



Public Facilities Design Services

## Board of Commissioners' Meeting

May 23, 2017

CREECH & ASSOCIATES



**EDIFICE**  
GENERAL CONTRACTORS  
The Art and Science of Construction





- Project Goals and Process
- Space Needs Update
- Forecasting and Projections
- Benchmarking
- Building Diagrams
- Updated Cost Analysis
- Massing Model





# PROJECT GOALS AND PROCESS



# Guiding Principles – Downtown Public Facilities Project

1. Maintain the town's sense of community and complement the historic nature of downtown.
2. Retain a civic presence in downtown Davidson that is easily accessible to citizens.
3. Provide a sustainable parking solution for the long-term.
4. Provide space for community functions and governmental needs in a cost-effective manner.
5. Enhance connectivity and mobility to and through the site.
6. Improve public amenities, open space, and event areas on the site.
7. Expand the retail experience on Main Street.



**July, 2016:** Board of Commissioners' decision to move ahead with public facilities project in two phases:

## Phase I:

- Site master plan, including DFM improvements, w/public input
- Parking analysis
- Building siting and massing study
- Preliminary cost estimate

## Phase II:

- Schematic design, design development, construction documents
- Continue work with construction manager on efficiencies, reducing cost
- Determine parking solutions
- Obtain LGC approval and financing



# Public Facilities Overview and Timeline

## September/October:

- RFQ for design team, established Steering Committee

## November/December:

- Steering Committee chose design team and construction manager

## February/March:

- Space needs assessment – current and future

## March/April:

- Two public workshops



# Public Workshop Site Plan



Renovate town hall:

- PD and FD

New building:

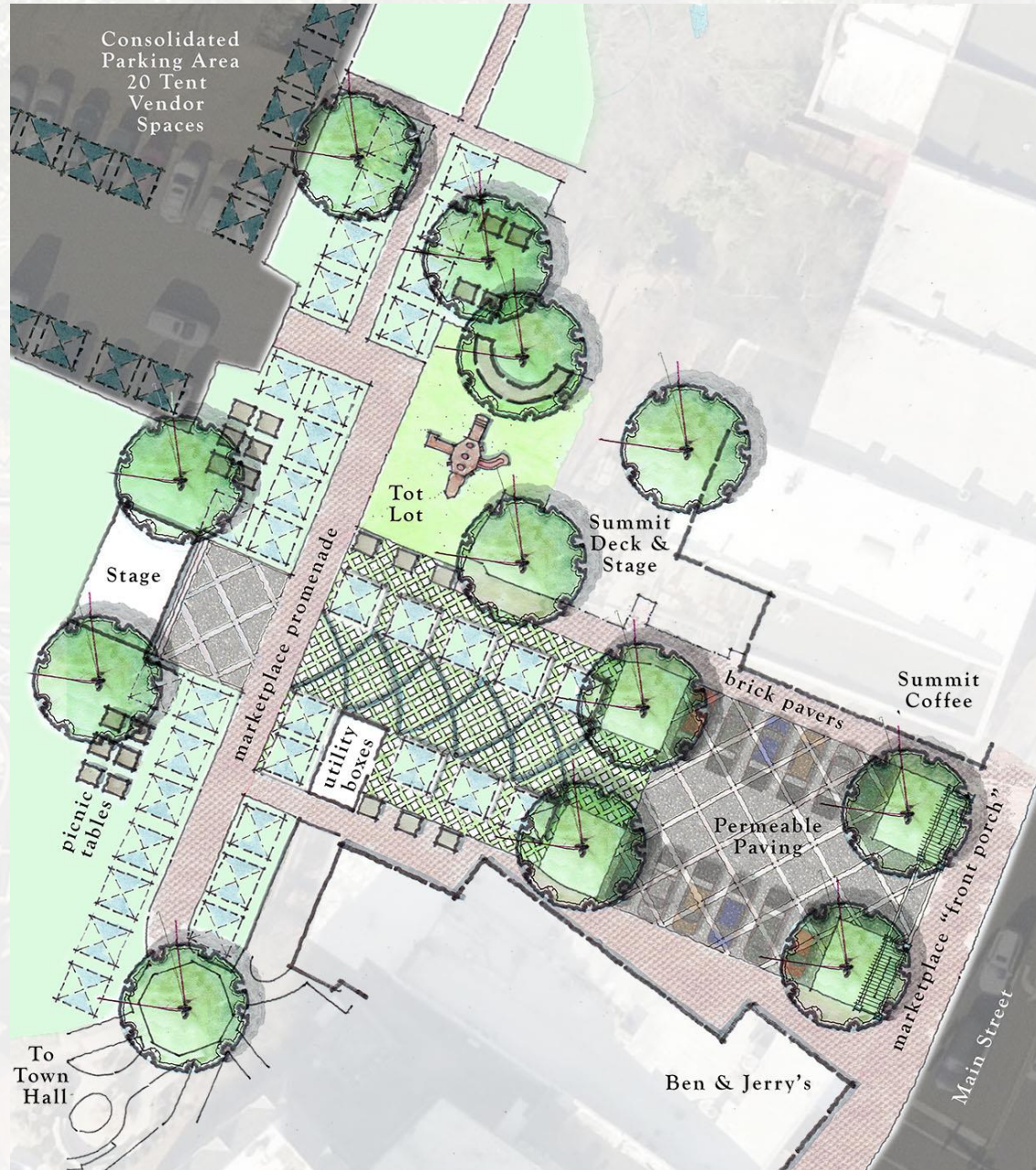
- Parks and Recreation
- Community Space
- Admin
- Finance
- Planning

Improve DFM site

Add parking



# Farmer's Market and Knox Court Improvements



A. Stage Area

B. Vendor Tents & Tot Lot

C. Truck Vendor Area

D. Marketplace Front Porch

55+ tents & 12+ truck vendors

(Consolidated parking area on Jackson Street serves as overflow for vendors)



# Short Term Options: Expand Jackson Street Surface Lot



Existing spaces: 71



Expected new spaces: 93-95

Potential Increase:  
22-24 spaces



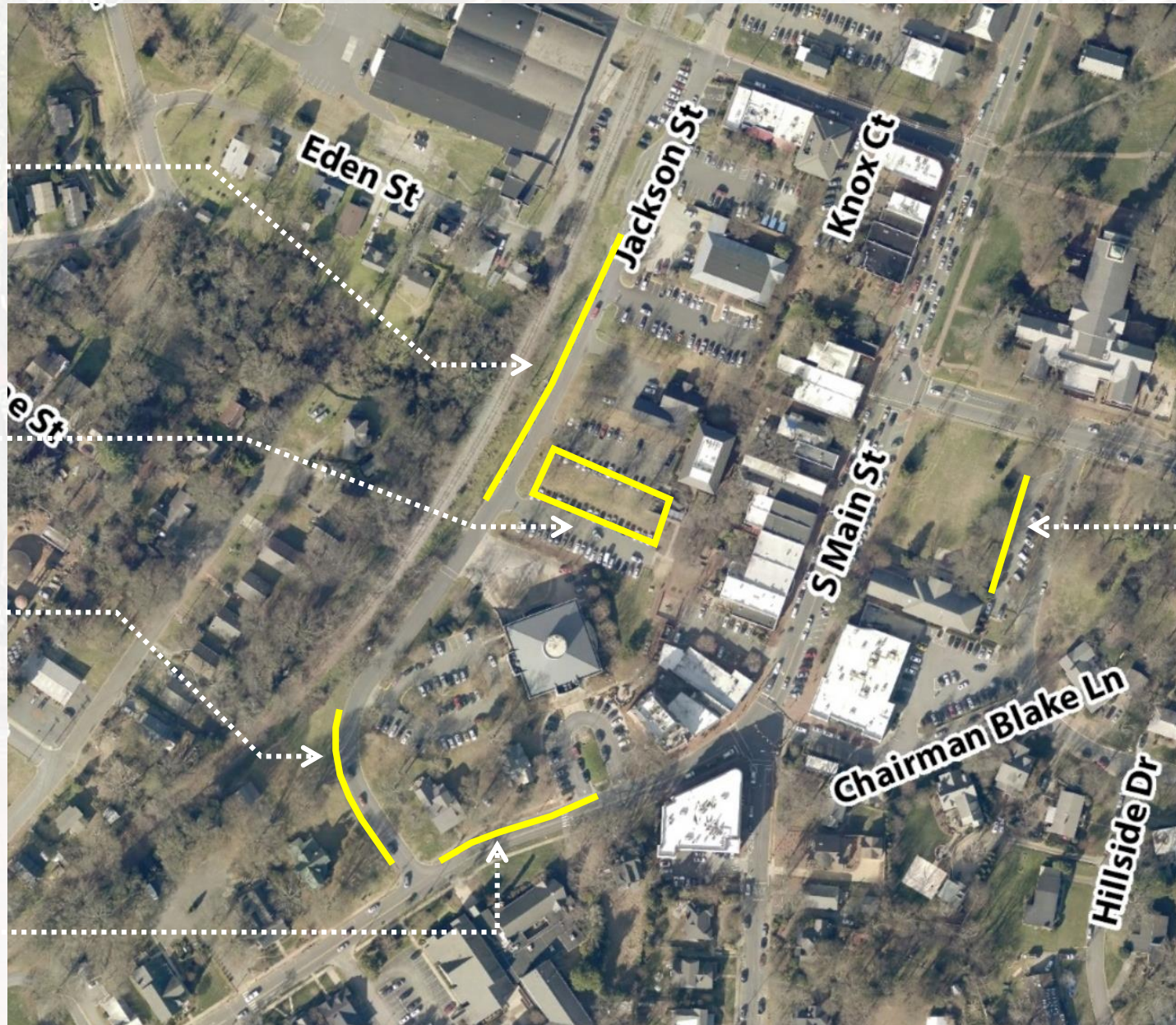
# Short Term Options: Opportunistic Parking

Gain = 33 spots

Gain = 24-28 spots

Gain = 20 spots

Gain = 24 spots



Gain = 16 spots

Total Short-term  
Opportunities  
Gain: 121



Signage

App-Based Parking Occupancy Sensors

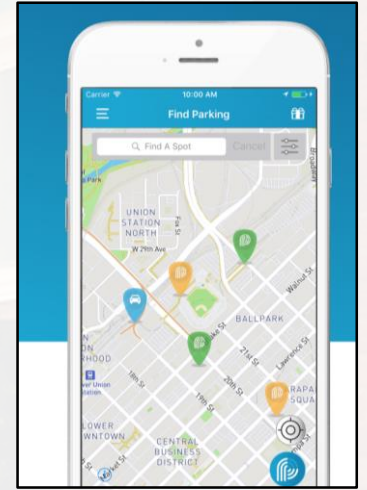
Short Term Trolley / Long Term Olli

Bicycling Facilities & Bike Share

Ride-Share Locations

Ride-Share Subsidy

Metered Spaces





## April - May:

- Steering committee meetings bi-weekly to review site design, preliminary construction cost estimates, parking options
- Sub-committee reviewed space needs and building efficiency
- Public meeting – parking analysis and opportunities





# SPACE NEEDS UPDATE



## Town Administration

- 7,000 sf in Town Hall + Sloan House (1,400 sf) + Pump House (1,200 sf) currently occupied totaling 9,600 sf
- Current needs are 20,914 sf
- 20 year projected needs are 25,525 sf (includes 2,380 sf of required retail-type space)

## Police Department

- 3,000 in Town Hall sf currently occupied
- Current needs are 17,490 sf
- 20 year projected needs are 21,509 sf

## Fire Station 1

- 6,000 sf currently occupied
- Current needs are 12,249 sf
- 20 year projected needs are 13,678 sf

*We continue to look for ways to make the program more efficient...*

- Converted several offices in Town Hall from private to open offices
  - Original private to open office ratio: 17 open 38% open office
  - **Proposed** private to open office ratio: **28** open **67%** open office



- Series of metrics that use statistical data to create growth projections
- Based on population and local utility data
- Using the previous 10 years of data to project the next 20 years
- Eliminate commercial and residential permit metrics with short data sets and either no growth or extremely high growth
- Average of 4 relevant percentages is scaled on the 2015 US Census population of 12,207
- Projects a population in 2037 of 23,567 (*roughly double*)

Metric Summary							
Metric	2010	2015	ANNUAL FACTOR	2022	2027	2032	2037
OSBM number increase 5 yr	10,944	12,692	291	15,314	16,771	18,227	19,684
OSBM percentage increase 5 yr	10,944	12,692	2.66%	16,078	18,334	20,908	23,843
Metric	2010	2015	ANNUAL FACTOR	2022	2027	2032	2037
Census number increase 5 yr	10,937	12,207	212	13,900	14,959	16,017	17,075
Census percentage increase 5 yr	10,937	12,207	1.94%	13,960	15,364	16,909	18,610
Metric	2000	2010	ANNUAL FACTOR	2022	2027	2032	2037
Census number increase 10 yr	7,212	10,944	339	14,676	16,372	18,069	19,765
Census percentage increase 10 yr	7,212	10,944	4.70%	15,809	19,894	25,034	31,503
Metric	2004	2013	ANNUAL FACTOR	2022	2027	2032	2037
Tonnage households number increase 10 yr	2,565	3,444	88	4,235	4,675	5,114	5,554
Tonnage household percentage increase 10 yr	2,565	3,444	3.43%	4,664	5,520	6,533	7,732
Metric	2015	2016	ANNUAL FACTOR	2022	2027	2032	2037
Commercial permit number increase	5	5	0	5	5	5	5
Commercial permit percentage increase	5	5	0.00%	5	5	5	5
Metric	2015	2016	ANNUAL FACTOR	2022	2027	2032	2037
Residential permit number increase	119	128	9	182	227	272	317
Residential permit percentage increase	119	128	7.6%	198	285	411	592

## POPULATION PROJECTION SUMMARY

Metric	ANNUAL FACTOR	2022	2027	2032	2037
Average of 4 percentages (based on census number increase)	3.18%	15,200	17,777	20,791	23,567



# Forecasting Metrics and Staff Projections

- Model is based on historic staff
- Each growth metric is applied as a percentage to the current staff
- Each metric yields a different 20 year projection based on the growth factor
- Average of 4 relevant percentages is scaled on the 2015 US Census population of 12,207
- Recommended model is staff projections
- Projects staff in 2037 of 39 (*roughly double*)
- Space dedicated to growth represents about 10% of the total program

Town Hall					
Forecast Data 2005-2017		2005	2017	Annual Change	
				Number	%
Historic Staff		12	19	0.54	2.83%
Forecast Model	Value	2022	2027	2032	2037
1: Actual 13 yr Number Increase	0.54	22	24	27	30
2: Actual 13 yr Percentage Increase	2.83%	22	25	29	33
3: OSBM 5 yr Percentage Increase	2.66%	22	25	28	32
4: U.S. Census 5 yr Percentage Increase	1.94%	21	23	25	28
5: U.S. Census 10 yr Percentage Increase	4.70%	24	30	38	48
6: Solid Waste 10 yr Percentage Increase (NP)	3.43%	22	27	31	37
7: Commercial Building Permits 1 yr Percentage Increase	0.00%	19	19	19	19
8: Residential Building Permits 1 yr Percentage Increase	7.56%	27	39	57	82
9: Staff Projections		23	28	33	39
Average (Items 1-6,9)		22	26	30	35
Recommended Model: Staff Projections		23	28	33	39



# How Does That Compare to our Neighbor?

*Using Cornelius as the most applicable local benchmark*

## *Cornelius Town Hall*

- 1999 Population 11,100
- 2015 Population 29,431

## *Davidson Town Hall*

- 2017 Population 13,000
- 2037 Population 24,000

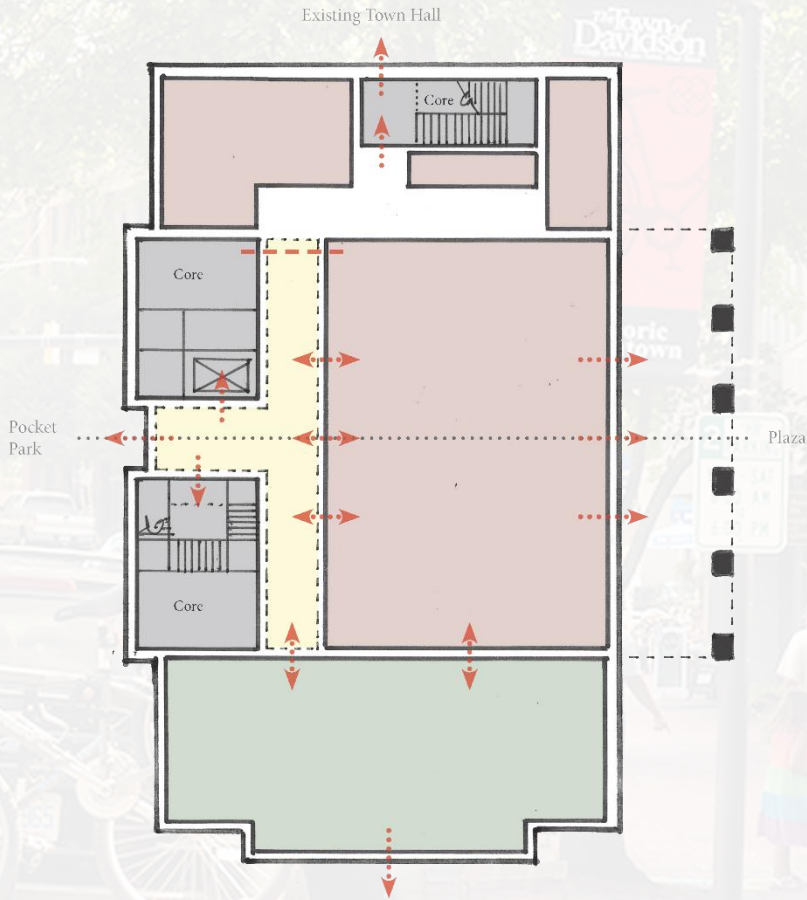




# BUILDING DIAGRAMS

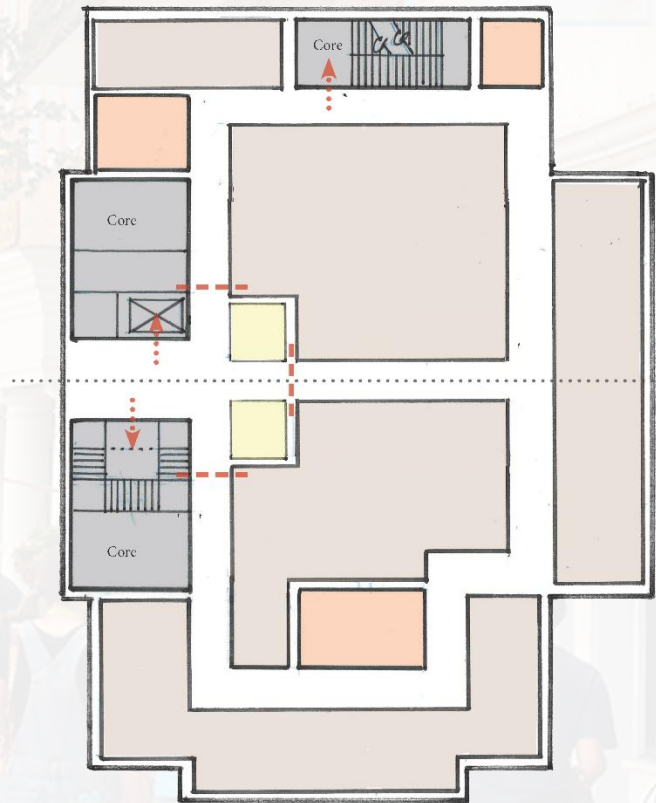


# Preliminary Plan Diagrams



First Floor Diagram

- Board Room
- Community Room
- Conference Room
- Public/Cultural Space
- Lobby



Second Floor Diagram

- Mayor
- Administration
- Legal
- Finance
- Human Resources
- Economic Development
- Communications
- Affordable Housing
- Fire Admin Offices
- IT/Server Room
- Conference Rooms
- Files and Storage



Third Floor Diagram

- Parks and Recreation
- PD/FD Training & EOC
- Planning
- Community Room
- Conference Rooms
- Files and Storage





# UPDATED COST ANALYSIS



# Preliminary Cost Analysis: Building and Site

## New Town Hall in front of Existing Town Hall

▪ New Town Hall	25,525 sf @ \$360/sf	\$9,189,000
▪ Renovate Existing Town Hall	12,000 sf @ \$150/sf	\$1,800,000
▪ Plaza (hardscape and landscape)	10,000 sf @ \$30/sf	\$300,000
▪ Covered Walkway	1,500 sf @ \$275/sf	\$412,500
▪ Expand Jackson Street parking lot	lump sum	\$226,154
▪ Marketplace amenities	lump sum	\$523,525

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▪ <b>Total Estimated Construction Costs</b>		<b>\$12,451,179</b>
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▪ Soft Costs (fees, furniture, equipment, contingency)	30%	\$3,735,354
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▪ <b>Total Estimated Project Costs</b>		<b>\$16,186,533</b>
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- Contingency and soft costs for the Marketplace Amenities were removed
- Jackson Street lot expansion cost was increased by \$75k to include stormwater detention
- Percentage of soft costs for the project was reduced to 30%.



# Updated Cost Analysis: Building and Site

## New Town Hall in front of Existing Town Hall

▪ New Town Hall	25,525 sf @ \$350/sf	\$8,933,750
▪ Renovate Existing Town Hall	12,000 sf @ \$150/sf	\$1,800,000
▪ Plaza (hardscape and landscape)	10,000 sf @ \$30/sf	\$300,000
▪ Covered Walkway	750 sf @ \$200/sf	\$150,000
▪ Expand Jackson Street parking lot	lump sum	\$226,154
▪ Marketplace amenities	lump sum	\$423,525
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▪ Total Estimated Construction Costs		\$11,833,429
▪ Soft Costs (fees, furniture, equipment, contingency)	30%	\$3,550,028
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▪ Total Estimated Project Costs		\$15,383,457
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• Reduced the Town Hall cost per square foot by \$10 ( <i>savings of \$255,250</i> )		
• Reduced the size of the covered walkway by half ( <i>savings of \$206,250</i> )		
• Reduced the covered walkway cost per square foot by \$75 ( <i>savings of \$56,250</i> )		
• Reduced the marketplace amenities cost by \$100,000		
• Doesn't include costs for opportunistic parking options		



# How Does That Compare to our Neighbor?

*Using Cornelius as the most applicable local benchmark*

## *Cornelius Town Hall*

- 1999 Population 11,100
- 2015 Population 29,431

Total Cost	Year	2017 \$	Size	\$/SF	2017 \$/SF
\$5.4 Million	1999	\$7.9 Million	22,845 sf	\$236	\$345

## *Davidson Town Hall*

- 2017 Population 13,000
- 2037 Population 24,000

Total Cost	Year	2017 \$	Size	\$/SF	2017 \$/SF
\$8.9 Million	2018	\$8.9 Million	25,525 sf	\$350	\$350





# MASSING STUDIES





Old Town Hall

New Town Hall

Covered Walkway

Plaza

Main Street

Mooney's  
Corner



# Street View – North on Main



New Town Hall

Flatiron building

DUMC Addition

Main Street



# Street View – South on Main



New Town Hall

Mooney's Corner

Plaza

Main Street



- *Board of Commissioner Meeting*
- Steering Committee Meeting
- *Board of Commissioner Meeting*

*May 23, 2017*

June 6, 2017

*June 13, 2017*





QUESTIONS ??



