Suitable Site Selection for Economic Development
The question...

Which parcels are most suitable for use as industrial lands?

Lowndes County has approx. 48,000 parcels
Ideally...

- Paved Arterial Streets
- No Wetlands
- Adequate Soils
- Nearby Railroad
- Utilities Present
The Technical Target...

Parcel 0102-23

Transportation Score: 80
Wetlands Score: 72
Soils Score: 54
Rail Score: 90
Utilities Score: 87

Total Score: 393

Individual category scores and a cumulative score for all 48,000+ parcels
What’s it really worth?

Weighting applied to wetlands (total area) and soils (type).

Example: for a 20 acre parcel, there are 5 acres of low value soils and 15 of high value soils. For another 20 acre parcel, there may be 15 acres of low value soils and only 5 of the best soils (the exact opposite).

A total score is not enough. Unless the total acreage of each soil category is used to calculate the overall parcel score, both parcels would both have the same overall soil rating.

Example: transportation classes and scores

- dirt, local roads = 1
- dirt minor collector = 17
- dirt major collector = 34
- paved minor collector = 51
- paved arterials = 82

- interstates = 100

Chris Strom
Construction begins...

Using ArcGIS Model Builder software, analysis models were built for every category of analysis.
A Close-Up of the Transportation Model:

1 – start with roads layer
2 – select ONLY dirt roads and build buffer around them
3 – select parcels that intersect those buffers
4 – calculate score
5 – repeat for every road type
OVER AND OVER AND OVER AGAIN...

Transportation

Soils

Railroad

Utilities

Wetlands
After transportation analysis:

<table>
<thead>
<tr>
<th>Transportation classes and scores</th>
<th>Total percentage of all parcels within classifications:</th>
</tr>
</thead>
<tbody>
<tr>
<td>dirt, local roads = 1</td>
<td>6 %</td>
</tr>
<tr>
<td>paved local roads = 17</td>
<td></td>
</tr>
<tr>
<td>dirt minor collector = 17</td>
<td>combined 56 %</td>
</tr>
<tr>
<td>dirt major collector = 34</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>paved minor collector = 51</td>
<td>11 %</td>
</tr>
<tr>
<td>paved major collector = 65</td>
<td>7 %</td>
</tr>
<tr>
<td>paved arterials = 82</td>
<td>17 %</td>
</tr>
<tr>
<td>interstates = 100</td>
<td>2 %</td>
</tr>
<tr>
<td>not within .10 miles of any road</td>
<td>1.5 %</td>
</tr>
</tbody>
</table>
After wetlands analysis:

Parcel Wetland percentages

Land area percentage breaks and scores

- > 90% of land area within wetlands = 1
- < 90% and >75% of land area within wetlands = 17
- <75 and >50% of land area within wetlands = 37
- <50 and >25% of land area within wetlands = 65
- <25 and >10% of land area within wetlands = 85
- <10 and >0% of land area within wetlands = 90
- 0% of land area within wetlands = 100

Total percentage of all parcels within each classification:

- < 1%
- <1%
- 2%
- 4%
- 4%
- 4%
- 85% (a large portion of these are within urban areas)
After Soils analysis:

Parcel
Soil
Scores
### Access to Utilities

Proximity to either utility and assigned score:

<table>
<thead>
<tr>
<th>Proximity</th>
<th>Assigned Score</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 1/2 mile</td>
<td>50</td>
<td>24%</td>
</tr>
<tr>
<td>&lt; 1/2 mile and &gt; 1000’</td>
<td>75</td>
<td>7%</td>
</tr>
<tr>
<td>&lt; 1000’ and &gt; 200’ mile</td>
<td>88</td>
<td>9%</td>
</tr>
<tr>
<td>&lt; 200’</td>
<td>100</td>
<td>60%</td>
</tr>
</tbody>
</table>

### Access to rail

Proximity to Railroad and assigned score:

<table>
<thead>
<tr>
<th>Proximity</th>
<th>Assigned Score</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 1 mile</td>
<td>50</td>
<td>34%</td>
</tr>
<tr>
<td>&lt; 1 mile and &gt; ¾ mile</td>
<td>60</td>
<td>11%</td>
</tr>
<tr>
<td>&lt;3/4 mile and &gt;1/2 mile</td>
<td>70</td>
<td>14%</td>
</tr>
<tr>
<td>&lt;1/2 mile and &gt;1/4 mile</td>
<td>80</td>
<td>18%</td>
</tr>
<tr>
<td>&lt;1/4 mile</td>
<td>90</td>
<td>23%</td>
</tr>
</tbody>
</table>
To sum it up..

Highest scores equal the best overall characteristics for development

~ 352 = minimum desirable score based on visual inspection
Decisions, Decisions...

• Delivered booklets of TOP 40, 20, and 10 scoring parcels

• Delivered an interactive web application with all data layers and scoring details for each parcel.
Parcel Id: 29399
Overall Score: 414
Owner: James Littleton Spivey, III
Total Acres: 133
Parcel Id: 29399
Nearest Railroad: Adjacent
Transportation Access: Paved Arterial
Nearest Utility: Adjacent
Zoning Class: R-A
Land Area in Wetlands: 15%
Parcel Id: 29399
Soil Scoring (1-100): 57
Using GIS:

• Documented, reproducible decisions

• Flexibility in the way we value parcel characteristics

• Analysis tool that can be easily shared with other GIS users
Final Four Evaluation

Tract One

Tract Two

Tract Three

Tract Four

Acreage:

Utilities: (onsite, adjacent, or distance)

Owner’s Price:

Per Acre Price:

Per Usable Acre Price: (less wetland or easements)

Committee Recommendation:

Notes: (special conditions by owner or possible issues with site)
Westside Tract
Successful Conclusion

Both parks are in the process of being Engineered and Developed.