CITY OF GAINESVILLE
every path starts with passion
FLORIDA

City of Gainesville Streetcar Conceptual Study
PTAC Meeting # 2 – September 25, 2013

RTS

Tindale-Oliver & Associates, Inc.
Planning and Engineering

Project Scope/ Schedule

Project Goals

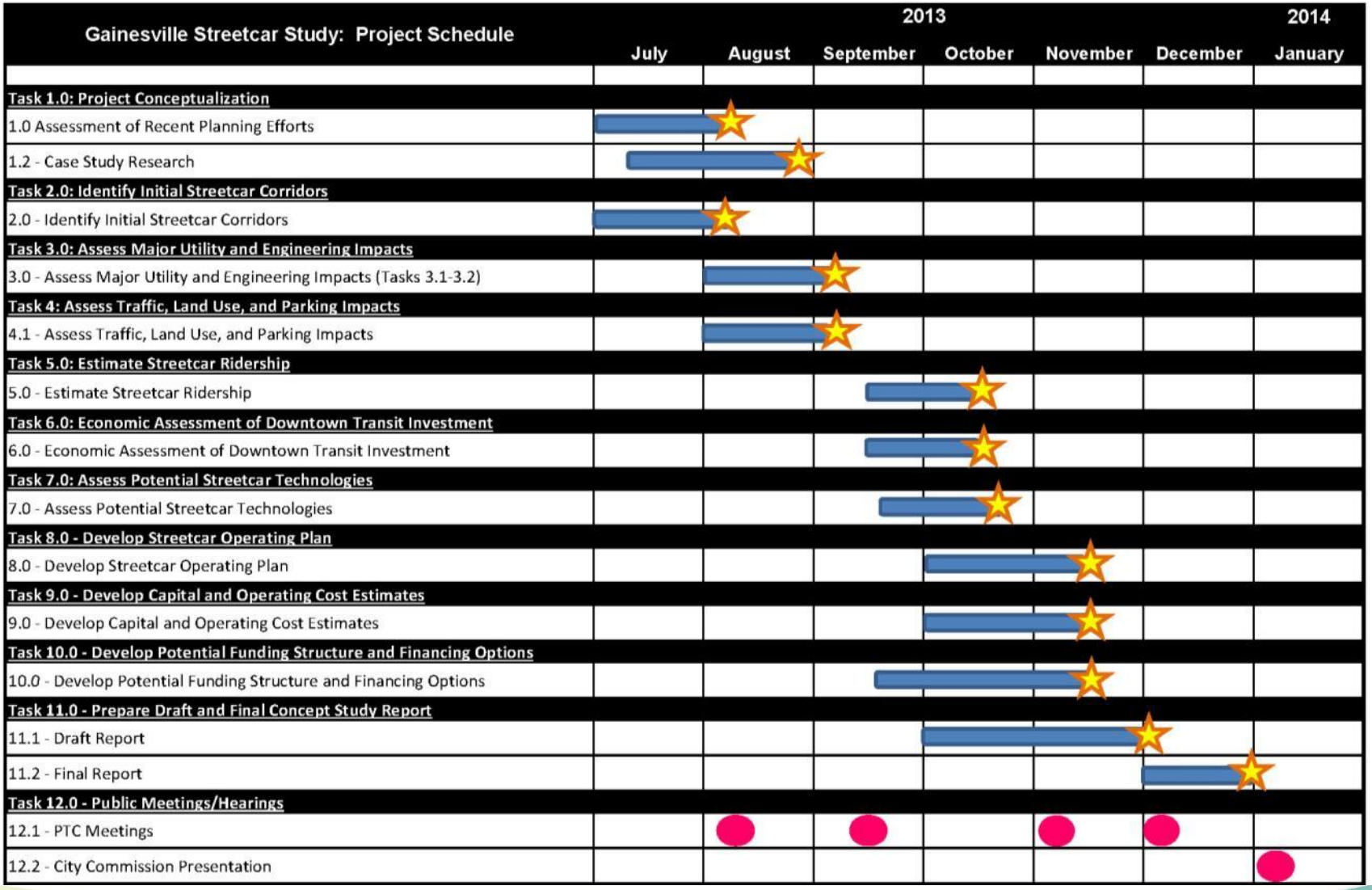
- Project Conceptualization
- Identification of Corridors
- Engineering, Parking Transportation
- Land Use/Operational Characteristics
- Economic Assessment
- Ridership/Technology
- Capital/Operating Costs

2-3 Options

Preliminary Screen

1 Preferred

Project Schedule



Major Project Milestones

- 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

- 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

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

Selected Case Studies

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

Tampa – The Basics

Ridership:

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

Tampa – Key Stats & Features

- 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

- 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

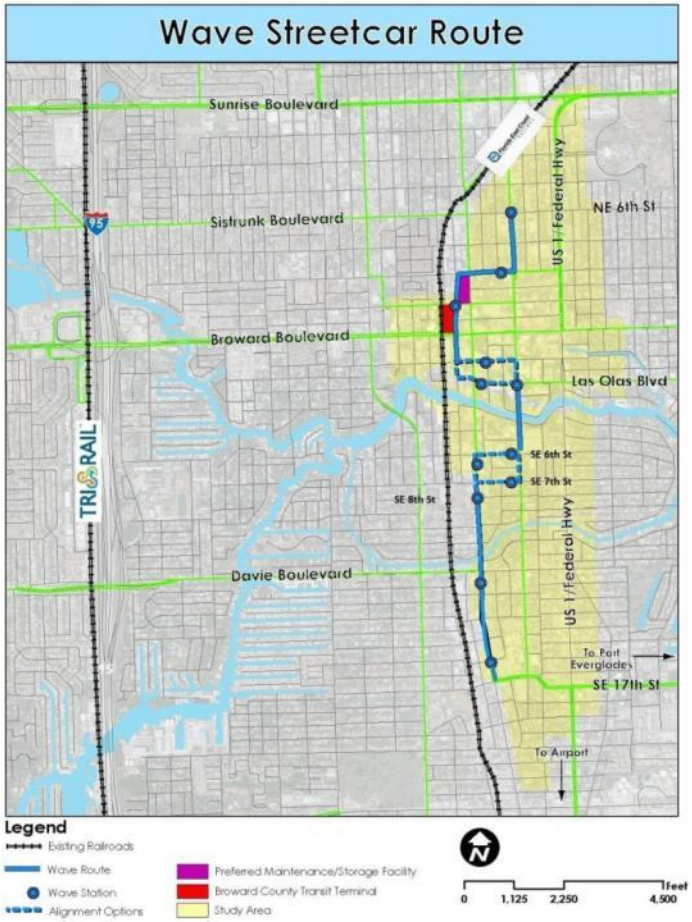
Tampa – Economic Development

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



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
TOTAL (equivalent daily riders)	**2,199**	**2,407**	**2,766**

Ft. Lauderdale – Stats & Key Features

- 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

- 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

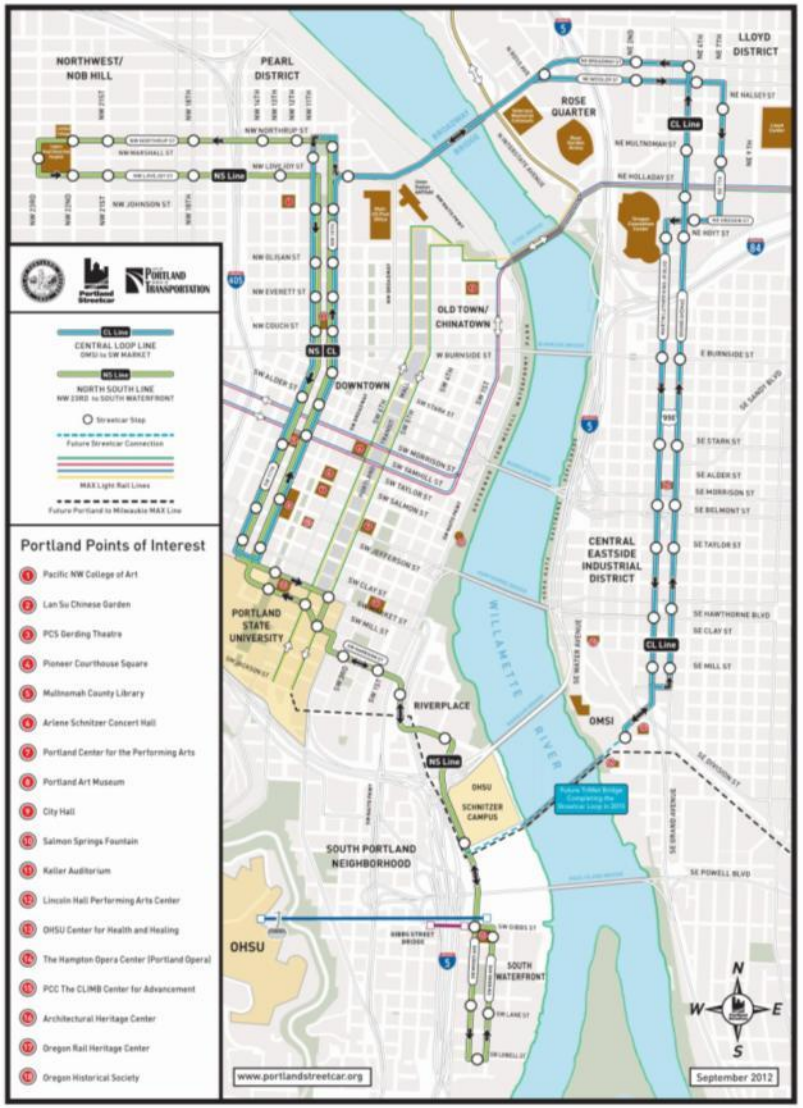
Ft. Lauderdale – Economic Development

- 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

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

- 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

- 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

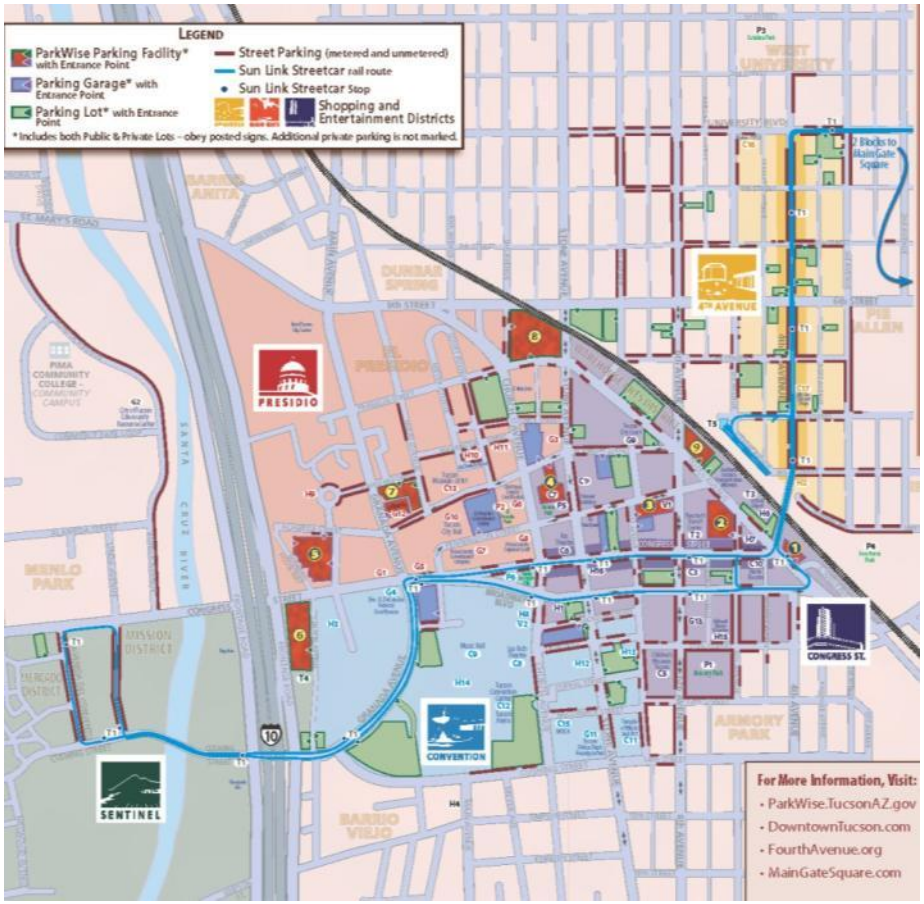
Portland – Economic Development

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

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



Tucson – Key Stats & Features

- 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

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

Ridership:

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

Little Rock – Key Stats & Features

- 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

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

- 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

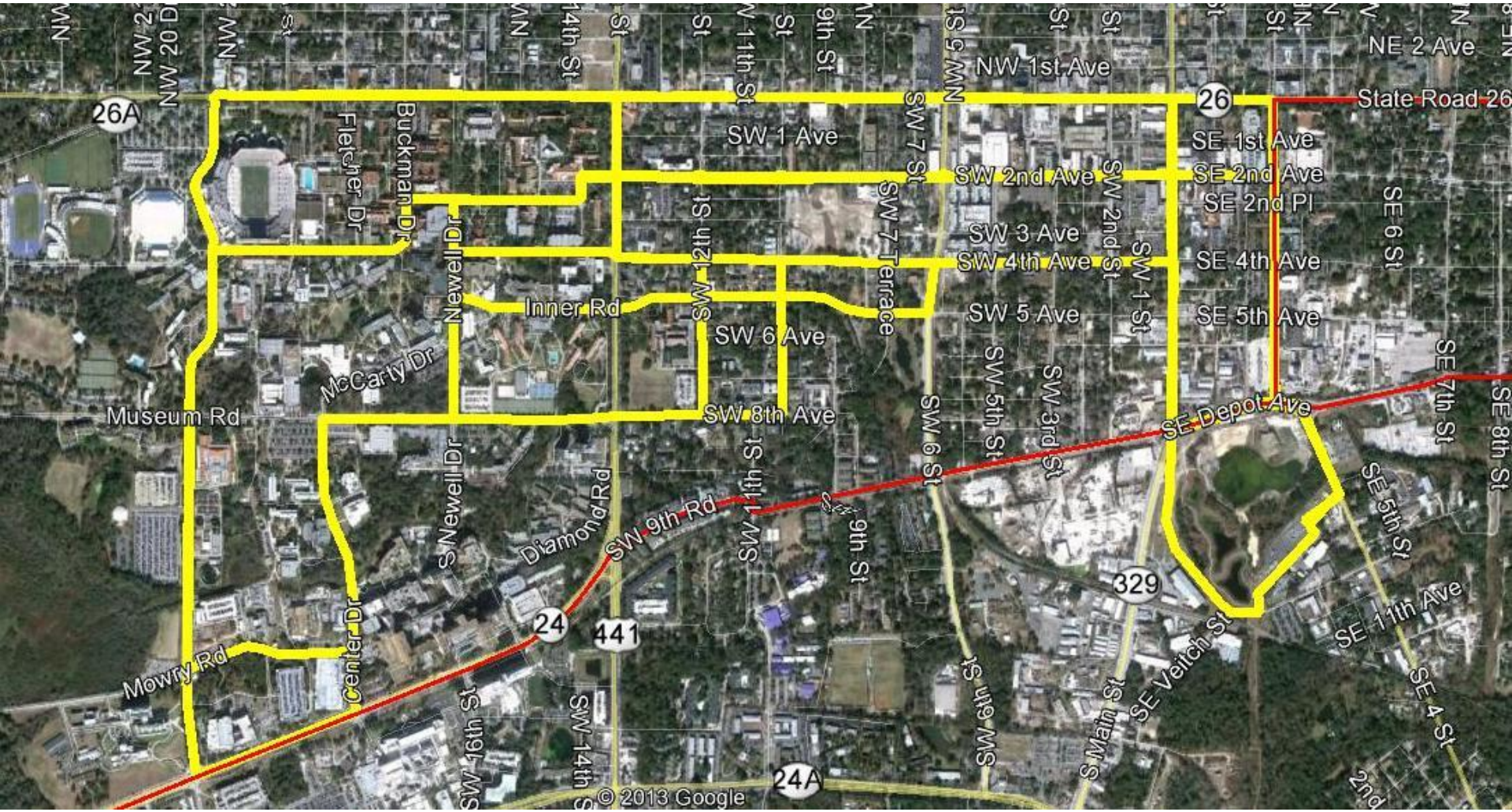
- Rolling stock choices are evolving – replica, modern, battery/wireless
- Variety of operational approaches
- Land use/urban design emphasis
- Institutional benefits of streetcar transit (PSU, OHSU)
- Continued system investment important to success (expansions, etc.)

Case Studies – Next Steps

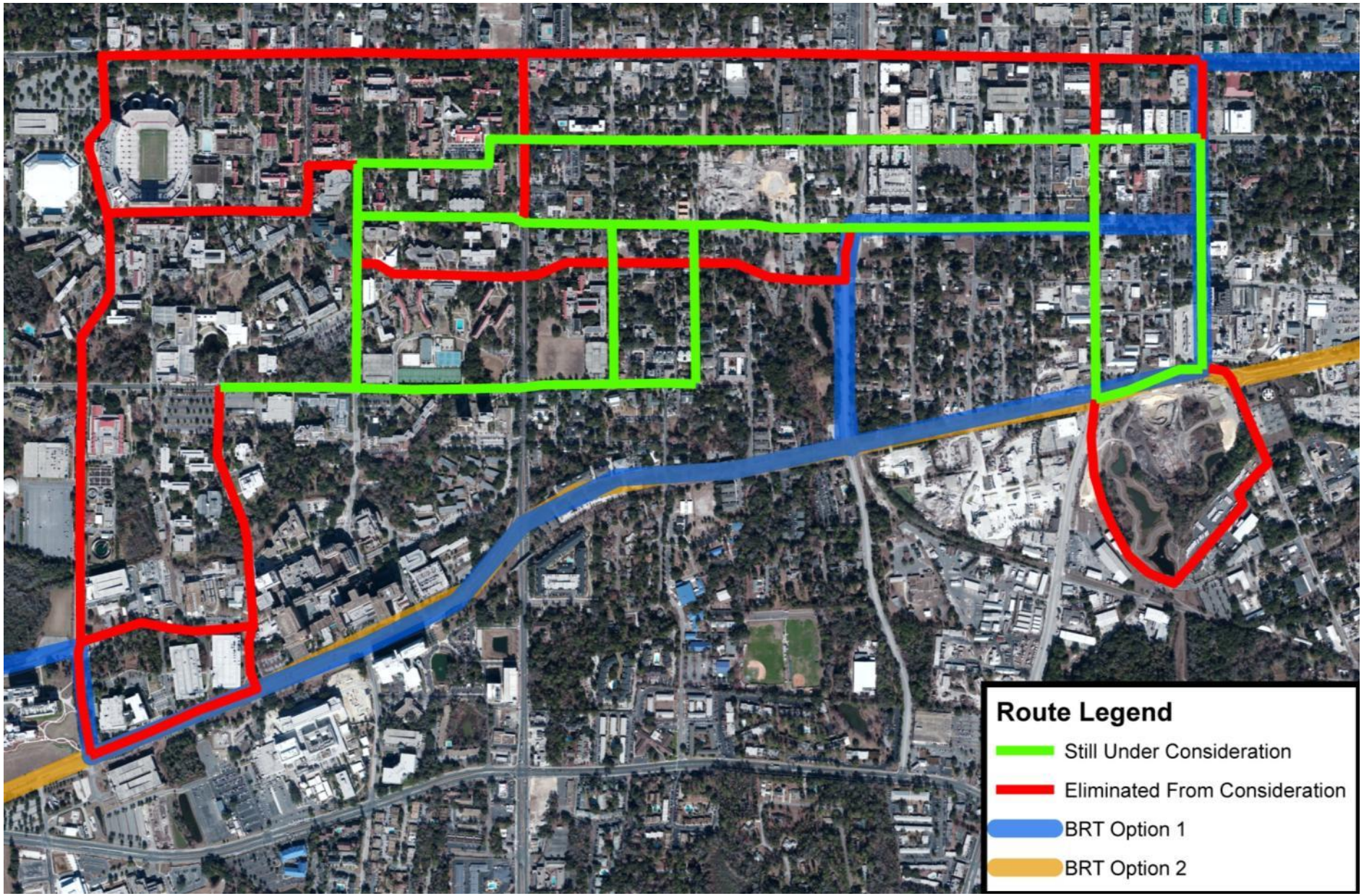
- Draft Case Study Report under internal review
- Following RTS review, report will be distributed to PTAC for review
- Inclusion in draft/final report

Preliminary Screen Analysis

All Potential Routes- PTAC 1



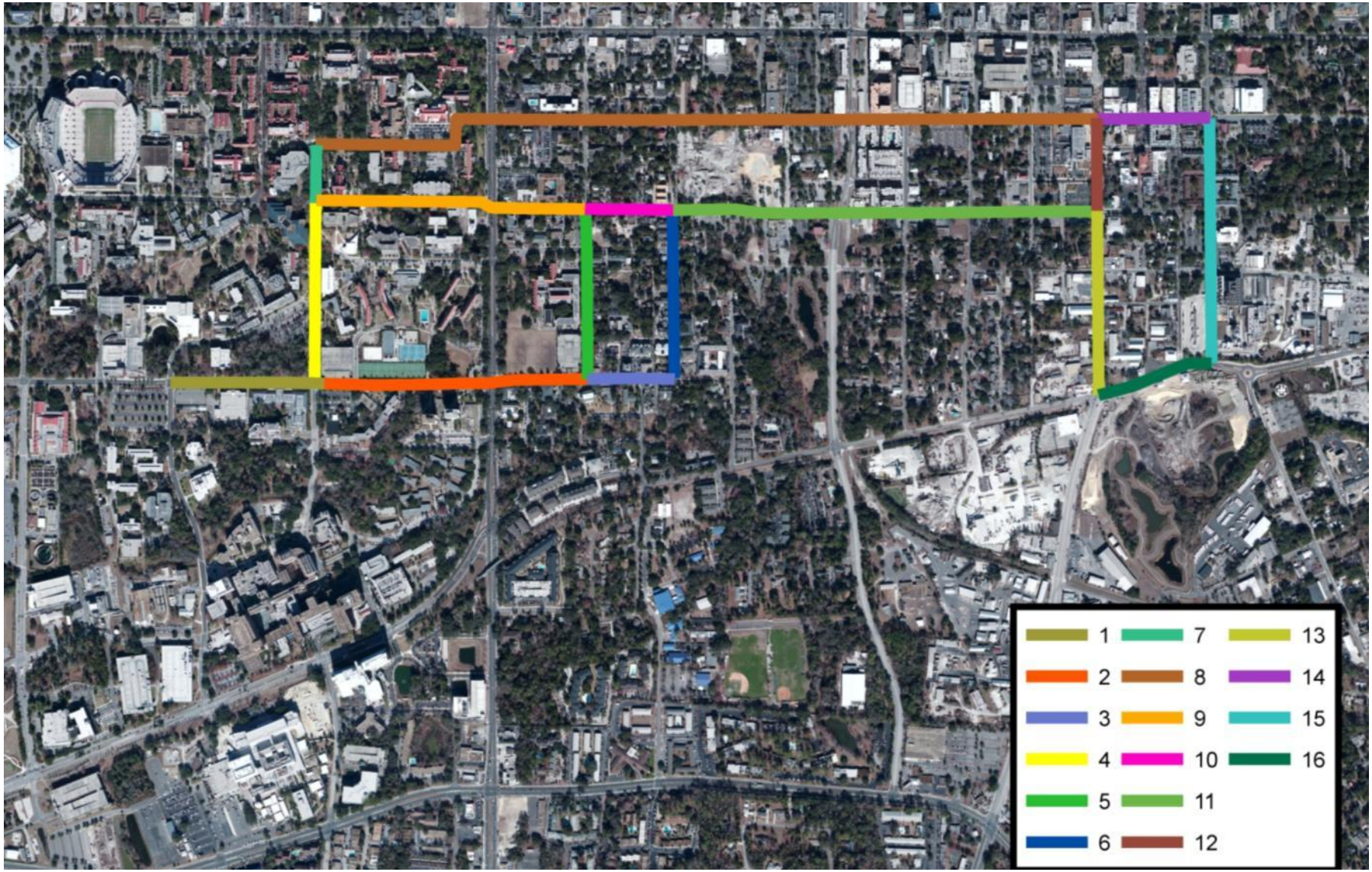
Refined Routes



Preliminary Screen

- 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



Building to Land Value Ratio

- 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

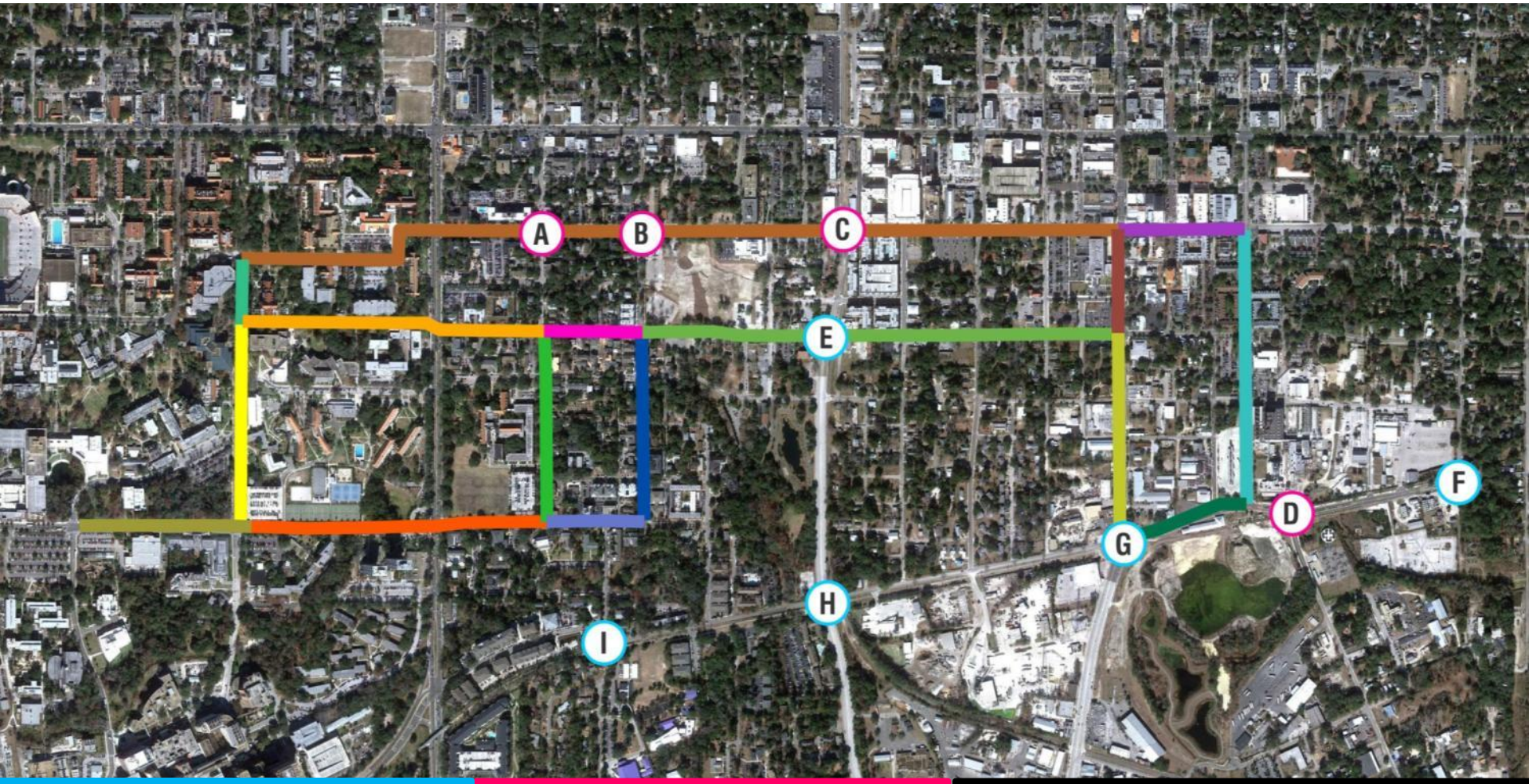
Employment Density - Scoring by Segment				
Segment	Employment Density 2007 (acre)	Employment Density 2035 (acre)	Employment Density 2022 (acre)	Points
1	39.80	41.71	40.83	3
2	19.97	21.93	21.02	1
3	9.92	11.21	10.61	1
4	54.47	56.66	55.64	5
5	12.91	15.21	14.14	1
6	15.84	16.75	16.33	1
7	64.37	66.24	65.37	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

- 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



Proposed

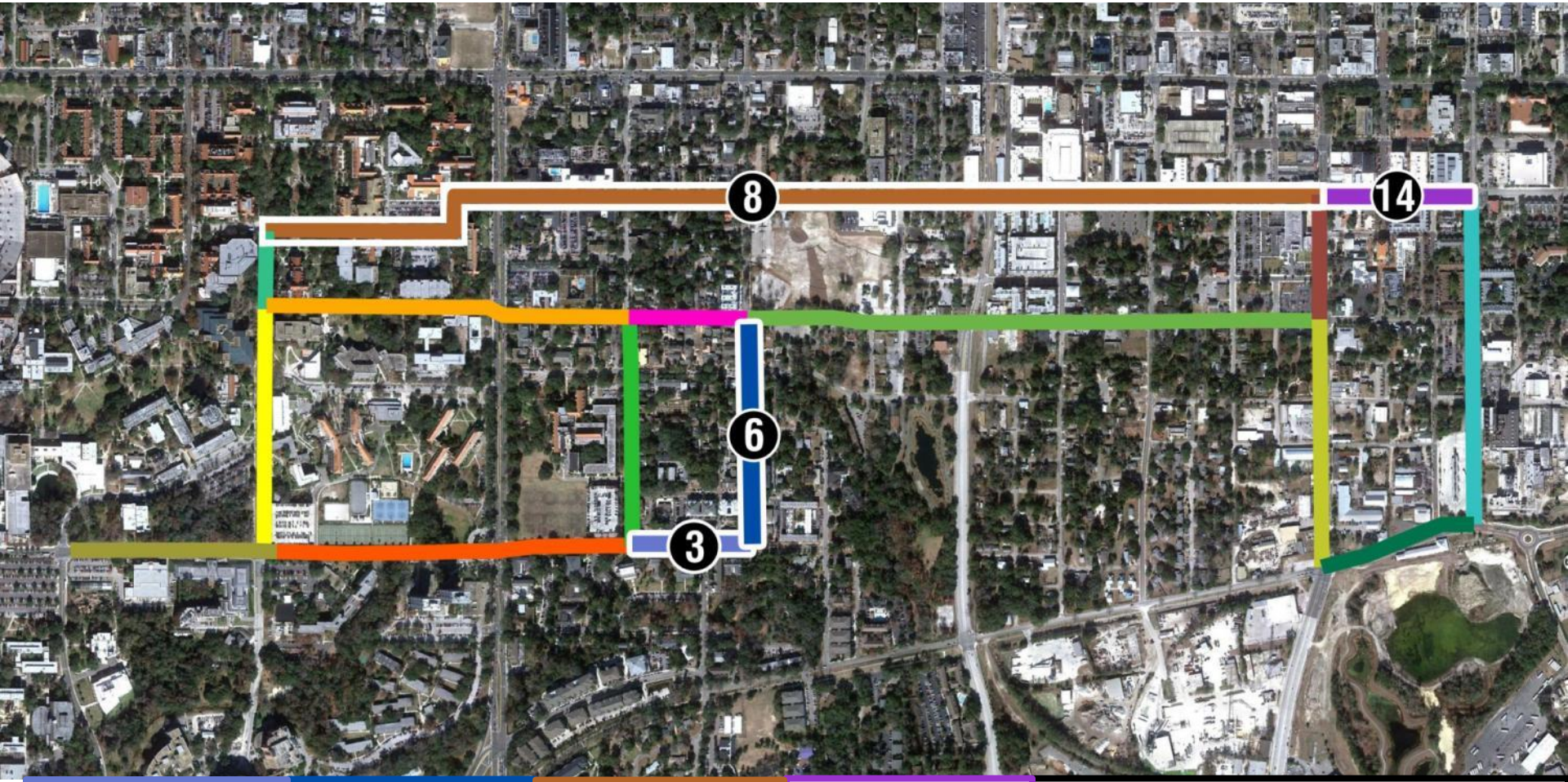
E – SW 6th St./SW 4th Ave.
F – SE 4th St./SE Depot Ave.
G – SW Main St./SW Depot Ave.
H – SW 6th St./SW Depot Ave.
I – SW 11th St./SW Depot Ave.

Constructed

A – SW 2nd Ave./SW 12th St.
B – SW 2nd Ave./SW 10th St.
C – SW 2nd Ave./SW 6th St.
D – SE 4th St./SE Depot Ave.

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

Existing On-Street Parking



3 Segment 3
SW 8th Avenue
0.12 miles
20.83% parking
Scoring: 1

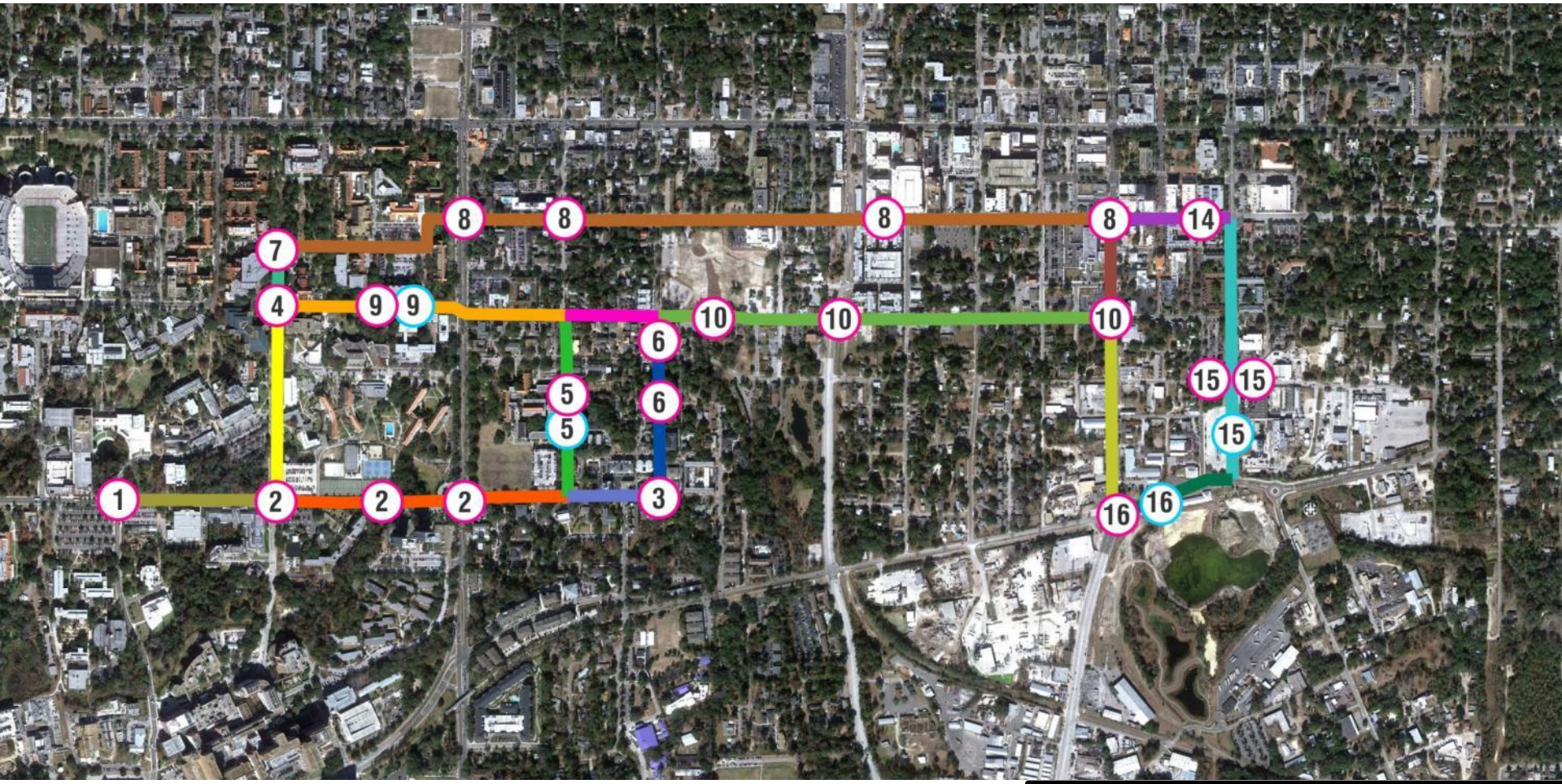
6 Segment 6
SW 10th Street
0.24 miles
46.88% parking
Scoring: 1

8 Segment 8
SW 2nd Avenue
1.15 miles
18.12% parking
Scoring: 1

14 Segment 14
SW 2ND Avenue
0.16 miles
20.83% parking
Scoring: 1

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

Utilities Assessment

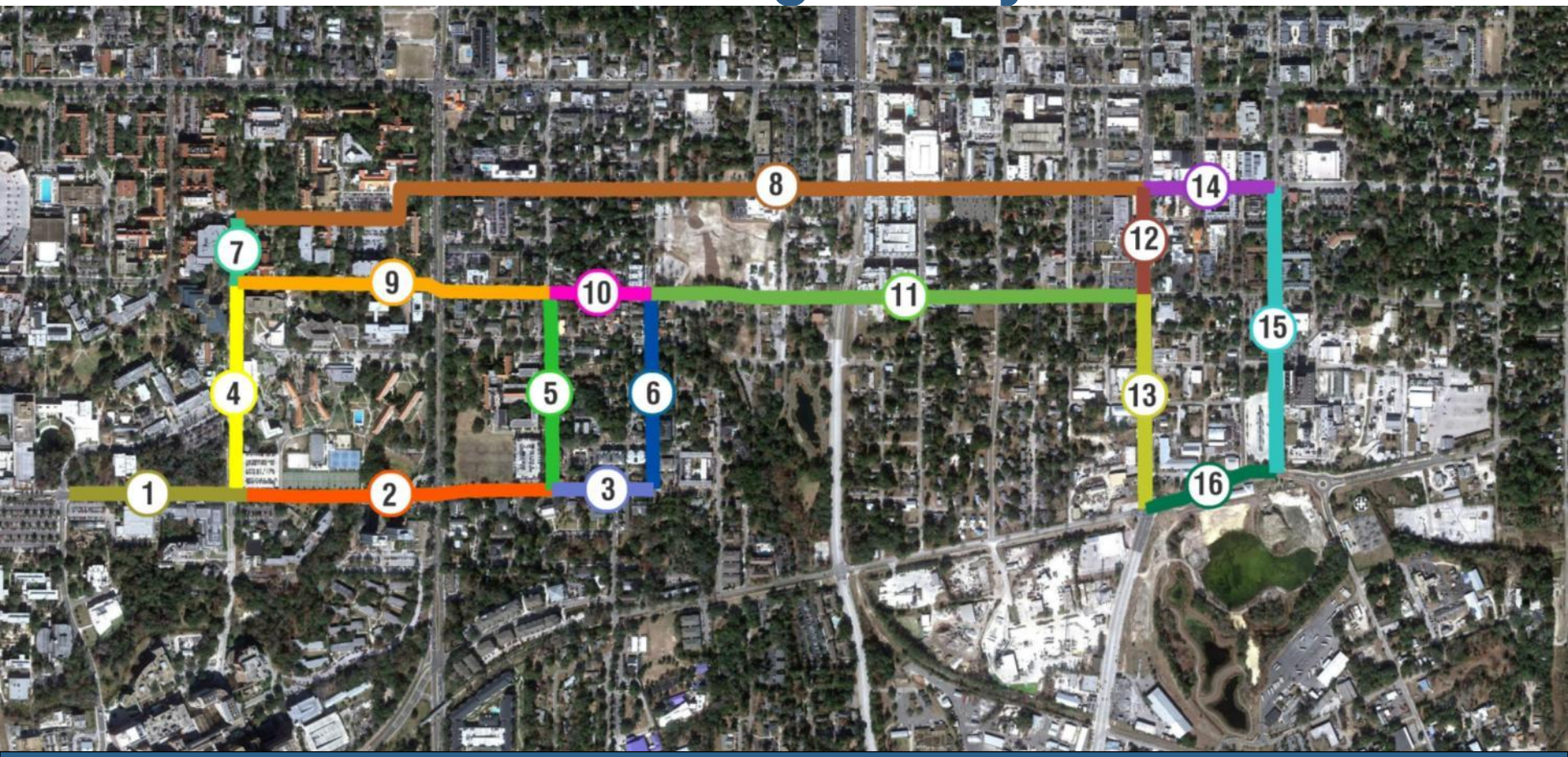


"Immediate Areas of Concern"

"Potential Fatal Flaws"

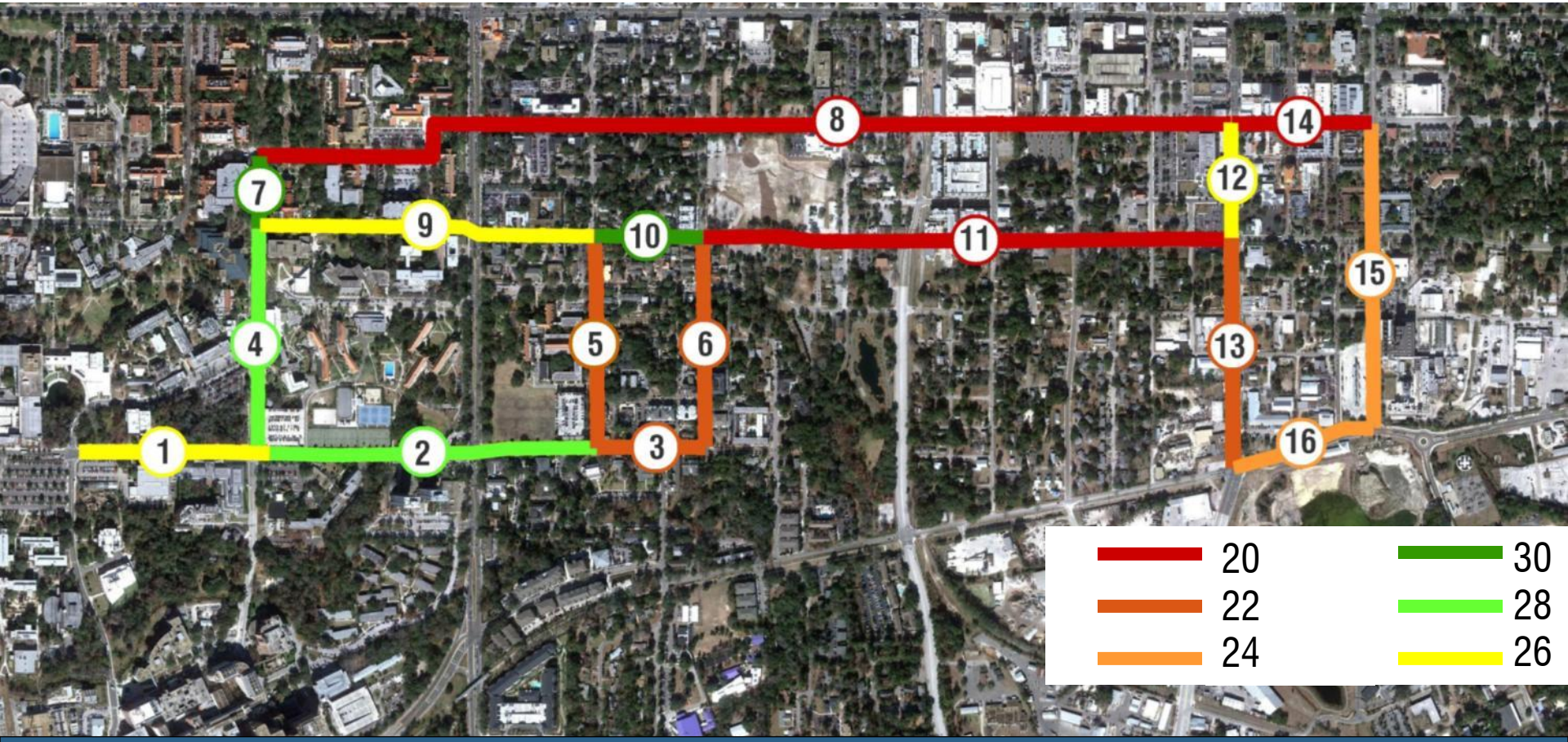
1 7 13
2 8 14
3 9 15
4 10 16
5 11
6 12

Cumulative Scoring Analysis



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
1	26	**5**	22	**9**	26	**13**	22
2	28	**6**	22	**10**	30	**14**	20
3	22	**7**	30	**11**	20	**15**	24
4	28	**8**	20	**12**	26	**16**	24

“Heat” Map



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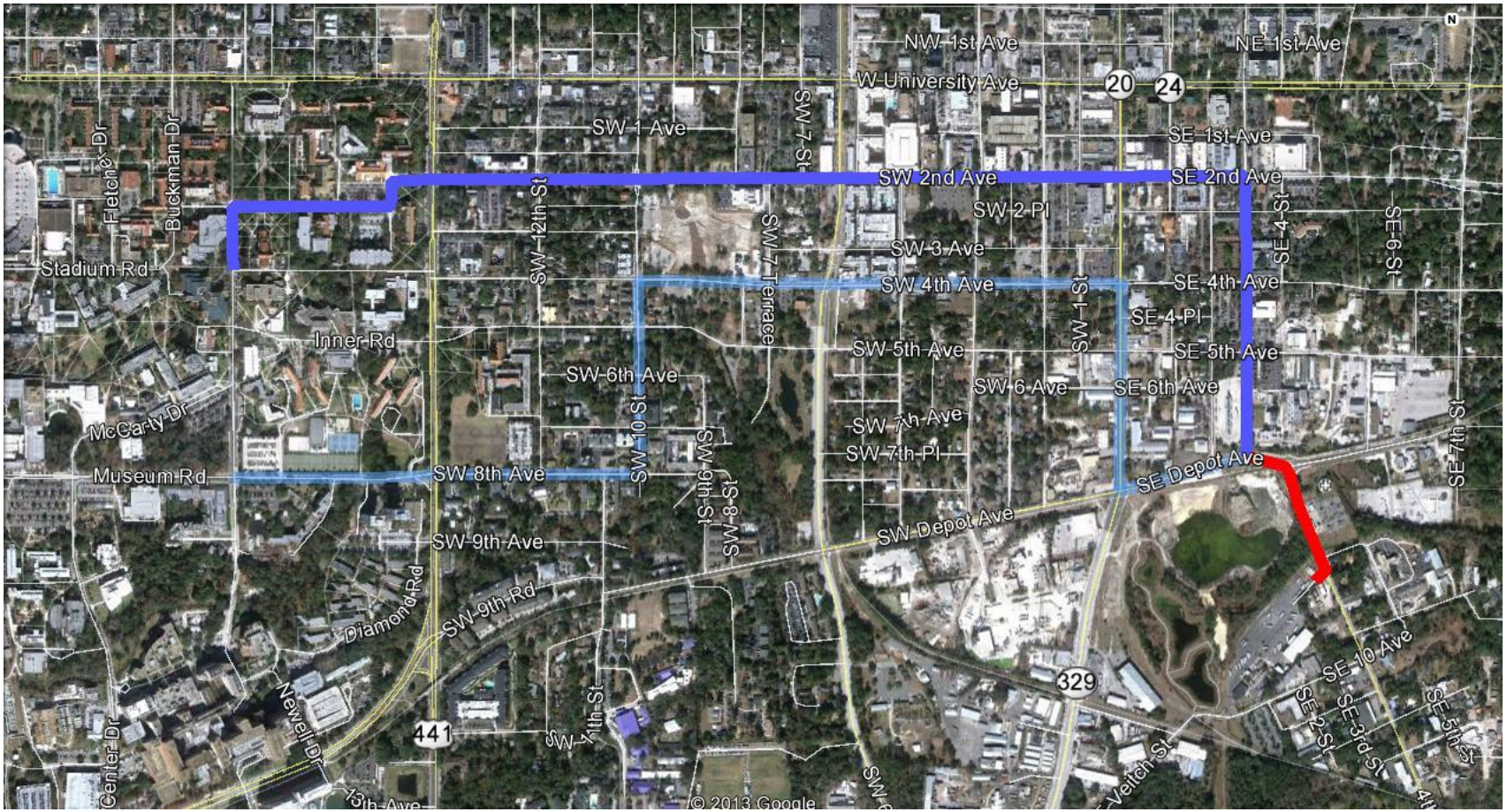
2	28	**6**	22	**10**	30	**14**	20
3	22	**7**	30	**11**	20	**15**	24
4	28	**8**	20	**12**	26	**16**	24

Conceptual Preferred Alternative



Segment 1 – Main Alignment (1.73 miles) -

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

Potential Alt. - SW 4th Ave. (1.79 miles) -

Next Steps

Economic Analysis

Ridership Estimates

Present Findings at PTAC #3 - Early November 2013

Questions?