

E - Entrance to New Senior Center at Longview Drive
**SITE ANALYSIS**

Community Park at the new Jonesborough Senior Citizen Center Conceptual Designs

- **LEGEND**
  - Parking
  - Overflow and Park Parking
  - Potential Pedestrian Connections
  - Traffic Calming Needed
  - Potential Signage Locations
  - Steep Grades
  - ADA Accessible Route
  - Potential Pedestrian Circulation into Park and Downtown
  - Vehicular Circulation
  - Vehicular Access
  - Buffer Needed
  - Slope Down
  - Drainage off-site
  - Drainage Area
  - Potential Good Views

**SITE INVENTORY & ANALYSIS**

- **Existing Gate** (To Be Removed)
- **Dilapidated Chain Link Fence along Property Line** (To Be Removed)
- **Potential ADA Entry into Park**
- **No Sightlines for Left Turn** (Need to eliminate or reconfigure left turn. Add island.)
- **Traffic Calming Needed** (Slow traffic)
- **Future Bioretention** (Collecting parking run-off)
- **Stairs Maintain Connection**
- **Shed** (TBR)
- **Cell Tower**
- **To Remain**
- **Short-term Main Entrance & Drop-off**
- **Future Pedestrian Connection to Downtown**
- **New Senior Citizens Center Courtyard**
- **Most Stable Soils on Site** (Buildable)
- **Old Landfill** (Poor Soils)
- **Dilapidated Chain Link Fence along Property Line** (To Be Removed)
- **Future Pedestrian Circulation into Park and Downtown**
- **Steep Grade**
- **ADA Accessible Route**
- **Potential Pedestrian Circulation into Park and Downtown**
- **Vehicular Circulation**
- **Vehicular Access**
- **Buffer Needed**
- **Slope Down**
- **Drainage off-site**
- **Drainage Area**
- **Potential Good Views**

**February 25, 2014**

**Disclaimer:** This drawing is conceptual and was prepared to show approximate location and arrangement of site features. It is subject to change and is not intended to replace the use of construction documents. The client should consult appropriate professionals before any construction or site work is undertaken. The Community Design Assistance Center is not responsible for the inappropriate use of this drawing.

An Outreach Center of the College of Architecture + Urban Studies Virginia Polytechnic Institute and State University
### Survey Method

- **All Respondents (150)**
  - Paper Survey (39) - 26%
  - Online Survey (111) - 74%

### Proximity of Respondents to Site

- **All Respondents (149)**
  - Respondents < 1 Mile from Site (48) - 32%
  - Respondents > 1 Mile from Site (101) - 68%

### How Often Do You Visit Jonesborough Parks?

- **All Respondents (149)**
  - Never (12%) - 34%
  - Rarely (30%) - 24%
  - Sometimes (32%) - 68%
  - Often (30%) - 26%

### Do You Forsee Yourself Using This Park with Young Children Including Grandchildren?

- **All Respondents (150)**
  - No (56%) - 63%
  - Yes (44%) - 37%

### Park Elements (%)

- **All Respondents (150)**
  - Restroom with Composting Toilets - 0%
  - Restroom with Flush Toilets - 100%
  - Fitness Area - 90%
  - Playground - 80%
  - Picnic Benches - 70%
  - Paved Trails - 60%
  - Grills - 50%
  - Picnic Areas for Outdoor Educational Classes - 40%
  - Trails that Form Loops - 30%
  - Water Fountain - 20%
  - Restroom with Flush Toilets - 10%
  - Performance Area - 0%

### Community Survey Results

**Community Park at the new Jonesborough Senior Citizen Center Conceptual Designs**
COMMUNITY PARK PRELIMINARY DESIGN

Two separate design concepts were developed for the community park. Each was developed with a different layout and with different park elements.

On the following pages are descriptions of the preliminary designs as well as reductions of the initial concepts.
COMMUNITY PARK PRELIMINARY DESIGN

Preliminary Design: Concept 1
Concept 1 focuses on a centralized lawn area where a prominent piece of sculpture or statue of cultural significance can be placed. This feature serves as a focal point and landmark throughout the entire park and allows seniors to easily orientate themselves when using any of the trails or gathering places. The main vehicular access to the park is located along Longview Drive. This visual entry into the park is highlighted with an area for a park overlook containing seat walls, flowering trees, native grasses, and the park sign. Adjacent to this entry feature is a covered amphitheater with concrete terraced seating and a lawn area for placing chairs and blankets during events. The main entrance into the park is anchored with a trellis, stepping down into a local quarried stone terraced butterfly and bird garden. Within the terraced garden would be bird boxes, benches, and rocking chairs. Adjacent to the park entry is a community garden consisting of raised vegetable beds, cut flowers, compost bins, and a shed with a potting table and seating covered by an arbor. This area will be ADA accessible with angular ADA compliant compacted gravel. Also within the community garden would be an arbor covered bench swing overlooking the garden and out onto the central lawn.

At the most northern portion of the site is a woodland area featuring a meditation garden. The meditation garden could be a peaceful oasis with a bubbling fountain, intimate seating, and shade loving shrubs and perennials. This garden will also have a view onto the central park feature strengthened by a view corridor of low grasses and ferns.

Along the eastern portion of the site is a pavilion containing two unisex restrooms, a drinking fountain, picnic tables, and a fireplace. On the north side of the pavilion are four grills with bistro style tables and chairs. On the south side of the pavilion are two bocce courts with rocking chairs and additional seating with shade umbrellas. Next to the bocce courts, separated by a row of small flowering trees and grasses, are horseshoe pits. Along with adult games, a chalk walk is designated along the south side of the pavilion where children can draw and play games.

Two main trails are proposed throughout the park. The outer loop trail is a five-foot ADA accessible path composed of rubberized asphalt. This trail is a more passive and tranquil path meandering through the woodland garden along the community garden and reaching above the park to the overlook point connecting seniors to the Senior Center.

The inner loop is a five-foot ADA accessible trail consisting of a different material such as concrete or concrete pavers. This loop can be considered the more adventurous trail as it undulates around the lawn area. Along the trail are natural play elements such as grass berms, stepping stumps, and fallen tree trunks to allow children the opportunity to exercise their imaginations. Along both of these trails are variations of seating areas with different configurations that promote many types of group interactions and conversations.

A buffer currently exists separating the park and the surrounding residents; however, kudzu has spread and needs to be eradicated. The CDAC team proposes to eradicate the nonnative plant species within the buffer and recommends supplementing with native plant material.

The following page illustrates Concept 1.
Preliminary Design: Concept 2

Concept 2 involves a transition of the landscape from South to North. Areas to the south, closer to the Senior Citizen Center, include elements more likely to be used by seniors, such as horseshoes and bocce ball. Transitioning to the north, elements such as a large lawn and natural play area are proposed which are more likely to be used by small children and residents of the community.

The park is organized along a central axis that starts as a stepped entry down into the park. The axis transects through the oval lawn, and a wildflower meadow and terminates at a gazebo structure. This axis allows seniors at the back of the park to orient themselves and have a clear view to the park entrance. There are three ways to enter the park: The first, to the west, involves a winding ramp downward, starting with a rocking chair overlook. The second entrance includes the visual and main entry to the park and is highlighted with an overlook, flowering trees, native grasses, a little free library, and the park sign. The third entrance is a set of steps straight down into the park or take a long ramp along its eastern edge, ending at the oval lawn.

Closest to the main entrance of the park, there are areas for a host of activities. At the base of the slope is a game area with horseshoes, shuffleboard, and a bocce court. There are plenty of seating options around this area for spectating. Next to the game area is the picnic pavilion along the eastern portion of the site with picnic tables, grills, two restrooms, and a drinking fountain. Just to the south of the pavilion is a raised garden bed surrounded by a picket fence and stone retaining wall. This area also includes a maintenance shed, potting table, and compost bins.

As the path loops back north, a park visitor will encounter the hammock grove. In this area hammocks will be tied to wooden posts anchored into the crushed gravel that covers the ground. Around these posts, trees will be planted so that once the trees grow large enough, the hammocks may be transferred to them. To the northern most section of the site, a natural play area is surrounded by a path and benches. This play area includes a sandbox, swings, bridge structure, and a slide incorporated into a berm. This play surface should be some type of rubberized mulch or rubber asphalt.

Two main trails are proposed throughout the park. The outer loop trail is a six-foot ADA accessible path composed of rubberized asphalt. This trail is a more passive and tranquil path meandering through the woodland garden and may be made up of compacted gravel in some areas. The path circumferencing the oval lawn is a ten-foot wide rubber asphalt path with load requirements for vehicles. Along both of these trails are variations of seating areas with different configurations that promote many types of group interactions and conversations.

A buffer currently exists separating the park and the surrounding residents; however, Kudzu has spread and needs to be eradicated. The CDAC team proposes to eradicate the nonnative plant species within the buffer and recommends supplementing with native plant material.

The following page illustrates Concept 2.
Community Park at the new Jonesborough Senior Citizen Center Conceptual Designs

PRELIMINARY DESIGN CONCEPTS
Concept 2 Plan
PART 3: APPENDIX
APPENDIX

A. Soil Samples: Former Municipal Garage Site
B. Explanation of Soil Tests
C. Creating Raised Bed Planters
D. Rubberized Asphalt Path Details
E. Survey
F. Survey Results
G. Preliminary Concept Presentation (2/6/15)
H. Final Presentation (4/1/15)
Community Park at the new Jonesborough Senior Citizen Center Conceptual Designs

Disclamer: This drawing is conceptual and was prepared to show approximate location and arrangement of site features. It is subject to change and is not intended to replace the use of construction documents. The client should consult appropriate professionals before any construction or site work is undertaken. The Community Design Assistance Center is not responsible for the inappropriate use of this drawing.

APPENDIX A
Soil Samples

Jonesborough Senior Center Park
Soil Analysis

7.27 pH

7.85 pH

Community Park at the new Jonesborough Senior Citizen Center Conceptual Designs
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<th>Ca ppm</th>
<th>Mg ppm</th>
<th>Zn ppm</th>
<th>Mn ppm</th>
<th>Cu ppm</th>
<th>Fe ppm</th>
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**Community Park at the new Jonesborough Senior Citizen Center Conceptual Designs**

| Name      | Sample ID | LabID | CEC meq/1 % Acidity | % Base Sat | % Ca Sat | % Mg Sat | % K Sat | P Rating | K Rating | Ca Rating | Mg Rating | SS Rating | OM Rating |
|-----------|-----------|-------|---------------------|------------|----------|----------|---------|----------|----------|-----------|-----------|-----------|-----------|-----------|
| JESSUP JENMUN01 | 48302     |       | 6.5                 | 31.1       | 68.9     | 55.3     | 11.5    | 2 L+     | M        | M+        | H         |           |           |
| JESSUP JENMUN02 | 48303     |       | 11.0                | 44.2       | 55.8     | 41.9     | 8.1     | 5.7 VH   | VH       | H         | VH        |           |           |
| JESSUP JENMUN03 | 48304     |       | 5.4                 | 47.4       | 52.6     | 40.2     | 9.9     | 2.5 M+   | M        | M-        | M+        |           |           |
| JESSUP JENMUN04 | 48305     |       | 5.2                 | 55.1       | 44.9     | 35.3     | 8       | 1.5 L+   | L+       | M-        | M-        |           |           |
| JESSUP JENMUN05 | 48306     |       | 4.9                 | 53         | 47       | 36.9     | 8.2     | 1.8 L+   | L+       | M-        | M-        |           |           |
| JESSUP JENMUN06 | 48307     |       | 5.4                 | 45         | 55       | 42.5     | 10.6    | 1.8 L+   | L+       | H         | VH        |           |           |
| JESSUP JENMUN07 | 48308     |       | 6.5                 | 13.7       | 86.3     | 70.8     | 14.1    | 1.4 L+   | L+       | H         | VH        |           |           |
| JESSUP JENMUN08 | 48309     |       | 7.3                 | 0.7        | 99.3     | 73       | 17.9    | 8.4 M+   | VH       | H+        | VH        |           |           |
| JESSUP JENMUN09 | 48310     |       | 7.3                 | 24 N/A     | 100      | 84.9     | 14      | 1.1 L-   | H         | VH        | VH        |           |           |
| JESSUP JENMUN10 | 48311     |       | 15.5                | 100        | 85.2     | 13.3     | 1.4 L   | M+        | VH        | VH        |           |           |           |
| JESSUP JENSEC01 | 48312     |       | 25.6                | 100        | 90.3     | 8.3      | 1.4 L+  | H         | VH        | VH        |           |           |           |
| JESSUP JENSEC02 | 48313     |       | 18.1                | 100        | 87.2     | 9.7      | 3.1     | 1 H-     | VH        | VH        | VH        |           |           |
The accompanying Soil Test Report (and supplemental Soil Test Notes, when provided) will help you assess your plant’s need for fertilizer and lime.

The “History of Sampled Area” section restates the information you filled in on the Soil Sample Information Sheet you submitted with the soil sample.

The “Lab Test Results” section shows the relative availability of nutrients numerically and if appropriate, as a rating. The rating may be interpreted as follows: L=Low, M=Medium, H=High, VH=Very High, EH=Excessively High (soluble salt test only), DEF=Deficient, or SUFF=Sufficient, and sometimes a “+” or “-.” When soils test Low, plants almost always respond to fertilizer. When soils test Medium, plants sometimes respond to fertilizer and a moderate amount of fertilizer is typically recommended to maintain fertility. When soils test High to Very High, plants usually do not respond to fertilizer. If there is no rating for a nutrient, the adequacy of that nutrient in the soil for the plant you specified has not been determined.

The following is an explanation of the symbols and abbreviation used in the report:

**Report Symbols and Abbreviations**

- P = phosphorus
- K = potassium
- Ca = calcium
- Mg = magnesium
- Zn = zinc
- Mn = manganese
- Cu = copper
- Fe = iron
- B = boron
- SS = soluble salts
- lb/A = pounds per acre
- ppm = parts per million
- meq = milliequivalent
- g = gram
- pH = acidity
- Sat. = saturation
- N = nitrogen
- P₂O₅ = phosphate
- K₂O = potash
- % = percent
- Est-CEC = estimated cation exchange capacity
- AG = agricultural limestone (dolomitic or calcitic)

### Fertilizer Recommendation

The fertilizer recommendations may be used for the same crop for two to three years. After this time, it is advisable to retest the soil to determine if significant changes have occurred in nutrient levels. When the soil tests Very High for phosphorus or potassium and no fertilizer for these nutrients is recommended, you should retest the following year to determine if fertilizer will be needed. Due to the variability associated with sampling, fertilizer application rates may be varied by a plus or minus 10 percent.

No soil test is performed for nitrogen because this element is too mobile in the soil for laboratory results to be useful. Nitrogen fertilizer recommendations are based on the crop/plant to be grown, the previous crop, and when applicable, the soil’s yield potential. Comments on the report and other enclosed Notes, if any, will have further information regarding nitrogen.

### Lime Recommendation

If needed, a lime recommendation is given to neutralize soil acidity and should last two to three years. After that time, you should have the soil retested. The measured soil test levels of calcium and magnesium are used to determine the appropriate type of limestone to apply. If neither dolomitic nor calcitic lime is mentioned, or “Ag” type or “agricultural” limestone is stated on the report, then it does not matter which type is used. When no information on the Soil Sample Information Sheet was provided regarding the last lime application, the lab assumed you have not applied lime in the past 18 months. If this is not correct, contact your Extension agent for advice on adjusting the lime recommendation to take into consideration recent lime applications. Do not over lime! Too much lime can be as harmful as too little. For best results, apply lime, when possible, several months ahead of the crop/plant to be planted to allow time for more complete soil reaction.

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**APPENDIX B: Explanation of Soil Tests**

**Virginia Cooperative Extension**

**Explanation of Soil Tests**

Rory Maguire, Extension Nutrient Management Specialist, Virginia Tech
Steve Heckendorn, Soil Test Laboratory Manager, Virginia Tech

The accompanying Soil Test Report (and supplemental Soil Test Notes, when provided) will help you assess your plant’s need for fertilizer and lime.

The “History of Sampled Area” section restates the information you filled in on the Soil Sample Information Sheet you submitted with the soil sample.

The “Lab Test Results” section shows the relative availability of nutrients numerically and if appropriate, as a rating. The rating may be interpreted as follows: L=Low, M=Medium, H=High, VH=Very High, EH=Excessively High (soluble salt test only), DEF=Deficient, or SUFF=Sufficient, and sometimes a “+” or “-.” When soils test Low, plants almost always respond to fertilizer. When soils test Medium, plants sometimes respond to fertilizer and a moderate amount of fertilizer is typically recommended to maintain fertility. When soils test High to Very High, plants usually do not respond to fertilizer. If there is no rating for a nutrient, the adequacy of that nutrient in the soil for the plant you specified has not been determined.

The following is an explanation of the symbols and abbreviation used in the report:

**Report Symbols and Abbreviations**

- P = phosphorus
- K = potassium
- Ca = calcium
- Mg = magnesium
- Zn = zinc
- Mn = manganese
- Cu = copper
- Fe = iron
- B = boron
- SS = soluble salts
- lb/A = pounds per acre
- ppm = parts per million
- meq = milliequivalent
- g = gram
- pH = acidity
- Sat. = saturation
- N = nitrogen
- P₂O₅ = phosphate
- K₂O = potash
- % = percent
- Est-CEC = estimated cation exchange capacity
- AG = agricultural limestone (dolomitic or calcitic)

**Fertilizer Recommendation**

The fertilizer recommendations may be used for the same crop for two to three years. After this time, it is advisable to retest the soil to determine if significant changes have occurred in nutrient levels. When the soil tests Very High for phosphorus or potassium and no fertilizer for these nutrients is recommended, you should retest the following year to determine if fertilizer will be needed. Due to the variability associated with sampling, fertilizer application rates may be varied by a plus or minus 10 percent.

No soil test is performed for nitrogen because this element is too mobile in the soil for laboratory results to be useful. Nitrogen fertilizer recommendations are based on the crop/plant to be grown, the previous crop, and when applicable, the soil’s yield potential. Comments on the report and other enclosed Notes, if any, will have further information regarding nitrogen.

**Lime Recommendation**

If needed, a lime recommendation is given to neutralize soil acidity and should last two to three years. After that time, you should have the soil retested. The measured soil test levels of calcium and magnesium are used to determine the appropriate type of limestone to apply. If neither dolomitic nor calcitic lime is mentioned, or “Ag” type or “agricultural” lime is stated on the report, then it does not matter which type is used. When no information on the Soil Sample Information Sheet was provided regarding the last lime application, the lab assumed you have not applied lime in the past 18 months. If this is not correct, contact your Extension agent for advice on adjusting the lime recommendation to take into consideration recent lime applications. Do not over lime! Too much lime can be as harmful as too little. For best results, apply lime, when possible, several months ahead of the crop/plant to be planted to allow time for more complete soil reaction.
APPENDIX B: Explanation of Soil Tests

Methods and Meanings
For more detail on the lab procedures used, visit www.soiltest.vt.edu and click on “Laboratory Procedures.”

Soil pH (or soil reaction) measures the “active” acidity in the soil’s water (or hydrogen ion activity in the soil solution), which affects the availability of nutrients to plants. It is determined on a mixed suspension of 1:1, volume to volume ratio of soil material to distilled water.

Virginia soils naturally become acidic, and limestone periodically needs to be applied to neutralize some of this acidity. A slightly acid soil is where the majority of nutrients become the most available to plants, and where soil organisms that decompose organic matter and contribute to the “overall health” of soils are the most active. When a soil is strongly acid (pH < 5.0-5.5), many herbicides lose effectiveness and plant growth is limited by aluminum toxicity. When soils are overlimed and become alkaline (> 7.0), micronutrients, such as manganese and zinc, become less available to plants.

For most agronomic crops and landscaping plants, lime recommendations are provided to raise the soil pH to a slightly acid level of between 5.8 and 6.8. Blueberries and acid-loving ornamentals generally prefer a 4.5 to 5.5 pH, and an application of liming material is suggested when the soil pH drops below 5.0. For the majority of other plants, lime may be suggested before the pH gets below 6.0. This is to keep the soil pH from dropping below the ideal range, since lime is slow to react and affects only a fraction of an inch of soil per year when the lime is not incorporated into the soil. If the soil pH is above the plant’s target pH, then no lime is recommended. If the pH is well above the ideal range, then sometimes an application of sulfur is recommended to help lower the pH faster; however, most of the time, one can just let the soil pH drop on its own.

A Mehlich buffer solution is used to determine the Buffer Index to provide an indication of the soil’s total (active + reserve) acidity and ability to resist a change in pH. This buffer measurement is the major factor in determining the amount of lime to apply. The Buffer Index starts at 6.60 and goes lower as the soil’s total acidity increases and more lime is needed to raise the soil pH. A sandy soil and a clayey soil can have the same soil pH; however, the clayey soil will have greater reserve acidity (and a lower Buffer Index) as compared to the sandy soil, and the clayey soil will require a greater quantity of lime to be applied in order to raise the soil pH the same amount as the sandy soil. A reported Buffer Index of “N/A” means that it was not measured since the soil (water) pH was either neutral or alkaline and not acidic (soil pH ≥ 7.0) and therefore requires no lime.

Nutrients that are available for plant uptake are extracted from the soil with a Mehlich 1 solution using a 1:5 vol:vol soil to extractant ratio, and are then analyzed on an ICP-AES instrument. An extractable Mehlich 1 level of phosphorus from 12 to 35 pounds per acre (lb/A) is rated as medium or optimum. A medium level of potassium is from 76 to 175 lb/A. Medium levels of calcium and magnesium are 721 to 1440 and 73 to 144 lb/A, respectively. Calcium and magnesium are normally added to the soil through the application of limestone. It is rare for very high fertility levels of P, K, Ca and Mg to cause a reduction in crop yield or plant growth. Levels of micronutrients (Zn, Mn, Cu, Fe and B) are typically present in the soil at adequate levels for plants if the soil pH is in its proper range. See Soil Test Note 4, at www.soiltest.vt.edu/stnotes, for documented micronutrient deficiencies in Virginia.

Soluble Salts (S.Salts) or fertilizer salts are estimated by measuring the electrical conductivity of a 1:2, vol:vol ratio of soil material to distilled water. Injury to plants may start at a soluble salts level above 844 ppm when grown in natural soil, especially under dry conditions and to germinating seeds and seedlings. Established plants will begin to look wilted and show signs related to drought. This test is used primarily for greenhouse, nursery and home garden soils where very high application rates of fertilizer may have led to an excessive buildup of soluble salts.

Soil Organic Matter (SOM) is the percentage by weight of the soil that consist of decomposed plant and animal residues, and is estimated by using either the weight Loss-On-Ignition (LOI method) from 150° to 360°C, or a modified Walkley-Black method. Generally, the greater the organic matter level, the better the overall soil tilth or soil quality, as nutrient and water holding capacities are greater, and improved aeration and soil structure enhance root growth. The percent of organic matter in a soil can affect the application rate of some herbicides. Soil organic matter levels from 0.5% to 2.5% are ordinary for natural, well-drained Virginia soils. A soil organic matter greater than 3% would be considered very high for a cultivated field on a farm, but can be beneficial. Due to relatively large amounts of organic materials being commonly added to gardens, the soil organic matter in garden soils can be raised into the range of 5% to 10%.
The remaining values that are reported under the “Lab Test Results” section are calculated from the previous measured values and are of little use to most growers.

Estimated Cation Exchange Capacity (Est-CEC) gives an indication of a soil’s ability to hold some nutrients against leaching. Natural soils in Virginia usually range in CEC from 1 to 12 meq/100g. A very sandy soil will normally have a CEC of 1 to 3 meq/100g. The CEC value will increase as the amount of clay and organic matter in the soil increases. This reported CEC is an estimation because it is calculated by summing the Mehlich 1 extractable cations (Ca + Mg + K), and the acidity estimated from the Buffer Index and converting to units commonly used for CEC. This is also an Effective CEC since it is the CEC at the current soil pH. This value can be erroneously high when the soil pH or soluble salts level is high.

The percent Acidity is a ratio of the amount of acid-generating cations (as measured by the Buffer Index) that occupy soil cation exchange sites to the total CEC sites. The higher this percentage, the higher the amount of reserve acidity in the soil, and the higher the amount of acidity there will be in the soil solution and the lower the soil pH will be. A reported Acidity% of “N/A” means that a buffer index was not determined, and the acidity is probably less than 1 meq/100g and/or 5%, and the soil pH is alkaline (greater than 7.0).

The percent Base Saturation is the ratio of the quantity of non-acid generating cations (i.e., the exchangeable bases, Ca, Mg, and K) that occupy the cation exchange (CEC) sites.

The percent Ca, Mg, or K Saturation refers to the relative number of CEC sites that are occupied by that particular nutrient and is a way of evaluating for any gross nutrient imbalance.

Additional Information
For questions and more information, contact your local Virginia Cooperative Extension (VCE) office or go to www.ext.vt.edu. Contact information for your local Extension office appears on the upper left of your soil test report.

**Conversion Factors**
(Some Values are Approximate)

- 1 acre = 43,560 square feet
- 1 pound of 5-10-5, 5-10-10 or 10-10-10 fertilizer = 2 cups
- 1 pound of ground limestone or ground dolomitic limestone = 1.5 cups
- 1 pound of aluminum sulfate or magnesium sulfate = 2.5 cups
- 1 pound of sulfur = 3.3 cups
- 1 quart = 2 pints = 4 cups
- 1 pint = 2 cups = 32 tablespoons
- 1 tablespoon = 3 teaspoons
- 1 bushel = 35.24 liters = 1.25 cubic feet

Pounds per 100 square feet x 0.54 = lbs per cubic yard
100 square feet = 5 feet x 20 feet, 10 feet x 10 feet, or 2 feet x 50 feet
1,000 square feet = 50 feet x 20 feet, 10 feet x 100 feet, or 25 feet x 40 feet
Pounds per 100 square feet x 436 = pounds per acre
Pounds per 1,000 square feet x 43.6 = pounds per acre
Pounds per acre x 0.0023 = pounds per 100 square feet
Pounds per acre x 0.023 = pounds per 1,000 square feet
APPENDIX C: Creating Raised Bed Planters

**Special considerations for tabletop gardens**
- Sizes can be adjusted to accommodate the reach of an individual gardener or a group of gardeners, as well as the space available.
- Recommended width is 36 to 48 inches.
- Suggested height is 30 to 33 inches to top of bed.
- Hose plants need at least 8 to 12 inches of soil for good rooting and growth.
- Planting bed depth should allow for 3 to 2 inches of mulch on top of soil.
- Drilling 1/2-inch holes every 6 inches across the base promotes good drainage.
- Lining the planting bed bottom with a landscaping fabric before adding the soil mix allows for the water to drain through the holes.
- Secure the fastenings to the ground with cement for best stabilization.

For more information:
Check these additional publications in the Therapeutic Gardening Series:
- A Factor in Choosing Healthcare Facilities, RG 108
- Briefs for Healthcare Facilities, RG 109
- Container Vegetable Gardening, PM 977B
- Gardening Tips for Older Adults, RG 107
- Resources, RG 116

Check these Web sites:
- ISU Extension Distribution Center
  - www.extension.iastate.edu/store
- ISU Horticulture
  - www.gardensandgardener.extension.iastate.edu
- Reiman Gardens
  - www.reimangardens.iastate.edu
- The Iowa Horticulturist
  - www.iowahort.org
- Iowa Master Gardeners
  - www.mastergardeners.iastate.edu

If you want to learn more about horticulture through training and volunteer work, ask your ISU Extension office for information about the ISU Extension Master Gardener program.
Prepared by Cindy Harris, extension horticulturist; Ann Marie Vinder/Zeitlen, extension horticulturist; Susan Erickson, PLACE Program Coordinator; and Dan Nelson, extension communication specialist. Illustrations by Jane Lehman, extension graphic designer.

These dimensions are typical for a tabletop raised bed planter.

**Raised beds and planters make gardening accessible for gardeners of all abilities.** Raised beds allow much of the activity to be done from a seated position on the ground, a permanent built-in bridge, or a portable chair, wheelchair, bench, or scooter. Tabletop gardens also help the visually impaired by bringing the garden closer to eye level.

**Considerations**
Many types of raised bed planters are possible. The type you choose should be based on the abilities and interest of the gardener(s) who will be using them, and on the opportunities provided by your site.

Use the following guidelines to start the planning process.

**Site**
- Raised bed planters are usually placed in sunny locations because most vegetables and flowers require at least six hours of full sun for peak performance.
- Choose a level site to simplify the building process.
- A north-south orientation for the planter is best for low-growing crops.

**Water**
- A water supply with a lightweight hose should be easily accessible.
- Automatic or trickle irrigation systems may be worth the investment for permanent planters.

**Size**
- Raised bed for a wheelchair user should be about 2 to 5 feet high.
- Forward reach from a wheelchair, without bending, is about 30 inches.
- Beds with access on just one side should be no wider than 2 to 3 feet.
- Beds with pathways all around can be 4 to 5 feet wide depending on the gardener’s reach and upper arm strength.

**Possible vegetable cultivars for raised bed gardens**

<table>
<thead>
<tr>
<th>Vegetables</th>
<th>Varieties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beets</td>
<td>Ruby Queen, Detroit Dark Red</td>
</tr>
<tr>
<td>Carrots</td>
<td>Little Finger, Danvers Half Long, Nantes Half Long</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>Salad Bush, Bush Champion, Specklemaster</td>
</tr>
<tr>
<td>Eggplants</td>
<td>Dusky</td>
</tr>
<tr>
<td>Green beans</td>
<td>Topcrop, Tendercrop, Derby</td>
</tr>
<tr>
<td>Lettuce</td>
<td>Green Ice, Salad Bowl, Red Sails, Black Seeded Simpson, Buttercrunch, Oakleaf</td>
</tr>
<tr>
<td>Parsley</td>
<td>Dark Moss Curled, Paramount</td>
</tr>
<tr>
<td>Pepper</td>
<td>Lady Bell, Cayenne, Grapex, New Ace, Bell Red, Bell Chili ( użyteczne)</td>
</tr>
<tr>
<td>Radishes</td>
<td>Champion, Comet, Sparkle, White Icicle, Early Scarlet Globe</td>
</tr>
<tr>
<td>Spinach</td>
<td>American Viking, Long Standing, Bloomsdale, Melody</td>
</tr>
<tr>
<td>Summer squash</td>
<td>Pica, Pica (yellow crookneck)</td>
</tr>
<tr>
<td>Swiss chard</td>
<td>Fernbush Giant (white ribbed), Laccolith (green ribbed), Bright Lights</td>
</tr>
</tbody>
</table>

**Pathways**
- Level paths increase maneuverability and safety.
- Allow sufficient width between beds to accommodate gardeners’ mobility.
- Paved access to the garden area often increases site usage.

**Materials**
- Effective raised beds can be made using 1 x 10-inch or 2 x 12-inch pressure treated lumber to build simple square or rectangular boxes over soil.
- Cinder blocks, landscape edging blocks, stone, brick, and poured concrete are other choices.

**Soil**
- Use a mixture of equal parts of loam, peat moss, garden loam, and sharp sand.
- Test the soil mixture for nutrients and pH. Add lime or sulfur as needed to bring the pH to about 6.0 to 6.5.
- Incorporate a slow-release fertilizer if indicated by the soil test.
- When filling the planter bed, remember to allow space for 3 to 2 inches of mulch on top of the soil.

**Plants**
- Annual flowers and vegetables are best for table top gardens and raised beds.
- Vegetable cultivars with compact growth habits also work well in raised beds.

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University Extension

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APPENDIX D: Rubberized Asphalt Path Details

NOTE:
1. CONCRETE
2. POURED-IN-PLACE SBR BASE LAYER (DEPTH VARIES PER MANUFACTURER RECOMMENDATION)
3. POURED IN PLACE WEAR COURSE, (2% MAX SLOPE). WEAR COURSE DEPTH VARIES BASED ON PRODUCT SOLD
4. 4" MIN. SUB-BASE (CONCRETE, ASPHALT, OR 95% COMPACTED AGGREGATE INSTALLED IN 2-2" LIFTS), SLOPE 2% MAX
5. EXISTING EARTH, 95% COMPACTED SUB-GRADE, SLOPE 2%
6. 1.5" RECESS
7. 3" DEEP X 3" WIDE NOTCH FORMED WHEN POURED

NOTE:
- Rubberized asphalt is suggested. Due to application
- VARIOUS DUE TO VARIOUS LOCAL CODES, CONSTRUCTION PRACTICES AND REQUIREMENTS, ALL DETAILS SHALL BE CONSTRUCTED IN ACCORDANCE WITH SUCH LOCAL CODES, CONSTRUCTION PRACTICES AND REQUIREMENTS REGARDLESS OF DETAIL CONSTRUCTION SHOWN IN DRAWING. RUBBERWAY, INC. RESERVES THE RIGHT TO CHANGE SPECIFICATIONS SHOWN WITHOUT NOTICE. ALL CHANGES TO SPECIFICATIONS CAN ONLY BE APPROVED BY RUBBERWAY, INC.

DRAWN BY: JAB
APPROVED BY: KA
DATE: 1/23/15

SHEET NAME: RUBBERWAY CONCRETE BORDER OR WALKWAY (NEW CONSTRUCTION)
SHEET: DETAIL NO. 9
APPROVED BY: KA DRAWN BY: JAB DATE: 1/23/15

Rubberway, Inc.
4000 Barranca Pkwy,
Ste 250
Irvine, CA 92604
Phone: 877.288.0045
rubberway.com

NOTE:
- ALL INFORMATION SHOWN IS SUGGESTED. DUE TO APPLICATION VARIANCES, IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO PROVIDE ALL INFORMATION REQUIRED TO SUIT LOCAL BUILDING CODES AND REGULATIONS. THIS DETAIL IS FOR REPRESENTATIVE PURPOSES ONLY AND SHOULD NOT BE SOLELY USED FOR CONSTRUCTION PURPOSES UNLESS IT HAS BEEN CERTIFIED AND SEALEDBY A QUALIFIED ENGINEER.

Rubberway, Inc.
4000 Barranca Pkwy,
Ste 250
Irvine, CA 92604
Phone: 877.288.0045
rubberway.com

NOTE:
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DRAWN BY: JAB
APPROVED BY: KA
DATE: 2/6/15

SHEET NAME: RUBBERWAY SOFT WALK TRAIL PERVERSIVE PAVEMENT OVER TREE ROOT ZONE
SHEET: DETAIL NO. 2
APPROVED BY: KA DRAWN BY: JAB DATE: 2/6/15

Rubberway, Inc.
4000 Barranca Pkwy,
Ste 250
Irvine, CA 92604
Phone: 877.288.0045
rubberway.com

NOTE:
- ALL INFORMATION SHOWN IS SUGGESTED. DUE TO APPLICATION VARIANCES, IT IS THE RESPONSIBILITY OF THE ENGINEER OF RECORD TO PROVIDE ALL INFORMATION REQUIRED TO SUIT LOCAL BUILDING CODES AND REGULATIONS. THIS DETAIL IS FOR REPRESENTATIVE PURPOSES ONLY AND SHOULD NOT BE SOLELY USED FOR CONSTRUCTION PURPOSES UNLESS IT HAS BEEN CERTIFIED AND SEALED BY A QUALIFIED ENGINEER.

DRAWN BY: JAB
APPROVED BY: KA
DATE: 2/6/15

SHEET NAME: RUBBERWAY LOGO.jpg
APPENDIX E: Survey

1. What age group best describes you?
   50-65
   65-80
   80 +

2. How often do you visit your local parks?
   Often
   Once and a while
   Rarely
   Never

3. What amenities would you like to see in a future community park? (Please indicate which elements you WOULD like to see)
   Loop paved trails
   Soft surface (dirt) trails
   Covered structures such as a gazebo or pavilion
   Grassy areas
   Picnic areas
   Seating areas
   Shuffle board courts
   Horse shoe pits
   Corn hole
   Water fountain
   Playground
   Fitness areas
   Performance area
   Basketball court
   Tennis court
   Restrooms
   Raised vegetable, flower, herb garden beds maintained by Senior Citizens
   Area for outdoor educational classes such as plant class, birding, or fitness class
   Gardens such as reflection or meditation garden

4. What other amenities would you like to see in a future community park? (Please write in any amenities that aren’t mentioned above.)

5. Do you foresee yourself using a park associated with the new Senior Citizens Center?

6. Do you foresee yourself using this park with young children? If so, what type of activities would you like to have?
APPENDIX F: Survey Results

Community Design Assistance Center
Summary of Survey Data Collected for Community Park in Jonesborough, TN
Jonesborough, TN

General Information:
Total Responses – 154

Question 1 – How often do you visit Jonesborough Parks?
A. Never 18 respondents (12%)
B. Rarely (Once a year) 45 respondents (29%)
C. Sometimes (Once a month) 55 respondents (36%)
D. Often (Once or more a week) 36 respondents (23%)

Question 2 – If rarely or never visit local parks, why?
TOP ANSWERS INCLUDE:
- Didn’t know they existed / don’t know where they are
- Don’t have time / too far away
- Trouble getting around / disabled
- Difficult to access / not enough parking
- Not enough things to do for children
- Too many kids

Question 3 – What other parks (anywhere) have you visited that you really liked? Why?
TOP ANSWERS INCLUDE:
- Bays Mountain (Kingsport)
  o Hiking, picnics, paved paths, animal friendly
- Davy Crockett
  o Ability to walk, fish, swim, picnic, and play
- Erwin
  o Good areas for children
- Walking trail
- Hungry Mother Park
  o Bicycling
- Johnson City
  o Good parking, nice scenery, walking areas, variety of playground equipment, and water features
- Persimmon Ridge (Jonesborough)
- Warriors Path State Park (Kingsport)
  o Easy access and good walking areas
- Willow Springs
APPENDIX F: Survey Results

- Walking paths and views (scenery)
- Winged Deer
- Fishing, walking path in the woods

Question 4 – Do you foresee yourself using this park with young children including grandchildren?

A. Yes 66 respondents (44%)
B. No 85 respondents (56%)

Question 5 – If yes, please describe the activities you might do with them?

TOP ANSWERS INCLUDE:
- Picnic
- Sand box
- Playground / play equipment
- Basketball
- Swings
- Walking (trails)
- Walk the dog
- Splash pad

Question 6 – If you answered yes to Question 5, what youth age group would you most like to see the park accommodate? (Multiple selection)

OUT OF 68 RESPONDENTS

A. 2 to 4 years old 41 respondents (60%)
B. 5 to 7 years old 49 respondents (72%)
C. 8 to 12 years old 50 respondents (74%)
D. 13 to 18 years old 27 respondents (40%)

Question 7 – How far do you live from the new Senior’s Center Building (Located on the corner of East Main Street and Longview Drive)

OUT OF 154 RESPONDENTS

A. Less than 1/4 Mile 26 respondents (17%)
B. Between 1/4 – 1/2 Mile 10 respondents (7%)
C. Between 1/2 – 1 Mile 16 respondents (10%)
D. Over 1 Mile 102 respondents (66%)
APPENDIX F: Survey Results

Question 8 – Which of the following elements would you like to see in this park?

OUT OF 155 RESPONDENTS

<table>
<thead>
<tr>
<th>Element</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Restrooms with flush toilets</td>
<td>128</td>
</tr>
<tr>
<td>B. Plants that attract birds and butterflies</td>
<td>104</td>
</tr>
<tr>
<td>C. Benches along the trails</td>
<td>104</td>
</tr>
<tr>
<td>D. Paved trails</td>
<td>100</td>
</tr>
<tr>
<td>E. Picnic benches</td>
<td>95</td>
</tr>
<tr>
<td>F. Trails that form loops</td>
<td>94</td>
</tr>
<tr>
<td>G. Water fountain</td>
<td>81</td>
</tr>
<tr>
<td>H. Lawn areas</td>
<td>79</td>
</tr>
<tr>
<td>I. Areas for outdoor educational classes</td>
<td>64</td>
</tr>
<tr>
<td>J. Pavilions</td>
<td>63</td>
</tr>
<tr>
<td>K. Playground</td>
<td>56</td>
</tr>
<tr>
<td>L. Performance area (amphitheater)</td>
<td>55</td>
</tr>
<tr>
<td>M. Soft surface trails</td>
<td>50</td>
</tr>
<tr>
<td>N. Gazebos</td>
<td>50</td>
</tr>
<tr>
<td>O. Meditation garden</td>
<td>48</td>
</tr>
<tr>
<td>P. Grills</td>
<td>45</td>
</tr>
<tr>
<td>Q. Fitness areas</td>
<td>42</td>
</tr>
<tr>
<td>R. Raised vegetable, flower, herb garden beds</td>
<td>37</td>
</tr>
<tr>
<td>S. Horseshoe pits</td>
<td>32</td>
</tr>
<tr>
<td>T. Other (please describe)*</td>
<td>26</td>
</tr>
<tr>
<td>U. Shuffleboard courts</td>
<td>24</td>
</tr>
<tr>
<td>V. Tennis courts</td>
<td>22</td>
</tr>
<tr>
<td>W. Basketball courts</td>
<td>20</td>
</tr>
<tr>
<td>X. Corn hole</td>
<td>19</td>
</tr>
<tr>
<td>Y. Restrooms with composting toilets</td>
<td>12</td>
</tr>
<tr>
<td><strong>OTHER - TOP ANSWERS INCLUDE</strong></td>
<td></td>
</tr>
<tr>
<td>- Bike trails</td>
<td></td>
</tr>
<tr>
<td>- Dog friendly area</td>
<td></td>
</tr>
<tr>
<td>- Sidewalks connecting to downtown</td>
<td></td>
</tr>
<tr>
<td>- Labyrinth</td>
<td></td>
</tr>
<tr>
<td>- Lots of trees for shade (with seasonal interest)</td>
<td></td>
</tr>
<tr>
<td>- Non-invasive plants</td>
<td></td>
</tr>
<tr>
<td>- Splash pad / sprinklers</td>
<td></td>
</tr>
<tr>
<td>- Tennis backboard</td>
<td></td>
</tr>
</tbody>
</table>

Question 9 – How often would you use this park if it had some or all the elements you requested above?

OUT OF 143 RESPONDENTS

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Never</td>
<td>3</td>
</tr>
<tr>
<td>B. Rarely (Once a Year)</td>
<td>4</td>
</tr>
</tbody>
</table>
APPENDIX F: Survey Results

C. Sometimes (Once a Month) 49 respondents (34%)
D. Often (Once or more a Week) 87 respondents (61%)

Question 10 – Please fill in the number of people residing in your household that fit into the following age range and gender?

OUT OF 104

<table>
<thead>
<tr>
<th>Age Range and Gender</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Ages 10 and Under / MALE</td>
<td>10 respondents (10%)</td>
</tr>
<tr>
<td>B. Ages 10 and Under / FEMALE</td>
<td>3 respondents (3%)</td>
</tr>
<tr>
<td>C. Ages 11 – 21 / MALE</td>
<td>6 respondents (6%)</td>
</tr>
<tr>
<td>D. Ages 11 – 21 / FEMALE</td>
<td>4 respondents (4%)</td>
</tr>
<tr>
<td>E. Ages 22 – 45 / MALE</td>
<td>4 respondents (4%)</td>
</tr>
<tr>
<td>F. Ages 22 – 45 / FEMALE</td>
<td>3 respondents (3%)</td>
</tr>
<tr>
<td>G. Ages 46 – 65 / MALE</td>
<td>12 respondents (12%)</td>
</tr>
<tr>
<td>H. Ages 46 – 65 / FEMALE</td>
<td>7 respondents (7%)</td>
</tr>
<tr>
<td>I. Ages 65 and Over / MALE</td>
<td>20 respondents (19%)</td>
</tr>
<tr>
<td>J. Ages 65 and Over / FEMALE</td>
<td>35 respondents (34%)</td>
</tr>
</tbody>
</table>
APPENDIX G. Preliminary Concept Presentation 2/6/15

Community Park Design at New Senior Center
Jonesborough, TN

Agenda

1. Location
2. Existing Conditions
3. Survey Results
4. Concept 1
5. Concept 2
APPENDIX G. Preliminary Concept Presentation 2/6/15

Project Location

Map Indicating Location of New Senior Citizen Center in Relation to Downtown Jonesborough

Existing Conditions

A - Looking towards existing City Garage
B - Entrance to existing City Garage
C - Intersection at Lincoln Avenue
D - Entrance at Lincoln Avenue
E - Entrance at East Main and Longview Drive
APPENDIX G. Preliminary Concept Presentation 2/6/15

Survey Results

Survey Results: Method

SURVEY METHOD
ALL RESPONDENTS (150)

- Paper Survey (39)
- Online Survey (111)
APPENDIX G. Preliminary Concept Presentation 2/6/15

Survey Results: Proximity to Site
All Respondents - 149

PROXIMITY OF RESPONDENTS TO SITE
ALL RESPONDENTS (149)

- 68% Respondents <1 Mile from Site (48)
- 32% Respondents >1 Mile from Site (101)

Survey Results: Frequency of Visits

HOW OFTEN DO YOU VISIT JONESBOROUGH PARKS?

- 30% Never
- 34% Rarely
- 12% Sometimes
- 24% Often

RESIDENTS <1 MILE FROM SITE (48)
- 36% Never
- 29% Rarely
- 17% Sometimes
- 16% Often

RESIDENTS >1 MILE FROM SITE (101)
- 38% Never
- 28% Rarely
- 22% Sometimes
- 12% Often
Survey Results: Children

All Respondents - 150

DO YOU FORSEE YOURSELF USING THIS PARK WITH YOUNG CHILDREN INCLUDING GRANDCHILDREN?

ALL RESPONDENTS (150)

- Yes: 56%
- No: 44%

RESIDENTS <1 MILE FROM SITE (49)
- Yes: 63%
- No: 37%

RESIDENTS >1 MILE FROM SITE (101)
- Yes: 41%
- No: 59%

Survey Results: Park Elements

PARK ELEMENTS (%) - ALL RESPONDENTS (150)

- Restroom with Flush Toilets
- Plants that Attract Birds
- Benches Along Trails
- Paved Trails
- Picnic Benches
- Trails that Form Loops
- Lawn Areas
- Water Fountain
- Areas for Outdoor Educational Classes
- Playground
- Pavilions
- Performance Area
- Gazebos
- Meditation Garden
- Soft Surface Trails
- Grills
- Fitness Area
- Raised Vegetable Gardens
- Horseshoe Pits
- Shuffleboard Courts
- Basketball Court
- Tennis Court
- Cornhole
- Restrooms with Composting Toilets
APPENDIX G. Preliminary Concept Presentation 2/6/15

Design Concepts

Concept 1
APPENDIX G. Preliminary Concept Presentation 2/6/15

Entries

1. Park Overlook with Park Entrance Sign
   - Visual entry into the park
   - Seat walls
   - Flowering trees and native grasses

2. Main Park Entrance
   - Trellis swings and seat walls

Amphitheater

3. Covered amphitheater with concrete terraced seating and a lawn area for placing chairs and blankets during events
APPENDIX G. Preliminary Concept Presentation 2/6/15

Garden Terraces

Stone Terraced Butterfly and Bird Garden with bird boxes

Benches or rocking chairs on stone dust

ADA-compliant compacted gravel

Central Lawn

Sculpture or statue of cultural significance can be placed in the center of the lawn

This feature serves as a focal point throughout the entire park and allows seniors to easily orientate themselves when using any of the trails or gathering area

Natural play features and benches will also be featured around the adventure trail
Natural Play Areas

- Grass Berms
- Play Areas

Community Garden

- Raised vegetable and flower beds surrounded by ADA compliant compacted gravel
- Shed with a potting table
- Compost bins
- Seating under an arbor
- Bench swing under an arbor overlooking the garden and out onto the central lawn

Locator Map
APPENDIX G. Preliminary Concept Presentation 2/6/15

Outdoor Game Area

- Two bocce ball courts
- Horseshoes
- Rocking chairs and additional seating with shade umbrellas
- Chalk wall along the south side of the pavilion where children can also draw and play games

Picnic Pavilion

- Pavilion with picnic tables, two restrooms and a drinking fountain
- On the north side of the pavilion are four grills with bistro style tables and chairs
APPENDIX G. Preliminary Concept Presentation 2/6/15

Meditation Garden & Nature Trails

Woodland area featuring a meditation garden with a bubbler fountain, intimate seating, and shade loving shrubs and perennials. This garden will also have a view onto the central lawn.

The nature trail is a five-foot ADA accessible path composed of rubberized asphalt. This trail is both passive and tranquil, meandering through the woodland garden.

Site Sections
Each of the following sections is meant to illustrate the general topography across the site and some of the proposed design elements. Of particular note are two different ideas for a focal point sculpture at the center of the main lawn area.

Section A-A
3:1 Vertical Exaggeration

Section B-B
3:1 Vertical Exaggeration

Concept 2
APPENDIX G. Preliminary Concept Presentation 2/6/15

Park Entrance

1. Visual entry to the park, highlighted with an overlook, flowering trees, native grasses, and the park sign.

Little Free Library

2. One has an option to take a set of steps straight down into the park or take a long ramp along its eastern edge ending at the oval lawn.

Overlook

The second park entrance involves a double-railed ramp down to the park with a rocking chair overlook at the beginning.
APPENDIX G. Preliminary Concept Presentation 2/6/15

Picnic Pavilion

Picnic pavilion with picnic tables, grills, two restrooms, and a drinking fountain

Just to the south of the pavilion is a raised bed garden surrounded by a picket fence and stone retaining wall. This area also includes a maintenance shed, potting table, and compost bins.

Game Area

Game area with horseshoes, shuffleboard and a boccie ball

Plenty of seating options around the games for spectating.
APPENDIX G. Preliminary Concept Presentation 2/6/15

Forested Meditation Garden

Under a native canopy will be looping paths with areas extending off of it.

These areas will include a meditation garden with benches looking out to a creek bed fountain along a slope surrounded by stone, native ground covers and shrubs.

Another area will include bench swings.

Pocket Spaces

Secondary lawn with a picnic table and grill.

Secluded lawn / outdoor classroom.

Rain gardens with plants to attract butterflies and wild birds.
Oval Lawn

Main lawn surrounded by a 10 ft path and seating options

Birdhouse Garden

In this area, birdhouses and feeders will be placed among benches and planted trees to become a tranquil area for relaxation and the enjoyment of nature.

Potential alternatives include fitness equipment area, lounge chairs, or a hammock grove
APPENDIX G. Preliminary Concept Presentation 2/6/15

Bench Swing Gazebo

The bench swing structure is oriented to a view of the wildflower meadow and the oval lawn.

This axis allows seniors at the rear of the park to have a clear view back to the park entrance.

Natural Play Area

Surrounded by a path and benches.

Sandbox, swings, bridge structure and slide off of a berm.

Rubber mulch or rubberized asphalt play surface.
Each of the following sections is meant to illustrate the general topography across the site and some of the proposed design elements.
APPENDIX H. Final Concept Presentation 4/1/15

Community Park Design at New Senior Center
Jonesborough, TN

Agenda

1 Location
2 Existing Conditions
3 Conceptual Park Master Plan
APPENDIX H. Final Concept Presentation 4/1/15

Project Location

Map Indicating Location of New Senior Citizen Center in Relation to Downtown Jonesborough

Existing Conditions

A - Looking towards existing City Garage
B - Entrance to existing City Garage
C - Intersection at Lincoln Avenue
D - Entrance at Lincoln Avenue
E - Entrance at East Main and Longview Drive
APPENDIX H. Final Concept Presentation 4/1/15

**Entry**

- Park Overlook with Park Entrance Sign
  - Visual entry into the park
  - Rocking chairs
  - Flowering trees and native grasses
  - Little Free Library
  - ADA Entrance Ramp

**Amphitheater**

- Covered amphitheater with concrete terraced seating and a lawn area for placing chairs and blankets during events
APPENDIX H. Final Concept Presentation 4/1/15

Garden Terraces

Stone Terraced Butterfly and Bird Garden with bird boxes

Benches or rocking chairs on stone dust

ADA-compliant compacted decorative gravel

Central Lawn

Sculpture or statue of cultural significance can be placed in the center of the lawn

This feature serves as a focal point throughout the entire park and allows seniors to easily orientate themselves when using any of the trails or gathering areas

The surrounding trail will be 9 ft. in width to allow vehicle access throughout the park
APPENDIX H. Final Concept Presentation 4/1/15

**Community Garden**

- Raised vegetable and flower beds surrounded by ADA compliant compacted decorative gravel
- Shed with lockers, restrooms and a potting Table
- Compost bins
- Seating under an arbor
- Bench swing under an arbor overlooking the garden and out onto the central lawn

**Bench Swing Gazebo**

- On a path leading up from the community garden area will be a bench swing gazebo set amongst lush plantings and under the tree canopy
APPENDIX H. Final Concept Presentation 4/1/15

Outdoor Game Area

Three Shuffleboard Courts
Two Bocce ball Courts
Horseshoes
Rocking chairs and additional seating with shade umbrellas

Picnic Pavilion

Pavilion with picnic tables, two restrooms and a drinking fountain
On the north side of the pavilion are three grills with bistro style tables and chairs
APPENDIX H. Final Concept Presentation 4/1/15

Nature Trails & Play Area

Play areas for children are set amongst a woodland area of trees and shade loving shrubs and perennials.

The play area will feature a berm with slide and climbing features, sandbox, stepping logs and benches

Rubber mulch or rubberized asphalt play surface

Intergenerational Swings

Intergenerational Swing Arrangement including:

- Bench Swings with Back Support
- Toddler Swings
- Playground Swings

Jonesborough, TN: North Lincoln Ave. Community Park
APPENDIX H. Final Concept Presentation 4/1/15

Meditation Garden

At the far end of the park off of the nature trail will be a meditation garden under a native tree canopy. The area will include benches surrounding a bubbler fountain. A second fountain designed to look like a natural creek will flow along the path. The creek bed fountain will be surrounded by stone, native ground covers and shrubs.

Site Sections
Each of the following sections is meant to illustrate the general topography across the site and some of the proposed design elements. Of particular note are two different ideas for a focal point sculpture at the center of the main lawn area.

Park Overlook
Community Garden

Meditation Garden