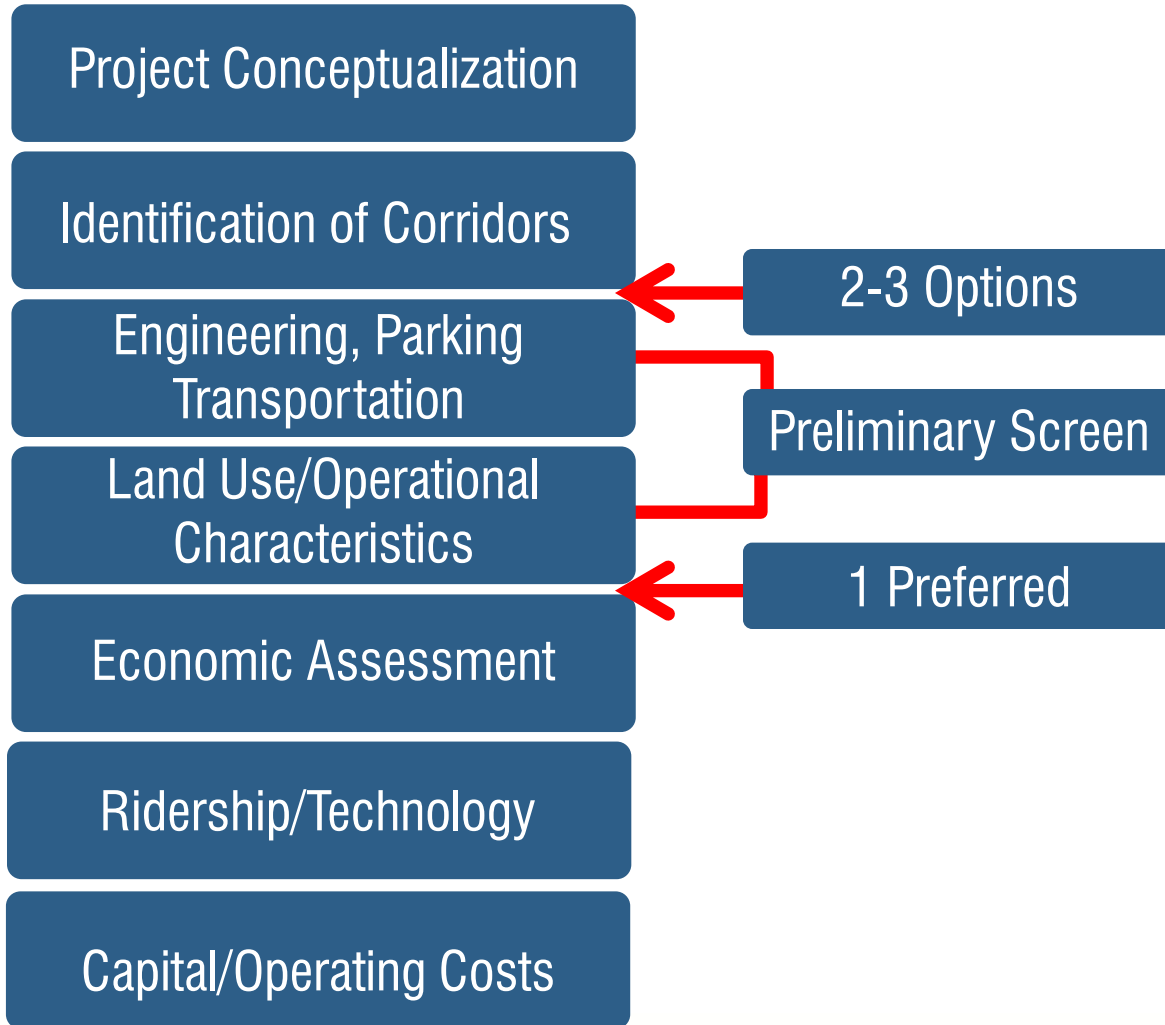


# **Project Scope/ Schedule**

# Project Goals

Legislative ID# 130722D





# Project Schedule

Legislative ID# 130722D

Gainesville Streetcar Study: Project Schedule	2013						2014
	July	August	September	October	November	December	January
<b>Task 1.0: Project Conceptualization</b>							
1.0 Assessment of Recent Planning Efforts							
1.2 - Case Study Research							
<b>Task 2.0: Identify Initial Streetcar Corridors</b>							
2.0 - Identify Initial Streetcar Corridors							
<b>Task 3.0: Assess Major Utility and Engineering Impacts</b>							
3.0 - Assess Major Utility and Engineering Impacts (Tasks 3.1-3.2)							
<b>Task 4: Assess Traffic, Land Use, and Parking Impacts</b>							
4.1 - Assess Traffic, Land Use, and Parking Impacts							
<b>Task 5.0: Estimate Streetcar Ridership</b>							
5.0 - Estimate Streetcar Ridership							
<b>Task 6.0: Economic Assessment of Downtown Transit Investment</b>							
6.0 - Economic Assessment of Downtown Transit Investment							
<b>Task 7.0: Assess Potential Streetcar Technologies</b>							
7.0 - Assess Potential Streetcar Technologies							
<b>Task 8.0 - Develop Streetcar Operating Plan</b>							
8.0 - Develop Streetcar Operating Plan							
<b>Task 9.0 - Develop Capital and Operating Cost Estimates</b>							
9.0 - Develop Capital and Operating Cost Estimates							
<b>Task 10.0 - Develop Potential Funding Structure and Financing Options</b>							
10.0 - Develop Potential Funding Structure and Financing Options							
<b>Task 11.0 - Prepare Draft and Final Concept Study Report</b>							
11.1 - Draft Report							
11.2 - Final Report							
<b>Task 12.0 - Public Meetings/Hearings</b>							
12.1 - PTC Meetings							
12.2 - City Commission Presentation							

# Major Project Milestones

Legislative ID# 130722D

- **Identification of Initial Study Corridors**
- **Completion of Initial Analysis / Identification of Preferred Corridor**
- **Detailed Analysis of Preferred Corridor**
- **Summary Report of Analysis / Next Steps**
- **Presentation to City Commission**

# Today's Agenda

Legislative ID# 130722D

- **Review of Case Study Information**
- **Summary of Preliminary Screening Analysis**
- **Identification of Preferred Alignment**
- **Discussion on Preferred Alignment**
- **Next Steps Discussion**

# Case Studies

# Case Studies - Background & Intent

Legislative ID# 130722D

- Recognize unique Florida context
- Contain unique perspectives/characteristics
- Proximate to colleges and universities
- Variety of sizes – City & Metro Area



# Selected Case Studies

Legislative ID# 130722D

- Tampa, FL
- Ft. Lauderdale, FL
- Portland, OR
- Tucson, AZ
- Little Rock, AR



# Tampa – The Basics

Legislative ID# 130722D



## Ridership:

2011	431,425
2010	501,959
2009	505,703
2008	484,711
2007	562,320



# Tampa – Key Stats & Features

Legislative ID# 130722D

- Longest-running of new generation of streetcar systems in Florida (2003)
- Current Annual Operating Cost – \$1,980,000 (2014)
- Current Frequency – 20 minutes
- Operated by a non-profit corporation instead of the local transit agency
- Connects important urban neighborhoods adjacent to Downtown Tampa
- Uses heritage replica technology – Birney

# Tampa – Challenges

Legislative ID# 130722D

- Ridership has been largely flat in recent years
- On-going funding issues – endowment, special assessment, contributions from government/ quasi-governmental agencies
- Operating hours (no morning commutes)
- CSX insurance requirements
- Rubber-tire trolley & streetcar connections



# Tampa – Economic Development

Legislative ID# 130722D

## Connects Activity Centers:

- Florida Aquarium
- Multiple hotels
- Three cruise ship terminals
- Two major urban retail centers, Centro Ybor and Channelside
- Tampa Convention Center
- Tampa Bay History Center
- USF Center for Advanced Medical Simulation (CAMLS)
- Tampa Bay Times Forum
- Historic 7th Avenue in Ybor City

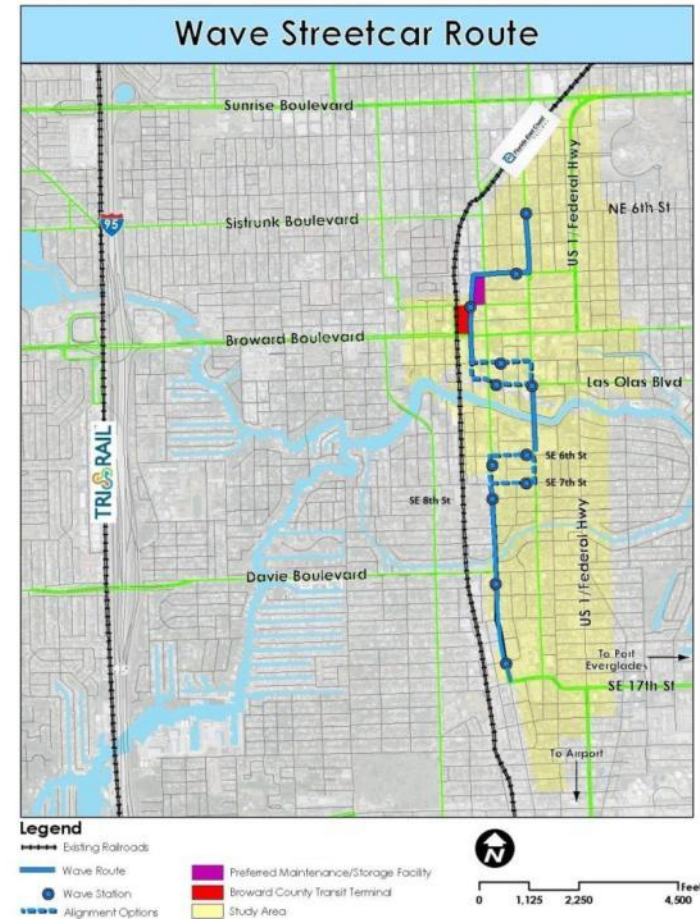
More than \$1 billion in private development in Streetcar's Special Assessment District (since 2002)





# Ft. Lauderdale – The Basics

Legislative ID# 130722D



## Ridership (projected):

Component Streetcar Market	Streetcar Ridership (Daily)		
	Low	Medium	High
Market 1: Trips to/from outside CBD	967	1,064	1,258
Market 2: Intra-CBD Trips	1,029	1,103	1,179
Market 3: Special Venues Events (daily equivalent)	203	240	330
<b>TOTAL (equivalent daily riders)</b>	<b>2,199</b>	<b>2,407</b>	<b>2,766</b>

# Ft. Lauderdale – Stats & Key Features

Legislative ID# 130722D

- Newest fully-funded system in Florida
- Estimated capital cost (1.42-mile segment) – \$83.2 Million
- Estimated annual operating cost – \$2.1 Million
- Modern vehicles for its rolling stock w/battery capability
- Connections to multimodal system
- Capital/operating costs are being covered by a mix of state, federal, local government (city and county), and special assessment funding
- Operated by Broward County Transit (BCT)
- Includes connection to major institutional use (Broward General Medical Center)

# Ft. Lauderdale – Challenges

Legislative ID# 130722D

- Capital and operating costs needed to complete remainder of initial 2.7-mile system (Phase 1a & 1b)
- Requires modern car with off-line battery operation
- Operations will require coordination between County and Regional Transit Authorities (SFRTA & BCT)
- Timing of FEC connection unknown

# Ft. Lauderdale – Economic Development

Legislative ID# 130722D

- Strong land use policies are driving urban development
- Planned route includes over 15,000 residential units (with densities up to 150 dwelling units per acre) and 5 million sq ft of commercial development
- Cumulative new tax revenue over the next 15 years of between \$498,401,944 and \$535,053,826





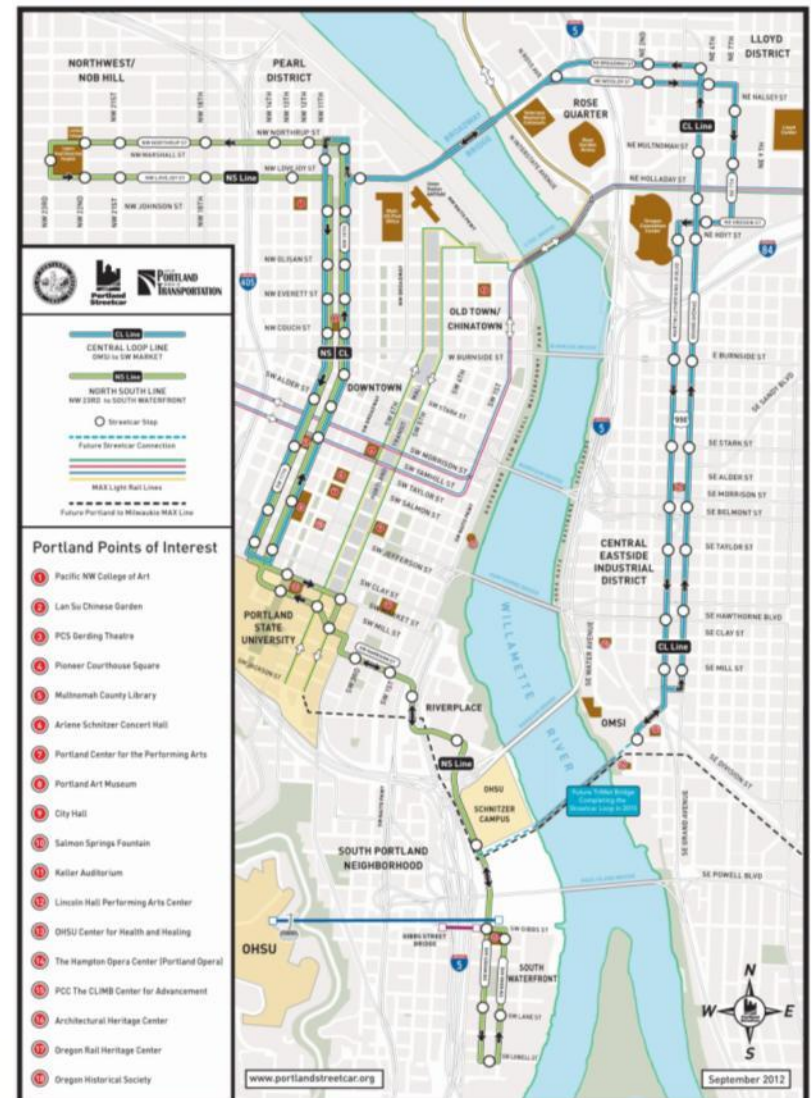
# Portland – The Basics

Legislative ID# 130722D



## Ridership:

2012	3,712,762
2011	3,963,368
2010	3,914,722
2009	4,038,920
2008	3,550,316
2007	2,964,576





# Portland – Key Stats & Features

Legislative ID# 130722D

- Connects Downtown to adjacent urban neighborhoods
- System operates in mixed-traffic – 7.35 Miles
- System capital cost –
  - Phase 1 – \$56.9 Million
  - Phase 2 - \$16.0 Million
  - Phase 3 - \$14.45 Million
  - Phase 4 - \$15.8 Million
  - Phase 5 - \$148.27 Million
- System annual operating cost – \$8.2 Million

# Portland – Key Stats & Features

Legislative ID# 130722D

- Serves Portland State University (29,524 students)
  - Contributed to initial capital expenditures
- Serves Oregon Health & Science University (4,405 students)
- System connects to several other important institutional uses
- Operated by the City of Portland instead of the transit agency
- Has encouraged significant urban redevelopment within its service area
- Shallow slab construction wherever possible
- System uses modern cars – Inkeon & United Streetcars

# Portland – Economic Development

Legislative ID# 130722D

Since 1997 within 2 blocks of alignment:

- \$3.5 billion has been invested
- **10,212 new housing units and 5.4 million sq ft of office, institutional, retail and hotel** construction have been constructed
- 55% of all CBD development has occurred within 1-block of the streetcar and properties located closest to the streetcar line **more closely approach the zoned density potential** than properties situated farther away
- Developers are building new residential buildings with **significantly lower parking ratios** than anywhere else in the region

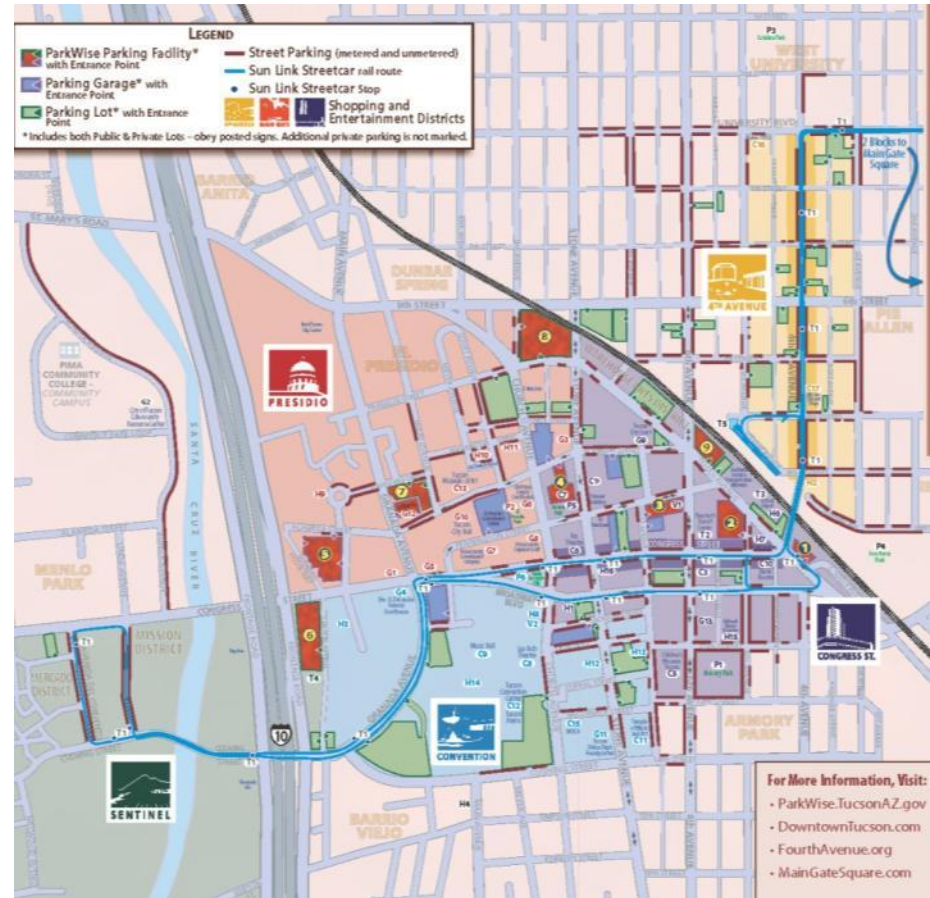


# Tucson – The Basics

Legislative ID# 130722D



The current ridership estimate is 3,600 boardings per weekday.



# Tucson – Key Stats & Features

Legislative ID# 130722D

- System is funded and currently under construction – 3.9 miles
- Capital cost – \$196 million
- Operating cost – \$5.2 million (est.)
- Connects to major cultural/institutional uses and vacant land
- Serves the University of Arizona (38,057 students)



# Tucson – Economic Development

Legislative ID# 130722D

In the last two years:

- 50 new restaurants, bars, and cafes
- 1,500 new student housing apartments
- 58 retail businesses
- New headquarter for UniSource Energy (400+ employees)
- Providence Service Corporation

Increase in property near the transit line from 2% to 30%. Specifically, for each of 3,800 properties within 1,500 feet of the alignment, an average property will increase by \$9,200 by 2015.



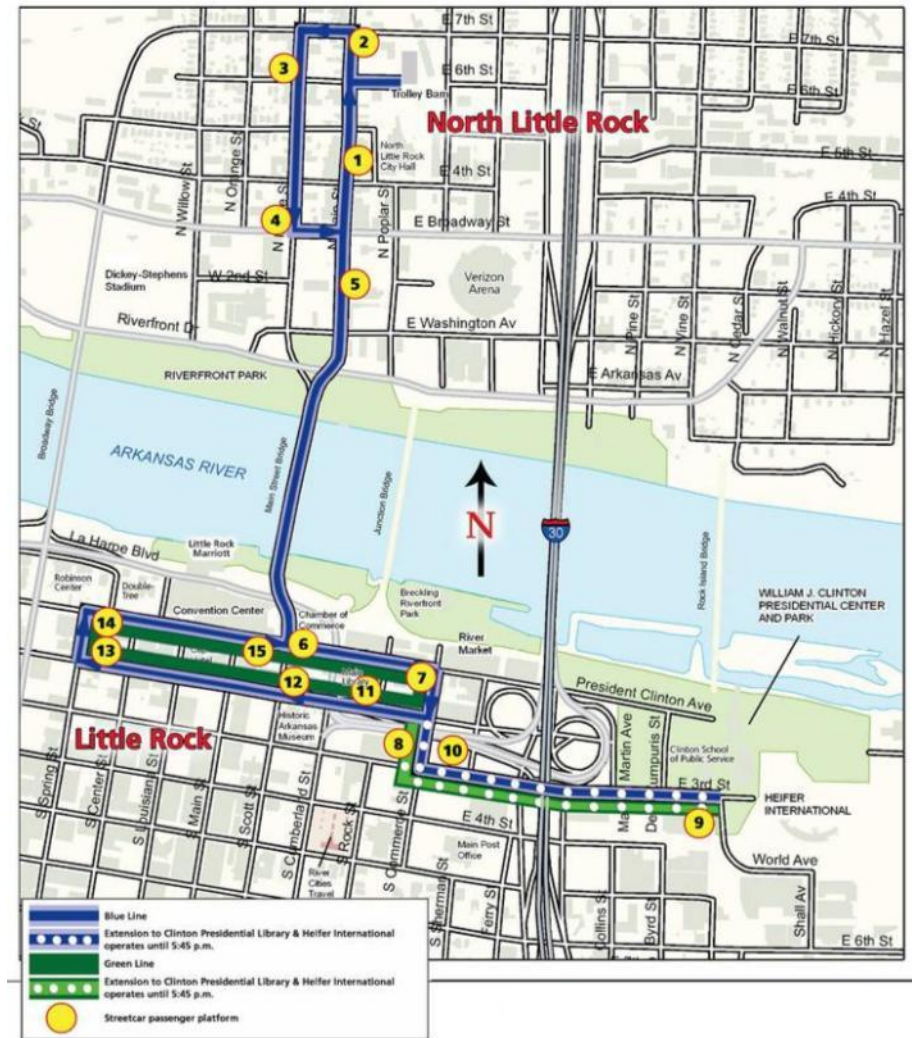
# Little Rock – The Basics

Legislative ID# 130722D



## Ridership:

2011	136,380
2010	107,088
2009	119,758
2008	134,204
2007	154,644



# Little Rock – Key Stats & Features

Legislative ID# 130722D

- Designed for economic development
- System capital cost – \$28 Million (Phase I & II)
- System annual operating cost – \$960,000
- Connects major institutional uses within the Downtown area (including the Clinton Presidential Library)
- The operating costs are completely covered by the local governments that it serves (Little Rock and North Little Rock)
- The system uses heritage replica streetcars – Birney
- Has stimulated significant urban redevelopment within the area it serves



# Little Rock – Economic Development

Legislative ID# 130722D

Within 4 blocks of alignment (2000-2010):

- 1,084 new residential units
- \$883 million in new capital investment (new construction & rehabilitations)
- 56% increase in residential property value
- 44% increase in retail property value
- 21% population growth



# Case Study Takeaways

Legislative ID# 130722D

- Importance of Balancing economic development and transit success
- Choosing the right route – initial impact and long-term return on investment
- Seamless integration of all transit services
- Operating costs require long term commitment from partners



# Case Study Takeaways

Legislative ID# 130722D

- Rolling stock choices are evolving – replica, modern, battery/wireless
- Variety of operational approaches
- Land use/urban design emphasis
- Institutional benefits of streetcar transit (PSU, OHSU)
- Continued system investment important to success (expansions, etc.)

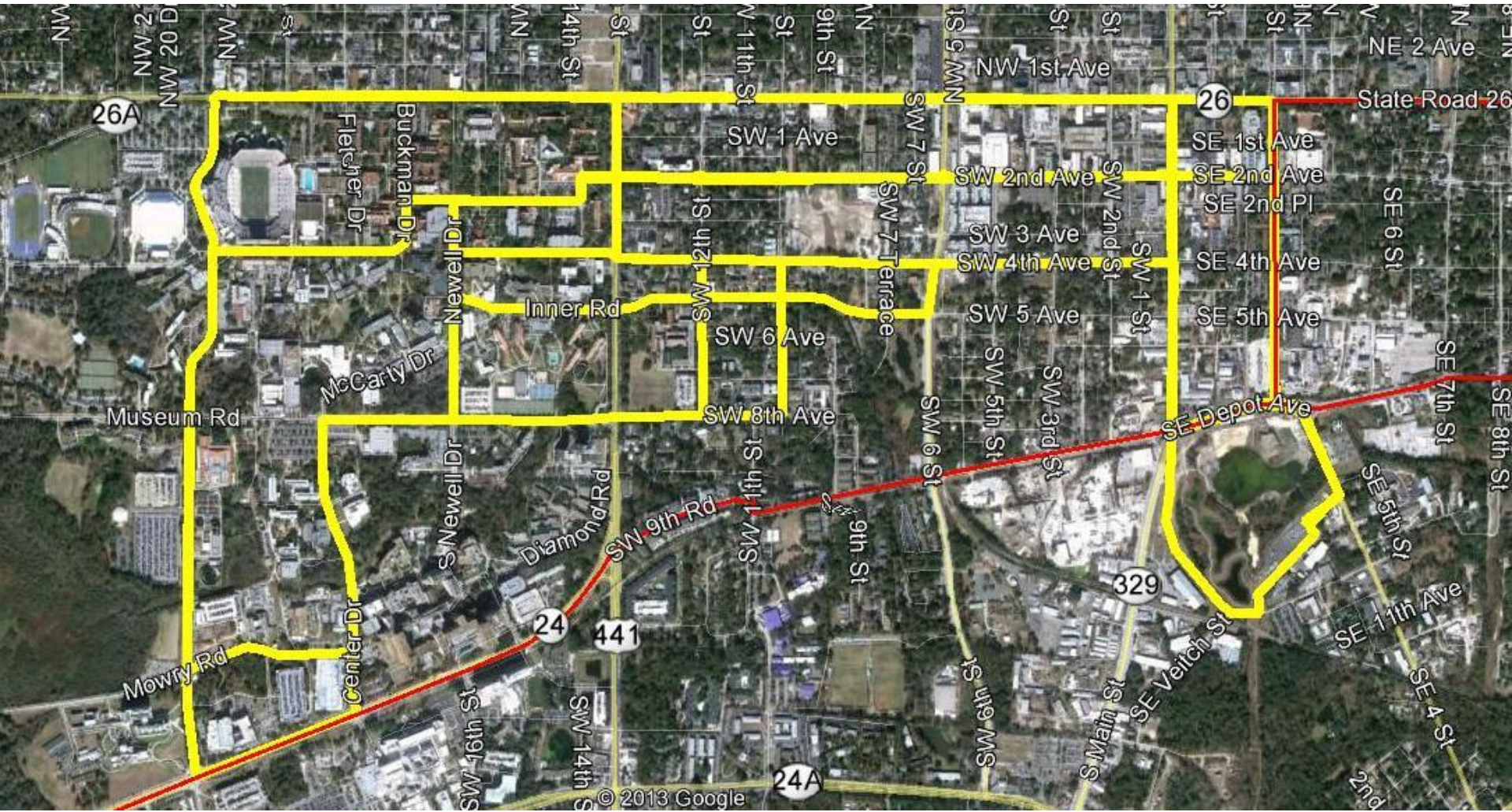
- Draft Case Study Report under internal review
- Following RTS review, report will be distributed to PTAC for review
- Inclusion in draft/final report

# Preliminary Screen Analysis



# All Potential Routes- PTAC 1

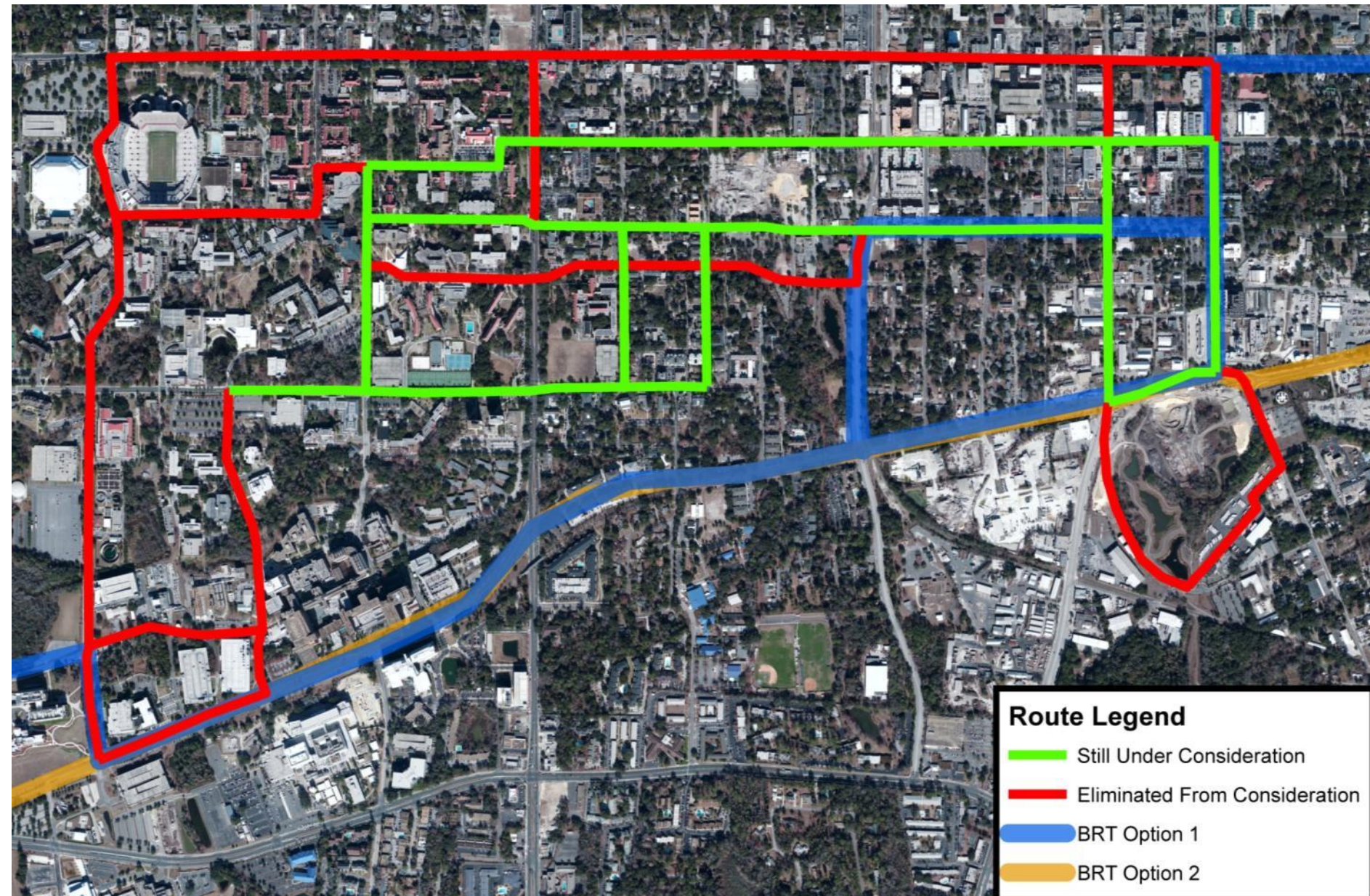
Legislative ID# 130722D





# Refined Routes

Legislative ID# 130722D



# Preliminary Screen

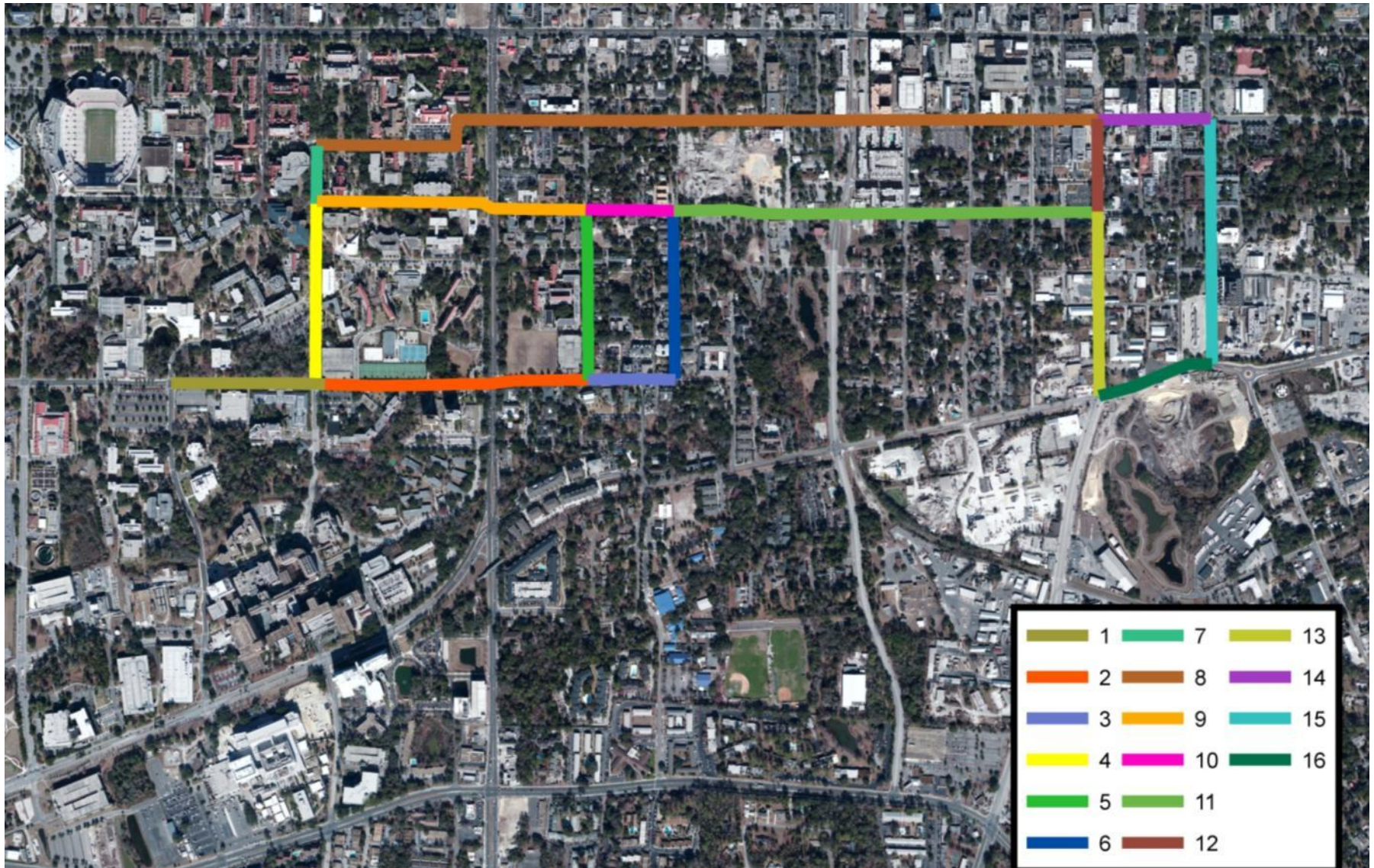
Legislative ID# 130722D

- Remaining alignments into segments
- Developed/analyzed variety of criteria
- Analyzed/scored criteria for all segments
- Developed preferred alignment based on results



# Preliminary Screen – Route Segments

Legislative ID# 130722D



# Building to Land Value Ratio

Legislative ID# 130722D

- A ratio of building values over land values
- The higher the ratio, the less propensity for redevelopment

Building to Land Value Ratio (BLVR) - Scoring by Segment					
Segment Number	Total Building Value of all Parcels Within Buffer	Total Land Value of all Parcels Within Buffer	BLVR	Scoring	
1	\$0	\$13,469,600	0.00	1	
2	\$13,924,800	\$17,967,100	0.78	5	
3	\$20,552,500	\$7,208,000	2.85	1	
4	\$0	\$15,869,600	0.00	1	
5	\$20,864,200	\$11,333,300	1.84	3	
6	\$26,420,100	\$16,189,900	1.63	3	
7	\$0	\$4,603,200	0.00	1	
8	\$96,544,700	\$36,698,000	2.63	1	
9	\$9,477,700	\$8,980,700	1.06	3	
10	\$9,249,000	\$13,061,900	0.71	5	
11	\$42,606,800	\$20,617,100	2.07	3	
12	\$24,912,100	\$7,971,900	3.12	1	
13	\$19,247,600	\$7,527,200	2.56	1	
14	\$56,026,200	\$9,949,400	5.63	1	
15	\$45,923,100	\$15,639,600	2.94	1	
16	\$5,633,300	\$7,639,100	0.74	5	

\* For these segments, the buffer only captured properties within the University of Florida, which does not report building value.



# Volume/Capacity Ratio

- Ratio of projected volume over roadway capacity
- The higher the ratio, the more congested the roadway segment

Max Volume/Capacity Ratio By Segment				
Segment Number	Max V/C Ratio - 2007	Max V/C Ratio - 2035	Max V/C Ratio - 2022	Points
1	1.20	1.39	1.30	1
2	1.22	1.36	1.30	1
3	0.61	0.89	0.76	5
4	1.01	1.38	1.21	1
5	0.90	1.31	1.12	1
6	0.67	0.91	0.80	3
7	0.88	1.14	1.02	3
8	1.28	1.53	1.42	1
9	0.74	1.05	0.91	3
10	0.78	1.00	0.90	3
11	0.86	1.05	0.96	3
12	1.35	1.03	1.18	1
13	1.09	1.02	1.05	1
14	0.83	0.94	0.89	3
15	0.32	0.76	0.56	5
16	0.95	1.04	1.00	3

# Population Density

- Project population density for each segment
- Higher density is more supportive of transit

Population Density - Scoring by Segment				
Segment	Population Density 2007 (acre)	Population Density 2035 (acre)	Population Density 2022 (acre)	Points
1	15.33	15.33	15.33	3
2	26.80	26.80	26.80	5
3	25.01	25.40	25.22	5
4	16.65	16.65	16.65	3
5	24.55	24.55	24.55	5
6	25.29	25.65	25.48	5
7	13.56	13.56	13.56	1
8	13.06	18.46	15.95	3
9	17.08	17.08	17.08	3
10	28.78	29.16	28.98	5
11	12.30	14.99	13.74	1
12	3.67	3.69	3.68	1
13	1.72	1.72	1.72	1
14	5.61	5.65	5.63	1
15	2.97	3.02	3.00	1
16	1.66	1.71	1.69	1

# Employment Density

- Project employment density for each segment
- Higher density is more supportive of transit

Employment Density - Scoring by Segment				
Segment	Employment Density 2007 (acre)	Employment Density 2035 (acre)	Employment Density 2022 (acre)	Points
1	39.80	41.71	40.83	3
2	19.97	21.93	21.02	1
3	9.92	11.21	10.61	1
4	54.47	56.66	55.64	5
5	12.91	15.21	14.14	1
6	15.84	16.75	16.33	1
7	64.37	66.24	65.37	5
8	48.77	53.09	51.08	5
9	52.92	54.79	53.92	5
10	16.12	17.81	17.02	1
11	11.95	13.20	12.62	1
12	28.01	29.81	28.98	3
13	8.17	8.85	8.54	1
14	26.49	28.89	27.77	3
15	7.73	8.72	8.26	1
16	4.51	5.11	4.83	1

# Right of Way Assessment

Legislative ID# 130722D

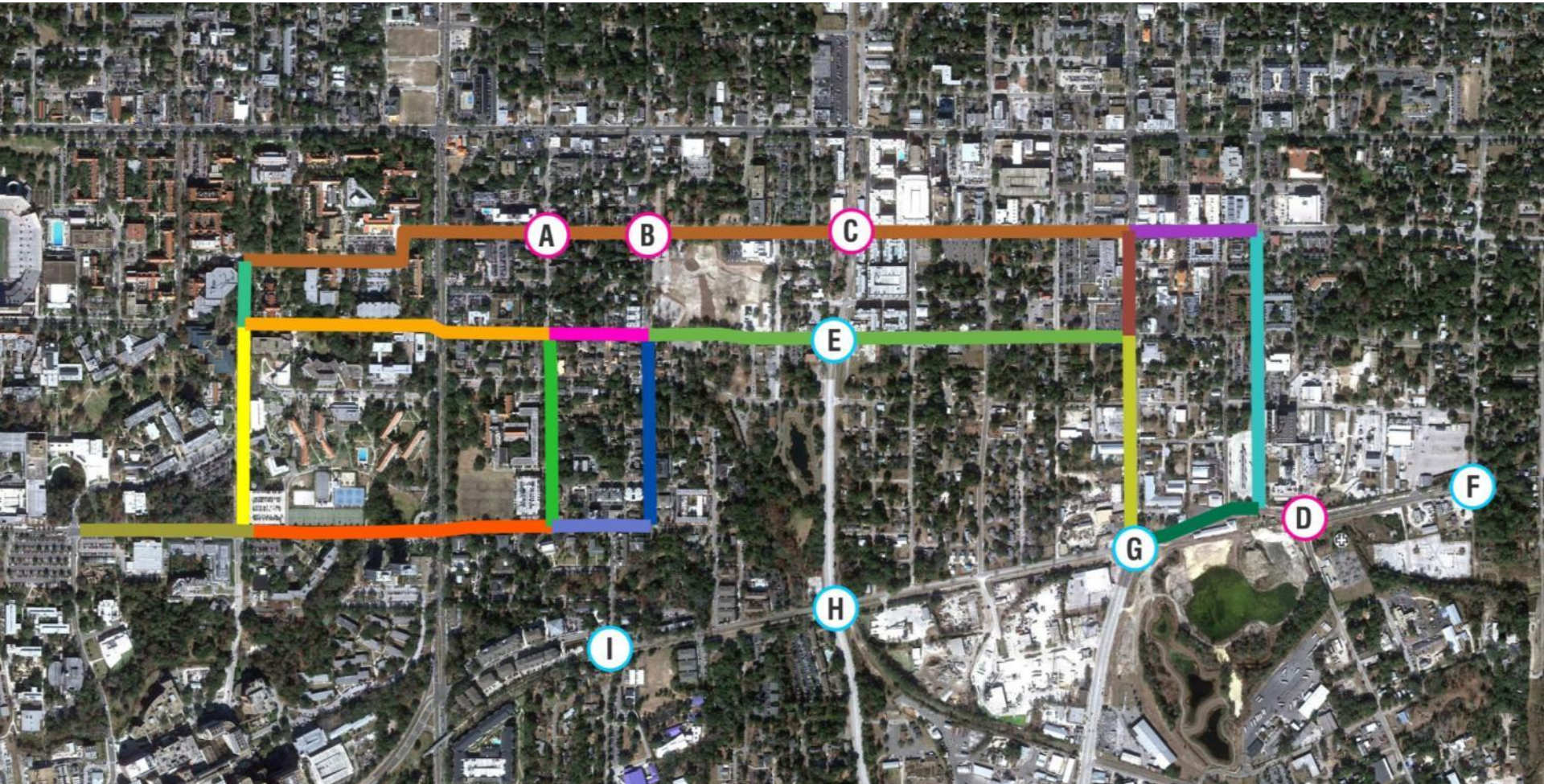
- Assumed standard cross-section for dedicated streetcar lane
- Assessed each segment for appropriate ROW
- Scoring gives preference to segments that may minimize acquisitions

Right-Of-Way Assessment and Scoring by Segment				
Segment	Total Segment Length (feet)	Total Length with ROW > 70'	% of Segment with ROW > 70'	Scoring
1	1161.60	1161.60	100.00%	5
2	2059.20	1453.58	70.59%	3
3	633.60	0.00	0.00%	1
4	1320.00	1320.00	100.00%	5
5	1267.20	0.00	0.00%	1
6	1267.20	0.00	0.00%	1
7	422.40	422.40	100.00%	5
8	6072.00	3916.07	64.49%	3
9	2006.40	0.00	0.00%	1
10	686.40	0.00	0.00%	1
11	3168.00	168.08	5.31%	1
12	686.40	686.40	100.00%	5
13	1372.80	1372.80	100.00%	5
14	844.80	0.00	0.00%	1
15	1848.00	1848.00	100.00%	5
16	897.60	897.60	100.00%	5



# Study Area Roundabouts

Legislative ID# 130722D



**Proposed**  
 E – SW 6<sup>th</sup> St./SW 4<sup>th</sup> Ave.  
 F – SE 4<sup>th</sup> St./SE Depot Ave.  
 G – SW Main St./SW Depot Ave.  
 H – SW 6<sup>th</sup> St./SW Depot Ave.  
 I – SW 11<sup>th</sup> St./SW Depot Ave.

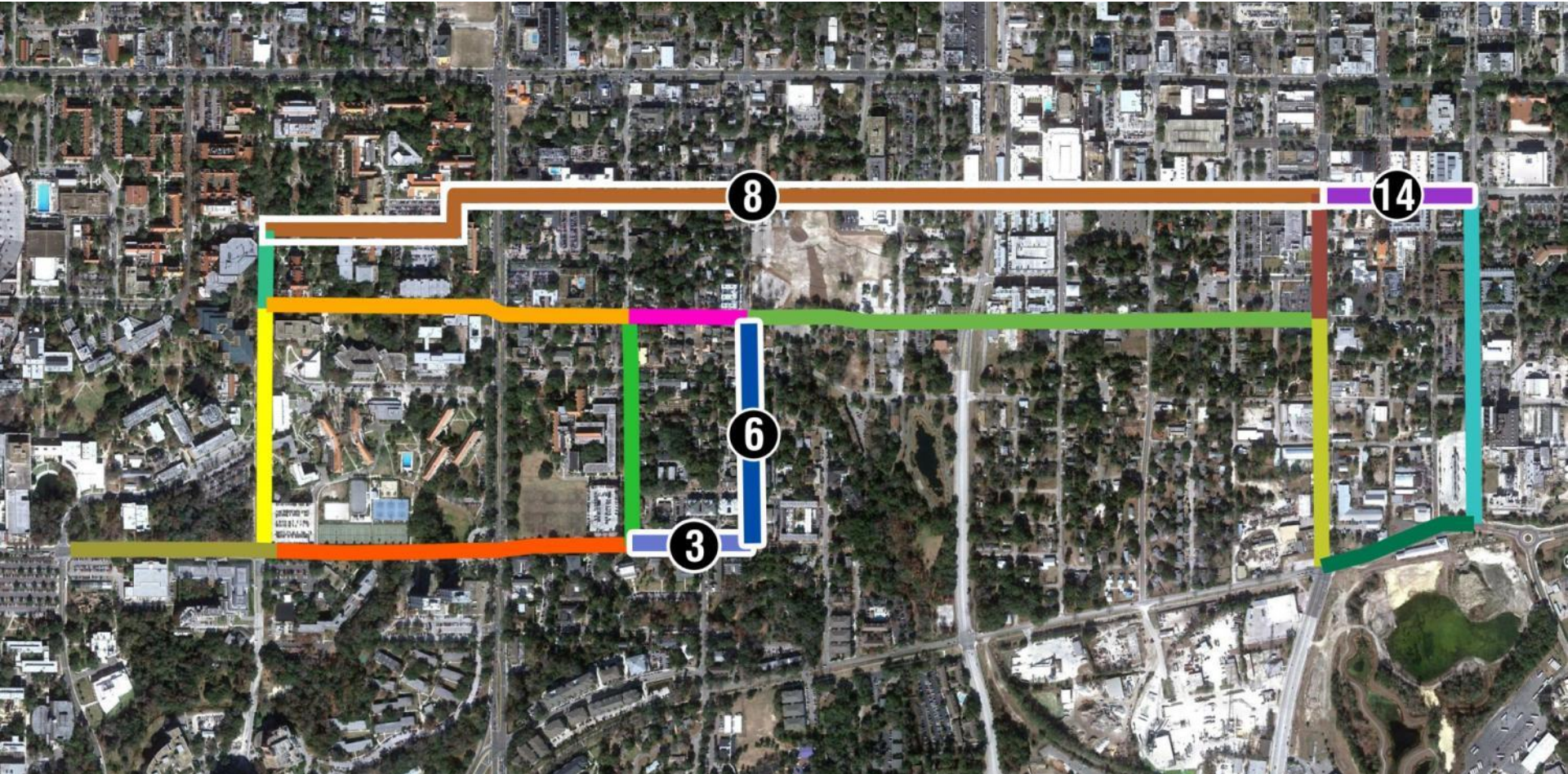
**Constructed**  
 A – SW 2<sup>nd</sup> Ave./SW 12<sup>th</sup> St.  
 B – SW 2<sup>nd</sup> Ave./SW 10<sup>th</sup> St.  
 C – SW 2<sup>nd</sup> Ave./SW 6<sup>th</sup> St.  
 D – SE 4<sup>th</sup> St./SE Depot Ave.

1	7	13
2	8	14
3	9	15
4	10	16
5	11	
6	12	



# Existing On-Street Parking

Legislative ID# 130722D



**3** Segment 3  
SW 8<sup>th</sup> Avenue  
0.12 miles  
20.83% parking  
Scoring: 1

**6** Segment 6  
SW 10<sup>th</sup> Street  
0.24 miles  
46.88% parking  
Scoring: 1

**8** Segment 8  
SW 2<sup>nd</sup> Avenue  
1.15 miles  
18.12% parking  
Scoring: 1

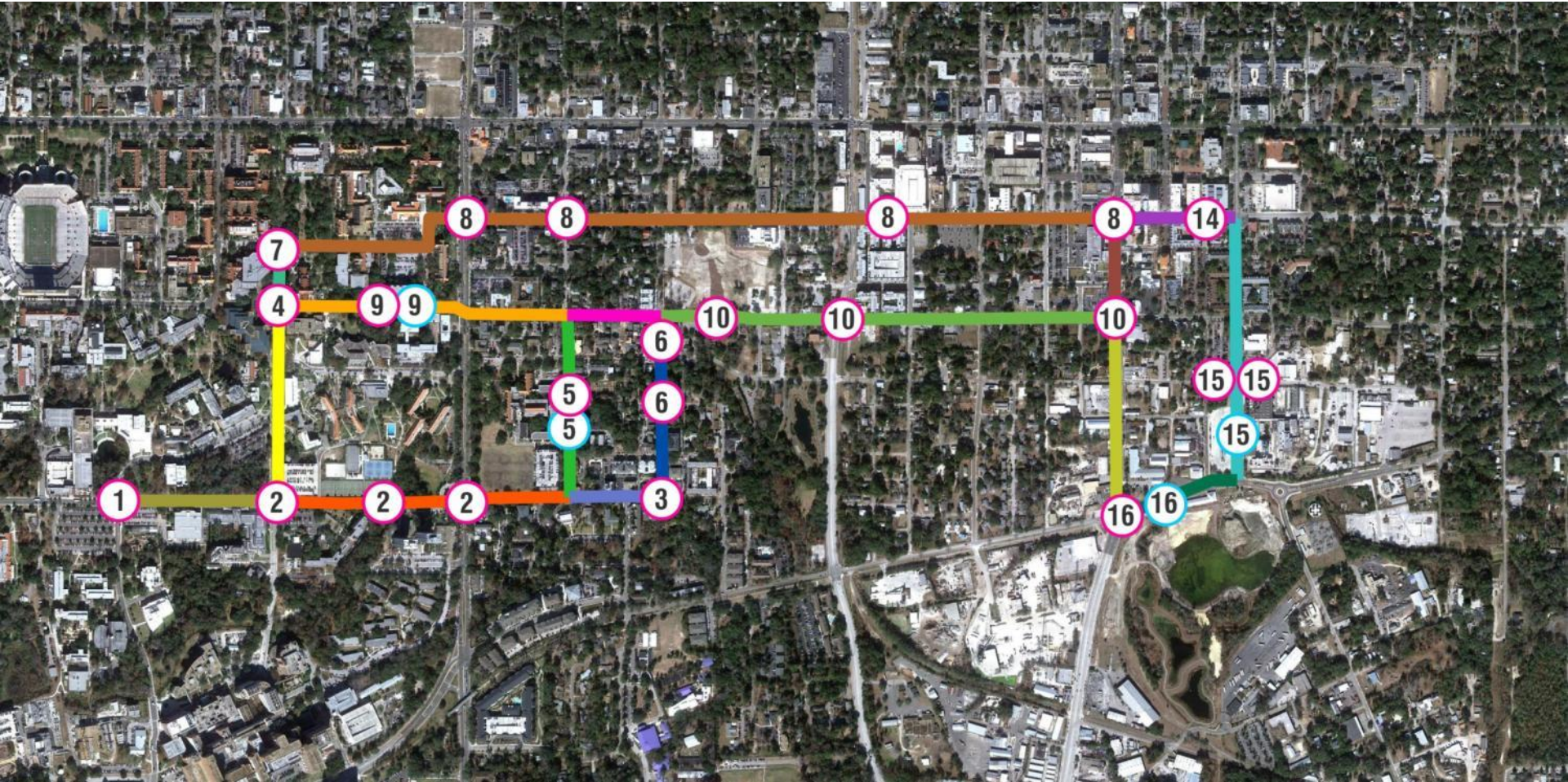
**14** Segment 14  
SW 2<sup>ND</sup> Avenue  
0.16 miles  
20.83% parking  
Scoring: 1





# Utilities Assessment

Legislative ID# 130722D



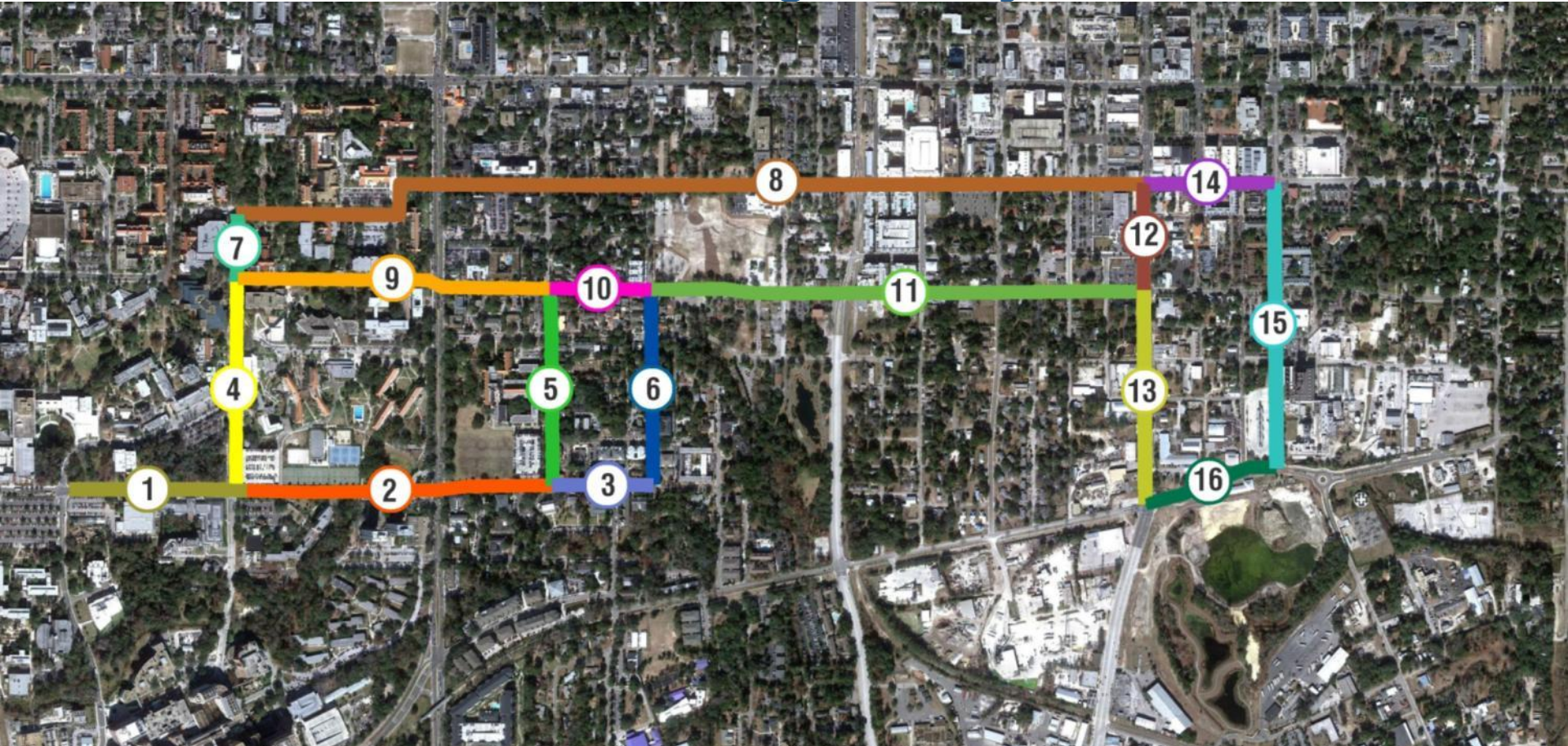
 "Immediate Areas of Concern"

 "Potential Fatal Flaws"





# Cumulative Scoring Analysis Legislative ID# 130722D



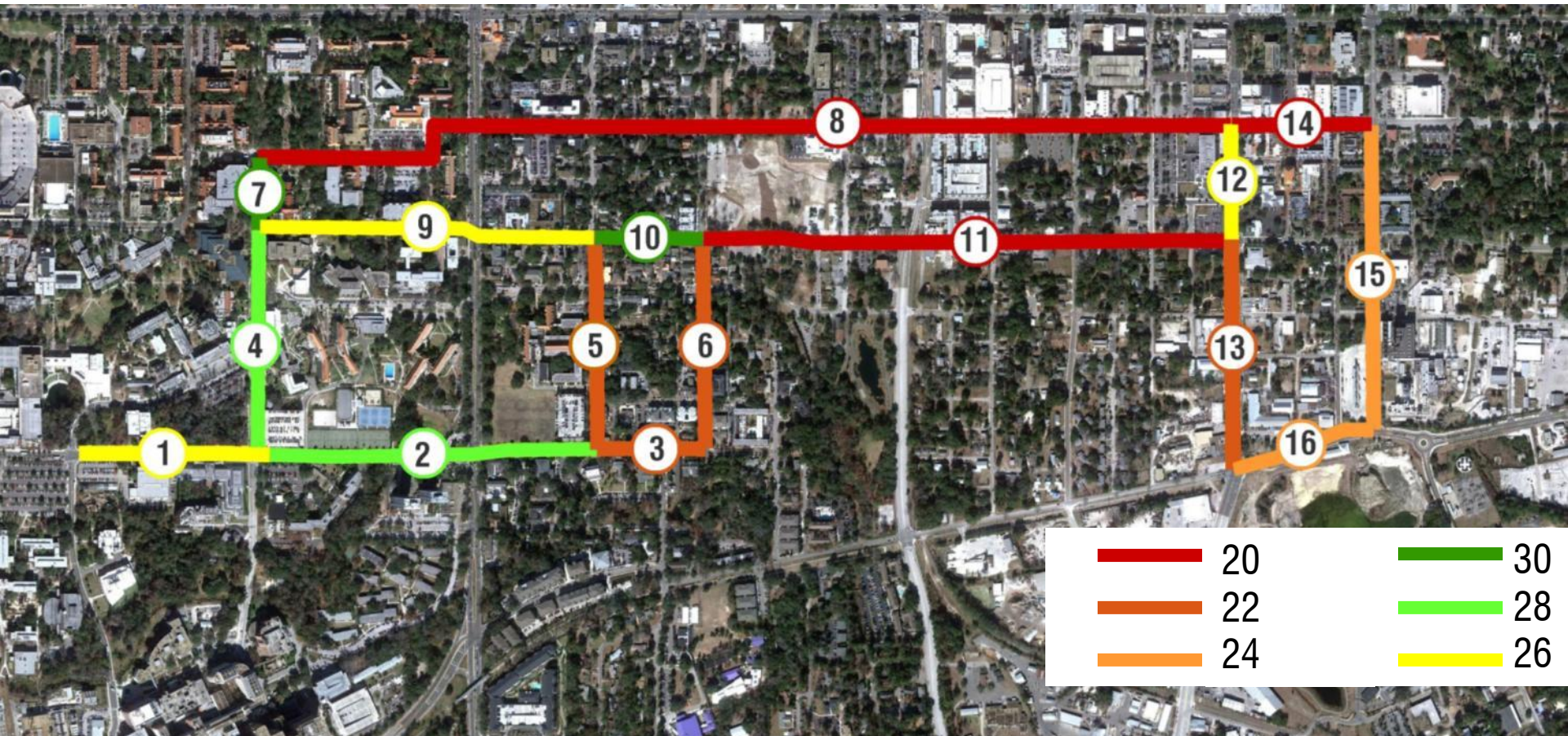
Cumulative Points Summary by Segment

Segment	Total Scores by Segment	Segment	Total Scores by Segment	Segment	Total Scores by Segment	Segment	Total Scores by Segment
<b>1</b>	26	<b>5</b>	22	<b>9</b>	26	<b>13</b>	22
<b>2</b>	28	<b>6</b>	22	<b>10</b>	30	<b>14</b>	20
<b>3</b>	22	<b>7</b>	30	<b>11</b>	20	<b>15</b>	24
<b>4</b>	28	<b>8</b>	20	<b>12</b>	26	<b>16</b>	24



# “Heat” Map

Legislative ID# 130722D

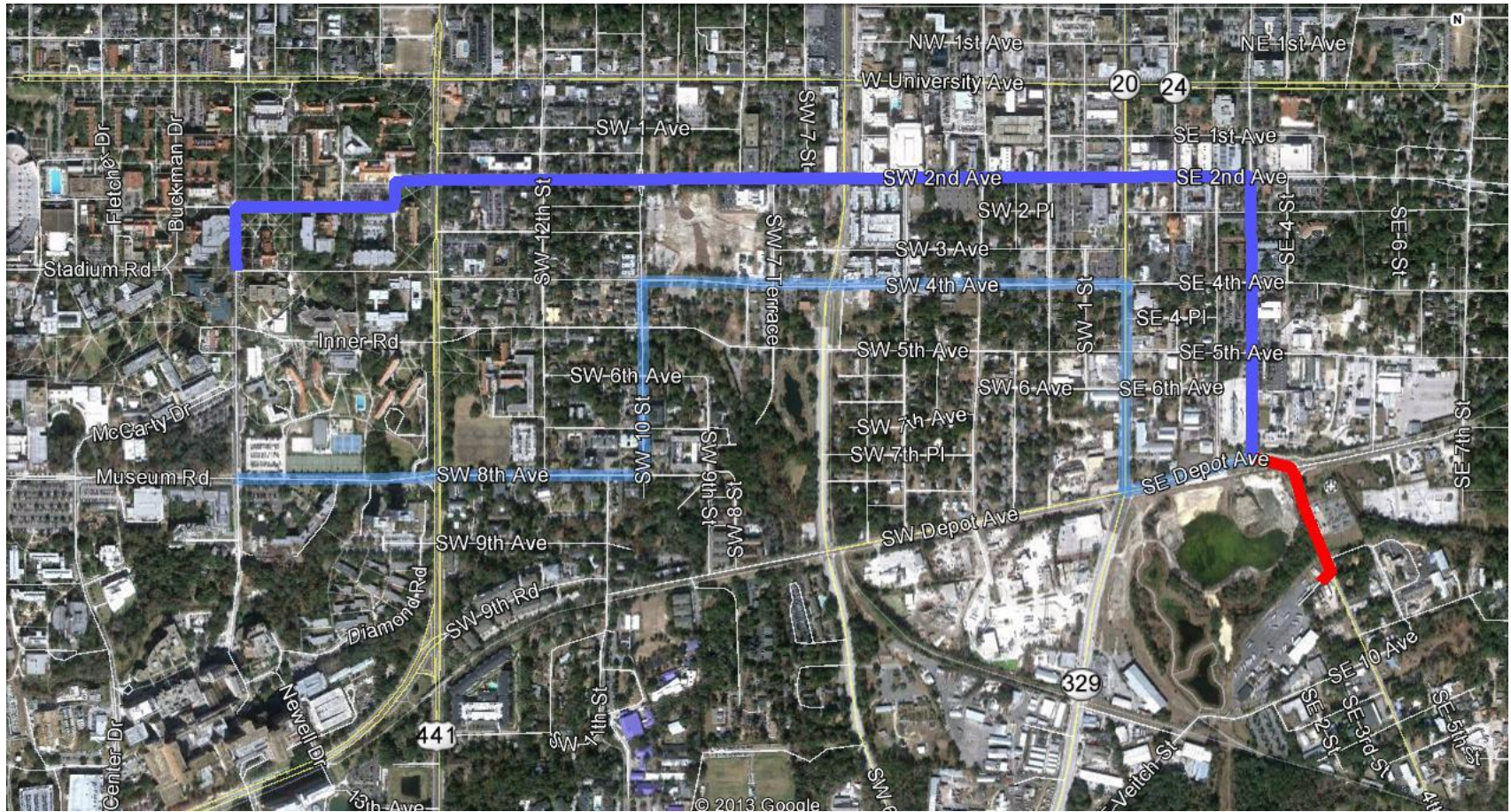


Cumulative Points Summary by Segment

Segment	Total Scores by Segment	Segment	Total Scores by Segment	Segment	Total Scores by Segment	Segment	Total Scores by Segment
<b>1</b>	26	<b>5</b>	22	<b>9</b>	26	<b>13</b>	22
<b>2</b>	28	<b>6</b>	22	<b>10</b>	30	<b>14</b>	20
<b>3</b>	22	<b>7</b>	30	<b>11</b>	20	<b>15</b>	24
<b>4</b>	28	<b>8</b>	20	<b>12</b>	26	<b>16</b>	24



# Conceptual Preferred Alternative



Segment 1 – Main Alignment (1.73 miles) -



Segment 2 – Potential Link to RTS (.21 miles) -



Potential Alt. - SW 4<sup>th</sup> Ave. (1.79 miles) -



# Next Steps

Legislative ID# 130722D

**Economic Analysis**



**Ridership Estimates**



**Present Findings at PTAC #3 - Early  
November 2013**





# Questions?