125 E. Rosemary Deck
Parking and Guidance Technology Selection

WALKER CONSULTANTS

June 04, 2021

Presentation Agenda

01 Project Overview/Timeline

02 PARCS Technology

03 APGS Technology

04 Recommendations / Next Steps

PROJECT GOALS

Holistic Vision
A Parking and Guidance System that Supports Livability and Promotes Economic Development

Proven PARCS and APGS Management Solutions

Provide a realistic and implementable plan for more effective use of parking and better management of the downtown parking system

Experience and Data-driven Analyses

Provide PARCS and APGS systems that will offer credible information that can be communicated to the public and stakeholders

Technology Requirements

Identify solutions for a parking and guidance system that deploys the latest technology to improve the user experience while sustaining realistic revenue goals

Competitive Request for Proposal Process

Receive the best possible pricing and options from vendors through a Competitive RFP and provide detailed technical specifications and requirements

PARCS and APGS Solutions

Provide an evaluation of parking and guidance systems that will best suite the requirements of the 125 E. Rosemary Street Parking Deck today, and into the future..

PROJECT TIMELINE

October 23

PARCS AND APGS TECHNOLOGY REPORT

Walker provides a comprehensive overview report of Parking Access and Revenue Control Systems (PARCS) and Automated Parking Guidance Systems (APGS) technologies as they exist in the market today.

November 12

PARCS AND APGS RECOMMENDATIONS

After review and discussions of the technologies report, Walker provides a recommendations report of the technologies best suited for 125 E. Rosemary Garage based on the anticipated requirements for successful operations.

December 4

COUNCIL COMMITTEE ON ECONOMIC SUSTAINABILITY

Walker Consultants presents the PARCS and APGS Technology overview and recommendations to Town Council Committee on Economic Sustainability. Committee provided final guidance.

January 8

PARCS AND APGS REQUEST FOR PROPOSAL

Request for Proposals ("RFP") is issued for PARCS and APGS

January 29

RFP DUE DATE

Proposals received from six (6) PARCS and three (3) APGS Vendors

March 10

COUNCIL PRESENTATION

PARCS and APGS technologies were discussed with projected budget costs.

June 4

COUNCIL PRESENTATION

PARCS and APGS technologies and budgets are requested for council approval.

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PARCS AND APGS TECHNOLOGIES

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TABLE OF CONTENTS

November 12, 2020

Dwight Bassett
Town of Chapel Hill
405 Martin Luther King Jr. Blvd.
Chapel Hill, NC 27514

Re: *Parking Access and Revenue Control Systems*
       Recommended Technologies for 125 E. Rosemary Street Parking Deck

Dear Mr. Bassett:

Walker provided an overview of parking access and revenue control systems (PARCS) technologies that are available for the Town of Chapel Hill's review and consideration for the new 125 E. Rosemary Street parking deck on October 23, 2020. The report also addressed automated parking guidance systems (APGS), or "electronic wayfinding", for the Town's consideration.

A review meeting was conducted via Zoom ® on November 4, 2020 at 10 am EST. Many of the technologies from that report were discussed between the Town of Chapel Hill and Walker Consulting. The report addressed technologies as they are utilized in a traditional gated PARCS; however, the Town was also interested in a "gateless" system. The meeting addressed both gated and gateless concepts, electronic payments, credit card systems, license plate recognition (LPR), on-line reservations, APGS, and Electric Vehicle Charging Stations. Another topic of discussion was the requirement to provide 100 spaces at the top of the garage to the University of North Carolina.

As a result of this meeting, the Town of Chapel Hill has asked Walker to discuss the options for technology as they will apply "specifically" to the E. Rosemary parking deck and to provide a recommended methodology of

PARCS TECHNOLOGIES

- ACCESS CONTROL SYSTEMS
    - **PROXIMITY CARD (PROX)**
    - AUTOMATIC VEHICLE IDENTIFICATION (AVI)
    - BLUETOOTH ® TECHNOLOGY
    - **LICENSE PLATE RECOGNITION (LPR)**

- REVENUE CONTROL SYSTEMS
    - TRADITIONAL CASHIERING
    - **INTEGRATED CREDIT CARDS**
    - **PAY-ON-FOOT (POF) TECHNOLOGY**
    - **CREDIT CARD EXIT VERIFIER**
    - CREDIT CARD IN/OUT
    - **APPLE / GOOGLE PAY**
    - **QR BARCODE READER**
    - **PAY BY MOBILE DEVICE (PARKMOBILE)**
    - **RESERVATIONS (PARKMOBILE)**
    - FREQUENT PARKER PROGRAMS

- VALIDATION SYSTEMS
    - **OFFLINE VALIDATIONS**
    - CHASER TICKETS
    - ONLINE VALIDATIONS

PARCS DESCRIPTION:

## CONTRACT CUSTOMER (MONTHLY, EMPLOYEE, ETC.)

1. APPROACH ENTRY LANE: LPR READS PLATE AND OPENS GATE.
2. IF LPR FAILS (PLATE OBSTRUCTED) CUSTOMER SCANS PROXIMITY CARD TO ENTER.
3. APPROACH EXIT LANES: REPEAT PROCESS FOR ENTRY TO EXIT.

"TRANSIENT" CUSTOMER:

1. APPROACH ENTRY LANE: WAVE HAND FOR TICKET, LPR SCANS PLATE
    1) RECEIVE A VALIDATION FROM DESTINATION (IF APPLICABLE)
    2) PAY FOR PARKING AT PAY-ON-FOOT KIOSK – LOCATED IN ELEVATOR LOBBY
1. APPROACH EXIT LANE: LPR SCANS PLATE – IF PAID/VALIDATED GATE OPENS.
2. IF NOT PAID, PARCS DISPLAYS FEE DUE PER LPR ENTRY DATA.
3. IF LPR FAILS (PLATE OBSTRUCTED) CUSTOMER INSERTS TICKET AND FEE IS DISPLAYED.
4. PAYMENT IS MADE VIA CREDIT CARD OR PARKMOBILE APPLICATION.

PRE-REGISTERED CUSTOMER:

1. RESERVE PARKING ON PARKMOBILE APPLICATION – ENTER LICENSE PLATE AND/OR RECEIVE A QR BARCODE ON PHONE OR EMAIL – CAN BE PRINTED.
2. APPROACH ENTRY LANE: LPR READS PLATE AND OPENS GATE – IF NOT, SCAN QR/BARCODE (MOBILE OR PRINTED).
3. APPROACH EXIT LANE: REPEAT ENTRY LANE PROCESS.
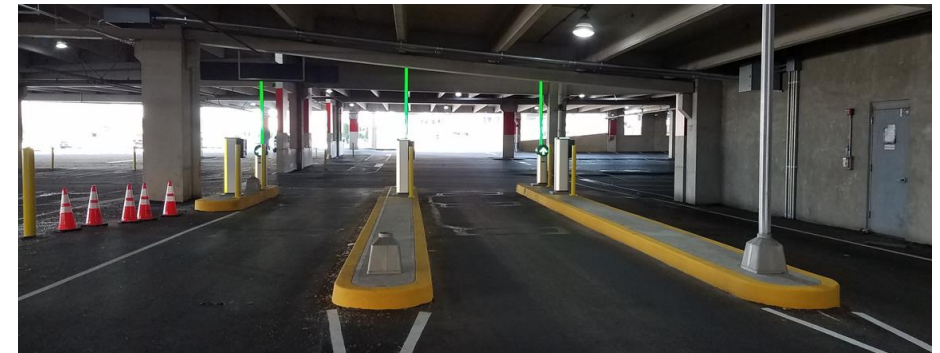
TRANSACTION FLOW

Read Plate, "Wave for Ticket" or scan QR on Entry
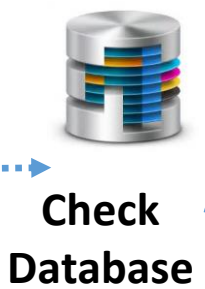
Raise Gate

Registered User

Plate Read at Exit Activate Gate

Check Database

Not Registered LPR – take ticket

Pay at kiosk or Validated

Plate Read at Exit – Activate Gate if paid Or Pay in Lane

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APGS TECHNOLOGIES

WHERE IS MY CAR? I KNOW IT IS BLUE...

- FACILITY COUNTS
  - INTEGRAL TO PARKING ACCESS AND REVENUE CONTROL SYSTEM
  - TRACKS TOTAL OF MONTHLY CUSTOMERS AND DAILY CUSTOMERS
  - "RESERVES" AVAILABILITY FOR MONTHLY CUSTOMERS
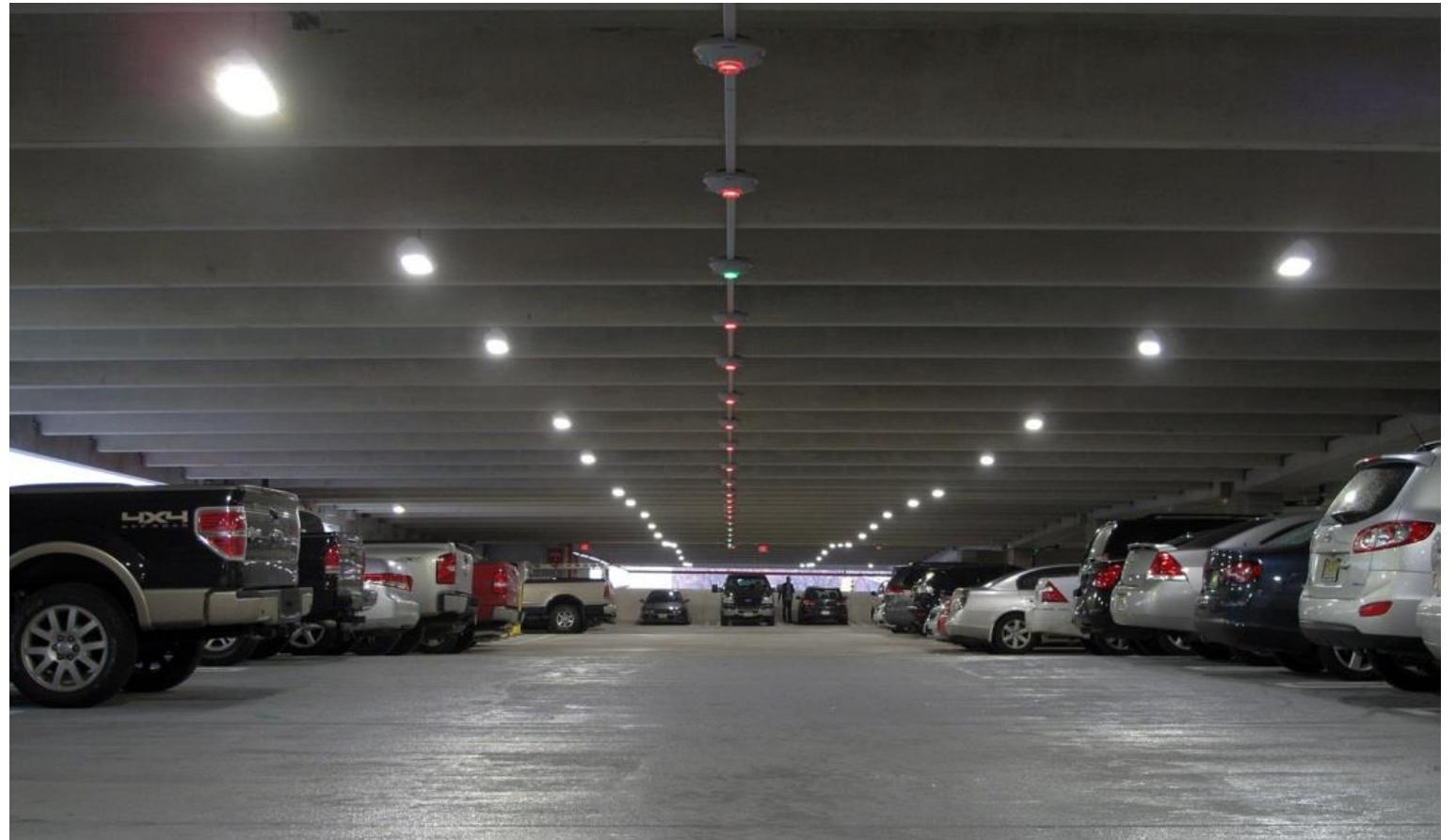 - "FULL STATUS" DISPLAYED AT ENTRY PREVENTS DAILY TRAFFIC

- LEVEL OR ZONE COUNTS
  - PROVIDES THE FACILITY COUNTS, BUT ONLY BY TOTAL SPACES
  - TRACKS SPACES BY LEVEL OR ZONE WITHIN THE GARAGE
  - PROVIDES QUICK ACCESS TO PARKING SPACES PER LEVEL
  - REQUIRES DAILY COUNTING AND/OR RESETTING

- **SINGLE-SPACE GUIDANCE**
  - PROVIDES THE SAME LEVEL OF SERVICES AS ABOVE, PLUS:
  - PROVIDES EXACT DIRECTION TO AVAILABLE PARKING
  - REDUCES TIME SPENT HUNTING FOR SPACES – REDUCING CARBON EMMISSIONS
  - INCREASED OCCUPANCY USAGE CAN BE CORRELATED TO RETURN ON INVESTMENT
  - **CAMERA-BASED SINGLE-SPACE SYSTEMS PROVIDE PARKED CAR LOCATOR KIOSKS VIA LICENSE PLATE TECHNOLOGY**
  - REDUCES STRESS AND PROVIDES A BETTER EXPERIENCE TO CUSTOMERS
  - ALLOWS FOR THE BEST LEVEL OF OCCUPANCY TRACKING AND DATA ANALYTICS CAPABILITIES
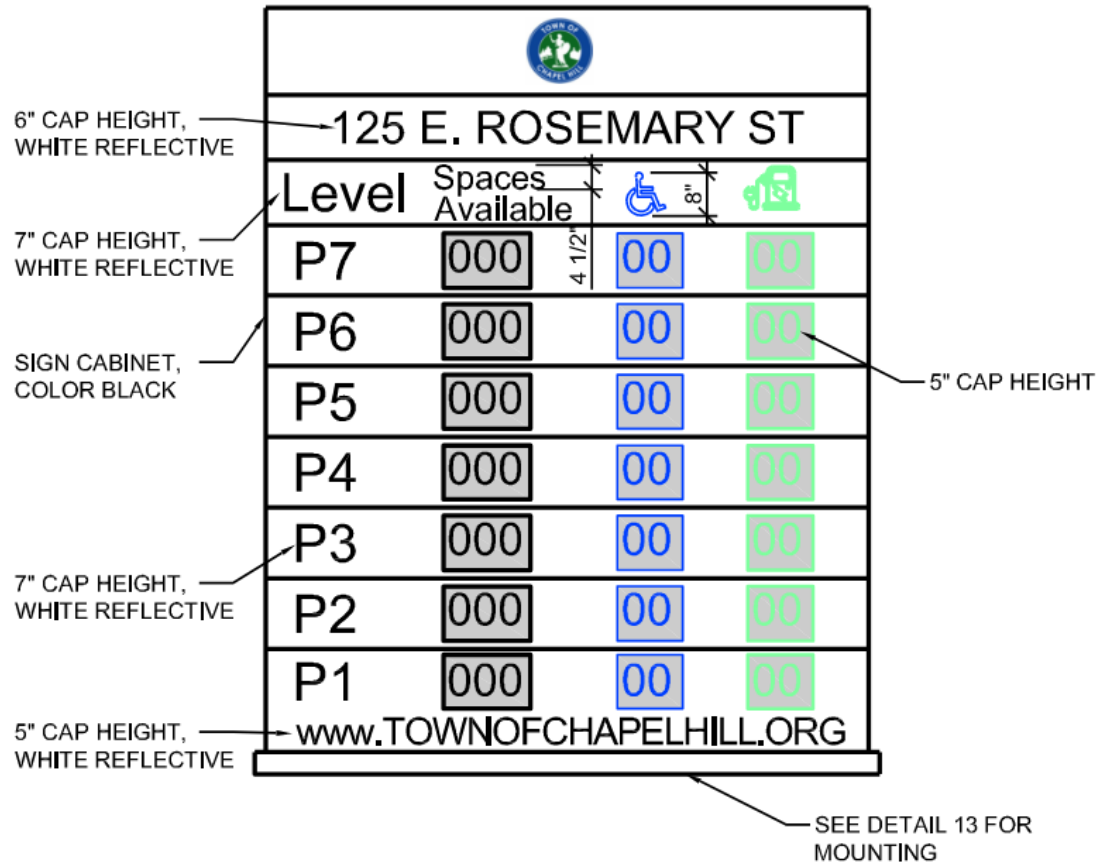
APGS DESCRIPTION:

1. Parking customer approaches the entry lane and receives a ticket.

2. As they enter the parking facility, they'll see a sign showing parking spaces on all levels of the facility.

3. As they approach decision points (turns), they'll see signs showing available spaces in each turning direction.

4. As they drive down the isle, they'll see lights over the parking spaces indicating if they are available or occupied.
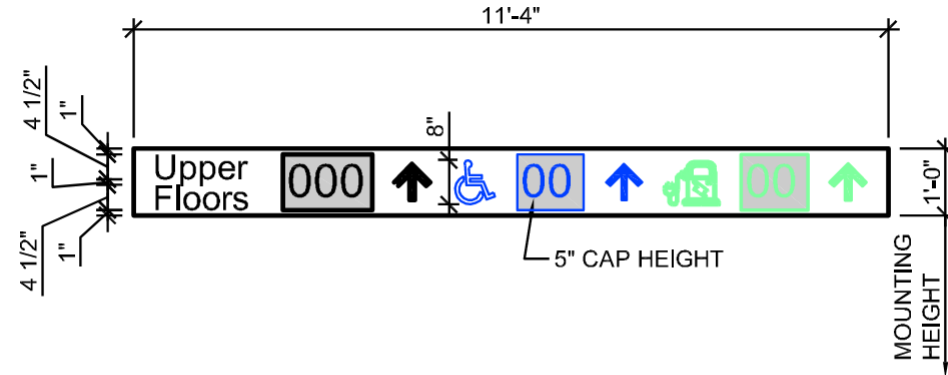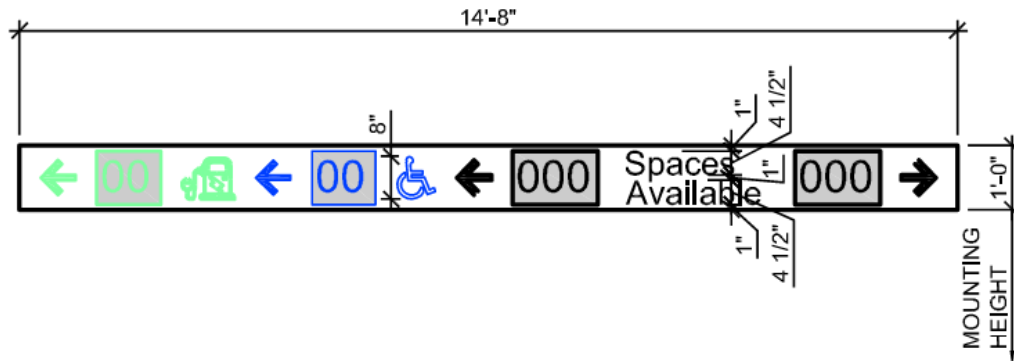
CAMERA-BASED APGS (LICENSE PLATE RECOGNITION)

PARKING AVAILABILITY DISPLAYS

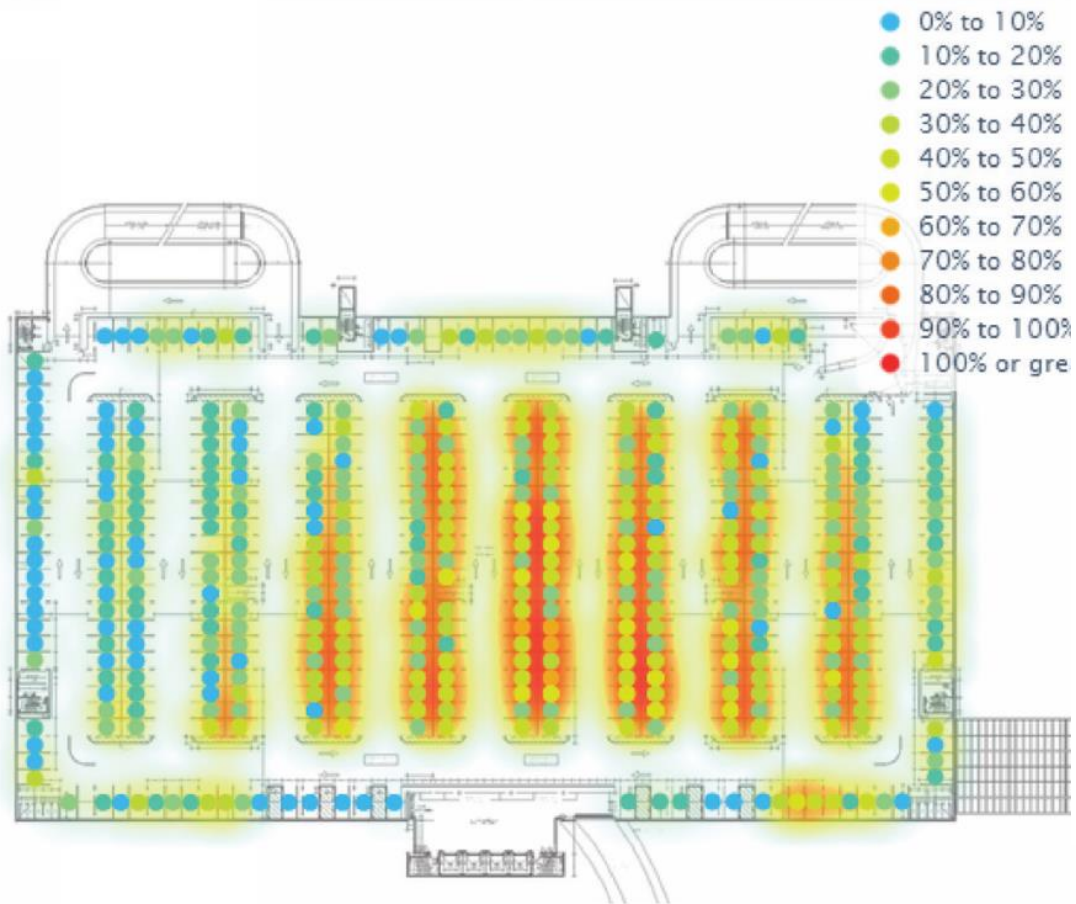6" CAP HEIGHT, WHITE REFLECTIVE

7" CAP HEIGHT, WHITE REFLECTIVE

SIGN CABINET, COLOR BLACK

7" CAP HEIGHT, WHITE REFLECTIVE

5" CAP HEIGHT, WHITE REFLECTIVE

125 E. ROSEMARY ST

Level	Spaces Available	♿	⛽
P7	000	00	00
P6	000	00	00
P5	000	00	00
P4	000	00	00
P3	000	00	00
P2	000	00	00
P1	000	00	00

www.TOWNOFCHAPELHILL.ORG

5" CAP HEIGHT

SEE DETAIL 13 FOR MOUNTING

(11) SIGN RDW-1 DETAIL

11'-4"

Upper Floors 000 ↑ ♿ 00 ↑ ⛽ 00 ↑

5" CAP HEIGHT

MOUNTING HEIGHT

(10) SIGN UF-3 DETAIL

14'-8"

← 00 ⛽ ← 00 ♿ ← 000 Spaces Available 000 →

MOUNTING HEIGHT

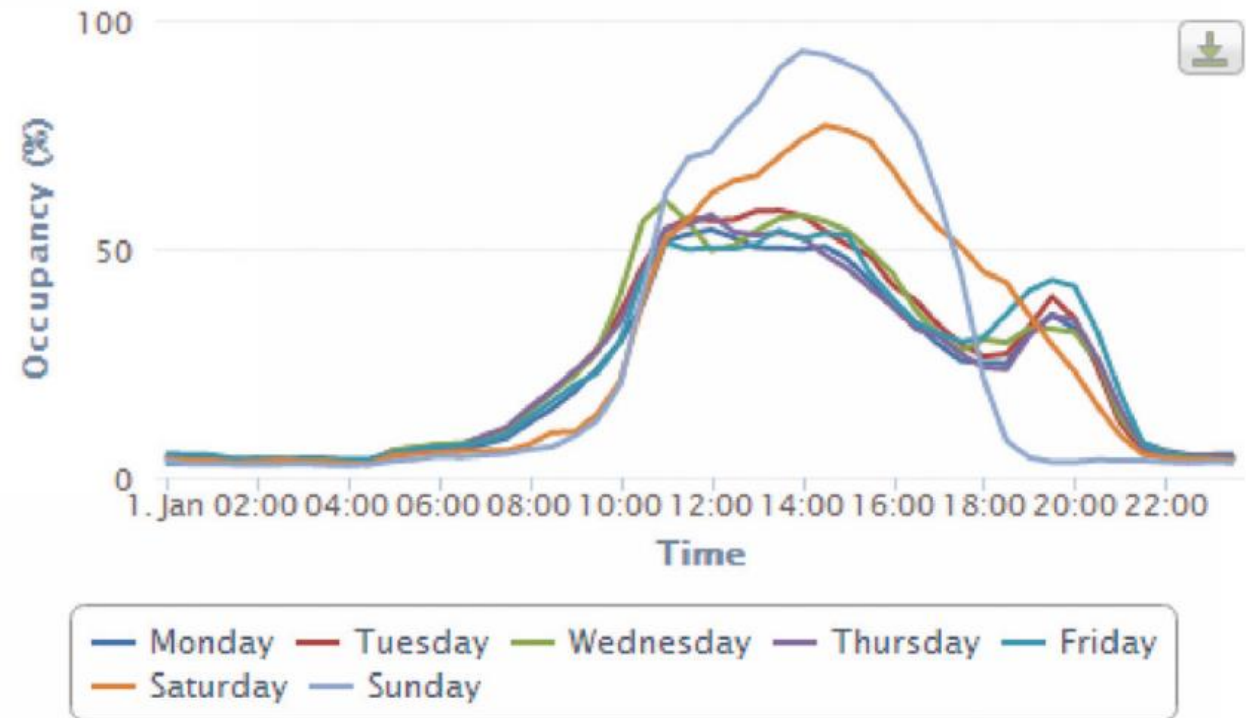(7) SIGN SA-7 DETAIL

ADDITIONAL APGS BENEFITS

CUSTOMER AMENITY: FIND YOUR CAR
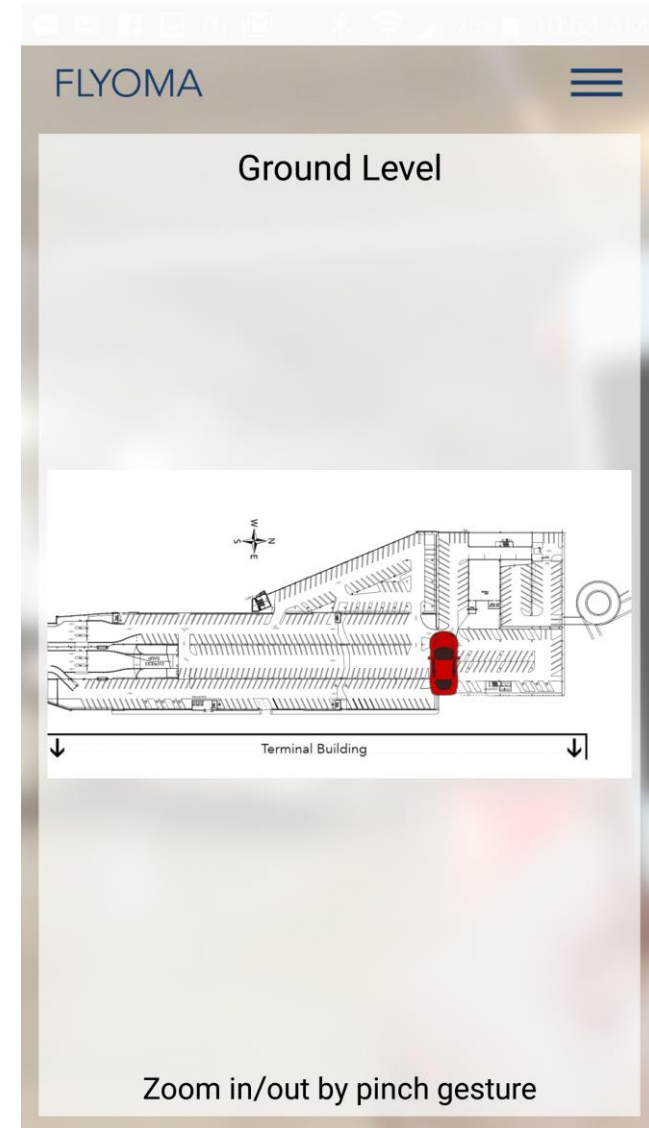
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THE BIG QUESTIONS:
WHICH TECHNOLOGIES TO IMPLEMENT?

1. Town of Chapel Hill created a Technology Selection Committee.
2. Committee reviewed the proposals on an individual basis and discussed their findings as a group.
3. Two vendors for PARCS and two vendors for APGS were selected for finalist interviews.
4. **The selection committee is requesting PARCS and APGS technologies and budgets to be authorized by Town Council.**
5. Selection Committee recommendation will be provided to General Contractor.
6. General Contractor to include Technology Recommendation in the overall Project.

Questions?